

Division 2-1 (Electric)
Vegetation Management

Request:

Provide any outage statistics that are available specific to the cause of the tree outages. Information including whether the outage was caused by: limbs, tree, tree uproot, live or dead tree, and if the tree was in the right-of-way or outside.

Response:

The table below shows five years of tree-related interruptions with major storms excluded. The Company breaks tree interruptions down into four categories – Broken Limb, Vines, Tree Fell and Growth only.

	2006		2007		2008		2009		2010	
Cause	# Evts	Cust Int								
Tree-Broken Limb	534	89,017	372	53,595	584	58,412	384	46,989	511	59,037
Tree-Vines	52	511	47	438	51	515	52	392	48	673
Tree Fell	119	40,638	135	22,347	277	38,591	239	26,424	342	36,111
Tree Growth	40	4,282	46	5,987	48	588	46	509	52	687
Summary	745	134,448	600	82,367	960	98,106	721	74,314	953	96,508

Prepared by or under the supervision of: Jennifer L. Grimsley

Division 2-2 (Electric)
Vegetation Management

Request:

The report states that the core element Cycle Pruning program is the determination of the optimal schedule of pruning events for each circuit which is based upon a set of dynamic factors. However, the requested budget for Cycle Pruning is based upon a fixed timeframe or rotation. Provide the system average cycle trim per circuit value in years. Considering the maturity of the vegetation management program, wouldn't the effort required to manage the tree growth rates be less than when the program was started? Based on this reduction in effort, would an adjustment in the overall cycle provide additional implementation cost efficiency? If a 4.5 year cycle is considered, what would be the budget requirement?

Response:

The weighted average current cycle length is 4.1 years. At the optimum cycle length of 4 years we are attempting to prune vegetation on a circuit right at the point where growth from underneath the conductors is just about to reach the wires and growth from side vegetation is just about to reach the field side phase. At the optimum cycle length of 4 years generally the same amount of work will exist each time we prune a circuit as the utility forest continues to grow, previously pruned branches re-sprout from mature trees, smaller trees grow into the wire zone, over mature trees continue to die off which requires us to remove limbs above the conductors and finally branches and trees are continually damaged by storms or succumb to insect and disease infestation both of which require removal during the pruning process. With all that considered, the cost of cycle trimming is expected to remain fairly consistent into the future excepting external costs to the contractors such as labor, fuel and employee benefits. Extending the cycle to a point where vegetation is allowed to grow into conductors, between conductors or across the top of multiple phases is the turning point which will produce a significant increase in cycle pruning costs. It is at that point that the pruning operation requires additional steps to safely remove the vegetation usually due to a second or third "safety cut" required to drop the branch end being pruned between the conductors so not to cause a phase to phase fault followed by the primary cut to remove the branch from the wire zone. The Company believes that extending the cycle past 4 years will potentially put circuits into this growth stage explained above potentially raising pruning costs per mile. Finally, allowing branches to grow between phases or across phases will increase the risk of phase to phase faults and will negatively affect service reliability.

Division 2-2 (Electric) continued
Vegetation Management

If the Cycle Pruning program was moved to a 4.5 year cycle the straight annual cost would be approximately \$4.579 million or \$571K below the filed need of \$5.150 million for the 4 year cycle assuming no change in the cost per mile. However the Company believes that at a 4.5 year cycle we would see an increase in the vendor's cost per mile which cannot be easily estimated at this point but would potentially negate any cost savings from the cycle change.

Prepared by or under the supervision of: Jennifer L. Grimsley

Division 2-3 (Electric)
Vegetation Management

Request:

Explain why a generic hazard tree economic benefit discussion is included in the plan and why there is not specific detailed data available to calculate the cost avoidance in lieu of a weighted average approach?

Response:

The weighted average approach is used due to the wide range of possible costs involved in both hazard tree removal and emergency restoration. Hazard tree work can range from the removal of a single large lead overhanging conductor outside of the pruning specification to the removal of a 16-foot single stem Poplar which can be roped and felled into the woods to a 32-foot oak in a residential front yard requiring full cleanup. Emergency restoration from a single tree-related interruption could range from clearing the tree and closing in a fuse cutout to replacing 2 or 3 poles, cross arms and all associated hardware. In addition, the Company does not have cost data for the removal of individual hazard trees.

Prepared by or under the supervision of: Jennifer L. Grimsley

Division 2-4 (Electric)
Vegetation Management

Request:

Discuss why Hurricane Irene tree clearing efforts did not reduce cycle trimming and hazard tree mitigation requirements?

Response:

It is important to note that Hurricane Irene should be characterized much more like a tropical storm as generally winds did not reach Hurricane strength. Much of the damage from Hurricane Irene came from trees outside the wire zone or pruning zone and so the absence of those trees or limbs will not reduce the pruning work on a circuit. In fact, the Company's opinion is that Hurricane Irene will increase the work required of our vegetation management program. Damaged branches within the crowns of trees remaining from the storm well above the pruning dimensions will need to be removed by our contractors as our pruning specification requires that all damaged, dead and/or dying limbs above the conductors be removed during the pruning operation. Storm damage break points in branches and leads will now sprout in many species requiring some form of corrective pruning on the short term and creating additional growth into the wire zone which must be controlled in the future. These same break points increase the trees susceptibility to decay and insect infestation which in turn creates the potential for future hazardous conditions requiring remediation. Finally, the hurricane, especially due to its relatively long duration, may have weakened tree structures thus increasing the failure potential for those trees and increasing the rate of future tree mortality. All of these effects will add both short term and long term costs to the Company's vegetation management program rather than reduce them.

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Division 2-5 (Electric)
Vegetation Management

Request:

Provide detailed budget information for the All Other Activities, Core Activities, budget item. While the FY2013 proposed is lower than the FY2012 forecast, the actual FY costs have increased each year since 2009.

Response:

The Company has reduced the spend in both the Worst Feeder and Interim/Spot Trim categories due to the proposed Cycle Prune Recovery work and the Post Irene EHTM work. These new categories of work for FY13 should offset work in both categories. Should the Recovery work and the Post Irene EHTM work not be approved the Company will need to increase both the Worst Feeder and Interim/Spot Trim categories by \$80K in each activity for a total increase in the All Other Activities category of \$160K.

Work Type	Activity	Expn Type Roll up	Grand Total
Worst Feeders	DM1222	Consultant/Contractor	80
Interim/Spot Trim	DM1235	Consultant/Contractor	81
Customer Requests	DM1010	Consultant/Contractor	240
Trouble Maintenance	DM1210	Consultant/Contractor	163
Staff	DM1000	Consultant/Contractor	209
		Base labor	251
	DO9000	Employee Costs	13
		Materials	18
		Other	29
		Overtime	9
			3
Transportation	35		
Grand Total			1,131

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Division 2-6 (Electric)
Vegetation Management

Request:

Explain the increase in the Police/Flagman Detail for the FY2012 and FY2013. For comparable levels of spend in pruning and trimming activities in FY 2009-2010, the budget item is significantly less than proposed for FY2013.

Response:

The increase in police detail/flagman cost is a result of the FY12 actual spend YTD and a forecast for total spend at year end, plus 2% for inflation. We do not control the locations where we are required to use these details and also do not control the costs or rate increases for these details. Since 2009 we have seen a significant increase in the requirement for use of police details.

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