DUKE ENERGY OHIO EXHIBIT_____

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

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

DIRECT TESTIMONY OF

RON A. ADAMS

ON BEHALF OF

DUKE ENERGY OHIO, INC.

October 26, 2018

TABLE OF CONTENTS

PAGE

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Ron A. Adams, and my business address is 107 East Liberty Street, York, South Carolina.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Duke Energy Carolinas, LLC as General Manager of Transmission Vegetation Management. Duke Energy Carolinas, LLC is an affiliate of Duke Energy Ohio, Inc., (Duke Energy Ohio or Company).

Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I received a Bachelor of Science degree from Clemson University in Electrical Engineering in May 1985. I am a registered professional engineer in the States of North and South Carolina and a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE). I joined Duke Energy in 1985 as a Substation Engineer. In 1996, I was promoted to Manager, Technical Services within Transmission. Since that time I have held positions of increasing responsibility in various departments including, engineering, construction and maintenance, field operations, and corporate governance with a passion for customer service and operational excellence. In 2016, I moved from my role as Director, Vegetation Management Governance to my current position.

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES.

A. As General Manager of Transmission Vegetation Management, my responsibilities include the design and implementation of utility Transmission

Vegetation Management (TVM) standards and specifications in all of the states in which Duke Energy provides electric services. I am responsible for management of vegetation along the transmission corridor, clearance for construction of new facilities, administration of line clearance and vegetation management contracts, supplemental forestry contracts, management of an internal staff consisting of arborists and utility arborists, budgeting of TVM activities and ensuring compliance with state and federal regulatory standards. I also communicate with state, regional and federal authorities regarding Duke Energy's TVM policies and practices. I have two managers and four directors that report directly to me with a department of 40 plus internal employees, additional contract employees and work planners who oversee the work activities of 1000 to 1500 contract personnel performing vegetation management services across the enterprise.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO?

A. No.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE PROCEEDINGS?

A. The purpose of my testimony is to discuss the Duke Energy TVM Program generally and as it pertains to the work that is currently underway in Ohio, and the requirements regarding the removal of incompatible vegetation within the rights of way.

II. THE TVM PROGRAM

Q. PLEASE DISCUSS DUKE ENERGY'S TVM PROGRAM AND ITS APPLICATION IN OHIO.

A. The Duke Energy TVM program, for which I am responsible, is carried out through the work of many employees, contract employees and arborists across the Duke Energy footprint. As one of the nation's largest electric utilities, Duke Energy manages 31,645 miles of transmission lines, across six states, providing Transmission grid security, safety and reliability in compliance with state and federal regulations. As explained by Duke Energy Ohio witnesses John Goodfellow and Kevin McLoughlin, the Company must comply with requirements established by the Federal Energy Regulatory Commission (FERC) and the Public Utilities Commission of Ohio (Commission). Duke Energy does this across many different types of terrains and in diverse ecosystems such as mountains, wetlands, plains, rural and urban locations throughout our service territory.

Q. **PLEASE DESCRIBE THE MANNER IN WHICH DUKE ENERGY'S VEGETATION MANAGEMENT PROGRAM IS DEVELOPED.**

A. Duke Energy's vegetation management program development is coordinated and maintained by our Transmission System Forester who is a subject matter expert for vegetation management. The program has developed over the years and is in alignment with recognized industry best practices. The original development of the program included multiple meetings and discussions between internal Vegetation Management subject matter experts, Engineering, Compliance, Land Services, Legal and Field Operations personnel. On a routine basis, the Transmission System

Forester reviews the program with all key stakeholders for potential updates to ensure accuracy and regulatory compliance. In my previous role as Director of Vegetation Management Governance, I was responsible for the development of the current program strategy and participated directly in the development process.

Q. PLEASE EXPLAIN WHAT AN EASEMENT OR RIGHTS OF WAY ARE AND HOW THE COMPANY OBTAINS RIGHTS OF WAY.

A. When people talk about transmission lines, they often refer to an "easement" or rights of way. I am not a lawyer, but based upon my work experience, it is my understanding that an easement is a permanent right authorizing a person or party to use the land or property of another for a particular purpose. In this case, a utility acquires certain rights to build and maintain a transmission line. Landowners are paid for the easement and continue to use the land for most purposes, although there are rights of way restrictions in the agreement. The easement instrument is the legal document that must be signed by the landowner before the utility can proceed. Rights of way are the actual land areas acquired for a specific purpose, such as a transmission line. Once an easement is acquired, it becomes part of the property record, and all future owners of the property are bound by the terms of the easement agreement.

Q. DOES DUKE ENERGY HAVE EASEMENTS FOR THE TRANSMISSION LINES ACROSS ITS SERVICE TERRITORY?

A. Yes, Duke Energy Ohio has easements of record for each of the Complainants in this proceeding.

Q. WHAT AUTHORITY IS PROVIDED BY THE TRANSMISSION EASEMENTS HELD BY DUKE ENERGY?

A. The easements are obtained to support the design, installation, maintenance and operations of a transmission line to secure the right to clear and keep clear any vegetation or obstructions that may endanger the safe operation, maintenance and access of the transmission line. As an example, some of the easements in Ohio state that the Company has the right to cut, trim or remove any trees, overhanging branches or other obstructions both within and without the limits of the easement which in the opinion of the Company's engineers and other subject matter experts may endanger the safety of or interfere with the construction, operation or maintenance of the system. The easements also provide for the right of ingress and egress to perform the necessary work.

Q. IS THE COMPANY'S VEGETATION MANAGEMENT CONSISTENT WITH THE RIGHTS PROVIDED BY THE EASEMENTS GRANTED TO THE COMPANY BY THE VARIOUS LAND OWNERS?

A. Yes. The Company is always aware of its easement rights and works diligently to ensure that it is operating within its lawfully granted easement authority.

Q. PLEASE DESCRIBE DUKE ENERGY'S WORK IN OHIO TO MAINTAIN ITS RIGHTS OF WAY.

A. Duke Energy Ohio has 1607 circuit miles of transmission rights of way that are maintained on a six-year cycle. The mileage breakdown by voltage is 402 miles of 345 kilovolt (kV), 734 miles of 138 kV and 471 miles of 69 kV.

Q. **PLEASE DESCRIBE THE TVM PROGRAM THAT IS APPROVED IN OHIO**.

A. To maintain reliable service and minimize outages, it is important that Duke Energy manage trees and other vegetation along the lines that deliver electricity to our customers. The Company hires qualified, trained arborists to inspect and clear vegetation that poses a threat to its power lines. Duke Energy follows an Integrated Vegetation Management (IVM) program strategy which includes the use of various rights of way vegetation management tools such as mechanical, herbicide, and/or manual floor maintenance, tree pruning, and tree felling including the removal of danger and hazard trees along the outside edge of the rights of way. The objective of an IVM Program is to maintain the transmission rights of way such that compatible, low growing woody-shrub species and herbaceous grasses can exist in the rights of way corridor. The IVM Program was initially rolled out in the Duke Energy Midwest service territory in the 2010 to 2011 time frame.

The TVM program is set forth in the Application for programs of inspection, maintenance, repair, and replacement of transmission and distribution circuits and equipment as required under O.A.C. Rule 4901:1-10-27(E) (the Plan). The Plan was submitted to the Commission on April 28, 2016 and was approved by the Commission, pursuant to its rules, forty-five days later. This Plan is consistent with the Company's overall approach in terms of providing optimum safety and reliability for Duke Energy Ohio customers.

Q. CAN YOU EXPLAIN THE FUNCTIONALITY OF A TRANSMISSION AND DISTRIBUTION (T&D) ELECTRICAL SYSTEM?

A. From a functionality perspective, the transmission grid is the hierarchical network responsible for transmitting large amounts of power over long distances. The transmission lines in the Cincinnati area are part of the larger interconnected grid system that powers an entire region like the Midwestern states, not just the communities the lines cross. Federal regulations and standards are more stringent for some transmission lines, depending on voltage, and may include fines up to $1 million per day for tree-related outages. In order to provide reliable operation of the grid, Duke Energy manages these applicable transmission lines to adhere to these federal regulations, standards and easement rights. The North American Electric Reliability Corporation (NERC) Standard FAC-003-1 went into effect in 2007 as a result of the 2003 Northeast Blackout. The 345 kV system in Ohio is subject to the NERC Transmission Vegetation Management Reliability Standard FAC-003-4.

The distribution system power lines in a given area carry power from a local substation to the homes and small businesses in that community. Typically, one can distinguish a transmission power line from a distribution power line in that the transmission is typically cross country and is built on taller wooden or lattice steel structures. The distribution power lines are typically road side on shorter wooden poles.

For further clarity, as explained above, the Duke Energy transmission system in Ohio consists of 345 kV, 138 kV and 69 kV systems. The 345 kV is

predominantly the tie lines or interconnections with other utilities and/or generating stations and operates similar to the interstate highway system to transport power between states or regional entities operating under purview of NERC. The 138 kV system operates as a loop network system surrounding the Ohio/Kentucky service territory and serves as the main conduit from the 345 kV system to the 69 kV system and the distribution system. Due to the design and operating configuration of the 138 kV system, it serves a similar function as the 230 kV system in other jurisdictions in which Duke Energy owns and operates Transmission. With regard to the criticality of the 138 kV loop network, the Company is required pursuant to regulatory requirements to operate the system from a contingency perspective to withstand the loss of a single line. If the system did experience a lock out, or an outage on the 3881 line, for example, and depending on the system loading and configuration at that time, it could put the Company in a contingency situation that if another 138 kV line were lost, it could overload adjacent transmission lines causing a localized blackout in the greater Cincinnati area. However, the probability of this event causing a cascading outage impacting other utility networks, such as occurred in 2003 with the Northeast Blackout, is highly unlikely in this scenario because that system was part of the 345 kV system.

Q. WHY IS DUKE ENERGY INCREASING ITS FOCUS ON REMOVAL OF TREES IN THE RIGHTS OF WAY?

A. Previously in some areas of Ohio, the rights of way were maintained such that they accommodated property owner desires but now these same areas have a

significant number of incompatible trees within the rights of way. Although this has allowed more flexibility for homeowners adjacent to the Company's easements, this condition is not an industry accepted practice. The incompatible vegetation has become so dense and tall that it impacts public safety, reliability and access to the transmission facilities.

The role of the electric utility is to provide safe, reliable, quality service to the communities it serves. Duke Energy has initiated the work within its easement rights for these rights of way in order to advance public safety, provide safe work zones, provide better access and conditions for our employees, improve reliability and sustain the integrity of the transmission grid. In addition, it continues the Company's journey to align the Ohio Transmission VM program with the corporate IVM program strategy and recognized industry practices. It will take several years for the reclamation strategy to be fully implemented and yield results, however, this is the best way to maintain and protect Duke Energy Ohio's transmission system.

The initiation of this rights of way reclamation represents a change in philosophy. Rights of way reclamation is defined by the American National Standard Institute (ANSI) A300 as "reestablishing IVM on a right of way that is not currently managed to the full extent of its easement or ownership rights and intended purposes. Conditions on a right of way in need of reclaiming include tall, dense amounts of undesirable vegetation, and utility facilities that are inaccessible. Reclamation usually involves non-selective methods of mechanical mowing or clearing, hand-cutting or broadcast application of herbicides".

What the Company has done in the past is perform vegetation maintenance; the plan moving forward is to perform vegetation management. The Company has successfully completed this plan on approximately 260 miles of circuit in the southwestern Ohio service area without problems. Tree removal, inside and outside the right of way, is a standard practice across the Duke Energy Transmission Vegetation Program footprint. This practice is well within the Company's easement rights and consistent with utility best practices.

The 3881, 138 kV line easements were initially obtained in the 1950s and the line was built in 1952. At that point, the area was rural and it was not until the 1980s that the majority of urban development reached this area. When this development occurred, the majority of the trees in the rights of way were newly planted in the maintained, landscaped areas and have continued to grow over several decades with an ever increasing risk to reliability and public safety. This overgrown, incompatible vegetation took 20 plus years to get to this state and it will take several years to convert the transmission rights of ways in Ohio to compatible vegetation such that it can safely coexist with the transmission lines. Duke Energy recognizes this is initially stressful to the community and property owners, but in the long term, the next 20 years, it is in the best interest of all parties and communities involved. It is the right thing to do and aligns with the Arbor Day Foundation's public education program, "Right Tree, Right Place."[1]

As we previously discussed, the Northeast Blackout occurred on August 14, 2003. Due to the inadequate vegetation management practice that caused the Northeast Blackout, FERC took action and positioned NERC as the regulatory

[1] See https://www.arborday.org/trees/righttreeandplace/.(Accessed May 3, 2018).

authority to assure the reliability and security of the bulk power system in North America. As a result, the NERC FAC–003–1 Transmission Vegetation Management Reliability Standard went into effect on April 4, 2007. To ensure compliance with this standard, the Company initiated work on its easement rights on all applicable NERC lines in the Midwest operations. Around the end of 2012, the Company completed the initial focus of moving these lines into the IVM program strategy. Thereafter, in 2016, the Company initiated the focus on its 138 kV system in Ohio. These lines have condition assessments performed routinely through aerial patrols by Vegetation Management Specialists (VMS) that are managing an assigned area within the service territory. Just to add perspective, upon recent aerial inspection of the 3881 circuit, the assessing VMS noted that the tree canopy has grown so tall and thick that one loses visual sight of the 3881 line in particular segments. This is not typical for a transmission line and puts the transmission grid at risk.

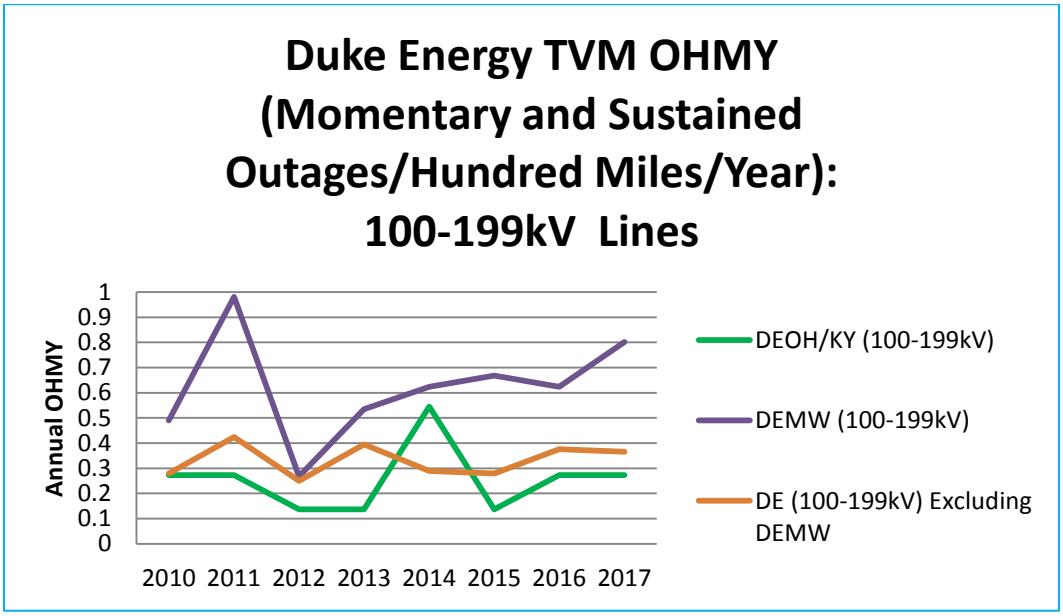
From a vegetation outage perspective, the reliability performance of the 138kV Ohio system performs comparably to the same voltage class systems across the Duke Energy service territory. However, as previously noted, due to the 138 kV system being a loop network it serves a similar function as the 230 kV system in other jurisdictions in which Duke Energy owns and operates transmission. See below Table and Graph showing the vegetation related outages on a basis of Outages per Hundred Mile Year (OHMY) for voltage classes 100 kV to 199 kV.

Duke Energy 100 to 199kV TVM Line Outages

** All TVM-related Line Outages (On or Off-ROW)*
** Momentary and Sustained Outages*

2010-2017 System TVM Outage Performance: 100-199kV Lines

Region/Jurisdiction	Circuit Miles	2010	2011	2012	2013	2014	2015	2016	2017	2010-2017 8-Yr Avg. Outages	2010-2017 8-Yr Avg. OHMY *Circ-Mile*
DEOH/KY (100-199kV)	734	0.272665	0.272665	0.136333	0.136333	0.545331	0.136333	0.272665	0.272665	1.9	0.2556
DEMW (100-199kV)	2,244	0.490196	0.980392	0.267380	0.534759	0.623886	0.668449	0.623886	0.802139	14.0	0.6239
DE (100-199kV) Excluding DEMW	10,374	0.279545	0.424137	0.250627	0.395219	0.289184	0.279545	0.375940	0.366300	34.5	0.3326



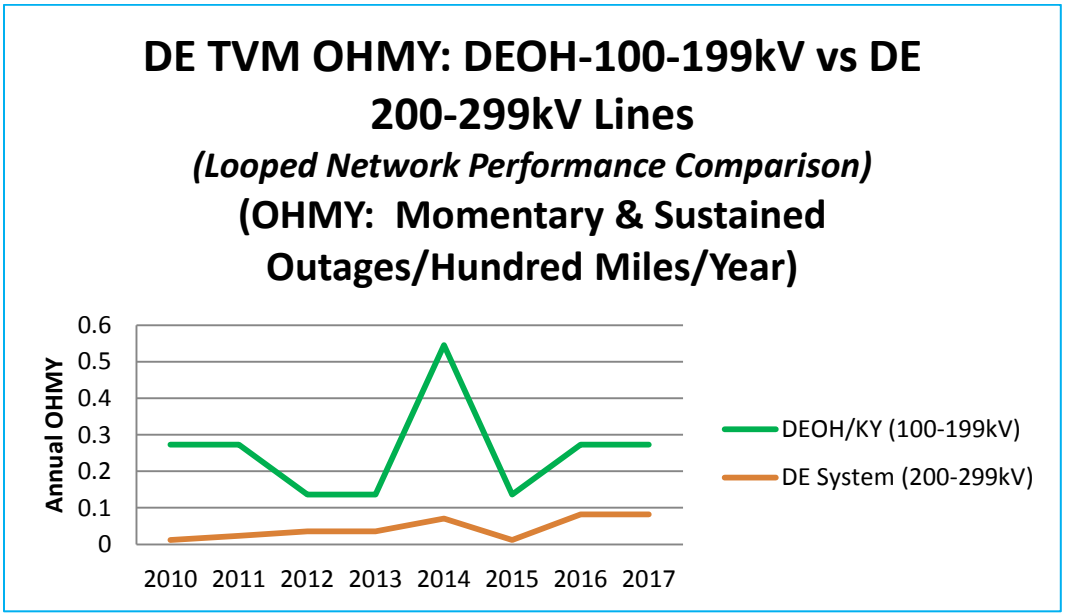
As previously noted, the 138 kV system in Ohio is designed to operate like the 230 kV systems in other jurisdictions. When we compare the performance of the 138 kV Ohio system to performance of the comparable 230 kV system across the Duke Energy system, its performance is over five times worse than the system average based on the metric of Outages per Hundred Mile Year (OHMY). See table and graph below for comparison of the Ohio 138 kV system to the Duke Energy 230 kV system.

Duke Energy OHIO 100 to 199kV Lines
vs Duke Energy 200-299kV Lines

** All TVM-related Line Outages (On or Off-ROW)*
** "Looped network" performance*
** Momentary and Sustained Outages*

2010-2017 System TVM Outage Performance: 100-199kV vs 200-299kV Lines

Region/Jurisdiction	Circuit Miles	2010	2011	2012	2013	2014	2015	2016	2017	2010-2017 8-Yr Avg. Outages	2010-2017 8-Yr Avg. OHMY Circ-Mile
DEOH/KY (100-199kV)	734	0.272665	0.272665	0.136333	0.136333	0.545331	0.136333	0.272665	0.272665	1.9	0.2556
DE System (200-299kV)	8,491	0.011777	0.023554	0.035332	0.035332	0.070663	0.011777	0.082440	0.082440	3.8	0.0442



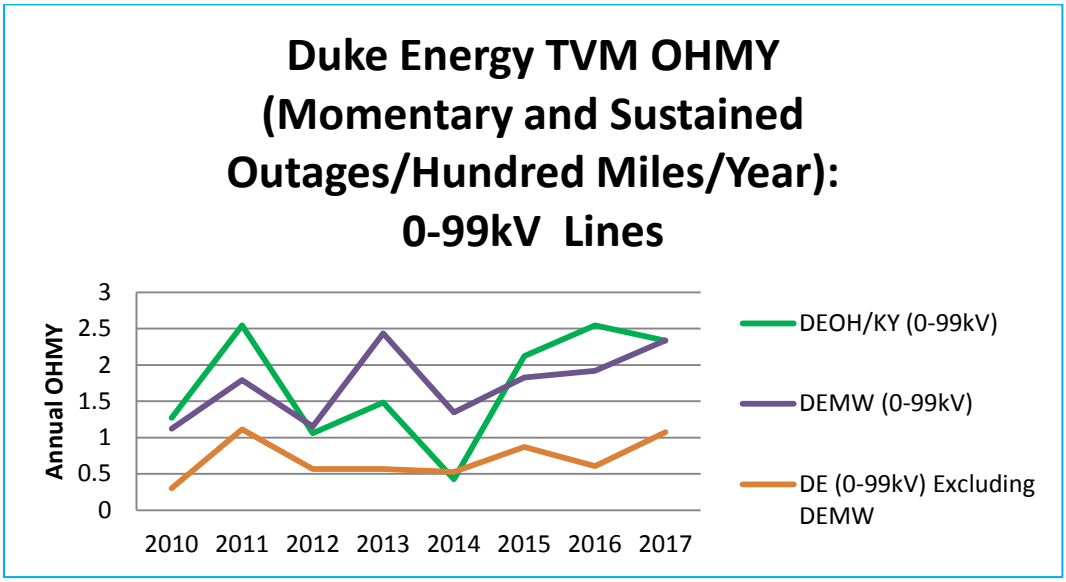
When we look at the 69 kV system in Ohio, the vegetation related outage performance is over two times worse than the system average for similar voltage class systems across Duke Energy. See table and graph below for comparison of the Ohio 69 kV system to the Duke Energy 69 kV system.

Duke Energy 0 to 99kV TVM Line Outages

** All TVM-related Line Outages (On or Off-ROW)*
** Momentary and Sustained Outages*

2010-2017 System TVM Outage Performance: 0-99kV Lines

Region/Jurisdiction	Circuit Miles	2010	2011	2012	2013	2014	2015	2016	2017	2010-2017 8-Yr Avg. Outages	2010-2017 8-Yr Avg. OHMY *Circ-Mile*
DEOH/KY (0-99kV)	471	1.274021	2.548041	1.061684	1.486357	0.424674	2.123368	2.548041	2.335704	8.1	1.7252
DEMW (0-99kV)	3,121	1.121435	1.794297	1.153476	2.435117	1.345723	1.826338	1.922461	2.338994	54.4	1.7422
DE (0-99kV) Excluding DEMW	4,943	0.303459	1.112685	0.566458	0.566458	0.525996	0.869917	0.606919	1.072223	34.8	0.7030



The largest contributing factor for this performance difference is due to the high volume of incompatible trees in the wire zone and border zone of the rights of way and trying to manage the impact of these incompatible trees through a maintenance program.

Q. PLEASE EXPLAIN UTILITY VEGETATION MANAGEMENT PHILOSOPHY AND THE PROGRAM AT DUKE ENERGY.

A. As previously mentioned, Duke Energy utilizes an IVM program which includes the use of various rights of way management tools such as mechanical, herbicide,

and/or manual floor maintenance, tree pruning, and tree felling including danger and hazard trees. The objective of an IVM program is to manage the transmission rights of way such that compatible, woody-shrub species and herbaceous grasses can exist in the rights of way corridor. Vegetation growth is constant year over year; if unmanaged the vegetation presents significant risk to the public and overhead utility power systems when incompatible vegetation is located under or near power lines. Incompatible vegetation within the rights of way corridor is generally any vegetation that at mature height poses a risk of growing into the power lines.

The hyperlink below to the video "People, Trees and Power Lines" is a good overview of the Duke Energy program:

https://www.duke-energy.com/community/trees-and-rights-of-way/how-we-manage-trees

In addition, the following website page snapshot depicts the rights of way restrictions and an interactive learning tool. The website path is:

https://www.duke-energy.com/community/trees-and-rights-of-way/what-can-you-do-in-right-of-way.

On this website page, in the left hand menu, the viewer can select a copy of Electric Transmission Right-of-Way Guidelines/Restrictions. Item 8 references vegetation plantings:

Duke Energy will not object to certain vegetation plantings as long as:

- They do not interfere with the access to or the safe, reliable operation and maintenance of Duke Energy facilities.
- With prior written approval, Duke Energy does not object to low-growing shrubs and grasses within the wire zone. Tree species are not permitted within the wire zone. Trees that are approved in the border zone may not exceed, at maturity, 15 feet in height. Contact the Asset Protection specialist for wire zone/border zone definitions.
- For compliant mature height species, refer to:
  - plantfacts.osu.edu/plantlist/index.html.
- Engineering drawings must indicate the outermost conductor.
- Vegetation that is not in compliance is subject to removal without notice.

- Duke Energy may exercise its rights to cut "danger trees" outside the rights of way limits as required to properly maintain and operate the transmission line.

Q. PLEASE DISCUSS DUKE ENERGY'S ENVIRONMENTAL INITIATIVES WITH RESPECT TO THE TRANSMISSION RIGHTS OF WAY.

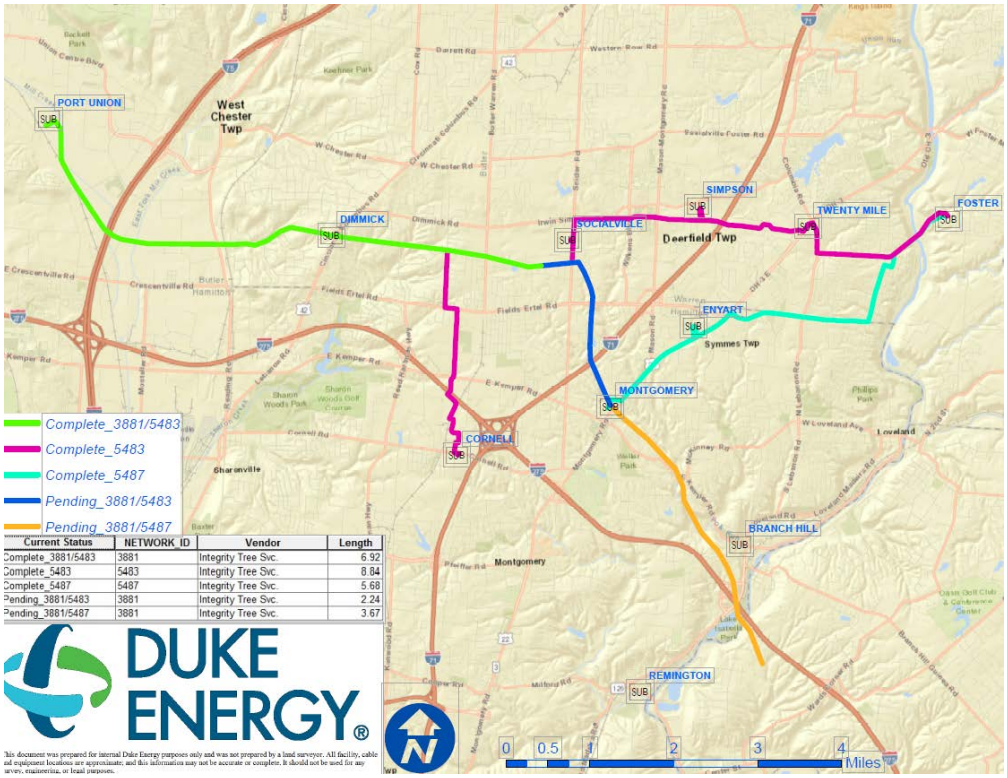
A. In addition to concerns for reliability and safety, Duke Energy works to manage its rights of way in an environmentally responsible and sustainable way. Duke Energy Ohio witness Scott Fletcher will discuss this in greater detail. Duke Energy is justifiably very proud of its environmental programs and the alignment of the Company's IVM program with overall environmental stewardship programs.

Q. **PLEASE PROVIDE AN OVERVIEW OF THE PROJECT FOR THE 3881, 138 KV LINE THAT IS LOCATED ON COMPLAINANTS' PROPERTIES IN THIS CASE.**

A. The 3881 line is 22.7 miles long and runs from the Port Union substation to the Summerside substation in the north and northeast areas of Cincinnati. This line serves multiple retail substations which feeds multiple distribution circuits, several large industrial facilities, two 33 kV lines feeding the Brecon and Blue Ash substations and one 13.2 kV dedicated feeder serving the P&G research center. The impact of a lockout outage on this line would result in approximately 20,000 plus customer outages along with the industrial facilities and research center mentioned above.

Sections 3881, 5483 and 5487 circuits were assigned to Integrity in 2017. The total mileage for the assigned work was 27.37 miles. To date, 21.45 miles have been completed and 5.92 miles of the 3881 remain to be completed.

Circuit Map



The section of line that is remaining for rights of way reclamation has a 100 foot easement for the entire section of the line. This section of the 3881 line crosses approximately 350 individual parcels and was initially awarded to Integrity on a fixed price contract. Once the community issues developed, Duke Energy Ohio had to modify the vendor's contract to "time and material" basis due to inefficiencies created by multiple refusals. At that time, the Company solely dedicated a VMS to assist the vendor with property owner notification and communication. Through this dedicated resource, the majority of the pending

customer concerns were resolved. Duke Energy Ohio has continually relied on open communication and education of property owners to address tree felling for this project. This process was successful until the Company began initial stages of work on the section of the line that initiated the multiple Commission complaints currently pending.

It is very important to understand that when an electric utility is performing vegetation management on a large, overhead electrical network, it is not reasonable or efficient to manage the work execution on a property by property or a tree by tree basis. The utility must have a standard specification and execute that specification consistently with all property owners. Since this is a rights of way reclamation project, the cost per mile is in excess of $36,000 per mile and approximately 30% of the cost is dedicated to site restoration. The contractor performing this restoration work is K&L Excavating out of Bedford, Indiana. This company specializes in rights of way restoration. The site restoration that is being performed by Duke Energy is above the industry norm in that depending on the specific site it may include fence replacements, stump grinding and grass seeding. This additional focus on site restoration is provided in order to help the property owners adapt to the change. As a visual example of site reclamation, please see the following before and after picture of reclamation of this area:

3881 at Creekstone Before

3881 at Creekstone After

Q. PLEASE DESCRIBE THE QUALIFICATION PROCESS AND CAPABILITY OF THE VENDOR'S CREWS TO COMPLETE THE WORK.

A. The qualification process for vendor selection process begins with an assessment of the vendor, provided by Duke Energy's Environmental, Health and Safety (EHS) department. This process includes an industry recognized safety risk assessment provided by a third party Avetta. Avetta is a supply chain risk management manager that provides a safety assessment process. This safety risk management assessment is used by multiple Fortune 500 companies and many major utilities. In alignment with the Duke Energy Operational Excellence vision, if the vendor cannot meet the safety assessment review, then the process will require executive approval prior to allowing the vendor to perform work for the corporation.

Below is a high level summary of the assessment steps:

- Business units define safety risk of the work to be performed (high, medium, low).
- Turnkey contract companies that provide high risk and certain medium risk work activities are required to have a safety rating (Approved or Conditional) in Avetta.
- These contract companies participate in Avetta and provide safety performance data for the previous 3 years.
- Avetta resources compare the contractor's safety data to the Duke Energy targets based on the business unit involved.

- If a contract company fails the business unit targets, conditional approval from the business unit vice president is required to allow the contractor to work for the business unit.

Once a potential new VM vendor completes the EHS assessment, a technical assessment is performed. This includes a field visit to assess the performance and qualifications of the vendor. Some key areas of assessment include verification that its leadership and field management are technically qualified to perform the work per industry standards and carry industry qualifications as appropriate to perform the assigned work activities. For example, regarding the crews working on the 3881 line; two of the personnel performing property owner notification are registered as International Society of Arboriculture (ISA) Certified Arborists and one is an ISA Certified Arborist Utility Specialist which are the same certifications the Duke Energy field VM Specialists obtain for advancement in the VMS classification. The field crews performing the work are qualified Line Clearance Specialists as defined by ANSI Z133 (The American National Standard for Arboricultural Operations – Safety Requirements).

With regard to the vendor's capability, Integrity was approved to perform vegetation management services in 2014 for Duke Energy. The Company initially assigned them to a small project in Indiana associated with rights of way reclamation and monitored its performance. Once the Company was comfortable with the quality of service that Integrity provided, the Company expanded their workload into other areas within the Midwest operation. They were moved to a

base contract service provider, focused mainly on rights of way reclamation projects.

The next step in the vendor assessment process is Duke Energy's VM Supplier Performance Management program. This process is designed to monitor supplier performance on a quarterly basis and includes defined scorecard metrics with regard to safety, reliability, quality, customer service and business reporting. Management from Duke Energy and the VM Supplier meet face-to-face for this quarterly performance assessment. If the supplier's performance falls below pre-defined performance levels, the supplier is placed on a performance improvement plan.

The process for screening K&L as a supplier was similar to the one above with a few exceptions. Since K&L is not performing high risk work such as transmission vegetation clearance activities around energized conductors, it was not required to go through the detailed Avetta safety screening process.

Q. PLEASE DESCRIBE THE PROCESS FOR THE PLANNING AND WORK EXECUTION ASSOCIATED WITH THE 3881 SYSTEM.

A. At a high level, the work flow is a five-step process consisting of:

- Pre-Planning Activity
- Notification and Planning
- Work Performance
- Quality Audit
- Restoration

Pre-Planning Activity

A circuit is identified for a particular year's work plan schedule. From this point maps are generated, as well as a unit sheet for tracking the planning activities. This information is passed on to a work planner who assesses work which needs to be performed. The work planner then creates a timeline estimate and submits to the VMS. Once approved, planning of the work begins.

At this point an orientation is held with the selected service provider, largely to review expectations/requirements surrounding safety and general/technical specifications with contractors/work performers.

Notification/Planning

Notification of work is given to affected properties. If the property owner is not at home, a door hanger will be left at the property with information that includes the work planner contact information, a standard Ohio communication letter explaining the vegetation management activities and why Duke Energy removes trees. This begins in advance of any work occurrence, and subsequently runs concurrent with the remainder of work planning. Work planning involves the identification of activities needed on a span-by-span basis to meet specifications of the work contracted to be performed.

Work Performance

Once two weeks have passed since notification and planning of work, the work on a given property can commence. Completed work activities are logged in the unit activity sheet once completed.

Quality Audit

At this time, a quality audit is initiated to ensure work has been completed to specification. The quality audit scores are recorded and included in the supplier performance reviews.

Restoration

Once work has passed the quality inspection, applicable stumps will be ground, and applicable restoration activity commences. After restoration activities have concluded a final quality audit is performed and the circuit is considered to be complete.

Q. PLEASE DESCRIBE THE WORK THAT HAS BEEN PERFORMED WITHIN THE COMPANY'S EASEMENTS ON THE FIVE CIRCUITS IN QUESTION AND WHETHER THERE HAS BEEN CONSISTENCY WITH THE COMPANY'S IVM POLICIES AND PROGRAMS.

A. Yes. All of the work, to date, has been consistent with the Company's easements, and the Company's approved vegetation management programs as filed with and approved by the Commission. Importantly, the work is consistent with industry best practices and once completed, will provide a safer and more reliable transmission system for all southwestern Ohio customers including customers who do not reside along the rights of way.

III. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.