

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

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

**DIRECT TESTIMONY OF KIM WIETHORN
ON BEHALF OF
COMPLAINANTS**

October 26, 2018

1 **Q. Please state your name and address.**

2 A. My name is Kim Wiethorn. I live in Symmes Township. Specifically, I reside at
3 8656 Birchbark Drive, Cincinnati, Ohio 45249.

4 **Q. Please describe your educational background.**

5 A. After graduating high school, I earned an Associates' Degree in Arts and Sciences
6 from Cincinnati State Technical and Community College. I have also taken
7 liberal arts classes at the University of Cincinnati and Xavier University.

8 **Q. Are you currently employed?**

9
10 A. Yes. I am a marketing director.

11 **Q. When did you purchase your home?**

12
13 A. I purchased my home in the Fall of 2015.

14 **Q. When you purchased your home, were you aware that Duke Energy Ohio,**
15 **Inc.'s (Duke) transmission lines ran over the property?**

16
17 A. Yes. I could see that Duke's transmission lines ran over the middle of my
18 backyard and I was informed that Duke's predecessor had an easement on a
19 portion of my property. Additionally, I have since obtained a copy of an
20 easement that Duke now has on a portion of my property. That easement is
21 attached to my testimony as Attachment A.

22 **Q. When you purchased your home, were you aware that Duke would need to**
23 **perform vegetation management on any of your trees as a result of the**
24 **presence of the transmission lines?**

25
26 A. Yes. I knew that Duke would perform vegetation management and that is why
27 Duke had an easement to access my property. During property closing
28 discussions, I learned that, historically, Duke would come and trim one Pin Oak

1 on the property every four or six years, so that is what I expected when I moved
2 into the property. As far as I knew, no other trees were ever touched.

3 **Q. Since you purchased your property, has Duke conducted any sort of**
4 **vegetation management activities related to your trees or other vegetation?**

5
6 A. No, Duke has not completed any vegetation management activities on my
7 property since I have owned and lived at the property.

8 **Q. Since you have lived at the property, have trees or other vegetation on your**
9 **property come into direct contact with the transmission wires above your**
10 **property?**

11
12 A. Not that I am aware. My trees are not of a height that would make it possible for
13 them to directly contact the transmission wires.

14 **Q. Are you aware of any outages that have occurred or other concerns with the**
15 **provision of electric service as a result of the trees and other vegetation on**
16 **your property?**

17
18 A. No. I have not experienced any outages since I have owned my property. I am
19 also not aware of any outages or other concerns being raised regarding trees or
20 other vegetation on my property affecting the safety and reliability of Duke's
21 electric system.

22 **Q. How did you become involved in this case?**

23 A. My involvement in this case began when I found a door hanger from Duke on my
24 door that stated Duke's intention to remove all trees and other vegetation on my
25 property within 50 feet on either side of its transmission wires. I was shocked by
26 this, as I never thought my trees posed an issue for Duke or its transmission wires
27 and, as far as I knew, they had never removed any trees from my property
28 previously. A photograph of the door hanger provided to me by Duke is attached

1 to my testimony as Attachment B, and a copy of the documents provided to me
2 along with that door hanger are attached to my testimony as Attachment C.

3 **Q. What did you do upon receiving this notification?**

4 A. I reached out to the phone number that was on the door hanger. After several
5 calls to the tree service, I was finally put in touch with Steve Holton, a Duke
6 representative. I wanted someone to explain to me exactly what Duke was
7 planning to do on my property to my trees and other vegetation and why.

8 **Q. Were you able to speak with Mr. Holton?**

9 A. Yes. I spoke with Steve Holton; he came to my property to talk about Duke's
10 plan to remove trees from my backyard.

11 **Q. How did Steve Holton introduce himself and who did he say he was**
12 **representing?**

13
14 A. Mr. Holton said he was a transmission forester for Duke.

15 **Q. What, if anything, did you learn from Mr. Holton?**

16
17 A. He confirmed that Duke would be seeking to clear cut roughly 20 of my trees
18 from my yard. We also extensively discussed the reason for the removal of so
19 many trees.

20 **Q. You used the term "clear cut," what does that mean?**

21 A. The term clear cut means the removal of or leveling to the ground of all trees and
22 vegetation within a specified area. Various dictionaries similarly define clear cut
23 as "to cut down all the trees in an area of forest"¹ or "cut down and remove every
24 tree from (an area)."² Given that Duke has stated its intent to remove all trees on

¹ Merriam-Webster dictionary at <https://www.merriam-webster.com/dictionary/clear-cut>.

² Google dictionary at https://www.google.com/search?q=clear+cut&rlz=1C1GGRV_enUS751US751&oq=clear+cut&aqs=chrome..69i57j0l5.1848j0j7&sourceid=chrome&ie=UTF-8.

1 my property within 50 feet on either side of its transmission wires, Duke's
2 activities constitute clear cutting.

3 **Q. Let's start with the trees. Which trees on your property is Duke proposing to**
4 **remove?**

5
6 A. I have 11 spruce trees that are between 15-25 feet tall, four maple trees between
7 15-40 feet tall, two nine-foot pine trees, and three 15-foot arborvitae trees. I have
8 prepared a diagram that shows the trees on my property and their proximity to the
9 wires. That diagram is attached to my testimony as Attachment D. I have
10 included photographs of some of the affected trees as Attachment E.

11 **Q. Referring to Attachment E, could you please describe each photo?**

12 A. Yes. The first photo in Attachment E shows a row of fully mature trees that Duke
13 intends to remove from my backyard. As can be seen in the photos, these trees
14 are nowhere near tall enough to contact the transmission lines. The second photo
15 shows a view down the transmission line. This again shows trees that are
16 nowhere near the wires that Duke intends to cut down. The third photo
17 emphasizes the extreme nature of this policy. The four trees identified in that
18 photo are all fully mature and ornamental. They cannot come close to contacting
19 the transmission wires and, yet, per Steve Holton, Duke is intent on removing
20 them.

21 **Q. Are you aware of any additional photos of your property that depict the**
22 **location of your trees and other vegetation relative to Duke's transmission**
23 **wires?**

24
25 A. Yes. I have attached aerial photographs of my property taken by a drone on
26 October 20, 2018 to my testimony as Attachment F. As can be seen in
27 Attachment F, these photographs were taken from the perspective of Duke's

1 lowest transmission wires that run above my property. They show the same trees
2 as Attachment E, but this angle reinforces the reality that these trees are simply
3 nowhere near the transmission wires.

4 **Q. Are you familiar with the terms “border zone” and “wire zone,” as those**
5 **terms are used by Duke with regard to vegetation management?**
6

7 A. Yes, I am, as they are defined in Attachment C.

8 **Q. What is your understanding of the “wire zone,” as defined by Duke?**
9

10 A. From Duke’s documents, it is my understanding that Duke’s “wire zone” includes
11 the area directly underneath the transmission wires and extends twenty feet left
12 away from the outermost transmission wires.

13 **Q. What is your understanding of the “border zone,” as it is defined by Duke?**
14

15 A. My understanding is that the border zone includes all of the remaining portions of
16 property located within Duke’s easement that do not fall under the wire zone. On
17 my property, Duke has a total easement extending approximately 50 feet to the
18 right and left of the center of its transmission line. After accounting for the
19 distance that Duke considers to be the “wire zone,” I estimate that the border zone
20 on each side of the wire zone on my property includes about 13-14 feet.
21 Attachment D illustrates these different zones as they apply on my property.

22 **Q. In terms of Duke’s “wire zone” and “border zone,” as defined in Attachment**
23 **C, where are the trees that Duke is seeking to remove located?**
24

25 A. As is shown on Attachment D, the shorter pine trees and arborvitaes are in the
26 “wire zone,” or near the transmission wires. The spruce trees are on the outer
27 edge of the “wire zone,” and the maple trees are in the “border zone.”
28

1 **Q. You stated that you spoke extensively with Mr. Holton about the reasoning**
2 **for removing so many trees. What was Mr. Holton's rationale?**

3
4 A. He gave me a few different stories. First, he told me that Duke was requiring a
5 clear line of sight down the transmission lines. I responded that, from my
6 property, there already was a clear line of sight. I showed him the clear line of
7 sight.

8 **Q. How did Mr. Holton respond to this?**

9 A. He said Duke was no longer allowing any trees to exist at all under or near the
10 wires, regardless of height.

11 **Q. What other justification did Mr. Holton give you for the change in Duke's**
12 **vegetation management practices and policies?**

13
14 A. He then told me that federal regulations had changed, so this decision was out of
15 Duke's hands and Duke had no choice in the matter.

16 **Q. Did Mr. Holton say which specific federal regulations were compelling Duke**
17 **to remove these trees?**

18
19 A. No, I asked but he never gave me a specific regulation.

20 **Q. Did you raise any other issues with Mr. Holton?**

21
22 A. Yes, I noted that there was also a standalone shed and a fence on my neighbor's
23 property, right behind the trees that Duke said had to be removed. The shed is
24 similar in height to the pine trees that he was telling me needed to be removed, so
25 I asked him if those would be removed as well. Mr. Holton told me that he was
26 an arborist, so the shed and fence would be handled by another department, but
27 that he believed the fence and shed would be permitted to stay.

28

29

1 **Q. Did Mr. Holton say anything else about your trees?**

2 A. Yes. He said it was a shame that Duke was being required to cut all these trees
3 down. He pointed to my spruce and pine trees and said that if an arborist looked
4 at the pine trees, the arborist would determine that the pine trees will not ever
5 grow tall enough to come close to the wires. But he added that, unfortunately, an
6 arborist review was not part of Duke's process in implementing its vegetation
7 management plan. He suggested that Duke's hands were tied by the PUCO and
8 that Duke did not have much choice in the matter.

9 **Q. How did you respond?**

10 A. I offered to trim and maintain the trees at my own expense.

12 **Q. Did Mr. Holton agree to allow you to keep your trees?**

13 A. No, but he did tell me, however, that, if I kept quiet about it, they would grind the
14 stumps of the trees they cut down for me. He said, "I will do it for you because
15 you've been so nice. But I can't do that for everyone. I do not have a budget for
16 that, but I have another pot of money I can pull from."

17 **Q. Did you accept Mr. Holton's offer to allow Duke to remove the trees in**
18 **exchange for grinding the stumps when they were done?**

20 A. No. This was not an acceptable solution to me. I do not believe that my trees
21 threaten the safety and reliability of Duke's electric system as the trees will not
22 come into direct contact with Duke's transmission lines. And even if for some
23 reason they would become tall enough to do so, the trees could easily be trimmed
24 to maintain the appropriate clearances.

25

26

1 **Q. Upon what do you base your opinion that you do not believe that your trees**
2 **threaten the safety and reliability of Duke's system?**

3
4 A. First, as I stated previously and as Mr. Holton confirmed, my trees will not grow
5 tall enough to even come close to the wires. Second, Duke's new clear cutting
6 practice does not seem to be consistent with Duke's vegetation management plan
7 on file with the Public Utilities Commission of Ohio (PUCO), which states that its
8 purpose is to maintain and improve safe and reliable electric service by limiting
9 contact between vegetation and power lines. Additionally, I would assume that
10 the PUCO's requirements would be in place to protect the safety and reliability of
11 the system.

12 **Q. Is it your understanding that Duke's vegetation management plan establishes**
13 **minimum clearances between vegetation and the lowest wire?**

14
15 A. Yes. After meeting with Mr. Holton, I reviewed the informational documents
16 provided by Duke as well as Duke's modified vegetation management plan filed
17 with the PUCO.

18 **Q. Referring to those informational documents provided by Duke with the door**
19 **hanger (Attachment C), does Duke reference minimum clearances or state**
20 **that it is going to engage in clear cutting?**

21
22 A. It depends which document you are reviewing. The door hanger placed on my
23 door states that Duke will engage in clear cutting, removing all trees within
24 Duke's 100-foot easement. According to the other documents provided with the
25 door hanger, however, Duke explains that it engages in vegetation management
26 through trimming, pruning, and the use of herbicides. Some documents do say
27 that Duke will either cut down or remove vegetation that is taller than seven feet
28 in the wire zone, but that it will trim, prune, or remove trees that are taller than 15

1 feet in the border zone. In some of the documents, Duke also refers to
2 maintaining a 15-foot clearance between the wires and all trees and other
3 vegetation in any zone.

4 **Q. Are these documents consistent with each other and with the door hanger?**

5

6 A. No. The documents are internally inconsistent and inconsistent with each other.

7 As explained, the door hanger states that Duke plans to remove all trees within the

8 100-foot easement (i.e., clear cut). Page 2 of Attachment C says that vegetation

9 may grow in the wire zone and that 15-foot trees and other vegetation may exist

10 and grow in the border zone, but it also requires trees to be pruned to appropriate

11 levels if possible to a 15-foot clearance. Page 4 of Attachment C implies that all

12 vegetation in wire zone may be seven feet high at maturity and that all vegetation

13 may be 15 feet high in the border zone. There is also a reference to a 15-foot

14 clearance between the wires and all vegetation. The documents also say that

15 Duke will contact homeowners if trees cannot be pruned to appropriate levels and

16 will only take immediate action to remove vegetation if there is an outage risk.

17 **Q. Are the policies outlined in the Attachment C documents consistent with**
18 **what Mr. Holton told you about what Duke would be doing on your**
19 **property?**

20

21 A. No. Mr. Holton stated that they would be clear cutting all vegetation within the

22 wire zone. Thus, Mr. Holton's statements were neither consistent with the

23 Attachment C documents or the door hanger.

24 **Q. Do you know whether the documents included in Attachment C have been**
25 **approved by the PUCO or some other state or federal agency?**

26

27 A. I do not, but the documents do not indicate such.

28

1 **Q. You mentioned that you reviewed Duke’s modified vegetation management**
2 **plan, what document specifically did you review?**

3
4 A. I have reviewed Duke’s application to modify its vegetation management plan
5 and the modified plan filed in Case No. 16-915-EL-ESS. In the application, Duke
6 claimed that it did not make any substantive changes to its vegetation
7 management plan, but instead Duke stated it was simply filing changes to clarify
8 and make the terms more coherent. Duke’s application to modify its vegetation
9 management plan, filed in 2016, is attached to my testimony as Attachment G.

10 **Q. Do you agree with Duke’s characterization of how it was modifying its**
11 **vegetation management plan?**

12
13 A. No. I have reviewed the modified plan and it is clear to me that the changes that
14 Duke made were substantive and were not mere clarifications. Duke’s application
15 was misleading. Furthermore, Duke’s application did not provide justification for
16 the revisions it sought. It also did not include any information regarding whether
17 the changed practices and policies included in the plan were generally accepted
18 industry practices or standards.

19 **Q. What substantive changes did Duke make in its application to amend its**
20 **prior vegetation management plan?**

21
22 A. Most importantly, the modified vegetation management plan established
23 “minimum clearances of vegetation from Duke Energy Ohio overhead electric
24 line facilities following such clearing cycles.” See Attachment G at 5. But then
25 included language that allows Duke to cut down and remove vegetation from a
26 Duke corridor when Duke has a legal right to do so. Specifically, the vegetation
27 management plan states: “These requirements shall not be construed to limit Duke
28 Energy Ohio’s right to cut down and remove vegetation form a Duke Energy

1 Ohio corridor when Duke Energy Ohio has the legal right to do so, e.g., statue,
2 recorded easement grant, easement by prescription, license, condemnation order,
3 etc.” See Attachment G at 5. Previously, the plan only allowed Duke to remove
4 weakened or dead trees outside of clearance requirements if the trees posed an
5 imminent threat to electric equipment and, in the absence of a legal right to
6 remove those trees, Duke had to obtain permission from the property owner.

7
8 With regard to the Transmission Clearing Cycle, the new language modifies the
9 purpose and intent of the program. The goal was revised from helping to
10 maintain and improve safe and reliable electric service by limiting contact
11 between vegetation and power lines to helping to maintain and improve safe and
12 reliable electric service by limiting or eliminating the possibility of contact by
13 vegetation which has grown towards the overhead transmission lines. While the
14 revised plan retains minimum clearances between vegetation and energized
15 conductors as discussed above, it also removed all references to obtaining
16 permission from property owners to remove trees and deleted the provision that
17 permitted well-established hardwood trees with structurally sound overhanging
18 limbs or branches greater than six inches in diameter to remain.

19 **Q. Are the practices and policies outlined in Duke’s modified vegetation**
20 **management plan consistent with what Mr. Holton told you about what**
21 **Duke would be doing on your property?**

22
23 **A.** No, not on its face. Duke’s modified vegetation management plan talks
24 extensively about clearance distances and Duke repeatedly states in that plan that
25 it will maintain a 15-foot clearance between trees and the transmission wires. Mr.
26 Holton did not discuss whether my trees that Duke intended to level to the ground

1 were 15 feet from the lowest wire. Mr. Holton also did not discuss whether the
2 removal of my trees was necessary to maintain reliable and safe electric service.
3 Moreover, Mr. Holton did not discuss whether Duke had the legal right to remove
4 my trees.
5

6 From my review of the materials and from my interactions with Duke regarding
7 my property, it is my opinion that Duke is attempting to use the new language in
8 the modified vegetation management plan as justification for modifying its
9 practices and policies and to engage in clear cutting without first determining
10 vegetation clearances and without determining whether such tree and vegetation
11 removal or destruction is necessary for maintaining or improving safe and reliable
12 electric service.

13 **Q. Are you aware whether Duke has done any analysis to determine whether**
14 **removal was necessary to maintain reliable and safe electric service?**
15

16 **A.** No, not to my knowledge. In response to a discovery question, CACC-INT-01-
17 018, Duke stated that it had not assessed every tree that Duke proposes to remove.
18 That discovery response is attached to my testimony as Attachment H.

19 **Q. You stated that you obtained your easement. Have you reviewed it?**
20

21 **A.** I have reviewed my easement. I am not an attorney, but I do not believe Duke's
22 proposed actions are authorized under my easement, as Duke has not complied
23 with the requisite terms and conditions of the easement prior to removing my
24 trees. See Attachment A.
25
26

1 **Q. How did you proceed after speaking with Mr. Holton?**

2 A. Shortly after my meeting with Mr. Holton, Joe Grossi and Olga Staios, who live
3 in a different neighborhood in Symmes Township, and Ken Bryant, a Township
4 Trustee, reached out to me to discuss Duke's plans and the negative impacts on
5 our neighborhoods and the Township. From there, we organized a neighborhood
6 meeting, which took place on October 12, 2017.

7 **Q. What were your objectives in organizing a neighborhood meeting?**

8
9 A. Duke had told each of us different things. More than anything, we were confused
10 and wanted to compare notes as a larger group to figure out what exactly was
11 going on. We figured that by working together as a community, we might be able
12 to stop the extreme action of clear cutting by Duke from occurring. I hoped that a
13 collective response from an entire township or numerous communities might
14 cause Duke to revert to its former vegetation management practices and policies
15 of trimming and pruning instead of clear cutting within its 100-foot easement,
16 creating what equates to an eight-lane highway through our community.

17 **Q. How did Duke respond to your collective efforts?**

18
19 A. Duke refused to meet with us as a customer group and stated that it would only
20 meet with customers individually to discuss options. Eventually, when it seemed
21 like the cutting was imminent, we realized we had no choice but to file complaints
22 against Duke and seek stays from the PUCO to prevent clear cutting on our
23 properties.

24

25

1 **Q. Did you file a complaint against Duke?**

2

3 A. I am a named Complainant in the Citizens Against Clear Cutting (CACC)
4 customer group who filed and participated in the Second Amended Complaint
5 against Duke, which included allegations related to: the adequacy and lawfulness
6 of Duke's vegetation management plan; the unjust and unreasonable vegetation
7 management practices and policies of Duke; the unjust, unreasonable, and
8 unlawful implementation of Duke's vegetation management practices, policies,
9 and plan, which includes the clear cutting of trees and vegetation on customers'
10 properties and the use of dangerous herbicides to remove or destroy trees and
11 vegetation; and defects in how Duke's vegetation management plan was
12 modified, including deceptive and misleading statements and filings by Duke.

13 **Q. Why do you believe that Duke would not meet with the customer group and**
14 **wanted to meet with individuals?**

15

16 A. Just as Mr. Holton attempted to do with me, I believe that Duke wanted to meet
17 individually with property owners so that Duke could cut deals with some
18 property owners, such as grinding stumps or allowing certain property owners to
19 retain specific trees, buildings, or fences.

20 **Q. Are you aware of incidences where Duke entered into special agreements**
21 **with individual property owners?**

22

23 A. Yes. Mr. Holton explained one that would likely occur regarding my neighbor's
24 shed and fence. I have since learned of individuals who received such deals, and
25 reviewed at least one proposed deal.

26

27

1 **Q. If it were determined that Duke needed to maintain a certain amount of**
2 **clearance between trees and other vegetation and the transmission wires,**
3 **would you object to Duke or its contractors trimming your trees and/or other**
4 **vegetation to attain the clearance determined to be necessary to ensure safe**
5 **and reliable electric service?**
6

7 A. No, I would not object. In fact, I support this practice and believe that this was
8 Duke's prior vegetation management practices and policies. I certainly would not
9 want my trees to create a problem that would cause people to lose electric service
10 or pose a safety hazard.

11 **Q. Specifically regarding Duke's vegetation management plan, what are you**
12 **challenging?**
13

14 A. Among other items stated above and in the filed CACC Second Amended
15 Complaint, I am challenging the unreasonable manner with which Duke is
16 implementing its modified vegetation management plan that includes mass and
17 indiscriminate removal of trees and other vegetation from my property, without
18 analyzing the vegetation and the clearances from the power lines and regardless of
19 how necessary (if at all) that removal is to the safety and reliability of Duke's
20 electric service, as I believe is required from reading Duke's modified vegetation
21 management plan, the PUCO's rules, and my easement.

22 **Q. Are you concerned about the safety and reliability of Duke's electric system?**
23

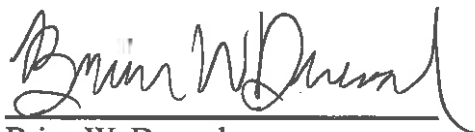
24 A. Of course, I have always been receptive to Duke trimming trees and bushes on my
25 property to ensure safety and reliability.

26 **Q. Recognizing the need for safety and reliability, why are you challenging**
27 **Duke's proposed vegetation management activities?**
28

29 A. I am not challenging all vegetation management activities. Rather, I am
30 challenging the unreasonable and unnecessary vegetation management practices

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and accurate copy of the foregoing testimony was served on October 26, 2018 by electronic mail upon the parties listed below.



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000 2576

Situated in Section 35, Town 3, Range 1, Township 1, County of Lincoln, Nebraska, and containing that part of the original section 35, as shown in the original Land Office file of 1887, and the County of Lincoln, Nebraska, which was the original section 35, as shown in the original Land Office file of 1887.

beginning at a point in the east boundary, the point being 124 feet north of the south-east corner along east side boundary line, thence S 89° 4' E 299.4 feet to a point on the west boundary, thence S 89° 4' E 299.4 feet to a point being 217 feet south of the corner, thence N 89° 4' E 299.4 feet to a point on the east boundary, the point being 124 feet north of the south-east corner, and thence S 89° 4' E 299.4 feet to the south-east corner.

1. The first step in the process of the investigation is the identification of the problem. This is done by the investigator who is responsible for the investigation. The investigator will identify the problem and then will determine the scope of the investigation. The investigator will then determine the objectives of the investigation and will then determine the methods of the investigation. The investigator will then determine the results of the investigation and will then determine the conclusions of the investigation. The investigator will then determine the recommendations of the investigation and will then determine the actions of the investigation. The investigator will then determine the follow-up of the investigation and will then determine the final report of the investigation.

2. The main objective of the present study was to determine the effect of the use of the above-mentioned materials on the development of the motor skills of the children. The study was conducted in the form of a quasi-experimental design. The study was conducted in the form of a quasi-experimental design. The study was conducted in the form of a quasi-experimental design.

1. Learning objectives are the specific skills and knowledge that students are expected to acquire by the end of the course. These objectives should be measurable and aligned with the program's goals.

☐ Distribution☒ Transmission**Dear Customer and/or Property Owner:**

At Duke Energy, we're committed to the proper maintenance of trees and vegetation to help provide safe and reliable electricity for you and your neighbors. We were here today to notify you of the following:

- ☒ See information letter enclosed.
- ☒ A Duke Energy contract tree crew will soon be performing power line vegetation management in your area.
- ☒ To prevent an electrical outage or hazardous situation, trees in the right of way on your property need to be pruned or taken down. Duke Energy will perform this work at no cost to you.
- ☐ The trees that you reported were inspected. Since no immediate danger is present, this work will be performed during our regularly scheduled vegetation management. Duke Energy will perform this work at no cost to you.
- ☐ Duke Energy does not need to perform the work you requested because the trees do not cause safety or reliability concerns.
- ☐ Hazard tree(s) marked with paint or ribbon should be taken down. Should any of these tree(s) fall and come in contact with the power line, a safety hazard could be created or your electric service interrupted.
- ☐ Duke Energy has performed emergency outage restoration work caused by an act of nature. This work required trees to be trimmed or cut down. Duke Energy is not responsible for cleanup of wood and debris when this occurs.
- ☐ Duke Energy has identified vegetation that needs to be controlled by herbicide. Duke Energy's contract crews will be in the area in the near future applying approved herbicides.
- ☐ To ensure safe and reliable electric and gas service for you and your neighbors, a Duke Energy contract mowing crew will soon be mowing right-of-way corridors in your area.
- ☒ Other: We are removing all trees 50ft.
of center on both sides
666.301.1300 ext #180

Thank you.

If you have specific questions, your primary contact is the person identified on the attached business card. For additional questions please call Duke Energy Vegetation Management at 866.385.3675. For information about our Integrated Vegetation Management program please visit us online at duke-energy.com/safety/right-of-way-management.asp.

Job number: 3881

Date: _____

Time: _____



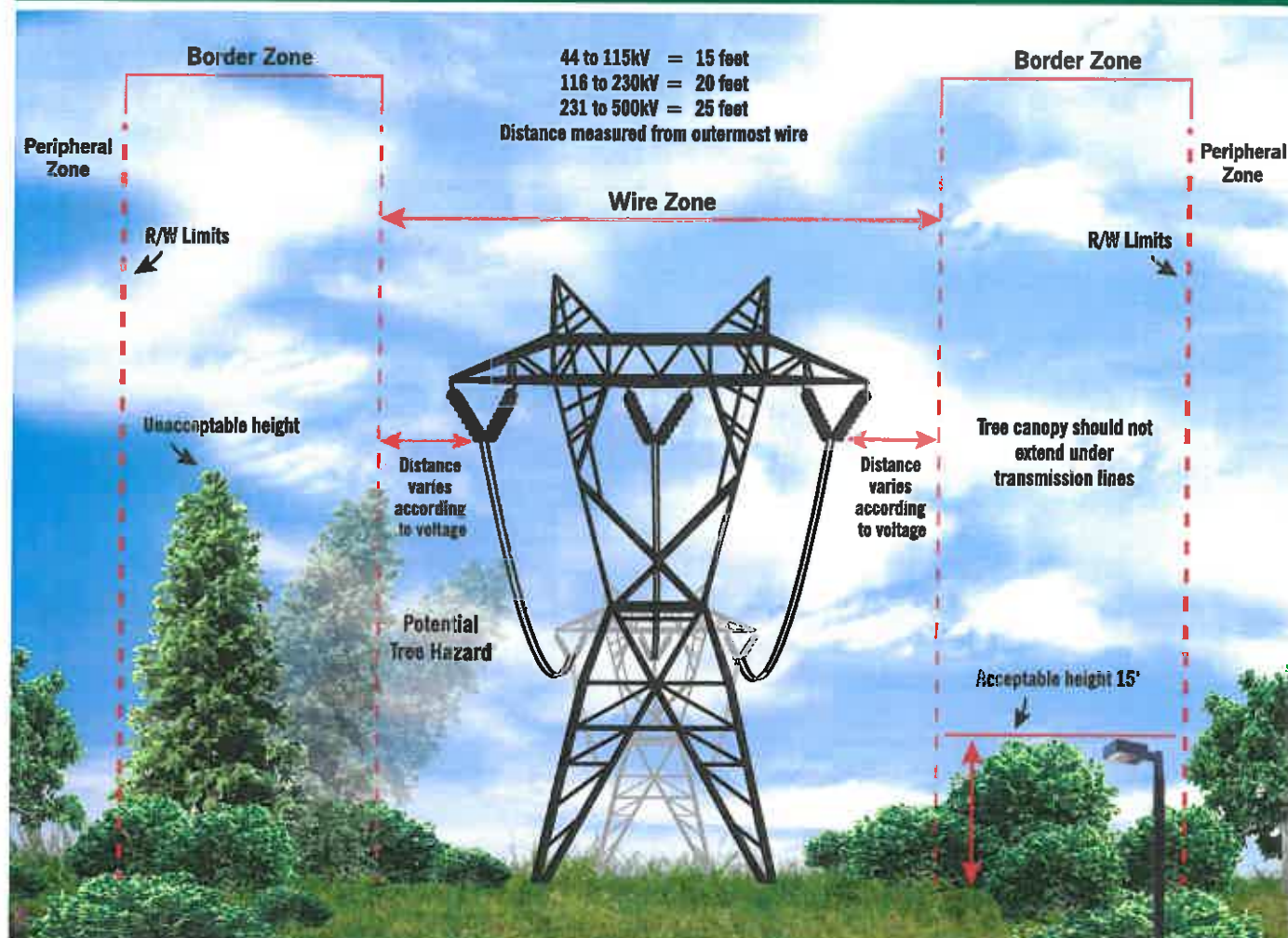
ELECTRIC TRANSMISSION RIGHT-OF-WAY GUIDELINES/RESTRICTIONS VALID FOR OHIO, INDIANA AND KENTUCKY (Revised 11/20/14)

This list of right-of-way restrictions has been developed to answer the most frequently asked questions about property owner use of Duke Energy's electric transmission rights of way. This list does not cover all restrictions or all possible situations. You should contact the Asset Protection right-of-way specialist if you have additional concerns about the rights of way. This list of restrictions is subject to change at any time and without notice. Duke Energy reserves all rights conveyed to it by the right-of-way agreement applicable to the subject property. All activity within the rights of way shall be reviewed by an Asset Protection right-of-way specialist to obtain prior written approval. Engineering plans may be required. Compliance with the Duke Energy Right-of-Way Guidelines/Restrictions or approval of any plans by Duke Energy does not mean that the requirements of any local, county, state or federal government or other applicable agency with governing authority have been satisfied.

1. Structures, buildings, manufactured/mobile homes, satellite systems, swimming pools (and any associated equipment and decking), graves, billboards, dumpsters, signs, wells, deer stands, retaining walls, septic systems or tanks (whether above or below ground), debris of any type, flammable material, building material, wrecked or disabled vehicles and all other objects (whether above or below ground) which in Duke Energy's opinion interfere with the electric transmission right of way are not allowed within the right-of-way limits. Transformers, telephone/cable pedestals (and associated equipment) and fire hydrants are not allowed. Manholes, water valves, water meters, backflow preventers and irrigation heads are not permitted. Attachments to Duke Energy structures are prohibited.
2. Fences and gates shall not exceed 10 feet in height and shall be installed greater than 25 feet from poles, towers and guy anchors. Fences shall not parallel the centerline within the rights of way but may cross from one side to the other at any angle not less than 30 degrees with the centerline. If a fence crosses the right of way, a gate (16 feet wide at each crossing) shall be installed by the property owner, per Duke Energy's specifications. The property owner is required to install a Duke Energy lock on the gate to ensure access. Duke Energy will supply a lock.
3. Grading (cuts or fill) shall be no closer than 25 feet from poles, towers, guys and anchors (except for parking areas; see paragraph 7) and the slope shall not exceed 4:1. Grading or filling near Duke Energy facilities which will prevent free equipment access or create ground-to-conductor clearance violations will not be permitted. Storage or stockpiling of dirt or any construction material is prohibited. Sedimentation control, including re-vegetation, is required per state regulations.
4. Streets, roads, driveways, sewer/water lines, other utility lines or any underground facilities shall not parallel the centerline within the right of way but may cross, from one side to the other, at any angle not less than 30 degrees with the centerline. No portion of such facility or corresponding easement shall be located within 25 feet of Duke Energy's facilities. Roundabouts, cul-de-sacs and intersections (such as roads, driveways and alleyways) are not permitted.
5. Any drainage feature that allows water to pond, causes erosion, directs stormwater toward the right of way or limits access to or around Duke Energy facilities is prohibited.
6. Contact Duke Energy prior to the construction of lakes, ponds, retention or detention facilities, etc.
7. Parking may be permitted within the right of way, provided that:
 - a. Prior to grading, concrete barriers shall be installed at a minimum of 9 feet from the Duke Energy facilities. During construction, grading shall be no closer than 10 feet to any Duke Energy facility.
 - b. After grading/paving activity is complete, Duke Energy-approved barrier sufficient to withstand a 15-mph vehicular impact shall be erected 9 feet from any Duke Energy facility.
 - c. Any access areas, entrances or exits shall cross (from one side to the other) the right of way at any angle not less than 30 degrees with the centerline and shall not pass within 25 feet of any structure. Parking lot entrances/exits cannot create an intersection within the right of way.
 - d. Lighting within the right-of-way limits must be approved by Duke Energy before installing. Due to engineering design standards, lighting is not allowed in the "Wire Zone." Where lighting is approved ("Border Zone"), the total height may not exceed 15 feet. Contact your Asset Protection right-of-way specialist as the "Wire Zone" varies for the different voltage lines.
8. Duke Energy will not object to certain vegetation plantings as long as:
 - a. They do not interfere with the access to or the safe, reliable operation and maintenance of Duke Energy facilities.
 - b. With prior written approval, Duke Energy does not object to low-growing shrubs and grasses within the "Wire Zone." Tree species are not allowed within the "Wire Zone." Trees that are approved in the "Border Zone" may not exceed, at maturity, 15 feet in height. Contact the Asset Protection right-of-way specialist for "Wire Zone"/"Border Zone" definitions.
 - c. For compliant mature height species, refer to plantfacts.osu.edu/plantlist/index.html for reference.
 - d. Engineering drawings must indicate the outermost conductors.
 - e. Vegetation that is not in compliance is subject to removal without notice.
 - f. Duke Energy may exercise the right to cut "danger trees" outside the right-of-way limits as required to properly maintain and operate the transmission line.

We hope this is useful information. If you have additional questions or plan any activity not mentioned above, please contact the Asset Protection right-of-way specialist for your area (see map).

Transmission Right-of-way Zones - Midwest



Wire Zone: Extends beyond the outermost conductor on both sides.
(See diagram above.)

Permitted within the Wire Zone: Low-growing plants, shrubs and grasses.

Not permitted within the Wire Zone: Tree species of any kind.

Border Zone: Extends from the edge of the Wire Zone to the outside edge of the Right of Way.

Permitted within the Border Zone: Lighting structures and plantings within the Right of Way that do not exceed a vertical height of 15 feet. For compliant mature height species, refer to plantfacts.osu.edu/plantlist/index.html.

Not permitted within the Border Zone: Any object that exceeds vertical height restrictions. These restrictions are based on flat ground elevations. If the ground elevations differ, no object at any time may exceed the outermost conductor's ground elevation.

Peripheral Zone: Outside the Right of Way and adjacent to Border Zones.

Permitted within the Peripheral Zone: Trees may be planted in the Peripheral Zone. Duke Energy recommends customers exercise caution selecting and planning trees in this zone.

Not permitted in the Peripheral Zone: Trees with canopies are subject to routine trimming and possible removal.

In all zones:

When an outage risk is identified, Duke Energy will attempt to notify the affected customer. However, the company may need to take immediate action if trees cannot be pruned to appropriate levels. This may include trees and shrubs that are within 20 feet of the power line at the maximum peak load or during weather conditions that create line sag and sway.

Written approvals by Duke Energy are required for all plans.

We hope this is useful information. If you have additional questions on line voltages or plan any activity not mentioned above, please contact the Asset Protection Specialist for your area. (See Map)

*Right of Way is intended to reference the easement rights granted to Duke Energy. Actual zone size may vary based upon the particular Right of Way.

Why must Duke Energy remove trees?

Reliable electricity is important to our customers



Trees are part of the natural beauty of the Midwest. Duke Energy recognizes the important role trees play in enhancing the beauty of communities and contributing to the quality of life for our customers in Indiana, Ohio and Kentucky. While the trees that thrive throughout the 26,054 square miles of our service area are a tremendous source of pride, trees and limbs that fall into power lines also are the number one cause of power outages.

Our customers want reliable power – in both good and bad weather. It's our responsibility to ensure power lines that transmit electricity are free from trees, overgrown shrubbery and other obstructions that can prevent continuous, safe and reliable electric service to the more than 1.6 million Midwest customers who depend on us 24 hours a day. Trees that are close to power lines must be trimmed or removed so they don't disrupt electric service to households, businesses, schools and hospitals.

Our crews use a variety of methods to manage vegetation growth along distribution and transmission power line rights of way, including vegetation pruning, tree removal and herbicides. These approaches are based on widely accepted standards developed by the tree care industry for maintenance and operations and approved by the American National Standards Institute (ANSI).

Transmission rights of way

High-voltage transmission lines provide large amounts of electricity over long distances. The transmission lines in your community are part of the larger, interconnected grid system that powers an entire region, not just the community through which the lines run. Federal rules are more stringent for some transmission lines, depending on the voltage, and may include fines up to \$1 million per day for tree-related outages. We manage our grid to provide reliable operation of transmission facilities while adhering to regulations and easement rights.

Distribution rights of way

Distribution lines carry power from local substations to homes and businesses. An electric distribution right of way may also contain other utilities (electric, telephone, cable, water and/or gas) that must be maintained as well. Duke Energy manages rights of way to provide reliable delivery of electricity.

Vegetation Management methods

We use an Integrated Vegetation Management approach, which includes careful pruning, selective herbicidal application and tree removal. This allows us to proactively evaluate power line areas and determine the best method for maintaining reliable service. The objective of an Integrated Vegetation Management program is to maintain the lines – before the trees and brush are close enough to cause outages – in a manner that's consistent with good arboricultural practices.

Maintaining rights of way

Well-maintained rights of way help prevent power outages and allow our vehicles and personnel to safely access our electrical equipment for operations, maintenance and storm response. By maintaining vegetation around our equipment, we can get our customers' power restored more efficiently and safely.

Maintaining easements

Easements allow us access to mow, prune or cut down vegetation that may interfere with our transmission equipment and the ability to deliver safe reliable power. They also give us the space we need to build new equipment to meet the future energy demands of our customers.

Sometimes public and private entities plant trees in the easements that impede our ability to operate and maintain these critical assets. Trees planted outside of a right of way also can grow into our easement and endanger our equipment. We recommend that you only plant grass in an electric transmission rights of way or easement.

Why trimming doesn't always work

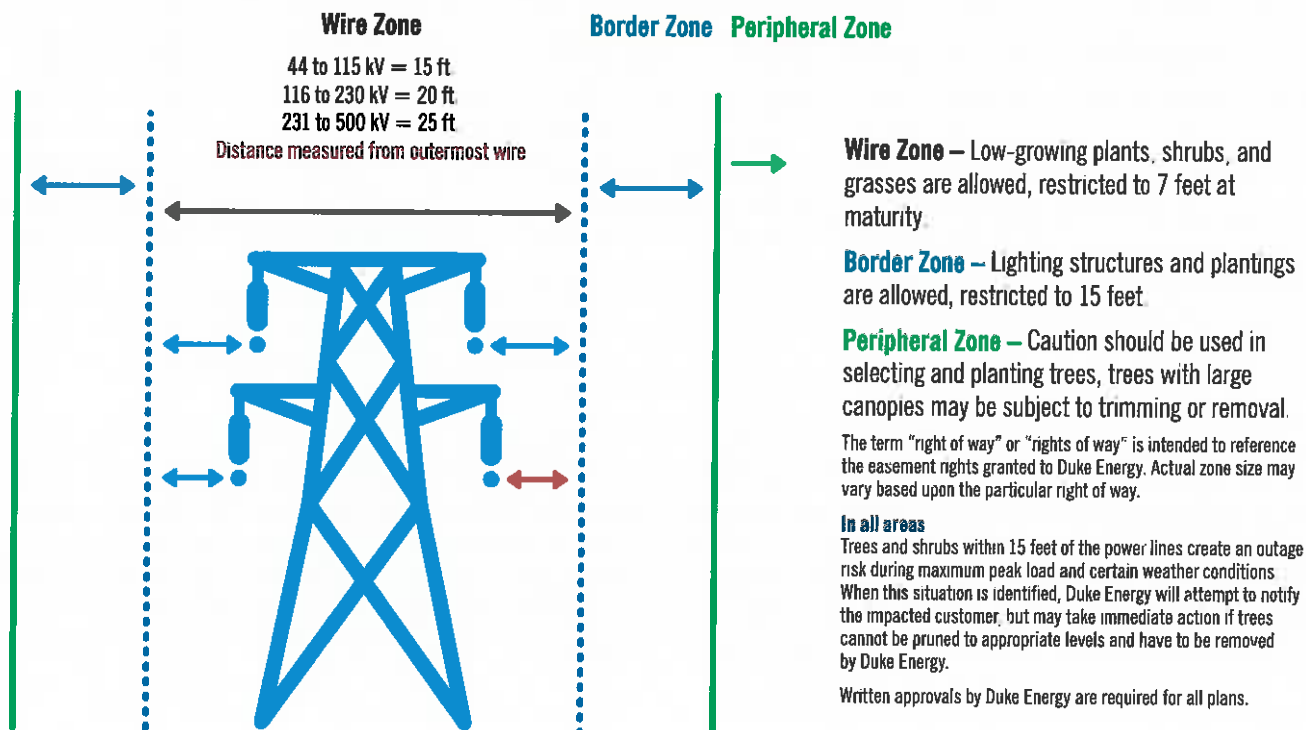
We're often asked why we remove some trees instead of trimming them. Trimming is not always healthy for the trees.

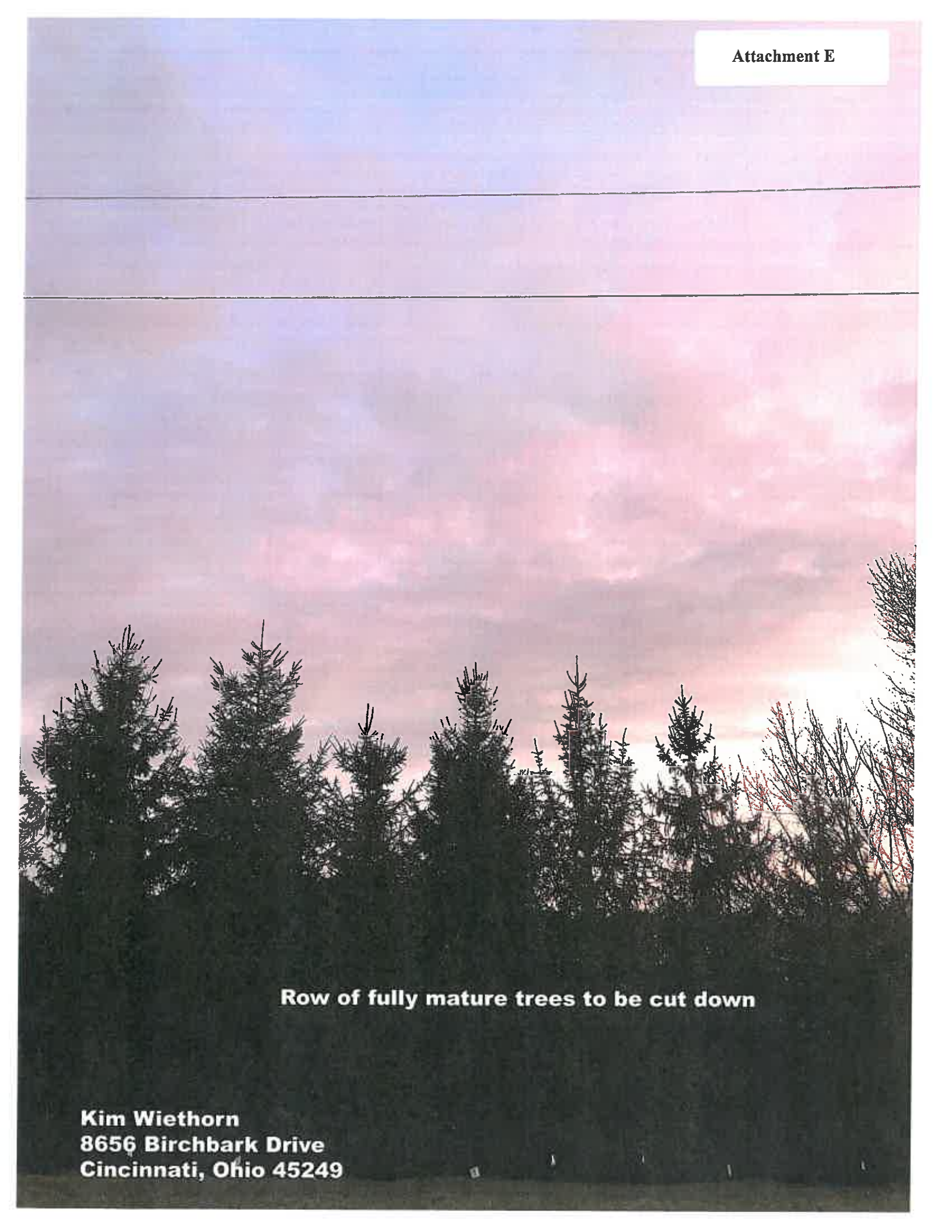
Duke Energy has thousands of miles of right of way to maintain; even with the latest technology, some fast-growing tree species can outpace our ability to keep them in check. When we have to cut down trees, we take care to leave the area in the same condition as we found it.

Before planting, visit our right-of-way website at duke-energy.com/safety/right-of-way-management.asp. To report trees growing into power lines, visit duke-energy.com/indiana/outages/tree-trimming.asp and fill out the online form.

Questions? Please call 866.385.3675 to ask for a Duke Energy transmission forester to contact you.

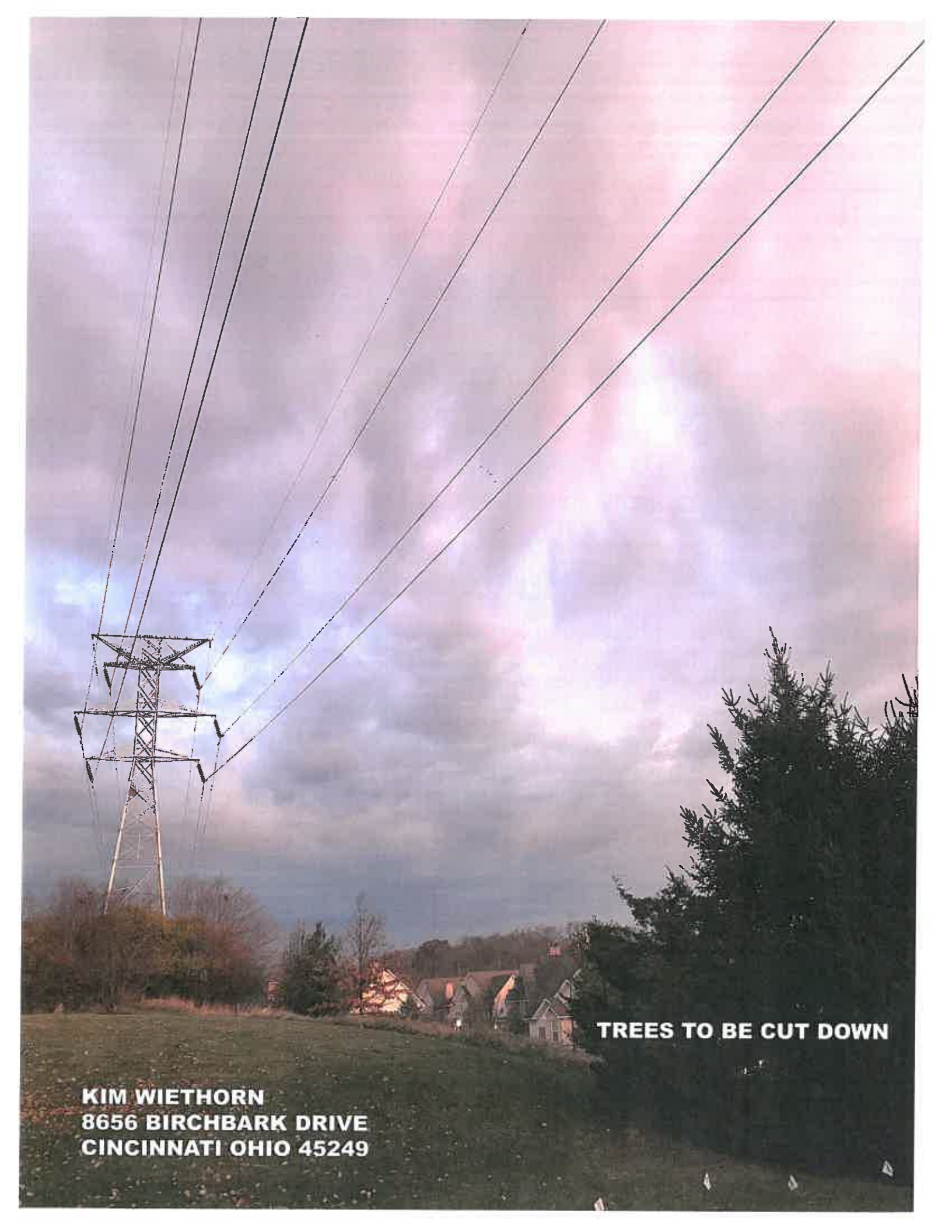
Transmission Right-of-Way Zones:



A photograph showing a row of evergreen trees in silhouette against a dramatic sky with pink and orange clouds. The trees are dark and dense, forming a horizontal line across the lower half of the image. The sky is filled with soft, wispy clouds in shades of pink, orange, and light blue, suggesting a sunset or sunrise. The overall mood is serene yet somber due to the dark trees.

Row of fully mature trees to be cut down

**Kim Wiethorn
8656 Birchbark Drive
Cincinnati, Ohio 45249**



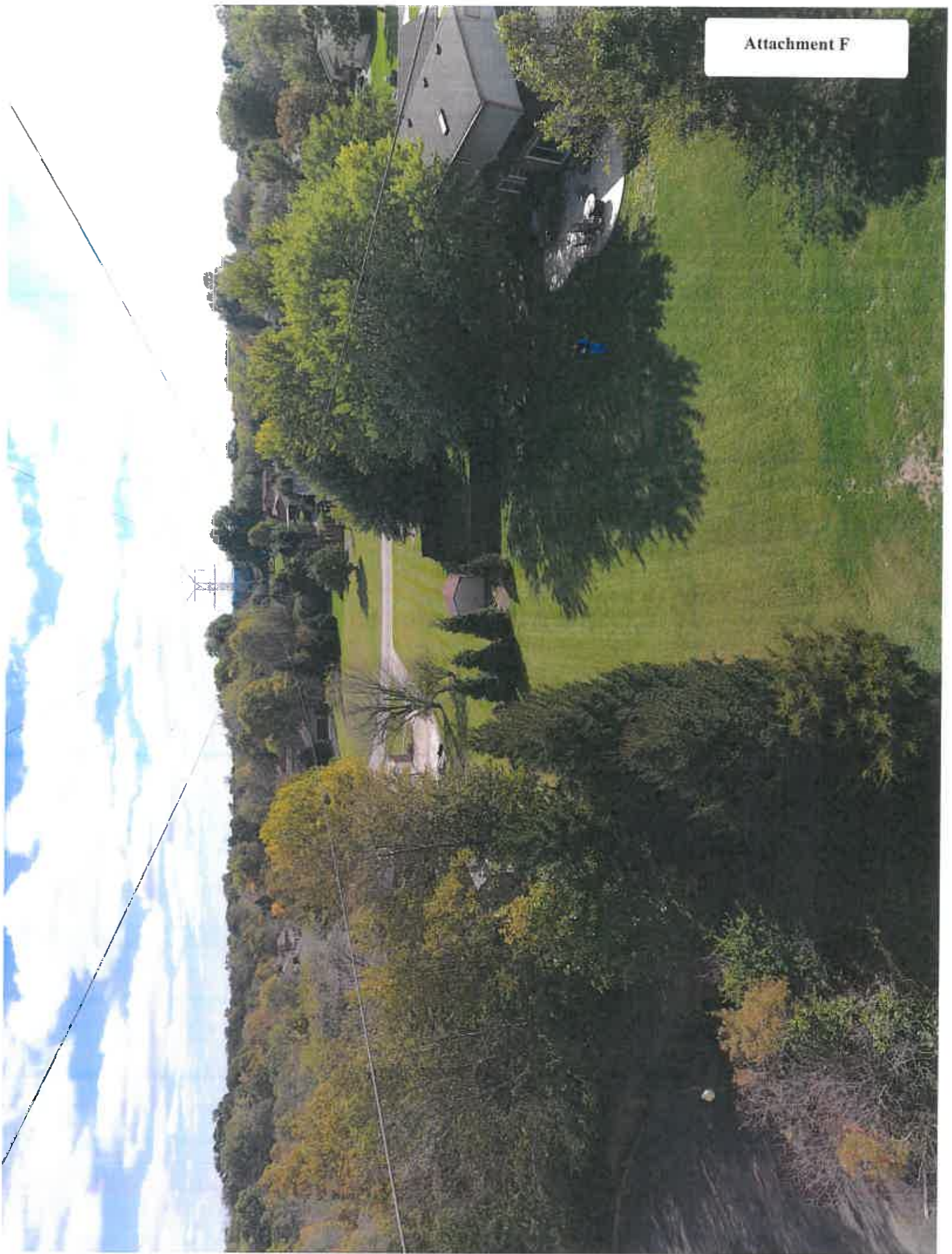
TREES TO BE CUT DOWN

**KIM WIETHORN
8656 BIRCHBARK DRIVE
CINCINNATI OHIO 45249**



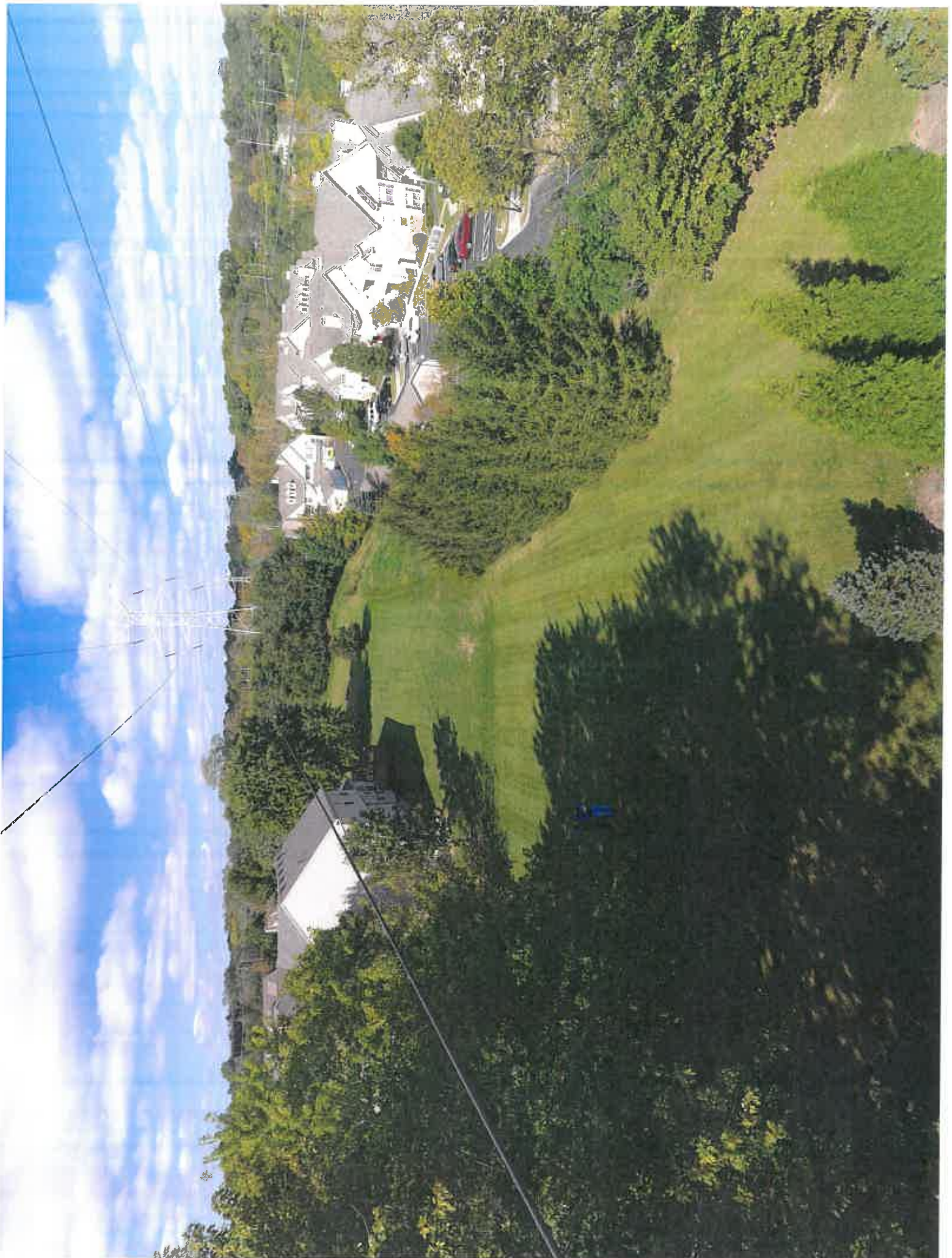
4 FULLY MATURE ORNAMENTAL TREES TO BE CUT DOWN

**KIM WIETHORN
8656 BIRCHBARK DRIVE
CINCINNATI OHIO 45249**

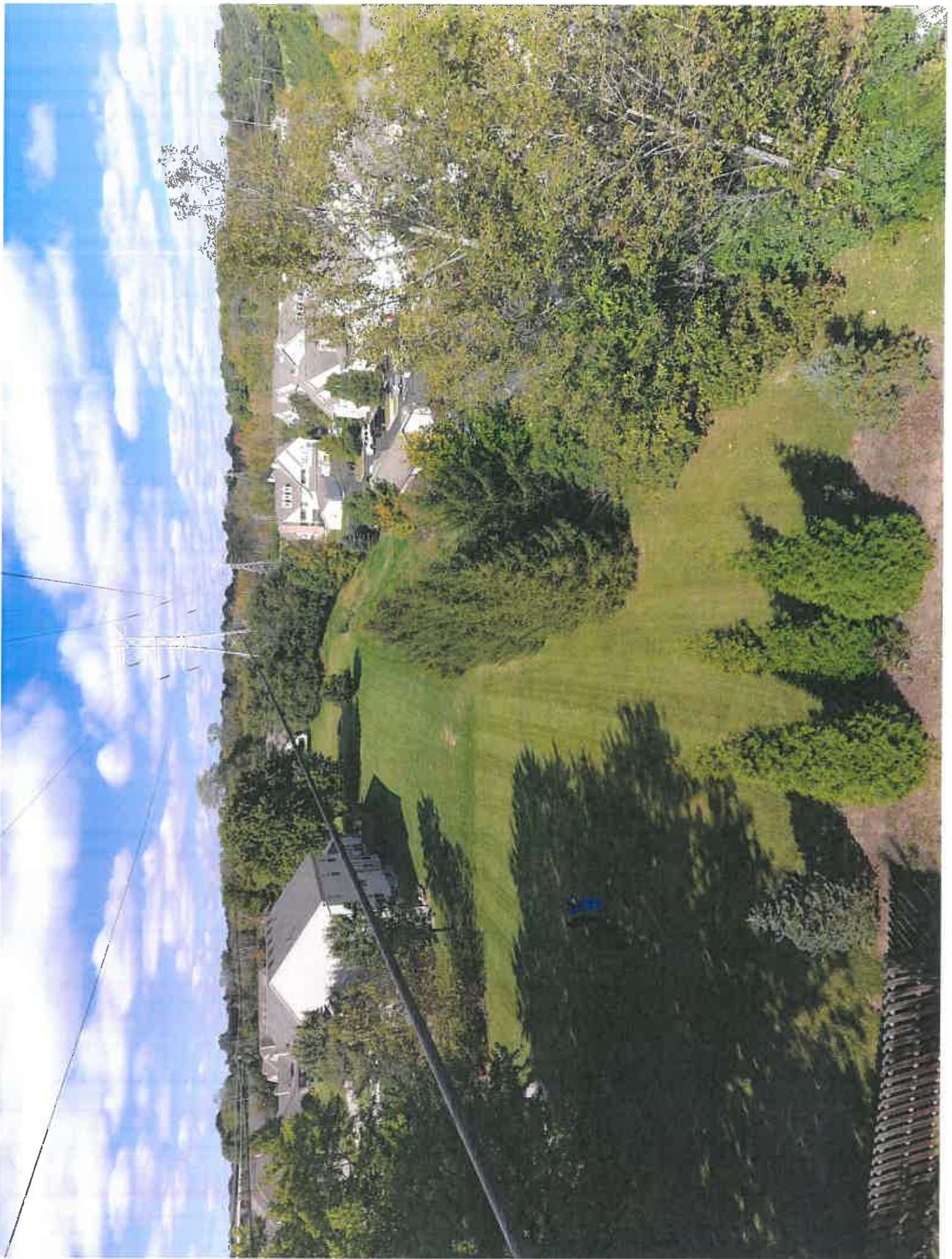




















BEFORE

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 blue ink that reads "Elizabeth H. Watts" followed by a stylized mark that appears to be "1064".

Amy B. Spiller (0047277)

Deputy General Counsel

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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 coparation 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.

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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.

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

CACC-INT-01-018

REQUEST:

In reference to Duke's Easements relating to Complainants' properties, have Duke's engineers assessed every tree that Duke intends to remove on Complainants' properties?

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: No.

PERSON RESPONSIBLE: Ron Adams

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in

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

Summary: Testimony Direct Testimony of Kim Wiethorn on Behalf of Complainants
electronically filed by Mrs. Kimberly W. Bojko on behalf of Complainants