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MICHIGAN PUBLIC SERVICE COMMISSION

STAFF REPORT AND RECOMMENDATIONS

TREE TRIMMING DEBRIS-REMOVAL POLICIES

DECEMBER 26, 2007

INTRODUCTION AND PURPOSE

The Commission issued an Order on September 25, 2007 in Case No U-14912, regarding a complaint against The Detroit Edison Company that focused on the utility's tree trimming debris-removal policy. The Order directed Staff to investigate the debris-removal policies of Commission-regulated electric utilities and file a report, including recommendations as to whether tariff revisions are necessary to resolve the confusion relating to the policies. This report is pursuant to that Order.

PRIOR RELATED CASES

Staff found these four cases to relate, at least in part, to tree trimming. Although these cases do not address debris-removal directly, they do include prior commitments, agreements and directives that may affect current policies and practices.

On July 17, 1991, the Commission issued an order in Case No U-9916 initiating an investigation into the response by Consumers Energy Company and Detroit Edison to a widespread storm outage. This case resulted in a settlement agreement. Detroit Edison agreed to "[r]educe instances of outages and wire-down by accelerating line clearance schedules, continuing productivity improvements for line clearance crews and strengthening tree removal and replacement programs." Consumers Energy agreed to double its budget level of line clearing programs. This included: (1) trimming, removing trees, mowing and chemical brush control to ensure adequate line clearance on primary distribution lines; (2) trimming trees to ensure adequate clearance under-built secondary lines; (3) trimming trees around services fed off under-built secondary lines; and (4) optional trimming of trees around other services where safety, reliability or convenience dictates.

In an Order dated July 31, 1995, in Case No. U-10908, the Commission initiated an investigation into the storm outage response of Consumers Energy and Detroit Edison. In a settlement agreement, Detroit Edison agreed to a line clearance schedule of 780,000 trees per year.

On January 3, 2000, in Case No U-12270, the Commission ordered another investigation on service reliability, following a November 1999 Staff Report, which recommended that Detroit Edison increase its tree trimming operations and that it expand its utilization of storm resistant overhead wiring configurations. The Commission subsequently ordered that all utilities annually report their performance on a number of distribution reliability standards. These standards were adopted as administrative rules – Service Quality and Reliability Standards for Electric Distribution Systems (R 460.701 – 460.752). These rules address service reliability and other customer complaint areas but do not directly address debris-removal issues.

On December 9, 2003, in Case No U-13975, the Commission issued an order directing investor owned utilities to file a report regarding the status of the transmission and distribution lines used to serve their customers in Michigan, including details of vegetation trimming practices. This was prompted by information that line contact with trees was a contributing factor to the major blackout that occurred the previous August. The reports filed by the utilities did not give any indication that debris-removal was an issue.

ADMINISTRATIVE RULES

The Commission has adopted two administrative rules relating to tree trimming.

R 460.3505

Each utility shall adopt a program of maintaining adequate line clearance through the use of industry-recognized guidelines. A line clearance

program shall recognize the national electrical safety code standards that are adopted by reference in R 460.811 et seq. The program shall include tree trimming.

This rule, applicable to all regulated electric utilities, does not directly address debris-removal. It requires that each utility adopt a line clearance program but does not require that the program receive Commission approval. Instead, the program is required to follow the national electric safety code and industry-recognized guidelines and provide adequate safety and reliability.

R 460.813

This rule adopts by reference the 1997 edition of the National Electrical Safety Code (NESC). Rule 218(A)(1) of the NESC states: "Trees which may interfere with ungrounded supply conductors should be trimmed or removed." There is a footnote to the rule giving some guidance as to how much to trim or remove but it does not address debris removal.

It should be noted that Rule 218 of the NESC was changed for the 2007 edition (which the Commission has not currently adopted). That rule now states: "Vegetation that may damage ungrounded supply conductors should be pruned or removed. Vegetation management should be performed as experience has shown to be necessary." This modification changes the standard from "interfere" to "damage" thereby allowing some touching of the line by vegetation. The NESC Handbook acknowledges that mere incidental touching of a living leaf with an energized conductor will rarely damage the conductor.

INVESTIGATION

In addition to reviewing administrative rules and utility tariffs, Staff investigated information available to the public and written procedures given to contractors and

mutual aid crews (storm restoration crews from other utilities), as well as specific data requests made to all regulated utilities.

Staff's review of utility internet sites found a diverse range of posted tree trimming information. Ontonagon County Rural Electrification Association is the smallest electric utility in Michigan and does not have a web site. Edison Sault Electric Company has a web site but does not post tree trimming information. Other utilities explain the need for tree trimming on their website and provide advice on planting near power lines. Consumers Energy, Xcel Energy, Detroit Edison and We Energies have the most extensive tree trimming information posted on their web sites.

Staff requested all utilities to provide a copy of tree trimming information provided to customers or property owners. The information requested included specific information regarding the following categories: (a) rural and urban policies, (b) routine versus storm situations, (c) residential versus non-residential, (d) deep right-of-way policies, (e) cross country rights-of-way, (f) rights-of-way along roads, and (g) maintained areas. For example, Wisconsin Electric has five focuses in its vegetation management program: maintenance trimming, construction related trimming, reliability related trimming, non-scheduled maintenance and storm related trimming.

From the responses, it is clear that the various utilities have significant differences among the various categories. One category that is fairly uniform is routine work versus storm restoration. Only three utilities indicated that some sort of clean up from storm restoration was provided – Edison Sault Electric Company, Thumb Electric Cooperative, and Great Lakes Energy Cooperative. Although Alpena Power Company has no written criteria for storm status, wind damaged trees are not removed by the utility, which removes debris only if additional trimming is needed to restore service.

Consumers Energy states that it does not have a formal written policy on debris clean up but it does have a written practice, as follows:¹

Consumers Energy will trim or remove trees interfering with electric restoration activities. Clean up of debris from tree trimming or removal during a storm emergency is the responsibility of individual property owners.

Detroit Edison reported the following policy regarding storm debris:

Line clearance crews do not remove tree debris that is a result of a storm. Brush and wood are left on site. It is the property owner's responsibility to contact their community Department of Public Works, private trash collector, or professional tree-removal service for disposal advice.

Wisconsin Electric does not declare a storm condition. Rather, crews are trained to handle tree debris according to conditions. In general, Wisconsin Electric will only remove debris resulting from the trimming of trees growing towards conductors and will not remove debris when responding to situations caused by weather or tree decay.

Xcel Energy in general removes debris for routine tree trimming but does not remove debris related to safety zone requests or storm response.

In general, utilities remove tree trimming debris in maintained areas during routine line clearance activities pursuant to common utility practice. They usually leave material that is: (a) 4 inches in diameter or greater, (b) diseased, or (c) from an ash tree. Most utilities leave all tree debris resulting from storm restoration.

Attachment 1 contains sample debris-removal language for responding utilities. Attachment 3 displays in tabular format the summary of responses from all utilities.

TREE TRIMMING COMPLAINTS

Because the genesis of this report was a debris-removal complaint, Staff asked the utilities for information on tree trimming and debris-removal complaints handled in last

¹ Apparently, the distinction between policy and practice is related to liability concerns.

three years. The responses indicate that not all utilities track tree trimming complaints much less debris removal.² The investor-owned utilities report only a limited number of complaints in the last few years. The cooperatives either do not track complaints within this category or report that it would take an excessive amount of time to manually extract tree trimming complaints from all complaints. However, Tri-County Electric Cooperative reports that it has a total of six tree trimming complaints from 2005 through 2007 that were received through the Commission.

This report resulted from a complaint against Detroit Edison, who reports a total of 9 debris-removal complaints in 2005-2006, 1 of which was related to storm debris. Attachment 2 gives a synopsis of the reported complaints.

OTHER RELATED ISSUES

A few utilities report that local ordinances and authorities restrict tree trimming to certain permissions, places, times or amounts. In addition, animal habitat and oak wilt issues can restrict debris-removal in some situations. The utility policies address these issues at most only through contract or tree worker guidelines.

The emerald ash borer quarantine has also impacted debris removal especially for Detroit Edison which is almost entirely within Michigan Department of Agriculture level one quarantine area.

TARIFF LANGUAGE

Generally, utility tariffs do not address tree trimming or debris removal. Alpena Power Company is an exception in that its tariff allows the utility access to customer property to, among other things, perform tree trimming and brushing to maintain line clearance standards. Other utilities often have common tariff language that includes a

² The utilities appear to have more detailed information on complaints that came to them through the Commission offices.

customer responsibility to not: (a) interfere with utility facilities, (b) use service in a way that causes a safety hazard, (c) endanger utility workers or facilities, or (d) disturb service to others. A customer is also expected to use reasonable diligence to protect utility facilities.

MIOSHA CONCERNS

The Michigan Occupational Safety & Health Administration restricts working in the proximity to energized lines to qualified employees who understand the hazards and are trained to work near the power lines. MIOSHA distinguishes between a tree worker and a qualified line clearance tree trimmer. In basic terms, tree trimmers have to be properly trained if working within ten feet of a power line. Once the trees are cleared from the power line by qualified employees and resultant material is located on the ground at a safe distance, lesser qualified personnel can continue with debris removal. Service drop wires have lower voltage than primary and are often covered. This represents a lesser hazard and therefore has lower tree trimming qualifications. Utilities will generally trim trees around a service drop if it is deemed a hazard.³

Because of the worker safety issue, it is reasonable to expect that policies relating to debris-removal during storm restoration would be different from those during normal periods. That does not preclude a return visit at a later time, although it may then be difficult to determine whether the remaining debris is the result of the outage/restoration work or some other cause.

CUSTOMER REQUESTS

Property owners or contractors doing their own tree trimming would be subject to safety issues and damage potential if the tree was close enough to the power line.

³ Utilities differ on the appropriate clearance radius, but generally provide 2 to 3 feet clearance. See Attachment 3 for more details.

Utilities will generally accommodate this by temporarily removing a span of line depending on who it serves. The utility may do some of the tree trimming depending on proximity and the designation (danger and/or hazard) of the tree.⁴ Utilities do not offer other free non-utility related tree trimming. Some utilities offer a non-regulated tree trimming service, for a fee, to do the non-utility related private jobs. Debris from the customer-related utility work is generally not removed. The non-regulated private jobs are subject to contract terms that may or may not address debris removal.

CONCLUSION AND RECOMMENDATIONS

A review of the utilities' debris-removal policies on Attachments 1 and 3 suggests that they have little in common. However, Staff discussions with utility personnel involved lead us to believe that the differences are more semantic than real – in many cases, what appear to be divergent policies are just different ways of expressing a common policy. It is Staff's opinion that the debris removal policies of Michigan utilities should be examined to determine to what extent a common policy can be developed. We recognize that complete consensus is unlikely because each utility has its individual issues that need to be addressed – for example, many of the Upper Peninsula utilities operate mainly in Wisconsin and would be expected to adhere more closely to Wisconsin guidelines. Nevertheless, based on our review, Staff has concluded that there is a substantial overlap in existing policies so that development of a common policy with limited exceptions is feasible. To that end, Staff recommends that the Michigan Electric & Gas Association and the Michigan Electric Cooperative Association be requested to form a joint work group charged with developing a model debris-removal policy for Michigan utilities.

⁴ For example, Xcel Energy will trim or drop a tree in response to a safety zone request, thus allowing work by a "non-qualified" person. All debris is left on the site.

Midwest Energy Cooperative (from printed material)

Our contract crews will dispose of branches and limbs in the most economic and practical manner possible. During regular line clearing activity, crews will remove branches and limbs within maintained or landscaped areas and leave wood for use by the homeowner or resident. In non-maintained areas, crews will leave wood, branches and limbs for use by the homeowner or resident or to decompose naturally. During emergency power restoration, crews clear trees from our facilities and move to the next location. Midwest does not return to remove wood, branches and limbs.

Cloverland Electric Cooperative (prepared for staff request)

Any debris, wood or brush, resulting from the restoration of power is left for the property owner. The trees or branches are removed from the power line, the power restored and the debris is left as is. There is no distinction made between an outage on a primary voltage distribution power line or a secondary voltage power line. Also, there is no distinction made between an outage in a rural or a yard area. There is no declaration of a storm event to indicate that the debris will be left for the property owner. All debris generated from power restoration activity is left for the property owner.

In addition, any debris resulting from trimming tree branches to resolve a power quality issue, usually a blinking lights complaint, is left for the property owner.

Great Lakes Energy Cooperative (contract excerpt)

2.11 Brush and Wood Disposal Specifications -- Unless otherwise directed by Great Lakes Energy, brush and wood disposal shall conform to the following specifications:

All logs, chips and brush created during the workday must be properly disposed of before quitting work for that day. If any brush is found by GLE or reported by a customer as being left overnight without signed permission and notifying Great Lakes Energy Vegetation Department, the contractor will be subject to a fine of \$500 per occurrence. If limbs are going to be left over night or longer, the contractor must contact and inform the customer in person and get "signed permission" prior to windrowing or stacking brush (see section 5.2). In the event that personal contact could not be obtained, the contractor shall leave a Great Lakes Energy approved door card. The contractor must also notify and inform a representative from the Great Lakes Energy Vegetation Management Department of any brush that is not properly disposed of before quitting work for that day.

All wood less than 4 inches in diameter shall be chipped, mowed or windrowed.

Chips may be blown into the right-of-way wherever possible. Chip piles must be raked out so as not to accumulate beyond 6 inches in depth, and must not cover up logs, brush, rocks or holes. Otherwise, chips must be blown into a truck and hauled away. Chips from one ownership shall not be blown onto a different ownership.

When brush disposal is performed by mowing, all "mowable" brush (less than 4 inches in diameter) shall be stacked length-wise, more or less along the centerline of the right-of-way. No brush shall be stacked within fifteen feet of any pole location. Brush stacked for mowing shall be mowed each day unless land owners and Great Lakes Energy have been informed as to when the brush will be mowed as described above.

Signed permission must be obtained from the land owner prior to windrowing. Windrowed brush shall be stacked in piles along the edge of, but within the limits of, the right-of-way and "slashed" such that they do not exceed 4 feet in height. Brush from one ownership shall not be windrowed onto another ownership.

All wood 4 inches in diameter and larger shall be cut to 100 inches in length and stacked along the edge of, but within the limits of, the right-of-way easement. If there is no "tree line" between the right-of-way and the roadway, wood should be stacked on the backside of the right-of-way, away from the road. Logs from one ownership shall not be stacked onto a different ownership.

Logs shall be separated and windrowed immediately in front of the windrowed brush piles. Piles of windrowed brush and/or logs may be more or less continuous in nature, provided that a fifteen-foot wide break in the windrow shall be left at each pole location to allow easy access to the pole. No logs or brush shall be left across roads, trails or footpaths.

Presque Isle Electric & Gas Co-Op (prepared for staff request)

PIE&G has no written policy on where and when debris can be left at a site. We do chip brush in yard (mowed) areas. If not in a yard area the brush and wood are piled on the back side (if paralleling roadway) of the right of way.

Presque Isle Electric & Gas Co-Op (contract excerpt)

- (a) All brush in yard areas (or otherwise in front of improved locations) will be chipped or removed;
- (b) In all other (unimproved) areas, all brush will be piled along the edge of the right-of-way;

(c) Where any power line runs adjacent to the right-of-way line of a road, the brush will be piled on the back side of the power line right-of-way away from the road;

Tri-County Electric Cooperative (prepared for staff request)

Routine debris – urban (maintained): Smaller branches chipped and removed. Large wood cut and left (4 ft sections) in residential areas and along roads.

Routine debris – rural (un-maintained): Limbs cut and wind-rowed in non-residential areas & deep ROW. Wood, branches and limbs remain in non-maintained areas.

Storm debris: Not responsible for storm damaged trees and debris. Wood, branches and limbs remain for owner cleanup.

Edison Sault Electric Company (prepared for staff request)

Edison Sault does not have a written policy with respect to debris accumulated from cuttings. In most cases all small debris is chipped and removed from the job site and larger pieces are left at the property owner's request. Where removal is necessary, our contractors remove debris that they have produced either as specified in the agreement or at an extra charge to Edison Sault.

Edison Sault Electric Company (contract excerpt)

Routine Debris (Urban) Chip brush, leave wood (if customers so desire).
Storm Debris Leave unless otherwise specified.

Alpena Power Company (prepared for staff request)

Routine Debris-Urban Customer decides if they want the wood removed or not. Otherwise removed. All limbs are chipped and removed.

Routine Debris-Rural Same as above for residential. All debris is wind-rowed in non-residential.

Storm Debris Not responsible for wind damaged trees and debris. If additional cutting is required to restore service, then we remove all debris resulting from APC's trimming.

Alpena Power Company (contract excerpt)

All tree limbs and branches cut manually by the Contractor shall be immediately and continuously chipped during the progress of the Contractor's work. Limbs and brush removed by the Contractor at ground level (in lieu of removal with brush hog equipment due to different terrain, etc.) shall be chipped also. Contractor will not be allowed to cut off the trees and brush at ground level, lay it down and leave it. Limbs and brush cut during the trimming/removal work shall not be placed in piles and left overnight for chipping the following work day.

Contractor shall be responsible for the disposal of all tree lumber, tree limbs, brush or wood chips generated by his tree cutting/trimming operations. APC has contacted ABTCO in Alpena concerning disposal of wood chips from our type of trimming work. They have indicated that they will accept wood chips from our type of work as long as all the material in the load has been chipped.
APC will not provide a disposal site for any chips generated by the work.

Consumers Energy Company (prepared for staff request)

Consumers Energy does not have a formal written policy on debris clean up due to the complexity and variety of individual situations. Our current practices during non-storm and storm situations were developed based on providing safe, reliable delivery of electricity in a variety of situations. ... The clean up of this debris varies for each situation and is dependent on ownership of the property on which the CE facility is located, the type of line clearing performed, the condition of the property prior to the line clearing activity, customer/property owner preferences and any applicable local ordinances. ... Therefore, Forestry professionals assess each site and each tree to ascertain the best way to make a line safe and reliable and leave the site in a condition consistent with its intended use.

Consumers Energy Company (mail brochure)

In yards, and other maintained areas, they (Forestry crews) usually chip all brush debris. Larger wood from the line clearing will be cut into manageable pieces and left for landowner use. In areas that are not maintained, the brush will be piled in windrows along the power line right-of-way creating good habitat for animals and helping to suppress future tree growth. When trees are removed, stumps are left and cut as close to the ground as possible.

Consumers Energy Company (letters mailed before work begun)

Debris that is up to four inches in diameter will be chipped and removed from lawn areas only. Remaining wood is cut to manageable sections and left on site.

Consumers Energy Company (language during storm restoration)

Consumers Energy will trim or remove trees interfering with electric restoration activities. Clean up of debris from tree trimming or removal during a storm emergency is the responsibility of individual property owners.

Detroit Edison Company (prepared for staff request)

Routine maintenance- Line Clearance crews will chip and remove small branches and debris they create. Larger wood will be cut to handling

length and left on-site. All branches and smaller limbs from dead and diseased trees will be left on the property for the customer to use or dispose of responsibly.

Storm debris- Line clearance crews do not remove tree debris that is a result of a storm. Brush and wood are left on site. It is the property owner's responsibility to contact their community Department of Public Works, private trash collector, or professional tree-removal service for disposal advice.

Detroit Edison Company (Mutual Assistance lines crew guidebook)

When tree debris is caused by a severe storm, Detroit Edison does not remove it. Broken and uprooted trees are cut just enough to reach the area needed to make repairs. Brush and wood are left at the customer's property so that we can quickly proceed with other restoration work.

Detroit Edison provided a copy of printed tree debris removal policy. It echoes the above and addresses ash-tree debris, which they do not remove. Detroit Edison also provided copy of a letter sent to communities prior to trimming and a press release consistent with their response to staff request. The press release adds additional detail regarding a customer responsibility to keep tree branches away from the service drop.

We Energies (prepared for staff request)

Wisconsin Electric's policies for handling tree debris vary depending on the purpose of work being done. Where trimming is needed to establish tree clearance from conductors, Wisconsin Electric chips and removes the brush unless the customer has provided permission to leave it behind. All wood is left at the property unless the property owner has requested that it be removed. When Wisconsin Electric facilities have sufficient clearance, we assist by trimming to enable a customer to safely perform work on their tree, and since wood and brush can be handled safely by the customer along with the remainder of the tree, all debris is left for the customer. Finally, for all situations of broken limbs and fallen trees resulting from weather events and tree decay, wood and brush is left for customers to handle unless the amount of debris can be hand carried.

We Energies (Tree Trimming Information sheet)

We cut the wood to fireplace size and leave it on your property so you can use it or give it to others. We remove and chip small branches and make the wood chips available to the public at several locations.

We Energies (Power Restoration Work door hanger)

Due to power outages resulting from severe weather, we had to clear tree-related material in order to restore power.

To continue restoring service to our customers in a timely manner during severe weather, we must leave behind the wood and/or brush for disposal by the property owner.

We Energies provide additional detail for debris removal in its Work Procedures Manual. This six page document details such additional things as what forms to use, length to cut wood, length to cut brush, dealing with fences and third parties, and handling chips. In regard to storm restoration work, crews are directed to leave storm debris on site limiting clean up to branches that can be hand carried and safely transported away without chipping.

Wisconsin Public Service Corporation / Upper Peninsula Power (contract excerpt)

Brush and debris from public and private landscaped properties shall be removed and disposed of upon completion of the work in accordance with desires of the public authorities or property owners.

Chipped and/or shredded material, whenever possible, shall be blown onto the right of way. This practice must be done in a manner that does not adversely affect drainage, access in the corridor, or leave debris in nearby roads.

Contractor required to locate and utilize dumping locations to meet state, federal, and local requirements.

Xcel Energy (excerpt from vegetation management guideline)

3.2.1 Routine Maintenance /Scheduled Work

Routine Maintenance is proactive, scheduled work performed on a circuit/maintenance map basis. In general, all debris is removed, while logs are cut into manageable-sized pieces and left on the property for the customer.

Xcel Energy does not currently charge a fee for the trimming or dropping of trees related to safety zone requests, but it is important that the contractor clearly communicate to the requesting party that all debris will be left on site.

3.2.4 Emergency/Storm Response

Contractor personnel are required to respond to storm situations in accordance with the regional storm response process. Contact the Vegetation Management Representative to confirm applicable regional

processes. Only work necessary for the restoration of power will be performed. A reasonable attempt should be made to notify customers. No debris disposal will be attempted for any tree work performed.

Complaint Synopsis

Attachment 2

Alpena Power reported that during the years 2005 through November 2007 they had 6 complaints that involved debris removal.

Consumers Energy reports having performed tree trimming on tens of thousands of properties since 2004. They distinguish debris removal from "yard cleanup" complaints. Of 13 yard cleanup MPSC complaints in 2004, none relate to debris removal. Of 11 yard cleanup MPSC complaints in 2005, two directly related to debris removal. Of 19 yard cleanup MPSC complaints in 2006, two related directly to debris removal. So far in 2007, CE has received 19 debris removal related complaints. Most of the 19 reflected debris being left at the work site in non-maintained areas. Seventeen of them were closed through discussion with the property owners.

Detroit Edison

Complaints	2004	2005	2006
Corporate total	5,482	6,127	5,863
Line Clearance total	NA	34	20
Debris including storm debris	NA	7	2
Storm debris	NA	0	1
Request for trimming/removal	NA	8	6

Edison Sault reports dealing with only one tree removal complaint and one debris complaint in the past several years.

We Energies reports 13 vegetation related complaints from 2005 through 2006. 11 of them were received via feedback during customer satisfaction calls. 3 of the complaints in 2006 were related to debris removal.

Wisconsin Public Service Corporation and Upper Peninsula Power Company track all complaints and tree trim refusals in the same category. Complaints are not broken down by trimming, removal or debris. The specific data are as follows:

Complaints/Refusals

	2004	2005	2006	Total
WPSC	0	2	2	4
UPPCO	3	8	27	38

Xcel Energy reports 17 tree trimming or removal complaints for 2004 through 2006. Of that, 9 dealt with debris removal. Of the 9, two customers submitted two brush complaints each.

Cooperatives, of those responding on complaints, report that they do not track tree trimming complaints except for those sent from the PSC. They make a general statement that the tree trim debris removal complaints are very minimal and are promptly addressed.

Attachment 3 Part 1 of 6

Issues	Alpena Power	Consumers Energy	Detroit Edison
Trim cycle	5 years	At \$28.3M rate order tracker: Approximately 14 years – Distribution, 4-5 years – High Voltage Distribution (HVD)	4 to 5 years
Transmission	50-110 ft. width	HVD: 80-132 ft. width, 15 ft minimum clearance – 46 kV, 20 ft minimum clearance – 138 kV	15 ft. clearance. In addition, all clearances are based on species of the tree.
Distribution	10 ft. minimum clearance	30 ft. width, 10 ft minimum clearance	4 -10 ft. clearance. Faster growing trees are trimmed more than slower growing trees.
Secondary	2.5 ft.	2.0 ft.	2-4 ft. Considerations are made for the location of the tree to the wires.
Service drop	2.5 ft.	2.0 ft.	Customer responsibility
Other attachments	We do not clear for other attachments.	Not conducted.	
Notification	No advance notification. Contractor uses door tags and personal notification once in the work area.	Postcards, doorcards, letters and marking in advance.	2 month community list – website/door tag/first class letter/media release with community information.
Contact Information	989-358-4900; 989-358-4945	All documents contain name and phone.	Notification letter provides website and company 1-800 telephone number. Website has 1-800 number and link to the System Forester.
Routine debris-urban	Customer decides if they want the wood removed or not. Otherwise removed. All limbs are chipped and removed.	Chip limbs, cut & leave larger wood in residential yards & along city streets.	Small branches chipped & removed. Large wood cut & left. Dead, diseased & ash wood left on property.
Routine debris-rural	Same as above for residential. All debris is wind-rowed in non-residential.	Limbs cut & wind-rowed in non-residential areas & deep ROW; small limbs chipped and removed in maintained areas.	Non area distinction
Storm debris	Not responsible for wind-damaged trees and debris. If additional cutting is required to restore service, then we remove all debris resulting from APC trimming.	Left at site. Sidewalks/driveways/roads cleared of obstructions to allow safe access.	Brush and wood debris left on property-specifically addressed. Tree debris caused by acts of nature are the customers' responsibility.
Danger trees	Only if they interfere or threaten to interfere with service.	Hazardous trees removed or trimmed if they interfere or threaten to interfere with HVD lines.	Trees that fall within the normal scope of routine maintenance that have a severe defect. For example trees with cracks, cankers, dead limbs, root rot or construction injury
Standard	International Society of Arboriculture	ANSI A300 FERC FAC-003-1	International Society of Arboriculture. How to Prune Trees USDA NE Area State & Private Forestry NA-FR-01-98 and Pruning Trees Near Electric Utility Lines by Dr. Alex Shigo, PhD.
Other tree work	No work performed other than service related.	Private Tree Service Program	None
Stumps	We do not remove stumps.	Not removed.	Do not remove stumps.
Trim vs remove	We remove vs. trim on all primary and transmission voltages when permitted.	Removed in non-maintained area; case-by-case otherwise.	Contact customer for removal
Wood chips	Removed from the area.	Available at customer request for pickup or dropped off if nearby.	Chips are not available to the public. Requests for charitable contributions are considered, i.e. Greening of Detroit tree planting and Habitat for Humanity.
Trees marked	Yes.	Yes. Blue "X" or dot.	Trees marked for removal with a white "X".

Attachment 3 Part 2 of 6

Issues	Edison Sault	Indiana Michigan	UPPCo
Trim cycle	Approximately 5 years	Currently working on a 7 year plan to get I&M onto a 4 year cycle.	6 years
Transmission	Not Applicable	50-200 foot r/w cleared full width	N/A
Distribution	Trim to maintain clearance for 4-5 years and as per Contractor Instruction booklet	10 ft minimum clearance	6 feet for slow growing species, 10 feet for fast growing species. 20 feet overhang for all species
Secondary	Only if ok'd by ESE	Tri-plex treated similar to service drops; open-wire is trimmed out when working on adjacent primary	For coated secondary – Only if causing deflection to line. For open 3 wire secondary – 3 feet for slow and 5 feet for fast growing species
Service drop	Only if ok'd by ESE	Primarily left to customer to take care of unless limb is rubbing to the point that insulation may be wearing off (minimum trimming)	Only if causing deflection to line
Other attachments	No trim for any other wires	Will selectively clear poles if climbing is required (off-road locations)	Only if causing deflection
Notification	By radio and newspaper and door hangers; some areas done personally door-to-door	Notified by work planner initially, letter mailed approximately 2 weeks in advance of work proceeding, door hanger card left days prior to crews coming onto the property.	Combination of letter, door card & verbal
Contact Information	906-632-5152 – also on door hangers and other advertised information	Contact information available in the pre-notification information and through Customer Solutions Center.	1-800-450-7260
Routine debris-urban	Customer decides if they want the wood removed or not. Otherwise removed. All limbs are chipped and removed.	Branch & limb debris removed from maintained or landscaped areas	Limbs & brush smaller than 4 inch dia. chipped and hauled away. Larger wood left on site "except where prohibited by local ordinances".
Routine debris-rural	Same as above for residential.	Wood, branches and limbs remain in non-maintained areas	Limbs & brush smaller than 4 inch dia. chipped or piled & left on site. Larger wood left on site.
Storm debris	Return to area after service restoration.	Does not return to remove wood, branches and limbs	No clean up
Danger trees	Assessed on an individual basis; ESE makes final call	Removed or topped below lines if a tree presents an imminent danger to the integrity of the primary line.	Depends on tree situation, See WPS/UPPCO Specification
Standard	See attachment for Contractor Instruction book	International Society of Arboriculture, ANSI, Tree Care Industry Association	International Society of Arboriculture, ANSI, Tree Care Industry Association
Other tree work	Private work done at customer's request and their payment responsibility; scheduled separately from ESE work	N/A	N/A
Stumps	No stump removal for ESE	Generally left, but is a negotiable item in exchange for removals in urban, landscaped areas.	Treat with herbicide and leave
Trim vs remove	As designated by ESE based upon onsite visit and risk determination.	"Climbable" too close to power line	See Tree Removal Process in WPS/UPPCO Specification
Wood chips	Removed from the area or given to customer.	Generally removed from the location unless landowner specified otherwise.	See 303.1 to 3 in WPS/UPPCO Specification
Trees marked	No	Yes	When needed

Attachment 3 Part 3 of 6

Issues	We Energies	Wisconsin Public Service Corp.	Xcel Energy
Trim cycle	Every few years	4 to 6 years depending on growth rate of predominant tree species	3 to 5 years
Transmission		N/A	50-125 ft. width
Distribution	Not specified	6 feet for slow growing species, 10 feet for fast growing species. 20 foot overhang for all species.	Goal to prevent trees into wires
Secondary	More resistant to tree contact	For coated secondary – Only if causing deflection to line. For open 3 wire secondary – 3 feet for slow growing species, 5 feet for fast growing species	Only if major interference, such as broken limb
Service drop	Trim branches preventing wire to hang freely	Only if causing deflection to line	Only if major interference, such as broken limb
Other attachments	Do not trim for telephone or cable lines	Only if causing deflection	Does not trim for these wires
Notification	Letter or door notice	Combination of letter, door card & verbal	Voice, post card or door notice
Contact Information		1-800-450-7260	Phone numbers listed on website
Routine debris-urban	Remove & chip small branches, cut wood to fireplace size and leave on site	Limbs & brush smaller than 4 inch dia. chipped and hauled away. Larger wood left on site "except where prohibited by local ordinances".	Remove & chip small branches, cut wood to fireplace size and leave on site.
Routine debris-rural		Limbs & brush smaller than 4 inch dia. chipped or piled & left on site. Larger wood left on site.	Small limbs & brush chipped & left if compatible with site. Larger wood left on site.
Storm debris	Not able to assist in removing debris from yards	No clean up	Brush and wood debris left on property-specifically addressed.
Danger trees	Leave behind any wood & brush from assisting customer contractor for safety	Depends on tree situation, See WPS/UPPCO Specification	Off ROW trees that have an unacceptable risk of line interference before next maintenance cycle are removed.
Standard	International Society of Arboriculture, Tree Care Industry Association	International Society of Arboriculture, ANSI, Tree Care Industry Association	ANSI "natural directional pruning"
Other tree work	No charge to de-energize for customer tree work	N/A	No charge to de-energize for customer tree work
Stumps	Do not remove stumps	Treat with herbicide and leave	Do not remove stumps
Trim vs remove	Remove only when hazard is severe	See Tree Removal Process in WPS/UPPCO Specification	Remove if cheaper than trimming. Contact customer for removal.
Wood chips	Available to public at several locations	See 303.1 to 3 in WPS/UPPCO Specification	Available in truckload if in area
Trees marked		When needed	No, unless tree removal or trim needs customer concurrence and customer not available.

Attachment 3 Part 4 of 6

	Alger Delta	Cherryland	Cloverland
Trim cycle	7 years		9 years for primary distribution, secondary/service drop generally by member request
Transmission	None	to 230 ft R-O-W	Do not own
Distribution	30 foot width	30 ft width	Cut 30 feet wide
Secondary	3 feet from conductors		Trim 3 feet from the wires
Service drop	3 feet from conductors		Trim 3 feet from the wires
Other attachments	as required to remove contact		Do not cut trees for attaching utilities
Notification	Personal contact, door hangers, phone calls.	letter months in advance	Notice printed in "Country Lines" (mailed to all members)
Contact information	Provide information on door hangers	door hanger card	Contained in "Country Lines" article
Routine debris-urban	We have no urban areas	Chip limbs, cut & leave larger wood in residential areas & along road	For yard areas where the grass is mowed and maintained, brush is removed and all logs 4" diameter and larger are left for the property owner
Routine debris-rural	Do as member requests, which frequently is to leave logs (8 feet or longer) stacked longitudinally with ROW. Absent that, we windrow, or chip as determined by the area we're working in.	Limbs cut & windrowed in non-residential areas & deep ROW	For cross country ROW - brush is left windrowed at the edge of the ROW if not mechanically mowed. For ROW along a road - brush is normally (but not always) chipped and blown into ROW. All logs 4" diameter and larger are left for the property owner.
Storm debris	Cut up into small pieces. Will only return if requested and debris is in ROW or easement.		Anything cut for restoration is left for the property owner
Danger trees	Remove if they pose any threat to our lines.	"If they interfere or threaten to interfere"	For yard areas where the grass is mowed and maintained, brush is removed and all logs 4" diameter and larger are left for the property owner. For non-yard areas, the trees are cut down and left for the property owner.
Standard	ANSI A300, RUS, ACRT		National Arborist Association
Other tree work	Recommend private contractors.	Private Tree Service Program	None
Stumps	We remove to within 3" or less of the ground.	Private Tree Service Program	We do not remove stumps
Trim vs remove	Follow our forester's recommendation. Prefer removal whenever possible.	Discussed in FAQ	Generally, trees within ROW are removed and trees encroaching are trimmed.
Wood chips	Leave chips in ROW or easement.	Available in area or from crew.	Chips are made available to members depending on quarantine.
Trees marked	Yes	Yes	Trees are not pre-marked prior to cutting

Attachment 3 Part 5 of 6

	Great Lakes	HomeWorks Tri-County
Trim cycle	7 years	Currently 7 to 8 years
Transmission	Not Applicable	Not Applicable
Distribution	30 ft width 1 phase, 40 ft 3 phase	30 ft
Secondary	Only if rubbing/pushing up/out	Only if it presents a hazard--dead, weak or leaning trees
Service drop	Only if rubbing/pushing up/out	Only if it presents a hazard--dead, weak or leaning trees
Other attachments		Only if it presents a hazard--dead, weak or leaning trees
Notification	<i>Country Lines</i> magazine article annually in spring, post card two months prior to work in the area, automated phone calls made two weeks prior to commencing work	Postcards via U.S. Mail - two weeks in advance.
Contact information	Phone numbers listed	Cooperative phone number included in letter
Routine debris-urban	Large limbs & logs cut and stacked, small limbs chipped and hauled	Smaller branches chipped and removed. Large wood cut and left (4 ft sections) in residential areas and along roads.
Routine debris-rural	Large limbs & logs cut and stacked. Small limbs might be windrowed along edge of right-of-way, chipped and spread on right-of-way, chipped and hauled, or shredded with brush hog depending on situation	Limbs cut and wind-rowed in non-residential areas and deep ROW. Wood, branches and limbs remain in non-maintained areas.
Storm debris	Large limbs and logs left at site. Small limbs in yard areas chipped at later date only if cut for company convenience	Not responsible for storm damaged trees and debris. Wood, branches and limbs remain for owner cleanup.
Danger trees	Dead, weak, leaning, or otherwise interfering or threatening to interfere with line are cut, whether inside or outside right-of-way	Site visit. Hazard trees trimmed or removed if dead, weak or leaning.
Standard	Rural Utilities Service	Rural Utilities Service
Other tree work	Private tree service (discontinuing in 2008)	Private Tree Service
Stumps	Not ground, cut as flush as practical	Private Tree Service
Trim vs remove	Trim along edge of right-of-way, remove within right-of-way. Exception is landscaped areas, which are trimmed unless danger tree or permission obtained	Remove in most areas. Trim at customer request in maintained areas.
Wood chips	Hauled off site or dropped for customers when in area. May be blown into right-of-way in rural areas	Available in area from crew at customer request.
Trees marked	Not routinely, occasionally for danger trees	Only in maintained areas.

Attachment 3 Part 6 of 6

	Midwest Energy	Presque Isle Electric & Gas	Thumb Electric Cooperative
Trim cycle	Currently 8 years	Eight Years	trans-3yrs, dist-5-8years
Transmission	Not applicable		80 feet width
Distribution	30 ft.	30 to 40 feet	30 foot or 10 ft clearance
Secondary	Only if it presents a hazard--dead, weak or leaning trees		
Service drop	Only if it presents a hazard – dead, weak or leaning trees	3 ft radius	
Other attachments	Only if it presents a hazard – dead, weak or leaning trees		
Notification	Attempt to speak to customers in person. Letters and door hangers used as well.	Letter months in advance	Post cards or newspaper
Contact information	Cooperative phone number included in letter	In advance letter	Phone numbers
Routine debris-urban	Smaller branches chipped and removed. Large wood cut and left (4 ft sections) in residential areas and along roads.	Small branches chipped & removed. Large wood cut & left.	Not Applicable
Routine debris-rural	Limbs cut and wind-rowed in non-residential areas and deep ROW. Wood, branches and limbs remain in non-maintained areas.	Wood & brush wind-rowed and piled on edge of ROW	Cut and stack firewood, chip all others, rake lawn
Storm debris	Not responsible for storm damaged trees and debris. Wood, branches and limbs remain for owner cleanup.	brush and wood debris left on property	try to clean up
Danger trees	All dead, dying, defective or leaning trees which endanger the safe operation and maintenance of the line shall be routinely removed.	removed after a site visit to determine threat	remove as many as possible
Standard	National Arborist Association	ANSI/NESC	
Other tree work	Private Tree Service	no charge to de-energize for customer tree work	TESC private tree service program
Stumps	Private Tree Service	do not remove stumps	TESC private tree service program
Trim vs remove	Remove in most areas. Trim at customer request in maintained areas.	contact customer for removal	remove if can, otherwise trim
Wood chips	Available in area from crew at customer request.	available in area or from crew	available in area
Trees marked	Trees are not pre-marked prior to cutting		yes