

VERIFICATION

STATE OF OHIO)
)
COUNTY OF HAMILTON) **SS:**

The undersigned, Christa Strunk, Supervisor GIS Data Integrity, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained are true and correct to the best of her knowledge, information and belief.

Christa Strunk
Christa Strunk Affiant

Subscribed and sworn to before me by Christa Strunk on this 3rd day of May, 2022.

E. Minna Rolfes-Adkins
NOTARY PUBLIC

My Commission Expires: July 8, 2022

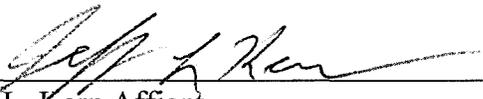


E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Jeff L. Kern, Rates & Regulatory Strategy Manager, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Jeff L. Kern Affiant

Subscribed and sworn to before me by Jeff L. Kern on this 4th day of May,
2022.



NOTARY PUBLIC

My Commission Expires: July 8, 2022



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

VERIFICATION

STATE OF OHIO)
)
COUNTY OF HAMILTON) SS:

The undersigned, Nick Melillo, Director Asset Management, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Nick Melillo Affiant

Subscribed and sworn to before me by Nick Melillo on this 3rd day of May,
2022.



NOTARY PUBLIC

My Commission Expires: July 8, 2022



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

KyPSC Case No. 2022-00105
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**Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022**

STAFF-DR-01-001

REQUEST:

Refer to Duke Kentucky's proposed tariff, KY P.S.C. Electric No. 2, Fifth Revised Sheet No. 92, page 1 of 10, Attachment Charges. Provide support for the new conduit occupancy fee of \$0.27 per linear foot.

RESPONSE:

Please see STAFF-DR-01-001 Attachment.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky

**Formula For Use of Electric Utility Conduit (FCC 01-170 Appendix F-2)
 BASED UPON 2020 FERC FORM 1 DATA**

<u>FCC Conduit Rate Formula</u>	<u>Amount</u>	<u>Reference/Source</u>
1 Gross Conduit Investment	\$41,176,284	A Below
2 Conduit Depreciation Reserve	\$10,428,715	B1 below
3		
4 Accumulated Deferred Taxes	(\$4,886,404)	R1 Below
5 Net Conduit Investment	\$25,861,165	1 - 2 + R1
6 Number of Duct Feet of Conduit	5,492,444	D Below
7 Net Investment Per Duct Feet	\$4.71	5 / 6
8 Maintenance		
A. Maintenance of Underground Lines	\$238,188	E Below
B. Total Investment in Conduit	\$140,275,499	A + F + G
C. Depreciation Reserve	\$35,527,566	B1 + B2 + B3
D. Accumulated Deferred Taxes	-\$16,643,539	R1 + R2 + R3
E. Total Investment in Conduit - Net	\$88,104,394	8B - 8C + 8D
F. Conduit Maintenance Ratio	0.27%	8A / 8E
9 Depreciation	2.62%	(1 / (1 - 2 - R1)) * H
10 Administration	1.14%	I / (J - K - R)
11 Taxes (Normalized)	1.16%	(L + M + N + O + P + Q) / (J - K + R)
12 Rate of Return	6.41%	Proposed
13 Total Carrying Charge	11.60%	8F + 9 + 10 + 11 + 12
14 Allocated Space	50%	Y / Z
15 Maximum Rate per Foot of Conduit	\$0.27	7 * 13 * 14
 <u>Input Data</u>		
A. Underground Conduit (Acctg.366)	\$41,176,284	FERC Form 1, Page 207, Line 66, Column g
B. Accum. Depr. - Distribution Plant	\$149,863,967	FERC Form 1, Page 219, Line 26, Column c
1. Accum Depr. for FERC Acctg 366	\$10,428,715	Provided by Asset Accounting
2. Accum Depr. for FERC Acctg 367	\$19,112,542	Provided by Asset Accounting
3. Accum Depr. for FERC Acctg 369	\$5,986,310	Provided by Asset Accounting
C. Gross Investment - Distribution Plant	\$591,716,376	FERC Form 1, Page 207, Line 75, Column g
D. Number of Duct Feet of Conduit	5,492,444	Provided by Asset Accounting
E. Maintenance of Underground Lines (Acctg. 594)	\$238,188	FERC Form 1, Page 322, Line 150, Column b
F. Underground Conductors & Devices (Acctg. 367)	\$75,463,130	FERC Form 1, Page 207, Line 67, Column g
G. Underground Services (Acctg. 369)	\$23,636,085	FERC Form 1, Page 207, Line 69, Column g
H. Depreciation Rate - Distribution Property	2.27%	Provided by Plant Accounting
I. Admin. & Gen. Exps. (Acctgs. 920-935)	\$23,677,182	FERC Form 1, Page 323, Line 197, Column b.
J. Utility Plant in Service	\$2,881,491,826	FERC Form 1, Page 200, Line 8, Column c.
K. Accum. Depr. - Utility Plant in Service	\$1,044,742,638	FERC Form 1, Page 200, Line 22, Column c.
L. Taxes Other Than Income Taxes (Acctg. 408.1)	\$13,169,657	FERC Form 1, Page 115, Line 14, Column g.
M. Income Taxes - Federal (Acctg. 409.1)	(\$498,211)	FERC Form 1, Page 115, Line 15, Column g.
N. Income Taxes - Other (Acctg. 409.1)	\$329,389	FERC Form 1, Page 115, Line 16, Column g.
O. Prov. for Deferred Inc. Taxes (Acctg 410.1)	\$32,009,110	FERC Form 1, Page 115, Line 17, Column g.
P. (Less) Prov. for Def. Inc. Taxes - Cr. (Acctg 411.1)	(\$26,622,848)	FERC Form 1, Page 115, Line 18, Column g.
Q. Investment Tax Credit Adj. - Net (Acctg 411.4)	(\$428)	FERC Form 1, Page 115, Line 19, Column g.
R. Accumulated Deferred Inc. Taxes (Acct 190, 281, 282, 283)	(\$248,040,831)	Deferred Tax Calculation Worksheet
1. Underground Conduit (Acctg.366)	(\$4,886,404)	Deferred Tax Calculation Worksheet
2. Underground Conductors & Devices (Acctg. 367)	(\$8,954,274)	Deferred Tax Calculation Worksheet
3. Underground Services (Acctg. 369)	(\$2,802,861)	Deferred Tax Calculation Worksheet
S.		
T.		
U.		
V.		
X. Rate of Return	6.41%	Approved in Case No. 2019-00271
Y. Space Occupied (Ducts)	1.00	
Z. Number of Inner Ducts per Conduit	2	

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-002

REQUEST:

Refer to Duke Kentucky's proposed tariff, KY P.S.C. Electric No. 2, Fifth Revised Sheet No. 92, page 2 of 10.

- a. Explain why there is a provision in the tariff indicating that all fees, charges, and rentals not paid when due and payable shall bear interest at the maximum rate permitted by law instead of a late payment charge provision.
- b. Explain how Duke Kentucky determines the interest rate to be charged for unpaid fees, charges, and rentals.
- c. Explain whether the interest charged on unpaid fees, charges, and rentals is simple or compound interest.
- d. Explain why 807 KAR 5:006, Section 9(3)(h), which states that a late payment charge may be assessed only once on a bill for rendered services, would not apply to the interest charge.

RESPONSE:

- a. This provision in the tariff remains unchanged from the Company's prior pole attachment tariff previously approved by the Commission. In the Company's current pole attachment agreement, more specificity was negotiated with attachers, such that the interest rate would be 1.5%. The language in the tariff merely reflects that, to the extent a lower rate is set forth under Kentucky law, the Company would revert to that statutory rate. Charging a set interest rate was deemed to be a more

effective incentive for attachers to pay on time, as well as more reflective of actual costs.

- b. See response to part a, above. Duke Energy Kentucky's attachment agreement provides greater specificity whereby the rate charged is 1.5%, subject to any statutory limitation (as reflected in the Company's tariff). This rate is a legacy rate that has been in place for many years and was the product of negotiations with attachers. There is no study.
- c. The interest charged is calculated as simple interest on the unpaid balance each month and is not compounded.
- d. As stated earlier, this provision in the tariff remains unchanged from the Company's prior pole attachment tariff previously approved by the Commission. Generally speaking, 807 KAR 5:006, is concerned with typical utility services, such as electric, gas, water, sewer, and telephone services. Its generic provisions, such as Section 9, are not necessarily applicable to pole attachments, which are governed primarily by 807 KAR 5:015, whose Section 3(1) provides that pole attachment tariffs must "include[] rates, terms, and conditions governing pole attachments in Kentucky that are consistent with the requirements of this administrative regulation and KRS Chapter 278," (emphasis added). For pole attachments, it is important that there be an ongoing financial incentive to pay past due bills because, among other things, it can be difficult and time-consuming for the Company to exercise the remedy of removing the attacher's facilities from the poles. For example, sixty days' notice is required to remove pole attachments, as compared to only ten days' notice to disconnect gas or electric service. Compare 807 KAR 5:015, Section 6(1) to 807 KAR 5:006, Section 15(1)(f). Removing pole attachments requires personnel

and equipment, while connecting and disconnecting other types of service can often be done remotely and near-instantly. The interest charged is an ongoing form of incentive and also compensates the Company for the time value of the past due amounts. It is not a nonrecurring late payment penalty, as contemplated in Section 9(3)(h). Additionally, pole attachments are a distinct form of service and properly governed primarily by a separate regulation. Thus, 807 KAR 5:006, Section 9(3)(h) is not applicable.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022**

STAFF-DR-01-003

REQUEST:

Refer to Duke Kentucky's proposed tariff, KY P.S.C. Electric No. 2, Fifth Revised Sheet No. 92, page 6 of 10, Terms and Conditions, No. 16. Regarding the attachee's responsibility to pay for unauthorized attachments, explain the reasoning for the change to make the attachee responsible for an amount equal to twice the rental that would have been due had the installation been in place for the past five years instead of had the installation been made the day after the Duke Kentucky's last inspection.

RESPONSE:

Generally, unauthorized attachments are discovered during inspections which occur on a rotating program every five years. Therefore, charging the unauthorized attacher for the past five years is generally the same as charging since the day after the last inspection. However, using a set time frame of five years is administratively easier and more clear to attachers who may not know Duke's inspection schedule.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-004

REQUEST:

- a. Identify each account and subaccount in which the costs of utility poles in service are recorded.
- b. Provide a narrative description of the costs that are recorded in each such account, including a description of the type and vintage of poles for which costs are recorded in the account and a description other plant, if any, for which costs are recorded in the account.
- c. Provide an Excel spreadsheet with all formulas, columns, and rows unprotected and fully accessible showing the plant in service balance of each such account at the end of each of the last five fiscal years.

RESPONSE:

- a. Costs of utility poles are recorded to account 36400 – Poles, Towers & Fixtures.
- b. The retirement units that are recorded to the poles account include wood poles, steel poles, wood crossarms, steel/fiberglass crossarms, estimated retirements, and non-unitized assets. Please see STAFF-DR-01-004 Attachment 1 for a list of poles by vintage year.
- c. Please see STAFF-DR-01-004 Attachment 2.

PERSON RESPONSIBLE: Denise Lepisto

Duke Energy Kentucky
Case No. 2022-00105
Staff First Set Data Request
STAFF-DR-01-004 Attachment 1

Retirement Unit	Vintage
Pole: steel, all sizes	1925
Pole: steel, all sizes	1926
Pole: steel, all sizes	1927
Pole: steel, all sizes	1928
Pole: steel, all sizes	1929
Pole: steel, all sizes	1930
Pole: steel, all sizes	1931
Pole: steel, all sizes	1933
Pole: steel, all sizes	1935
Pole: steel, all sizes	1938
Pole: steel, all sizes	1939
Pole: steel, all sizes	1942
Pole: steel, all sizes	1943
Pole: steel, all sizes	1947
Pole: steel, all sizes	1950
Pole: steel, all sizes	1951
Pole: steel, all sizes	1952
Pole: steel, all sizes	1954
Pole: steel, all sizes	1956
Pole: steel, all sizes	1957
Pole: steel, all sizes	1959
Pole: steel, all sizes	1960
Pole: steel, all sizes	1964
Pole: steel, all sizes	1966
Pole: steel, all sizes	1967
Pole: steel, all sizes	1970
Pole: steel, all sizes	1973
Pole: steel, all sizes	1977
Pole: steel, all sizes	1981
Pole: steel, all sizes	1985
Pole: steel, all sizes	1987
Pole: steel, all sizes	2001
Pole: steel, all sizes	2009
Pole: steel, all sizes	2011
Pole: steel, all sizes	2012
Pole: steel, all sizes	2013
Pole: steel, all sizes	2014
Pole: steel, all sizes	2015
Pole: steel, all sizes	2017

Pole: steel, all sizes	2018
Pole: steel, all sizes	2019
Pole: steel, all sizes	2020
Pole: steel, all sizes	2021
<u>Pole: Wood, 30' or less</u>	1917
Pole: Wood, 30' or less	1918
Pole: Wood, 30' or less	1920
Pole: Wood, 30' or less	1924
Pole: Wood, 30' or less	1925
Pole: Wood, 30' or less	1926
Pole: Wood, 30' or less	1927
Pole: Wood, 30' or less	1928
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Pole: Wood, 35'	2019
Pole: Wood, 35'	2020
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Pole: Wood, 40'	2019
Pole: Wood, 40'	2020
Pole: Wood, 40'	2021
Pole: Wood, 45'	1919
Pole: Wood, 45'	1925
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Pole: Wood, 65'	1925
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Pole: Wood, 65'	1940
Pole: Wood, 65'	1947
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Pole: Wood, 65'	2012
Pole: Wood, 65'	2013
Pole: Wood, 65'	2015
Pole: Wood, 65'	2016
Pole: Wood, 65'	2017
Pole: Wood, 65'	2019
Pole: Wood, 65'	2020
Pole: Wood, 65'	2021
Pole: Wood, 70'	1940
Pole: Wood, 70'	1947
Pole: Wood, 70'	1948
Pole: Wood, 70'	1949
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Pole: Wood, 70'	1952
Pole: Wood, 70'	1954
Pole: Wood, 70'	1955
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Pole: Wood, 70'	2013
Pole: Wood, 70'	2017
Pole: Wood, 70'	2019
Pole: Wood, 70'	2020
Pole: Wood, 70'	2021
Pole: Wood, 75'	1972
Pole: Wood, 75'	1975
Pole: Wood, 75'	1985
Pole: Wood, 75'	1988
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Pole: Wood, 75'	2002
Pole: Wood, 75'	2009
Pole: Wood, 75'	2011
Pole: Wood, 75'	2012
Pole: Wood, 75'	2013
Pole: Wood, 75'	2021
Pole: Wood, 80'	1958
Pole: Wood, 80'	1967
Pole: Wood, 80'	1974
Pole: Wood, 80'	1975
Pole: Wood, 80'	1977
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<u>Pole: Wood, 80'</u>	1989
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Pole: Wood, 80'	2011
<u>Pole: Wood, 80'</u>	2013
<u>Pole: Wood, 85'</u>	1977
Pole: Wood, 85'	2002
Pole: Wood, 85'	2006
Pole: Wood, 85'	2011
<u>Pole: Wood, 85'</u>	2012
<u>Pole: Wood, 90'</u>	1962
Pole: Wood, 90'	1971
Pole: Wood, 90'	1977
Pole: Wood, 90'	1989
Pole: Wood, 90'	2005
Pole: Wood, 90'	2006
<u>Pole: Wood, 90'</u>	2013
<u>Pole: Wood, 95'</u>	2000
<u>Pole: Wood, 95'</u>	2006

Duke Energy Kentucky
 Case No. 2022-00105
 STAFF-DR-01-004 Attachment 2
 Plant in Service Balance Utility Account 364 at 12/31/2021

Company	Depr Group	Func Class	Utility Account	Vintage	Retirement Unit	Activity	
						Quantity	Activity Cost
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1901	Estimated Retirement	1,140.00	(\$217,728.96)
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1915	Pole: Wood, 35'	1	\$22.22
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1917	Pole: Wood, 35'	1	\$21.06
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1918	Pole: Wood, 35'	1	\$18.91
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1919	Pole: Wood, 35'	1	\$20.33
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1921	Pole: Wood, 35'	1	\$35.85
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1922	Pole: Wood, 35'	1	\$39.78
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1923	Pole: Wood, 35'	1	\$36.37
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1924	Pole: Wood, 30' or less	1	\$35.31
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1924	Pole: Wood, 35'	1	\$42.59
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1925	Pole: Wood, 35'	1	\$44.57
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1925	Pole: steel, all sizes	10	\$619.63
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1926	Crossarm Wood	1	\$6.05
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1926	Pole: Wood, 30' or less	1	\$26.43
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1926	Pole: Wood, 40'	1	\$46.33
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1926	Pole: steel, all sizes	1	\$99.38
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1926	Pole: Wood, 35'	4	\$155.82
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1927	Crossarm Wood	1	\$3.56
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1927	Pole: Wood, 40'	1	\$47.12
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1927	Pole: steel, all sizes	1	\$49.97
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1927	Pole: Wood, 30' or less	7	\$102.66
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1927	Pole: Wood, 35'	4	\$138.26
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1928	Crossarm Wood	3	\$12.97
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1928	Pole: Wood, 30' or less	8	\$118.98
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1928	Pole: steel, all sizes	2	\$166.46
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1928	Pole: Wood, 35'	7	\$252.03
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1929	Crossarm Wood	3	\$18.97
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1929	Pole: Wood, 40'	1	\$47.33
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1929	Pole: Wood, 30' or less	4	\$81.86
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1929	Pole: steel, all sizes	2	\$147.22
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1929	Pole: Wood, 35'	11	\$524.10
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1930	Crossarm Wood	8	\$38.28
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1930	Pole: Wood, 50'	1	\$90.96
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1930	Pole: Wood, 40'	2	\$94.55
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1930	Pole: steel, all sizes	1	\$118.86
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1930	Pole: Wood, 30' or less	12	\$216.00
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1930	Pole: Wood, 35'	13	\$494.85
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1931	Crossarm Wood	18	\$104.31
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1931	Pole: Wood, 30' or less	10	\$169.39
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1931	Pole: Wood, 40'	17	\$897.01
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1931	Pole: Wood, 35'	27	\$950.26
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	1931	Pole: steel, all sizes	16	\$1,785.76

75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: Wood, 60'	19	\$75,489.71
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: Wood, 55'	44	\$138,689.34
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: steel, all sizes	12	\$141,172.40
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: Wood, 35'	78	\$170,031.58
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: Wood, 50'	70	\$219,221.11
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: Wood, 40'	128	\$359,851.62
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Crossarm Wood	778	\$389,544.25
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2012	Pole: Wood, 45'	250	\$719,886.06
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Non-unitized	16	\$9,224.16
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 30' or less	5	\$12,020.22
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 90'	1	\$12,870.98
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 65'	5	\$23,055.20
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 75'	3	\$24,810.79
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 80'	2	\$25,698.02
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 70'	5	\$27,588.42
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Crossarms, Steel/Fiberglass	18	\$40,685.09
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: steel, all sizes	4	\$44,768.02
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 55'	19	\$72,581.16
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 60'	19	\$98,646.62
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 35'	76	\$199,596.90
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 50'	63	\$234,960.11
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Crossarm Wood	409	\$256,039.01
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 40'	168	\$537,339.22
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2013	Pole: Wood, 45'	244	\$816,804.43
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Non-unitized	29	(\$28,878.53)
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: steel, all sizes	1	\$7,716.55
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 30' or less	4	\$15,831.45
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 60'	4	\$33,270.46
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Crossarms, Steel/Fiberglass	14	\$41,125.97
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 55'	6	\$44,817.71
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 50'	26	\$125,170.54
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 35'	62	\$230,363.69
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 40'	117	\$461,178.18
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Crossarm Wood	547	\$574,136.37
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2014	Pole: Wood, 45'	222	\$1,094,213.26
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 65'	4	\$18,555.95
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 30' or less	12	\$51,845.19
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: steel, all sizes	6	\$81,917.75
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Crossarms, Steel/Fiberglass	65	\$85,581.76
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 55'	24	\$96,344.62
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Non-unitized	42	\$98,019.09
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 60'	51	\$200,602.92
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 35'	71	\$260,451.37
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Crossarm Wood	691	\$517,699.54
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 50'	162	\$567,839.18
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 40'	163	\$647,876.67
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2015	Pole: Wood, 45'	310	\$1,368,840.01
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Non-unitized	48	\$1,818.64
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 65'	2	\$17,752.43
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 30' or less	10	\$44,744.87

75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 60'	8	\$57,743.84
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Crossarms, Steel/Fiberglass	37	\$64,386.16
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 55'	20	\$105,329.04
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 35'	53	\$214,794.81
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 50'	49	\$255,250.75
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Crossarm Wood	426	\$506,048.79
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 40'	192	\$930,065.40
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2016	Pole: Wood, 45'	210	\$1,048,313.39
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 30' or less	3	\$6,635.28
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 70'	1	\$6,830.10
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 65'	3	\$15,302.83
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: steel, all sizes	3	\$34,754.15
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 40'	20	\$34,768.12
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 35'	21	\$45,124.50
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 60'	13	\$54,867.56
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Crossarms, Steel/Fiberglass	56	\$58,193.47
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Crossarm Wood	195	\$93,564.73
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 55'	39	\$141,351.39
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 50'	69	\$237,662.52
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Pole: Wood, 45'	73	\$260,930.00
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2017	Non-unitized	169	\$1,741,773.44
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Crossarms, Steel/Fiberglass	19	\$12,605.64
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: Wood, 35'	4	\$13,935.95
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: Wood, 30' or less	2	\$14,378.89
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Crossarm Wood	67	\$45,009.74
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: Wood, 55'	9	\$45,565.53
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: steel, all sizes	2	\$58,121.67
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: Wood, 50'	17	\$76,346.51
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: Wood, 40'	17	\$110,144.16
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Pole: Wood, 45'	34	\$153,737.11
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2018	Non-unitized	344	\$1,489,507.15
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Estimated Retirement	8	(\$2,822.51)
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 65'	2	\$10,300.42
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 70'	3	\$19,350.86
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 30' or less	5	\$19,817.66
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 35'	8	\$31,194.15
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: steel, all sizes	4	\$40,283.41
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 55'	13	\$47,058.65
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 60'	11	\$87,624.07
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 40'	18	\$132,278.28
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 50'	85	\$423,097.80
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Crossarms, Steel/Fiberglass	183	\$438,079.53
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Crossarm Wood	344	\$495,958.17
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Pole: Wood, 45'	145	\$715,983.78
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2019	Non-unitized	324	\$1,048,107.70
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2020	Pole: Wood, 70'	1	\$4,560.35
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2020	Pole: Wood, 65'	2	\$8,905.36
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2020	Pole: Wood, 35'	21	\$46,055.37
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2020	Pole: Wood, 60'	10	\$49,443.70
75084-DE Kentucky Power Deliv - Ele	3640 - ULH Poles, Towers & Fixtures	Elec - Distribution Plant	36400 - Poles, Towers & Fixtures	2020	Pole: Wood, 40'	23	\$53,080.64

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-005

REQUEST:

- a. Identify each account and subaccount in which accumulated depreciation for poles in service is recorded.
- b. Provide a narrative description of how the accumulated depreciation in each such account is calculated.
- c. Identify the corresponding plant account or accounts for each account in which accumulated depreciation for poles is recorded.
- d. Provide an Excel spreadsheet with all formulas, columns, and rows unprotected and fully accessible showing the balance of each such account at the end of each of the last five fiscal years.

RESPONSE:

- a. Accumulated depreciation of poles is recorded to account 108000.
- b. Depreciation expense is calculated multiplying the pole asset balance (asset base) by the total depreciation rate.
- c. The accumulated depreciation for poles is not recorded to a plant account, it is recorded to a depreciation group.
- d. The total accumulated depreciation reserve of poles at December 31 of each of the last five fiscal years is as follows:

2017	\$28,298,723
2018	\$28,527,504
2019	\$28,203,748

2020	\$28,608,273
2021	\$27,920,237

PERSON RESPONSIBLE: Denise Lepisto

**Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022**

STAFF-DR-01-006

REQUEST:

- a. Identify the depreciation rates currently used to calculate depreciation expense for each account containing utility pole costs.
- b. Identify the case in which each such depreciation rate was set.
- c. Identify the useful lives of the poles used to calculate each such depreciation rate.

RESPONSE:

- a. 2.09% is the total depreciation rate.
- b. Case No. 2017-00321.
- c. The average service life for distribution poles in the most recently approved depreciation study is 52 years.

PERSON RESPONSIBLE: Denise Lepisto – a., c.
Jay Brown – b.

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-007

REQUEST:

Identify the total number of distribution poles in Duke Kentucky’s system, and provide a breakdown of those poles based on the year they were installed.

RESPONSE: The total number of company-owned distribution poles in Duke Energy Kentucky’s system is 44,328. The breakdown by installation year is below. Installation dates are unavailable for 281 poles.

Distribution	44,328
NULL	281
1915	4
1917	1
1918	1
1919	2
1920	1
1923	1
1924	6
1925	34
1926	26
1927	67
1928	83
1929	54
1930	69
1931	168
1932	143
1933	227
1934	218
1935	174
1936	44
1937	141
1938	140
1939	169
1940	207

1941	154
1942	209
1943	42
1944	94
1945	131
1946	87
1947	146
1948	144
1949	185
1950	263
1951	244
1952	359
1953	336
1954	390
1955	467
1956	424
1957	493
1958	513
1959	462
1960	351
1961	627
1962	566
1963	624
1964	605
1965	698
1966	517
1967	527
1968	728
1969	677
1970	705
1971	678
1972	802
1973	809
1974	684
1975	586
1976	674
1977	697
1978	613
1979	697
1980	990
1981	644
1982	500

1983	571
1984	449
1985	487
1986	558
1987	715
1988	512
1989	785
1990	550
1991	746
1992	816
1993	790
1994	928
1995	669
1996	368
1997	415
1998	459
1999	369
2000	412
2001	413
2002	445
2003	562
2004	454
2005	412
2006	575
2007	423
2008	494
2009	522
2010	459
2011	579
2012	484
2013	440
2014	382
2015	717
2016	695
2017	724
2018	341
2019	688
2020	708
2021	643
2022	166

PERSON RESPONSIBLE: Christa Strunk

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-008

REQUEST:

Identify the total number of transmission poles in Duke Kentucky’s system, and provide a breakdown of those poles based on the year they were installed.

RESPONSE: The total number of Company-owned transmission poles in Duke Energy Kentucky’s system is 3,976. The breakdown by installation year is below. Installation dates are unavailable for 76 poles

Transmission	3,976
NULL	76
1925	1
1926	1
1930	1
1935	1
1941	1
1942	1
1943	62
1946	1
1949	1
1950	55
1952	1
1953	2
1954	1
1955	7
1956	2
1957	1
1958	126
1959	11
1960	11
1961	162
1962	5
1963	17
1964	334

1965	77
1966	25
1967	17
1969	25
1970	6
1971	120
1972	6
1973	129
1974	177
1975	27
1976	215
1977	50
1978	12
1979	12
1980	12
1981	78
1982	6
1983	172
1984	4
1985	81
1986	4
1987	14
1988	142
1989	34
1990	16
1991	21
1992	102
1993	29
1994	337
1995	74
1996	44
1997	22
1998	20
1999	40
2000	6
2001	34
2002	131
2003	30
2004	95
2005	94
2006	118
2007	87
2008	14
2009	14

2010	20
2011	38
2012	45
2013	51
2014	27
2015	36
2016	17
2017	2
2018	11
2019	46
2020	25
2021	4

PERSON RESPONSIBLE: Christa Strunk

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-009

REQUEST:

Describe in detail the current plan or policy regarding the inspection and replacement of aging or damaged poles in Duke Kentucky's system, and provide a copy of any such plan or policy that has been memorialized in writing.

RESPONSE:

Duke Energy Kentucky has the following programs that inspect and replace poles:

1) Line Patrol Inspection program:

- a. Inspection of all above ground equipment (including visual inspection of poles) for an entire circuit from the sub to the end of the circuit
- b. Takes place every 2 years
- c. Any hazard poles are replaced immediately and priority poles within 60 days

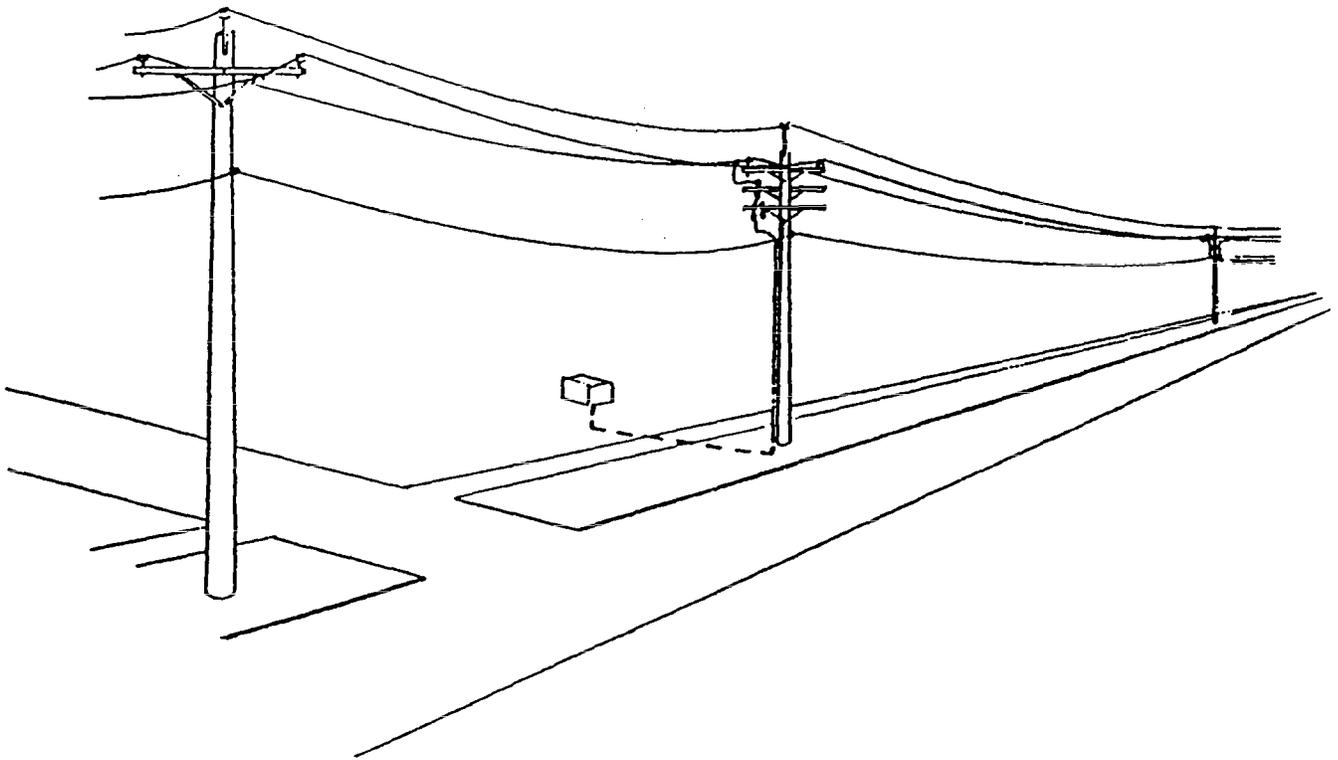
2) Pole Inspection program:

- a. Pole integrity focused inspections (includes ground line pole probing)
- b. Takes place every 12 years
- c. Any hazard poles are replaced immediately and priority poles within 60 days

Please see inspection documentation for both of these programs attached hereto as STAFF-DR-01-009 Attachment 1 and STAFF-DR-01-009 Attachment 2.

PERSON RESPONSIBLE: Nick Melillo

LINE PATROL AND INSPECTION MANUAL



CG&E Co.
U.L.H. & P. Co.
W.H.G. & E. Co.

January 2002

Line Patrol & Inspection Procedure for the
 Electric Overhead and Underground Transmission
 and Distribution System

Each circuit on the system will be patrolled and inspected for feeder configuration, condition of equipment and hardware, line clearances, and the customers (street addresses) it serves.

Generally all line patrol and inspection will begin at the substation related to the feeder name or number.

The circuit will be visually identified at this “source” station before proceeding with the inspection. (Refer to Procedure 2)

Refer to Procedure 1 for Facility Numbering Verification.

Verification of Information on Feeder Map

The following information (I thru X) will be verified with the feeder map;

- I Line location with respect to streets, railroads, rivers, lakes, airports, etc.
- II Conductor size (Applies to 2.4/4KV, 7.5/13KV and 20/34.5VK ONLY)
 - A. When two wires of different size are strung together, the symbol for the smaller size is used and the larger noted.
 - B. Aluminum wire is not noted when the “equivalent” copper wire symbol is used; i.e., for No. 4/0ACSR the No. 2/0 B.C. symbol is used.
 - C. When it is necessary to note wire size, the aluminum size will be noted.

EXAMPLES	(Symbol for Ø 1 & Ø3 NO. 2 COPPER	
FOR C & D	 Ø2 & N – 4/0AL	 Ø1-NO.2 Ø2 & N-1/0AL

- D. When the conductor size on a “2Ø&N” line is larger than the smallest symbol in the wire size key on that particular feeder, note the wire size by the “2Ø&N” symbol on map.
- E. NO. 4 (Indicates B.C. or W.P.)
 NO. 4AL (Indicates ACSR)
 NO. 6A/8A (Indicates copper weld)

- F. Aerial Cable: Symbol  is used and notes 3Ø, 2Ø&N, or 1Ø. When space is limited, underground symbology can be used and "A.C." can denote aerial cable.

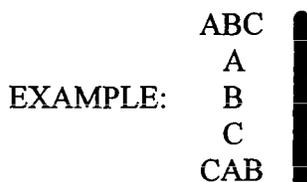
(NOTE: When 1Ø aerial cable is fed off 1Ø open wire, it is not necessary to note "1Ø".)

- G. Note "Trans. Static" when it is used for a distribution neutral.

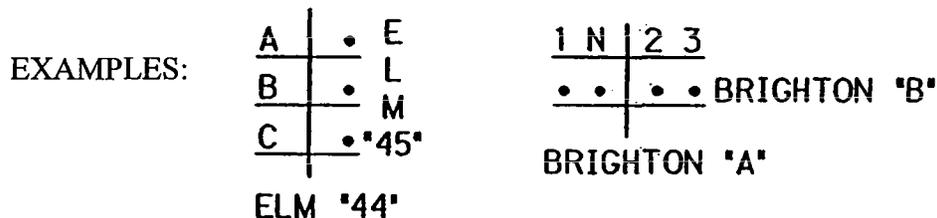
III Phasing configuration (Refer to Procedure 2)

- A. Phasing is shown on feeder map at all terminal poles, numbered switches, and points where phasing changes. Phasing is also shown at a sharp turn, edge of a page, or at a continuation mark. Phasing on taps are identified. Additional locations may be marked as needed. Face in same direction the phasing is read.

Vertical phasing is shown only where the phasing changes.



- B. A "stick" diagram is shown where two feeders of the same voltage exist on the same pole line, either side by side or one above the other.



- C. Phasing Table (used on all 345KV, 138KV, 69KV, and some 33KV)

The phasing follows the line facing away from the numbered station from which the feeder number originates. (Numbers may be either increasing or decreasing.) All taps are phased facing station to be served or facing feeder tie.

The operating pole numbers will be noted on the map at every terminal pole, numbered switch, and when convenient at taps and main road intersections. This will help tie the phasing table to the map.

TOWER OR POLE	PHASE	CONDUCTOR	STATIC
FACING STA.	C B A	3-4/0 H.D.B.C.	1-134600 CM A.C.S.R. 12/7
FACING AWAY FROM (STATION NAME)			
1-16	A B C	3-4/0 H.D.B.C.	1-NO.2 H.D.B.C.
17-35	A C B	" ①	1-1/0 A.C.S.R.
36	A B C	"	_____ ②
37-40	A B C	"	1-1/0 A.C.S.R. (DIST.)
3761 NO. 18	A . i 3 B . 7 C . 6 1	③ "	_____
BURN STA.	EAST ABC SOUTH CBA	④ "	1-NO.2 H.D.B.C.
TAP TO RYAN STA.			
20-24	A B C	3-4/0 H.D.B.C.	1-NO.2 H.D.B.C. ⑤

- ① Note the wire size when it changes, but do not repeat static size when the conductor size changes, or the conductor size when the static size changes.
- ② When there is no static size to be noted, fill in the space with a line _____.
- ③ When two feeders are joint, the pole top will be shown on both feeders.
- ④ Note both feeds in one space when there is a loop feed.
- ⑤ Show the new, or repeat both the conductor and static sizes under each new heading.

Combining phasing blocks on transmission feeders

When phasing changes for less than 5 spans and then returns to same, phasing that is on the pole where change began, then it will not be necessary to show change on separate phasing block.

When phasing change is for 5 spans or more, then a separate phasing block should be shown.

IV Line switch locations (Refer to Procedure 2)

- A. Switch number, pole location number, and phasing is shown.
- B. Symbol indicates whether single pole or group operated, and whether loadbreak or non-loadbreak. (Refer to standard key to symbols sheet, Exhibit 1)

V Terminal pole locations (Refer to Procedure 2)

- A. Feeder terminal poles; Switch number, pole location number, and phasing is shown.
- B. Terminal poles where either “loop feed” or “feedback” is possible, such as from customer’s generator or another feeder source.
 - 1. Switch number, pole location number, and phasing is shown.
 - 2. Red plastic tags, “loop feed” and “Danger Feedback”, are mounted on crossarm of terminal pole. (Refer to standard handbook drawings for actual placement of these tags.)
- C. Radial feed to subdivisions, individual customers, etc.; Pole location number (field fabricated with reflective stickers on crossarm or pole top) is shown.

VI Fused or “coppered” junctions

- A. Fuse size is shown if other than the size indicated in the standard note by the feeder name. Junction fuse sizes are determined by engineering.
- B. Symbol indicates whether fused or coppered, and whether loadbreak or non-loadbreak. (Refer to standard key to symbols sheet, Exhibit 1.)
- C. When tap has only one standard transformer with no fuse protection, the fuse at the beginning of tap is a “transformer fuse”.

VII The phase notation is shown for all single phase taps off either a 3Ø or 2Ø & N line.

(NOTE: 2.4/4KV feeders have “phase areas” along 3Ø and 2Ø & N lines. Single phase transformers connected to 3Ø and 2Ø & N lines of 7.5/13KV and 20/34.5KV feeders are generally connected to alternate phases along the line.

VIII Open points between two different feeders or in a “loop” on the same feeder are shown as follows:

- A. Switches are noted “Norm Open”. Cutouts are noted “Open”.
- B. Span Dead or Spans Dead: Conductor exists between poles but “open” at both ends.
- C. Open: Conductor exists on both sides of pole, dead ends on either pole and/or crossarms.
- D. Span Out: Conductor does not exist between poles, but it is possible to install a span for temporary feed during emergencies.

NOTE: See “Exhibit 2” for various situations involving VIII-B, C, and D.

- IX Street Index and street addresses noted on feeder map.
- A. Index will show only the addresses (customers) served by a particular feeder.
 - B. Street numbers are shown on feeder map where possible. The last address served on a radial feed and the address “break” at all disconnect switches and “open” points are desirable.

X Equipment

- A. Substations: Check equipment to make sure feeder diagram is correct where applicable. Enter substation only with Personal Protective Equipment.
 - 1. Make sure each station has correct name tag on gate.
 - 2. Check fence and locks for damage caused by vandals.
 - 3. Check insulators including the bushings of transformers, regulators, reclosers, etc.
 - 4. Check for oil leakage from transformers, regulators, etc.
 - 5. Make sure all tags are in place and are readable.
 - 6. Check for tree clearance problems, or trees growing inside station fence.
- B. Capacitors:
 - 1. Check size (if noted on equipment).
 - 2. Check controls. Don't try to determine what type is used at a particular installation. This control information is available from the Electric Operations Section, Rm. 667 Annex.
- C. Regulators:
 - 1. Check size (if noted on equipment)
- D. Reclosers: Check size, “by-pass” cutouts, fuse doors hanging on crossarm brace, etc.
- E. Sectionalizers: Check size
 - 1. 7.5/13KV circuits-1Ø, 2Ø, or 3Ø (oil type and/or dry type)
 - 2. 20/34.5KV circuits-3Ø only (vacuum type)
- F. Boosters or Buckers (Identify connections)

NOTE: There are “Auto-boosters” installed on 7.5/13KV feeders in the Eastern area.

- G. Lightning arresters (Diagram only)
 - 1. Station, as shown on station one line diagram (Refer to X-A)
 - 2. Terminal pole – Generally, all installations built before 1979 have the lightning arrester connected between the cutout or disconnect and line. Since 1979, all installations were built with the arrester connected between the cable termination and cutout or disconnect.

H. Transformers

1. “Step-down” or “Step-up” transformers: Verify size and voltage.

Examples: 100KVA-20-2.4KV-1Ø
 75KVA-7.5-2.4KV-1Ø
 300KVA-7.5/13KV-2.4/4KV-3Ø

NOTE: The 20KV step-down transformers have self-contained primary current limiting fuses.

2. Padmount Transformers:
 - a) Verify size and pad number

I. Sectionalizing modules (URD)

1. Verify pad number

NOTE: All changes and/or additions involving items I thru X made to feeder maps and diagrams as a result of field inspection will be made in color as follows:

1. Red for additions and changes
2. Green for deletions
3. Blue for street additions, relocations, and/or name changes, railroads and rivers

Inspection of Equipment and Hardware

All Equipment and Hardware will be inspected as follows:

I. Towers

- A. Steel loose, bent, rusty (needs paint) or missing
- B. Numbers and “Danger Hi-Voltage” signs
- C. Base of tower rusted
- D. Involved with landslides or “wash outs”
- E. Objects hanging on or near tower.
- F. Flashing lights on tower (FAA)

II. Poles

- A. Check condition of base of pole; rotting, termites, etc.
- B. Involved with landslides or “wash outs”, leaning for any reason
- C. Objects hanging on or near pole
- D. Burning pole, crossarms, and/or braces
- E. Ground wire broken
- F. Crossarms, or braces broken
- G. Check for bird holes (woodpeckers)
- H. Vehicular damage

NOTE: Communities or municipalities often have permission to post/attach traffic control and similar signs on utility poles. Business, political, and yard sale or similar signs should be removed.

- III Guy wires:
 - A. Broken or too slack
 - B. Guy insulators broken or missing
 - C. Guy wire wrapped around another guy, conductor, common neutral, secondary, etc.
 - D. Guy guard damaged or missing
 - E. Anchor rod corroded, bent, or eroded
 - F. Grips; loose, damaged

- IV Insulators:
 - A. Flashed (discolored generally white or yellow)
 - B. Dirty insulators
 - C. Tracking/burning (burn path along crossarm to ground)
 - D. Broken

- V Conductors:
 - A. Broken strands
 - B. Flashed
 - C. Loose spacers, dampers, tie wires, or “wrap locks”
 - D. Too much sag
 - E. Insulators separated from pin or pin and insulator pulled loose from crossarm
 - F. Pulled away from insulator (floating)

- VI Cutout devices: (Fused or Coppered, Loadbreak or Non-Loadbreak)
 - A. Broken or door missing (4KV)
 - B. Load break shield broken or missing
 - C. Fuse link hanging or cut out status different than what is shown on circuit map

- VII Lightning arresters:
 - A. Broken or missing
 - B. Ground wire disconnected (isolater blown)
 - C. Disconnected from line

- VIII Transformers, Regulators, Reclosers
 - A. Leaking Oil
 - B. Check for cutouts hanging open and/or fuses blown
 - C. Needs painting
 - D. Damage by vehicles or vandals

X Other Conditions: In addition, report any abnormal condition on our system.

All items that might need immediate attention should be called in to the Trouble Desk, (513) 287-2901, or Call Center (513) 421-9500.

Clearances to Overhead Lines

Clearances to overhead lines will be observed as follows (Refer to Cinergy T&D Standards Drawing Numbers 99005 and 99006)

- I
 - A. Tree clearance – vertical and horizontal. Consider annual growth.
 - B. Note potentially dangerous timber at edge of right-of-way (dead, rotten, washed out, etc.)
 - C. For tree conditions that need immediate attention, call Electric Trouble Desk, (513) 287-2901.
- II Buildings or structures on right-of-way, either under the line or near the line.
- III New power lines installed under or near the circuit being checked (Company or others).
- IV Railroad, waterways, ponds, etc.
- V Miscellaneous: TV antennas, satellite dishes, tree houses, swimming pools, backyard play rigs, etc.

General guidelines to be followed while checking Overhead and Underground Feeders

- I Records and Reports
 - A. Circuit is signed out in office, date out, date completed.
 - B. Emergency patrols are assigned by supervisor.
 - C. Priority concerns should be reported to Trouble.
 - D. Including witnessing an accident.
 - E. Handheld data collector for reporting regular maintenance.
 - F. Customer complaints handled as required by above guidelines.
 - G. Reports (copy attached) are distributed for workers in close proximity to lines; may require trouble call. (See Exhibit #3)
 - H. When in doubt, consult with supervisor or Trouble Desk.
- II Wearing Apparel (Personal Protective Equipment)
 - A. Inside substation fence
 - 1. Hard Hats – Within the fenced area of a substation, a hard hat is required at all times. The **only** exception – you may remove your hard hat when you are inside a control building or switchgear. However, if you believe there is

potential for a head injury, please keep your hard hat on. This would be for instances involving low-hanging steel, maneuvering within panels, etc.

2. Long-Sleeve Shirts – Long-sleeve shirts are required in the vicinity of any switching (12KV or higher). Long-sleeve shirts are also required if you will be in the vicinity where energized leads will be lifted (i.e., CB's, TB's, control Room, etc.). In all other circumstances, you may wear a short-sleeve shirt within the substation. Please be certain it is 100% cotton, or made of flame retardant materials.
3. Footwear – Sturdy, industrial-grade work shoes or boots with slip-resistant soles are required while inside the substation.
4. Rubber Boots – If there are grounds installed for project construction at a substation, you must wear rubber boots. Please check with the crew leader to be sure you are dressed appropriately. If you are instructed to wear rubber boots, either wear them or conduct your business from outside the fence.

B. Line inspection outside substation fence

Apparel for field work daily

1. Work boots or similar, with heavy, gripping sole, rugged material, and providing ankle support.
2. Long pants, trousers, formidable to resist injury to legs walking line or in areas such as construction sites or substation.
3. Cotton or flame-retardant shirt.
4. Hard hat where appropriate and for identification when away from vehicle.
5. Red/orange vests, when walking in right-of-way or traffic for visibility and safety.
6. Patrol personnel are provided leather gloves, walking sticks, rain suits, dielectric boots, binoculars, safety sun glasses, and 4-wheel drive vehicles with strobes, machetes, and cell phones. Each person is responsible to use proper materials in a safe manner to do his job safely and as proficiently as possible, using good sense, awareness and being considerate of customers and traffic flow. When in doubt, consult supervision or another patrolman.

III Roadways:

Drivers can and should be used for safe operation in many instances.

Use of a well-marked vehicle, preferably equipped with amber lights and identification.

Awareness of traffic and consideration of safety is critical. Use of berm, drives, parking lots, and field glasses are often advantageous.

When out of vehicle, hard hats and vests increase visibility for other drivers.

IV Right-of-way and Rear Lot

Before traversing any right-of-way in a vehicle, beware of soil condition, crops, fences, drainage culverts, and creeks. Ascertain ownership and permission. Use driveways when available.

When traversing on foot, be aware of same conditions, animals in area, use walking stick, gloves, binoculars, carry a phone, make someone aware of your location. Don't damage fence. Reclose gates immediately in either direction.

Always attempt to procure permission from landowner. Often he will help with useful information about access and terrain, livestock, drives and gates.

View all line, equipment and structures as closely as possible to identify pole rot, bird holes, broken grounds and guys, missing tags, as well as chipped insulators, burn marks and broken strands. This will require more than one angle of sight.

If a driver is in vehicle, communicate progress or any change of plans (i.e., unable to cross creek and must retrace steps to meet vehicle). Pole numbers and maps are invaluable for tracking progress and approach. Update maps to show points of access not previously recorded, uncrossable creeks, any information helpful to future patrols and maintenance crews.

V Reporting

Report any damage, deterioration or encroachment accurately in appropriate form. Any dangerous condition should be called in to Trouble Desk immediately. (i.e., conductor sagging to 6½' in a pasture or pole broken at base)

Written reports or entries in data collectors should include pole number (even if tag missing and note "needs tagging"), street address and/or details for locating (may attach copy of map) neighborhood, circuit name and/or number, bucket truck accessibility, an accurate description of trouble reported and helpful information. (i.e., call customer to schedule work [include name and phone number] or locked gate)

VI Auto Accidents or Personal Injury

Call Trouble Desk immediately (513) 287-2901 or 1-800-262-3000, ext. 2901.

VII SUMMARY

- A. Report all abnormal conditions.
- B. Call your supervisor when in doubt.
- C. All line patrol records are kept on file in the office.

Additional Guidelines in Regard to Information Shown on Feeder Maps and Diagrams

- I Show other power companies that cross under or over our Company's lines.
- II Show "non-connected" line crossings.
- III Underground feeds are identified at the cutout or at the point of overhead to underground termination. Radial feeds use the same number on the pole top as the pole identification tag. A continuous U.G. loop is assigned a 3, 4, or 5-digit series number and it is posted on the pole top.
- IV When a substation is fed by two feeders, show the feeds on both feeder maps and diagram (where applicable).
- V On standard padmount transformer installations larger than 250-KVA-1Ø or 500KVA-3Ø, show the customer's name, transformer size, and pad number on the feeder map.

When the padmount transformer is 250KVA-1Ø or 500KVA-3Ø and smaller, show only the pad number on the feeder map.

Attachments

- Procedure 1
- Procedure 2
- Exhibit 1
- Exhibit 2
- Exhibit 3

Procedure 1

PURPOSE

The purpose of this procedure is to provide an explanation of our facility numbering systems.

Facility Location Number (pole tag)

I FACILITY NUMBERS (Location)

- A. All transmission and distribution poles are to be identified in the field by a numbered aluminum tag or reflective decal similar to that in Exhibit A. This will include poles owned by others except those contacted for clearance purposes only, which will not be tagged. The pole number will be followed by the letter “E” if owned by our Company, but the letter “C” if owned by others. An exception to this is the use of the letter “T” to indicate a CG&E Co.-owned transmission pole in the Commonwealth of Kentucky.
- B. Underground facility numbers are to identify all equipment containing cable terminations or switching. The facility number should be made of aluminum or reflective decals.

II NUMBERING PLAN

- A. The number described above is known as the “location” number and the method of assigning it is described in the following three ways.
 - 1. Existing sectional maps covering the entire system show all poles, pads, and sectionalizers installed in the field. The facilities on each map are numbered consecutively starting with 1 and continuing until all poles on that map have a number. The complete pole number consists of the map number followed by the pole number, and then the ownership letter.
 - 2. New pole numbers are assigned in “PassPort” (work management system) with the county, state, pole number, then ownership – HMO-945E
 - 3. New underground facility numbers are assigned in “PassPort” (WMS) with county, state, consecutive facility number.

III EXISTING MAP NUMBERS

- A. Except for the 200’ maps in Hamilton County, all map numbers indicate by a symbol the county in which they are located. A list of the county symbols follows:

<u>OHIO</u>		<u>KENTUCKY</u>	
Adams County	A	Boone County	BN
Brown County	B	Campbell County	CA
Butler County	BT	Grant County	G
Clermont County	C	Kenton County	K
Clinton County	CT	Pendleton County	PN
Hamilton County	H		
Highland County	HL		
Montgomery County	M	<u>INDIANA</u>	
Preble County	P	Dearborn County	D
Warren County	W		

- B. For rural areas, 400' per inch maps are used, and for these the map number precedes the county symbol. For example, 47CA-45E indicates that Pole 45 on Campbell County Map 47 is a pole owned by our Company.
- C. In metropolitan Hamilton County, 200' per inch maps are used and these have letter and number coordinates, but have no county designation. S12-11C, for example, is pole 11 on map S12 and is owned by others.
- D. When rural areas become congested, the 400' per inch map is broken down into four 200' per inch maps. The 200' maps retain the same number as the 400' per inch map from which they originated and are designated by the *quadrant in addition to map number. Example 120H/NW.
- E. In some congested areas of Butler, Warren, Kenton, and Campbell Counties, 200' per inch maps are used and on these maps the number follows the county symbol. BT 9-21E, for example, indicates pole 21 on Butler County map 9 is owned by our Company. These 200' per inch areas were mapped prior to the present system and all future congested areas in all counties will be mapped as indicated in the preceding paragraph.
- F. Due to very congested areas, maps numbered N8, O7, P8, P9, R19 (Hamilton Co.), CA6 (Campbell Co.), K51 (Kenton Co.) have been changed to a scale of 1" = 100'. They are designated by a *quadrant in addition to map numbers. Example, N8-NE.
- G. The maps themselves will show only the numbers 1, 2, 3, etc., alongside the pole with the map number in the corner. The pole tag, however, will give both map and pole number and also the ownership. Example, 40BT-110E.

NOTE: *The quadrant designation appears only on the maps. The pole tag does not indicate the map quadrant.

IV NEW MAP NUMBERS

OHIO

Adams County	ADO
Brown County	BRO
Butler County	BTO
Clermont County	CLO
Clinton County	CTO
Hamilton County	HMO
Highland County	HLO
Montgomery County	MNO
Preble County	PRO
Warren County	WRO

KENTUCKY

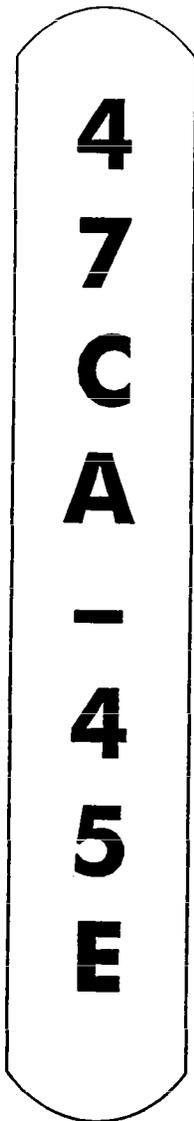
Boone County	BNK
Campbell County	CAK
Grant County	
Kenton County	
Pendleton County	

INDIANA

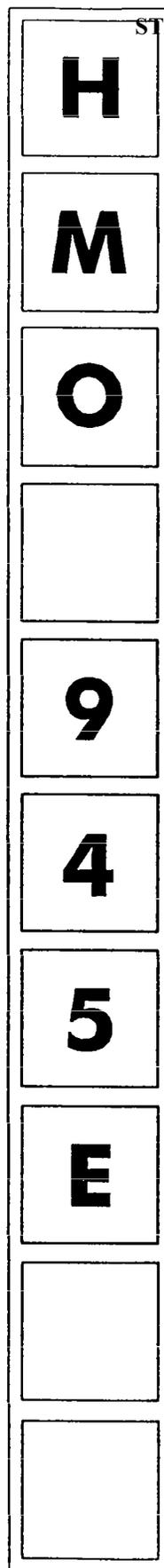
Dearborn County

Attachment
Exhibit A

Exhibit "A"



Example:
Existing Pole Tag
(Aluminum)



Example:
New Pole Tag
(Plastic)

Procedure 2

PURPOSE

This procedure describes how substations, transmission and distribution feeders and street light circuits are designated and marked.

GENERAL

Refer to the following:

Procedure 1

Cinergy Standards Underground Cable Labeling System

I SUBSTATIONS

- A. An identifying name and number is assigned to each substation by the Electric System Operations Department. Substations are identified with an engraved laminated plastic name tag attached to the substation gate. Switches and other equipment in the station are numbered and labeled as shown on the substation construction drawing.

II FEEDER DESIGNATION (Distribution)

- A. 2.4/4kV – 3-phase, 4-wire feeder. This is a feeder with a solidly-grounded neutral at the supply transformer. It is designated by the name of the originating substation, followed by a letter. A transfer feeder is identified by “T”.

Examples: Evanston “A”, Woodlawn “T”.

Phase designation is normally 1-2-3 and N. However, in the Oxford and Reading areas, the phases are designated A-B-C and N because the voltages are displaced by a phase angle shift from the normal. The feeders with phases designated A-B-C and N cannot be tied to feeders with the normal phasing 1-2-3 and N unless one feeder is de-energized.

Examples: Fuhrman “A” and Reading “A”.

- B. 13.2 kV feeder. This can be a 3-phase, 4-wire wye-connected feeder with a solidly-grounded neutral at the supply transformer, or a 3-phase, 3-wire, delta-connected feeder without a neutral at the supply transformer. Phase designation is A-B-C. A common neutral or a static wire is associated with these types of feeders. The 3-wire, delta-connected feeder will not have phase to neutral (ground) load connected to it. The 4-wire, wye-connected feeder normally will not have phase to neutral connected to it because of the relay settings of the circuit breakers in the substations. A Distribution Operations Area Engineer may permit a very light phase to neutral load to be connected to a 4-wire feeder when there are no other facilities to supply the load. Either type of feeder is designated by a 3- or 4-digit number.

- C. 7.5/13kV – 3-phase, 4-wire feeder. This is a feeder with phase to neutral loads. It is designated by the name of the originating substation followed by a 2-digit number in the 31 through 49 series.
Examples: Terminal “41”, Elmwood “38”, Otterbein “41”.
- D. Phase designation is normally A-B-C and it has a common neutral. However, on a feeder designated “31” or “32”, the phases are designated 1-2-3 because the voltages are displaced by a phase angle shift from the normal. The feeders with designated phasing 1-2-3 cannot be tied to feeders with normal A-B-C phasing unless one feeder is de-energized.
Examples: Pleasant Plain “31”, New Hope “31”.
- E. 20/34.5kV – 3-phase, 4-wire feeder. This is a feeder that has phase to neutral loads. Phase designation is A-B-C and it has a common neutral. It is designated by the name of the originating substation followed by a 2-digit number in the 51 through 59 series.
Examples: Brown “52”, Morgan “52”.

III FEEDER DESIGNATION (Transmission)

- A. 33kV – 3-phase, 4-wire numbered feeder. This is a feeder with a solidly grounded neutral at the supply transformer. It will not have phase to neutral load. It may have a common neutral or static wire. Phase designation is A-B-C. It is designated by a 3- or 4-digit number. These feeders are in the transmission power pool and use transmission clearing accounts.
Example: “6859”
- B. 33kV – 3-phase, 3-wire numbered feeder. This is an ungrounded feeder. Phase designation is A-B-C. It may have a static wire or a common neutral. It is designated by a 3- or 4-digit number. These feeders are in the transmission power pool and use transmission clearing accounts.
Example: “3856”

When numbered distribution feeders have various phase to neutral loads connected to them, the circuits will then be designated as a “30”, “40”, or “50” series distribution feeder.

- C. 69kV, 138kV and 345kV feeders. These are 3-phase, 3-wire feeders. Phase designations are 1-2-3 and they have a single or double static wire associated with the feeder.
 - 1. Feeder designations for 69kV and 138kV are by 3- or 4-digit numbers.
Examples: (69kV) “863”, “1269” (138kV) “1782”
 - 2. Feeder designations for 345kV are by station names followed by 345kV. A 4500 series number, shown in parenthesis, is assigned for plant and general accounting purposes.
Example: “Miami Fort – Terminal 345kV (4514)”

IV FEEDER DESIGNATION (Numbered Feeders)

- A. The first number on the left of a 3-digit number, or the first two digits on the left of a 4-digit feeder number, identifies the substation. Each generating station and substation is assigned a number from 1 to 399.
- B. The second digit from the right of a 3- or 4-digit feeder number identifies the voltage.
1. 13kV is designated by 0, 2, or 3.
 2. 33kV is designated by 5.
 3. 69kV is designated by 6.
 4. 138kV is designated by 8.
 5. Examples: “404”, “1326”, 853”, “1269”, “5485”
- C. The digit on the right identifies the circuit number of a particular substation.
- Examples: “1326”, “853”, “1269”, “5485”
1. “1326” is a 13.2kV circuit #6 originating in substation 13-Charles.
 2. “853” is a 33kV circuit #3 originating in substation 8-Oakley.
 3. “1269” is a 69kV circuit #9 originating in substation 12-Mitchell.
 4. “5485” is a 138kV circuit #5 originating in substation 54-Foster.
- D. Circuits that terminate at more than one company substation are assigned either substation designation number.
- Examples: “1326”, “853”, “1269”, “5485”
- E. All 345kV feeders are designated by the name and voltage of the circuit followed by a 4500 series number in parenthesis. The entire designation is used for all operating and dispatching purposes.
1. Example: “Tanners Creek-Miami Fort 345kV (4504)”
 2. When an additional circuit is placed in service between the two terminals, the designation will then read “Miami Fort-Tanners Creek” followed by (a new 4500 series number) for the second circuit.
 3. A number in the 4500 series, enclosed in parenthesis, will be indicated on feeder maps and diagrams issued by the Electric Distribution Engineering Department. This number is used for records and accounting purposes.
- Examples: (4501) (4502)

V FEEDER DESIGNATION (Local Loop Feed)

- A. To reduce retagging of cables due to operational changes, certain local loop feed cable systems will be given a designated name. Feeder numbers will not be used. Feeder diagrams will show the designated loop name.
- Example: “Queens Loop I”

VI FEEDER MARKING IN THE FIELD

- A. Distribution feeders of all voltages will be marked in the field with a laminated plastic feeder name tag and phase markings installed as follows:

1. At feeder terminal poles of originating substations, a feeder name tag will be installed on the face of the cable termination arm. The terminal pole disconnect switch will be identified with a switch number. When a disconnect switch does not exist, install a laminated plastic tag indicating the pole location number. The pole location number will be shown on the feeder map.
 2. A feeder name will not be installed at the feeder terminal pole of stations other than originating substations. The disconnect switch will carry a switch number. When a disconnect switch does not exist, the terminal pole will be identified with a pole location number engraved on a laminated plastic tag and will be shown on feeder maps.
- B. Where the feeder is supplied from an originating substation by overhead circuits, the feeder name tag will be installed in one of the following ways:
1. At the first pole out of the station if overhead and not a buckarm.
 2. When the first pole from the substation is a buckarm pole, install the feeder name tag on the road-side of the double arm supporting the conductors from the station.
 3. When the first pole from the substation is vertical construction, install the feeder name tag on the road-side of the pole.
- C. Phases will be marked in the field as follows:
1. On the high and low side take-off structures of substations.
 2. At feeder terminal poles and other 2- or 3-phase terminal poles supplying local loop and radial cable systems with 2 or more loop-through single-phase and/or three-phase transformers on the loop system or radial tap.
 - a) Terminal poles supplying a radial tap with 1 single-phase and 1 three-phase transformer, or an individual single-phase or an individual three-phase transformer, will not require phase identification tags.
 3. At all disconnecting switches.
 4. At the first pole out of the substation when overhead and not a buckarm.
 5. When the first pole from the substation is a buckarm pole, mark phases on the first pole in all directions from the buckarm pole.
 - a) Phase identification tags will always be installed on the station side of poles.

VII SWITCH DESIGNATION AND MARKING

All switches, 3-phase main-line disconnecting jumpers, and all terminal poles for underground cables will be assigned a specific designation on feeder maps, and in the field, to identify isolation points.

- A. Main-line switches will be identified with a laminated plastic switch tag. Terminal pole switches (fused or unfused), will be identified with a laminated plastic switch tag and a red “Danger Feedback” tag where there is a dual feed and/or feedback possible. Switches associated with reclosers and

sectionalizers (oil or vacuum), installed in main-lines, will be identified with a laminated plastic switch tag if they can be used as a tie point.

- B. When a main-line switch is not at the cable termination on the terminal pole, or where dual feed or feedback is possible, the terminal pole will be marked with the series switch number on a laminated plastic tag. The tag will be installed on the face of the cable termination crossarm, if available, or on the termination side of the pole. A red "Danger Feedback" tag is also installed. The series switch number and pole location number will be shown on the feeder map. *Tags will be installed on switch or cutout pole.*
 - C. Fused cutouts and/or disconnects (with fuses in series) that supply an underground cable radial tap, where there is no dual feed or feedback possible, will be identified with a laminated plastic pole location number tag.
 - 1. If there is more than one set of cables on the same terminal pole, and a wiring diagram is not available, each set of switches will be identified with the pole location number followed by a sub-number.
Example: L16-437-1, L16-432-2, or HMO-1321-1, HMO-1321-2.
- NOTE: Existing non-standard installations may be tagged differently.
- D. Where cutouts and/or disconnects do not exist, the terminal pole will be identified with a plastic pole location number mounted on the face of the termination crossarm or pole.
 - E. Aerial cable taps that feed transformers or stations that cannot be seen from the terminal pole will also be identified with a laminated plastic pole location tag.
 - F. Where there is a possibility of error in identifying both ends of a cable feed, a duplicate of the terminal pole laminated plastic tag will be installed at the cable termination in the vault, station or pad. (not applicable for inspectors)
 - 1. See Paragraph A of this section for cases where there is dual feed and/or where feedback is possible.
 - G. A ground switch will be designated by the letters GR followed by a two-digit number.
Example: GR-14 (not applicable for inspectors)
 - H. On underground distribution systems with padmount transformers or URD "pit" transformers, the elbow connectors or disconnects on the transformers will be designated by the letters UL. New pads are installed with UL numbering designations 1 through 12 where applicable. The tags will be attached to the cable at the elbow connectors. When the transformer has internal switches and cable terminations, the tag will be attached to the cable termination associated with the appropriate disconnect switch.

1. When the transformer has internal oil switches and elbow connectors, the point of isolation is the visibly-open elbow connector, not the oil switch.
- I. Disconnecting Jumper Markings – a series of number tags (DJ10 and up) is assigned to identify disconnecting jumpers only on three-phase main-lines. On taps from main-lines, DJ symbols only will be shown on the feeder maps, as numbers are not assigned. On two- or three-phase lines which do not have disconnecting jumpers on all phases, symbols will be shown on the feeder maps accompanied by a statement such as: “On Phase ‘c’ only”. Numbers are not assigned for these conditions.
 1. Only installations designated by the Distribution Operation Area Engineers will be assigned numbers and be indicated on the feeder maps.
- J. Overhead Supplied From Underground – At locations where an underground system feeds overhead, other than feeder terminal poles, the pole with the termination will be identified with a laminated plastic pole location number tag and a laminated plastic tag marked “CAUTION - TERMINATION ALWAYS ENERGIZED” or ‘CAUTION - OVERHEAD FED BY UNDERGROUND”.

VIII RESPONSIBILITIES – NAMES AND NUMBERS

- A. Assignment of Numbers
 1. The sponsoring Engineer or Technician will assign the UL numbers and radial tap pole location numbers on approved construction drawings. (not applicable for inspectors).
- B. Assignment of Names to Local Loop Feed Cable Systems
 1. The Distribution Operations Area Engineer assigns the names to the cable loop systems. These underground systems supply new, industrial, commercial and residential loads. The cable loops have several switching points and could have the ends supplied from different feeders. The Underground Drafting and Records Section make separate feeder maps for each cable loop.
Example: Queens Loop I”. (not applicable for inspectors).
- C. Responsibilities for the Fabrication, Verification, and Installation of Switch Numbers.
 1. The person in charge of the construction crew must verify that all of the project’s switch and phase tags are properly installed. (not applicable for inspectors).
 2. The Distribution Operations Area Engineer, who prepares a switching request for a new feeder or feeder rearrangement, is responsible for confirming that all terminal poles and switches are properly labeled when the switching request is written. (not applicable for inspectors)
 3. The Distribution Operations Area Engineer is responsible for notifying the Underground District to change labels and cable tags when an overhead circuit rearrangement involves an underground system.

D. Removal of Numbers

1. Tags need not be returned but any changes should be addressed to Feeder Group, Room 467A, 4th & Main, for updates on feeder and URD masters.

TRANSMISSION AND PRIMARY CIRCUITS

DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL		
	PRESENT	PROPOSED	PRESENT	PROPOSED	EXISTING	PROPOSED	REMOVED
TRANSMISSION CIRCUITS							
OVERHEAD TRANSMISSION	T, 3, 2/OAAACB7 S, 1, 2/OAAACB7 	T, 3, 2/OAAACB7 S, 1, 2/OAAACB7 		N/A			REMOVE T ABANDON
UNDERGROUND TRANSMISSION	T, 3, 2CUISKVUG 	300' T, 3, 2CUISKVUG 		N/A			REMOVE T
FOREIGN TRANSMISSION							REMOVE FT ABANDON
PRIMARY CIRCUITS							
1PH PRIMARY OVERHEAD	P, 1, 4CUBS N, 1, 4CUBS 	P, 1, 2/OAAACB7 N, 1, 2/OAAACB7 		N/A			REMOVE ABANDON
1PH PRIMARY UNDERGROUND	P, 1, 2ALISKVCN 	233' P, 1, 2ALISKVCN 	CABLE AND CONDUIT MAPS				REMOVE
2 PH PRIMARY OVERHEAD	P, 2, 4CUBS N, 1, 4CUBS 	P, 2, 2/OAAACB7 N, 1, 2/OAAACB7 		N/A			REMOVE ABANDON
2 PH PRIMARY UNDERGROUND	P, 2, 2/OALISKVCN 	245' P, 2, 2/OALISKVCN 	CABLE AND CONDUIT MAPS				REMOVE
3 PH PRIMARY OVERHEAD	P, 3, 2/OAAACB7 N, 1, 2/OAAACB7 	P, 3, 2/OAAACB7 N, 1, 2/OAAACB7 		N/A			REMOVE ABANDON
3 PH PRIMARY UNDERGROUND	P, 3, 2CUISKVUG 	300' P, 3, 2CUISKVUG 	CABLE AND CONDUIT MAPS				REMOVE
3 PH PRIMARY UNDERGROUND (SEPARATE NEUTRAL)	P, 3, 500CUISKVUG N, 2/OAUB7SD 	305' P, 3, 500CUISKVUG N, 2/OAUB7SD 	CABLE AND CONDUIT MAPS				REMOVE
CONDUCTOR CONNECTION POINT							
CONDUCTOR CHANGE	P, 3, 4/OAAACB7 N, 1, 2/OAAACB7 	P, 3, 2/OAAACB7 N, 1, 2/OAAACB7 	CHANGE IN LINE THICKNESS				
OPEN POINT	P, 3, 2/OAAACB7 N, 1, 2/OAAACB7 			N/A			
PRIMARY METERING	N/A	N/A		N/A		INSTALL 	

EXHIBIT "1"

SECONDARY CIRCUITS & SERVICES

DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL		
	PRESENT	PROPOSED	PRESENT	PROPOSED	EXISTING	PROPOSED	REMOVED
SECONDARY CIRCUITS							
IPH 2 WIRE OH SECONDARY	S, 1, 4CUPCS N, 1, 4CUBS	S, 1, 6ALDX -----	-----	----- BROWN	-----	----- -----	REMOVE ----- ABANDON
IPH 2 WIRE UG SECONDARY	S, 1, 10AL2CUG	294' S, 1, 10AL2CUG -----	CABLE AND CONDUIT MAPS		----- ● -----	----- ● -----	REMOVE ● ----- ABANDON
IPH 3 WIRE OH SECONDARY	S, 2, 4/0AAACP7 N, 1, 2/0AAACP7	S, 1, 2/0AL3CPL -----	-----	----- BROWN	-----	----- -----	REMOVE ----- ABANDON
IPH 3 WIRE UG SECONDARY	S, 1, 2/0ALTXUG	255' S, 1, 2/0ALTXUG -----	CABLE AND CONDUIT MAPS		----- ● -----	----- ● -----	REMOVE ● ----- ABANDON
3PH 3 WIRE OH SECONDARY	S, 3, 4/0CUMP	S, 3, 4/0AAACP7 -----	-----	----- BROWN	-----	----- -----	REMOVE ----- ABANDON
3PH 3 WIRE UG SECONDARY	S, 3, 2/0ALOXUG	222' S, 3, 2/0ALOXUG -----	CABLE AND CONDUIT MAPS		----- ● -----	----- ● -----	REMOVE ● ----- ABANDON
3PH 4 WIRE OH SECONDARY	S, 3, 500CUMP37 N, 1, 300CUMP19	S, 1, 4/0ALACPL -----	-----	----- BROWN	-----	----- -----	REMOVE ----- ABANDON
3PH 4 WIRE UG SECONDARY	S, 1, 2/0ALOXUG	278' S, 1, 2/0ALOXUG -----	CABLE AND CONDUIT MAPS		----- ● -----	----- ● -----	REMOVE ● ----- ABANDON
SERVICES							
IPH 2 WIRE OH SERVICE	— 2 —	120' 1, 4ALDX + 2 +	N/A	N/A	— 2 —	— 2 —	REMOVE — 2 — ABANDON
IPH 2 WIRE UG SERVICE	— 2U —	120' 1, 4ALDX + 2U +	N/A	N/A	— 2U —	— 2U —	REMOVE — 2U — ABANDON
IPH 3 WIRE OH SERVICE	— 3 —	100' 1, 1/0ALTX + 3 +	N/A	N/A	— 3 —	— 3 —	REMOVE — 3 — ABANDON
IPH 3 WIRE UG SERVICE	— 3U —	100' 1, 1/0ALTX + 3U +	N/A	N/A	— 3U —	— 3U —	REMOVE — 3U — ABANDON
3PH 3 WIRE OH SERVICE	— 3 —	105' 1, 4/0ALDX + 3 +	N/A	N/A	— 3 —	— 3 —	REMOVE — 3 — ABANDON
3PH 3 WIRE UG SERVICE	— 3U —	105' 1, 4/0ALDX + 3U +	N/A	N/A	— 3U —	— 3U —	REMOVE — 3U — ABANDON
3PH 4 WIRE OH SERVICE	— 4 —	125' 1, 4/0ALDX + 4 +	N/A	N/A	— 4 —	— 4 —	REMOVE — 4 — ABANDON
3PH 4 WIRE UG SERVICE	— 4U —	125' 1, 4/0ALDX + 4U +	N/A	N/A	— 4U —	— 4U —	REMOVE — 4U — ABANDON
SECONDARY METE ²	●	●	N/A	N/A	— 3 — ●		

EXHIBIT "1"

FOREIGN UTILITIES

NEW CENERGY SYMBOL

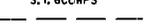
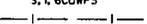
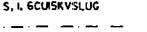
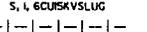
	<u>EXISTING</u>	<u>PROPOSED</u>
FOREIGN TRANSMISSION LINE	————— FT —————	----- FT -----
FOREIGN GAS LINE	————— FG —————	----- FG -----
FOREIGN ELECTRIC LINE	————— E —————	----- E -----
TELEPHONE LINE	————— TEL —————	----- TEL -----
WATER MAIN	————— W —————	----- W -----
SEWER MAIN (STORM OR SANITARY)	————— SEW —————	----- SEW -----
CABLE TV	————— CATV —————	----- CATV -----

UNDERGROUND SYSTEM TERMINATIONS, CONNECTORS & CONDUIT

DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL
	PRESENT	PROPOSED	PRESENT	PROPOSED	
NON-LOADBREAK ELBOW					
LOADBREAK ELBOW					
CONDUIT			<p>CABLE AND CONDUIT MAPS</p>		<p>SINGLE CONDUIT IN SMALL WORLD'S INTERNAL WORLD</p>
DUCT BANK (NO. WIDE X NO. HIGH - DIA.)					<p>SYMBOL WILL TAKE USER TO THE INTERNAL WORLD FOR DUCTBANK CONFIGURATION</p>
FAULT INDICATOR					<p>EXISTING</p> <p>PROPOSED INSTALL</p> <p>REMOVED RM</p>
CUSTOMER OWNED FACILITIES	N/A	N/A	N/A	N/A	

EXHIBIT "1"

STREET LIGHTING

DESCRIPTION	OLD CINERGY WEST	OLD CINERGY EAST	NEW CINERGY SYMBOL	
<u>STREET LIGHTING</u>	<p><u>PRESENT</u> <u>PROPOSED</u></p>	<p><u>PRESENT</u> <u>PROPOSED</u></p>	<p><u>EXISTING</u> <u>PROPOSED</u> <u>REMOVED</u></p>	
ORNAMENTAL STANDARD			  	
OVERHEAD STREET LIGHT			<p>STREET LIGHTS AND D TO D LIGHTS ARE REPRESENTED IN CINERGY EAST BY VARIOUS SYMBOLS REPRESENTING THE LIGHTS LUMENS AND WATTAGES.</p>	
DUSK TO DAWN LIGHT ON POLE				  
DUSK TO DAWN LIGHT ON BUILDING				
SERIES STREET LIGHT	<p>S, L 6CUWPS</p> 	<p>S, L 6CUWPS</p> 	<p>USE SECONDARY CONDUCTOR SYMBOL. WIRE CODE WILL SHOW WIRE TYPE IN THE WIRE ANNOTATION</p>	
UG SERIES STREET LIGHT	<p>S, L 6CUGVSLUG</p> 	<p>S, L 6CUGVSLUG</p> 	<p>OVERHEAD N/A</p> <p>UNDERGROUND N/A</p> 	

ANCHOR AND OVERHEAD GUYS

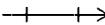
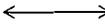
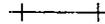
LINE GUYS	OLD CINERGY WEST	OLD CINERGY EAST	NEW CINERGY SYMBOL
OVERHEAD GUY			<p><u>EXISTING</u> <u>PROPOSED</u> <u>REMOVED</u></p>   
ANCHOR GUY	<p>N/A</p>	<p>N/A</p>	  

EXHIBIT "1"

GENERATING STATION, SUBSTATION, CIRCUIT BREAKER, AND DPS NODE

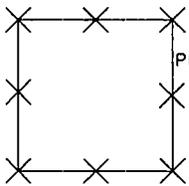
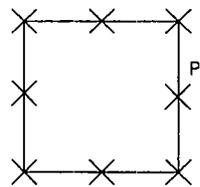
	<u>OLD CINERGY WEST</u>	<u>OLD CINERGY EAST</u>	<u>NEW CINERGY SYMBOL</u>						
GENERATING STATION	N/A	N/A	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>SYMBOL TO BE PLACED AS A POLYGON TO SHOW THE ACTUAL SHAPE OF THE GENERATING STATIONS PROPERTY. THIS WILL BE SHOWN AT A SCALE OF 0-800' PER INCH.</p> </div> </div> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>SYMBOL WILL BE SHOWN WHEN THE SCALE REACHES ABOVE 800' PER INCH</p> </div> </div>						
SUBSTATION	N/A	N/A	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>SYMBOL TO BE PLACED AS A POLYGON TO SHOW THE ACTUAL SHAPE OF THE SUBSTATION</p> </div> </div>						
CIRCUIT BREAKER	N/A	N/A	<table style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;"><u>EXISTING</u></td> <td style="border: 1px solid black; padding: 2px;"><u>PROPOSED</u> INSTALL</td> <td style="border: 1px solid black; padding: 2px;"><u>REMOVED</u> RM</td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 40px; text-align: center; vertical-align: middle;">CB</td> <td style="border: 1px solid black; width: 40px; height: 40px; text-align: center; vertical-align: middle;">CB</td> <td style="border: 1px solid black; width: 40px; height: 40px; text-align: center; vertical-align: middle;">CB</td> </tr> </table>	<u>EXISTING</u>	<u>PROPOSED</u> INSTALL	<u>REMOVED</u> RM	CB	CB	CB
<u>EXISTING</u>	<u>PROPOSED</u> INSTALL	<u>REMOVED</u> RM							
CB	CB	CB							
DPS NODE		N/A							

EXHIBIT "1"

SWITCHES AND PROTECTIVE DEVICES

DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL		
	PRESENT	PROPOSED	MAP	DIAGRAM	PRESENT	PROPOSED	PROPOSED
SWITCHES AND PROTECTIVE DEVICES							
AIRBREAK	 RALLY AB #1 1-WAY NO 100 A ABSW	 RALLY AB #2 2-WAY NO 100 MO ABSW		 DISTRIBUTION TRANSMISSION		INSTALL 	RM
AIRBREAK (AUTOMATIC)	N/A	N/A	N/A	N/A		INSTALL 	RM
AIRBREAK (MOTORIZED)	N/A	N/A	N/A	N/A		INSTALL 	RM
AIRBREAK (REMOTE CONTROL)	N/A	N/A	N/A	N/A		INSTALL 	RM
AIRBREAK (LOADBREAK)	 LONDON #1 1-WAY NO 100 A AB SW LB	 LONDON #2 2-WAY NO 100 MO AB SW LB				INSTALL 	RM
AIRBREAK (LOADBREAK) AUTOMATIC	N/A	N/A	N/A	N/A		INSTALL 	RM
AIRBREAK (LOADBREAK) MOTORIZED	N/A	N/A	N/A	N/A		INSTALL 	RM
AIRBREAK (LOADBREAK) REMOTE CONTROL	N/A	N/A	N/A	N/A		INSTALL 	RM
TRANSMISSION SWITCH			N/A	N/A		INSTALL 	RM

EXHIBIT "1"

TOWERS, POLES, AND STRUCTURES

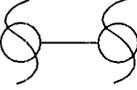
DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL		
<u>TOWERS</u>	PRESENT	PROPOSED	PRESENT GREEN	PROPOSED BROWN	EXISTING	PROPOSED	REMOVED
TRANSMISSION TOWER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
TRANSMISSION TOWER WITH FOREIGN ATTACHMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A			
FOREIGN TRANSMISSION TOWER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	GREEN <input type="checkbox"/>	BROWN <input type="checkbox"/>			
<u>STRUCTURES</u>							
TRANSMISSION STRUCTURE			N/A	N/A			
TRANSMISSION STRUCTURE WITH FOREIGN ATTACHMENT			N/A	N/A			
FOREIGN TRANSMISSION STRUCTURE			N/A	N/A			
<u>POLES</u>							
TRANSMISSION POLE							
TRANSMISSION POLE WITH FOREIGN ATTACHMENT							
DISTRIBUTION POLE							
DISTRIBUTION POLE WITH FOREIGN ATTACHMENT							
RELOCATING POLES			N/A	N/A			
FOREIGN POLE							
FOREIGN TRANSMISSION POLE							

EXHIBIT "1"

TRANSFORMERS, REGULATORS, CAPACITORS

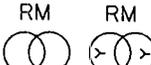
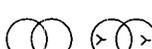
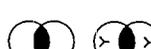
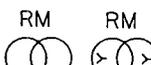
DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL		
DESCRIPTION	PRESENT	PROPOSED	PRESENT	PROPOSED	EXISTING	PROPOSED	REMOVED
TRANSFORMERS, REGULATORS, AND CAPACITOR BANKS							
IPH TRANSFORMER	 PH SIZE	 C 25	 25	 25 BROWN			 RM
OPEN DELTA TRANSFORMER BANK	 A, B 25, 25	 A, B 25, 25	 2-25 OR 2-25 AA	 2-25 OR 2-25 AA			 RM
3 PH TRANSFORMER	 A, B, C 25, 25, 25	 A, B, C 50, 50, 50	 3-25 (3φ)	 3-25 (3φ)			 RM
Y DELTA TRANSFORMER	 AB, BC, CA 25, 25, 25	 AB, BC, CA 50, 50, 50					 RM
TRANSFORMERS, REGULATORS, AND CAPACITOR BANKS					SYMBOL WILL BE DISTINGUISHED BY THE TRANSFORMER TYPE ATTRIBUTE IN SYMBOL ANNOTATION		
STEP UP/DOWN TRANSFORMER	 A 25	 A 25	 167 ST DN	 167 ST DN			 RM RM
CONSTANT CURRENT TRANSFORMER	 A 25	 A 25	 20 CC	 20 CC			 RM RM
LINE VOLTAGE REGULATOR	 25 A	 50 A	 400 AMP	 400 AMP		 INSTALL	 RM
CAPACITOR BANK	 S, 1200A	 S, 1380A	 1200 KVAR	 1200 KVAR		 INSTALL	 RM

EXHIBIT "1"

PADS, VAULTS AND PITS

DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL			
	PRESENT	PROPOSED	PRESENT	PROPOSED	PADS, VAULTS AND PITS ONLY EXISTING PROPOSED REMOVED	EXISTING	PROPOSED	REMOVED
TRANSFORMER PADS VAULTS AND PITS								
1PH TRANSFORMER ON PAD	IAI A 50 391.032	IAI A 50 526.037	25 PAD 195	25 PAD 195				RM
OPEN DELTA ON PAD OR Y DELTA ON PAD	2DI A,B 50, 50 391.967	2DI A,B 50, 50 526.887	N/A	N/A				RM RM
3 PH TRANSFORMER ON PAD	IDI ABC 150 391.967	IDI ABC 150 526.887	750-3φ PAD 195	750-3φ PAD 195				RM
1PH TRANSFORMER IN VAULT	IAI A 50 391.837	IAI A 50 526.832	25 T.V. 195	25 T.V. 195				RM
OPEN DELTA ON VAULT OR Y DELTA ON VAULT	2DI A,B 50, 50 391.967	2DI A,B 50, 50 526.887	N/A	N/A				RM RM
3 PH TRANSFORMER IN VAULT	IDI ABC 150 391.722	IDI ABC 150 531.717	750-3φ T.V. 195	750-3φ T.V. 195				RM
1PH SUBSURFACE TRANSF.	IAI A 50 386.637	IAI A 50 521.637	25 PIT 195	25 PIT 195				RM
OPEN DELTA IN PIT OR Y DELTA IN PIT	2DI A,B 50, 50 386.637	2DI A,B 50, 50 521.637	N/A	N/A				RM RM
3 PH SUBSURFACE TRANSF.	IDI ABC 150 386.457	IDI ABC 150 521.457	300-3φ PIT 195	300-3φ PIT 195				RM
CABINET ENCLOSURE						CABINET	CABINET	CABINET RM

EXHIBIT "1"

UNDERGROUND FACILITIES

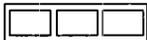
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	PRESENT	PROPOSED	PRESENT	PROPOSED	EXISTING	PROPOSED	REMOVED
<u>UNDERGROUND SYSTEMS - (TRANSFORMERS, VAULTS, HANDHOLES AND SWITCHGEAR)</u>					SYMBOLS WILL BE DISTINGUISHED BY THE SYRFACE STRUCTURE ATTRIBUTE IN SYMBOL ANNOTATION		
CABLE AND CONDUIT VAULT	 IAI 226, 281 150	 IAI 356, 291 150	 SHOW TRUE SHAPE				 RM
CABLE AND CONDUIT MANHOLE	 226, 236	 356, 236	 SHOW TRUE SHAPE				 RM
HANDHOLE-PULLBOX	 HH 226, 186	 HH 356, 181	 SIZE NOTED ON C&C MAPS				 RM
SECONDARY PEDESTAL	 SEC. PED. 226, 186	 SEC. PED. 356, 181					 RM
MOBILE HOME METER SERVICE (PEDESTAL)	 221, 121 200	 356, 116 200					 RM
MANHOLE LID	N/A	N/A	N/A	N/A			
VAULT GRATE	N/A	N/A	N/A	N/A			
VAULT SLAB	N/A	N/A	N/A	N/A			
PADMOUNT SWITCHGEAR	 SG1 221, 066 600	 SG2 356, 066 600			 SG	 SG	 SG RM
3 PH PADMOUNT CAPACITOR	 S, 900A	 S, 1350A	N/A	N/A			 RM

EXHIBIT "1"

SWITCHES AND PROTECTIVE DEVICES

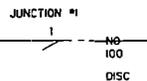
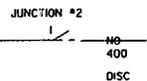
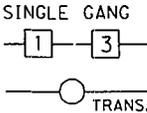
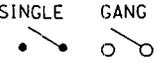
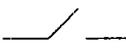
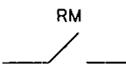
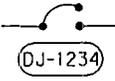
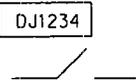
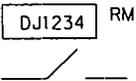
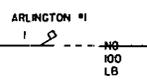
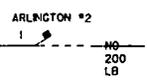
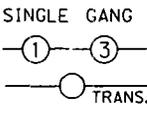
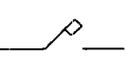
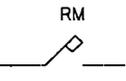
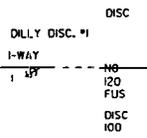
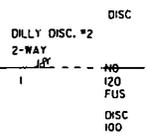
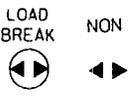
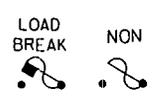
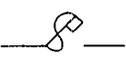
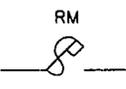
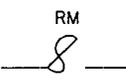
DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL			
<u>SWITCHES AND PROTECTIVE DEVICES</u>	<u>PRESENT</u>	<u>PROPOSED</u>	<u>MAP</u>	<u>DIAGRAM</u>	<u>PRESENT</u>	<u>PROPOSED</u>	<u>PROPOSED</u>	
LINE DISCONNECT								
DISCONNECTING JUMPER W/ OPERATING NUMBER	N/A	N/A						
LINE DISC. LOADBREAK								
FUSED DISCONNECT								
								LOAD BREAK NON LOAD BREAK

EXHIBIT "1"

SWITCHES AND PROTECTIVE DEVICES

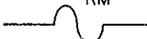
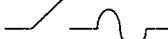
DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST				NEW CINERGY SYMBOL		
	PRESENT	PROPOSED	MAP	DIAGRAM		EXISTING	PROPOSED	REMOVED	
LINE CUTOUT	N/A	N/A	LOAD BREAK 	NON 	LOAD BREAK 	NON 		INSTALL 	RM 
FUSED CUTOUT W/ OPERATING NUMBER	N/A	N/A	LOAD BREAK 	NON 	LOAD BREAK 	NON 	•1234 	INSTALL •1234 	RM •1234 
LINE DISCONNECT W/ POWER FUSE W/ OPERATION NUMBER	N/A	N/A					6890 	INSTALL 6890 	RM 6890 
			6C-104 OR 6890		6C-104 OR 6890	NON-DISC	NON-DISC	NON-DISC	

EXHIBIT "1"

PROTECTIVE DEVICES

DESCRIPTION	OLD CINERGY WEST		OLD CINERGY EAST		NEW CINERGY SYMBOL		
	PRESENT	PROPOSED	MAP	DIAGRAM	EXISTING	PROPOSED INSTALL	REMOVED RM
RECLOSER							
SECTIONALIZER							
SURGE ARRESTOR							
NETWORK PROTECTOR							



CAUTION
YOUR SAFETY IS OUR CONCERN
 COMING TOO CLOSE TO POWER LINES IS DANGEROUS
 POWER LINES ARE **NOT** INSULATED

CONTACT WITH ELECTRIC LINES OR FACILITIES CAN CAUSE PROPERTY DAMAGE, SERIOUS INJURY OR DEATH!
 Minimum clearances from power lines are outlined in the Occupational Safety and Health Act and other state and national codes.

Serious injuries or death and property damage can also be caused when contacting gas lines. PLEASE BE CAREFUL!

CALL BEFORE YOU DIG - OHIO 1-800-362-2764 INDIANA 1-800-382-5544 KY. 1-800-752-6007

WARNING INFORMATION

Date _____

Time _____

PERSON(S) WARNED _____

LOCATION OF POTENTIAL UNSAFE CONDITION _____

COMPANY ADDRESS _____

Description of Conditions/Comments _____

Cinergy Employee Signature _____

96A0803 R 1/98

(Original to Public Person(s) Warned / Copy to Supervisor)

Exhibit "3"



Distribution Pole Inspection and Treatment Program

Duke Energy Scope of Work
(Effective 01/01/2021)



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Distribution Pole Inspection and Treatment Program

Duke Energy Scope of Work

1. Scope of Work Summary

The purpose of the Pole Inspection and Treatment Program is to identify the health of the distribution pole plant and identify conditions that may impact the safety or integrity of the system.

Poles shall be inspected based on geographical boundaries determined by Duke Energy.

Poles shall have a detailed visual inspection above ground line, sounded, probe where specified, bored and/or excavated as specified in this document.

Poles shall be internally and/or externally treated as required in the scope of work.

Pole inspection results shall be clearly identified in the data and the inspected poles shall be tagged with inspection/treatment/reject tag as appropriate.

All pole inspection findings shall be captured using a pole inspection script (questions/answer combinations) and conform to the provided return data delivery format to expedite follow-up work generation in the Duke Energy systems.

Poles in Duke Energy Carolinas (DEC), Duke Energy Indiana (DEI), Duke Energy Kentucky (DEK), and Duke Energy Progress (DEP) shall receive a **Visual Inspection** and a **Sound-Probe-Bore Inspection** as specified in this document.

Poles in Duke Energy Florida (DEF) shall receive a **Visual Inspection** and a **Sound-Bore-Excavation Inspection** as specified in this document. CCA poles under 16 years of age shall be exempt from groundline excavation as specified in the exception referenced on this document.

Poles in Duke Energy Ohio (DEO) shall be inspected under the **DEO Scope of Work (Exhibit 2)**, after performing a visual inspection as specified in this document.

2. Contractor Requirements and Responsibilities

2.1. General Requirements

- 2.1.1. The Contractor shall furnish all supervision, labor, tools, equipment, inspection/treatment/reject tags, field adaptable handheld data collection devices, transportation, and material necessary for the evaluation, treatment and repairs of Duke Energy's poles as set forth in these specifications, unless otherwise specified as an exception. (Exceptions may include Duke Energy provided material to complete repairs).



- 2.1.2. It is the Contractor's responsibility to comply with all federal, state and local regulations when performing the described work within this Scope of Work document. Any permits, business licenses, etc. required for the work is the responsibility of the awarded contractor.
- 2.1.3. The Contractor shall have experience of a minimum **of 5 years** in the in-service pole inspection and treatment application of wood preservatives.
- 2.1.4. The Contractor must have documented programs/policies conforming to the Environmental Protection Agency ("EPA"), the Occupational Safety and Health Administration ("OSHA"), the Department of Transportation ("DOT"), along with all federal and state pesticide regulations. These policies must include a safety manual, pesticide training manual and test, standards for safe storage of preservatives on drop sites/ vehicles, operating policies for Contractor's personnel to handle preservatives and procedures for disposing of empty containers used for pole treatment in compliance with label requirements, and OSHA regulations involving Personal Protective Equipment ("PPE"). Documentation will be provided to Duke Energy Representative upon request.
- 2.1.5. The Contractor shall maintain throughout the term of the applicable agreement, in full force and effect, in amounts reasonably satisfactory to Duke Energy and otherwise in compliance with applicable law, the following insurance coverages: Workers' Compensation, Commercial General Liability (including Public Liability, Personal Injury, Property Damage, and Contractual Liability) and Automobile Liability. Prior to the commencement of the work, Contractor shall furnish Duke Energy with a certificate evidencing said coverages.
- 2.1.6. The Contractor shall supply the Duke Energy Representative with a list of employees that hold a valid Pesticide Applicator License as issued by the State in which the work will be performed. The Contractor shall comply with all State requirements for applying ground line preservative materials. The Contractor shall be responsible for the disposal of all leftover pesticide materials, packaging, containers, etc. and refuse off of Duke Energy property in accordance with all applicable Federal, State and local laws and regulations.
- 2.1.7. All preservative materials used shall bear appropriate EPA approved labels stipulating the intended end use. All preservative material used shall conform to all Local and State requirements; see **Exhibit 3 – Approved Treatments**. Any alternate preservatives proposed by the Contractor must be approved in writing by Duke Energy prior to being used.
- 2.1.8. Prior to the start of work, the Contractor shall send the Duke Energy Designated Representative(s) a complete set of MSDS sheets and copies of the labels of those chemicals and preservative materials identified in **Exhibit 3 - Approved Treatments**, that are proposed for use on Duke Energy property. The Contractor shall also supply these same documents for any proposed alternative chemicals or preservative materials prior to their approval for use and introduction to Duke Energy property.



- 2.1.9. The Contractor shall notify the customer to gain access to the work site if necessary. The Contractor shall obtain, at its expense, any necessary permits from any owner, municipality or other authority on whose premises the work is to be done prior to the start of work.
- 2.1.10. Contractor is responsible for making reasonable contacts to gain access to a pole (door hanger, go back by at different time to gain access, phone calls, etc.).
- 2.1.11. Contractor shall make sure Duke Energy Designated Representatives are aware of the access issues for which reasonable attempts to gain access have been made. The contractor shall send a list of inaccessible poles, including meter number, address, and pole identifier, on the daily deliveries.
- 2.1.12. Poles not inspected due to access issues, shall not be delivered by the contractor as completed records.

2.2. Personnel Requirements:

- 2.2.1. Contractor personnel shall comply with all rules and regulations specified by Duke Energy.
- 2.2.2. The Contractor shall supply written verification of the pole inspection, treatment experience and associated training of each Foreperson and Supervisor to the Duke Energy Representative.
- 2.2.3. Each working Foreperson/ Crew Leader shall be a permanent, full-time employee of the Contractor having not less than **one-year experience** in pole inspection, reinforcement and treatment.
- 2.2.4. Each Supervisor (oversees multiple crews) shall be a permanent, full-time employee of the Contractor having not less than **two years of experience** in supervising pole inspection, reinforcement and treatment.
- 2.2.5. It is a requirement that any crew working on Duke Energy's customer property must be able to communicate in fluent English as needed.
- 2.2.6. Each Supervisor/ foreperson/ crew leader shall provide and maintain an operational cellular telephone equipped with a method for leaving messages. Duke Energy Representative shall have the ability to communicate with the Contractor's Supervisor/ foreperson/ crew leader immediately in case of emergency, customer complaint, or other reason.
- 2.2.7. The Contractor shall provide a supervisor for each of the areas where work is being performed. The supervisor shall remain in the assigned area through the duration of the work.
- 2.2.8. Personnel not specifically qualified/trained to inspect and treat poles as outlined above shall not be transferred to work on the Pole Inspection and Treatment



Program from other contractual work. Duke Energy reserves the right to request evidence of qualifications of the entire crew by "letter of reference," Foreperson résumé, or training taken.

2.3. Work Requirements:

- 2.3.1. Duke Energy will provide the locations of all poles to be inspected and/or treated via shape files.
- 2.3.2. The Contractor shall develop and provide a pre-work check list to be completed at a "kick-off" meeting with the Duke Energy Representative prior to the start of work. This checklist addresses any special concerns, requests, directions, or situations unique to this assigned Duke Energy work area that are outside the scope of this specification. This checklist is to also contain all necessary land-based and mobile telephone numbers for reaching Contractor personnel. A copy of this completed check list shall be supplied to the Duke Energy representative for each Duke Energy work area before the start of work.
- 2.3.3. The Contractor shall develop a detailed schedule identifying how the work will be accomplished. This schedule should include such data as the order in which areas will be worked, start/finish dates, anticipated crew sizes, and the number of crews that will be working. This schedule is to be reviewed with the Duke Energy Representative and approved prior to the start of work.
 - 2.3.3.1. Any revision to the schedule shall be reviewed with Duke Energy Representative and approved prior to the schedule change implementation, to ensure work completion by the assigned due date.
 - 2.3.3.2. Duke Energy understands the need for mutual storm assistance. Contractor shall request and receive approval prior to any departures for mutual assistance. Upon return, contractor shall submit a recovery plan to meet the original target completion date.
- 2.3.4. The Contractor shall report work location(s) to the Duke Energy representative daily or advise Duke Energy if no work is to be performed on that day. If the Contractor fails to provide a daily work location, then Duke Energy assumes no work is being performed and no units will be paid for that day.
 - 2.3.4.1. Daily reporting shall include daily locations of work by each crew, contact number, previous day's priority/imminent hazard poles, poles with access issues/not found in field needing Duke assistance, etc.
- 2.3.5. When a Duke Energy work area or other defined working grid is completed, the Contractor shall provide the Duke Energy Representative with all reports, including a detailed summary of inspections, defects, and recommended reinforcement options before the invoice will be accepted.



- 2.3.6. The contractor shall provide photos of all poles requiring follow up work, including rejected poles and non-rejects with follow-up work required. The photos shall include a legible tag, view of the damage, and a full pole photo, so that the pole can be easily identifiable. The photo naming convention will be provided to the successful bidder.
- 2.3.7. The contractor shall report material inventory used for treatments and or repairs on a monthly basis. The report shall include details for monthly material usage and year-to-date usage for the program.
- 2.3.8. The contractor shall report material forecast for all treatment and/or repair material to complete the Duke Energy Pole Inspection and Treatment Program on a monthly basis. Additional reporting details will be shared with successful bidders.

3. Inspection Scope

The contractor shall inspect all poles designated for inspections, as follows:

- 3.1. All Duke Energy Owned Distribution Wood Poles shall be inspected as describe in this Scope of Work. This includes any Duke Energy Owned Distribution Wood Poles within the designated inspection boundary that might have not been delivered in the inspection shapefile.
- 3.2. Duke Energy Owned Non-Wood Poles shall not be inspected, unless otherwise noted as an exception by a Duke Energy Representative.
- 3.3. Duke Energy Owned Transmission poles shall not be inspected under this contract, unless otherwise identified as an exception.
- 3.4. Duke Energy Owned Distribution Poles inside a fenced Duke Energy Substation shall not be inspected under this contract.
- 3.5. Duke Energy Owned Decorative Lighting only poles (Non-Wood Lighting poles) shall not be inspected under this contract.
- 3.6. Foreign Owned Poles shall not be inspected under this contract, unless otherwise identified as an exception.

4. Visual Inspection

4.1. Safety Assessment

- 4.1.1. All Duke Energy designated poles shall be visually inspected to identify potential hazards before any work is done. An imminent hazard is a situation or instance that



could impact the health and safety of the pole assessor, contractor or company employees, the general public, or the environment.

- 4.1.2. Hazardous conditions that may endanger life, property, or cause an outage shall be reported to the Duke Energy Distribution Control Center (DCC) and/or Duke Energy Emergency Point of Contact(s) immediately by phone. Examples of these conditions include, but are not limited to:
- Poles in danger of Imminent Failure (Pole with less than 4% original strength, broken poles, etc.)
 - Poles with severe mechanical damage
 - Pole that could fall at any minute
 - Wire/Line down
 - Low hanging electrical power wire within reach (clearance issue)
 - Live voltage on equipment where public can make contact
 - Active oil leak
 - Equipment about to fall or drop an energized conductor
 - Broken power risers with damaged conductors
 - Broken/slack guy wire which may come in contact with energized conductor.
 - Equipment control box damaged or missing lock (open)
 - A floating conductor
 - Phase wire burning on crossarm
 - Crossarm with severe displacement which could make contact with energized conductor.
- 4.1.3. During approved stand by, the contractor shall remain at the site until a Duke Energy Representative releases them from the location, to mitigate any safety exposure to other personnel or the public. The site must be secured with cones or tape if the contractor can safely do so.
- 4.1.4. The contractor shall maintain a list of Duke Energy Emergency contacts, supplied by Duke Energy Representative, to refer to in case of emergency.
- 4.1.5. The contractor shall supply Duke Energy with a list of emergency contacts.
- 4.1.6. Any imminent safety item found shall also be noted in the inspection data and delivered to the Duke Energy Representative as part of the daily delivery, identifying standby time, Duke Energy Representative contacted person, and DCC Event number).
- 4.1.7. The contractor shall follow special safety precautions when working around damaged or vandalized grounds.
- 4.1.8. If the actual pole is the cause of the imminent hazard, it shall be clearly identified as a rejected pole in the data, noting the reject reason, and delivered to the Duke Energy Representative as part of the daily delivery. The rejected pole shall be classified as imminent hazard pole reject. The pole shall be further classified as



rejected based on Safety Assessment. An imminent hazard pole shall not be tagged unless it is safe to do so.

- 4.1.9. If the pole integrity is not affected by the imminent hazard, the poles shall be inspected following the procedures described in this document, once the imminent hazard has been resolved or the site has been made safe to resume work.

4.2. Pole Component Evaluation

- 4.2.1. All assigned poles shall be visually inspected from top to bottom to identify any signs of damage or defects to the pole components that may affect the integrity or performance of the Distribution System.
- 4.2.2. Visible defects shall be recorded, including, but not limited to slack/ broken/ missing guy wires, buried or protruding anchors, damage insulators, missing or broken grounds, and damage equipment. For a complete list, refer to **Exhibit 4 – Pole Component Inspection List**.
- 4.2.3. The contractor shall provide details on the observations captured during the visual Pole Component Inspection and include details in the data collected.

4.3. Pole Top Evaluation

- 4.3.1. All wood pole tops shall be visually inspected to identify any deficiencies, decay or defects that could affect the integrity of the pole, including but not limited to, stressed/broken pole tops, Split Tops, Woodpecker Holes and Deteriorated Tops due to decay.
- 4.3.2. All wood pole tops shall be visually inspected along all four quadrants of the pole, using binoculars.
- 4.3.3. All evidence of woodpecker holes in a pole should be identified through the pole inspection. A pole with one or multiple woodpecker holes exceeding the size of a baseball shall be rejected as specified on this document.
- 4.3.4. Deteriorated pole tops due to decay, shall not be identified for rejection unless:
- the deterioration has descended near critical bolt holes,
 - the internal deterioration perceived from the ground is within 3 inches of the nearest bolt, or
 - the top is noticeably hollow.

Evidence of this will be apparent by the washer, as the weakening of the top of the pole will allow the washer to recede into the pole.

- 4.3.5. A crossarm with a significant crack that goes through a critical bolt hole shall be identified for replacement. Significant crack examples include:
- The sky can be seen when looking through the crack
 - The crack is significantly wider than a hairline crack at the bolt hole location



- The washer is receding into the crossarm

Any crossarm with a crack large enough to cause hardware to shift/recess, tilt, or fall, or large enough for the bolt to start pulling through the crossarm should be treated as a priority.

A crossarm should be evaluated and identified independently from the Pole Rejection Criteria. Poles with solely failed crossarms shall not be considered rejected poles, unless other conditions for pole rejection are met, as specified in the program scope.

Poles with solely failed crossarms shall be identified in the data and delivered as a Non-Reject requiring follow up candidate. A photo shall be provided, as stated in the work requirement sections.

A pole with a “failed” crossarm assessment and rejected based on groundline assessment shall not be considered as candidate for reinforcement of the pole. The pole should be designated for replacement.

4.4. [Pole Top Rating](#)

Based on the observations, and following the examples on **Exhibit 5 - Top of Pole and Crossarm Assessment Examples**, the poles shall receive a Pole Top Rating of Pass/Fail as follows:

- 4.4.1. **PASS:** Poles with little to no problems that could affect the integrity of the pole or support to the hardware. If there are no other defects, passing criteria varies and includes these observations:
- Normal aging and checking.
 - Small to moderate split not intersecting or approaching bolt holes and hardware. Cannot see through split. Split has no impact to intersecting hardware.
 - Crowning of top.
 - Small split intersecting with a bolt hole.
 - Small to moderate woodpecker holes (just one or two), where combined missing area does not exceed the size of a baseball.
 - Poles with small surface area removed due to mechanical damage

A passing top of pole assessment may be a candidate for reinforcement of the pole, depending on the ground line assessment.

- 4.4.2. **FAIL:** If the top of the pole has failed inspection, the pole top shall be assigned a prioritization level of Non-Priority or Priority. Note that only one of the criteria must be met to be classified on the appropriate scale.
- A. **FAIL – NON-PRIORITY:** Poles failing the Pole Top Inspection based on the observations described below, shall receive a Fail - Non-Priority Pole Top rating:
- Moderate to large split going through and in-line with bolt hole.



- Split top or decay where insulators/hardware have shifted but have not been displaced/recessed.
- Woodpecker holes (one baseball-sized or multiple holes where the combined area of holes are larger than a baseball within the same quarter of the pole or on the same plane).
- Woodpecker holes with active nest, with vegetation growing out of it, or fading below the hole, indicating moisture ingress.
- Wide split in hole (significant daylight can be seen through the split pole).
- Poles with temporary pole top failure mitigations.

Poles failing the above criteria shall be identified as replacement rejects and shall not be considered for reinforcement.

Overall priority of the reject shall be determined based on the all the procedures of the inspection. If there are no other defects, the pole shall be delivered as a Non-Priority Pole Top Reject, identifying the reject reason(s).

- B. ***FAIL – PRIORITY:*** Poles failing the Pole Top Inspection based on the observations described below, shall receive a Fail - Priority Pole Top rating:
- Severely split top where hardware is displaced/recessed.
 - Severe mechanical breaks at the top of the pole that should be addressed promptly.
 - Large chunks removed off top of the pole.

Poles failing the above criteria shall be identified as Priority Replacement rejects and shall not be considered for reinforcement.

Priority split tops that are deemed to be imminent hazards should continue to be treated in the same way; call in to DCC and standby at the site until a Duke Energy Representative releases them from the location.

5. Sound-Probe-Bore Inspection (DEC/ DEI/ DEK/ DEP)

To determine the condition of a wood pole, all poles shall be sounded above the pole groundline and probed below the pole groundline. Additionally, poles shall be drilled to evaluate the extent of decay if there is any sign of decay based on sound and probe test. The following procedure shall be performed:

- 5.1. All poles, regardless of birthmark, shall be hammer sounded a minimum of 5 times in each quadrant of the pole with a waffle head hammer (total of 20 hammer marks), starting at groundline up to 7 ft. above groundline (or as high as the inspector can reach). Sounding should leave a mark on the pole that is audible.
 - 5.1.1. All poles which sound solid will be considered as having no internal decay.



- 5.1.2. If a pole gives a “hollow” sound, the pole must be drilled and evaluated using a shell gauge.
- 5.2. Any location on the pole that fails the hammer sounding test shall have a ½-inch hole drilled at 30 degree off vertical, to a depth of 12 inches.
 - 5.2.1. A shell gauge shall be used to determine if the “hollow” sound is caused by growth ring separation, or wood decay.
 - 5.2.1.1. Any wood “fibrous” material removed from the hole will indicate decay and not growth ring separation.
 - 5.2.1.2. Growth ring separation would be a very small void with solid wood on both sides of the void.
 - 5.2.2. If growth ring separation is confirmed with shell gauge, the hole shall be treated with two Duke Energy approved treatment rods sealed with a plastic plug.
 - 5.2.3. Determination of no internal decay shall have the evaluation hole treated with two Duke Energy approved treatment rods sealed with a tight-fitting removable plastic plug, pending no other inspection/treatment needs as outlined below.
 - 5.2.4. Any pole for which internal decay is found will require additional inspection drilling for remediation determination.
- 5.3. All poles shall have the below ground line checked for decay using a pole probe.
 - 5.3.1. The probe shall be used at 2 locations in each quadrant at 3 inches and 6 inches below the ground line (a minimum of 4 locations in each quadrant) on the pole.
 - 5.3.2. A pole shall be defined as a reject if either of the following exists:
 - 5.3.2.1. 2-inch pocket of decay is found in 2 separate quadrants
 - 5.3.2.2. 3-inch pocket is found in any quadrant.
 - 5.3.3. Any suspected below ground-line decay, that does not meet the reject criteria above, shall require a divot (a condition-based inspection of a shovel full of soil approximately 10-inch wide by 6-inch to 8-inch deep) at the location of suspected decay. The suspected decay shall be validated by inspecting in the divot area with further probing as necessary in the bottom of the divot. All divots shall be returned to as close to possible original condition and packed with the inspector’s foot once evaluation is complete.
 - 5.3.3.1. No external decay shall result in a half-inch treatment hole drilled at ground line, at 30 degrees from vertical. The treatment hole shall be filled with two Duke Energy approved treatment rods sealed with a tightly fitting removable plastic plug.



- 5.3.3.2. Confirmation of below ground-line decay, with appropriate structural integrity so as not to be classified as a reject, shall receive a treatment via a half-inch drilled hole at 30 degrees from vertical at the top of the decay area. The treatment hole shall be filled with two Duke Energy approved treatment rods sealed with a tightly fitting removable plastic plug. The pole shall also receive an internal treatment above ground-line as outlined in section 7.
 - 5.3.3.3. Confirmation of below ground-line decay, which would indicate the pole's status be changed to a potential reinforceable reject (pending further shell thickness evaluation), would require a treatment via a half-inch drilled hole at 30 degrees from vertical at the top of the decay area. The treatment hole shall be filled with two Duke Energy approved treatment rods sealed with a tightly fitting removable plastic plug. The pole shall also receive an internal treatment above ground-line as outlined in section 7.
 - 5.3.3.4. Confirmation of below ground-line decay, which would indicate the poles status be changed to a reject replace, would see no treatment applied, unless otherwise specified by Duke Energy Representative. All holes shall be plugged with a removable plastic plug.
- 5.3.4. Any pole that has been determined to be a reject through probing or found to have internal decay from the sounding process above, shall require additional pole inspection via drilling.

Drilling Procedure:

- 5.3.5. All evaluation holes shall be made a half-inch by 18-inch drill bit at 30 degree off vertical.
- 5.3.6. After locating the largest pocket of decay, the first evaluation hole shall be drilled 3 inches above groundline, at a rotation of 90 degrees to the right (one quadrant away from the largest pocket of decay).
- 5.3.7. The next three holes shall be 6-inch above ground-line, 9" above ground-line, and 12 inches above ground-line rotating 90 degrees around the pole each time (the fourth evaluation hole shall end up 12 inches above the largest pocket of decay).
- 5.3.8. The shavings from each inspection hole shall be reviewed for moisture, treatment smell, and fibrous material.
- 5.3.9. Each inspection hole shall be evaluated with a shell gauge to check for voids and to determine effective shell thickness.
- 5.3.10. An additional hole shall be drilled 4 feet above ground line to determine if there is enough sound wood that would classify the pole as a reinforceable candidate, by meeting both of following criteria:



- Minimum 4 inches shell measured with shell gauge at single hole drilled at 4 ft.
- Average shell thickness of 1 inch or greater of shell as measured at 3 inches, 6 inches, 9 inches, and 12 inches above ground line.

5.3.11. Each pole locked in concrete, asphalt, rock, etc. shall receive an internal inspection/treatment via the drilling pattern of groundline, 3-inch, 6-inch, 9-inch, & 12-inch (directly above groundline).

6. Sound – Bore – Excavation (DEF)

To assess the condition of wood poles and determine their serviceability, all designated **Duke Energy Florida** poles shall be visually inspected, sounded, bored and excavated, following the procedure describe in this document.

Above Ground Line Inspection

- 6.1. All assigned poles shall be visually inspected from the ground line to the top for defects in the pole that would classify it as a reject, as specified in section 4 of this document. Also note any faulty equipment or components on the pole that are in need of maintenance or repair as per specified format.
 - 6.1.1. If the pole is judged to be an obvious reject due to excessive damage, the pole is to be noted as "Rejected" and "Replace" on the electronic data requirements and no treatment is to be applied, unless otherwise specified by Duke Energy Representative.
- 6.2. All poles, regardless of birthmark, shall be hammer sounded a minimum of 5 times in each quadrant of the pole with a waffle head hammer (total of 20 hammer marks), starting at groundline up to 7 ft. above groundline (or as high as the inspector can reach). Sounding should leave a mark on the pole that is auditable.
- 6.3. Any location on the pole that fails the hammer sounding test shall have a half-inch hole drilled at 30 degree off vertical, to a depth of 12 inches, in that location to determine whether internal decay or wood ring separation exists.
 - 6.3.1. Determination of internal decay will result in a full ground-line excavation inspection/treatment.
 - 6.3.2. Determination of no internal decay will have the evaluation hole treated with two Duke Energy approved treatment rods and sealed with a tight-fitting removable plastic plug pending no other inspection/treatment needs as outlined below.
- 6.4. All poles designated by Duke Energy to have a full ground-line excavation inspection/treatment and that pass the above ground-line inspection but cannot be excavated at least 3/4 of the ground line circumference due to pavement, standing water,



erosion, or for any other reason (example: electric riser), shall be sounded from ground line to 7 feet above ground line and have evaluation holes drilled to locate interior decay.

- 6.4.1. All evaluation holes shall be made a half-inch by 18-inch drill bit at 30 degree off vertical. The evaluation holes shall be at 3-inch above ground-line, 6-inch above ground-line, 9-inch above ground-line, and 12-inch above ground-line rotating 90 degrees around the pole each time.
- 6.4.2. Finding adequate structural integrity shall result in the pole receiving an internal treatment. Internal treatment shall result in each evaluation hole being filled with two Duke Energy approved treatment rods and sealed with a tightly fitting removable plastic plug.
- 6.4.3. Such poles shall be noted as "Internally Treated" on the electronic data requirements. Poles sounded and drilled which, in the judgment of the Contractor, should be rejected, shall be noted as both "Extensive Internal Decay" and "Rejected" on the electronic data requirements. Poles that cannot be excavated and pass the sound and drill inspection shall be further evaluated for fumigation treatment as described in section 7.

Below Ground-line Inspection

- 6.5. All poles shall have an excavation inspection unless rejected by sound and bore, excluding poles that meet the exception below:

Exception:

- A) All CCA poles under the age of 16 years shall be sounded and selectively bored but shall not be fully excavated. However,
 - B) The contractor shall randomly select a sample of at least 1% of that population of CCA less than 16 years old, to perform a full inspection, including sound, bore and excavation. The details of the sampling shall be clearly noted in the data delivered.
- 6.6. All poles that pass the above ground line inspection and are judged to be candidates for full excavation ground-line inspection treatment shall be excavated to a depth of 18 inches below the ground-line. The width of the hole around the pole shall provide a minimum clearance of 4-inch at the bottom of the hole and 10-inch at the ground line. When necessary to protect turf on public or private property, the Contractor shall provide and use tarpaulins to place the dirt on while excavating the pole. Turf shall be carefully cut and replaced after the hole has been backfilled.
 - 6.7. After excavation, the exposed portion of the pole butt shall be scraped and or wire brushed to remove all foreign material and examined for external decay. The ground-line circumference shall be measured and recorded on the electronic data requirements.



- 6.8. After scraping/wire brushing, the pole shall be sounded with a hammer for internal decay around the circumference from the bottom of the hole to 7 feet above ground line. If decay is suspected, the pole shall have evaluation holes drilled in the questionable area and as many evaluation holes drilled as may be necessary to determine the location and extent of the decay.
 - 6.8.1. If scraping, brushing and sounding does not indicate decay, one evaluation hole shall be made just below the ground-line at a 30-degree angle off vertical.
 - 6.8.2. All evaluation holes shall be made a with a half-inch by 18-inch drill bit. All evaluation holes shall be loaded with two Duke Energy approved treatment rods and shall be plugged with tightly fitting removable plastic plugs.
 - 6.8.3. If decay extends eighteen inches below ground line, excavation shall continue to a depth of four inches below the decay, but not to exceed twenty-four inches below ground-line.
- 6.9. All loose, weathered and/or decayed wood shall be removed to at least six inches above ground line. Good or visually sound wood shall not be removed from the pole. Removal of decay shall be made with an approved tool; an ax or hatchet shall not be used for this purpose. All loose, decayed wood chips and pieces shall be removed from the hole and the surrounding area and disposed of properly. In no case shall the contractor remove enough diameter of the pole that would make the pole a reject pole based on remaining circumference.
- 6.10. Effective and original circumference shall be captured electronically for each pole inspected. Extent and location of decay shall be noted in comments against each pole (Example: Internal decay 2" pocket at 30" above ground line).
- 6.11. Final circumference (effective ground line circumference) is to be measured at the narrowest point below ground line and checked against approved NESC Loading Tables. Poles having sufficient sound wood to support their load shall be externally & internally treated as appropriate. Poles not meeting this condition shall be rejected and noted on the electronic data requirements as "Rejected", tagged and evaluated for reinforcement.

7. Treatment Procedures

All Serviceable poles, and poles rejected as reinforcement candidate shall receive internal/fumigant treatment and external groundline treatment as follows:

7.1. [Internal Treatment/fumigant](#)

- 7.1.1. All inspection holes shall be filled with two Duke Energy approved preservatives and sealed a removable plastic plug.



- 7.1.2. All serviceable poles with signs of heart decay, enclosed pockets or internal decay or which are infested with insects, but with sufficient sound wood to support their load, shall be treated internally with an approved preservative.
- 7.1.3. All poles requiring a groundline treatment that cannot be excavated at least 3/4 around their ground line circumference for causes beyond the contractor's control such as concrete, blacktop paving, standing water, or other obstructions (Example: electric risers) shall be treated with a fumigant. Only large, significant roots and rocks shall be accepted as a reason for a 3/4 excavation.
- 7.1.4. Poles receiving a fumigant treatment shall be marked with a suitable non-ferrous tag placed six inches below the pole tag, and such poles be noted as "Internal Treatment" on the electronic data requirements.

7.2. External Treatment for Fully Excavated Poles

All poles that have been fully excavated during the inspection process, shall be groundline treated with an externally applied wood preservative, as outlined below.

- 7.2.1. Duke Energy approved supplemental wood preservative shall be applied to the entire exposed surface of the pole from two inches above ground line to eighteen inches below ground line. The preservative shall be applied in accordance with the manufacturer's label instructions. Treated poles shall be noted as "Ground-line Treated." on the electronic data requirements.
- 7.2.2. For Duke Energy Florida, External Groundline Treatment shall consist of a Duke Energy approved wood preservative paste/wrap applied to the pole from a depth of 18-inch below grade to a height of 3-inch above grade. The wood preservative shall be covered with a moisture barrier. Moisture barrier shall be of company approved material and shall cover the entire application area. Moisture barrier shall be of sufficient length to provide a 4" overlap and shall be stapled in place at the top of the barrier and along the side seam.
- 7.2.3. External treatment shall not be applied over decayed wood. All decayed wood shall be removed before treatment is applied.
- 7.2.4. All excavated holes shall be solidly backfilled and compacted to eliminate air pockets. The soil shall be replaced in six-inch layers and solidly compacted before adding the next layer. Rocks or stones shall not be placed directly against the bandage and care shall be used to prevent the compaction from tearing the bandage. Backfills shall be mounded around the pole to at least three inches above the ground line to allow for settling. No debris or loose dirt shall be left in the pole area.
- 7.2.5. All turf, flowers, etc. shall be replaced with care, and returned to prior or better condition.



7.2.6. Any chemical spills shall be cleaned up immediately in accordance with all federal, state and local rules and regulations.

7.3. Previously Treated Poles Requiring Re-treatment:

7.3.1. Old wooden plugs are extremely hard to drill out without damaging/further widening the holes for retreat.

7.3.1.1. Further widening of the hole could compromise the ability to seal the hole after treatment is applied. Therefore, poles shall be retreated with new holes drilled and approved preservative shall be appropriately applied and sealed with a removable plastic plug, if the pole is considered a treatment candidate.

7.3.1.2. All Inspection and treatment tags shall be stacked under the same nail and indicate the company, year inspected, and treatment types (rod and/or wrap).

7.3.1.3. Replacement rejects shall not be treated, unless otherwise specified by Duke Energy Representative.

7.3.2. Poles with previous Genics Cobra Rod treatment may be encountered in the field. In that case,

7.3.2.1. Poles may exhibit similar sounding and probing issues from previous inspection (unless conditions have changed) and the existing drilled hole pattern should be close to what is needed in the current inspection (unless conditions have changed).

7.3.2.2. Use plastic plug removal tool to remove the plastic plug and check for effective shell and undissolved treatment.

7.3.2.3. If pole integrity remains above levels for replacement, reload holes with treatment and replace plastic plug.

7.3.2.4. If new holes are needed to evaluate the pole integrity and effective circumference (shell), proceed with additional hole drilling and treatment per contract procedure.

7.4. Inspection and treatment tags shall be stacked under the same nail and indicate the company, year inspected, and treatment types (rod and/or wrap).



8. Evaluation of Existing Reinforcement Truss

- 8.1. The contractor shall probe Steel and or remove divot to inspect for excessive corrosion.
- 8.2. The contractor shall verify that the existing truss banding and connectors are tight between pole and steel.
- 8.3. The contractor shall verify that there is still enough remaining shell around both band locations as follows
 - 8.3.1. Verify no decay at upper band location (4 feet above groundline) via half-inch evaluation hole, **and**
 - 8.3.2. Verify 2-inch average shell at lower band.
 - 8.3.2.1. If both conditions are met, each evaluation hole shall be treated with two Duke Energy approved treatment rods and sealed with tight-fitting removable plastic plug.
 - 8.3.2.2. If either condition is not met, the pole shall be delivered as a replacement reject.
 - 8.3.2.3. Poles previously reinforced using another wood pole will have the additional pole stub checked using the same procedure at the groundline as a regular wood pole.

9. Pole Inspection Result

All Inspected poles shall be tagged to specify inspection Company, inspection year and treatment type applied (if applicable).

All Inspection and treatment tags shall be stacked under the same nail and indicate the company, year inspected, and treatment types.

All poles shall be categorized based on the result of the inspection as follows:

9.1. Non-Reject:

- 9.1.1. Poles in good condition that do not fail any of the pole integrity inspections, or serviceable pole with only follow up, as specified under the Pole Component Evaluation section.
- 9.1.2. Non-rejected poles shall be clearly Identified in the data, identifying the procedure performed, the required data collected as specified by the scope of work, and any additional comments captured by the inspector.



9.1.3. Follow-Up Required: Non-reject poles with required follow up items shall be clearly identified in the data. All repair/replacement items shall be listed with details as needed.

9.1.3.1. Follow Up items shall be further classified based on priority, as specified on **Exhibit 4 – Pole Component Inspection List.**

9.2. Reinforceable Reject:

9.2.1. A Pole shall be considered a Reinforceable Reject if it passes the Visual Inspection, Pole Top Evaluation, and meets the following criteria:

9.2.1.1. Remaining strength is less than 2/3 original strength at groundline (\leq 67% remaining strength), or the pole has an average of less than 2 inches of shell thickness at groundline.

9.2.1.2. Have a minimum of 4-inch shell thickness at single hole drilled 4 feet above ground line; and

9.2.1.3. Have an average shell thickness of 1 inch or greater of shell as measured at 3 inches, 6 inches, 9 inches, and 12 inches above ground line.

9.2.2. Poles, regardless of size or class, shall be considered for reinforcement, pending Duke Energy jurisdictional program guidance.

9.2.3. Poles located in asphalt or concrete shall be considered for reinforcement.

9.2.4. Poles not meeting the current reinforcement criteria, and referred for replacement, may need to be treated, according to current Duke Energy jurisdictional guidance.

9.2.5. For Pole with Power Riser Only:

9.2.5.1. Poles with a fully enclosed power riser (enclosed conduit) may be considered for reinforcement.

9.2.5.2. Poles with a u-guard power riser without a power backup plate shall not be reinforced, unless there is a Duke Energy approved solution, ensuring no possibility of contact with energized conductor during and/or after installation.

9.2.5.3. Poles with a u-guard power riser without a power backup plate and with a ventilation boot shall not be considered for reinforcement.

9.2.5.4. Poles with multiple (two or more) u-guard power riser shall not be considered for reinforcement.



9.2.6. For Midwest Poles Only (DEK, DEI, DEO):

9.2.6.1. Poles shall be “truck accessible” to be considered for reinforcement; otherwise it should be submitted for replacement.

9.2.6.2. A pole is truck accessible if the truck can drive on a solid surface road like blacktop and/or concrete and the pole is within 20 feet of the edge of the road. This would allow large boom truck to reach out and gain access to that pole from the solid surface road. Any pole outside of the 20 ft. from the edge of the road would be considered not truck accessible, is not a candidate for reinforcement, and should be replaced. Driveways are excluded from the definition of a solid surface road.

9.2.7. Reinforcement Rejects shall be tagged with one yellow tag, placed six inches below Duke Energy pole tag.

9.3. Replacement Reject:

9.3.1. A pole shall be considered a replacement reject if it meets rejection criteria based on one or more of the evaluation procedures (visual, sound-bore-probe, sound-bore-excavation), but does not qualify for reinforcement, as specified under the Reject - Reinforcement Criteria section.

9.3.2. Poles failing solely the Pole Top Evaluation shall be identified as replacement rejects and shall not be considered for reinforcement.

9.3.3. Poles failing solely the Pole Top Evaluation shall be classified as High priority or Non-Priority reject, as specified in the Pole Top Evaluation Rating, section 4.

9.3.4. Poles classified as **High Priority Replacement Rejects** based on Pole Top Evaluation Rating shall be delivered to Duke Energy on the daily communication.

9.3.5. Poles not meeting minimum NESC strength requirements at groundline, but with less than 14% remaining strength or less than an average of 1 inch of shell, shall be considered **High-Priority Replacement Rejects**, and delivered to Duke Energy on the daily communication.

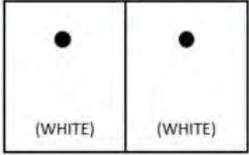
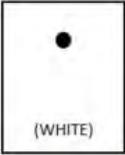
9.3.6. Poles not meeting minimum NESC strength requirements at groundline, but with 14% or more remaining strength or more than an average of 1 inch of shell at groundline, shall be considered **Non-Priority Replacement Reject**, unless they classify as a High-Priority Replacement Reject based on Pole Top Evaluation Rating.

9.3.7. Rejected Poles shall be further classified based on the severity of the defects, and tagged with 1 1/2" x 1 1/2" square aluminum tags as follows:



- 9.3.7.1. High Priority Replacement Reject: two white tags placed side-by-side six inches below the Duke Energy pole tag.
- 9.3.7.2. Non-Priority Replacement Reject: one white tag placed six inches below Duke Energy pole tag.
- **For DEF Only** - “Pole Top” Reject Replace Pole: One Yellow Arrow Tag pointing up, placed six inches below Duke Energy pole tag.

Figure 1 - Pole Tagging Criteria for Rejected Poles

Tag	Reject Type	Groundline Reject Criteria	Pole Top Reject Criteria *
	High Priority Replacement	<ul style="list-style-type: none"> •Between 4% and 14% original strength •Less than 1 inch shell 	<ul style="list-style-type: none"> •Severe split top with insulators almost pulled out •Severe mechanical breaks
	Normal Priority Replacement	<ul style="list-style-type: none"> •Between 14% and 67% original strength 	<ul style="list-style-type: none"> •Split top or decay where insulators are tilting down •Bird holes meeting inspection criteria for replacement •Cross-arm or pole splits near critical bolt holes
	Reinforcement Candidate	<ul style="list-style-type: none"> •Less than 67% original strength •Average 1 inch of shell at bottom band for double truss •Average 2 inches of shell at bottom band for single truss •Average 4 inches of shell at top band of reinforcement 	<ul style="list-style-type: none"> •No significant pole top decay
	*DEF ONLY: Top Pole Only Reject	<ul style="list-style-type: none"> •No significant groundline issue (Greater than 67% original strength) 	<ul style="list-style-type: none"> •Severe split top with insulators almost pulled out •Severe mechanical breaks •Split top or decay where insulators are tilting down •Bird holes meeting inspection criteria for replacement •Cross-arm or pole splits near critical bolt holes



10. On-Site Repairs

- 10.1. The contractor may be required, at Duke Energy discretion, to perform on-site repairs, included but not limited to vine removal, ground repairs and guy guard installation.
- 10.2. The contractor shall follow all safety guidelines associated with working around energized equipment, as required per Duke Energy.
- 10.3. Any Duke Energy approved on-site repair shall be performed by trained personnel, following all Duke Energy and OSHA regulations involving Personal Protective Equipment ("PPE").
- 10.4. **Vine Removal:**
 - 10.4.1. If approved by Duke Energy Representative, the contractor shall only remove vines not within the power space (no touching secondary/neutral level or within minimum approach distance of primary wire).
 - 10.4.2. The contractor shall contact the customers to make them aware of the need to remove the vine or portion of vine in order to inspect the pole.
 - 10.4.3. The contractor shall cut the vine at ground line. Remove the vine to inspect the pole from ground line to 8 feet above ground line. (1 ft. above sounding level). No additional voltage rated tool or additional voltage rated personal protective equipment shall be required beyond traditional pole inspection personal protective equipment.
 - 10.4.4. The contractor shall be responsible for the disposal of the removed vine.
- 10.5. Any on site repair completed by the contractor shall be clearly identified in the data, noting the details of the repair completed.
- 10.6. On site-repairs shall not be performed on poles rejected for replacements, unless it prevents the completion of the pole inspection (i.e.: vine removal).

11. Data Requirements

11.1. Data Collection

- 11.1.1. All poles assigned for inspection shall be inspected per the scope of work, unless otherwise defined by exception.
- 11.1.2. All Inspection data shall be collected in the field using a handheld device.



- 11.1.3. The Contractor shall collect pole inspection information outlined in the **Exhibit 6 - High Level Data Requirements for Pole Inspection Program**. A detailed pole inspection script will be shared by Duke Energy with the successful bidder.
- 11.1.4. All information collected in the field shall be entered into a handheld computer while in the field. Information entered shall have an overall accuracy of at least 98%. New facilities will be entered into the database and located via GPS coordinates. Specific details of all data to be collected and reports to be provided will be shared by Duke Energy with successful bidder.
- 11.1.5. The contractor shall supply electronic summary reports as directed by Duke Energy. The pole shall be clearly identified in the data (pole ID, Service area, address, etc.) to be considered acceptable.
- 11.1.6. Any pole inspected in the field, which was not originally provided in the shapefile, shall be validated as unique to mitigate potential duplicates (similar GPS). If unique, it should be added to the shapefile. Added poles shall be identified based on GPS, physical address, and reference to other existing poles in the circuit, when necessary.
- 11.1.7. Poles that require follow up (repairs, replacements, reinforcements, access issues, etc.) shall have a physical address, GPS latitude and longitude, pole id#, directional/site comments, etc. on the inspection record.
- 11.1.8. GPS data must be collected electronically at the location of the pole, preferably with sub-meter accuracy, unless otherwise acceptable by Duke Energy. GPS data provided must include a Dilution of Precision (DOP) value.

11.2. Data Delivery

- 11.2.1. The contractor shall be able to deliver Inspection data records in different formats, included but not limited to:
 - XML File
 - Excel File (.xlsx)
 - Shapefile (.shp)
 - ESRI REST service
- 11.2.2. Data shall be delivered at the frequency specified by the Jurisdictional Duke Energy Representative, prior to the payment of invoices.
- 11.2.3. Data submitted prior to the completion of an entire geographical boundary shall be identified as partial in the delivery file format.



11.3. Data Quality

- 11.3.1. The vendor shall warranty the work (inspection and data records) for no less than 3 years after the inspection date. Exception will be given for poles failing due to unforeseen circumstances, or conditions changes after the inspection.
- 11.3.2. Any data discrepancies shall be corrected at the Contractor's expense, included but not limited to additional field visits to validate the data.
- 11.3.3. All pole data delivered to the contractor shall be verified for accuracy (example, pole size, class, material, original treatment, etc.). Any discrepancies shall be captured on the inspection records.
- 11.3.4. All inspection records must be accurately matched to the pole data provided in the shapefile. Any mismatched data must be corrected at the Contractor's expense, included but not limited to additional field visits to validate the data.
- 11.3.5. Inaccurate data shall be rejected and returned to the Contractor for correction. The Contractor is required to supply the Duke Energy Representative with electronic data formatted to Duke Energy specifications. This data shall be submitted within 30 days of the completion of each designated geographical area or department assignment.

11.4. Data Validation and Field Tagging

- 11.4.1. The contractor shall validate the data provided to Duke Energy, to ensure it is provided in the correct formats, with valid values as specified in the script which will be provided to the successful bidder.
- 11.4.2. Contractor shall validate completed electronic work files for data accuracy. Examples of validation include, but are not limited to, the following:
 - All required information filled in with appropriate answers to the associated questions.
 - Review null values for appropriateness or excessiveness
 - Review default values for appropriateness or excessiveness
 - Valid answers to specific questions
 - If a GPS coordinate is provided, ensure the returned GPS, if applicable, is within a spatially acceptable threshold.
 - Time stamp of work analysis
 - Same time stamp for multiple work sites for same crew.
 - Inadequate time between adjacent work sites for same crew to complete work with required quality of service.
 - Inadequate average time per work site to complete work with required quality of service.
 - Missing time stamp



- Missing work units by asset number (comparing units provided for work versus units returned with work complete by specific asset identifier) or by GPS coordinate, or by address, etc.
- Review follow-up action site rate between map sheets and crews for exceptions that may need additional field audit verification.

11.4.3. At Duke Energy's discretion, the contractor may be required to install unique identifiers to distribution poles inspected. Further details will be share with the successful bidder.

12. Audit Requirements

- 12.1. All work shall be entirely satisfactory to Duke Energy and shall be subject to inspection by and approval of Duke Energy.
- 12.2. The Contractor's Supervisor shall perform Quality Control inspection on no less than 3% of all poles inspected by each Foreperson in each designated work area. Poles are to be selected at random, re-excavated (where appropriate), treated and checked for accuracy and quality of work being performed. This Quality Control inspection is to be done at the Contractor's own expense. The 3% inspection shall be distributed equitably and proportionally across the crews doing the inspections/treatment and returned to the designated Duke Energy representative weekly.
- 12.3. Contractor audits shall be communicated electronically weekly to Duke with inspection data against the specific pole audited and tied to the inspection data electronically.
- 12.4. Duke Energy will provide audit form and format requirements
- 12.5. Contractor shall ensure the audit form they utilize will include the Duke required audit information in the required format when documenting their quality audits.
- 12.6. The contractor shall audit the contractual percentage of the completed work and return with each dataset of completed work.
- 12.7. Frequency of the audits shall be discussed and approved by Duke Energy before beginning work (I.e. during the kick-off meeting).
- 12.8. Contractor shall provide proof of field audits and electronic file audits when submitting a data file of completed work for invoicing.
- 12.9. Contractor shall provide periodic updates of crew performance (production and quality) for both the period in question as well as year to date performance.



13. Work Schedule

- 13.1. 7am – 6pm Monday through Friday
- 13.2. No Sunday work allowed.
- 13.3. Holiday work or Saturday work only with prior approval from the Duke Energy Representative or designee.

14. Invoicing

- 14.1. The contractor shall submit invoices on a biweekly basis, unless otherwise specified by the Duke Energy Representative.
- 14.2. On any given year, all work shall be completed, delivered and invoiced no later than November 30th of that year, unless otherwise approved by Duke Energy Representative.
- 14.3. All Invoices shall be submitted using Duke Energy procedures. The successful bidder will receive training/training material, along with forms and format to submit invoices.
- 14.4. All required documentation for the completed work shall be submitted before invoices can be processed, including, but not limited to reports, raw data on .xlsx format, .shp and xml files.
- 14.5. Contractor shall include all service items associated to the data submitted, along with the invoice, including but not limited to inspection and treatment, hourly rates, repairs, etc.

**Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022**

STAFF-DR-01-010

REQUEST:

State whether new attachers will be subsidizing other utility customers by paying the full cost to replace a utility pole that is not a red-tagged pole when the replacement pole has a longer useful life than the pole that is replaced, and explain each basis for the response.

RESPONSE:

When a new attacher pays the full cost to replace a utility pole that is not a red-tagged pole, they may be subsidizing other utility customers to the extent the new pole has a longer useful life than the remaining life of the pole replaced. However, if the cost of the new pole was spread among all customers, then other utility customers would be subsidizing the new attacher by paying for the early replacement of a pole that was perfectly serviceable for the other utility customers' needs at the time of replacement. Making the new attacher pay for the full cost of replacing the utility pole that is not red-tagged more closely follows the doctrine of cost causation, since the only reason the pole is being replaced is to benefit the new attacher.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky
Case No. 2022-00105
STAFF First Set Data Requests
Date Received: April 21, 2022

STAFF-DR-01-011

REQUEST:

Explain how it would affect capital planning and the ability to complete other necessary projects if Duke Kentucky were required to cover the cost of every pole that had to be replaced to accommodate a new attacher less the undepreciated value of the pole being replaced.

RESPONSE:

The impact on capital planning if Duke Energy Kentucky were required to cover the cost of every pole that had to be replaced to accommodate a new attacher less the undepreciated value of the pole being replaced depends on the number of attacher requests that require pole replacements. This would impose an uncontrollable variable to the utility's annual budgeting and forecasting process. The number of pole replacements necessitated due to attachers varies year to year, and is dependent on attaching companies' plans, as well as the available space on the specific poles they want to add attachments. Any additional capital funding Duke Energy Kentucky would need to cover this unplanned work (which is currently charged to the requesting attacher) would divert capital funding from planned work. This diversion of funds could impact timing of planned reliability improvements and distribution capacity increases that directly benefit all Duke Energy Kentucky customers.

PERSON RESPONSIBLE: Nick Melillo