

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Complaint of Citizens)	
Against Clear Cutting, et al.,)	Case No. 17-2344-EL-CSS
)	
Complainants,)	
v.)	
)	
Duke Energy Ohio, Inc.,)	
)	
Respondent.)	

**DIRECT TESTIMONY
OF
JAMES D. WILLIAMS**

**On Behalf of
The Office of the Ohio Consumers' Counsel
And
Complainants**

October 26, 2018

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ATTACHMENTS

Attachment JDW-01	List of Previous Testimony Filed at the PUCO by James Williams
Attachment JDW-02	Duke Response to CACC INT-01-066
Attachment JDW-03	Duke's Application in Case No. 16-915-EL-ESS
Attachment JDW-04	Duke Midwest Vegetation Management Program
Attachment JDW-05	Public Comments Case No. 16-915-EL-ESS
Attachment JDW-06	Duke Response to CACC INT-01-015
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Attachment JDW-12	Duke Response to CACC INT-01-062

1 **I. INTRODUCTION**

2

3 ***Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.***

4 ***A1.*** My name is James D. Williams. My business address is 65 East State Street, 7th
5 Floor, Columbus, Ohio 43215. I am employed by the Office of the Ohio
6 Consumers' Counsel ("OCC") as a Utility Consumer Policy Expert.

7

8 ***Q2. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATION AND***
9 ***PROFESSIONAL EXPERIENCE.***

10 ***A2.*** I am a 1994 graduate of Webster University, in St. Louis, Missouri, with a Master
11 of Business Administration, and a 1978 graduate of Franklin University, in
12 Columbus, Ohio, with a Bachelor of Science, Engineering Technology. My
13 professional experience includes a career in the United States Air Force and over
14 22 years of utility regulatory experience with the OCC.

15

16 Initially, I served as a Compliance Specialist with the OCC and my duties
17 included the development of compliance programs for electric, natural gas, and
18 water industries. Later, I was designated to manage the agency's specialists who
19 were developing compliance programs in each of the utility industries. My role
20 evolved into the management of OCC's consumer hotline, the direct service
21 provided to consumers to resolve complaints and inquiries that involved Ohio
22 utilities. Following a stint as a Consumer Protection Research Analyst, I was
23 promoted to a Senior Utility Consumer Policy Analyst and later a Utility

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1 Consumer Policy Analyst. In these roles, my responsibilities involve developing
2 and recommending policy positions on utility issues that affect residential
3 consumers.

4
5 I have been directly involved in the development of policy issues that impact
6 Ohio residential utility consumers involving natural gas, electric, water, and
7 telecommunications for many years. My responsibilities have included
8 participating in the evaluation of several Public Utilities Commission of Ohio
9 (“PUCO”) cases involving the establishment of minimum electric service
10 standards,¹ review of inspection, maintenance, repair, and replacement of
11 transmission and distribution facilities (circuits and equipment) plans,² annual
12 system improvement plan reports,³ and annual reliability performance reports.⁴
13 My responsibilities have also extended to Duke Energy Ohio, Inc. (“Duke” or
14 “Utility”) specific cases involving electric service quality and more specifically
15 the establishment of minimum reliability performance standards.⁵ Specific to this
16 proceeding, I was involved in the review of Duke’s most recent application to
17 amend its inspection, maintenance, repair, and replacement plan⁶ as well as

¹ Ohio Adm. Code 4901:1-10.

² Ohio Adm. Code 4901:1-10-27.

³ Ohio Adm. Code 4901:1-10-26.

⁴ Ohio Adm. Code 4901:1-10-10.

⁵ *In the Matter of Duke Energy Ohio, Inc.’s Application for Approval of Proposed Reliability Standards*, Case 09-757-EL-ESS, Application (August 28, 2009), Case No. 13-1539-EL-ESS, Application (June 28, 2013), Case No. 16-1602-EL-ESS, Application (July 22, 2016).

⁶ *In the Matter of the Application of Duke Energy Ohio, Inc., for Approval of Revised Paragraph (f) of its Proposed Programs for Inspection, Maintenance Repair and Replacement of Distribution and Transmission Lines*, Case No. 16-915-EL-ESS, Application (April 28, 2016).

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1 review of several of the public comments and complaints that precipitated this
2 case.

3
4 ***Q3. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY OR TESTIFIED***
5 ***BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO?***

6 ***A3.*** Yes. The cases that I have submitted testimony and/or have testified before the
7 PUCO can be found in Attachment JDW-01.

8
9 ***Q4. ON WHOSE BEHALF ARE YOU TESTIFYING TODAY?***

10 ***A4.*** I am testifying on behalf of the Office of the Ohio Consumers' Counsel, who has
11 the statutory authority to represent the interests of Duke's residential utility
12 customers, as well as the Complainants in this case, who are residential utility
13 customers of Duke.

14
15 ***II. SUMMARY OF MY TESTIMONY***

16
17 ***Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS***
18 ***PROCEEDING?***

19 ***A5.*** The purpose of my testimony is to recommend that the PUCO protect customers
20 by requiring Duke to refrain from clear cutting⁷ and other overly aggressive tree-
21 cutting practices that prompted these complaint cases. While OCC supports an

⁷ According to Duke's response to CACC INT-01-066 (attached herein as JDW-02), Duke claims that the phrase "clear cutting" is an undefined term indicating that Duke has no understanding about the nature of the tree trimming practices leading to this proceeding.

1 adequate vegetation management program to reduce power outages, the interest of
2 property owners must also be respected.

3
4 Duke's application in Case No. 16-915-EL-ESS claimed its revised vegetation
5 management plan was not substantively different from its previous plan, but
6 actually the amended plan's practices are very different. Furthermore, on a going
7 forward basis, the PUCO should require affirmative approval on any application
8 to amend Duke's vegetation management program rather than allowing these
9 applications to be automatically approved. As evidenced in this case, changes in
10 vegetation management practices can have a damaging public impact.

11 Finally, the PUCO should investigate Duke's significant projected increases in
12 vegetation management expenses. The PUCO should determine the increased
13 spending is in the public interest.

14

15 **III. INSPECTION, MAINTENANCE, REPAIR, AND REPLACEMENT**
16 **PROGRAMS**

17

18 ***Q6. CAN YOU PROVIDE SOME BACKGROUND ON DUKE'S INSPECTION,***
19 ***MAINTENANCE, REPAIR, AND REPLACEMENT PROGRAM?***

20 ***A6.*** Yes. Effective with Senate Bill 3, the legislation that established retail electric
21 choice in Ohio, the PUCO was required to establish prescriptive standards for the
22 inspection, maintenance, repair, and replacement of the transmission and

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1 distribution systems of the Ohio electric utilities.⁸ The law further required the
2 utilities to file annual public reports and provided authority for the PUCO to
3 enforce the standards.⁹ These standards are promulgated in the minimum Electric
4 Safety and Service Standards (“ESSS”) rules pursuant to Ohio Adm. Code
5 4901:1-10.

6
7 The inspection, maintenance, repair, and replacement standards for the electric
8 utilities are contained in Ohio Adm. Code 4901:1-10-27 (“Rule 27”). Rule 27
9 established extensive and detailed standards for the inspection and reporting of
10 both electric transmission and distribution circuits and equipment.¹⁰ Rule 27 also
11 requires each electric utility and transmission owner to establish, maintain, and
12 comply with written programs, policies, procedures, and schedules for the
13 inspection, maintenance, repair, and replacement of distribution and transmission
14 circuits and equipment.¹¹ Specific programs must include, but are not limited to,
15 poles and towers, circuit and line inspections, primary enclosures and secondary
16 enclosures, line reclosers, right of way vegetation control, and substations.¹²
17 According to the PUCO’s rules, the inspection, maintenance, repair, and

⁸ Ohio Revised Code 4928.11(A).

⁹ Ohio Revised Code 4928.11(B).

¹⁰ Ohio Adm. Code 4901:1-10-27(D).

¹¹ Ohio Adm. Code 4901:1-10-27(E)(1).

¹² Ohio Adm. Code 4901:1-10-27(E)(1)(a) – (g).

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1 replacement programs are automatically approved on the 46th day after the
2 programs are filed unless they are acted upon by the PUCO.¹³

3
4 The programs and plans that an electric utility is required to file are intended to
5 ensure that the Utility is providing safe and reliable service.¹⁴ Ohio Revised Code
6 ORC 4905.22 requires public utilities to furnish necessary and adequate facilities
7 to ensure that just and reasonable services are provided to customers. The use of
8 inspection, maintenance, repair, and replacement plans and programs for any
9 purpose other than the provision of safe and reliable service are not authorized.

10

11 ***Q7. WHEN DID DUKE LAST FILE TO AMEND ITS INSPECTION,***
12 ***MAINTENANCE, REPAIR, AND REPLACEMENT PROGRAM?***

13 ***A7.*** Duke filed its last revised inspection, maintenance, repair, and replacement
14 program on April 28, 2016 in Case No. 16-915-EL-ESS (attached herein as JDW-
15 03).

16

17 ***Q8. CAN YOU BRIEFLY EXPLAIN THE REVISIONS THAT DUKE MADE TO***
18 ***ITS INSPECTION, MAINTENANCE, REPAIR, AND REPLACEMENT***
19 ***PROGRAM THAT AFFECT DUKE'S CUSTOMERS?***

20 ***A8.*** Yes. Duke amended section (f) of the program pertaining to electric line
21 vegetation management. For distribution electric lines, Duke continued the

¹³ Ohio Adm. Code 4901:1-10-27(E)(3).

¹⁴ Ohio Adm. Code 4901:1-10-27(E)(1).

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1 practice of performing vegetation line clearing at least once every four years. For
2 transmission electric lines, Duke continued the practice of performing vegetation
3 line clearing at least once every six years. However, the vegetation management
4 program was modified to include the explicit practice of cutting down and
5 removing vegetation away from electric facilities if Duke has the legal right to do
6 so.¹⁵

7
8 Contrary to Duke's assertion otherwise, the new program is significantly different
9 from the previous program, which required more coordination with customers
10 when removing trees within the right-of-way. Duke's previous program required
11 coordination with customers before removing trees unless Duke had a legal right
12 to remove a tree *and* there was an emergency.¹⁶ That is not the case now.

13
14 The new program requires Duke to clear vegetation away from its transmission
15 lines at least once every six years and lists minimum clearances between the
16 vegetation and the transmission lines of fifteen feet at the completion of the six-
17 year clearing cycle.¹⁷ Furthermore, Duke's new program is inconsistent with its
18 own standards for transmission vegetation management.¹⁸ For example, Duke's
19 vegetation management standards specify a 15-foot clearance standard between

¹⁵ See Exhibit JDW-3, pages 5-6 (new section (f), "Distribution Clearing Cycle" and "Transmission Clearing Cycle.").

¹⁶ See *id.*, pages 8-9 (Duke must contact and receive approval from the property owner or agent "absent a legal right to remove and excluding an emergency situation").

¹⁷ See Exhibit JDW-3, page 7 (Minimum Transmission Line Overbuild Clearances).

¹⁸ Duke Energy Midwest Vegetation Management Program, March 2017. (attached herein as JDW-04).

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1 tree limbs and transmission conductors for 69KV and 138KV lines and a more
2 aggressive tree-trimming program for higher voltage 230 KV and 345 KV
3 conductors.¹⁹ Duke's implementation of its new program, however, seems that
4 Duke is exercising the more aggressive vegetation management practices on all
5 transmission conductors regardless if there is actually a need related to providing
6 safe and reliable service. .

7

8 ***Q9. DID THE PUCO ACT UPON THE REVISED INSPECTION,***
9 ***MAINTENANCE, REPAIR, AND REPLACEMENT PROGRAM THAT WAS***
10 ***FILED ON APRIL 28, 2016?***

11 ***A9.*** Not that I am aware of. The docket card for Case 16-915-EL-ESS includes the
12 application filed by Duke as well as the separate public comments filed by eight
13 Duke Energy Ohio customers between October 16, 2017 and November 29, 2017
14 raising concern about negative impacts of Duke's modified vegetation
15 management practices.²⁰ The comments were filed after the automatic approval
16 date of Duke's application. In general, the public comments in the docket
17 expressed concerns about Duke's alleged use of herbicides that were not
18 addressed in the vegetation management program, clear cutting over large areas ,
19 indiscriminate vegetation management and control, impacts on property values

¹⁹ *Id.*

²⁰ DIS Docketing Card for Case 16-915-EL-ESS Public Comments (Attached herein as JDW-05).

1 and taxes, ecology issues, easement rights, and Duke's potentially providing
2 misleading information to the public.²¹

3

4 ***Q10. DID DUKE REPRESENT THAT IT WAS MAKING SUBSTANTIVE***
5 ***CHANGES IN THE VEGETATION MANAGEMENT PROGRAM WHEN IT***
6 ***FILED THE REVISED INSPECTION, MAINTENANCE, REPAIR, AND***
7 ***REPLACEMENT PROGRAM?***

8 ***A10.*** No. Quite the opposite. Duke represented to the PUCO that the changes that were
9 being made in the inspection, maintenance, repair, and replacement program were
10 intended "simply to clarify and make the terms more coherent."²² Duke further
11 represented to the PUCO that "There are no substantive changes to the
12 program."²³

13

14 But Duke now acknowledges in its supplemental response to CACC INT-01-015
15 (attached herein as JDW-06) that it changed line clearing policy from a "policy of
16 maintenance" to an Integrated Vegetation Management program ("IVM"). Duke
17 claims that the policy of maintenance was unsustainable,²⁴ yet this assertion was
18 not made known to the PUCO in its application to amend the vegetation
19 management program. Duke claims that it intends to proceed with its IVM
20 program and that it may or may not involve removal of trees or other vegetation

²¹ *Id.*

²² JDW-03.

²³ *Id.*

²⁴ JDW-06.

1 from customer properties.²⁵ The IVM program was not described in Duke's
2 application even though this was a new and substantive change in policy and
3 programs.

4
5 Duke even acknowledges that its previous vegetation management program was
6 intended to avoid contention with property owners.²⁶ The intent of the revised
7 vegetation management program was to avoid having to perform off-cycle, tree-
8 trimming supposedly to protect and maintain the safety and reliability of the
9 transmission system.²⁷ However, according to Duke's response to CACC INT-
10 05-023 (attached herein as JDW-09), the Utility has performed no studies,
11 analysis, reviews, or any other similar actions to determine the impact of the
12 vegetation management program on the number of outages.

13
14 ***Q11. DOES THE SIX-YEAR CYCLE BASED VEGETATION MANAGEMENT***
15 ***PROGRAM ON TRANSMISSION CIRCUITS APPEAR TO BE WORKING?***

16 ***A11.*** Yes. Rule 26 requires each of the electric utility companies to file an annual
17 system improvement plan report. I have reviewed Duke's annual system
18 improvement plan report related to transmission circuits over the last several
19 years and Duke has been consistently able to achieve its goal for completing an
20 average of 16% of the target circuit miles per year. In addition, I have reviewed

²⁵ Duke response to CACC INT-01-007 (attached herein as JDW-07).

²⁶ Duke response to CACC INT-05-045 (attached herein as JDW-08).

²⁷ *Id.*

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the total capital and Operations and Maintenance (“O&M”) spending from base rates that Duke claims it made in each of the years 2013-2017. The results of this review are shown in Table 2.

Table 2: Duke Rule 26 Review (2013 – 2017)

Year	Achieved Transmission Vegetation Management Goal	Spending Capital	Spending O&M
2017 ²⁸	Yes	\$2,374,782	\$3,169,497
2016 ²⁹	Yes	\$1,129,076	\$1,426,730
2015 ³⁰	Yes	\$731,029	\$2,707,701
2014 ³¹	Yes	\$871,983	\$3,814,608
2013 ³²	Yes	\$720,996	\$3,581,106

As shown in Table 2, Duke met and/or exceeded its current vegetation management goals in completing an average of at least 16% of target circuit miles per year for each year before Duke changed its vegetation management plan in 2016. This indicates to me that Duke’s previous vegetation management plan and goal of completing an average of 16% of target circuit miles per year is effective and that further revisions in the program are not necessary. In addition, Duke’s

²⁸ In the Matter of the Annual Report of the Electric Service and Safety Standards, Pursuant to Rule 4901:1-10-26(B). Case 18-999-EL-ESS, Report (March 29, 2018 at page 23, 15, 16). (Attached herein as JDW-10).

²⁹ In the Matter of the Annual Report of the Electric Service and Safety Standards, Pursuant to Rule 4901:1-10-26(B). Case No. 17-999-EL-ESS, Report (March 31, 2017 at 10a:2, 7c:1, 7d:1).

³⁰ In the Matter of the Annual Report of the Electric Service and Safety Standards, Pursuant to Rule 4901:1-10-26(B). Case 16-999-EL-ESS, Report (March 31, 2016 at page 81, 39, 40).

³¹ In the Matter of the Annual Report of the Electric Service and Safety Standards, Pursuant to Rule 4901:1-10-26(B). Case 15-999-EL-ESS, Second Revised Report (November 19, 2015 at pages 83, 41, 42).

³² In the Matter of the Annual Report of the Electric Service and Safety Standards, Pursuant to Rule 4901:1-10-26(B). Case 14-999-EL-ESS, Report (March 27, 2014 at pages 75, 53,54).

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1 reported spending for transmission circuit vegetation management was in the
2 range of \$3.6 million to \$3.8 million in 2013 and 2014.

3
4 Spending dropped in 2015 to \$2.7 million and again in 2016, the spending
5 substantially dropped to \$1.4 million. In explaining a variance in 2015 spending,
6 Duke claimed that less vegetation management work was done because of an
7 increased focus on capital.³³ But there was only a modest \$85,700 increase in
8 vegetation management capital spending for the year compared to the original
9 2015 budget.³⁴ The significant decline in vegetation management O&M expenses
10 for 2016 from the budgeted amount of \$3.5 million to \$1.4 million was
11 unexplained in the Rule 26 report.³⁵ Duke also underspent approximately
12 \$70,000 from the amount it had budgeted for capital spending in 2016.³⁶ Duke
13 increased its transmission O&M spending for vegetation management in 2017 to
14 approximately \$3.2 million.³⁷ The increase in capital spending in 2017 (the first
15 full year of the new vegetation management plan) was attributed to more
16 vegetation line clearing being performed than planned.³⁸

³³ Case 16-999-EL-ESS (March 31, 2016 at pages 39 and 40).

³⁴ *Id.*

³⁵ FN 27 (page 7d:1)

³⁶ FN 27 (page 7c:1).

³⁷ FN 26 (page 16).

³⁸ FN 26 (page 15).

1 ***Q12. DID YOUR REVIEW OF THE RULE 26 REPORT FOR 2017 REVEAL***
2 ***OTHER POTENTIAL ISSUES WITH DUKE'S TRANSMISSION***
3 ***VEGETATION MANAGEMENT PROGRAM?***

4 ***A12.*** Yes. Duke projected \$2,780,122 in its O&M budget for transmission vegetation
5 management for 2017 and spent \$3,169,497.³⁹ The 14% increase in the amount
6 spent was attributed to a "Non-NERC herbicide program" as shown in JDW-10.
7 Duke's application to amend its inspection maintenance repair and replacement
8 program makes no mention of a Non-NERC herbicide program. This also
9 appears to be a substantive change that was made in Duke's vegetation
10 management practices that should have been included in the application for
11 PUCO approval. Furthermore, according to the Duke response to CACC INT-01-
12 029 (attached herein as JDW-11), Duke claims that it may or may not use
13 herbicides on specific properties. Duke should not have the sole discretion to use
14 vegetation management practices that are not explicitly identified and authorized
15 by the PUCO in its vegetation management plan.

16
17 Duke's O&M budget for transmission vegetation management in 2018 was
18 significantly increased to \$21,835,484 as shown in JDW-10. This 589% increase
19 in transmission O&M spending over the 2017 spending level indicates that Duke
20 has launched an aggressive vegetation management program based on the
21 substantially different vegetation management program than that in effect prior to
22 April 2016. Duke has also proposed major increases in distribution vegetation

³⁹ *Id.*

1 management costs in 2018 compared to previous years.⁴⁰ And Duke collects the
2 costs associated with the vegetation management program from the same
3 customers who are impacted by the overly aggressive tree-trimming practices.⁴¹
4

5 **IV. CONCLUSIONS**

6
7 ***Q13. CAN YOU SUMMARIZE YOUR CONCLUSIONS?***

8 ***A13.*** Yes. The vegetation management program filed in Case No. 16-915-EL-ESS
9 substantively changed the previous vegetation management program and is
10 negatively impacting consumers, including costing customers more. It provides
11 less coordination with customers regarding tree removal and gives Duke almost
12 unfettered sole discretion over the clearing of vegetation on customers' properties
13 within a right of way. And the changes would seem to be unnecessary given that
14 Duke was meeting its transmission goals before the program was changed in
15 2016.
16

17 While OCC supports an adequate, reasonable vegetation management program to
18 reduce outages, the interest of property owners must also be respected. Duke's
19 current unilateral, overly aggressive, and unreasonable vegetation management
20 program does not adequately take the interest of property owners into
21 consideration.

⁴⁰ FN 26 (Page 19).

⁴¹ Duke response to CACC INT-01-062 (attached herein as JDW-12).

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1 ***Q14. DOES THIS CONCLUDE YOUR TESTIMONY?***

2 ***A14.*** Yes. However, I reserve the right to incorporate new information that may
3 subsequently become available through outstanding discovery or otherwise.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of James D. Williams on Behalf of the Office of the Ohio Consumers' Counsel and Complainants* was served via electronic transmission to the persons listed below on this 26th day of October 2018.

/s/ Terry L. Etter
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Testimony of James D. Williams
Filed at the Public Utilities Commission of Ohio

1. *In the Matter of the Application of the Cincinnati Gas and Electric Company for an Increase in Its Rates for Gas Service to All Jurisdictional Customers, Case No. 95-0656-GA-AIR (August 12, 1996).*
2. *In the Matter of the Application of the Cincinnati Gas and Electric Company for an Increase in Its Rates for Gas Service to All Jurisdictional Customers, Case No. 01-1228-GA-AIR (February 15, 2002).*
3. *In the Matter of the Commission's Investigation into the Policies and Procedures of Ohio Power Company, Columbus Southern Power Company, The Cleveland Electric Illuminating Company, Ohio Edison Company, The Toledo Edison Company and Monongahela Power Company regarding installation of new line extensions, Case No. 01-2708-EL-COI (May 30, 2002).*
4. *In the Matter of the Application of The East Ohio Gas Company d/b/a Dominion East Ohio for an Increase in Its Rates for Gas Service to All Jurisdictional Customers, Case No. 07-0829-GA-AIR (June 23, 2008).*
5. *In the Matter of the Application of the Columbia Gas of Ohio, Inc. for Authority to Amend Filed Tariffs to Increase the Rates and Charges for Gas Distribution, Case No. 08-072-GA-AIR (September 25, 2008).*
6. *In the Matter of a Settlement Agreement Between the Staff of the Public Utilities Commission of Ohio, The Office of the Consumers' Counsel and Aqua Ohio, Inc. Relating to Compliance with Customer Service Terms and Conditions Outlined in the Stipulation and Recommendation in Case No. 07-564-WW-AIR and the Standards for Waterworks Companies and Disposal System Companies, Case No. 08-1125-WW-UNC (February 17, 2009).*
7. *In the Matter of the Application of the Ohio American Water Company to Increase its Rates for water and Sewer Services Provided to its Entire Service Area, Case No. 09-391-WS-AIR (January 4, 2010).*
8. *In the Matter of the Application of Aqua Ohio, Inc. for Authority to Increase its Rates and Charges in its Masury Division, Case No. 09-560-WW-AIR (February 22, 2010).*
9. *In the Matter of the Application of Aqua Ohio, Inc. for Authority to Increase its Rates and Charges in Its Lake Erie Division, Case No. 09-1044-WW-AIR (June 21, 2010).*

10. *In the Matter of the Application of The Ohio American Water Company to Increase its Rates for Water Service and Sewer Service*, Case No. 11-4161-WS-AIR (March 1, 2012).
11. *In the Matter of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan*, Case No. 11-346-EL-SSO, et al (May 4, 2012).
12. *In the Matter of the Application of The Dayton Power and Light Company for Approval of its Market Rate Offer*, Case No. 12-426-EL-SSO (June 13, 2012).
13. *In the Matter of the Application of Ohio Power Company to Establish Initial Storm Damage Recovery Rider Rates*, Case No. 12-3255-EL-RDR (December 27, 2013).
14. *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan*, Case No. 13-2385-EL-SSO (May 6, 2014).
15. *In the Matter of the Application of Duke Energy Ohio for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service*, Case 14-841-EL-SSO (May 29, 2014).
16. *In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan*, Case No. 14-1297-EL-SSO (December 22, 2014).
17. *In the Matter of the Application of Duke Energy Ohio, Inc., to Adjust Rider DR-IM and Rider AU for 2013 Grid Modernization Costs*, Case No. 14-1051-EL-RDR (December 31, 2014) and (February 6, 2015).
18. *In the Matter of the Application Not for an Increase in Rates Pursuant to Section 4901.18, Revised Code, of Ohio Power Company to Establish Meter Opt Out Tariff*, Case No. 14-1158-EL-ATA (April 24, 2015).
19. *In the Matter of the Application of Duke Energy of Ohio, Inc., for Approval of a Grid Modernization Opt-out Tariff and for a Change in Accounting Procedures Including a Cost Recovery Mechanism.*, Case 14-1160-EL-UNC and 14-1161-EL-AAM (September 18, 2015).

20. *In the Matter of the Application of Duke Energy Ohio, Inc., for Approval of an Alternative Rate Plan Pursuant to Section 4929.05, Revised Code, for an Accelerated Service Line Replacement Programs*, Case No. 14-1622-GA-ALT (November 6, 2015).
21. *In the Matter of the Complaint of Jeffrey Pitzer, Complainant, v. Duke Energy Ohio, Inc. Respondent.*, Case No. 15-298-GE-CSS, (December 30, 2015).
22. *In the Matter of the Application of Ohio Power Company to Initiate Phase 2 of Its gridSMART Project and to Establish the gridSMART Phase 2 Rider.*, Case No. 13-1939-EL-RDR, (July 22, 2016).
23. *In the Matter of the Application of Columbia Gas of Ohio, Inc. for Approval of Demand Side Management Program for its Residential and Commercial Customers.*, Case No. 16-1309-GA-UNC, (September 13, 2016).
24. *In the Matter of the Application of the Dayton Power and Light Company for Approval of Its Electric Security Plan*, Case No. 16-0395-EL-SSO (November 21, 2016). Supplemental Testimony, (March 29, 2017).
25. *In the Matter of the Application of Aqua Ohio, Inc. to Increase Its Rates and Charges for Its Waterworks Service.*, Case No. 16-0907-WW-AIR, (December 19, 2016).
26. *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan*, Case No. 16-1852-EL-SSO, (May 2, 2017).
27. *In the Matter of the Application of the Ohio Development Services Agency for an Order Approving Adjustments to the Universal Service Fund Riders of Jurisdictional Ohio Electric Distribution Utilities*, Case No. 17-1377-EL-USF, (August 11, 2017).
28. *In the Matter of the Application of Duke Energy Ohio, Inc. to Adjust Rider AU for 2016 Grid Modernization Costs*, Case No. 17-690-GA-RDR, (August 18, 2017).
29. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Adjustment to Rider AMRP Rates*, Case No. 17-2318-GA-RDR, (April 5, 2018).
30. *In the Matter of the Application of the Dayton Power and Light Company for an Increase in Electric Distribution Rates*, Case No. 15-1830-EL-AIR, (April 11, 2018).
31. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates*, Case No. 17-032-EL-AIR, et al, (June 25, 2018).

32. *In the Matter of the Complaint of Citizens Against Clear Cutting, et al., Complainants, v. Duke Energy Ohio, Inc., Respondent., Case No. 17-2344-EL-CSS (August 27, 2018).*

Duke Energy Ohio
Case No. 17-2344-EL-CSS
Citizens Against Clear Cutting First Set of Interrogatories
Date Received: January 25, 2018

CACC-INT-01-066

REQUEST:

If the answer CACC-INT-063 is affirmative, who pays for or funds the cost recovery for Duke's clear cutting activities on or near the Complainants' properties?

RESPONSE:

Objection. This Interrogatory is vague and ambiguous as to the meaning of the phrase "clear cutting" as such phrase is undefined. Without waiving said objection, to the extent discoverable, and in the spirit of discovery, see response to CACC-INT-01-063.

PERSON RESPONSIBLE: Legal

SUPPLEMENTAL RESPONSE:

See response to CACC-INT-01-59 through CACC-INT-01-65.

PERSON RESPONSIBLE: Legal

BEFORE**THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Duke)
 Energy Ohio, Inc., for Approval of)
 Revised Paragraph (f) of its Proposed) Case No.16-915-EL-ESS
 Programs for Inspection, Maintenance)
 Repair and Replacement of Distribution)
 and Transmission Lines.)

**APPLICATION OF DUKE ENERGY OHIO, INC. FOR APPROVAL OF
 REVISED PARAGRAPH (F) OF ITS PROGRAMS
 FOR INSPECTION, MAINTENANCE, REPAIR AND REPLACEMENT
 OF DISTRIBUTION AND TRANSMISSION LINES**

The Public Utilities Commission of Ohio (Commission) regulations provide that each "electric utility and transmission owner shall establish, maintain, and comply with written programs, policies, procedures, and schedules for the inspection, maintenance, repair, and replacement of its transmission and distribution circuits and equipment," Rule 4901:1-10-27(E)(1). Further, the rules provide that all revisions or amendments requested by an electric utility shall be filed with the commission as outlined in paragraph (E)(2) of the rule. Pursuant to Rule 4901:1-10-27(E)(2), Duke Energy Ohio, Inc. (Duke Energy Ohio) hereby submits a requested change to the language contained within its currently approved inspection, maintenance, repair and replacement programs.

Specifically, Duke Energy Ohio has deleted the language contained only in paragraph (f) and replaced it with a new paragraph (f), "Overhead Electric Line Vegetation Management." Changes to this section were made simply to clarify and make the terms more coherent. There are no substantive changes to the program. For these reasons, Duke Energy Ohio respectfully requests that the Commission approve these changes as requested. A redlined version of the edited section that is included within the overall program terms is attached as Exhibit 1.

Respectfully submitted,

DUKE ENERGY OHIO, INC.

A handwritten signature in dark ink, reading "Elizabeth H. Watts" followed by a stylized monogram or initials.

Amy B. Spiller (0047277)

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Duke Energy Ohio, Inc. - Exhibit 1**4901:1-10-27 (E)(1) Inspection, maintenance, repair, and replacement of transmission and distribution facilities (circuits and equipment).****(a) Poles and Towers**

Duke Energy Ohio shall inspect all DEO owned poles on a 10 year schedule and treat, repair or replace as needed. Poles and towers shall be visually inspected in compliance with inspection program 4901:1-10-27 (D)(1),(2). The goal shall be to maintain adequate strength and integrity of poles and towers per the National Electrical Safety Code. Based on the inspection results, repair work orders shall be prepared as needed and tracked until complete.

All equipment and hardware on poles shall be inspected as follows: Duke Energy shall check condition of base of the pole for rotting, termites, and other abnormalities. Poles involved with landslides or "wash outs", leaning for any reason; objects hanging on or near pole; burning pole, cross-arms, and/or braces; ground wire broken; cross-arms or broken braces; bird holes; and vehicular damage. 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 shall be removed.

Refer to Exhibit A for complete pole inspection specifications.

Towers shall be inspected as follows: Duke Energy Ohio will inspect for loose, bent, rusty, or missing steel; Duke Energy Ohio shall inspect numbers and "Danger Hi-Voltage" signs; base of tower rusted; involved with landslides or "wash outs"; objects hanging on or near tower; and flashings lights on tower (FAA).

(b) Circuit and Line Inspections

The distribution inspection program shall consist of a driving or walking visual inspection. All distribution circuits shall be inspected on a 5-year schedule as part of the distribution inspection program 4901:1-10-27(D)(1),(2). Inspectors shall document physical defects or other potential hazards to the safe and reliable operation of the circuits. Based on the inspection results, those findings that are determined to be critical will be immediately reported for assessment and repair. Otherwise, repair work orders are prepared as needed and tracked until complete.

Refer to Exhibit B for LEVEL definitions and examples.

When LEVEL 1 (L1) situations are found, the inspector will contact the appropriate district Work Coordinator immediately. If there is no answer, the inspector will leave a message and contact the appropriate District Supervisor and provide complete, detailed and thorough as possible description of the situation found when entering details into eMax. eMax is Duke Energy's computerized maintenance management system in which Duke Energy maintains centralized records of all equipment and maintenance performed on that equipment. This will assist Transmission & Distribution Construction personnel in evaluating the situation.

Two-pole conditions are those where in the field, two poles sit side by side and where one pole is in the process of being removed/changed out. Duke Energy Ohio shall log two-pole conditions into eMax when found in the field. Enter pole numbers, physical location, and

attachments; type and number of attachments. Deteriorated "Elephant Ear" cutouts, deteriorated "Fuzzy Barrel" fuse tubes, taped fuse tubes, and deteriorated, checked or cracked Durabute ("Chicken Wing") cutouts should be logged as a priority LEVEL 3 (L3).

(c) **Primary enclosures (e.g., pad-mounted transformers and pad-mounted switch gear) and secondary enclosures (e.g., pedestals and hand holes)**

The distribution inspection program shall consist of a visual inspection. All pad-mounted transformers, secondary pedestals, hands holes and primary switchgear shall be inspected on a 5-year schedule as part of the distribution inspection program 4901:1-10-27(D)(1). Inspectors shall document physical defects or other potential hazards to the operations of the transformers, switch gear, and secondary enclosures. This inspection shall identify exterior physical defects in equipment or potential hazards such as transformers that are rusted, leaking, oil-stained, have broken hinges, missing locks and/or bolts. Based on the inspection results, repair work orders shall be prepared as needed and tracked until complete.

Refer to Exhibit C for priority definitions.

In eMax, the term "TRANSFORMER" – "OTHER" shall be used to refer to damage(s) to box pads.

(d) **Line reclosers**

Line reclosers and sectionalizers shall be visually inspected each year. The units shall be inspected for signs of damage or deterioration and the operations-counter readings shall be recorded. Items to look for are black or burnt marks on equipment and/or molten metal, indicating that a flash has occurred at the recloser installation. Based on the inspection results, repair work orders shall be prepared as needed and tracked until complete.

A Commissioning Test is performed on all newly installed electronically controlled reclosers. Hydraulic under oil units shall be removed from service every 6 years for maintenance. Vacuum under oil units shall be removed from service every 7 years for maintenance. Work Orders shall be initiated for annual inspections of reclosers. Inspectors shall visually inspect the recloser site for issues, document the counter reading, etc. The inspectors then shall enter the Work Order information into an Excel spreadsheet.

(e) **Line capacitors**

Electronic remote monitoring will replace the annual visual inspection wherever the capability has been installed and activated. Distribution line capacitors will still be reviewed visually within the existing requirements of the 5 year line patrol program.

As part of the Duke Energy SmartGrid Capacitor upgrades, Duke Energy has implemented two components for monitoring the status of capacitors. The first component is through our DMS system. Alarms are received from capacitors, through DMS, and alert our operators to take action. The second component is CapCentral. CapCentral is a software program that queries historical data in our PI database and identifies trends that need to be addressed.

DMS

The DMS system is set up to receive two types of alarms. We intentionally limited the types of alarms in DMS to those conditions where an operator would need to take action, for the health of the system.

- 1.) **High/Low Voltage Alarm** - If too many capacitor banks are in service on the system during low load conditions then a voltage rise on the system occurs. If there are not enough capacitors on the system during peak load conditions then low voltage may occur. In both of these conditions, an operator would need to take action to bring the system back into normal operating conditions.

High Neutral Current Alarm - This occurs when one or two phases of the three phase capacitor bank is removed from service. This can be caused by a fuse operating or a switch failing to close. In this case, because of the voltage imbalance introduced, the operator removes the bank from service. After repairs are completed the bank is restored to service.

CapCentral

The CapCentral system is set up to help us maintain oversight over our fleet of capacitors on our system, based on historical data reported by the capacitor and stored in our PI database. The data points we query do not need immediate action by an operator to maintain the health of the system, but they are data points that give indication to the health of our system and fleet of capacitors. The data points we query using CapCentral are: Delta Voltage, Frequency of Operations, High/Low Voltage, Self Diagnostic, Remote Manual, Loss of Communications, and High Neutral Current.

Based on the results of monitoring the statuses of these capacitors, repair work orders are prepared as needed and tracked until complete.

The repair intervals for issues found during an inspection are the same duration as Circuit and Line inspections. A LEVEL 1 (L1) = 72 hours, LEVEL 3 (L3) = 60 working days maximum, LEVEL 5 (L5) = 6 to 12 months, and LEVEL 7 (L7) = no time frame, not a safety or reliability issue. The repair work for Level 7 issues shall be completed when other equipment is repaired at that location.

(f) Overhead Electric Line Vegetation Management

The following overhead electric line vegetation management requirements are intended to establish minimum clearing cycles by Duke Energy Ohio, and minimum clearances of vegetation from Duke Energy Ohio overhead electric line facilities following such clearing cycles. These requirements shall not be construed to limit Duke Energy Ohio's right to cut down and remove vegetation from a Duke Energy Ohio corridor when Duke Energy Ohio has the legal right to do so, e.g., statute, recorded easement grant, easement by prescription, license, condemnation order, etc.

Distribution Clearing Cycle – Duke Energy Ohio shall clear vegetation away from its distribution lines at least once every four years which may include cutting down and removing vegetation from a Duke Energy Ohio corridor when Duke Energy Ohio has the legal right to do so. The goal shall be to help maintain and improve safe and reliable electric service by limiting

or eliminating the possibility of contact by vegetation which has grown towards the overhead distribution lines.

Transmission Clearing Cycle – Duke Energy Ohio shall clear vegetation away from its transmission lines (69KV and above) at least once every six years which may include cutting down and removing vegetation from a Duke Energy Ohio corridor when Duke Energy Ohio has the legal right to do so. The goal shall be to help maintain and improve safe and reliable electric service by limiting or eliminating the possibility of contact by vegetation which has grown towards the overhead transmission lines.

Minimum Distribution Line Clearances

- For any two phase or three phase primary distribution line, vegetation shall be no closer than ten feet to an energized conductor when the clearing is completed. In addition, Duke Energy Ohio shall remove any “unsuitable” branch above the distribution line even though it is located more than ten feet away from an energized conductor. An “unsuitable” branch above the distribution line includes one which is either weak, diseased or decaying, or is part of a tree which is.
- For any single phase primary distribution line, vegetation shall be no closer than ten feet to an energized conductor when the clearing is completed. In addition, Duke Energy Ohio shall remove any branch above the distribution line even though it is located more than ten feet away from an energized conductor if it is within an area 15 feet from the energized conductor measured at a 45 degree angle.
- For any open wire secondary distribution line (without a primary distribution line and excluding a service drop), vegetation shall be no closer than five feet to an energized conductor when the clearing is completed.
- For any triplex or street light distribution line (excluding a service drop), vegetation shall be no closer than twelve inches to an energized conductor when the clearing is completed.
- Duke Energy Ohio shall have no responsibility to clear vegetation from a service drop.

Minimum Transmission Line Clearances

- For any transmission line (69kV and above), vegetation shall be no closer than fifteen feet to an energized conductor when the clearing is completed. In addition, Duke Energy Ohio shall remove any branch above the transmission line even though it is located more than fifteen feet from any energized conductor.

Minimum Transmission Line Overbuild Clearances

- For any transmission line (69KV and above) which is located above any distribution line on the same supporting structure, vegetation shall be no closer than fifteen feet to an energized conductor on either line. In addition, Duke Energy Ohio shall remove any branch above the transmission line even though it is located more than fifteen feet from any energized conductor.

(f) — ~~Right-of-way vegetation management~~

~~Distribution Vegetation Management — Duke Energy Ohio shall perform vegetation line clearing on distribution circuits at least once every four years. The goal shall be to help provide maintain and improve safe and reliable electric service by limiting contact between vegetation and power lines.~~

~~Transmission Vegetation Management — Duke Energy Ohio shall provide vegetation line clearing on transmission circuits at least once every six years. The goal shall be to help provide maintain and improve safe and reliable electric service by limiting contact between vegetation and power lines.~~

~~For two phase and three phase primary lines, side clearances shall be at least ten feet from tree branches to nearest conductor. Duke Energy Ohio shall remove unsuitable overhanging/encroaching limbs/branches above the conductor. Unsuitable overhanging/encroaching limbs/branches includes limbs that are smaller diameter, weak, diseased, or decaying, or are positioned in a horizontal manner. Mature, well-established hardwood trees with structurally sound overhanging limbs or branches greater than six inches diameter may remain. At least Ten feet clearance shall be obtained from the lowest conductor to the nearest vegetation for trees underneath the primary.~~

~~For transmission lines 69kV and above, side clearances should provide a minimum of fifteen feet clearance from the tree branches to the nearest conductor. Duke Energy Ohio shall remove overhanging or encroaching branches above the conductor. For trees underneath the primary, Duke Energy Ohio shall maintain a fifteen feet minimum clearance from the lowest conductor to the nearest vegetation.~~

~~For over builds, where there are transmission circuits on the same structure as the distribution circuits, the circuits shall be trimmed to fifteen feet clearance from the tree branches to the nearest conductor of each circuit.~~

~~For single phase lines, side clearances shall be provided ten feet clearance from the tree branches to the nearest conductor. For overhang on a single phase line, all live branches above the conductors shall be removed to a minimum height of fifteen feet above the nearest conductor, and at a 45 degree angle. Duke Energy Ohio shall remove all branches that will could potentially become overhang and lighten up remaining overhang and remove all dead and structurally weak branches overhanging any primary voltages. Underneath the primary, Duke Energy Ohio shall maintain at least a ten foot clearance from the lowest conductor to the nearest vegetation.~~

~~For open wire secondary (without primary), open wire secondaries shall be pruned to obtain a minimum of five feet of clearance around the conductors. Other secondaries and (excluding service drops) shall be pruned to remove any obvious line damaging limbs. These would be limbs of a size substantial enough that through continued rubbing or pressure due to weight will likely lead to service interruptions.~~

~~For open wire or triplex services, and street lighting, all service and street light wires shall have a twelve inch swing clearance to move without obstruction. Any limbs large enough to create pressure on these conductors, such that the conductor is pushed out of normal "sag" configuration, shall be removed back to qualified lateral.~~

~~All vines are to be cut down from all electric poles and guy wires. Vines are to be cleared at least ten feet off the ground and stump chemically treated.~~

~~Special clearances: Down, span, and other guys shall be free of weight, strain, or displacement because of pressure caused by contact with tree parts, particularly of fast growing trees. Vines shall be removed from guys and poles. Working clearance from trees shall be obtained around transformers, cross arms, and risers. In addition, to the amount of separation between conductors and trees specified above, allowance shall be made for wire sag and horizontal displacement due to weather extremes and high winds, maximum of wire sag and sway occurs at span centers. All tree pruning and removal should be done accordingly.~~

~~Poles with switching mechanisms, transformers, or other mechanical equipment for the electric system installed in the right of way or that are not accessible by bucket truck shall be cleared from ground to sky to a minimum ten foot radius.~~

~~Leaning, weakened, or dead trees outside of the clearance requirements, which pose an imminent threat to the adjacent electric equipment, shall be identified by the Contractor and brought to the Duke Forester's attention. The Duke Forester may authorize the removal of such trees on a time and material basis but in the absence of a legal right to remove and excluding an emergency situation, no removal may take place until Contractor has contacted and received approval from the property owner or agent to remove such trees.~~

~~When performing routine circuit line clearing, all unsuitable trees twelve inches diameter breast height (DBH) or less with the trunk within ten feet of the conductor shall be removed where permissible by the property owner or Township but in the absence of a legal right to remove, and excluding an emergency situation, no removal may take place until Contractor has contracted and received approval from the property owner or agent to remove such trees. Removal of trees greater than twelve inches DBH must be approved by a Duke Forester prior to beginning the work. Removal of all trees with the trunk more than ten feet from the conductor should be approved by a Duke Energy Forester prior to the beginning the work. In the absence of a legal right to remove, and excluding an emergency situation, a signed permission notice must be obtained from the property owner or their agent prior to removing such trees or brush. Removals of secondary and service wires should not be performed unless there are extenuating circumstances that are approved by the Duke Energy Forester prior to beginning the work. In most cases, on secondary and service wires customers should be informed that they may request the temporary disconnection of the conductor so the customer can then make arrangements for the tree's removal. Contractor shall utilize the most efficient and cost effective methods available to perform the removals including, but not limited to: cutting, mowing, hand cutting, and chemical applications. All stumps from downed trees shall be treated with herbicides where applicable and possible.~~

(g) Substations

All Duke Energy safety rules shall be observed when entering any substation:

Appropriate Personal Protective Equipment

Minimum Approach Distance

Personal Protective Grounds

Special Precautionary Techniques

Environmental Rules and Regulations

Station Visual Inspection

Substation visual inspections shall be performed once a month. These visual inspections and recorded readings can help indicate the need for maintenance on a piece of equipment, reasons for unplanned outages, the presence of unbalanced or overloaded circuits, and the presence of potentially dangerous situations. Bus structure, circuit breakers, transformers, the control building, and the general yard are specific items that shall be covered under the station visual inspection.

Visual inspections of the bus structure and the equipment mounted in the structure are performed every time the substation is entered. When performing the inspection, items or conditions that appear abnormal should be closely inspected, such as a sudden change in color on the bus structure which could indicate a spot where flashing has occurred or where overheating has occurred. The connection points and lines of a static line shall be visually checked for damage. Insulators, bushings, and arresters are checked for breakage, cracking or

discoloration. Air break, load break or disconnect switches are visually inspected to ensure that they are properly seated if closed and that padlocks are in place and locked. Wave traps, coupling capacitor transformers, potential transformers, fault bus and other equipment mounted on the bus structure shall be checked for signs of overheating, loose connections, vandalism, corrosion, dirt, and lightning strikes. Steel structures are also inspected for signs of excessive rust, cracks, excessive vibration and debris.

Visual inspections on circuit breakers will vary depending on the type/model of the circuit breaker. The overall appearance of the circuit breaker shall be visually checked for anything abnormal such as cracks, chips, or oil leaks. High/low gas pressures and temperatures, air pressure, oil level, counter numbers, elapsed time readings on the compressors, and compressor oil level are all checked and recorded. The semaphore indications shall also be checked to ensure true circuit breaker status.

The overall appearance of the transformer shall be visually checked for anything abnormal such as oil leaks, fans and pumps not operating, and bushings that are cracked, chipped, or leaking. The main tank and load tap changer liquid temperatures and winding temperatures are checked and recorded. Lightning arresters are also checked and the counters are recorded if applicable. The load tap changer compartment and controls are checked for signs of damage and correct automatic operation. The Mulsifyre® system, a high velocity water spray system, and nitrogen supplies are checked and valves are opened to ensure the system is in a state of readiness.

The yard shall be visually inspected for damage and deterioration from vandalism, accidents. The general appearance of the yard shall be checked for excessive vegetation and equipment appearance. The yard lights shall be visually checked and any bulbs that are blown are replaced. The bottom of the perimeter fence shall be checked for excessive height above ground.

Equipment in control buildings shall be visually inspected and readings recorded. An operator shall visually check all relays for targets and records information and resets targets. This person shall also ensure that primary relay and backup relay indicating lights are lit and checks the remainder of indicating lights to ensure they agree with equipment status. The annunciator panel shall be tested to ensure all lamps are operational and alarm cutout switches closed unless tagged. The control panel switches are checked to ensure they are in the proper position. The operator shall also change charts and records date, time, and initials the chart where applicable. Digital fault recorder targets shall be checked and reset as necessary. The fault bus shall be tested to ensure the voltage level is approximately 15 volts. Power station panels shall be checked for tripped breakers or breakers placed in the wrong position. Station power supplies are checked to ensure both the normal and reserve power sources are available and the DC control panels shall be checked to ensure switches are in the proper position. The substation batteries and battery charger shall be visually inspected. Fire extinguishers shall be visually inspected to ensure acceptable pressure in the tank

Infrared Inspection

An infrared scan of substation equipment shall be performed annually. All outdoor substation equipment shall be scanned using suitable infrared detection equipment to check for signs of abnormal heating or below normal expected temperature. Abnormal heating may be caused by high resistance connections, excessive loading, restricted air or oil flow, or deteriorated equipment. Below normal temperatures can be caused by unbalanced loading, restricted air or oil flow, or device malfunction.

Bus conductor, connectors, fittings, fuses, bushings, lightning arresters, switches, transformer case and auxiliary equipment, circuit breaker interrupter tanks, line neutral and static connections and power cable terminations shall be scanned for abnormalities. Control and relay cabinet doors shall be opened to scan circuit breakers, contactors, control wiring, fuses, heaters, relay terminals, and terminal blocks. Station batteries shall be checked for uneven heating, high resistance connections, and contamination losses. The thermography and field repair records shall be reviewed and analyzed to determine cause.

Power Factor Testing

Power factor tests shall be performed on a time period from 2 – 9 years based on station equipment type/size/condition/criticality. Power factor tests establish baseline readings on new equipment for future reference when tests are performed to evaluate the integrity of equipment at later date.

Refer to Exhibit E for power factor intervals.

The guidelines set forth in the Power Factor Test Set instructions are followed. The readings from the Power Factor Test Set shall then be recorded for future assessment or compare readings to evaluate the piece of equipment being tested.

Dissolved Gas Analysis Testing – Transformer and Transformer Load Tap Changer Oil Sampling

A dissolved gas analysis test shall be performed on transformers with a 3-phase rating 7.5 MVA – 49.9 MVA once per year. A dissolved gas analysis test shall be performed on transformers with a 3-phase rating 50 MVA and larger twice per year. The dissolved gas analysis determines the gas levels within the insulating oil and overall health of the transformer.

A dissolved gas analysis test shall be performed on transformer load tap changers once per year for GE: LRT200-2 w/fiberglass drum, LRT300 and LRT500, Reinhausen: RMV-A and RMV-II, Westinghouse: UVT. A dissolved gas analysis test shall be performed on transformer load tap changers twice per year for ABB: UZE w/filter, Allis Chalmers: SJ5 w/filter and TLF w/filter, ASEA/Waukesha: UZD w/filter, GE: LRT48 w/filter, LR65 w/filter, LRT65 w/filter, LRT68 w/filter, LRT72 w/filter, LR83 w/filter, LRS83 w/filter, and LRT83 w/filter, McGraw Edison: V2PA, Westinghouse: UNR w/filter, URS w/filter, URT w/filter, and UTS w/filter, also twice per year for ABB: UZE no filter, Allis Chalmers/Siemens: TLB w/filter and TLH-21 w/filter, Allis Chalmers: SJ5 no filter and TLF no filter, ASEA/Waukesha: UZD no filter, Federal Pacific: TC546 w/filter, TC525 w/filter, and TC25E w/filter, GE: LRT200 w/paper drum, LRT48 no filter, LR65 no filter, LRT65 no filter, LRT68 no filter, LRT72 no filter, LR83 no filter, LRS83 no filter, and LRT83 no filter, McGraw Edison: 394

w/filter, 550 w/filter, 550B w/filter, and 550C w/filter, Moloney: T-MB w/filter, TC-MA w/filter, TC-MB w/filter, TC-MC w/filter, Westinghouse: UNR no filter, URS no filter, URT no filter, UTS no filter, and UTT w/filter. A dissolved gas analysis test shall be performed on transformer load tap changers three times per year for Allis Chalmers/Siemans: TLB no filter and TLH-21 no filter, Federal Pacific: TC546 no filter, and TC25E no filter, McGraw Edison: 394 no filter, 550 no filter, 550B no filter, and 550C no filter, Moloney: T-MB no filter, TC-MA no filter, TC-MB no filter, TC-MC no filter, and Westinghouse: UTT no filter. The dissolved gas analysis determines the gas levels within the insulating oil and overall health of the load tap changer.

Circuit Breaker Inspection

A circuit breaker inspection shall be performed every 3 years for all air, vacuum, gas, and oil circuit breakers. The purpose of this inspection is to provide a non-intrusive method of evaluating the circuit breaker to ensure its integrity.

Metal Enclosed Capacitor Assemblies

Metal enclosed capacitor assemblies without unbalanced protection shall be internally inspected each year and every 3 years for metal enclosed capacitor assemblies with unbalanced protection. The capacitors within enclosures shall be inspected to ensure equipment is functioning properly.

Capacitors must be de-energized for a minimum of five minutes before they are grounded. Duke Energy Ohio shall check isolation and check voltage and ground after five minutes. Duke Energy Ohio shall check all electrical connections, check capacitor fuses and replace blown fuses after checking capacitor with capacitor tester and check fuse clips and all ground connections. Duke Energy Ohio shall inspect capacitors for any damage or leaking cases, broken or cracked bushings, and replace if necessary. Duke Energy Ohio shall clean and inspect insulators for damage and repair/replace if necessary. If isolation permits, clean and lubricate disconnect switch and ground disconnect if equipped. Duke Energy Ohio shall clean and inspect neutral pot for damage and repair/replace if necessary and clean and inspect capacitor structure or enclosure for damage and clear isolation and return equipment to service.

Planned Maintenance

Planned Maintenance work (i.e. MAXIMO Work Type "PM") shall be completed and the associated MAXIMO work order closed within the following time interval from the date on which the work order was generated:

<u>PM Frequency/Interval¹</u>	<u>Work Order Should Be Completed Within</u>
1 Week or Less	1 Week
1 Month	Within the calendar month in which work order generated.
3 Months	30 Days
6 Months	60 Days
1 Year	90 Days
3 Years	1 Year
6 Years or Greater	2 Years
Relays (all frequencies)	12 months after the due date in the Aspen relay database.

Note 1: For PM frequencies/intervals that fall between those shown in this table, the next lower interval from this table will apply.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

4/28/2016 1:50:11 PM

in

Case No(s). 16-0915-EL-ESS

Summary: Application Application of Duke Energy Ohio, Inc., for Approval of Revised Paragraph (f) of its Programs for Inspection, Maintenance, Repair and Replacement of Distribution and Transmission Lines electronically filed by Dianne Kuhnell on behalf of Duke Energy Ohio, Inc. and Spiller, Amy B. and Watts, Elizabeth H.



Midwest Vegetation Management Program



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SECTION 1 – GOAL, OBJECTIVE AND PURPOSE

Duke Energy's vegetation management goal is to balance the need for safe and reliable utility service with safe and cost-effective vegetation management practices.

The primary objective of the Duke Energy Midwest Vegetation Management Program (DEM VMP) is to control the growth of incompatible vegetation along its electric lines in order to help provide safe and reliable service to our customers. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and by initiating various vegetation control practices to reduce, manage or eliminate incompatible growth. This integrated vegetation management program is essential in providing safe and reliable electric service by ensuring that trees and brush near or within rights-of-way are periodically trimmed or removed to help reduce potential outages and hazards near our facilities.

The consistent implementation of industry accepted vegetation management practices reduces the likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the operating system.



SECTION 2 – DEFINITIONS

ANSI A300- American National Standards Institute (ANSI) A300 for Tree Care Operations, provides the generally accepted industry performance standards for the care and management of trees, shrubs, and other woody plants.

BRUSH- A perennial woody stem less than six inches DBH (diameter at breast height) in an unmaintained or natural area is classified as brush.

CONTRACTOR- Corporation to whom the Vegetation Management work is awarded.

HAZARD TREES- A tree that is dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment of the distribution or transmission system if it falls or is cut.

INTEGRATED VEGETATION MANAGEMENT- Vegetation plan that combines various components including pruning, mowing and herbicide applications to manage the growth of vegetation on the electric utility rights-of-way.

LEGAL- Duke Energy Legal Department.

PRIMARY LINE- Electric conductor(s) that carry greater than 600 volts of electricity.

RIGHT-OF-WAY (ROW)- A strip of land that an electric utility uses to construct, operate, inspect, maintain, repair or replace an overhead or underground power line. The ROW allows the utility to provide clearance from trees, buildings and other structures that could interfere with the line installation, maintenance and operation. ROW may include licenses, easements and other rights to access property.

ASSET PROTECTION- Duke Energy department that oversees right-of-way issues.

SECONDARY LINE- Electric conductor(s) that carry 600 volts or less of electricity.

SINGLE PHASE- A type of electric power line construction that contains one conductor carrying primary voltage.

THREE PHASE- A type of electric power line construction that contains three conductors carrying primary voltage.

TRANSMISSION LINE— a set of electrical conductors that carry 69 kV or more of electricity.

TWO PHASE- A type of electric power line construction that contains two conductors carrying primary voltage.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height) is classified as a tree.



SECTION 3 – *FEDERAL, STATE, LOCAL LAWS*

Contractor shall perform all work in conformance with DEM VMP requirements and work specifications, Occupational Health and Safety Administration (OSHA) regulations, American National Standards Institute (ANSI) A300 and Z133, and all federal, state, county, and municipal laws, ordinances and regulations applicable to said work.

The governing entities include but are not limited to:

Indiana Utility Regulatory Commission
Indiana Department of Transportation
Kentucky Public Service Commission
Kentucky Department of Transportation
Public Utility Commission of Ohio
Ohio Department of Transportation
Kentucky Agriculture Pesticide Department
Ohio Agriculture Pesticide Department
Hamilton County Park Division
Cincinnati Forestry Department
Butler County Park Division
Department of Natural Resources
Occupational Health and Safety Administration (OSHA)
Indiana Department of Environmental Management
American National Standards Institute (ANSI)



SECTION 4 – *PROPERTY ACCESS RIGHTS / REQUIREMENTS*

The rights to access, inspect, or perform the work associated with vegetation management practices include, but are not limited to, established legal instruments, easements, public road rights-of-way, municipal ordinances, state statutes, regulatory rules, tariffs and other legal authority. The Duke Energy Midwest Vegetation Management (DEM VM) Specialist should, when necessary, utilize the available supporting documents to pursue the completion of necessary work activities in order to maintain vegetation growth to the established standards of acceptance in the provision of safe and reliable electric service. If there are objections, restrictions or limitations that prevent completion of the necessary work activities, the DEM VM Specialist should contact the Right-of-Way Services Department or Legal Department for specialized assistance.

A list of items to determine property access rights include, but are not limited to:

- Existing property easement, prescriptive easements, public road rights-of-way and / or agreements
- State statutes
- Municipal codes
- Commission rules and regulations
- Customer consent



SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with DEM VMP Requirements, OSHA regulations, American National Standards Institute (ANSI) A300, ANSI Z133, Tree Care Industry Association's (formerly the National Arborist Association) standards, Dr. Shigo's *Field Guide for Qualified Line Clearance Tree Workers*, National Electrical Safety Code (NESC), International Society of Arboriculture Best Management Practices, and all federal, state, county, and municipal laws, statutes, ordinances and regulations applicable to said work.

Clearance to obtain safety and reliable electric service are based on, but not limited to, consideration of the following:

National Electrical Safety Code (NESC)

ANSI A300 Standard - American National Standards Institute A300 for Tree Care Operations

ANSI Z133 Standard - American National Standards Institute Z133 for Tree Care Operations - Safety Requirements

OSHA Standard 29 CFR 1910.269 - Occupational Safety and Health Administration Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

Field Guide for Qualified Line Clearance Tree Workers by Dr. Alex Shigo



SECTION 6 — CLEARANCE SPECIFICATIONS AT THE TIME OF ROUTINE MAINTENANCE

TRANSMISSION CONDUCTORS 230KV AND 345KV

- As a best practice, the ROW should be maintained to the outside edge of ROW
- No overhanging/encroaching branches permitted
- DEM VMP's goal is to eliminate any incompatible vegetation within the maintained ROW

TRANSMISSION CONDUCTORS 69KV AND 138KV

- Minimum of 15 feet clearance to the side of all conductors
- Minimum of 15 feet clearance below the lowest conductor
- No overhanging/encroaching branches permitted
- As a best practice, the ROW should be maintained to the outside edge of ROW
- DEM VMP's goal is to eliminate any incompatible vegetation within the maintained ROW that has a mature height of greater than 15 feet

TWO AND THREE PHASE PRIMARY DISTRIBUTION LINES

- Minimum of 10 feet clearance to the side from all conductors or to the previously established width
- Underneath the primary: minimum of 10 feet clearance below the conductors
- Overhanging branches above the conductors shall be removed unless identified as structurally sound and established

SINGLE PHASE PRIMARY DISTRIBUTION LINES

- Minimum of 10 feet clearance to the side from all conductors or to the previously established width
- Underneath the primary: minimum of 10 feet clearance below the conductors
- Overhanging branches above the conductors shall be removed to a minimum height of 15 feet, and at a 45-degree angle. All dead and structurally weak branches overhanging any primary voltage wires shall be removed



SECTION 7 – *INSPECTION AND MONITORING*

Aerial inspections shall be performed on each transmission circuit (69kv and above) a minimum of two times per year in order to observe vegetation conditions on the transmission system. These aerial inspections may be coordinated with routine transmission facility inspections but should provide for the capabilities to specifically identify unsuitable vegetation conditions.

Any unsuitable vegetation conditions shall be noted along with location, structure numbers, or other information that will provide details necessary to return to the location by ground to address the condition. This information shall also be recorded in the appropriate database logs.

Vegetation conditions observed that pose an immediate threat to the operation of the line or public safety shall be reported immediately to the Duke Energy System Operations Control Center and the Duke Energy Midwest Vegetation Management (DEM VM) Specialist responsible for that area.

Vegetation related ground inspections shall be performed on an as needed basis as determined by the field DEM VM Specialist.



SECTION 8 – VEGETATION CONTROL METHODS

- **TREE SIDE TRIMMING-** Trees found along the right-of-way edge will, in most cases, encroach upon the electrical conductors through the side growth of their limbs. The maintenance of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of “pruning” such limbs so as to minimize any damages to the tree. These methods are referred to as natural trimming, drop crotch or lateral trimming techniques. Stubbing and tearing of bark shall be avoided. Tree trimming may be performed by aerial buckets where accessibility permits. In some areas that are less accessible, off-road buckets may be assigned to perform the work. In other remote areas, boom mounted cutting devices or helicopters may be employed to perform the pruning activities. In terrain where no mechanical equipment can access the trees at issue, the contractor may resort to manual climbing of the trees in order to perform the pruning operations.
- **HAZARD TREE REMOVALS-** Trees found adjacent to or within the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment of the distribution or transmission system that are cut down. Stumps from downed (live) trees shall be treated with herbicides where appropriate and possible.
- **TREE REMOVALS-** Trees which are in close proximity to electrical facilities can require a substantial amount of maintenance in order to prevent them from causing reliability problems. In many cases these trees must be pruned extensively. These trees may be identified for removal and the property owners are consulted.
- **BRUSH REMOVAL-** Incompatible brush within the transmission and distribution right-of-way corridors is eliminated if possible. When such vegetation is eliminated, it will normally be cut down either by manual or mechanical means. If the stems are of a smaller size or are a result of the re-sprouting of previously removed stems, the vegetation may be controlled by the application of approved and environmentally acceptable herbicides, and applied in compliance with all applicable regulations. All chemicals used in line clearing operations shall be registered with the EPA, the applicable Ohio, Indiana and/or Kentucky regulating state authority and are subject to approval by DEM VMP.
- **RIGHT-OF-WAY MOWING-** In situations where brush height is of significant size and therefore not conducive to herbicide applications, the right-of-way may be mechanically mowed with brush hogs or other mowing equipment. This equipment is typically used where there are substantial areas of such brush along with heavy densities.
- **HERBICIDE-** Because of a variety of terrain, differences in soil, land use, and vegetation types, we use integrated vegetation management practices which include environmentally acceptable chemical control methods as a supplement or substitute to mowing or hand cutting.



SECTION 9 – CONTRACTOR RESPONSIBILITIES

STANDARDS TO FOLLOW- Contractor shall perform all work in conformance with DEM VMP requirements, OSHA regulations, ANSI 300, ANSI Z133, Tree Care Industry Association's (formerly the National Arborist Association) standards, Dr. Shigo's *Field Guide for Qualified Line Clearance Tree Workers*, NESC, International Society of Arboriculture Best Management Practices and all federal, state, county, and municipal laws, ordinances, rules and regulations applicable to said work.

INCLUSIONS- Contractor shall furnish all labor, tools, transportation, equipment and materials necessary to perform the work. Herbicides used for stump treatment during maintenance operations in compliance with these specifications shall be furnished by the Contractor.

SUPERVISION AND OVERSIGHT- Contractor must have on-site supervision responsible for all work in each area that work is undertaken. Each supervisor, general foreman and/or lead person on miscellaneous work crews (reactive crews) must have a cellular phone or other suitable method of communications. Contractor must make all telephone numbers available to Duke Energy representatives. All other crews must have a suitable means of communication to respond to emergencies and daily work needs. The Contractor must provide the location of office facilities, contact names and telephone numbers for all supervisors and general foremen to Duke Energy prior to the commencement of any work under the contract. Contractor shall immediately advise the DE VM Specialist of any changes in the contact names and numbers as they occur.

RESPONSE- Contractor agrees that supervisors or general foremen shall respond to Duke Energy or property owner/customer calls within one hour of the call during the day and two hours at night. Contractor agrees to make available at least one general foreman per designated area at all times during the term of the contract. The number of general foremen required may vary depending upon the areas awarded.

COMMUNICATIONS- Contractor must have at least one English speaking employee per work group.

REPORTING- Contractor shall work with DE VM Specialist(s) to determine crew reporting procedures and ensure that the DE VM Specialist(s) are aware of crew locations. Contractor is also responsible for ensuring that notification is given if any work under the contract is suspended or stopped during normally scheduled times.

PERSONNEL TRAINING- Contractor shall be responsible for its personnel completing training and demonstrating necessary levels of competence to perform the work. Duke Energy shall not be obligated to pay for services performed by personnel who have not been trained and who have not demonstrated competence. Contractor shall have and maintain all relevant employee documentation. Contractor shall comply with all applicable laws that may impact Contractor's employment obligations under the contract agreement, including the Immigration Reform and Control Act of 1986 and Form I-9 requirements. Without limiting the generality of the foregoing, Contractor shall perform all required employment



eligibility and verification checks and maintain all required employment records as specified in their contracts.

FITNESS FOR DUTY- Contractor shall be responsible for its personnel's compliance with Duke Energy's hygiene and substance abuse requirements. Contractor's employees, agents or other personnel shall begin each day in clean, neat clothing, and shall observe all Duke Energy hygiene regulations and rules in effect while at the locations. Duke Energy has an Alcohol/Drug Abuse Procedure included in its Fitness For Duty Policy. Copies of said Fitness For Duty Policy and Alcohol Drug Abuse Procedure shall be supplied to Contractor by Duke Energy. Under said Alcohol/Drug Abuse Procedure, Contractor shall be considered to be a supplier performing sensitive services for Duke Energy. Contractor shall therefore implement and administer an alcohol/drug abuse policy acceptable to Duke Energy and at least as stringent as that of Duke Energy. Contractor agrees that Duke Energy and/or its agents shall be permitted access to Contractor's documentation of Contractor's alcohol/drug abuse policy as necessary for Duke Energy to evaluate conformity with the policy.

PUBLIC REPRESENTATION- Contractor acknowledges and agrees that the personnel it retains or hires to perform the work give the impression to the public that they represent Duke Energy. Accordingly, such personnel must be respectful, professional and courteous. Contractor will provide and maintain vehicles, equipment and tools that are safe to operate and present a positive public image. All Contractors' vehicles shall have a standard decal identifying the contract company. Contractor shall provide its employees with cards to distribute to customers/property owners on request. Cards should provide the name and telephone number of a supervisor or general foreman who can be reached about service, inquiries or claims. All contractor employees shall carry identification and provide it for inspections upon request.

SOLICITATION- Neither Contractor, nor Contractor's personnel, shall during hours worked pursuant to the contract, solicit work from, or propose sales to customers of Duke Energy or its affiliated utilities.

CUSTOMER NOTIFICATION- Contractor shall comply with State notice requirements. Contractor shall notify the property owner or the owner's agent of upcoming work by means of oral communication, notification letters, brochures, and/or door hangers. This communication shall occur within a minimum of fourteen calendar days prior to commencement of the work. If notification is done orally, the door hanger materials and information shall be given to the property owner or the owner's agent. Duke Energy will provide the door hangers and associated materials, which will describe the work. Contractor shall attach as part of the door hanger and associated materials a telephone number for the Contractor's supervisor or general foreman.

CONTRACTOR SAFETY- Accidents, injuries, near misses, and Contractor caused interruptions, involving the public or Contractor personnel must be reported to appropriate Duke Energy personnel. In case of power interruption or damage, the Contractor shall notify the Owner immediately. The Contractor shall conduct a prompt and thorough investigation of such incidents. Contractor and/or its liability or other insurance carrier shall conduct a prompt and thorough investigation of such incidents and provide the DE VM Specialist with an accident investigation report within five business days of the occurrence.

Case Record For:	16-0915-EL-ESS	File a Public Comment
Case Title:	Duke Energy Ohio, Inc	
Status:	OPEN-OPEN	
Industry Code:	EL-ELECTRIC	
Purpose Code:	ESS-Electric Service & Safety	
Date Opened:	4/28/2016	
Date Closed:		

[Case Documents](#)[Public Comments](#)[Parties of Record](#)[Related Cases](#)

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1 - 8 of 8 documents		1 / 1
Date Filed	Summary	Pages
11/29/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	3
11/24/2017	Public Comment electronically filed by Docketing Staff.	3
11/20/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	3
11/17/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	4
10/17/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	2
10/16/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	3
10/16/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	2
10/16/2017	Public Comment electronically filed by Docketing Staff on behalf of Docketing.	3
		1 / 1

Duke Energy Ohio
Case No. 17-2344-EL-CSS
Citizens Against Clear Cutting First Set of Interrogatories
Date Received: January 25, 2018

CACC-INT-01-015

REQUEST:

If the answer to CACC-INT-009 is affirmative, and referring to Complainants for which the answer to CACC-INT-014 is negative, why not?

RESPONSE: Not applicable

SUPPLEMENTAL RESPONSE:

Pursuant to the Attorney Examiner's ruling wherein the the response is limited to the five transmission circuits relevant to this proceeding, the Company has previously maintained such lines consistent with a policy of maintenance. Such policy has become unsustainable. The Company is now engaged in an Integrated Vegetation Management program (IVM). This current program is consistent with utility best practices and well within the Company's easement rights.

PERSON RESPONSIBLE: Legal

Duke Energy Ohio
Case No. 17-2344-EL-CSS
Citizens Against Clear Cutting First Set of Interrogatories
Date Received: January 25, 2018

CACC-INT-01-007

REQUEST:

If the answer to CACC-INT-006 is in the affirmative, on which Complainants' properties does Duke intend to engage in clear cutting, the removal of trees, and/or the removal of other vegetation?

RESPONSE:

Objection. This Interrogatory is vague and ambiguous as to the phrase, "clear cutting" as this phrase is undefined. Without waiving said objection, to the extent discoverable, and in the spirit of discovery, this response is not applicable.

SUPPLEMENTAL RESPONSE:

Pursuant to the Attorney Examiner's ruling wherein the the response is limited to the five transmission circuits relevant to this proceeding, Duke Energy Ohio intends to proceed with its program of integrated vegetation management (IVM) which may or may not require removal of tress or other vegetation.

PERSON RESPONSIBLE: Ron Adams

Duke Energy Ohio
Case No. 17-2344-EL-CSS
CACC Fifth Set of Interrogatories
Date Received: July 20, 2018

CACC-INT-05-045

REQUEST:

In response to CACC-INT-01-014, Duke stated that in the past 12 years, it was “was more focused on the maintenance of trees and non-contentious (sic) removals to accommodate individual property owners rather than the full management of the right of way for overall safety and reliability of the transmission system. In doing so, the Company performed vegetation management practices consistent with its vegetation management program that was approved by the Public Utilities Commission of Ohio during the relevant time period.” Is it Duke’s position that by focusing on non-contentious removals and accommodating individual property owners, it was risking the safety and reliability of Duke’s transmission system?

RESPONSE: Objection. This Interrogatory seeks to elicit a narrative response and is thus better suited for deposition. See Generally, *Penn Central Transportation Co. v. Armco Steel Corp.*, 27 Ohio Misc 76 (Montgomery Cty. 1971). Without waiving said objection, to the extent discoverable, and in the spirit of discovery, no. Duke Energy Ohio never put the safety and reliability of its transmission system at risk. During this period, Duke Energy Ohio was taking short term actions to accommodate public concern and creating a situation that required Duke Energy Ohio to perform excessive off-cycle work activity to protect and maintain the safety and reliability of the transmission system.

PERSON RESPONSIBLE:

As to objection: Legal

As to response: Ron Adams

Duke Energy Ohio
Case No. 17-2344-EL-CSS
CACC Fifth Set of Interrogatories
Date Received: July 20, 2018

CACC-INT-05-023

REQUEST:

Has Duke conducted any studies, analyses, reviews, or other similar actions to determine the impact that the proposed vegetation management activities in this case will have on the number of power outages related to the transmission lines at issue in this case?

RESPONSE: Objection. This Interrogatory is vague and ambiguous as to the definition and meaning of the phrase "proposed vegetation management." This Interrogatory also may call for a legal conclusion to the extent it suggests that Duke Energy Ohio's application to modify paragraph (f) of its vegetation management plan filed on April 28, 2016, was not approved by rule on June 13, 2016. Without waiving said objection, to the extent discoverable, and in the spirit of discovery, no.

PERSON RESPONSIBLE: Legal

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the matter of the Annual Report of the)	
Electric Service and Safety Standards,)	Case No: 18 -0999 -EL-ESS
Pursuant to Rule 4901:1-10-26(B) of the Ohio)	
Administrative Code)	

**ANNUAL REPORT OF
Duke Energy Ohio
submitted for the year 2017 .**

I certify that the following report accurately and completely reflects the annual report requirements pursuant to Rule 4901:1-10-26 of the Ohio Administrative Code.

James Sochacki
Signature

JAMES SOCHACKI
Printed Name

VICE-PRESIDENT CONSTRUCTION & MAINT.
Title

3/28/2018
Date

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO


In the matter of the Annual Report of the)
Electric Service and Safety Standards,)
Pursuant to Rule 4901:1-10-26(B) of the Ohio)
Administrative Code)

Case No: 18 -0999 -EL-ESS

ANNUAL REPORT OF
Duke Energy Ohio
submitted for the year 2017 .

I certify that the following report accurately and completely reflects the annual report requirements pursuant to Rule 4901:1-10-26 of the Ohio Administrative Code.


Signature


Printed Name


Title


Date

**Duke Energy Ohio
Rule 26 Report for 2017**

1. 4901:1-10-26(B)(1), (B)(1)(b), (B)(1)(c) Future investment plan for facilities and equipment, covering period of no less than three years

Identification of project, program, or plan	Transmission or Distribution	Project description and goals	Portion of service territory affected	Characteristics of territory affected	Estimated cost	Initiation Date	Planned Completion Date
TOH1928	Transmission	Garver 138kV Expansion	North	Rural/Suburban	\$18,823,339	10/30/2017	6/1/2021
TOH2041	Transmission	Ford-Sharonville Install Ring Bus	North	Rural/Suburban	\$5,852,437	12/30/2017	6/30/2020

Notes:

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

1a. 4901:1-10-26(B)(1), (B)(1)(a) Relevant characteristics of the service territory

Transmission or Distribution	Overhead Miles	Underground Miles	Notable Characteristics
Distribution	8,196	4,149	
Transmission	1,373	11	

Notes:

**Duke Energy Ohio
Rule 26 Report for 2017**

1b. 4901:1-10-26(B)(1) Future investment plan for facilities and equipment

Transmission or Distribution	2017 Planned Costs	2017 Actual Costs	2018 Planned Costs	2019 Projected Costs	2020 Projected Costs	2021 Projected Costs
Distribution	\$183,096,885	\$211,173,620	\$198,746,203	\$217,108,157	\$219,166,164	\$223,025,284
Transmission	\$101,327,318	\$78,447,238	\$118,544,683	\$118,873,870	\$128,759,088	\$124,466,185

Notes:

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

2. 4901:1-10-26(B)(1)(d), (B)(1)(f) Complaints from other entities

Entity making complaint	Date complaint received	Nature of complaint	Action taken to address complaint	Resolved (yes/no)	Date complaint resolved	If not resolved, why?
Unknown	Duke Energy was made aware of the complaint on October 6, 2017	Unknown	None	Yes	Duke Energy was informed the matter was resolved on October 6, 2017	N/A

Notes: Duke Energy was made aware, by NERC via email, of a complaint on October 6, 2017. No details were provided regarding the nature of the complaint, its origins, or its applicability to interests in Ohio.
NERC does not plan any further action on this item.

Duke Energy Ohio
Rule 26 Report for 2017

3a. 4901:1-10-26(B)(1)(e), (B)(1)(f) Electric Reliability Organization standards violations

Standard number	Standard name	Date of violation	Risk factor	Severity factor	Penalty dollars	Violation description	Resolved (yes/no)	Date resolved	If not resolved, why?
CIP-004-6, R2.2.	Cyber Security - Personnel & Training	3/8/2017	Pending	Pending		Confidential, non-public information			
CIP-004-6, R5.1.	Cyber Security - Personnel & Training	4/13/2017	Pending	Pending		Confidential, non-public information			
CIP-006-6, R1.4.	Cyber Security - Physical Security of BES Cyber Systems	4/28/2017	Pending	Pending		Confidential, non-public information			
CIP-011-2, R1.1.,R1.2.	Cyber Security - Information Protection	6/30/2017	Pending	Pending		Confidential, non-public information			

Notes:

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

3b. 4901:1-10-26(B)(1)(e), (B)(1)(f) Regional Transmission Organization (RTO) violations

Name of RTO violation	Violation description	Resolved (yes/no)	Date resolved	If not resolved, why?
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Notes: There were no RTO Violations in 2017

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

3c. 4901:1-10-26(B)(1)(e) Transmission Load Relief (TLR) events

Event Start	Event End	Highest TLR during event	Firm load interrupted during event	Amount of load (MW) interrupted	Description of event
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Notes: There were no TLR Events in 2017

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

3d. 4901:1-10-26(B)(1)(e) Top ten congestion facilities by hours of congestion

Rank	Description of facility causing congestion
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Notes: There were no congested facilities in 2017

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

3e. 4901:1-10-26(B)(1)(e) Annual System Improvement Plan and Regional Transmission Operator Expansion Plan

Relationship between annual system improvement plan and RTO transmission expansion plan

Notes: No such relationship in 2017

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

4. 4901:1-10-26(B)(2) Report of implementation plans from previous reporting periods

Identification of project, program, or plan	Transmission or Distribution	Planned Completion Date	Actual Completion Date	Identification of deviation from previous plan	Reason for deviation from previous plan
AMOH0616	Distribution	3/1/2017	10/16/2017	Planned Completion date changed	Permit delayed by Sycamore Twp
X04C7993	Transmission	6/1/2018		Planned Completion date changed	Weather delayed completion, waiting to schedule customer outage
AMOH0194	Transmission	12/31/2017	5/12/2017		
X14C8959	Distribution	5/2/2018			
TOH1455	Transmission	6/1/2018			
TOH1488	Transmission	12/31/2018			
TOH1409	Transmission	12/31/2018			
TOH1423	Transmission	12/31/2018			
DOH1598	Distribution	3/1/2019			
TOH1504	Transmission	6/1/2019			
TOH1848	Transmission	12/31/2019			
TOH1072	Transmission	12/31/2020			
TOH1605	Transmission	12/31/2020			
TOH1442	Transmission	12/31/2020			
TOH1443	Transmission	12/31/2020			
DOH1651	Distribution	10/26/2021			
TOH1439	Transmission	12/31/2021			

Notes:

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

5. 4901:1-10-26(B)(3), (B)(3)(a) Characterization of condition of company's system

Transmission or Distribution	Qualitative characterization of condition of system	Explanation of criteria used in making assessment for each characterization
Transmission	The condition of the Duke Energy Ohio electric system meets or exceeds industry standards and customer expectations for delivery of safe and reliable electric service. Duke Energy Ohio recognizes that the electric system infrastructure continues to age, and on-going preventive maintenance and corrective actions are necessary. Duke Energy Ohio continues to strive to provide safe and reliable electric service to our customers at a reasonable price. The quality of electric service and the condition of the electric system will parallel each other. Therefore, the quality of electric service can be used to measure the condition of the electric system.	Scheduled inspections
Distribution	The condition of the Duke Energy Ohio electric system meets or exceeds industry standards and customer expectations for delivery of safe and reliable electric service. Duke Energy Ohio recognizes that the electric system infrastructure continues to age, and on-going preventive maintenance and corrective actions are necessary. Duke Energy Ohio continues to strive to provide safe and reliable electric service to our customers at a reasonable price. The quality of electric service and the condition of the electric system will parallel each other. Therefore, the quality of electric service can be used to measure the condition of the electric system.	Scheduled inspections

Notes:

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

6. 4901:1-10-26(B)(3), (B)(3)(b) Safety and reliability complaints

Transmission or Distribution	Availability of Service	Damage	Momentary Interruption	Out of Service	Quality of Service	Repair Service	Public Safety	Total Complaints
Distribution	157	1	27	0	191	1	2	379

Notes:

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

7a. 4901:1-10-26(B)(3)(c), (B)(3)(c)(i) Transmission capital expenditures

Total transmission capital expenditures in 2017	\$78,447,238
Total Transmission investment as of year end	\$809,377,209
Transmission capital expenditures as % of total transmission investment	9.69%

Notes:

7b. 4901:1-10-26(B)(3)(c), (B)(3)(c)(i) Transmission maintenance expenditures

Total transmission maintenance expenditures in 2017	\$8,318,473
Total Transmission investment as of year end	\$809,377,209
Transmission maintenance expenditures as % of total transmission investment	1.03%

Notes:

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

7c. 4901:1-10-26(B)(3), (B)(3)(c)(ii), (B)(3)(c)(iii) Transmission capital expenditures - Reliability specific

Transmission capital budget category	2017 Budget	2017 Actual	% Variance	Explanation of variance if over 10%	2018 Budget
Major Cap and R&I	\$17,259,383	\$30,831,061	78.63%	Increased spend in capacity, inactive line removals and retail capacity.	\$21,009,260
Region Reliability & Integrity	\$72,879,506	\$34,765,308	-52.30%	Less Transmission FERC spend in NERC CIP due to more Distribution FERC work. Less spend in Asset Management programs due to outage scheduling and resource availability.	\$80,171,863
Vegetation Management	\$1,205,824	\$2,374,762	96.94%	More vegetation line clearing than budgeted.	\$2,768,618

Notes:

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

7d. 4901:1-10-26(B)(3), (B)(3)(c)(II), (B)(3)(c)(iii) Transmission maintenance expenditures - Reliability specific

Transmission maintenance budget category	2017		2017 Actual	% Variance	Explanation of variance if over 10%	2018	
	Budget					Budget	
Insp/Maint Prog	\$2,249,126		\$1,471,146	-34.59%	Preventive/Corrective maintenance cycles	\$6,731,948	
Project O&M	\$1,901,131		\$1,995,173	4.95%		\$9,572,834	
Vegetation Management	\$2,780,122		\$3,169,497	14.01%	Non-NERC herbicide program	\$21,835,484	

Notes:

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

8a. 4901:1-10-26(B)(3)(d), (B)(3)(d)(i) Distribution capital expenditures

Total distribution capital expenditures in 2017	\$231,250,932
Total distribution investment as of year end	\$2,553,244,981
Distribution capital expenditures as % of total distribution investment	9.06%

Notes:

8b. 4901:1-10-26(B)(3)(d), (B)(3)(d)(i) Distribution maintenance expenditures

Total distribution maintenance expenditures in 2017	\$61,535,675
Total distribution investment as of year end	\$2,553,244,981
Distribution maintenance expenditures as % of total distribution investment	2.41%

Notes:

Report date: 3/29/2018

Duke Energy Ohio
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8c. 4901:1-10-26(B)(3), (B)(3)(d)(ii), (B)(3)(d)(iii) Distribution capital expenditures - Reliability specific

Distribution capital budget category	2017 Budget	2017 Actual	% Variance	Explanation of variance if over 10%	2018 Budget
Major Cap and R&I	\$36,048,053	\$43,102,355	19.57%	Change in labor strategy that resulted in use of contract labor on Time and Equipment (T&E)	\$39,941,901
Region Reliability & Integrity	\$101,215,562	\$110,278,805	8.95%		\$109,801,432
Vegetation Management	\$4,961,992	\$1,989,009	-59.92%	Resources allocated to circuit maintenance	\$5,487,087

Notes:

Report date: 3/29/2018

Duke Energy Ohio
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8d. 4901:1-10-26(B)(3), (B)(3)(d)(ii), (B)(3)(d)(iii) Distribution maintenance expenditures - Reliability specific

Distribution maintenance budget category	2017		2017 Actual	% Variance	Explanation of variance if over 10%	2018 Budget
	Budget					
Insp/Maint Prog	\$4,933,541		\$5,373,565	8.92%		\$6,731,948
Project O&M	\$6,533,911		\$12,662,829	93.80%	Increased maintenance spending due to increase in capital spend	\$9,572,834
Region Reliability & Integrity	\$1,620,817		\$1,509,038	-6.90%		\$1,610,872
Vegetation Management	\$12,178,220		\$21,717,920	78.33%	Higher circuit maintenance costs	\$21,835,484

Notes:

Report date: 3/29/2018

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9. 4901:1-10-26(B)(3)(e) Average remaining depreciation life of distribution and transmission facilities

Transmission or Distribution	Asset type	FERC account/ subaccount	Total depreciable life of asset	Total depreciated life of asset	Total remaining life of asset	Percent of remaining life of asset	How age was determined
Distribution	Structures and Improvements	361	65.00	14.00	51.00	78.46%	Case No. 12-1683-EL-AIR
Distribution	Station Equipment	362	60.00	15.00	45.00	75.00%	Case No. 12-1683-EL-AIR
Distribution	Major Equipment	3622	60.00	18.00	42.00	70.00%	Case No. 12-1683-EL-AIR
Distribution	Distribution Station Equipment	3635	20.00	0.00	20.00	100.00%	Case No. 12-1683-EL-AIR
Distribution	Poles, Towers and Fixtures	364	50.00	13.00	37.00	74.00%	Case No. 12-1683-EL-AIR
Distribution	Overhead Conductors and Devices	365	50.00	6.00	44.00	88.00%	Case No. 12-1683-EL-AIR
Distribution	Underground Conduit	366	65.00	14.00	51.00	78.46%	Case No. 12-1683-EL-AIR
Distribution	Underground Conduit and Devices	367	58.00	11.00	47.00	81.03%	Case No. 12-1683-EL-AIR
Distribution	Line Transformers	368/3681	42.00	15.00	27.00	64.29%	Case No. 12-1683-EL-AIR
Distribution	Customer Transformer Install	3682	45.00	33.00	12.00	26.67%	Case No. 12-1683-EL-AIR
Distribution	Services - Underground	3691	65.00	14.00	51.00	78.46%	Case No. 12-1683-EL-AIR
Distribution	Services - Overhead	3692	43.00	12.00	31.00	72.09%	Case No. 12-1683-EL-AIR
Distribution	Services - Multi Occupancy	3693	0.00	0.00	0.00	0.00%	Case No. 12-1683-EL-AIR
Distribution	Meters / Leased Meters	370/3701	19.00	19.00	0.00	0.00%	Case No. 12-1683-EL-AIR
Distribution	Meters - Utility of Future (Smart)	3702	15.00	3.00	12.00	80.00%	Case No. 12-1683-EL-AIR
Distribution	Company Owned Outdoor Lighting	3710/3712	15.00	15.00	0.00	0.00%	Case No. 12-1683-EL-AIR
Distribution	Leased Property on Customer Premises	372	25.00	25.00	0.00	0.00%	Case No. 12-1683-EL-AIR

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

9. 4901:1-10-26(B)(3)(e) Average remaining depreciation life of distribution and transmission facilities

Transmission or Distribution	Asset type	FERC account/ subaccount	Total depreciable life of asset	Total depreciated life of asset	Total remaining life of asset	Percent of remaining life of asset	How age was determined
Distribution	Street Lighting - Overhead	3731	28.00	38.00	-10.00	-35.71%	Case No. 12-1683-EL-AIR
Distribution	Street Lighting - Boulevard	3732	45.00	13.00	32.00	71.11%	Case No. 12-1683-EL-AIR
Distribution	Street Lighting - Customer Private Outdoor	3733	30.00	75.00	-45.00	-150.00%	Case No. 12-1683-EL-AIR
Transmission	Structures and Improvements	352	60.00	9.00	51.00	85.00%	Case No. 08-709-EL-AIR
Transmission	Structures and Improvements - CD/CCD	352	60.00	23.00	37.00	61.67%	Case No. 08-709-EL-AIR
Transmission	Structures and Improvements - CGE - Ky	352	60.00	28.00	32.00	53.33%	Case No. 08-709-EL-AIR
Transmission	Station Equipment	3530	53.00	8.00	45.00	84.91%	Case No. 08-709-EL-AIR
Transmission	Station Equipment - Major Equipment	3532	55.00	19.00	36.00	65.45%	Case No. 08-709-EL-AIR
Transmission	Station Equipment - RTU	3535	20.00	0.00	20.00	100.00%	Case No. 08-709-EL-AIR
Transmission	Towers & Fixtures	354	80.00	61.00	19.00	23.75%	Case No. 08-709-EL-AIR
Transmission	Towers & Fixtures - CD/CCD	354	80.00	0.00	80.00	100.00%	Case No. 08-709-EL-AIR
Transmission	Towers & Fixtures - CGE - Ky	354	80.00	0.00	80.00	100.00%	Case No. 08-709-EL-AIR
Transmission	Poles and Fixtures	355	55.00	10.00	45.00	81.82%	Case No. 08-709-EL-AIR
Transmission	Poles and Fixtures - CD/CCD	355	55.00	0.00	55.00	100.00%	Case No. 08-709-EL-AIR
Transmission	Poles and Fixtures - CGE - Ky	355	55.00	0.00	55.00	100.00%	Case No. 08-709-EL-AIR
Transmission	Overhead Conductors and Devices	356	62.00	18.00	44.00	70.97%	Case No. 08-709-EL-AIR

Report date: 3/29/2018

Duke Energy Ohio
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9. 4901:1-10-26(B)(3)(e) Average remaining depreciation life of distribution and transmission facilities

Transmission or Distribution	Asset type	FERC account/ subaccount	Total depreciable life of asset	Total depreciated life of asset	Total remaining life of asset	Percent of remaining life of asset	How age was determined
Transmission	Overhead Conductors and Devices - CD/CCD	356	62.00	0.00	62.00	100.00%	Case No. 08-709-EL-AIR
Transmission	Overhead Conductors and Devices - CGE - Ky	356	62.00	4.00	58.00	93.55%	Case No. 08-709-EL-AIR
Transmission	Underground Conduit	357	65.00	38.00	27.00	41.54%	Case No. 08-709-EL-AIR
Transmission	Underground Conduit and Devices	358	45.00	15.00	30.00	66.67%	Case No. 08-709-EL-AIR

Notes:

Report date: 3/29/2018

Duke Energy Ohio
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10. 4901:1-10-26(B)(3)(f), (B)(3)(f)(i) Inspection, maintenance, repair, and replacement of distribution, transmission, and substation programs summary report

Asset type	Program Name	Program Goals	Goals achieved?
Distribution	Capacitor Maintenance	Visually inspect 100%, functionally inspect 100%, either on-site or remotely.	YES
Distribution	Line recloser inspection	Inspect line reclosers annually	YES
Distribution	URD Cable Replacement	Complete budgeted cable replacements	YES
Distribution	Distribution Pole Groundline Inspection and Treatment	Inspect all distribution poles every 10 years and treat as needed. All Ohio distribution poles will be inspected within ten years	YES
Distribution	Inspection of poles, towers, conductors, and pad mount transformers	Inspect distribution lines every 5 years	YES
Distribution	Distribution vegetation management	Achieve 4-year cycle for vegetation line clearing on distribution circuits. Complete an average of 25% of target circuit miles per year.	NO
Distribution Substation	Inspection of Distribution Substations	Inspect distribution substations monthly	NO
Transmission Substation	Inspection of transmission substations	Inspect transmission substations monthly	YES
Transmission	Transmission pole groundline inspection and treatment	Inspect all transmission poles every 10 years and treat as needed.	YES
Transmission	Inspection of poles, towers, conductors, and pad mount transformers	Inspect transmission lines each year	YES
Transmission	Transmission vegetation management	Achieve 6-year cycle for vegetation line clearing on transmission circuits. Complete an average of 16% of target circuit miles per year.	YES

Notes:

Report date: 3/29/2018

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10a. 4901:1-10-26(B)(3)(f), (B)(3)(f)(i), (B)(3)(f)(ii) If response in Column "Goals achieved?" of Report 10 is "Yes"

Program Name	Explanation of how goals were achieved	Quantitative description of goal achieved	Summary of Findings
Capacitor Maintenance	Automated capacitors have health check, non-electronic capacitors have "walking" inspection	In 2017, all 2191 capacitors were inspected (194 non-electronic, 1,997 electronic) - 100% of capacitors	As a result of 2017 capacitor inspections, 301 follow up work orders were generated. 161 of those 301 work orders are complete as of 3/28/2018.
Line redoser inspection (Distribution)	(walking) inspections	Annual inspection of 627 redoser installations were completed in 2017.	As a result of 2017 redoser inspections, 805 follow up work orders were generated. 246 follow up work order remaining to be completed as of 3/23/2018.
URD Cable Replacement (Distribution)	During 2016, URD cable replacements continued as needed.	100% of needed projects were scheduled. 530,855 feet of new, replacement URD cable was installed in 2017.	none
Distribution Pole Groundline Inspection and Treatment	(walking) inspection of each pole	In 2017, 35,334 wood poles were inspected - 26,738 Duke owned wood poles, and 8,596 foreign owned wood poles. During 2017, 10.18% of Duke Energy Ohio distribution wood poles received inspections	As a result of 2017 wood pole inspections, 6,900 follow up work orders were opened. 1,647 of those 6,900 work orders are complete as of 3/14/2018.
Inspection of poles, towers, conductors, and pad mount transformers (Distribution)	(walking and driving) inspection along distribution circuits	During 2017, the distribution inspection program for Ohio completed inspection of 168 distribution circuits	As a result of 2017 distribution circuit inspections, 3,224 follow up work orders were opened. 1,436 of those 3,224 work orders are complete as of 3/14/2018.
Inspection of Transmission substations	(walking) inspection of each substation	201 monthly inspections were performed on Duke Energy Ohio's 17 transmission substations in 2017. 1 substation was put into service March 9th, and had 9 inspections performed.	As a result of 2017 transmission substation inspections, 137 follow up work orders were opened. 29 of those 137 work orders remain open as of 3/1/2018.

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

10a. 4901:1-10-26(B)(3)(f), (B)(3)(f)(i), (B)(3)(f)(ii) If response in Column "Goals achieved?" of Report 10 is "Yes"

Program Name	Explanation of how goals were achieved	Quantitative description of goal achieved	Summary of Findings
Inspection of poles, towers, and conductors (Transmission)	inspection flights along transmission lines	During 2017, the transmission circuit inspection program for Ohio completed inspection of 132 transmission circuits - 100% of circuits with overhead mileage.	As a result of 2017 inspection flights, 158 follow up work orders were generated from the inspections, and all of them remain to be completed.
Transmission pole groundline inspection and treatment	(walking) inspection of each pole	In 2017, 3,865 transmission designated wood poles were inspected.	As a result of 2017 wood transmission pole inspection, 479 follow up work orders were generated. 46 of the 479 work orders have been completed.
Transmission vegetation management	(walking and driving) vegetation clearing along transmission circuits	In 2017, total line clearing maintenance was completed on 299 transmission circuit miles. 21.9% of Duke Energy Ohio transmission circuit miles were cleared in 2017.	none

Notes:

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

10b. 4901:1-10-26(B)(3)(f), (B)(3)(f)(i), (B)(3)(f)(ii) If response in Column "Goals achieved?" of Report 10 is "No"

Program Name	Cause(s) for not achieving goals	Description of level of completion	Quantitative description of level of completion	Summary of Findings
Distribution vegetation management	Unable to complete work plan due to current constricted labor market for qualified resources. Discussions are ongoing with commission for a reliability based program.	21.8% of Duke Energy Ohio distribution circuit miles were cleared in 2017.	In 2017, total line clearing maintenance was completed on 1,790.9 distribution circuit miles.	
Distribution Substation	Unable to complete the 3 missed inspections in allotted time due to combined factors of the Work Management System rollout with holidays and weather at the due dates.	2616 inspections were completed for all 218 distribution substations in 2017. 3 of these inspections missed the 40 day inspection requirement, ranging from 1 to 4 days over the 40 day requirement.	100% of inspections were completed, but 99.89% completed within 40 day requirement.	

Notes:

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10c. 4901:1-10-26(B)(3)(f), (B)(3)(f)(iii) Remedial activity

Program Name	Program finding(s) resulting in remedial action	Remedial activity performed	Completion date	Remedial activity yet to be performed	Estimated completion date
Capacitor Maintenance	As a result of 2017 capacitor inspections, 301 work orders were opened.	161 of the 301 work orders are complete as of 3/26/2018		140 work orders remain to be completed	12/31/2018
Line recloser inspection (Distribution)	As a result of 2017 recloser inspections, 805 follow up work orders were generated.	Of the follow up work orders generated as a result of the 2017 line recloser inspections, 559 of the follow up work orders were completed.		246 follow up work orders remaining to be completed as of 3/23/2018.	12/31/2018
URD Cable Replacement	none	none		none	none
Distribution Pole Groundline Inspection and Treatment	As a result of 2017 wood pole inspections, 6,900 follow up work orders were opened.	1,647 of those 6,900 work orders are complete as of 3/14/2018.		5,253 work orders remain to be completed from the 2017 inspections. 79 work orders remain from the 2016 inspections. 1 work order remains from the 2015 inspections.	12/31/2018
Distribution Inspection of poles, towers, conductors, and pad mount transformers	As a result of 2017 distribution circuit inspections, 3,224 follow up work orders were opened.	1,436 of the 3,224 follow up work orders are complete as of 3/14/2018.		1,788 follow up work orders remain to be completed from the 2017 inspections. 5 work orders remain from the 2016 inspections.	12/31/2018
Distribution vegetation management	Unable to complete work plan due to current constricted labor market for qualified resources.	none		Discussions are ongoing with commission for a reliability based program.	none
Inspection of Distribution Substations	As a result of 2017 distribution substation inspections, 1,229 follow up work orders were opened.	1,047 of those 1,229 work orders are complete as of 3/11/2018.		182 work orders remain to be completed from the 2017 inspections. 63 Work orders remain from 2016 inspections. 16 Work orders remain from inspections prior to 2016.	12/31/2018

Report date: 3/29/2018

Duke Energy Ohio
Rule 26 Report for 2017

10c. 4901:1-10-26(B)(3)(f), (B)(3)(f)(iii) Remedial activity

Program Name	Program finding(s) resulting in remedial action	Remedial activity performed	Completion date	Remedial activity yet to be performed	Estimated completion date
Inspection of Transmission substations	As a result of 2017 transmission substation inspections, 137 follow up work orders were opened.	108 of those 137 work orders are complete as of 3/11/2018.		29 work orders remain to be completed from the 2017 inspections. 13 Work orders remain from 2016 inspections. 2 Work orders remain from inspections prior to 2016.	12/31/2018
Transmission pole groundline inspection and treatment	As a result of 2017 wood pole inspections, 479 follow up work orders were opened.	46 of the 479 work orders are complete as of 3/7/2018		433 work orders remain to be completed from 2017 inspections. 91 work orders remain from the 2016 inspections. 38 work orders remain from inspections prior to 2016.	12/31/2018
Transmission Inspection of poles, towers, conductors, and pad mount transformers	As a result of 2017 inspection flights, 158 follow up work orders were opened.	0 of the 158 work orders have been completed as of 3/15/2018.		158 follow up work orders remain to be completed from the 2017 inspections. 36 work orders remain from the 2016 inspections.	12/31/2018
Transmission vegetation management	none	none		none	none

Notes:

Report date: 3/29/2018

Duke Energy Ohio

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JDW-10

10d. 4901:1-10-26(B)(3)(f): Current Year Goals

Asset Type	Program Name	Program Goals
Distribution	Capacitor Maintenance	Visually inspect 100%, functionally inspect 100%, either on-site or remotely. 100% of capacitors planned to be inspected in 2018, either on-site or remotely. Capacitors with communication are remotely monitored.
Distribution	Line recloser inspection	Inspect line reclosers annually. 622 Reclosers planned for 2018 Line Recloser inspections.
Distribution	URD Cable Replacement	Complete budgeted cable replacements
Distribution	Distribution Pole Groundline Inspection and Treatment	Inspect all distribution poles every 10 years and treat as needed. All Ohio distribution poles will be inspected within ten years. 39,243 poles planned for Distribution Pole Groundline Inspection and Treatment in 2018.
Distribution	Inspection of poles, towers, conductors, and pad mount transformers	Inspect distribution lines every 5 years. 113 circuits planned for inspection of poles, towers, conductors and pad mount transformers in 2018.
Distribution	Distribution vegetation management	Achieve 4-year cycle for vegetation line clearing on distribution circuits. Complete an average of 25% of target circuit miles per year. Discussions are ongoing with commission for a reliability based program.
Distribution Substation	Inspection of Distribution Substations	Inspect distribution substations monthly
Transmission Substation	Inspection of transmission substations	Inspect transmission substations monthly
Transmission	Transmission pole groundline inspection and treatment	Inspect all transmission poles every 10 years and treat as needed.
Transmission	Inspection of poles, towers, conductors, and pad mount transformers	Inspect transmission lines each year
Transmission	Transmission vegetation management	Achieve 6-year cycle for vegetation line clearing on transmission circuits. Complete an average of 16% of target circuit miles per year.

Report date: 3/29/2018

**Duke Energy Ohio
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10d. 4901:1-10-26(B)(3)(f): Current Year Goals

Asset Type	Program Name	Program Goals
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Notes:

**Duke Energy Ohio
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JDW-10

11. 4901:1-10-26(B)(3)(f), (B)(3)(iv): Prevention of overloading or excessive loading of facilities and equipment

Transmission or Distribution	Program Name	Program Goals
Distribution	103H9056	Columbia 138 kV 22.4 MVA Sub - 103H9056
Distribution	414H8992	Brighton Sub - Convert 4kV - 414H8992
Distribution	AMOH1086	Nickel Inst Ckts 44 and 45 - AMOH1086
Distribution	AMOH1112	South Faimount Inst New Sub & UG Exits - AMOH1112
Distribution	DOH1108	E Provident Dr New Ckts - DOH1108
Distribution	DOH1120	Charles Sub L_M_O 4kV Conv - DOH1120
Distribution	DOH1138	Linwood 12kV Ckt Upg Cbl OH Reco - DOH1138
Distribution	DOH1284	Oakley P_Reco Ckt 40 - DOH1284
Distribution	DOH1584	West End 42 Upg - DOH1584
Distribution	DOH1595	Hyde Park Relief - DOH1595
Distribution	DOH1596	Goodwin 10 5 MVA XTR Ckt 41-42 DOH1596
Distribution	DOH1597	Hamlet 10.5 MVA XTR, CKT 42 DOH1597
Distribution	DOH1598	N Rich 10 5 MVA XTR Ckt 42_43 - DOH1598
Distribution	DOH1599	Delhi 43 Reco Pedretti DOH1599
Distribution	DOH1636	Madeira New Ckt 43 Rbld 41 42 - DOH1636
Distribution	DOH1651	Brown 52 N Pole 41 Rbld Ext - DOH1651
Distribution	DOH1653	Rem 53-42 Rbld Reco Humphrey Rd - DOH1653
Distribution	DOH1685	Morgan 53 Conv Stepdown - DOH1685
Distribution	DOH1769	Bethany 45 4kV Conversion DOH1769

Report date: 3/29/2018

**Duke Energy Ohio
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JDW-10

11. 4901:1-10-26(B)(3)(f), (B)(3)(iv): Prevention of overloading or excessive loading of facilities and equipment

Transmission or Distribution	Program Name	Program Goals
Distribution	DOH1770	Kleenman 46 Repl Cond - DOH1770
Distribution	DOH1772	Terminal 42-44 Repl Cond - DOH1772
Distribution	DOH1778	Rochelle 43_48 Reco MLK Blvd - DOH1778
Distribution	DOH1781	Inst Seward Xtr 3 DOH1781
Distribution	DOH1782	Seward 44 Reco DOH1782
Distribution	DOH1879	Fairfax 43 Ext_Ret Oakley 829 SCER DOH1879
Distribution	DOH1899	Felicity A Conv Rel 4kV DOH1899
Distribution	DOH1907	Ebenezer 41 Reco Muddy Creek DOH1907
Distribution	DOH1909	Amanda Inst 12 kV Feeders - DOH1909
Distribution	DOH1910	Amanda Sub 12kV Conv DOH1910
Distribution	DOH1939	Eastwood 52 Conv 4kV SR 286 - DOH1939
Distribution	DOH1945	Oakley 52 853 Renfrg DOH1945
Distribution	DOH1962	Deer Park Prop Purch - DOH1962
Distribution	DOH1963	Banning 41 Reco OH Exit DOH1963
Distribution	DOH1964	Rochelle 45 Reco Euclid Auburn DOH1964
Distribution	DOH1976	Felicity 41 Conv Vern Hill Rd DOH1976
Distribution	DOH1985	Finneytown 41 Reco Compton DOH1985
Distribution	DOH2007	Manchester 41 Reco DOH2007
Distribution	DOH2028	Oak Knoll 34.5kV Conv DOH2028

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**Duke Energy Ohio
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11. 4901:1-10-26(B)(3)(f), (B)(3)(iv): Prevention of overloading or excessive loading of facilities and equipment

Transmission or Distribution		Program Name	Program Goals
Distribution	DOH2043	Vera Cruz 10.5 MVA XTR CKT 42 DOH2043	
Distribution	DOH2109	Mitchell 41 Reco Cliffm Woolper DOH2109	
Distribution	DOH2119	Simpson 43 58 Add 600A Swi DOH2119	
Distribution	DOH2120	Olive Branch 22.4 MVA XTR - DOH2120	
Distribution	DOH2154	Columbia 41 UG Exit DOH2154	
Distribution	DOH2174	Trenton BK 4 DOH2174	
Distribution	DOH2180	Newtown 44 Reco Round-Bottom Rd DOH2180	
Distribution	DOH2181	Allen 43_Instl 12kV Fdr DOH2181	
Distribution	DOH2182	Hensley 42 Instl Fdr DOH2182	
Distribution	DOH2196	Union 42 Reco and Ext DOH2196	
Distribution	DOH2273	Seward 46 Cap Inst DOH2273	
Distribution	DOH2414	Bethany 42 Reco DOH2414	
Distribution	DOH2488	Franklin 41 Reco DOH2488	
Distribution	DOH2530	Princeton 42 Fdr Ext DOH2530	
Transmission	AMOH0194	West End-Brent Spence Bridge - AMOH0194	
Transmission	AMOH0765	Beckjord P_C Separation - AMOH0765	
Transmission	AMOH0833	Feeder 8887-Purchase Property - AMOH0833	
Transmission	AMOH1012	Evendale_69 kV Rcnfr - AMOH1012	
Transmission	AMOH1013T	Shaker Run-Liberty Inst 69kV Ckt - AMOH1013	

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11. 4901:1-10-26(B)(3)(f), (B)(3)(iv): Prevention of overloading or excessive loading of facilities and equipment

Transmission
or
Distribution

Program Name	Program Goals
AMOH1085	Ford-Sharonville-Inst Loop Feed - AMOH1085
AMOH1202	Black Start Portable Gen Conn - AMOH1202
AMOH1276	Fdr 3861 Ext - AMOH1276
AMOH1367	F9064 Trmtn-Colnsvl Rbld ORP - AMOH1367
AMOH1369	F4666 Evndl-Pt Un Rbld ORP - AMOH1369
TOH1423	Miami Fort-Exp 345 kV Ring Bus - TOH1423
TOH1504	Ebenezer_138kV Rcnfrgr - TOH1504
TOH1556	868 Senco_Summerside Rbld OTIP - TOH1556
TOH1557	868 Oakley_Fairfax Rbld OTIP - TOH1557
TOH1560	3261 Trmtn_Pmctn Rbld OTIP - TOH1560
TOH1561	3261 Pmctn_Pt Un RBLD - TOH1561
TOH1562	5680 Warren Nickel Rbld OTIP - TOH1562
TOH1605	Todhuntr_Rpl CB 913_919_925_93 - TOH1605
TOH1661	F4501 Pierce-Beckjord Rem - TOH1661
TOH1847	F3263 Ext and Rcnfrgr - TOH1847
TOH1848	5863 Rebuild Brown to South Bethel - TOH1848
TOH1870	F3881_Wards Corner Re-feed - TOH1870
TOH1903	Beckjord P_C Cntrl Bldg Rmv - TOH1903
TOH1928	Garver 138kV Exp - TOH1928

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11. 4901:1-10-26(B)(3)(f), (B)(3)(iv): Prevention of overloading or excessive loading of facilities and equipment

Transmission or Distribution	Program Name	Program Goals
Transmission	TOH2032	F3881-5483 Purc Prop - TOH2032
Transmission	X04C7993	F868-Reconductor Fairfax-Senco - X04C7993

Notes:

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12. 4901:1-10-26(B)(3)(f), (B)(3)(iv): Actions to remedy overloading or excessive loading of facilities and equipment

Transmission or Distribution	Sub/Circuit name	Date overloading identified	Plan to remedy overloading	Estimated completion date	Actions taken to remedy overloading	Actual completion date
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Notes: Duke Energy had no overloading events in 2017.

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**Duke Energy Ohio
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13. 4901:1-10-26(B)(3)(f), (B)(3)(f)(vi): Programs deleted

Facility Type	Deleted Program Name
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Notes: Duke Energy did not delete any inspection, maintenance, repair, or replacement programs during 2017.

Report date: 3/29/2018

**Duke Energy Ohio
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14. 4901:1-10-26(B)(3)(f), (B)(3)(f)(vi): Programs modified

Facility Type	Deleted Program Name
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Notes: Duke Energy did not modify any inspection, maintenance, repair, or replacement programs during 2017.

Report date: 3/29/2018

**Duke Energy Ohio
Rule 26 Report for 2017**

15. 4901:1-10-26(B)(3)(f), (B)(3)(f)(vi): Programs added

Facility Type	Deleted Program Name
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Notes: Duke Energy did not add any inspection, maintenance, repair, or replacement programs during 2017.

Report date: 3/29/2018

**Duke Energy Ohio
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16. 4901:1-10-26(B)(4): Service Interruptions due to other entity

Date of Interruption	Time of Interruption	Type of entity causing interruption	Name of entity causing interruption	Impact on Transmission or Distribution	Sub/Circuit Interrupted	Cause of interruption
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Notes: Duke Energy Ohio had no customer service interruptions that were due solely to the actions or inactions of another electric utility, regional transmission entity, and/or a competitive retail electric supplier in 2017.

Report date: 3/29/2018

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

3/29/2018 3:39:47 PM

in

Case No(s). 18-0999-EL-ESS

Summary: Annual Report Duke Energy Ohio Annual Report of Electric Distribution System Reliability Pursuant to 4901:1-10-26 electronically filed by Dianne Kuhnell on behalf of Duke Energy Ohio, Inc. and Rocco D'Ascenzo and Watts, Elizabeth H.

Duke Energy Ohio
Case No. 17-2344-EL-CSS
Citizens Against Clear Cutting First Set of Interrogatories
Date Received: January 25, 2018

CACC-INT-01-029

REQUEST:

Within the next two tree trimming cycles, does Duke plan to use any herbicides on or near any of the properties owned by any of the Complainants?

RESPONSE:

Objection. This Interrogatory is overly broad and unduly burdensome in that there are more than 85 properties and property owners at issue in the Second Amended Complaint. Furthermore, this Interrogatory seeks information that would require Duke Energy Ohio to engage in impermissible speculation and guesswork concerning future events and the condition of any particular property, especially when Complainants requested and obtained a stay of all vegetation management activities by Duke Energy Ohio along the transmission lines at issue in the Second Amended Complaint. Finally, to the extent this Interrogatory seeks information unrelated to the transmission lines at issue in the Second Amended Complaint, it seeks information that is irrelevant or otherwise not reasonably calculated to lead to the discovery of admissible evidence.

PERSON RESPONSIBLE: Legal

SUPPLEMENTAL RESPONSE:

Pursuant to the Attorney Examiner's ruling wherein the the response is limited to the five transmission circuits relevant to this proceeding, Duke Energy Ohio intends to proceed with its program of Integrated Vegetation Management (IVM) which may or may not require the use of herbicides on specific properties.

PERSON RESPONSIBLE: Ron Adams

Duke Energy Ohio
Case No. 17-2344-EL-CSS
Citizens Against Clear Cutting First Set of Interrogatories
Date Received: January 25, 2018

CACC-INT-01-062

REQUEST:

If the answer CACC-INT-059 is affirmative, who pays for or funds the cost recovery for Duke's engagement in vegetation management practices?

RESPONSE:

See response to CACC-INT-01-059.

PERSON RESPONSIBLE: Legal

SUPPLEMENTAL RESPONSE:

As discussed in CACC-INT-01-060, charges to Duke Energy Ohio for transmission service, including the cost of vegetation management, are calculated and billed to users of the Duke Energy Ohio and Duke Energy Kentucky transmission system pursuant to the Attachment H-22A formula rate under PJM's Open Access Transmission Tariff. The portion of the overall transmission revenue requirement allocable to Duke Energy Ohio is recovered via Rider BTR.

PERSON RESPONSIBLE: Legal

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10/26/2018 4:31:02 PM

in

Case No(s). 17-2344-EL-CSS

Summary: Testimony Direct Testimony of James D. Williams on Behalf of the Office of the Ohio Consumers' Counsel and Complainants electronically filed by Ms. Deb J. Bingham on behalf of Etter, Terry L.