



- Toledo Edison's Transmission Vegetation Management ("TVM") Program mandates, where Toledo Edison has easement rights, the removal of all "incompatible vegetation."
- Under Toledo Edison's TVM Program, "incompatible vegetation" is any vegetation, including trees, that has the genetic disposition to grow into Toledo Edison's transmission lines.
- The National Electric Safety Code ("NESC") requires a minimum of at least 8.2 feet of horizontal clearance and 8.7 feet of vertical clearance between a tree and a transmission line.
- Tree-line interference with a transmission line can lead to an outage affecting thousands of Toledo Edison customers, not to mention posing grave risks to life and property.
- The trees that were removed were directly beneath or next to a 69 kV transmission line and were within the boundaries of the easement.
- The lower conductors of the 69 kV transmission line that runs through the right of way are approximately 35.5 to 41 feet from the ground.
- When they were removed, the trees were within 7 to 12 feet from the lower conductor wire. Thus, these trees were approaching or within NESC minimum clearances.
- The remaining arborvitae on the Complainants' property that fell outside of Toledo Edison's easement are the same species as the trees that were removed.
- These remaining trees are presently as tall as, if not taller than, the lower conductor wire on Toledo Edison's 69 kV transmission line. Thus, the trees in question would have grown into the line.
- Even the Complainants' witnesses testified that they could not state within a reasonable degree of scientific certainty that the trees that were removed would not grow into the transmission line.

Given the above facts, Complainants simply cannot meet their burden and show that Toledo Edison failed to act within its easement rights or pursuant to the Company's TVM Program when it removed the trees.

Complainants apparently want to argue that the trees should have been trimmed, not removed, and that such trimming could have been done by Complainants. [Compl., pp. 3-4.] As

the record shows, such a suggestion is unworkable and dangerous. Trimming requires guesswork about how fast trees will grow. Such a practice would not only require Toledo Edison to put its (or others') vegetation management personnel repeatedly near highly energized power lines, but would provide no guarantee that the trees will not come in contact with the lines, much less encroach minimum safety clearances. The consequences of a transmission line outage caused by a tree contact and the unnecessary safety issues caused by trimming make trimming an inferior practice to removal. Simply put, the best way to eliminate the risk of a tree growing to or near a line, and thus, preventing safe and reliable service, is to remove the tree.

For the same reason, having Complainants (or contractors hired by them) prune the trees yields no better results. Moreover, this invites the plainly unfeasible prospect of countless property owners doing their own work with the Company trying to determine: (a) who did what; and (b) whether what's been done is sufficient to maintain safely reliable electric service. Under the easement at issue, it is undisputed that Toledo Edison had the sole discretion to determine what should be done and when. Acting pursuant to its TVM program, Toledo Edison exercised that discretion reasonably.

Toledo Edison acted lawfully and reasonably in removing Complainants' trees. Accordingly, the Commission should dismiss the Complaint in this case.

## **II. STATEMENT OF FACTS**

### **A. Toledo Edison's TVM Program Requires the Removal of Incompatible Vegetation.**

Toledo Edison's TVM Program, which has been submitted to the Commission and reviewed by the Commission Staff,<sup>1</sup> sets forth a best practice methodology "to maintain safe,

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<sup>1</sup> Although the Commission retained authority to order a hearing if it objected to the Plan, it never did so. [TE Ex. 3 (Direct Testimony of Katherine Bloss ("Bloss Dir."), p. 4).]

reliable and economical electric service, through effective line clearance and satisfactory public relations.” [Specifications, TE Ex. KB-2, p. 4.] The TVM Program is embodied in a document entitled, “TVM Transmission Plan and The Transmission Vegetation Management Specifications” (the “Plan” and “Specifications,” respectively.)

Both the Plan and the Specifications require the removal of all “incompatible vegetation.” [*Id.*, pp. 3-4.] The Plan provides that, in maintaining vegetation, “[e]mphasis is to be placed on controlling all incompatible vegetation within [the] clearing zone.” [TE Ex. 3 at Ex. KB-1, p. 1 (Plan); TE Ex. 3 at Ex. KB-2, p. 13 (Specifications).] The Specifications define “incompatible vegetation” to mean “all vegetation that will grow tall enough to interfere with overhead electric facilities.” [TE Ex. 3 at Ex. KB-2, p. 25.] “Controlling” means “that all incompatible vegetation must be removed with herbicide or be removed mechanically . . .,” when such vegetation “has the potential to interfere with the safe and efficient operation of the transmission system.” [*Id.*, p. 24; TE Ex. 3 at Ex. KB-1, p. 1.]

Removal, rather than merely pruning, is an inherently reasonable practice. Pruning leaves uncertainty. [*Id.*, pp. 6-7.] Even TVM professionals can make only educated guesses regarding the amount a particular tree can grow over time. [Hearing Transcript (“Tr.”)<sup>2</sup>, 77:6-9 (Brewster Cross).] Indeed, Complainants’ witness Jay Brewster admitted as much. Mr. Brewster admitted that tree growth rate and ultimate heights vary and the maximum heights provided are averages. [*Id.*, 76:5-12.]

Q: And likewise tree growth varies which makes it difficult to predict what a tree’s ultimate height is going to be; isn’t that true?

A: That’s correct.

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<sup>2</sup> References to the hearing transcript here will show the page and line reference as follows: page:line(s).

Q: So ultimately it's just really a guess, isn't it, Mr. Brewster, how much any one tree is going to grow, isn't it, sir?

A: It's an educated guess but it's a guess. [*Id.*, 77:2-9.]

It is, therefore, a "guess" how tall any tree will grow. [*Id.*, 77:6-9.]<sup>3</sup>

Relying on guesswork means risking potential tree contacts with lines [TE Ex. 3 (Bloss Dir.), p. 6], not to mention repeatedly requiring personnel to work near energized power lines. [*Id.*] It cannot be disputed that the best way to eliminate the risk of a tree contacting a line or danger to employees working on trees in the vicinity of a line is to remove the tree. [TE Ex. 1 (Direct Testimony of David Kozy ("Kozy Dir.")), p. 8.] Accordingly, where the Company has the right to remove inconsistent vegetation, Toledo Edison's TVM Program wisely calls for removal.

**B. Toledo Edison's Easement on the Jeffers' Property Afforded Toledo Edison the Right to Remove the Trees.**

Complainants granted two easements over the property to Toledo Edison during the construction of Toledo Edison's Midway-Tontogany transmission line in 1970. [TE Ex. 2 (Direct Testimony of Christopher Hahn ("Hahn Dir.")), p. 4; TE Ex. 2 at Exs. CH-1 & CH-2.] The easements provided Toledo Edison with a 20-foot right of way on each side of the centerline of the easement, which tracked the placement of the transmission line. [TE Ex. 2 at Exs. CH-1 & CH-2.] The relevant easement is Lucas County Easement No. 66253, vol. 1979, p. 2. [Tr. 22:17-21 (Jeffers Direct); Complainants Ex. D.] This easement was filed in Lucas County on March 23, 1970. [*Id.*]

Both easements provide, "Grantee shall have the right to trim or remove underbrush and trees and to remove and keep free from obstructions from and along said line or lines that, in the

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<sup>3</sup> Complainants' witness Phil Parsons also testified that any growth rates regarding the removed trees were at best educated guesses. [Tr., 97:24-98:3 (Parsons Cross).]

judgment of the Grantee, will interfere with the construction or safe operation thereof.” [TE Ex. CH-1 & CH-2.] Thus, pursuant to the easements, it is the judgment of the Grantee, i.e., Toledo Edison, that controls whether any trees posed a threat to the “safe operation” of the transmission line. [*Id.*] There is thus no dispute regarding: (a) the validity of the easement [TE Ex. 2 (Hahn Dir.), p. 7; Tr., 45:9-22 (Jeffers Cross)]; (b) that pursuant to the easement, Toledo Edison’s judgment controls whether a tree poses a threat to its transmission lines [TE Ex. 2 (Hahn Dir.), pp. 3-4; Tr., 98:13-98:20 (Parsons Cross).]; and (c) that all of the trees removed were within the boundaries of the easement. [TE Ex. 2 (Hahn Dir.), p. 5; Tr., 44:9-22 (Jeffers Cross).]

**C. The Midway-Tontogany Transmission Line and the Consequences of Vegetation Interference.**

The Midway-Tontogany transmission line runs between the Midway substation and the Tontogany substation. Toledo Edison constructed the line along the Complainants’ property in 1970 and it directly serves approximately 5,300 Toledo Edison customers. [TE Ex. 1 (Kozy Dir.), p. 3; TE Ex. 1 at Exs. DK-2 & DK-3.] The Midway-Tontogany line is connected to the rest of the transmission grid and to several other transmission lines through Toledo Edison’s substation network. Specifically, the Midway-Tontogany line is directly connected to two 69 kV transmission lines, six 138 kV transmission lines, and two 345 kV transmission lines through the Midway substation. The line is further connected to two Rural Electric Association substations and two municipal electric systems. [TE Ex. 1 (Kozy Dir.), p. 4.]

As explained by Toledo Edison witness Kozy, transmission lines, as the backbone of the electric grid, are very different from distribution lines. [*Id.*, p. 3.] Transmission lines carry electricity at relatively high voltages, often over long distances, to deliver bulk power to cities and neighborhoods. Distribution lines, by contrast, operate at significantly lower voltages and carry power to individual end users, such as residences and businesses. *Id.* As such, vegetation

interference with a transmission line can potentially affect thousands of customers while interference with a distribution line typically only affects far fewer customers. [*Id.*, pp. 3, 8.] In the case of the Complainants' property, the integrity of a transmission line was at stake. [*Id.*, p. 3.]

In turn, the consequences of vegetation-transmission line interference are severe. On the Complainants' property, the most direct consequence of such interference would be a failure of the Midway-Tontogany transmission line, which would result in the immediate loss of power to the approximately 5,300 customers served by the five substations closest to that point. [TE Ex. 1 (Kozy Dir.), pp. 4-5.] The possible indirect consequences could be a cascading effect of systematic outages affecting thousands of customers well beyond the Midway-Tontogany line service area. [*Id.*, p. 8].

Moreover, energized lines near trees always present a very serious safety hazard. Tree-transmission line interference can lead to fires and serious property damage. More important, energized trees can electrocute people, including utility workers and anyone who might be climbing a tree near an energized line. [*Id.*, p. 5.] The phenomena of arcing, sagging and swaying amplifies these safety concerns and can lead to interference in the absence of direct physical contact of a tree with a transmission line.<sup>4</sup> Thus, it is critical to maintain the proper clearances between trees and transmission lines.

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<sup>4</sup> 'Arcing' is a phenomenon in which electricity can 'jump' from a transmission line to a nearby object, such as vegetation, without that object actually touching the line. For a 69 kV line, arcing can occur to objects that are approximately one and one-half feet away from the line. Arcing, like actual contact, poses a serious risk of outages, fire and damage to life and property. [TE Ex. 1 (Kozy Dir.), pp. 5-6.] 'Sagging' is a condition in which electric lines 'sag' or droop. Electric lines are not static; they are dynamic, meaning their height and position constantly change depending on a variety of factors, including ambient temperature, wind, and the amount of load going through the line at the time. During periods of high load, such as a hot summer day, a transmission line will sag toward the ground. The sag in the Midway-Tontogany 69 kV transmission line might vary as much as four feet in a single day and as much as eight feet from season to season. [*Id.*, p. 6.] 'Swaying' occurs when the wind causes a

Such clearances are embodied in the standards of the National Electric Safety Code (“NESC”). [TE Ex. 1 (Kozy Dir.), pp. 7-8; Tr., 68:6-16 (Brewster Cross).] The NESC establishes required minimum clearances between various types of electric lines, including 69 kV lines such as the Midway-Tontogany line, and various types of objects, including trees. The Commission has adopted the NESC as the requirements for clearances in Ohio. *See* Rule 4901:1-10-06, O.A.C. Specifically, in the case of a 69 kV line, the NESC requires a minimum horizontal clearance of 8.2 feet and a minimum vertical clearance of 8.7 feet. [TE Ex. 1 (Kozy Dir.), pp. 7-8; TE Ex. 1 at Ex. DK-4.] The NESC only sets *minimum* standards. To ensure safety, Toledo Edison requires additional clearance beyond that prescribed by the NESC. Toledo Edison’s overriding goal is to prevent, and not merely rectify, NESC violations. [Tr., 121:3-11 (Kozy Cross).]

**D. The History of the Trees and their Selection for Removal**

Complainants’ property is located along Manore Road in Grand Rapids, Ohio. [Tr., 10:1-11:11 (Jeffers Dir.).] The Midway-Tontogany 69 kV transmission line runs the entire length of the western boundary of the property along Manore Road. [TE Ex. 2 (Hahn Dir.), p. 3.] The removed trees were planted in approximately 1960 in two rows: a westerly row that was located directly under the Midway-Tontogany 69 kV line and an easterly row that ran parallel to the transmission line but was not directly underneath it. [Tr., 12:15-25 (Jeffers Dir.).] The vast majority of these trees were arborvitae and a few were mulberry trees. [TE Ex. 2 (Hahn Dir.), p. 4.] At the time of their removal, the trees were approximately 30 feet high. [TE Ex. 2 (Hahn

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transmission line to move horizontally. Wind may blow a transmission line as much as five feet to the right or left of its natural position. Wind can also cause trees to sway into the lines. [*Id.*]

Dir.), p. 10 ; Tr., 79:4-13 (Brewster Cross).] All agree that the trees had grown to within 7 to 12 feet of the lowest transmission wire conductors, which are approximately 35.5 to 41 feet off of the ground. [TE Ex. 2 (Hahn Dir.), p. 5; Tr., 55:12-17 (Jeffers Cross); 103:5-16 Cross Examination Testimony of Phil Parsons (“Parsons Cross”); 148:18-21 (Hahn Redirect).] Thus, the trees were within or approaching NESC clearance standards. [TE Ex. 2 (Hahn Dir.), p. 8.]

As part of the Toledo Edison’s five-year TVM maintenance cycle, in July 2009 contract workers from PennLine Services visited Complainants’ property and identified the arborvitae trees that were located underneath the transmission line and within Toledo Edison’s easement. Because the trees were directly below or next to the transmission line and had reached a certain height, PennLine Services workers identified the trees as incompatible vegetation that needed to be removed to ensure the safe and reliable operation of the Midway-Tontogany transmission line. [TE Ex. 2 (Hahn Dir.), p. 6.]

Subsequently, Transmission Specialist Christopher Hahn visited Complainants’ property and inspected the trees and the line. [*Id.*] His visual inspection confirmed that the trees were within NESC clearances. [*Id.*, p. 8.] He also researched the trees and determined that the arborvitae were a species known as “Green Giant” arborvitae (*Thuja standishii x plicata*). [*Id.*, p. 4.] Trees of that species can grow to a height well above 60 feet [*id.*] and thus well above the line at issue. Because the growth of the trees demonstrated that the arborvitae were interfering with the line, and because they were otherwise of a species that could continue to grow into or above the line,<sup>5</sup> they were “incompatible vegetation” and thus were ordered to be removed by Mr. Hahn. [*Id.*, p. 6.]

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<sup>5</sup> As discussed below, Complainants’ witnesses’ contention that the trees were “American Arborvitae,” and not “Green Giants” arborvitae, is of no moment. American Arborvitae can also grow to approximately 40 feet. [Tr., 76:1-4 (Brewster Cross).] Moreover, because the height of the remaining arborvitae currently on the property –

**E. Mr. Jeffers' Refusal and the Removal of the Trees**

During their July 2009 inspection, PennLine Services workers presented Mr. Jeffers with a copy of the TVM work forms documenting the need for removal, which Mr. Jeffers refused to sign. [TE Ex. 2 at Ex. CH-4.] In September 2009, a PennLine Services supervisor and Toledo Edison witness Hahn visited Mr. Jeffers at his home to explain the need to remove the trees because they were incompatible vegetation. Mr. Jeffers again refused to agree to the removal of the trees. [TE Ex. 2 (Hahn Dir.), pp. 6-7.]

In light of the continuing refusal of Mr. Jeffers to acknowledge the need to remove the trees, Mr. Hahn retrieved the relevant easements to confirm that Toledo Edison had the right to remove the trees, which it did. [*Id.*, p. 6.] In October 2009, Toledo Edison staked the easement, which provided for a boundary of 20 feet in either direction of the center line of the easement. [Tr., 125:4-12 (Hahn Direct); TE Ex. 2 at Exs. CH-1 & CH-2.] Due to the thickness of the vegetation, a tape measure was used to measure 20 feet east of the centerline to mark the eastern boundary of the easement. [TE Ex. 2 (Hahn Dir.), p. 6.]

On October 28, 2009, Mr. Hahn telephoned Mr. Jeffers to inform him that the trees were to be removed. On October 30, 2009, Mr. Hahn followed up on this telephone conversation and sent a letter to Mr. Jeffers in which Mr. Hahn documented the location and number of the easement, explained Toledo Edison's rights under the easement, including the right to remove the trees, and, explained that the trees needed to be removed. [*Id.*, p. 6; TE Ex. 2 at Ex. CH-5.]

On December 9, 2009, Mr. Hahn called Mr. Jeffers and again informed him that Toledo Edison would proceed with the removal. [TE Ex. 2 (Hahn Dir.), p. 7.] On February 22 and 23,

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arborvitae that were the same species as the trees that were removed [TE Ex. 2 (Hahn Dir.), pp. 5-6] – were as high as the line, [*Id.*] the trees at issue were unquestionably trees that had the ability to grow into the line.

2010, pursuant to its easement rights and TVM program, Toledo Edison removed the trees. [*Id.*] Threats from Mr. Jeffers to shoot Toledo Edison employees and contract workers necessitated the presence of outside security personnel during the removal.<sup>6</sup> [Tr., 29:20-30:1 (Jeffers Dir.); Tr., 52:23-53:2 (Jeffers Cross).] As evidenced by the Company's records, 281 trees attached to 227 stumps were removed from Toledo Edison's transmission line right of way. [TE Ex. 2 (Hahn Dir.), p. 8; TE Ex. 2 at Exs. CH-6 & CH-7.]

### III. ARGUMENT

#### A. Standard of Review

Complainants bear the burden to prove their allegations by a preponderance of the evidence and at all times the burden remains upon them. See *Ohio Bell Telephone Co. v. Pub. Util. Comm.* (1990), 49 Ohio St. 3d 123, 126; *Grossman v. Pub. Util. Comm.* (1966), 5 Ohio St. 2d 189, 190. Complainants, however, cannot meet their burden and, in fact, the record shows the opposite of what they contend. Pursuant to its easement, Toledo Edison had the right to remove the trees, all of which were within the easement. Further, Toledo Edison's removal of the trees

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<sup>6</sup> Regarding such threats, under cross-examination, Mr. Jeffers testified as follows:

Q: Now in response to what Mr. Hahn showed you [a copy of Toledo Edison's easement] you said that you told him that you were going to shoot the first person that fired up a chainsaw, correct?

A: Correct.

Q.: But you didn't use the word "person," did you?

A.: I didn't think that what I used would be appropriate here.

Q: Right, but we want to make sure that what you used was a profanity, correct?

A: Yes.

Q: Started with an M and an F?

A: Yes.

Q: And you said that not once but twice, correct?

A: Probably.

[Tr., 52:23-53:41 (Jeffers Cross).]

at issue was mandated by its TVM Program because the trees were incompatible vegetation. The TVM Program has been submitted to the Commission and reviewed by Commission Staff.

The trees were also violating, or encroaching upon, the NESC minimum clearance standards. Indeed, trees of the same species outside of the easement have grown as tall as the lower transmission line. Therefore, there is no dispute that the trees at issue have the disposition to grow into the line. The removal of the trees was thus reasonable and necessary to ensure the continued safety and reliability of Toledo Edison's service. *See* Rule 4901:1-10-27(E)(1), Ohio Administrative Code.

Because Complainants have failed to meet their burden, and because this case is on all-fours with the Ohio Supreme Court's decision in *Wimmer*, the Commission should dismiss their Complaint.

**B. Pursuant to Its Easement, Toledo Edison Was Within Its Rights to Remove the Trees**

The plain language of the easement granted to Toledo Edison unequivocally afforded Toledo Edison the right to remove the trees. The operative easement language provides:

"Grantee [Toledo Edison] shall have the *right to trim or remove underbrush and trees....*from and along said line or lines that, *in the judgment of the Grantee*, will interfere with the construction or safe operation thereof."

[*Id.* (emphasis added).] Pursuant to this language, "the judgment of the Grantee," i.e., Toledo Edison, controls whether the trees posed a threat to the "safe operation" of the line and should be removed, which Mr. Jeffers does not dispute:

Q: And both of those provisions and both of those easements give the company the right to remove trees if in the company's judgment the company believes that the trees will interfere with the lines, correct?

A: Yes. [Tr., 49:23-50:3 (Jeffers Cross).]

Complainants' witness Phil Parsons, also endorsed this aspect of the easement at hearing:

Q: Now, as part of your investigation for this case, you looked at the easement, correct?

A: Correct.

Q: And there is no question in your view, is there, that the company has the right to remove trees if in the company's judgment it believes that the trees will interfere with the lines, correct?

A: That's correct. That's in the easement. [Tr., 98:13-98:20 (Parsons Cross).]

There is also no dispute that virtually all of the trees that were removed fell within the physical boundaries of the easement. [Tr., 45:9-22 (Jeffers Cross); *see also* TE Ex. 2 (Hahn Dir.), p. 8.]<sup>7</sup>

The trees were interfering with the line at the time of their removal. They were approaching or within NESC clearances. [TE Ex. 2 (Hahn Dir.), p. 8.] Left alone, these trees, like the trees that were outside the easement, would have grown as high as the line. [*Id.*, pp. 5-6.] Given the incompatibility of the vegetation at issue, which in Toledo Edison's judgment indicated that the trees had the genetic disposition to interfere with the transmission line, Toledo Edison acted well within its rights under the terms of the easement to remove the trees. *See also Wimmer v. Pub. Util Comm.* (2012), 131 Ohio St. 3d 283, ¶¶ 1; 5-7 (affirming Commission order requiring the removal of incompatible vegetation in transmission line right of way where utility had valid easement rights to do so). In accordance with its undisputed easement rights, Toledo Edison thus exercised its judgment and removed the incompatible trees threatening its lines.<sup>8</sup>

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<sup>7</sup> In addition, Toledo Edison removed a small number of dead or dying trees that were outside of the easement at the request of, and as a favor to, Mr. Jeffers. [TE Ex. 2 (Hahn Dir.), p. 8.]

<sup>8</sup> Complainants attempted to make much of easement language regarding trimming, but such language is irrelevant. In pertinent part the easement states, "Grantee shall have the right to trim such trees....*outside of the boundaries of the easement.*" [Jeffers Ex. D; emphasis added.] The "trimming" language in the easement document thus relates only to those trees "outside of the boundaries of the easement." [*Id.*; Tr., 48:20-49:8.] Because Toledo Edison did not remove any trees outside of the boundaries of the easement (except for a few sick trees at the request of Mr. Jeffers) this language has absolutely no bearing on the current dispute between Toledo Edison and Complainants. [TE Ex. 2 (Hahn Dir.), p. 8.]

**C. Because of The Trees' Genetic Disposition to Grow into Toledo Edison's 69 kV Transmission Line Toledo Edison Had to Remove Them Under the Company's TVM Program.**

The evidence presented by both sides at hearing undeniably demonstrates that the removed trees had the genetic disposition to grow into the lower transmission line and thus were, by definition, incompatible vegetation. The Specifications define incompatible vegetation as "all vegetation that will grow tall enough to interfere with overhead electric facilities." (TE Ex. 3 at Ex. KB-2, p. 25.) There is no dispute that the remaining trees on the Jeffers' property, photographed in Toledo Edison Exhibit 6, are the same species as the trees that were removed, and that these remaining trees are currently as tall as, or taller than, Toledo Edison's lower transmission line. [Tr, 57:2-10 (Jeffers Cross); 80:8-12 (Brewster Cross); 149:10-21 (Hahn Redirect).] There is also no dispute that the removed trees were approximately within 7 to 12 feet of the lower transmission line and that the conductors for the lower transmission line were 35.5 to 41 feet high. [TE Ex. 2 (Hahn Dir.), p. 5; Tr., 55:4-17 (Jeffers Cross); 103:2-11 (Parsons Cross).] Prior to their removal, the trees were thus either invading, or very near, the 8.7 foot vertical minimum clearance zone established by the NESC.<sup>9</sup> [TE Ex. 1 (Kozy Dir), p. 7.]

All of Complainants' witnesses admitted, especially based upon the identity of the remaining arborvitae with that of the removed arborvitae, that the removed trees had the genetic disposition to grow into Toledo Edison's 69 kV transmission line. These remaining trees were at least 30 feet tall and both Mr. Brewster and Mr. Parsons, testified that these trees were still growing. [Tr., 78:17-79:3 (Brewster Cross); 110:4-7 (Parsons Cross).] As Mr. Jeffers testified:

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<sup>9</sup> To ensure safety, the Specifications require additional clearance beyond the minimal standards mandated by the NESC, which, in turn, have been adopted by the Commission. [TE Ex. 1 (Kozy Dir., p. 7).] *See also* Rule 4901:1-10-06, O.A.C.

Q: Mr. Jeffers, I've handed you what has been marked for identification as TE Exhibit 6. And you recognize that, do you not, as a photograph of some of your property?

A: Yes. [Tr., 56:12-16 (Jeffers Cross).]

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Q: And the line that's shown there is the line that's at issue in this case, correct?

A: Yes.

Q: And there are some trees that are indicated there which are of the same species as the trees that were removed, correct?

A: Correct?

Q: And you would agree with me, Mr. Jeffers, that some of the trees that remain that were of the same species as the trees that were removed are as tall as the line now?

A: Close to it and they have never been trimmed. [Tr., 56:24-57:11 (Jeffers Cross).]

Indeed, Mr. Parsons testified that the removed trees consequently posed a threat to that line:

Q: Now, in fact, isn't it the case, sir, that you recognize that the arborvitae that were removed on the Jeffers' property constituted a threat to the line?

A: If they grew — were allowed to grow in the line, correct.

Q: And you couldn't say with any certainty that the lines — or the trees that were removed, would not grow into the lines, correct?

A: If they were not trimmed, correct. [Tr., 109:23-110:7 (Parsons Cross).]

Like Mr. Parsons, Mr. Brewster also acknowledged that he could not say to a reasonable degree of scientific certainty that the trees that were removed did not have the genetic disposition to grow to 40 feet, which would have placed them at, or well above, the transmission line's lower conductors. [Tr., 80:13-18 (Brewster Cross).]

The trees at issue have been identified as either Green Giant Arborvitae (by Mr. Hahn [TE Ex. 2 (Hahn Dir.), p. 4]) or American Arborvitae (by Mr. Brewster [Complainants' Ex. O (Brewster Dir.), p. 3 ]). Both species have the genetic disposition to grow over 40 feet tall. Mr. Hahn testified, without rebuttal, that Green Giant arborvitae can grow to a height of 60 feet. [TE Ex. 2 (Hahn Dir.), p. 4.] Authoritative sources, such as the websites of the Arbor Day Foundation and North Carolina State University,<sup>10</sup> provide that American Arborvitae can grow to between 40 and 60 feet tall. [TE Exs. 8 and 9.]<sup>11</sup>

The removed trees, regardless of species, were thus clearly incompatible vegetation given their size, height, proximity to the line, and propensity, based upon the growth of the trees that remain, to have grown even higher. Because these trees had the genetic disposition to grow into Toledo Edison's 69 kV transmission line, they had to be removed.

The phenomena of arcing, sagging, and swaying further validates Toledo Edison's determination that the trees were incompatible vegetation because tree-line interference can thereby occur in the absence of physical contact of the tree with the line. [Tr., 116:4-21; 117:7-20 (Kozy Cross).] Thus, both the row of trees directly beneath the transmission line and the easterly row had to be removed. The trees in the easterly row were of sufficient height that, even though they were not directly beneath Toledo Edison's transmission lines, they could have interfered with the lines due to the likelihood of arcing, sagging and swaying. [TE Ex. 2 (Hahn Dir.), p. 8.] Pursuant to Toledo Edison's Plan and Specifications, the removed trees thus were

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<sup>10</sup> Complainants' witness Parsons admitted that these sources were authoritative. [Tr., 106: 3-11, 22-24; Tr., 107: 10-19 (Parsons Cross).]

<sup>11</sup> Complainants' witness Brewster also admitted that American Arborvitae can grow to at least 40 feet tall. [Tr., 76:1-4 (Brewster Cross).]

incompatible vegetation and their removal was necessary to ensure the safe and reliable operation of the Midway-Tontogany 69 kV transmission line.

**D. Removal of the Jeffers' Vegetation Was Consistent with Sound Vegetation Management Practices, the NESC standards, and the Ohio Supreme Court's Decision in *Wimmer v. Pub. Util. Comm.***

Sound vegetation management practices mandated the removal of the Jeffers' trees. As testified to at length by Toledo Edison witness Kozy, the best way to avoid the severe consequences of tree-transmission line interference is to remove the incompatible vegetation. [TE Ex. 1 (Kozy Dir.), p. 8. ] Given their height and close proximity to Toledo Edison's lower transmission line, the removed trees would have interfered with the line, whether through direct physical contact or through arcing, sagging, or swaying. In turn, such interference would have led to an immediate loss of power for the 5,300 customers on the Midway-Tontogany line, and could have affected thousands of more Toledo Edison customers through cascading outages. [*Id.*, p. 4.] Fires, serious property damage, and electrocutions could also have resulted. [*Id.*, p. 5.] By removing all incompatible vegetation in its easements, Toledo Edison can dramatically reduce a predictable and avoidable risk.<sup>12</sup>

Removal of Complainants' trees also was consistent with the standards established by the NESC regarding minimum clearances for 69 kV transmission lines such as the Midway-Tontogany line. Given that the average height of the trees prior to removal was approximately 30 feet, and Toledo Edison's lower conductors were approximately 35.5 to 41 feet off the ground, many, if not most of the trees, were either violating the NESC minimum vertical clearance of 8.7 feet, or would be doing so in the fairly near future. [TE Ex. 1 (Kozy Dir.), pp. 7-

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<sup>12</sup> Indeed, Mr. Jeffers admitted that "it is a reasonable goal of Toledo Edison to want to take steps to prevent the trees from contacting the lines" because "having the trees contact the lines would be a bad thing." [Tr., 50:4-11 (Jeffers Cross).]

8.] As a result of these NESC minimum clearance violations, Mr. Kozy testified that he believed to a reasonable degree of engineering certainty that the vegetation removed by Toledo Edison would have interfered with the Midway-Tontogany line, through direct contact, arcing or both. [*Id.*, p. 8; Tr., 116:17-21 (Kozy Cross).]

Complainants offer no contrary evidence. Tellingly, Complainants' witnesses Parsons and Brewster admitted that they had no knowledge of any clearance standards, whether those contained in the Plan and Specifications or in the NESC. [Tr., 68:6-10, 19-22 (Brewster Cross); 98:21-99:10, 102:6-10 (Parsons Cross).] Adherence to the NESC thus required Toledo Edison to remove the offending trees.

The Ohio Supreme Court recently addressed this same issue. In *Wimmer v. Pub. Util Comm.* (2012), 131 Ohio St. 3d 283, ¶1, the court held that an electric utility properly removed incompatible vegetation to comply with NESC clearance standards. Therein, the Court affirmed a Commission order permitting the removal of incompatible vegetation within a utility's transmission right of way because the trees were invading, or threatened to invade, the minimum NESC clearance zone. *Id.* at ¶9. The utility's expert witness had testified that the trees targeted for removal had the disposition to grow "to potentially interfere" with the utility's transmission line and therefore removal was necessary. *Id.* The Ohio Supreme Court held that the Commission properly ordered the removal of the incompatible trees. *Id.* at ¶¶9-11.

So too in this case, the Complainants' trees were violating the minimum NESC clearance zone. Complainants' own witnesses, in addition to Toledo Edison's witnesses, testified that the removed trees had the disposition to grow into the 69 kV transmission line that traversed the Complainants' property. [Tr., 76:1-4 (Brewster Cross); 110:4-7 (Parsons Cross); TE Ex. 2

(Hahn Dir.), pp. 5-6.] The removal of the Complainants' trees was thus consistent with the Ohio Supreme Court's decision in *Wimmer*.

**E. Complainants Wrongly Argue that Toledo Edison Should Have Pruned Instead of Removed the Trees.**

Complainants do not dispute the validity of the easement, the location of the trees within the easement, the applicable clearance standards or that the trees might have grown into the transmission lines. Rather, their only argument appears to be that Toledo Edison should have pruned the incompatible trees instead of removing them. [*E.g.*, Complainants' Ex. P (Parsons Dir.), p. 5.] Pursuant to the Specifications, however, removal, and not pruning, is the preferred option when dealing with incompatible vegetation. [TE Ex. 3 (Bloss Dir.), p. 5; Specifications, TE Ex. KB-2, p. 17.] The only way for Toledo Edison to be certain that there is no future interference within the transmission lines is to remove vegetation that will grow close enough to touch or otherwise interfere with them. [TE Ex. 3 (Bloss Dir.), p. 7.]

It is undisputed that, for pruning to be a successful vegetation management strategy, the growth rates of the vegetation at issue must be accurately predicted. [*Id.*] But, as is also undisputed, growth rates are, at bottom, guesses because each tree's growth rate may be different, even for two trees in the same environment. [TE Ex. 2 (Hahn Dir.), p. 5.] When dealing with transmission line reliability, however, guesswork – educated or not – has no place. The implications of vegetation interference with a transmission line are severe and removal provides by far the best means to permanently prevent such interference. [TE Ex. 1 (Kozy Dir.), p. 8.] As such, the NESC mandates that certain minimum clearance standards be maintained for transmission lines. Removal consequently ensures that incompatible vegetation will never compromise these standards. [TE Ex. 3 (Bloss Dir.), pp. 6-7.]

The only evidence submitted by the Jeffers to support the argument that Toledo Edison should have pruned the trees is the testimony of Mr. Parsons. [Jeffers Ex. P (Parsons Dir.), p. 5.] Aside from Mr. Parsons' obvious bias,<sup>13</sup> he is hardly qualified to provide any opinion regarding safe operations around transmission lines. As Mr. Parsons admitted during cross-examination:

- He has never been recognized as an expert by any court or administrative agency. [Tr., 93:14-16 (Parsons Cross).]
- He has had no formal education since high school. [*Id.*, 93:17-19.]
- He has taken no courses in agriculture. [*Id.*, 93:22-24.]
- He has taken no courses in forestry. [*Id.*, 94:1-2.]
- He has taken no courses in utility operations. [*Id.*, 94:4-6.]
- He has no certifications in any of the aforementioned fields.<sup>14</sup> [*Id.*, 94:7-9.]
- As general manager of Tri-County Rural Electric Cooperative ("Tri-County"), he spent approximately 60% of his time in the office. [*Id.*, 94:10-21.]
- Tri-County only operates low-voltage distribution lines and thus Mr. Parsons has no experience working with transmission lines such as the Midway-Tontogany 69 kV line at issue in this case. [*Id.*, 94:24-95:5.]
- He has no knowledge of the NESC or of any industry standards related to tree-transmission line clearances. [*Id.*, 112:6-10.]

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<sup>13</sup> Mr. Parsons admitted that, as a result of his membership and employment with Tri-County Rural Corporation, he: (1) viewed Toledo Edison as an "adversary" [Tr., 91:2-4]; (2) did not have a "high opinion" of Toledo Edison [*Id.*, 92:3-7]; (3) believed that Toledo Edison was "more concerned about profits" and was "too large to care about its customers" [*Id.*, 92:8-13]; and (4) not only was not being compensated to testify but he would refuse compensation if offered [*Id.*, 92:14-20]. His bias unquestionably colored his testimony, even about purely factual issues. For example, in his direct testimony, Mr. Parsons stated that the trees at issue were "*several feet*" east of the line. [Complainants' Ex. P (Parsons Dir.), p. 5 (emphasis added).] On cross-examination, however, he admitted that the trunks of the trees were *two to three feet east of the line* and that the trees were otherwise *under the line*. [Tr., 103:25-104:8 (Parsons Cross).] Similarly, he claimed on direct that the trees at issue were *15 to 18 feet* in height. [Complainants' Ex. P (Parsons Dir.), p. 4.] On cross-examination, he admitted that the trees were seven to twelve feet from the line and, if the line was 35 to 41 feet above ground, the trees would have had to be *23 to 35 feet* tall. [Tr., 103:17-23 (Parsons Cross).]

<sup>14</sup> By comparison, Toledo Edison witnesses Hahn and Bloss both are certified arborists; Mr. Hahn is also a certified utility specialist and Ms. Bloss has a degree in forest biology. [TE Ex. 2 (Hahn Dir.), p. 2; TE Ex. 3 (Bloss Dir.), p. 1.]

- He did not know how much a 69 kV line might sag or what clearances were necessary to prevent arcing when such a line swayed. [Tr., 108:23-109:1.]
- In its distribution-line vegetation management practices, Tri-County required a 7-foot tree-line clearance zone, but Mr. Parsons admitted that this was purely a matter of convention and not based on any recognized industry standard. [*Id.*, 97:5-16.]
- He had not reviewed Toledo Edison's TVM Plan and Specifications, had no knowledge of the vegetation management procedures and clearances contained therein, and did not know whether Toledo Edison had complied with these procedures and clearances. [*Id.*, 98:20-99:10.]

Given Mr. Parsons' utter lack of qualifications in the field of transmission vegetation management, his direct testimony that the Jeffers' trees could have been pruned instead of removed simply carries no weight.

Complainants also wrongly argue that they could have been permitted to self-prune the removed trees. Toledo Edison does not permit individual property owners to self-prune because Toledo Edison would have had no control over how frequently that vegetation would have been maintained, the techniques used to maintain it, or any assurance of adequate clearances. [TE. Ex. 3 (Bloss Dir.), pp. 8-9.] Such a practice would still require Toledo Edison to police such activities to prevent outages and ensure the safe and reliable operation of its transmission lines. Keeping track of every individual homeowner who elects to self-prune would clearly overstretch Toledo Edison's vegetation management resources and prove unworkable. [TE Ex. 2 (Hahn Dir.), p. 11; TE Ex. 3 (Bloss Dir.), p. 9.]<sup>15</sup> Pruning the trees thus was not an option under the Toledo Edison's TVM Program.

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<sup>15</sup> Notably, Complainants' witness Parsons admitted that his former employer, Tri-County Rural Cooperative, always took responsibility to trim or remove trees. [Tr., 95:15-96:13 (Parsons Cross).]

#### IV. CONCLUSION

For the foregoing reasons, Toledo Edison respectfully requests that the Commission deny the Jeffers' Complaint.

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Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was delivered to the following persons by  
e-mail this 5th day of November, 2012:

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