STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

INVESTIGATION BY THE INDIANA UTILITY REGULATORY COMMISSION, UNDER IC §§ 8-1-2-58 AND 59, TO INVESTIGATE ELECTRIC UTILITY TREE-TRIMMING PRACTICES AND TARIFFS RELATING TO SERVICE QUALITY IN THE STATE OF INDIANA.	)	**CAUSE NO. 43663**
RESPONDENTS: ALL INDIANA JURISDICTIONAL ELECTRIC UTILITIES	)	

DUKE ENERGY INDIANA, LLC'S SUBMISSION OF 2024 VEGETATION MANAGEMENT REPORT AND VEGETATION MANAGEMENT PLAN

Respondent Duke Energy Indiana, LLC hereby submits its 2024 Vegetation Management Report and Vegetation Management Program in accordance with the November 30, 2010 Order in this Cause.

Respectfully submitted,

DUKE ENERGY INDIANA, LLC

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing submission was delivered electronically this 28th day of March 2025, to the following:

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Duke Energy Indiana

Annual Vegetation Management Report for Calendar Year 2024

Cause No. 43663

2024 Vegetation Management – Financial Report (Budget vs. Actual)

2024 Original Budget: $92,914,382. This amount is comprised of $57,217,171 for Distribution Vegetation Management and $35,697,211 for Transmission Vegetation Management.

2024 Actual Expenditures: $84,087,375. For 2024, Duke Energy Indiana spent $49,107,175 for Distribution Vegetation Management activities and $34,980,200 for Transmission Vegetation Management Activities.

The above reflects the expenditures associated with the vegetation management program to support approximately 16,000 distribution miles and approximately 6,000 transmission miles in the State of Indiana. The above dollars exclude expenses incurred on major event days as defined by the major event day methodology detailed in "IEEE Std. 1366, IEEE Guide for Electric Power Distribution Reliability Indices" or any other declared storms.

2024 Vegetation Management Reliability Report (Tree SAIFI):

Total Tree System Average Interruption Frequency Index ("Tree SAIFI"): 0.174

Total Indiana SAIFI from all causes for 2024 is 0.937. Tree SAIFI was approximately 18.5% of total Indiana SAIFI.

Tree SAIFI refers to the System Average Interruption Frequency Index for tree-related events only. Tree SAIFI is the average number of interruptions a customer would expect to have over a given period of time caused by trees in the State of Indiana.

The above indices exclude major event days as defined by the major event day methodology detailed in "*IEEE Std. 1366, IEEE Guide for Electric Power Distribution Reliability Indices.*"

NOTE: In addition, Duke Energy enterprise-wide experienced twenty-four catastrophic exclusion days using a 4.15 β methodology between 9/28/2024 and 10/21/2024 following Hurricanes Helene and Milton when Duke Energy Indiana provided significant mutual assistance. Excluding these days resulted in SAIFI of 0.89, and a Tree SAIFI of 0.169. The IEEE Standard also provides that utilities may adjust the IEEE method to develop a "catastrophic exclusion." While the IEEE Standard does not specify the beta to be used for the catastrophic exclusion, the IEEE working team has identified 4.15 as a threshold Beta for the calculation. This catastrophic exclusion was applied, and twenty-four days were identified using an adjusted 4.15 β (applied to Duke Energy enterprise-wide data) allowing for additional visibility into reliability impacts following hurricanes Helene and Milton.

2024 Vegetation Management Customer Complaints

For this annual report, Duke Energy Indiana has included the customer concerns that were not resolved in the field and were escalated to management for resolution. Duke Energy Indiana had ten customer complaints related to tree trimming/vegetation management. Seven of the customer complaints were informal complaints to the Indiana Utility Regulatory Commission's (the "Commission") Consumer Affairs Division ("CAD") and three were complaints escalated to Management. All ten in the current year are now closed.

Duke Energy Indiana uses advance customer notification as well as its call center to manage inquiries related to tree trimming and vegetation management. These inquires may be passed on to Duke Energy Indiana's Vegetation Management team to help further inform or educate customers regarding tree trimming questions and concerns. Through these processes, inquiries are often resolved proactively and in the field.

A brief description of the complaints and resolutions follows.

Complaints to CAD:

Complaint	Description	Resolution	Status
1	Customer complaint about not being notified of upcoming work as well as debris being left on customer's property.	Debris was removed from the property, and it was determined that the customer was notified of the upcoming work via door hanger and public notice.	Closed
2	Customer complaint regarding communication pertaining to trimming as well as trimming of trees.	Contractor replaced the customer's maple tree and planted it further away from the lines to minimize future conflict with Duke Energy Indiana facilities.	Closed
3	Customer complaint about the amount of trimming and requested trimming cease until a mutual decision could be reached.	VM Manager met with customer on location, a mutual agreement was reached, and VM Manager was on-site while the work was performed.	Closed
4	Customer complaint about debris being left in the right-of-way. Customer requested debris be cleaned up.	Duke Energy Indiana sent a crew to clean up debris, and customer was satisfied with the outcome.	Closed
5	Customer complaint regarding debris and trash after helicopter trimming was done in an unmaintained right-of-way.	Duke Energy Indiana sent a crew to clean up debris. Customer had already removed trash.	Closed
6	Customer concerned about removing trees on property for line upgrade work and requested trimming instead of removal.	Duke Energy Indiana has a utility easement on this property and all of the required removals are located within the easement.	Closed
7	Customer complaint about debris on property and communication with Duke Energy Indiana.	Duke Energy Indiana had an agreement with the customer to leave debris on site temporarily until a mowing crew could complete the cleanup. The debris was cleaned up, and the customer was satisfied with the outcome.	Closed

Complaints Escalated to Management:

Complaint	Description	Resolution	Status
1	Customer complaint about debris after routine trimming.	Crew returned to finish routine work at this location, all debris was cleaned up, and customer was satisfied with the outcome.	Closed
2	Customer complaint about debris and property damage to a fence.	Customer removed debris and Contractor fixed the fence. Customer was satisfied with the outcome.	Closed
3	Customer complaint about debris after hazard tree removal, stating the trunk pieces were too large for him to move.	Customer had signed a permission form agreeing for the wood to be left on site. Vendor actively worked with customer to make the wood more manageable; however, Duke Energy Indiana completed work within scope.	Closed

Vegetation Management Program – Duke Energy Indiana, LLC

CONTENTS

Distribution Vegetation Management Program – Duke Energy Indiana, LLC

CONTENTS

SECTION 1 – GOAL, OBJECTIVES, AND PURPOSE

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

The primary objective of the Duke Energy Indiana Vegetation Management Program is to control the growth of incompatible vegetation along its electric facilities to help provide reliable service to our customers. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and then initiating various vegetation control practices to reduce, manage, or eliminate incompatible growth. This integrated vegetation management program is essential in providing reliable electric service by ensuring that trees, brush, and vines near or within rights-of-way are periodically pruned or taken down to help reduce outages and risks near the company's 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 Indiana department that enforces transmission right-of-way legal rights.

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

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 - Third party to whom vegetation management work is contracted.

DANGER TREE - A traditional industry term for 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 traditional industry term for 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/or 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.

SECTION 2 – DEFINITIONS CONTINUED

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.

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 conductor energized at primary voltage.

THREE PHASE PRIMARY - A type of electric power line construction that contains three 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 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 Indiana Vegetation Management Program requirements and work specifications, Occupational Health and Safety Administration (OSHA) regulations, ANSI A300 and Z133 standards as amended, and all federal, state, county, and municipal laws, ordinances, and regulations applicable to said work.

The governing entities include but are not limited to:

- Indiana Utilities Regulatory Commission (IURC or Commission)
- Indiana Department of Transportation
- Indiana 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, assess, 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/or other legal authority. Personnel responsible for implementing vegetation management on behalf of Duke Energy Indiana 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, personnel should contact the Land Services Department or Legal 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 Indiana Vegetation Management Program Requirements, OSHA regulations, National Electrical Safety Code (NESC), ANSI A300 Z133 Standards, as amended, 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 Clauses 5, 11 and 13.

- **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

Based on a data driven approach to facilitate a 5-year trim cycle, Duke Energy Indiana will review, and clear vegetation as needed from approximately 20% of distribution system miles annually. Vegetation maintenance may include taking trees down, pruning limbs, mechanical limb removal, brush cutting/mastication, and herbicide application. The primary objective of the Duke Energy Indiana Vegetation Management Program is to control the growth of incompatible vegetation and mitigating hazard trees along its electric lines to help provide reliable service to its customers by limiting or eliminating the possibility of contact by vegetation that 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 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 by manual or mechanical means.

- Primary distribution lines are typically cleared during routine pruning to obtain no less than ten feet of 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 pruned 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 Indiana 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 pose unacceptable risks to electrical infrastructure are targeted to be taken down. Stumps from trees (live) taken down shall be treated with herbicides where appropriate.

SECTION 7 – INSPECTIONS AND MONITORING

Duke Energy Indiana can and may perform inspections and assessments of distribution circuits to observe vegetation conditions on the distribution system. 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 Indiana, LLC

CONTENTS

SECTION 1 – GOALS, OBJECTIVES, AND PURPOSE

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

The primary objective of the Duke Energy Indiana Vegetation Management Program is to control the growth of incompatible vegetation along its electric facilities to help provide reliable service to our customers. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and then initiating various vegetation control practices to reduce, manage, or eliminate incompatible growth. This integrated vegetation management program is essential in providing reliable electric service by ensuring that trees, brush, and vines near or within rights-of-way are periodically pruned or taken down to help reduce outages and risks near the company's 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.

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

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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 - 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 diameter at breast height (DBH).

COMPATIBLE VEGETATION - Vegetation within the transmission right-of-way that will not 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 not limit or block access or the safe and reliable operation, emergency restoration, or maintenance activity, which is typically within 25 feet of any Duke Energy Indiana facilities (towers, poles, guy wires, guy anchors, etc.).

CONTRACTOR - Third party to whom the Vegetation Management work is contracted.

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 traditional industry term for 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 traditional industry term for 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 within twenty-five (25) feet of any Duke Energy Indiana 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.

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 Diameter at Breast Height (DBH).

SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

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

The governing entities include but are not limited to:

- Indiana Utilities Regulatory Commission of Indiana (IURC or Commission)
- Indiana Department of Transportation
- Indiana Agriculture Pesticide Department
- Occupational Health and Safety Administration (OSHA)
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- Easement and/or Permit Documents

SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

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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
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SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Indiana Vegetation Management Program requirements, OSHA regulations**,** NESC, ANSI A300 Standards, as amended, and all federal, state, county, and municipal laws, statutes, ordinances, and regulations applicable to said work.

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    - For utility line clearance work, the primary foci are Clauses 5, 11 and 13

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

SECTION 6 – TRANSMISSION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Duke Energy Indiana'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 Indiana utilizes a threat and condition-based approach to planned work. This approach identifies threats as triggers to determine incompatible vegetation within and outside the transmission right-of-way (ROW). Duke Energy Indiana 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 incompatible vegetation in the ROW and support IVM.

THREAT/CONDITION-BASED TRIGGERS

For planned work, 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 six 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. A Duke Energy Indiana 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. Property owner concerns with the proposed mitigation strategy shall be communicated to Duke Energy Indiana personnel and alternative mitigation strategies will be considered. One mitigation strategy includes herbicide application.

MITIGATION FOR INCOMPATIBLE VEGETATION THREATS

All identified incompatible vegetation will be evaluated and taken down.

SPECIAL/SPECIFIC SITUATIONS

Potential Outage Risk: When a transmission outage risk is identified, Duke Energy Indiana will attempt to notify the affected property owner if practical and possible. However, Duke Energy Indiana may need to take immediate action, such as taking down 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 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 Indiana personnel will focus on taking down 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.

SECTION 7 – INSPECTION AND MONITORING

Duke Energy Indiana can and may perform inspections on each transmission circuit (69kv and above) to observe vegetation conditions on the transmission system. The intent of these inspections is to identify off-cycle vegetation threats along the transmission line corridors and take appropriate action.

INCOMPATIBLE VEGETATION MITIGATION - Trees which are in close proximity to electrical facilities can require extensive pruning to prevent them from causing a reliability or safety risk. These trees within the right-of-way will be targeted to be taken down and Duke Energy Indiana will attempt to notify the affected property owner.

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. 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 trees shall be treated with herbicides where appropriate and possible.

BRUSH MANAGEMENT - Because of a variety of terrain, differences in soil, land use, and vegetation types, Duke Energy Indiana 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.