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July 30, 2020

Ms. Tanowa M. Troupe
Public Utilities Commission of Ohio
Docketing Division
180 East Broad Street, 11th Floor
Columbus, OH 43215-3716

Re: Case No. 20-944-EL-ESS
Revised Attachment A to the Application of Duke Energy Ohio, Inc. to Amend the Vegetation Management Portion of its Transmission and Distribution Inspection, Maintenance, Repair and Replacement Programs

Dear Ms. Troupe:

In accordance with the Finding & Order filed on July 29, 2020, in the above-referenced case, Duke Energy Ohio, Inc. is filing herewith its Revised Attachment A to its Application filed on May 15, 2020. Attached are two copies of the Revised Attachment A:

- a Redline Copy depicting tracked changes made pursuant to the July 29 Finding and Order; and
- a Clean Copy depicting the final Revised Attachment A.

Please contact me if you have any questions.

Sincerely,

Emily A. Olive, CP
Paralegal

REVISED ATTACHMENT A - REDLINE

Vegetation Management Program – Duke Energy Ohio, Inc.

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Distribution Vegetation Management Program – Duke Energy Ohio, Inc.

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SECTION 1- GOAL, OBJECTIVES, AND PURPOSE

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

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

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

SECTION 2 – DEFINITIONS

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

ANSI Z133 - American National Standards Institute (ANSI) Z133 for Arboricultural Operations provides the generally accepted industry safety standards for the care and management of trees, shrubs, and other woody plants.

ASSET PROTECTION - Duke Energy department that enforces transmission right of way legal rights.

BRUSH - A perennial woody stem less than six inches DBH (diameter at breast height).

CIRCUIT MILES - (for reference and reporting purposes) The distance, in miles, of primary voltage electric lines from the substation to the end of the circuit including single phase, two phase or three phase configurations. The distance is measured to the nearest 1/10th of a mile.

COMPATIBLE VEGETATION – Vegetation within the distribution right of way that does not present a grow-in or fall-in threat that has a typical mature height of less than 15 feet and whose trunk is typically no closer than 20 feet from the center of the right of way.

CONTRACTOR - Corporation to whom the vegetation management work is awarded.

DANGER TREE – A tree that if it were to fall or be cut would be tall enough to strike electrical lines and equipment of the distribution system.

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

INCOMPATIBLE VEGETATION – Vegetation within or outside the distribution right of way that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the distribution conductor, or that will limit or block access to distribution facilities during routine or emergency maintenance activity.

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

LEGAL- Duke Energy Legal Department.

MAINTAINED/LANDSCAPED AREAS - An area where cut brush typically cannot be left on-site. Maintained areas typically include maintained yards and landscaped areas.

NON-MAINTAINED/NON-LANDSCAPED AREAS - An area where cut brush can be left on-site. Non-Maintained areas are unimproved areas or natural areas.

OPEN WIRE SECONDARY (OWS): A distribution line configuration that uses 2, 3 or 4 un-insulated conductors stacked vertically with 12 inches spacing between conductors, used to deliver secondary voltages ranging from 120- 600 volts to the customer.

PRIMARY LINE: Electric conductor(s) energized at greater than 600 volts of electricity.

SECTION 2 – DEFINITIONS CONTINUED

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

SECONDARY LINE: Electric conductor(s) are energized at 600 volts or less of electricity.

SERVICE – TRIPLEX – MULTIPLEX CABLE: Electric conductor(s) energized at 600 volts or less of electricity and terminate at a service delivery point. A bundle of three or four conductors, most commonly used to provide aerial service to homes and businesses, denoted by its 3 or 4 polyethylene coated conductors wrapped around a bare, aluminum conductor.

SINGLE PHASE PRIMARY: A type of electric power line construction that contains one (1) conductor energized at primary voltage.

THREE PHASE PRIMARY: A type of electric power line construction that contains three (3) conductors energized at primary voltage.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height)

TWO PHASE OR OPEN WYE: A type of electric power line construction that contains two (2) conductors energized at primary voltage.

UNIT MILE: A mile within a circuit that is required to be or has been trimmed per contract specifications.

SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

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

The governing entities include but are not limited to:

- Public Utilities Commission of Ohio (PUCO or Commission)
- Ohio Department of Transportation
- Ohio Agriculture Pesticide Department
- Occupational Health and Safety Administration (OSHA)
- American National Standards Institute (ANSI)
- Easement and/or Permit Documents

SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

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

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

- Existing property easement, prescriptive easements, public road rights of way and / or agreements
- State statutes
- Municipal codes
- Commission rules, regulations, orders, and approved tariffs.

SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Ohio Vegetation Management Program Requirements, OSHA regulations, National Electrical Safety Code (NESC) and all federal, state, county, and municipal laws, statutes, ordinances and regulations applicable to said work.

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

NESC

ANSI A300 Standard - American National Standards Institute A300 for Tree Care Operations
For utility line clearance work, the primary foci are Parts 1, 7 and 9.

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

OSHA Standard 29 Code of Federal Regulations (CFR) 1910.269 - OSHA Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

Pruning Trees Near Electrical Utility Lines – A Field Pocket Guide for Qualified Line-Clearance Tree Workers by Dr. Alex L. Shigo

SECTION 6 –DISTRIBUTION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Duke Energy Ohio will review and clear vegetation as needed from its distribution lines at least once every five years (pursuant to Paragraph 234 of the Commission's December 19, 2018 Order in Case No. 17-32-EL-AIR) which may include cutting down and removing vegetation. The primary objective of the Duke Energy Ohio Vegetation Management Program is to control the growth of incompatible vegetation and remove hazard trees along its electric lines to help provide safe and reliable service to our customers by limiting or eliminating the possibility of contact by vegetation which has grown towards or could fall into the overhead distribution lines. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and by initiating various vegetation control practices to reduce, manage or eliminate incompatible growth.

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

Distribution Line Clearances

Trees located along the right-of-way edge will, in most cases, encroach upon the electrical conductors through the side growth of their limbs. The maintenance of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of "pruning" such limbs to minimize any damages to the tree. Incompatible brush within the distribution right-of-way corridors is eliminated if possible. When such vegetation is eliminated, it will normally be cut down either by manual or mechanical means.

- Primary distribution lines are typically cleared during routine pruning to obtain no less than ten feet of side clearance. Unsuitable branches which are dead, dying, diseased or structurally unsound and above distribution facilities are removed during pruning.
- Secondary, including open wire secondary distribution conductors (without a primary distribution line and excluding a service drop), are trimmed on an as needed basis.
- Multiplex cables and guy wires (without a primary distribution line and excluding a service drop), are trimmed on an as needed basis. Removal of load bearing limbs that are in contact with conductors and have a size and weight that causes tension on the conductor or interference with the normal sag or alignment of the conductor will be pruned for a minimum of 12 inches of clearance.
- Duke Energy Ohio shall have no responsibility to clear vegetation from a service drop.

Hazard Tree Mitigation

Trees found within or adjacent to the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment are targeted to be taken down. Stumps from trees (live) taken down shall be treated with herbicides where appropriate and possible.

SECTION 7 – INSPECTION AND MONITORING

Duke Energy Ohio can and may perform inspections on distribution circuits to observe vegetation conditions on the distribution system. These inspections should provide for the capabilities to specifically identify potentially incompatible vegetation conditions. The intent of these inspections is to identify off-cycle vegetation threats along the distribution line corridors and take appropriate action.

Transmission Vegetation Management Program – Duke Energy Ohio, Inc.

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SECTION 1 – GOALS, OBJECTIVES AND PURPOSE

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

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

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

SECTION 2 – DEFINITIONS

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

ANSI Z133 - American National Standards Institute (ANSI) Z133 for Arboricultural Operations, provides the generally accepted industry safety standards for the care and management of trees, shrubs, and other woody plants.

ASSET PROTECTION - Duke Energy department that enforces transmission right of way legal rights.

BRUSH - A perennial woody stem less than six inches DBH (diameter at breast height).

COMPATIBLE VEGETATION – Vegetation within the Transmission Right of Way that: (1) does not present a threat; (2) ~~with a typical maximum mature height less than 15 feet and~~ is typically no closer, horizontally on the ground, than 25 feet from any Duke Energy ~~facilities~~ ground mounted structures (towers, poles, guy wires, guy anchors, etc.); and (3) and does not interfere with safe and reliable operation, or emergency restoration. Generally, vegetation with a typical maximum mature height of 15 feet or less shall be considered compatible vegetation, as long as it does not present a grow-in or fall -in threat. Additionally, ornamental and landscaped vegetation that matures taller than 15 feet may be considered compatible vegetation if it does not present a grow-in threat or a fall-in threat.

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

CONDUCTOR BLOWOUT – Conductors horizontal position/location at National Electrical Safety Code (NESC) designed wind and temperature.

CONDUCTOR SAG – Conductors vertical position/location at designed maximum operating conditions.

DANGER TREE – A tree that if it were to fall or be cut would be tall enough to strike electrical lines and equipment of the transmission or distribution system.

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

INCOMPATIBLE VEGETATION – Vegetation within or outside the Transmission Right of Way that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the transmission conductor, or that will limit or block access, or the safe and reliable operation, emergency restoration, or maintenance activity, which is typically horizontally on the ground within 25 feet of any Duke Energy ground mounted structures ~~facilities~~ (towers, poles, guy wires, guy anchors, etc.).

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

LEGAL- Duke Energy Legal Department.

MAINTAINED/LANDSCAPED AREAS - An area where cut brush typically cannot be left on-site. Maintained areas typically include maintained yards and landscaped areas.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC) CIRCUITS – Transmission lines typically operated at more than 200 kV. Some transmission lines operated at voltages lower than 200 kV may be designated as NERC circuits if deemed critical.

SECTION 2 – DEFINITIONS CONTINUED

NON-NERC CIRCUITS – Transmission lines that typically operate at less than 200 kV.

NON-MAINTAINED/NON-LANDSCAPED AREAS - An area where cut brush can be left on-site. Non-Maintained areas are unimproved areas or natural areas.

RECLAMATION – The establishment or reestablishment of Integrated Vegetation Management (IVM) objectives in areas not actively maintained.

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

TRANSMISSION LINE– A set of electrical conductors that carry 69 kV or more of electricity.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height)

SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

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

The governing entities include but are not limited to:

- Commission
- Ohio Department of Transportation
- Ohio Agriculture Pesticide Department
- Occupational Health and Safety Administration (OSHA)
- American National Standards Institute (ANSI)
- Easement and/or Permit Documents

SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

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

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

- Existing property easement, prescriptive easements, public road rights of way and / or agreements
- State statutes
- Municipal codes
- Commission rules, regulations, orders, and approved tariffs.

SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Ohio Vegetation Management Program Requirements, OSHA regulations, NESC and all federal, state, county, and municipal laws, statutes, ordinances and regulations applicable to said work.

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

National Electrical Safety Code (NESC)

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

- For utility line clearance work, the primary foci are Parts 1, 7 and 9.

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

OSHA Standard 29 Code of Federal Regulations (CFR) 1910.269 -OSHA Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

Pruning Trees Near Electrical Utility Lines – A Field Pocket Guide for Qualified Line-Clearance Tree Workers by Dr. Alex L. Shigo

SECTION 6 – TRANSIMISSION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Duke Energy's program is designed on an Integrated Vegetation Management (IVM) strategy that targets removals of incompatible vegetation to minimize potential outages to the Transmission system and ensure necessary access within all transmission line corridors. The reason for IVM is to create, promote, and conserve sustainable plant communities that are compatible with the intended use of the site, and manage incompatible plants that may conflict with the intended use of the site. This approach is recognized as an industry best management practice and is in alignment with ANSI A300 Part 7 standard.

As part of an IVM strategy, Duke Energy utilizes a threat and condition based approach to planned work. This approach of identifying threats as triggers to determine incompatible vegetation within and outside the Transmission Right of Way is inclusive of the Wire Zone, Border Zone and Peripheral Zone concepts as defined in ANSI A300. With regard to maintained or landscaped areas Duke Energy utilizes a process to define compatible and incompatible vegetation to balance the needs of public and worker safety as well as the reliable operation of the Transmission system. A time-based herbicide program will be used to further manage the ROW of incompatible vegetation and support IVM.

THREAT/CONDITION-BASED TRIGGERS

For planned work, Duke Energy Transmission Vegetation Management threat trigger distances are used to identify vegetation threats that do not allow for safe operation of the transmission facilities, under all operating conditions (designed blowout and designed maximum operating sag). These threat triggers are radial distances based on engineering design criteria for the conductor sag and blowout operating locations and are voltage dependent.

These threat trigger distances provide for approximately 6 years of typical vegetation re-growth and supports minimum safe worker distances. Once vegetation has been identified as a threat, the vegetation will be evaluated to determine a mitigation strategy through the work planning process.

THREAT/CONDITION-BASED ACTION

During the work planning and marking process, many factors and criteria must be considered when developing the mitigation strategy for incompatible vegetation. A trained utility vegetation management professional will evaluate the vegetation based on arboricultural, regulatory/safety standards, legal ROW rights and criteria such as size, age, location, growth rate, maintained/landscaped vs. non-maintained/non-landscaped, etc. For maintained/landscaped areas, vegetation that typically matures to a maximum height of 15 feet or less, will generally be considered compatible vegetation, as long as it does not

present a grow-in or fall-in threat. Additionally, ornamental and landscaped vegetation with a typical mature maximum height exceeding 15 feet will be considered compatible if it does not present a grow-in or fall-in threat. Property owner concerns with the proposed mitigation strategy shall be communicated to Duke Energy and alternative mitigation strategies will be

considered. One mitigation strategy includes herbicide application, of which, property owners may request a non-herbicide method mutually agreed upon with Duke Energy if available.

MITIGATION FOR INCOMPATIBLE VEGETATION THREATS

NERC Circuits

1. All identified incompatible vegetation will be evaluated and removed in all areas.

Non-NERC Circuits

1. Maintained/Landscaped Areas: Incompatible vegetation within these areas will be evaluated to determine if the threat can be ~~managed~~ mitigated through proper arboricultural pruning guideline of less than 33% of the vegetation canopy to obtain necessary clearance. If the threat can be mitigated and necessary clearance obtained through pruning less than 33% of the vegetation canopy, such incompatible vegetation will be pruned accordingly and allowed to remain until reevaluation on the next cycle. If ~~management is not viable,~~ the threat cannot be safely mitigated by pruning less than 33% of the vegetation canopy, ~~removal of~~ the incompatible vegetation ~~is required.~~ will be taken down.

    a. For maintained/landscaped areas, the property owner will be provided a notification of planned herbicide work and may choose to opt out of the herbicide application by contacting Duke Energy Ohio via designated contact set forth in the information provided at the time of notification.

2. Non-Maintained/Non-Landscaped Areas: All identified incompatible vegetation will be evaluated and removed.

During the site evaluation, additional vegetation removal may be required within the transmission line corridor if it presents an accessibility issue.

SPECIAL/SPECIFIC SITUATIONS

Potential Outage Risk: When a Transmission outage risk is identified, Duke Energy Ohio will attempt to notify the affected property owner. However, Duke Energy Ohio may need to take immediate action, such as remove the vegetation, to protect the reliability and security of the Transmission system.

Roadside: For situations such as roadside, overhead Transmission lines built within public road right of way with limited Duke Energy Transmission Right of Way rights, a Wire Zone / Border Zone approach will be utilized with property owners to manage vegetation threats within and outside of the public road right of way.

Off ROW Danger Tree: Duke Energy will focus on removing danger tree threats for reliability and storm hardening purposes on narrow corridors or rural areas where rights outside of the easement allow.

Storm: During storm events, debris in maintained or landscaped areas associated with emergency operations restoration efforts will be left on site and is the responsibility of the property owner.

Compliance/Federal/State: Targeted removal criteria will vary based on regulatory requirements as defined by applicable regulations (i.e. North American Electric Reliability Corporation (NERC) Reliability Standard: FAC-003 Transmission Vegetation Management) which are subject to change over time. Incompatible vegetation identified on NERC lines will be targeted for removal.

Non-NERC Reclamation Program: Over a 12-year period from 2020 to 2032, Duke Energy Ohio will perform planned work within and along these corridors. Initial phase of the program will be focused on removing ~~non-manageable~~incompatible vegetation that (1) poses a grow-in ~~and~~ or blowing together threats and (2) which cannot be safely mitigated by pruning less than 33% of the vegetation canopy within and along the corridor for landscaped/maintained areas. Second phase will be focused on removing healthy incompatible vegetation that poses a fall-in threat~~s~~ within and along the corridor for landscaped and maintained areas, and cannot be safely mitigated by pruning less than 33% of the vegetation canopy.

SECTION 7 – INSPECTION AND MONITORING

Duke Energy Ohio can and may perform inspections on each transmission circuit (69kv and above) to observe vegetation conditions on the transmission system. These inspections should provide for the capabilities to specifically identify potentially incompatible vegetation conditions. The intent of these inspections is to identify off-cycle vegetation threats along the transmission line corridors and take appropriate action.

TREE PRUNING - Trees found within or adjacent to the right-of-way edge will, in most cases, encroach upon the electrical conductors through the growth of their limbs. The management of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of "pruning" such limbs to minimize any damages to the tree (i.e., removal of less than 33% of a tree's canopy). These methods are in alignment with industry standards which refer to natural pruning, drop crotch and lateral pruning techniques. Stubbing and tearing of bark shall be avoided. When utilizing boom mounted cutting devices or helicopters to perform the pruning activities in rural locations, proper pruning methods are not typically a viable option.

HAZARD TREE MITIGATION - Trees found within or adjacent to the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment are targeted to be taken down. Stumps from downed (live) trees shall be treated with herbicides where appropriate and possible.

INCOMPATIBLE VEGETATION MITIGATION (i.e. trees)- ~~Trees which are in close proximity to electrical facilities can require extensive pruning (greater than 33% of the canopy) to prevent them from causing reliability or safety risk.~~ Incompatible vegetation will be evaluated to determine if the threat can be mitigated through proper arboricultural pruning guidelines of less than 33% of the vegetation canopy to obtain necessary clearance. If the threat can be mitigated and necessary clearance obtained through pruning less than 33% of the vegetation canopy, such incompatible vegetation will be pruned accordingly and allowed to remain until re-evaluation. If the threat cannot be safely mitigated by pruning less than 33% of the vegetation canopy, the incompatible vegetation ~~These trees within the right-of-way~~ will be targeted to be taken down and Duke Energy Ohio will attempt to notify the affected property owner.

BRUSH MANAGEMENT - Because of a variety of terrain, differences in soil, land use, and vegetation types, Duke Energy uses IVM practices which include environmentally acceptable herbicides to control brush within the right-of-way. All herbicides used in brush management operations shall be registered with the EPA and the applicable regulating state authority. In situations where brush height is of significant size and therefore not conducive to herbicide applications, the right of way may be mechanically mowed. In landscaped/maintained areas, brush will typically be hand cut and the remaining stumps treated. Also, in non-NERC landscaped/maintained areas, the property owner will be provided a notification of planned herbicide work and may choose to opt out of the herbicide application by contacting Duke Energy Ohio via designated contact set forth in the information provided at the time of notification.

SECTION 9 – CONTRACTOR RESPONSIBILITIES

STANDARDS TO FOLLOW - Contractor shall perform all work in conformance with Duke Energy Ohio Vegetation Management Program requirements (Contract Terms and Conditions).

REVISED ATTACHMENT A - CLEAN

Vegetation Management Program – Duke Energy Ohio, Inc.

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

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

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ASSET PROTECTION - Duke Energy department that enforces transmission right of way legal rights.

BRUSH - A perennial woody stem less than six inches DBH (diameter at breast height).

CIRCUIT MILES - (for reference and reporting purposes) The distance, in miles, of primary voltage electric lines from the substation to the end of the circuit including single phase, two phase or three phase configurations. The distance is measured to the nearest 1/10th of a mile.

COMPATIBLE VEGETATION – Vegetation within the distribution right of way that does not present a grow-in or fall-in threat that has a typical mature height of less than 15 feet and whose trunk is typically no closer than 20 feet from the center of the right of way.

CONTRACTOR - Corporation to whom the vegetation management work is awarded.

DANGER TREE – A tree that if it were to fall or be cut would be tall enough to strike electrical lines and equipment of the distribution system.

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

INCOMPATIBLE VEGETATION – Vegetation within or outside the distribution right of way that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the distribution conductor, or that will limit or block access to distribution facilities during routine or emergency maintenance activity.

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

LEGAL- Duke Energy Legal Department.

MAINTAINED/LANDSCAPED AREAS - An area where cut brush typically cannot be left on-site. Maintained areas typically include maintained yards and landscaped areas.

NON-MAINTAINED/NON-LANDSCAPED AREAS - An area where cut brush can be left on-site. Non-Maintained areas are unimproved areas or natural areas.

OPEN WIRE SECONDARY (OWS): A distribution line configuration that uses 2, 3 or 4 un-insulated conductors stacked vertically with 12 inches spacing between conductors, used to deliver secondary voltages ranging from 120- 600 volts to the customer.

PRIMARY LINE: Electric conductor(s) energized at greater than 600 volts of electricity.

SECTION 2 – DEFINITIONS CONTINUED

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

SECONDARY LINE: Electric conductor(s) are energized at 600 volts or less of electricity.

SERVICE – TRIPLEX – MULTIPLEX CABLE: Electric conductor(s) energized at 600 volts or less of electricity and terminate at a service delivery point. A bundle of three or four conductors, most commonly used to provide aerial service to homes and businesses, denoted by its 3 or 4 polyethylene coated conductors wrapped around a bare, aluminum conductor.

SINGLE PHASE PRIMARY: A type of electric power line construction that contains one (1) conductor energized at primary voltage.

THREE PHASE PRIMARY: A type of electric power line construction that contains three (3) conductors energized at primary voltage.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height)

TWO PHASE OR OPEN WYE: A type of electric power line construction that contains two (2) conductors energized at primary voltage.

UNIT MILE: A mile within a circuit that is required to be or has been trimmed per contract specifications.

SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

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

The governing entities include but are not limited to:

- Public Utilities Commission of Ohio (PUCO or Commission)
- Ohio Department of Transportation
- Ohio Agriculture Pesticide Department
- Occupational Health and Safety Administration (OSHA)
- American National Standards Institute (ANSI)
- Easement and/or Permit Documents

SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

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

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

- Existing property easement, prescriptive easements, public road rights of way and / or agreements
- State statutes
- Municipal codes
- Commission rules, regulations, orders, and approved tariffs.

SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Ohio Vegetation Management Program Requirements, OSHA regulations, National Electrical Safety Code (NESC) and all federal, state, county, and municipal laws, statutes, ordinances and regulations applicable to said work.

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

NESC

ANSI A300 Standard - American National Standards Institute A300 for Tree Care Operations
For utility line clearance work, the primary foci are Parts 1, 7 and 9.

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

OSHA Standard 29 Code of Federal Regulations (CFR) 1910.269 - OSHA Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

Pruning Trees Near Electrical Utility Lines – A Field Pocket Guide for Qualified Line-Clearance Tree Workers by Dr. Alex L. Shigo

SECTION 6 –DISTRIBUTION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Duke Energy Ohio will review and clear vegetation as needed from its distribution lines at least once every five years (pursuant to Paragraph 234 of the Commission's December 19, 2018 Order in Case No. 17-32-EL-AIR) which may include cutting down and removing vegetation. The primary objective of the Duke Energy Ohio Vegetation Management Program is to control the growth of incompatible vegetation and remove hazard trees along its electric lines to help provide safe and reliable service to our customers by limiting or eliminating the possibility of contact by vegetation which has grown towards or could fall into the overhead distribution lines. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and by initiating various vegetation control practices to reduce, manage or eliminate incompatible growth.

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

Distribution Line Clearances

Trees located along the right-of-way edge will, in most cases, encroach upon the electrical conductors through the side growth of their limbs. The maintenance of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of "pruning" such limbs to minimize any damages to the tree. Incompatible brush within the distribution right-of-way corridors is eliminated if possible. When such vegetation is eliminated, it will normally be cut down either by manual or mechanical means.

- Primary distribution lines are typically cleared during routine pruning to obtain no less than ten feet of side clearance. Unsuitable branches which are dead, dying, diseased or structurally unsound and above distribution facilities are removed during pruning.
- Secondary, including open wire secondary distribution conductors (without a primary distribution line and excluding a service drop), are trimmed on an as needed basis.
- Multiplex cables and guy wires (without a primary distribution line and excluding a service drop), are trimmed on an as needed basis. Removal of load bearing limbs that are in contact with conductors and have a size and weight that causes tension on the conductor or interference with the normal sag or alignment of the conductor will be pruned for a minimum of 12 inches of clearance.
- Duke Energy Ohio shall have no responsibility to clear vegetation from a service drop.

Hazard Tree Mitigation

Trees found within or adjacent to the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment are targeted to be taken down. Stumps from trees (live) taken down shall be treated with herbicides where appropriate and possible.

SECTION 7 – INSPECTION AND MONITORING

Duke Energy Ohio can and may perform inspections on distribution circuits to observe vegetation conditions on the distribution system. These inspections should provide for the capabilities to specifically identify potentially incompatible vegetation conditions. The intent of these inspections is to identify off-cycle vegetation threats along the distribution line corridors and take appropriate action.

Transmission Vegetation Management Program – Duke Energy Ohio, Inc.

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SECTION 1 – GOALS, OBJECTIVES AND PURPOSE

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

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

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

SECTION 2 – DEFINITIONS

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

ANSI Z133 - American National Standards Institute (ANSI) Z133 for Arboricultural Operations, provides the generally accepted industry safety standards for the care and management of trees, shrubs, and other woody plants.

ASSET PROTECTION - Duke Energy department that enforces transmission right of way legal rights.

BRUSH - A perennial woody stem less than six inches DBH (diameter at breast height).

COMPATIBLE VEGETATION – Vegetation within the Transmission Right of Way that: (1) does not present a threat; (2) is typically no closer, horizontally on the ground, than 25 feet from any Duke Energy ground mounted structures (towers, poles, guy wires, guy anchors, etc.); and (3) and does not interfere with safe and reliable operation, or emergency restoration. Generally, vegetation with a typical maximum mature height of 15 feet or less shall be considered compatible vegetation, as long as it does not present a grow-in or fall -in threat. Additionally, ornamental and landscaped vegetation that matures taller than 15 feet may be considered compatible vegetation if it does not present a grow-in threat or a fall-in threat.

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

CONDUCTOR BLOWOUT – Conductors horizontal position/location at National Electrical Safety Code (NESC) designed wind and temperature.

CONDUCTOR SAG – Conductors vertical position/location at designed maximum operating conditions.

DANGER TREE – A tree that if it were to fall or be cut would be tall enough to strike electrical lines and equipment of the transmission or distribution system.

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

INCOMPATIBLE VEGETATION – Vegetation within or outside the Transmission Right of Way that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the transmission conductor, or that will limit or block access, or the safe and reliable operation, emergency restoration, or maintenance activity, which is typically horizontally on the ground within 25 feet of any Duke Energy ground mounted structures (towers, poles, guy wires, guy anchors, etc.).

INTEGRATED VEGETATION MANAGEMENT - Vegetation plan that combines various components

including pruning, mowing and herbicide applications to manage the growth of vegetation on the electric utility rights-of-way.

LEGAL- Duke Energy Legal Department.

MAINTAINED/LANDSCAPED AREAS - An area where cut brush typically cannot be left on-site. Maintained areas typically include maintained yards and landscaped areas.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC) CIRCUITS – Transmission lines typically operated at more than 200 kV. Some transmission lines operated at voltages lower than 200 kV may be designated as NERC circuits if deemed critical.

SECTION 2 – DEFINITIONS CONTINUED

NON-NERC CIRCUITS – Transmission lines that typically operate at less than 200 kV.

NON-MAINTAINED/NON-LANDSCAPED AREAS - An area where cut brush can be left on-site. Non-Maintained areas are unimproved areas or natural areas.

RECLAMATION – The establishment or reestablishment of Integrated Vegetation Management (IVM) objectives in areas not actively maintained.

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

TRANSMISSION LINE– A set of electrical conductors that carry 69 kV or more of electricity.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height)

SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

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

The governing entities include but are not limited to:

- Commission
- Ohio Department of Transportation
- Ohio Agriculture Pesticide Department
- Occupational Health and Safety Administration (OSHA)
- American National Standards Institute (ANSI)
- Easement and/or Permit Documents

SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

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

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

- Existing property easement, prescriptive easements, public road rights of way and / or agreements
- State statutes
- Municipal codes
- Commission rules, regulations, orders, and approved tariffs.

SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Ohio Vegetation Management Program Requirements, OSHA regulations, NESC and all federal, state, county, and municipal laws, statutes, ordinances and regulations applicable to said work.

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

National Electrical Safety Code (NESC)

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

- For utility line clearance work, the primary foci are Parts 1, 7 and 9.

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

OSHA Standard 29 Code of Federal Regulations (CFR) 1910.269 -OSHA Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

Pruning Trees Near Electrical Utility Lines – A Field Pocket Guide for Qualified Line-Clearance Tree Workers by Dr. Alex L. Shigo

SECTION 6 – TRANSIMISSION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Duke Energy's program is designed on an Integrated Vegetation Management (IVM) strategy that targets removals of incompatible vegetation to minimize potential outages to the Transmission system and ensure necessary access within all transmission line corridors. The reason for IVM is to create, promote, and conserve sustainable plant communities that are compatible with the intended use of the site, and manage incompatible plants that may conflict with the intended use of the site. This approach is recognized as an industry best management practice and is in alignment with ANSI A300 Part 7 standard.

As part of an IVM strategy, Duke Energy utilizes a threat and condition based approach to planned work. This approach of identifying threats as triggers to determine incompatible vegetation within and outside the Transmission Right of Way is inclusive of the Wire Zone, Border Zone and Peripheral Zone concepts as defined in ANSI A300. With regard to maintained or landscaped areas Duke Energy utilizes a process to define compatible and incompatible vegetation to balance the needs of public and worker safety as well as the reliable operation of the Transmission system. A time-based herbicide program will be used to further manage the ROW of incompatible vegetation and support IVM.

THREAT/CONDITION-BASED TRIGGERS

For planned work, Duke Energy Transmission Vegetation Management threat trigger distances are used to identify vegetation threats that do not allow for safe operation of the transmission facilities, under all operating conditions (designed blowout and designed maximum operating sag). These threat triggers are radial distances based on engineering design criteria for the conductor sag and blowout operating locations and are voltage dependent.

These threat trigger distances provide for approximately 6 years of typical vegetation re-growth and supports minimum safe worker distances. Once vegetation has been identified as a threat, the vegetation will be evaluated to determine a mitigation strategy through the work planning process.

THREAT/CONDITION-BASED ACTION

During the work planning and marking process, many factors and criteria must be considered when developing the mitigation strategy for incompatible vegetation. A trained utility vegetation management professional will evaluate the vegetation based on arboricultural, regulatory/safety standards, legal ROW rights and criteria such as size, age, location, growth rate, maintained/landscaped vs. non-maintained/non-landscaped, etc. For maintained/landscaped areas, vegetation that typically matures to a maximum height of 15 feet or less, will generally be considered compatible vegetation, as long as it does not

present a grow-in or fall-in threat. Additionally, ornamental and landscaped vegetation with a typical mature maximum height exceeding 15 feet will be considered compatible if it does not present a grow-in or fall-in threat. Property owner concerns with the proposed mitigation strategy shall be communicated to Duke Energy and alternative mitigation strategies will be

considered. One mitigation strategy includes herbicide application, of which, property owners may request a non-herbicide method mutually agreed upon with Duke Energy if available.

MITIGATION FOR INCOMPATIBLE VEGETATION THREATS

NERC Circuits

1. All identified incompatible vegetation will be evaluated and removed in all areas.

Non-NERC Circuits

1. Maintained/Landscaped Areas: Incompatible vegetation within these areas will be evaluated to determine if the threat can be mitigated through proper arboricultural pruning guideline of less than 33% of the vegetation canopy to obtain necessary clearance. If the threat can be mitigated and necessary clearance obtained through pruning less than 33% of the vegetation canopy, such incompatible vegetation will be pruned accordingly and allowed to remain until reevaluation on the next cycle. If the threat cannot be safely mitigated by pruning less than 33% of the vegetation canopy, the incompatible vegetation will be taken down.

    a. For maintained/landscaped areas, the property owner will be provided a notification of planned herbicide work and may choose to opt out of the herbicide application by contacting Duke Energy Ohio via designated contact set forth in the information provided at the time of notification.

2. Non-Maintained/Non-Landscaped Areas: All identified incompatible vegetation will be evaluated and removed.

During the site evaluation, additional vegetation removal may be required within the transmission line corridor if it presents an accessibility issue.

Potential Outage Risk: When a Transmission outage risk is identified, Duke Energy Ohio will attempt to notify the affected property owner. However, Duke Energy Ohio may need to take immediate action, such as remove the vegetation, to protect the reliability and security of the Transmission system.

Roadside: For situations such as roadside, overhead Transmission lines built within public road right of way with limited Duke Energy Transmission Right of Way rights, a Wire Zone / Border Zone approach will be utilized with property owners to manage vegetation threats within and outside of the public road right of way.

Off ROW Danger Tree: Duke Energy will focus on removing danger tree threats for reliability and storm hardening purposes on narrow corridors or rural areas where rights outside of the easement allow.

Storm: During storm events, debris in maintained or landscaped areas associated with emergency operations restoration efforts will be left on site and is the responsibility of the property owner.

Compliance/Federal/State: Targeted removal criteria will vary based on regulatory requirements as defined by applicable regulations (i.e. North American Electric Reliability Corporation (NERC) Reliability Standard: FAC-003 Transmission Vegetation Management) which are subject to change over time. Incompatible vegetation identified on NERC lines will be targeted for removal.

Non-NERC Reclamation Program: Over a 12-year period from 2020 to 2032, Duke Energy Ohio will perform planned work within and along these corridors. Initial phase of the program will be focused on removing incompatible vegetation that (1) poses a grow-in or blowing together threats and (2) which cannot be safely mitigated by pruning less than 33% of the vegetation canopy within and along the corridor for landscaped/maintained areas. Second phase will be focused on removing healthy incompatible vegetation that poses a fall-in threat within and along the corridor for landscaped and maintained areas, and cannot be safely mitigated by pruning less than 33% of the vegetation canopy.

SECTION 7 – INSPECTION AND MONITORING

Duke Energy Ohio can and may perform inspections on each transmission circuit (69kv and above) to observe vegetation conditions on the transmission system. These inspections should provide for the capabilities to specifically identify potentially incompatible vegetation conditions. The intent of these inspections is to identify off-cycle vegetation threats along the transmission line corridors and take appropriate action.

TREE PRUNING - Trees found within or adjacent to the right-of-way edge will, in most cases, encroach upon the electrical conductors through the growth of their limbs. The management of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of "pruning" such limbs to minimize any damages to the tree (i.e., removal of less than 33% of a tree's canopy). These methods are in alignment with industry standards which refer to natural pruning, drop crotch and lateral pruning techniques. Stubbing and tearing of bark shall be avoided. When utilizing boom mounted cutting devices or helicopters to perform the pruning activities in rural locations, proper pruning methods are not typically a viable option.

HAZARD TREE MITIGATION - Trees found within or adjacent to the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment are targeted to be taken down. Stumps from downed (live) trees shall be treated with herbicides where appropriate and possible.

INCOMPATIBLE VEGETATION MITIGATION (i.e. trees)- Incompatible vegetation will be evaluated to determine if the threat can be mitigated through proper arboricultural pruning guidelines of less than 33% of the vegetation canopy to obtain necessary clearance. If the threat can be mitigated and necessary clearance obtained through pruning less than 33% of the vegetation canopy, such incompatible vegetation will be pruned accordingly and allowed to remain until re-evaluation. If the threat cannot be safely mitigated by pruning less than 33% of the vegetation canopy, the incompatible vegetation will be targeted to be taken down and Duke Energy Ohio will attempt to notify the affected property owner.

BRUSH MANAGEMENT - Because of a variety of terrain, differences in soil, land use, and vegetation types, Duke Energy uses IVM practices which include environmentally acceptable herbicides to control brush within the right-of-way. All herbicides used in brush management operations shall be registered with the EPA and the applicable regulating state authority. In situations where brush height is of significant size and therefore not conducive to herbicide applications, the right of way may be mechanically mowed. In landscaped/maintained areas, brush will typically be hand cut and the remaining stumps treated. Also, in non-NERC landscaped/maintained areas, the property owner will be provided a notification of planned herbicide work and may choose to opt out of the herbicide application by contacting Duke Energy Ohio via designated contact set forth in the information provided at the time of notification.

SECTION 9 – CONTRACTOR RESPONSIBILITIES

STANDARDS TO FOLLOW - Contractor shall perform all work in conformance with Duke Energy Ohio Vegetation Management Program requirements (Contract Terms and Conditions).

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing was delivered by first class U.S. Mail or electronic mail, on this 30th day of July 2020, to the following parties.

/s/ Larisa M. Vaysman
Larisa M. Vaysman

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