

Atlantic City Electric Company (NCR00688)  
Delmarva Power and Light Company (NCR00752)  
Potomac Electric Power Company (NCR00881)

Pepco Holdings, Inc.  
Transmission Vegetation Management Program  
for  
Potomac Electric Power Company, Atlantic City Electric,  
and Delmarva Power & Light

Revision: 6.0

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Prepared by: PHI Senior Staff Forester

Signature: *Genge P. Nelson*

Approved by: Vice President, Operations and Engineering

Approval Date: May 31, 2013

## Version and Review History

Revision #	Date	Action	Revision/Changes
Revision 6.0	Date: 5/31/13	Annual Review. Revision approved by George Nelson	Replaced old Pepco Brush Control Specification with current Pepco Brush Control Specification. Added definitions to Glossary; clarified Comprehensive Mgmt. Plan, Annual Work Plan; added restrictions for borders of ROW; removed mowing statistics.
Revision 5.0	Date: 12/20/12	Revision approved by George Nelson	Removed Quarterly Reporting section and Quarterly Reporting Form from TVMP. Quarterly Reporting addressed in separate document(s) from TVMP.
Revision 4.0	Date: 5/31/2012	Annual review. Revision approved by George Nelson.	Added Section numbers, updated terminology, provided clarifications. Deleted Compatible Use and Selective Grass Mowing sections. Added Appendix H Glossary of Terms, Appendix I Detailed Specifications on Integrated Vegetation Management, Appendix K 48-Hour Reporting Form, and renamed Appendix H as Appendix J Quarterly Reporting Form.
Revision 3.0	Date: 5/31/2011	Annual review. Revision approved by Michael Maxwell,	Updated terminology and titles, provided clarifications. Moved location of Objectives. Updated Appendix E.
Revision: 2.0	Date: 6/30/2010	Annual review.	No changes.
Revision: 2.0	Date: 6/30/2009	Annual review.	No changes.
Revision: 2.0	Date: 3/5/2008	Annual review. Revision approved by William M. Gausman	Provided clarifications on clearances and ROW width and selective mowing. Updated Aerial Inspection

			<b>Specification.</b>
<b>Revision: 1.0</b>	<b>Date: 6/15/2007</b>	<b>Initial version approved by William M. Gausman</b>	<b>Initial version documenting existing procedures and practices.</b>

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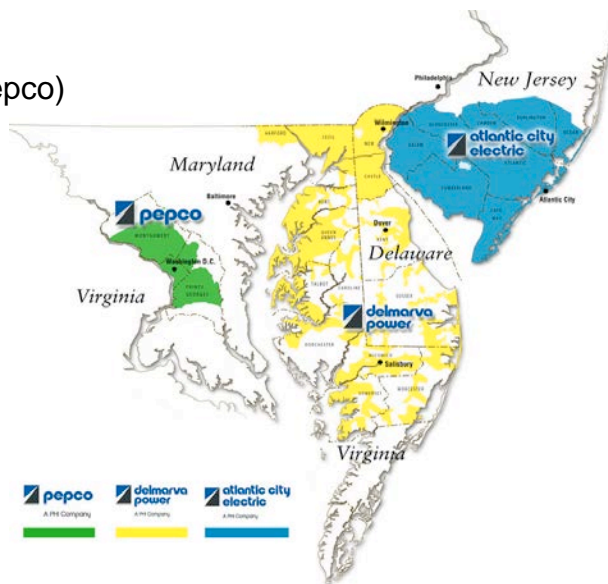
## 1. Introduction

The Pepco Holdings, Inc. (PHI) transmission system consists of the transmission systems of three PHI operating companies (Companies), registered as Transmission Owners:

Potomac Electric Power Company (Pepco)

Atlantic City Electric Company (ACE)

Delmarva Power and Light (DPL)



As the holding company for the separate Transmission Owners, PHI is responsible for developing and implementing its Transmission Vegetation Management Program (TVMP), as required by NERC Standard FAC-003-1 Transmission Vegetation Management Program (the Standard). See Appendix A for a copy of the current standard. The TVMP includes the Transmission Owners' objectives, practices, approved procedures and work specifications.

## 2. Objectives

The main objective of the TVMP is to avoid vegetation-caused outages to the PHI transmission system by managing the rights-of-way (ROW) so as to achieve at all times and under all expected conditions, an acceptable clearance between the conductors and the vegetation on or off the ROW. This objective meets requirement R1 of NERC Standard FAC-003-1 to develop a TVMP.

The vegetation, under PHI's transmission lines, is inspected and maintained on a regular basis, as per requirement R1.1 of the Standard. Contractors are engaged to obtain the required clearances between the conductors and vegetation on the ROW as per requirement R1.2 of the Standard, using a number of methods. These methods are evaluated for safety and environmental impact. An Integrated Vegetation Management (IVM) approach is employed. IVM offers a systematic way of planning and implementing a vegetation management program, and includes utilizing mechanical, chemical, biological, and cultural control methods. IVM is a system of managing plant communities in which vegetation manager sets objectives, identifies compatible and incompatible vegetation, considers action thresholds; and evaluates, selects, and implements the most appropriate controls method or methods to meet those objectives (ANSI A300 Part 7). More information about IVM is found in Appendix I of this document.

This approach requires qualified and trained personnel, as per requirement R1.3 of the Standard. In addition to meeting the requirements for system reliability, PHI manages its ROW with concerns for the environment. This is achieved through promoting the growth of favorable, low-growing, non-woody native vegetation. This, in turn, serves as food sources and shelter for various animals and pollinating insects. Working with Local, State and Federal natural resource agencies allows PHI to; identify, maintain and protect areas containing rare and/or threatened and endangered flora and fauna within its ROW.

Maintenance is performed annually according to a scheduled work plan as per requirement R2 of the Standard. Additionally, as discussed in the clearance section of this document, PHI mitigates for special circumstances where clearances are restricted as required in section R1.4 of the standard, and the requirements of R1.5 are addressed in the imminent threat section of this TVMP .

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### 3. Practices and Approved Procedures

#### 3.1 Vegetation Aerial Inspection

PHI's transmission ROW vegetation aerial inspection program consists of an aerial patrol of all applicable transmission ROW twice annually, once at the start of the growing season and a second inspection during the dormant season. A forestry qualified observer is present on all inspection patrols, performs a limited visual assessment, and makes note of any noticeable potential vegetation hazards or potential conflicts that should be addressed. The inspections are conducted for each ROW individually, (some containing multiple circuits), looking for vegetative concerns and any unusual activities or conditions. The program is designed to be flexible enough to adjust the scheduled flight patrol(s) to changing conditions such as a late spring or extended growing season(s) to pick the optimal time for inspection. The plan also accommodates additional flight patrol(s) and/or ground inspection(s), should there be a need for any.

As result of the vegetation aerial inspection:

- Follow-up action items are developed to address any identified unusual conditions, such as potential vegetation that could cause reliability issues.
- These action items are then prioritized and ground inspected.
- All identified action items are evaluated and addressed if necessary.

This program meets requirement R1.1 of NERC Standard FAC-003-1 for the TVMP to have an appropriate inspection program.

#### 3.2 Clearances (Comprehensive Inspection)

PHI's TVMP is designed to maintain the minimum acceptable clearances at all times except where easement and/or statutory/regulatory restrictions exist. This is

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accomplished through a combination of regularly scheduled maintenance as well as spot treatment as indicated from the semiannual inspections. In addition, this TVMP addresses how minimum acceptable clearances are maintained in the light of special local circumstances that may require alternative methods. PHI's transmission vegetation management program will ensure minimum acceptable clearance at all times, and therefore meets requirements R1.2 and R1.4 of NERC Standard FAC-003-1 and IEEE 516-2009R, Table 5 on minimal safety clearances.

The TVMP calls for each 230 kV and 500 kV transmission ROW to be maintained at least once every four years on an annual growing season basis (i.e. could span almost five years). Such maintenance will obtain minimum acceptable clearances between conductors and vegetation. This assures the minimum acceptable clearances of the height of vegetation above the floor either at less than 10 feet in height for trees and undesirable brush, or at five feet at maturity for desirable brush, such as laurel, whose re-growth rate and height at maturity are low. Such a program can be assured of maintaining an acceptable clearance between the conductor and the vegetation over the duration of the cycle (i.e. the air gap as specified in IEEE 516-2009R, Table 5, which is shown as Appendix B in this document). The entire system is further reinforced by the semi-annual aerial inspection that ensures that any fast growth, fallen tree, or other hazard is identified and dealt with. Note that the clearance is maintained throughout the wire zone under the conductor, and, in accordance with certain local standards, PHI may in some circumstances allow a height at maturity of up to 15 feet in the border zone. , which is still consistent with maintaining the required air gap clearance. PHI does not allow for border zones on ROWs with multiple transmission or distribution structures

Clearance 1: The following clearances are targeted minimums:

115 kV	5 feet
138 kV	5 feet
230 kV	10 feet
500 kV	15 feet

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Clearance 2: As derived from the IEEE Standard 526-2009R, Section 42.2.3 Table 5, the calculated minimum clearances are as follows

115 kV	2.46 feet
138 kV	2.95 feet
230 kV	5.15 feet
500 kV	14.70 feet

While Clearance 1 is targeted minimums to maximize safety and reliability, vegetation should encroach no closer than the calculated distances above (i.e. Clearance 2) from the conductors at maximized engineered sag.

PHI's long-term experience in transmission vegetation management has confirmed the parameters of this approach, with only occasional intervention as indicated by inspection, and no "grow-in" outages.

### **3.3 Inspection Cycle (Comprehensive)**

An integral part of the maintenance program, scheduled preventative maintenance, is performed at least on each 230 kV and 500 kV transmission ROW once every four years or within the one day less than 5 years, which accommodates for a seasonal overlap. This is primarily a ground-based inspection of the ROW floor and its surrounding "walls" to identify vegetative encroachment, and/or trees which might be structurally weak (i.e., dead, split or undermined in some fashion, etc.) and which may have the potential due to the height and distance from the line to fall within the minimum acceptable clearance gap. The vegetative concerns identified are then addressed. A Comprehensive ROW management plan is created based on this field inspection, as well as other factors including IVM, local and state regulations, environmental concerns, prescription timing, historical data, and aerial inspections to develop a ROW specific management prescription.

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For those special circumstances in which PHI's standard method of vegetation management (IVM) is not sufficient to ensure that the minimum acceptable clearance is maintained or we are unable to do so due to ROW restrictions, PHI completes an exception report, a 12E Filing, that includes the special circumstances and reasons for the exception, as well as the special methods and measures taken to ensure compliance in such circumstances. Appendix G contains the existing exception reports, known as '12E reports'

In the attached contract specifications, PHI demonstrates its annual management plan and its methods to accommodate those local conditions (per R2 of the standards set forth in FAC-003-1)

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### 3.4 Imminent Threat Communications

The following processes shall be followed when vegetation is found to be an imminent threat to transmission system reliability: This process meets the requirement R1.5 of NERC Standard FAC-003-1 for communication imminent threats to transmission facilities due to vegetative conditions.

#### Process to report the vegetation problem to Transmission System Operations (TSO):

- Individuals aware of an imminent vegetation threat shall report the potential threat to the Sr. System Operator (SSO) and/or Supervisor, System Operations (SSO). Individuals aware of the threat could include Vegetation Management personnel, line crews, and trouble & service personnel.
- The SSO will be provided with the following:
  - Name and contact information of the person reporting the problem;
  - The transmission line number
  - The location of the vegetation
  - The likelihood of when the vegetation will fall or otherwise cause problems;
  - The anticipated nature of the damage if the problem materializes;
  - Anticipated time to correct the problem;
  - Accessibility of the location.
- The SSO shall contact Vegetation Management as needed and/or assign a trouble person to investigate.
- The SSO will make an assessment to work with PJM for switching or instructions/direction.

#### Process to Report the Tree Problems to Vegetation Management:

- Contact the appropriate ACE, DPL or Pepco TSO team
- SSO will in turn contact the Manager of Vegetation Management or the Staff Forester on call for the appropriate area.

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Process to Rectify the Tree Problem:

- Upon notification of the vegetation hazard, Vegetation Management shall initiate the action to remedy the problem.
  - During work hours, the Manager of Vegetation Management will notify the Staff Forester about the emergency
  - After normal business hours, the on call Staff Forester shall do so.
- The Staff Forester responsible will immediately proceed to the location of the vegetative threat.
- The tree contractor's supervision will dispatch a crew to the site immediately upon notification of the emergency and meet the Staff Forester at the site.
- Subsequent to the field inspection, the Staff Forester shall contact the respective SSO to provide an evaluation of the situation and to advise if an outage will be required.
  - If an outage is necessary, the appropriate SSO shall coordinate with PJM.
- The Staff Forester will contact the SSO when the work has been completed.

## 4. Work Specifications

### 4.1 Brush Control

'Brush control' is the term used to describe the process by which tall growing trees and shrubs are managed on the ROW. Tall growing trees and shrubs are also referred to as "undesirable," or "incompatible" vegetation," that have the potential to grow to a height that would interfere with the conductors. Vines, invasive or otherwise, which are growing up towers, poles, or guy wires, are also considered incompatible or undesirable vegetation. Choice of methods for controlling incompatible vegetation is evaluated as part of the IVM process. PHI will choose to employ one or more control methods. IVM allows for the evaluation and selection of vegetation control methods. These methods include manual, mechanical, herbicide, and cultural control methods.

Treating undesirable/incompatible vegetation with herbicides is one of PHI's primary methods of brush control, where permitted. In IVM, this is referred to as a chemical control method.

PHI is very conscientious with regard to the proper application of herbicides, and specifies both the herbicide selectivity and the methods of application to be used on its ROW. PHI specifies only those, herbicides which have been approved and registered by the Environmental Protection Agency (EPA) for use in controlling ROW vegetation. It is also necessary that PHI's contract applicator be certified and licensed (or working under direct supervision of a certified applicator) by the respective State's Department of Agriculture / Environmental Protection pesticide regulations. PHI also complies with all federal, state and local permit requirements for pesticide application and reporting. Treatment timing is based on objectives, site evaluation, and action thresholds.

Mechanical clearing is a method of brush control which employs the use of motorized cutting machines. These machines are specifically designed for ROW work and do an excellent job of mowing and mulching the vegetation. These machines can, and will,

negotiate heavy densities of brush as well as lighter density brush, and shall be versatile enough to do so. However, mechanical clearing is not always selective and in most cases all vegetation, desirable and undesirable alike, is cut, thereby giving the ROW a mowed appearance. PHI uses this method to manage areas with undesirable vegetation in areas to be converted to herbaceous plant communities, or in areas where herbicide application is not permitted.

Hand cutting of undesirable vegetation is normally done by tree workers equipped with chainsaws and/or brush saws. Areas inaccessible to mowers, or herbicide application (for any number of reasons i.e. Pinelands Pilot Program); or are too large to be cut with mowers, generally determined to be hand cut areas.

PHI also will selectively employ the wire zone - border zone concept where regulatory conditions require the use of the method.

All brush control work is performed by a qualified contractor working in accordance with PHI's specifications. The contract is awarded through the competitive bid process, typically for a four-year contract.

See "Detailed Specifications for Brush Control" in Appendix E.

## 4.2 Hazard Tree

PHI defines a hazard tree as any tree on or off a PHI ROW which meets both of the following criteria:

- The tree or tree part is noted as structurally unsound (dead, split, diseased etc.), that is, likely to fail.
- The tree or tree part, if it fell toward the transmission facilities and could damage those facilities; that is, causing an unacceptable degree of injury, damage, or disruption.

PHI performs a Limited visual tree risk assessment for reliability, regulatory compliance, and safety through semi-annual aerial inspections, the comprehensive inspection process, and during maintenance activities. Vegetation concerns that are identified are then scheduled for mitigation by contract tree crew(s). Mitigation may be tree removal, tree pruning, continued monitoring, or other mitigation activities.

All hazard tree work is performed by a qualified contractor working in accordance with PHI's specifications.

## Selective Grass Mowing

PHI's grass mowing program is simply the mowing of grass, weeds and light brush with an agricultural type rotary brush mower such as a "Brush Hog".

The mowed acres are divided into two categories, A and B. The A acres are mowed 3 times to 5 times each year, while B mowing acres are scheduled for mowing just once each year, an "annual mow". Generally speaking, the acres which fall into the A category are located in urban or suburban areas, usually where residential communities adjoin the rights-of-way, or distribution facilities occupy the edge of the



ROW. Category B or annual mowing is done as part of scheduled brush control work, usually in rural areas.

The work is performed by a qualified contractor working in accordance with PHI specifications. The contract is awarded through the competitive bid process. A copy of the “Detailed Specifications for Mowing” is included as Appendix F.

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## 5. Qualifications and Training

As the Transmission Owners, the PHI operating companies are responsible for ensuring that all personnel involved in the development and implementation of the TVMP are properly trained and qualified to perform their duties, as specified in requirement R1.3 of NERC Standard FAC-003-1.

PHI has specified that its transmission ROW shall be managed by a Vegetation Management staff in the Operations organization. This position requires a degreed Forester (or someone with sufficient years of relevant experience) who is also an ISA Certified Arborist.

PHI shall maintain documentation that any and all current Vegetation Management staff meets these requirements.

In addition, PHI's contract specifications for all contractors include specific qualifications for those working on the system. See for example, section 2.3 of the Detailed Specifications for Brush Control in Appendix E.

## 6. Program Update and Approval

Beginning in 2007, PHI's TVMP shall employ an annual review process to keep it current. The process for updating the plan will be led by the PHI Senior Staff Forester with oversight from the Vice President of Asset Management and as needed by the PHI NERC/ERO Compliance Steering Committee, and Environmental Services. Basic document control and versioning will be utilized.

- Documents will be reviewed annually for updates or as requirements/regulations or conditions change. The revision number will be indicated on the document.
- The initial draft will be submitted to the affected areas for comment. Comments received will be incorporated into the document or discussed until a resolution is reached.
- The final draft will be submitted for review. Revisions will be made as necessary.
- Upon completion of the review the final draft will be submitted for final signature by the Vice President, Operations and Engineering.
- The final signed document will be dated and placed in a central filing system.

7. This process meets requirement R1 of NERC Standard FAC-003-1 for preparing and keeping current a TVMP.

## **Annual Work Plan**

PHI prepares an Annual Work Plan that specifies the work to be done in order to implement, for that year, the TVMP. This summary of Comprehensive ROW management plans includes details about which ROWs are to be maintained that year, including methods of control, and is based on the Comprehensive and aerial inspection data of 230kv and 500kv ROW's mentioned earlier.

The work plan includes consideration of any special access permits that may be required, such as permission to work on railroad ROW, private easements, and government lands. The work plan shall be flexible enough for any delays which such permits might require.

PHI has developed systems which allow PHI to specify the work to be performed and the ability to track its timely completion according to specifications.

This plan meets requirement R2 of NERC Standard FAC-003-1 for creating and implementing an annual plan of work for its TVMP and having the means to track such work and its compliance with specifications.

## APPENDICES

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## Appendix A – NERC Standard FAC-003-1

### Standard FAC-003-1 — Transmission Vegetation Management Program

#### A. Introduction

**1. Title: Transmission Vegetation Management Program**

**2. Number: FAC-003-1**

**3. Purpose:** To improve the reliability of the electric transmission systems by preventing outages from vegetation located on transmission rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW, maintaining clearances between transmission lines and vegetation on and along transmission ROW, and reporting vegetation-related outages of the transmission systems to the respective Regional Reliability Organizations (RRO) and the North American Electric Reliability Council (NERC).

**4. Applicability:**

**4.1.** Transmission Owner.

**4.2.** Regional Reliability Organization.

**4.3.** This standard shall apply to all transmission lines operated at 200 kV and above and to any lower voltage lines designated by the RRO as critical to the reliability of the electric system in the region.

**5. Effective Dates:**

**5.1.** One calendar year from the date of adoption by the NERC Board of Trustees for Requirements 1 and 2.

**5.2.** Sixty calendar days from the date of adoption by the NERC Board of Trustees for Requirements 3 and 4.

#### B. Requirements

**R1.** The Transmission Owner shall prepare, and keep current, a formal transmission vegetation management program (TVMP). The TVMP shall include the Transmission Owner's objectives, practices, approved procedures, and work specifications.<sup>1</sup>

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<sup>1</sup> ANSI A300, Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices, while not a requirement of this standard, is considered to be an industry best practice.

**R1.1.** The TVMP shall define a schedule for and the type (aerial, ground) of ROW vegetation inspections. This schedule should be flexible enough to adjust for changing conditions. The inspection schedule shall be based on the anticipated growth of vegetation and any other environmental or operational factors that could impact the relationship of vegetation to the Transmission Owner's transmission lines.

**R1.2.** The Transmission Owner, in the TVMP, shall identify and document clearances between vegetation and any overhead, ungrounded supply conductors, taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, and the effects of wind velocities on conductor sway. Specifically, the Transmission Owner shall establish clearances to be achieved at the time of vegetation management work identified herein as Clearance 1, and shall also establish and maintain a set of clearances identified herein as Clearance 2 to prevent flashover between vegetation and overhead ungrounded supply conductors.

**R1.2.1.** Clearance 1 — The Transmission Owner shall determine and document appropriate clearance distances to be achieved at the time of transmission vegetation management work based upon local conditions and the expected time frame in which the Transmission Owner plans to return for future vegetation management work. Local conditions may include, but are not limited to: operating voltage, appropriate vegetation management techniques, fire risk, reasonably anticipated tree and conductor movement, species types and growth rates, species failure characteristics, local climate and rainfall patterns, line terrain and elevation, location of the vegetation within the span, and worker approach distance requirements. Clearance 1 distances shall be greater than those defined by Clearance 2 below.

**R1.2.2.** Clearance 2 — The Transmission Owner shall determine and document specific radial clearances to be maintained between vegetation and conductors under all rated electrical operating conditions. These minimum clearance distances are necessary to prevent flashover between vegetation and conductors and will vary due to such factors as altitude and operating voltage. These Transmission Owner-specific minimum clearance distances shall be no less than those set forth in the Institute of Electrical and Electronics Engineers (IEEE) Standard 516-2009R (*Guide for Maintenance Methods on Energized Power Lines*) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.

**R1.2.2.1** Where transmission system transient overvoltage factors are not known, clearances shall be derived from Table 5, IEEE 516-2009R, phase-to-ground distances, with appropriate altitude correction factors applied.

**R1.2.2.2** Where transmission system transient overvoltage factors are known, clearances shall be derived from Table 7, IEEE 516-2009R, phase-to-phase voltages, with appropriate altitude correction factors applied.

**R1.3.** All personnel directly involved in the design and implementation of the TVMP shall hold appropriate qualifications and training, as defined by the Transmission Owner, to perform their duties.

**R1.4.** Each Transmission Owner shall develop mitigation measures to achieve sufficient clearances for the protection of the transmission facilities when it identifies locations on the ROW where the Transmission Owner is restricted from attaining the clearances specified in Requirement 1.2.1.

**R1.5.** Each Transmission Owner shall establish and document a process for the immediate communication of vegetation conditions that present an imminent threat of a transmission line outage. This is so that action (temporary reduction in line rating, switching line out of service, etc.) may be taken until the threat is relieved.

**R2.** The Transmission Owner shall create and implement an annual plan for vegetation management work to ensure the reliability of the system. The plan shall describe the methods used, such as manual clearing, mechanical clearing, herbicide treatment, or other actions. The plan should be flexible enough to adjust to changing conditions, taking into consideration anticipated growth of vegetation and all other environmental factors that may have an impact on the reliability of the transmission systems. Adjustments to the plan shall be documented as they occur. The plan should take into consideration the time required to obtain permissions or permits from landowners or regulatory authorities. Each Transmission Owner shall have systems and procedures for documenting and tracking the planned vegetation management work and ensuring that the vegetation management work was completed according to work specifications.

**R3.** The Transmission Owner shall report quarterly to its RRO, or the RRO's designee, sustained transmission line outages determined by the Transmission Owner to have been caused by vegetation.

**R3.1.** Multiple sustained outages on an individual line, if caused by the same vegetation, shall be reported as one outage regardless of the actual number of outages within a 24-hour period. .



**R3.2.** The Transmission Owner is not required to report to the RRO, or the RRO's designee, certain sustained transmission line outages caused by vegetation: (1) Vegetation related outages that result from vegetation falling into lines from outside the ROW that result from natural disasters shall not be considered reportable (examples of disasters that could create non-reportable outages include, but are not limited to, earthquakes, fires, tornados, hurricanes, landslides, wind shear, major storms as defined either by the Transmission Owner or an applicable regulatory body, ice storms, and floods), and (2) Vegetation-related outages due to human or animal activity shall not be considered reportable (examples of human or animal activity that could cause a non-reportable outage include, but are not limited to, logging, animal severing tree, vehicle contact with tree, arboricultural activities or horticultural or agricultural activities, or removal or digging of vegetation).

**R3.3.** The outage information provided by the Transmission Owner to the RRO, or the RRO's designee, shall include at a minimum: the name of the circuit(s) outaged, the date, time and duration of the outage; a description of the cause of the outage; other pertinent comments; and any countermeasures taken by the Transmission Owner.

**R3.4.** An outage shall be categorized as one of the following:

**R3.4.1.** Category 1 — Grow-ins: Outages caused by vegetation growing into lines from vegetation inside and/or outside of the ROW;

**R3.4.2.** Category 2 — Fall-ins: Outages caused by vegetation falling into lines from inside the ROW;

**R3.4.3.** Category 3 — Fall-ins: Outages caused by vegetation falling into lines from outside the ROW.

**R4.** The RRO shall report the outage information provided to it by Transmission Owner's, as required by Requirement 3, quarterly to NERC, as well as any actions taken by the RRO as a result of any of the reported outages.

## **C. Measures**

**M1.** The Transmission Owner has a documented TVMP, as identified in Requirement 1.

**M1.1.** The Transmission Owner has documentation that the Transmission Owner performed the vegetation inspections as identified in Requirement 1.1.

**M1.2.** The Transmission Owner has documentation that describes the clearances identified in Requirement 1.2.

- M1.3.** The Transmission Owner has documentation that the personnel directly involved in the design and implementation of the Transmission Owner's TVMP hold the qualifications identified by the Transmission Owner as required in Requirement 1.3.
- M1.4.** The Transmission Owner has documentation that it has identified any areas not meeting the Transmission Owner's standard for vegetation management and any mitigating measures the Transmission Owner has taken to address these deficiencies as identified in Requirement 1.4.
- M1.5.** The Transmission Owner has a documented process for the immediate communication of imminent threats by vegetation as identified in Requirement 1.5.
- M2.** The Transmission Owner has documentation that the Transmission Owner implemented the work plan identified in Requirement 2.
- M3.** The Transmission Owner has documentation that it has supplied quarterly outage reports to the RRO, or the RRO's designee, as identified in Requirement 3. .
- M4.** The RRO has documentation that it provided quarterly outage reports to NERC as identified in Requirement 4. .

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Monitoring Responsibility**

RRO  
NERC

#### **1.2. Compliance Monitoring Period and Reset**

One calendar Year

#### **1.3. Data Retention**

Five Years

#### **1.4. Additional Compliance Information**

The Transmission Owner shall demonstrate compliance through self-certification submitted to the compliance monitor (RRO) annually that it meets the requirements of NERC Reliability Standard FAC-003-1. The compliance monitor shall conduct an onsite audit every five years or more frequently as deemed appropriate by the compliance monitor to review documentation related to Reliability Standard FAC-003-1. Field audits of ROW vegetation

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conditions may be conducted if determined to be necessary by the compliance monitor.

## **2. Levels of Non-Compliance**

### **2.1. Level 1:**

**2.1.1.** The TVMP was incomplete in one of the requirements specified in any subpart of Requirement 1, or;

**2.1.2.** Documentation of the annual work plan, as specified in Requirement 2, was incomplete when presented to the Compliance Monitor during an on-site audit, or;

**2.1.3.** The RRO provided an outage report to NERC that was incomplete and did not contain the information required in Requirement 4.

### **2.2. Level 2:**

**2.2.1.** The TVMP was incomplete in two of the requirements specified in any subpart of Requirement 1, or;

**2.2.2.** The Transmission Owner was unable to certify during its annual self certification that it fully implemented its annual work plan, or documented deviations from, as specified in Requirement 2.

**2.2.3.** The Transmission Owner reported one Category 2 transmission vegetation related outage in a calendar year.

### **2.3. Level 3:**

**2.3.1.** The Transmission Owner reported one Category 1 or multiple Category 2 transmission vegetation-related outages in a calendar year, or;

**2.3.2.** The Transmission Owner did not maintain a set of clearances (Clearance 2), as defined in Requirement 1.2.2, to prevent flashover between vegetation and overhead ungrounded supply conductors, or;

**2.3.3.** The TVMP was incomplete in three of the requirements specified in any subpart of Requirement 1.

### **2.4. Level 4:**

**2.4.1.** The Transmission Owner reported more than one Category 1 transmission vegetation-related outage in a calendar year, or;

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2.4.2. The TVMP was incomplete in four or more of the requirements specified in any subpart of Requirement 1.

**E. Regional Differences**

None Identified.

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## Appendix B –Table 5 from IEEE 516-2009R

**Table 5—Example of detailed calculations for Minimum Air Insulation Distance  
60 Hz. Energized work, without tools in the air gap,  
when the transient overvoltage factors is not known, in meters**

Voltage in kilovolts phase to phase	Distance in meters	
	Phase to ground	Phase to phase
72.6—121	0.75 (2.46 ft)	1.09
138—145	0.90 (2.95 ft)	1.31
161—169	1.05 (3.44 ft)	1.52
230—242	1.57 (5.15 ft)	2.28
345—362	2.88 (9.45 ft)	4.18
500—550	4.48 (14.70 ft)	6.90
765—800	6.24 (20.47 ft)	10.22

### NOTES

1—These distances take into consideration the highest transient overvoltage an employee will be exposed to on any system with air as the insulating medium and the maximum voltages shown.

2—Values are based on altitudes below 900 m. See Table 1 for correction factors for higher altitudes. It is not necessary to correct for atmospheric conditions.

3—Table distances do not include a factor for inadvertent movement. See 7.2 for inadvertent movement considerations. These factors must be added to the values to obtain the total MAD.

4—The clear live tool length should be equal to or exceed these values for the indicated voltage ranges.

5—The data used to formulate this table was obtained from test data taken with standard atmospheric conditions. Standard atmospheric conditions are defined as temperatures above freezing, wind less than 24 kilometer per hour, unsaturated air, normal barometer, uncontaminated air, and clean and dry insulators. If standard atmospheric conditions do not exist, extra care must be taken.

6—Data for this table was obtained from Table 7 and Table 11.

7—For values in feet, see Table D.3.

## Appendix C: Maps of PHI's Transmission System

Maps of the transmission system for PHI's operating companies,

Atlantic City Electric Company  
Delmarva Power and Light Company  
Potomac Electric Power Company

are available to auditors on request. They contain security-sensitive information regarding the location of PHI transmission facilities.

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## Appendix D: Specifications for PHI's Aerial Inspection program

### Detailed Specifications For

### Vegetation Aerial Patrol of PHI Transmission Lines

1. General Scope - The Company aerially patrols the transmission and selected sub-transmission ROW's twice a year in a helicopter provided and flown by a contractor specializing in this activity. A Company representative acts as the observer and records unusual vegetation conditions or potential problems, GPS locations and notes are entered into an electronic database. Each ROW is flown in its entirety with the exception of restricted air space.
2. The Company produces electronic and paper copies of maps showing approximate location(s) of the unusual conditions or potential problems with sufficient detail to allow field crews to locate these on the ground. Summary reports are produced for tracking, ground inspection, and work completed.
3. Below is a list of typical problems and conditions observed on all ROWs, both those owned in fee simple or easement, however, this is not an all-inclusive list.
  - a) Tall undesirable vegetation
  - b) Hazard Trees
  - b) Trees leaning in from wooded edges
  - c) Vines growing up structures and/or poles
  - d) Beaver activity adjacent to the ROW
  - e) Activities which could cause an operation of the transmission circuit.
  - f) Miscellaneous, obvious defects
4. Any conditions observed which require rapid response by the Company will be reported to the appropriate PHI and contract personnel via cell phone as soon as practicable.
5. Copies of the reports will be sent to appropriate departments to deal with the conditions or problems found.
6. Tracking of the inspection, conditions found, work done and completion date will be the responsibility of the designated department.

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## Appendix E: Detailed Specifications for Brush Control



### REQUEST FOR PROPOSAL

**PHI SERVICE COMPANY  
Pepco, a PHI Company**

**2012-CSLT-PEPCO-6**

Pepco Transmission Vegetation Management

6/5/12

### **Request for Proposal**

**2012-CSLT-PEPCO-6**

**1.1** The undersigned, in anticipation of rendering services and/or supplying materials, machinery or equipment pursuant to the terms and conditions of the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09, to PHI Service Company (“PHI”) for the benefit of PHI and/or any of its affiliates, including but not limited to Potomac Electric Power Company, Delmarva Power & Light Company, and Atlantic City Electric Company, hereby agrees to the terms and conditions of this RFP which supplements and modifies the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09. In the event of any conflict between the terms and conditions of this RFP and the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09, the terms and conditions of this RFP shall control. This RFP, in combination with the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09, is a request for proposal. All dates need to be changed

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**1.2** All capitalized terms shall have the meanings used in the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09 unless expressly stated otherwise in this RFP.

**1.3 a)** If a Contractor is uncertain as to the meaning of any part of , this RFP or as to any other Project requirement, it shall submit to PHI, prior to the date the proposals are due, a written request for an explanation or interpretation thereof. Any explanation or interpretation shall be made and issued by PHI as an addendum to the RFP , as appropriate. A copy of each such addendum will be added to Ariba for each Contractor receiving the applicable RFP .

**b)** Requests for interpretation or other correspondence or questions shall be done via Ariba.

79NC37  
Michael Mozer - Sr. Sourcing Partner  
Pepco Holdings, Inc.  
630 Martin Luther King Blvd.  
Wilmington, De. 19899  
e-mail: michael.mozer@pepcoholdings.com  
Phone: (302) 429-3147  
Fax: (856) 351-7462

**c)** PHI shall not be bound by any other explanations or interpretations of the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09 or this RFP, except those requested and provided in accordance with Sections 1.3a and 1.3b herein.

**1.4** PHI reserves the right to reject any and all proposals, and to waive any informalities or irregularities in the proposals received. Any contract awarded by PHI as a result of this request for proposal will be awarded the Contractor whose proposal will be most advantageous to PHI as determined in PHI's sole discretion. Price and other factors will be considered. Therefore, a contract may not necessarily be awarded to the Contractor with the lowest price.

**1.5** All proposals must be received by PHI's Representative as set forth in Section 1.3b by not later than **Noon on July 6, 2012**. **ALL proposals must be submitted via Ariba and all necessary signatures included.**

**1.6** All information contained in this RFP and the PHI Service Company Construction Contract Standard Terms and Conditions Version 12.5, 4/10/09 is confidential and proprietary to PHI. This document is being supplied to you solely for your internal use with regard to formulating and submitting the requested proposal and must be returned to PHI's designated representative upon demand. All proposals submitted pursuant to this request for proposal shall, upon receipt by PHI, become the property of PHI and will not be returned to Contractor.

**1.7** PHI is committed to reducing its environmental footprint by fully considering, consistent with price, performance, availability, and safety considerations, the purchase of products that have a lesser or reduced effect on human health and the environment when compared with conventional or competing products used for the same purpose. In evaluating the products we procure, PHI may consider the environmental aspects and impacts associated with all stages of

the product's life, including raw materials used, manufacturing, packaging, maintenance requirements, reuses, recycle potential and disposal options.

- 1.8** It is the policy of Pepco Holdings, Inc., and its affiliates (collectively, 'PHI' or the 'Company') to maximize contracting opportunities for small, minority and protected class businesses, with specific interest in maximizing diverse contracting opportunities within PHI's service territories. Protected class businesses include those owned and operated by women, veterans, service-disabled veterans and those operating in historically underutilized business zones (HUB Zones). PHI encourages diversity and encourages small, minority and protected class businesses to bid and/or partner with others on this RFP. Please be advised that PHI will consider a Bidder's status and its willingness and ability to subcontract with small, minority and protected class businesses as part of its confidential bid evaluation process.

By my signature below, I hereby certify that I am authorized to enter into agreements on behalf of the below -named entity. The below-named entity, having the benefit of legal counsel and/or the opportunity to seek legal counsel, and intending to be bound, hereby agrees to accept and comply with the terms and conditions of PHI Service Company's Standard Terms and Conditions for Construction Services, Version 12.5, Revision 4/10/09 For the project referenced as, 2010-CSLT-PHI-7

**(SIGNATURE PAGE TO BE RETURNED WITH BIDDER'S PROPOSAL)**

**CONTRACTOR:**

\_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone no#: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## SECTION II – STATEMENT OF WORK

### **2. Scope of Work**

**Project:**

Vegetation Management on the Pepco Transmission System. Main Operating office is located at 3400 Benning Road NE, Washington, DC 20019-1599

**Transmission System:**

Pepco - approx. 280 miles of transmission lines and 10,000 acres vegetation management.

PHI intends to contract vegetation maintenance work on the Transmission system of Pepco but may include limited work on Distribution and Sub-Transmission in emergency or necessary situations. The contract period will be for four (4) years. The timeframe of this contract is targeted for the Contractor to begin July 30, 2012. However, depending upon award; the date will be sixty (60) days after notification of award. The work included in this contract will be planned electric transmission right-of-way vegetation management and reactive work such as aerial patrol hazards, capital projects and emergency support to provide clearance for any PHI distribution or transmission facility, and any other tree work assigned by PHI.

For purposes of this document the words PHI and Owner shall mean PHI Service Company or such other affiliate of PHI Service Company that enters into this contract with Contractor. Contractor shall mean the entity providing goods and/or performing the services as specified in this contract. All work will be performed in accordance with the latest version of the PHI Service Company's Standard Terms and Conditions for Construction Services, newest version.

The contract is unit based for all planned work, unless otherwise directed by PHI. Reactive work will initially be done on a time & material (T&M) basis with the option to establish and implement unit pricing where appropriate and at mutually agreed upon pricing. For all work associated with the contract the Contractor is solely responsible for safety and meeting all requirements set forth in the Master Terms & Conditions. Part of the requirement will be to ensure all individuals working under the contract have attended a safety orientation and signed the Safety Acknowledgement (refer to Attachment).

**2.1 Quantity of Work Not Guaranteed:** PHI does not guarantee the amount of work or any portion thereof that will be awarded under this contract. The estimates provided are an illustration only of the work that has or may be experienced and the magnitude of work may vary. PHI makes no guarantees of quantities expressed in this Rider or attachments.

**2.2 Lump Sum Work:** PHI reserves the option to request a lump-sum price for any project

or job such as but not limited to large capital projects. PHI reserves the right to bid any portion of work and the right to use other contractors to perform work within the contract Area.

**2.3 Normal Work Week:** The Contractor's work schedule shall consist of forty (40) hours, Monday through Friday excluding holidays between the hours of 6:30 a.m. to 5:30 p.m., unless otherwise agreed upon with PHI. Based upon mutual agreement, the Contractor may either work five (5) eight (8) hour days or four (4) ten (10) hour days. Such 10 hour days (Monday through Friday) shall be considered normal working hours for the first 40 hours. No work shall be performed on Saturday, Sunday, holidays or at overtime rates unless so ordered by PHI. For reporting purposes, the work week will begin at 00:01 hours Sunday morning and end at 24:00 hours the following Saturday.

**2.4 Term of Contract:** The term of this contract will be for four years, with the first two years being firm pricing, and the third and fourth year to be negotiated by both Parties and do not go into effect until BOTH parties have agreed to the increase. The date of agreement will be used for new rates. A standardized rate review process will be utilized for negotiations. Proposed work shall be scheduled within the time period by the Owner. Work may commence on Monday, July 30, 2012 and will proceed to the end of the contract. All work shall be performed only to the extent indicated and as directed by the Owner. Restrictions and/or special provisions shall be strictly observed by the Owner. This contract can be revoked at any time by the Owner for any justified reason. The Owner shall be the sole judge of what is considered justifiable grounds for dismissal.

**2.5 Energized Electrical Conductors:** The Contractor shall perform all vegetation management work while PHI's electrical conductors remain energized, unless otherwise directed by PHI. The Contractor shall ensure that their employees are trained and qualified to perform utility line clearance work.

### **3. Regulatory Compliance**

All work is to be performed in compliance with all applicable federal, state, county, local and Owner requirements. This includes all laws, regulations, licenses, permits, insurance, etc.

#### **OSHA & ANSI Standards**

Pruning shall be performed according to the latest ANSI A-300 guidelines for Utility Pruning, Integrated Vegetation Management, and Tree Risk Assessment. Cuts shall be made according to the latest version of the Utility Pruning section of American National Standards Institute for Tree Care Operations, ANSI A-300, unless permission is granted by Owner to use mechanical pruning equipment. Note: If 25% or more of the tree's crown must be removed in the pruning operation, the tree should be considered for removal. Any exceptions must be pre-approved by PHI.

### **Safety Compliance**

All work is to be performed in compliance with all applicable federal, state, local, and Owners safety requirements. This includes OSHA 29CFR Part1910.269<sup>®</sup> and ANSI-Z133.1. Contractor shall provide for the protection of its employees all and such safety equipment as is prescribed by the common practice for the type of work being performed or as required by any laws, rules or regulations or the exercise of prudence. Such safety equipment shall include, but not be limited to; hard hats, hearing protection, gloves, safety glasses, chaps, first-aid kits, and other necessary equipment.

**NPDES Compliance:** The contractor shall perform work involving the application of biological or chemical pesticides that leave a residue in compliance with federal or state National Pollutant Discharge Elimination System (NPDES) requirements and any PHI associated Pesticide Discharge Management Plan. The contractor is to provide Owner with pertinent information necessary to comply with the NPDES requirements. This information may include, but not be limited to, herbicide application field data, monitoring information, equipment maintenance data, and spill prevention procedures.

### **Maryland Electricity Service Quality and Reliability Act (COMAR 20.50.12.09) 'RM43' Compliance:**

The contractor shall perform notification of adjacent owners, as well as all vegetation management work, in compliance with COMAR 20.50.12.09 Standards.

## **SECTION III – UNIT AND RATE DEFINITIONS**

### **4. Planned Unit Work**

**Routine Preventative Maintenance and Capital Work:** Planned preventative maintenance work shall be performed on a unit basis unless otherwise directed. Planned work will primarily consist of entire circuits or portions of circuits, as directed by PHI, but may also include capital construction projects when the units can be quantified. The prescribed work applies to the entire right-of-way; regardless of the number of circuits on the right-of-way. All work will be planned prior to work being performed, either by third party contract work planners, PHI employees, or by the Contractor. The work plan will detail the type of work required and the number of associated units.

The Contractor's unit pricing shall include all associated costs related in any way to the timely and proper completion of the work, including labor, equipment, herbicide, material, transportation, mobilization, supervision, tools, phones, radios and overhead.

**Inclement Weather:** When the Contractor crews are working under units, they will not be paid for inclement weather time unless PHI has requested them to stand-by or to perform emergency work, at which time the provisions outlined under T&M would prevail. PHI requires all Contractor personnel to report to their assigned work location for a minimum of two (2)

hours. Initial two (2) hour report time shall be covered in Contractor overheads, unless otherwise specified by the Owner. Time lost due to inclement weather on Unit work will be made up on Friday or Saturday with PHI approval.

**Emergency Work:** When the Contractor crews are working under units and PHI has requested them to stand-by or to perform emergency work, the provisions outlined under T&M prevail.

**Brush acreage units:** Herbicide applications and mechanical cutting areas are measured in acres. The mowing units are delineated into Light, Medium and Heavy based upon stem density, diameter, and height. The Owner shall inspect and designate areas as light, medium or heavy brush. Preliminary maps of representative areas shall be provided to the Contractor prior to commencing work. The Owner's designation of prescriptions will be accepted as such as a condition of submitting a proposal. Field visits are recommended to view representative areas of each description. It shall be the Contractor's responsibility to use the appropriate equipment and personnel for the type of work being performed.

**Pruning units:** Trimming or pruning units are measured in linear feet. Pruning procedures must conform to ANSI and OSHA guidelines.

**Additions and Deletions:** The Owner reserves the right to add or remove work from planned circuits or projects. Variation from prescribed units encountered by the Contractor in the field shall be reported promptly to the Owner to accurately capture actual units. Payment shall be made only for work actually completed by the Contractor.

**Satisfactory Completion:** All work shall be completed to the standards of the Owner and shall be subject to inspection and approval by the Owner. Any work which is not entirely satisfactory to the Owner shall be corrected by the Contractor at the Contractor's expense. With the completion of each job or circuit, the pre-planned map must be returned to the Owner. At this time, any relevant required documentation, such as Job Completion Forms and/or Unworkable Sites Forms must be returned to the Owner, prior to submitting final invoice.

**4.1 Units:** Bidders shall provide prices for the following Units of work with their proposals:

**4.1 a) Linear Units (Price per Foot)**

**Bucket Linear Trim:** Bucket accessible tree trimming of vegetation, typically in areas highly visible to the public. All trees on the R/W edge where Owner has subtransmission and/or distribution facilities shall be pruned from 'ground to sky' so that no remaining tree branch is directed into the R/W. All transmission corridors without distribution or subtransmission shall be pruned as directed by Owner. Trees are pruned for utility clearance, also with regard to canopy symmetry, not removing more than 25% of the crown. Unit is based on linear feet of work. Debris must be chipped and removed from the site, or chipped and blown onto ROW floor. Wood must be removed from the site unless permission to leave wood on site is received from the landowner, and then must be stacked in manageable lengths.

**Manual Linear Trim:** Tree trimming inaccessible to lift-bucket crew, typically in areas highly visible to the public. Trees must be climbed physically. Trees are pruned with regard to canopy symmetry, not removing more than 25% of the crown. Unit is based on linear feet of work. Debris must be chipped and removed from the site. Wood must be removed from the site unless permission to leave wood on site is received from the landowner, and then must be stacked in manageable lengths.

**Bucket Wall Trim:** Bucket-accessible side-edge trimming of R/W, typically in wooded areas with multiple trees and branches. Unless otherwise instructed by PHI, all limbs protruding into the right-of-way are to be pruned to a proper lateral or back to the trunk of the tree, from ground to sky, rather than leaving a limb shelf or overhanging branches. This unit also includes the removal of encroaching trees less than 6 inches DBH along the R/W edge. Unit is based on linear feet of work, with each side of the R/W measured individually. Debris must be chipped or mowed, at the discretion of PHI. If chips are spread on the right of way, the depth of chips must not exceed 3 inches.

**Manual Wall Trim:** Trimming sides of R/W that are not accessible to bucket crews, typically in wooded areas with multiple trees and branches. Unless otherwise instructed by PHI, all limbs protruding into the right-of-way are to be pruned to a proper lateral or back to the trunk of the tree, from ground to sky, rather than leaving a limb shelf or overhanging branches. This unit also includes the removal of encroaching trees less than 6 inches DBH along the R/W edge. Unit is based on linear feet of work, with each side of the R/W measured individually. All wood and debris must be removed from any wetlands and chipped or mowed, at the discretion of PHI, in an upland location. If chips are spread on the right of way, the depth of chips must not exceed 3 inches.

**Tree Removal / Hazard Trees :** At PHI, Hazard trees are those trees that meet the following criteria:

- The tree or tree part is noted as structurally unsound (dead, split, diseased, etc.), that is, likely to fail; and
- The tree or tree part, if it fell toward transmission facilities, could damage, injure, or disrupt those facilities.

Hazard Trees and other trees scheduled for removal are to be selected and marked by the Owner. Trees on private property adjacent to Pepco ROW shall be considered the property of the property owner unless otherwise stipulated by PHI.

Trees to be removed are paid for by PHI on a unit basis, based on size class of tree to be removed.

Removal unit cost includes:

- **DBH Size Classes: 6-14", 14-18", 18-25", 25-31", 31-36", 36-43", 43-49"**
- trees shall be limbed and the sawn logs left in the woods, removed and either chipped or neatly piled as directed.
- Sub-merchantable wood usable as firewood shall be cut in cordwood lengths and piled in an orderly manner.
- All limbs and small wood debris shall be chipped and either removed or spread on the ROW.

- If so designated by PHI, Tree Removals may be cut below the point where falling could impact reliability and left as a wildlife den tree.
- Trees trunks left as wildlife den trees must be double girdled with a chainsaw.

No chips are to be placed in roads, wetlands, transition areas or flowing water. Wood may not be placed outside the Right-of-Way without permission of the Owner. Written approval of the Owner must be obtained for any commercial logging. All roads and paths, regardless of whether or not they show recent use, shall be left clear of logs, except as designated by the Owner, as an erosion control measure. No logs, brush or debris are to be left within the high water mark of ditches, drains, creeks or floodplains of any description.

All stumps shall be flush cut to a height of no more than three inches (3") above and parallel to the surrounding ground. Stumps in designated access lanes may need additional cutting following the initial clearing. All stumps shall be treated immediately with the low volume basal herbicide mix.

**Traffic Control:** The unit is based on linear feet of vegetation maintenance work requiring traffic control. The Contractor is responsible for providing traffic control. The set up normally consists of two (2) traffic control personnel, sign truck, and all necessary cones, signs, communication devices, etc. All traffic control must be in accordance with all local, state, and federal laws, rules, and regulations. Unit pricing will not include extras such as road closure, police provided traffic control, or mandated Attenuator "crash" trucks.

#### **4.1 b) Acreage Units (Price per Acre)**

##### **Mechanical Control Methods**

**Upland Reclamation:** Units are captured by acreage and include clearing beyond the existing maintained corridor to the original right-of-way width. This unit captures the removal of any and all incompatible woody vegetation, regardless of size and density, which exists on the right-of-way. Prescriptions include tree removals, pruning, handcut, mowing, chipping, wood removal, and site cleanup. Every effort will be made to preserve compatible, desirable woody vegetation.

**Wetland Reclamation:** Units are captured by acreage and include clearing beyond the existing maintained corridor to the original right-of-way width. This unit captures the removal of any and all incompatible woody vegetation, regardless of size and density, that exists on the right-of-way. Prescriptions include tree removals, pruning, hand cutting, mowing, chipping, wood removal, and site clean up. All debris must be removed from the wetland. Every effort will be made to preserve compatible, desirable woody vegetation.

**Hand-cut and Chip:** This Unit is based on acreage of vegetation requiring work. It is manual work done with chainsaws to cut and remove vegetation under 6" diameter breast height (DBH). Stump is to be cut parallel with ground and as low as possible to the ground. This unit includes an immediate herbicide application to cut stump surface with PHI-approved stump treatment herbicide unless otherwise directed by PHI. Debris is to be disposed of by chipping.



Wood chips must be removed from ROW or can be blown on site if applicable and approved by property owner and PHI. Wood must be removed from site unless permission to leave wood is received from the landowner and PHI. All wood and debris must be removed from wetlands.

**Hand-cut and Mow:** This Unit varies from the above in that the cut brush can be mowed. Unit is based on acreage of vegetation requiring work. Manual work performed with chainsaws to cut and remove vegetation under 6" diameter breast height (DBH), beneath overhead electric facilities and within R/W limits. This unit includes an immediate herbicide application to cut stump surface with PHI-approved stump treatment herbicide unless otherwise directed by PHI. Debris is to be disposed of through mowing. Wood must be removed from site unless permission to leave wood is received from the landowner and PHI. All wood and debris must be removed from wetlands.

**Mowing Decks:** Pricing should reflect the use of both a rotary and flail mow deck. The Contractor is expected to use the right tool to complete the job. Majority of mowing can be performed with a rotary mowing deck; however, when a flail mower is required, it will be expected to be utilized. All undesirable vegetation shall be cut not more than 3 inches from the ground and shall be completely severed.

**Flail Mowing:** Mowing with cylinder-type mow deck, where resulting debris is mulched into a fine consistency. It is often utilized in customer sensitive areas.

**Rotary Mowing:** Mowing with rotary-type mower, where resulting debris is shredded. It is often utilized in non-sensitive areas.

**Track or Skid-Steer Mower:** Light weight or smaller tractor, with lower center of gravity and less disturbance and soil compaction. Contractor must include a description of the equipment, tracks, or tires with pricing. Unit is based on acreage of vegetation.

**Grass Mowing:** Unit consists of mowing herbaceous growth with occasional shrubs or small trees. Equipment may be chosen by the contractor. PHI reserves the ability to reject any equipment it decides is not sufficient to satisfactorily complete the necessary work. Prescription may be used once a year or multiple times a year at the same location. Unit is based on acreage of vegetation. Multiple mows in a single year would count acreage for each time mowed. Contractor must include a description of the equipment.

**Light Mowing:** Mowing light density brush, typically 6 to 8 feet in height or smaller. Equipment may be chosen by the contractor. PHI reserves the ability to reject any equipment it decides is not sufficient to satisfactorily complete the necessary work. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment.

**Medium Mowing:** Mowing medium density brush, typically over 6 to 8 feet in height and under 4" DBH. End product often requires multiple passes with tractor to sufficiently mulch brush. This unit can also contain numerous trees too large to mow with standard bush hog. It is

recommended the crew be supplemented with additional ground person(s) to aid in cutting down trees. Debris is mowed. Wood over 6" in diameter is to be moved to edge of Right-of-way. Equipment may be chosen by the contractor. PHI reserves the ability to reject any equipment it decides is not sufficient to satisfactorily complete the necessary work. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment.

**Heavy Mowing:** Mowing heavy density brush, typically well over 8 feet in height, and over 4" DBH. This unit is meant to capture the use of a large mower capable of accommodating a 6" diameter tree. Equipment may be chosen by the contractor. PHI reserves the ability to reject any equipment it decides is not sufficient to satisfactorily complete the necessary work. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment.

### **Chemical Control Methods**

**Hydraulic Foliar Herbicide Application:** Undesirable vegetation will be treated on R/W using PHI-approved foliar materials, methods, and application timing. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment with pricing.

**Back Pack Foliar Herbicide Application:** Undesirable vegetation will be treated on R/W using PHI-approved foliar materials, methods, and application timing. This unit is often utilized in areas inaccessible to hydraulic applications. Unit is based on acreage of vegetation. Contractor must include a description of the equipment with pricing.

**Radiarc Herbicide Application:** Undesirable vegetation will be treated on R/W using PHI-approved materials and methods and application timing. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment with pricing.

**Basal Bark Herbicide Application:** Undesirable vegetation will be treated with low-volume herbicide application on R/W using PHI-approved materials and methods and application timing. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment with pricing.

**Cut – Stubble Herbicide Application:** Undesirable vegetation mowed and treated with approved herbicide. Unit is based on acreage of vegetation requiring work. Contractor must include a description of the equipment with pricing.

**Contractor Specific Application:** The Contractor is encouraged to submit unit prices for additional methods of application and mixes for above methods.

### **4.1 c) Individual Units (Price per single unit)**

**Vine Pole:** Any vegetation, including trees and vines, under 10 feet in height growing adjacent to, underneath, around or upon any electrical facilities, including towers, poles or guy wires

shall be chemically treated, using the solution and method of application designated by PHI. Any vegetation, including trees and vines, exceeding 10 feet in height growing adjacent to, underneath, around, or upon any electrical facilities, including towers, pole or guy wires shall be cut and the stumps chemically treated. Unit is based on an individual pole requiring work.

**Tree Removal:** Complete cutting of tree to ground level, brush disposal, and cutting wood into lengths, or as per regulation. Wood is to be moved to edge of Right-of-way or off site. Units are based on size classes of diameter at breast height (DBH) of trees to be removed. Stumps are to be immediately treated with PHI-approved stump herbicide, unless otherwise directed by PHI.

**DBH Size Classes: 6-14", 14-18", 18-25", 25-31", 31-36", 36-43", 43-49"**

#### **4.1 d) Specialized Units**

**Contractor Specific Units:** The Contractor is encouraged to submit unit prices for additional methods or types of equipment they are able to supply, such as Jaraaffe side trimmer, Helicopter Trimming, Timber Jack, track machinery, wetland mowing, wetland herbicide application, etc. PHI may approve use these additional methods or equipment at its own discretion. More efficient methods of vegetation management which save PHI time and money while accomplishing management goals will be seriously considered in the bid evaluation process. Contractor is responsible for mobilization costs of specialty equipment.

### **5. Time and Material (T&M)**

Time and Material Work includes chemical, mechanical and manual vegetation control, tree pruning, and removal of trees, brush and/or debris, as directed by the PHI. The Contractor will only be assigned work which can be performed utilizing the Contractor's personnel and equipment. Some miscellaneous work is not suited to be paid using the Contractor's unit price's and therefore is paid for at the time and material rates submitted by the Contractor. Miscellaneous work may be located anywhere on the PEPCO transmission or distribution systems.

The Contractor's labor, equipment and material rates shall include all profit and overhead related in any way whatsoever to the timely and proper completion of the work including but not limited to labor for the Area Supervisor and other similar personnel, all small equipment, tools, cell phones, radios. Billing for labor and equipment will be hourly, and materials will be on a quantity or "cost plus" basis as agreed upon under this contract and in accordance with the Master Terms and Conditions. The following shall apply to time and material work:

**Travel:** Rates per hour are for actual hours worked on the jobsite or travel between T&M jobsites during the work day. There is no pay for commute travel time or for equipment transportation related to unit work.

**Assignment of Work:** PHI shall assign the work that is to be completed on a time and material basis, and the Contractor shall perform the work as directed by PHI. The Contractor shall

perform only the work assigned by PHI in accordance with PHI's directions and specifications. PHI anticipates performing a small percentage of miscellaneous work that is not suited for compensation using the Contractor's unit prices. Therefore, payment will be provided utilizing the time and material rates submitted by the Contractor. Time and Material work is only to be performed if PHI deems such action necessary, and so instructs the Contractor.

**Location of Work:** Time and material work may be located anywhere on the PHI transmission or distribution systems. Job site reporting is required, the job sites are to be the crew headquarters and there shall be no payment of travel time to and from the job sites. Travel time during working hours, between job sites, will be paid. Mobilization of equipment whether on PHI premises or not, is not billable.

**Labor and Equipment to Work Productively:** Except for travel time and standby time, the Contractor's employees and equipment are expected to be working productively. The Contractor shall inform PHI when crews are not able to work productively due to inclement weather, broken equipment, or any other reason, and PHI will determine whether the crew or crews are to be held on standby or released. Unless PHI has designated that a crew is to be held on standby, the Contractor shall not include time that labor or equipment is unproductive on the time sheet.

**Overtime:** Overtime is defined as hours of work required by the Company outside of the Contractor's normal work day on site, or in excess of 40 hours in a normal work week. Overtime shall be paid at the overtime rates included in the Contractor's quotation. There shall be no overtime unless otherwise directed by the Owner.

**Inclement Weather:** If during the work day weather conditions become such that Contractor crew must stop work for the day, Contractor crew shall call PHI's Office to report that work has stopped for the day. Two hours labor will be paid if the work is postponed due to inclement weather after the crew has reported to the job site. There shall be no payment for equipment hours spent on standby due to inclement weather. The decision to cease work due to inclement weather rests with Contractor. In no event will PHI pay Contractor for non-productive T&M unless they have been authorized by PHI to standby.

**Standby Time:** PHI may specifically request Contractor crews to remain at reporting location or job site during emergency weather conditions. In such cases, PHI will reimburse Contractor for such standby time of Contractor on a T&M basis.

**Emergency Conditions / Storm Restoration:** When PHI has emergency work to be performed, or anticipates emergency conditions, all or part (including those working units work) of the Contractor's work force shall be made available to perform the emergency work (which includes standing by). All work shall fall under the T&M category of payment. Emergency situations may require crews to be assigned temporarily outside of their normal district or be called in during off hours. For emergency call out, the billable hours begins at the time employees arrive at their base reporting station work areas. Contract Crews shall not to be

released without prior authorization from PHI.

**Reactive Work:** PHI recognizes that there is work outside of the planned unit work. The reactive work as described earlier will consist mainly of customer requests, hazard trees found during the aerial inspection, some capital projects, and emergency support; and presently is beyond what is expected under the unit price. When these situations are encountered, PHI shall direct the contractor to perform work under the contracted T&M rates. PHI does reserve the right to establish and implement units pricing where appropriate and at mutually agreed upon pricing.

**Construction (Capital) Projects:** Most work on capital jobs will be based on unit pricing. However, if units are unavailable, or the capital job is expected to be less than a week in duration, billing may be based on T&M rates. Work on larger projects may be measured for unit work, independently bid, or designated as T&M. The Contractor shall provide crews to perform all aspects of vegetation management as assigned on projects such as new facility construction, re-builds, and system improvements. Project descriptions with instructions and schedule will be provided to Contractor prior to work being performed.

**Hot-spot or Miscellaneous Work Orders:** Contractor shall provide crews to perform vegetation management for any hot-spot or miscellaneous work, as requested by PHI. This work will usually be performed on a T&M basis unless otherwise directed. Larger projects may be measured and considered unit work.

**Traffic Control:** Contractor is responsible to provide traffic control associated with T&M jobs. The set up normally consists of two (2) traffic control personnel, sign truck, and all necessary cones, signs, communication devices, etc. All traffic control must be implemented in accordance with all local, state, and federal regulations. This will be performed under T&M, and should include police provided traffic control if required.

## **SECTION IV - OBLIGATIONS OF PHI**

PHI has collected vegetation management prescriptions on the preventative maintenance work scheduled for the current cycle. The prescriptions are captured in units and grouped by ROW, substation to substation.

PHI will provide unit data electronically to the Contractor by circuit or project. A map illustrating the exact work location and type of work proposed will be available; as well as a summary of units on each particular ROW. The Contractor is to retrieve this data electronically via web portal. The Contractor can then create paper maps and distribute them to crews who will perform the work.

## SECTION V - OBLIGATIONS OF THE CONTRACTOR

### General

Attend a Project Kick-Off Meeting after receiving the award to discuss schedules and other tasks needed to complete the work at a site determined by PHI. The date and time of this meeting will be scheduled at a future date.

The Contractor must complete all work on our planned maintenance schedule within the plan year for compliance purposes. **If not met, the Contractor will be responsible for paying any noncompliance penalties incurred by PHI.**

The Contractor is expected to perform all operations required for and incidental to the vegetation management of the ROW's proposed in this bid. The Contractor is not allowed to work more than two (2) planned maintenance jobs at a time without PHI approval. Crews are to document each activity performed on the maps including dates completed and signature of responsible contractor employee.

### Personnel

The Contractor is expected to provide adequate personnel to complete all work types required. Personnel must be competent and experienced in the type of work to be performed. Each crew working under this Contract shall be supervised by an individual supporting necessary qualifications required by law and/or PHI. PHI reserves the right to have any employee of the Contractor removed from the job if he or she is considered to be incompetent or otherwise unfit.

**Working Hours** – The days and hours that the Contractor may work are restricted to daytime hours on non-holiday weekdays. No work is to be performed on weekends, or holiday observed by PHI, without prior permission from PHI.

**Supervision** - Supervision cost is to be included in unit prices. If more than one crew is working; supervision is expected to be present on PHI territory.

**Area Supervisor:** The Contractor shall be responsible for all aspects of the work covered by this contract. The Area Supervisor shall be responsible for overseeing the first-line supervisor(s) and be the main contact for PHI to address regional staffing or any issues as they arise. Where applicable, the Area Supervisor or a designee of the Contractor shall be a Maryland Licensed Tree Expert. The Area Supervisor shall possess the ISA Certified Arborist designation, or attain it within one year of starting work for PHI. The Contractor shall equip their Area Supervisor with all the tools & equipment to properly perform this function including but not limited to a wireless telephone, computer and an appropriate vehicle for accessing all types of terrain as may be required. All cost for the Area Supervisor and other similar personnel shall be deemed included the Contractor's overheads. This applies regardless of the size of the Contract

workforce or work type (units, T&M) on PHI property.

**General Foreman/First-Line Supervisor:** The Contractor shall provide a General Foreman/First-Line supervisor who shall be responsible for the supervision and administrative duties associated with the field crews performing the work covered by this contract. The General Foreman/First-Line supervisor shall be knowledgeable of the requirements for tree clearance around electric wires and the proper methods for obtaining that clearance. The General Foreman/First-Line Supervisor shall have the ability to communicate effectively both verbally and in writing, in English. Each General Foreman shall have a lap top computer in their company vehicle and have an individual e-mail account which they shall monitor on a daily basis. This position shall also possess a current commercial pesticide license for the State/s in which they work. The individual must also support a Certified Arborist designation through the International Society of Arboriculture.

The General Foreman/First-Line supervisor shall assemble crews, assign, coordinate and supervise the work as necessary, and shall be continuously knowledgeable of the work status. This position shall supervise no more than eight (8) crews under normal operations. The General Foreman/First-Line supervisor shall be at work during the normal hours of the crews, and all work is to be exclusively related to this contract. When the General Foreman/First-Line Supervisor is off for more than one day due to illness, vacation, training, or any other reason, their position shall be filled by a trained, competent substitute. A General Foreman/First-Line supervisor shall not perform equipment repair or maintenance work during the work hours of the crews. If a General Foreman/First-Line Supervisor is supervising Unit Price work, he cannot supervise T&M work concurrently. The General Foreman / First Line Supervisor shall not be billed for while supervising Units Work.

Due to the nature of work and on-call requirements, the Contractor shall provide supervision during non-business hours that can be reached via telephone when PHI encounters emergency conditions. The Contractor shall provide a list of emergency contact numbers for this reason. The Contractor shall equip their employee(s) with all the tools & equipment to properly perform this function to include but not limited to a wireless telephone, computer and an appropriate vehicle for accessing all types of terrain as may be required.

**Crew Leader:** The Contractor shall provide Crew Leaders in accordance with these specifications, who are competent Qualified Line Clearance personnel. Crew Leaders shall have a minimum of one year of experience in utility line clearance tree trimming, or must meet experience requirements per the local union agreement. Crew Leaders of Bucket Crews shall be competent bucket truck operators and Crew leaders of Climbing Crews shall be competent climbing personnel. Crew Leaders shall perform tree work and direct the activities of the crew. Each Crew Leader shall have the ability to effectively communicate verbally and read/write in English. The Contractor shall equip their employee(s) with all the tools & equipment to properly perform this function to include but not limited to a wireless telephone, computer and an appropriate vehicle for accessing all types of terrain as required. The Crew leaders may be

expected to obtain their own permissions and perform their own notifications as the work warrants. Each foreman (or crew leader) will be a working foreman. Foremen must have at least one year of experience in the type of work performed and support a thorough knowledge of plant and tree identification in both the dormant and growing seasons. Foremen must remain on the job at all times, supervising the work.

### **Crew Complements**

**Bucket Crew:** The typical make-up consists of one (minimum 70' platform) bucket truck, 1 chipper, 1 Crew Leader, and 1 or 2 Qualified Line Clearance personnel, equipped with all necessary tools; including but not limited to all required PPE, small climbing chainsaw, large ground chainsaw, pole pruner, ropes, stump treatment herbicide, clean-up tools and traffic control equipment. The Crew Leader shall have the ability to effectively read and write and verbally communicate in English. Trucks shall be equipped for storm emergency conditions with rain gear, storm lights, chains, etc.

NOTE: General Foreman/First-Line supervisor shall always have available large saws for use when needed.

**Climbing Crew:** The typical make-up consists of one split dump truck, 1 chipper, 1 Crew Leader, and 2 or 3 Qualified Line Clearance personnel, equipped with all necessary tools; including but not limited to all required PPE, one small climbing chainsaw per climber, one large ground chainsaw, pole pruner, ropes and appropriate climbing gear, stump treatment herbicide, clean-up tools and traffic control equipment. The Crew Leader shall have the ability to effectively read and write and verbally communicate in English. At least 2 members of the crew will be competent climbing personnel, in addition to being Qualified Line Clearance personnel. Trucks shall be equipped for storm emergency conditions with rain gear, storm lights, chains, etc.

NOTE: General Foreman/First-Line supervisor shall always have available large saws for use when needed.

**Herbicide Application Crew:** The typical make-up consists of one crew leader w/ appropriate certifications, 2 or 3 application personnel. One or more herbicide application trucks with minimum 200 gallon hydraulic rig, hoses, and back pack sprayers as needed; all tools including ground chainsaw, emergency spill cleanup kit; herbicide concentrate or pre-mixed solution. The Crew Leader shall have the ability to effectively read and write and verbally communicate in English and demonstrate the ability to read, comprehend, and explain herbicide labels, Material Safety Data Sheets, and the proper application method for the chemicals being applied. Copies of the MSDS and labels will be kept on the vehicle. Required herbicide application records will be documented daily and returned to PHI with timesheets. Documentation of adverse incidents associated with the application of pesticides is to be submitted to PHI within 24 hours of an incident.



## **Notification**

Contractor shall be responsible for notification/permission of any and all property owners and regulatory authorities relative to Rights-of-Way matters necessary for work to be performed. The contractor shall perform notification of adjacent owners, as well as all vegetation management work, in compliance with COMAR 20.50.12.09 Standards.

The Contractor will promptly comply with all reasonable requests of the property owners and tenants relative to the Right-of-Way access and to the general conduct of work. He shall not, however, enter into any agreements with property owners or tenants that constitute a detriment to Regulatory Compliance, PHI or work in progress. He shall cease to perform any further operations against the objections of the property owner or tenant until the matter(s) has been resolved to the satisfaction of the property owner, tenant and PHI.

If an adjacent property owner objects to this work and the Contractor is unable to resolve the situation, then the Contractor shall inform PHI and shall not perform any work in that area until instructed to do so by PHI.

If PHI directs the Contractor to skip a portion of the work due to adjacent property owner problems (or any other reason), PHI may, after the problem has been resolved, direct the Contractor to return to that area and complete the work, as long as PHI takes such action prior to the expiration date of this Contract.

## **Access**

Before entering any private property the Contractor must obtain the permission of the landowner or lessee.

**The Contractor will establish and stake a baseline for the Right-of-Way. There shall be no chemical application or cutting outside of PHI rights-of-way.** Prior to the start of vegetation management activity, the Contractor will mark the ROW edge and boundaries of other sensitive areas. The Contractor shall take all necessary precautions to protect wetlands, threatened and endangered species populations and other sensitive areas. PHI reserves the right to designate the starting points of all clearing operations and, from time to time instruct the Contractor to clear any specific section or sections.

When a contractor uses an access road, culvert, bridge, and / or fence opening it shall be left in as "good or better" condition by the Contractor when his clearing operations are concluded. Where new roads or other means of access (such as bridges, neighboring properties, etc.,) are required to enter or traverse the Right-of-Way for construction and/or maintenance of the line, the work will be performed by the Contractor under the direction of PHI.

The Contractor shall keep all gates closed and shall be responsible for any problems resulting

from any open gate attributable to the Contractor's work

Under no circumstances will it be permissible to leave cut cherry trees in a pasture or in an area where livestock might have an opportunity to eat the leaves. When cherry trees occur in a pasture area, the trees shall be cut and removed from the pasture area, and the stump shall be chemically treated.

Where necessary to move equipment through cultivated fields, the Contractor shall use existing farm roads with the approval of the landowner. The Contractor shall make every effort not to damage gardens or crops located on the rights-of-way. There may be situations where PHI will approve crop damages; but a thorough investigation of alternative access routes must be conducted beforehand. Areas not possible to treat chemically due to proximity to crops shall be chemically treated after the crops have been harvested.

The Contractor shall be responsible for excessive and/or unapproved damages to crops in excess of those provided for by PHI. Written documentation to PHI is required for any area rendered inaccessible for treatment.

### **Contractor Required Reporting**

**Pre-Planned Maps** – Crew foreman and/or supervision is to document each day's progress on the map by initialing and dating the completion of each prescriptive entry. Herbicide maps require further documentation; including but not limited to product mix, gallons used and weather. Additionally, changes to work, customer interactions, or other relevant information must be recorded. With the completion of each job or circuit, the pre-planned map must be returned to PHI.

**Daily Location Report** – During the progress of the work, the Contractor shall call or email the Pepco Transmission Forester each morning by 7:00 a.m. and report each crew's work location(s) including the ROW, the number of personnel, the type of work being performed that day, and parking locations.

**Timesheets:** Contractor crew timesheets are to be submitted to PHI every Monday on a weekly basis.

**Herbicide Records:** Chemical reports are to be submitted to PHI with timesheets on a weekly basis.

**Weekly Production Report** – At the beginning of each week, the Contractor shall submit to PHI a written report detailing the previous week's work. If requested by PHI, the Contractor shall also provide this information at times other than the normal reporting time. The written report will summarize planned maintenance units completed by circuit. This data will correlate with the planned maintenance units data previously collected by PHI. Additionally the report shall include all completed work, unit or time and material, PM, RM, or Capital, fly-list units by circuit. A sample of this document will be supplied by PHI, attached with the bid.

**Job Completion Form** – Attached to the front of all pre-planning maps will be a job completion form, listing the region, circuit, type of work, start date, completion date, and any changes. Signatures will show approval by planner, general foreman, auditor, and forester when each step has been completed. A sample of this document will be supplied by PHI, attached with the bid. This form is to be completed and returned to PHI with the pre-planned map.

**Unworkable Sites (Skip) Form** – Any planned work, especially herbicide, that cannot be completed for any reason must be documented on the Unworkable Form (Punch List). This includes locations where the Contractor believes vegetation is too tall to treat or is inaccessible. When such a location is found, the general foreman is responsible for notifying their own supervisor, the utility planner, and PHI Forester. The document must be attached to the front of pre-planning maps and returned with the map upon work completion. The Contractor will be responsible for completing skipped work.

**Monthly Reporting Form** - At the beginning of each month, the Contractor supervision will submit to PHI a monthly reporting form. This form documents all work completed during the previous month. A sample of this document will be supplied by PHI.

**Herbicide Records** – Records of herbicide applications, including name of herbicide, location of application, rate of application, method of application, etc. must be documented daily. A copy of the herbicide record is to be submitted to PHI weekly with timesheets. Included in these reports, as applicable, shall be some form of confirmation that spray equipment is properly calibrated.

**Adverse Incident Reports** - An Adverse Incident is one that the operator has observed upon inspection or of which otherwise becomes aware, in which there is evidence that (1) A person or non-target organism may have been exposed to a pesticide residue, and (2) the person or non-target organism suffered a toxic or adverse effect. In the event of an Adverse Incident the Adverse Incident Form is to be completed and submitted to PHI.

**Storm Roster and Manifest** – The Contractor’s General Foreman must provide documentation of all equipment and laborers available for storm work. If storm work is necessary, the General Foreman must also provide documentation of hours worked.

**Contractor Specific Reporting** – Contractors are encouraged to submit additional reporting. Forms and reports that provide valuable information or save time and money for PHI will be considered in the bid process.

## **Invoicing**

The Contractor will be responsible for submitting invoices for units and T&M work separately. The invoices must be in a summary format and submitted electronically. For unit work, field maps and Job Completion Forms and Unworkable (Skip) form must be returned to PHI prior to submitting invoice for payment. All payments will be made in accordance with the Master Terms and Conditions.

**Unit Invoicing:** Invoicing for unit work will be submitted weekly and will be only for completed units. The invoice should include the circuit name and number being worked, the units billing sheet, and associated documentation.

**Billing for T&M:** Weekly invoice for T&M will include circuit name & number being worked, percentage of work completed, labor, equipment, materials details and associated documentation.

**Reporting:** Contractor shall provide periodic (weekly, monthly, year-to-date) reports of work progress as requested by PHI.

**Fuel Escalators and Price Adjustments:** There will be no adjustment of unit or T&M prices or additional charges from the Contractor to PHI due to future changes in the market price of fuel.

### **Equipment, Tools, and Materials**

The Contractor shall furnish all supervision, equipment, tools, supplies and materials necessary to perform all operations covered by this Contract. All equipment, tools and materials must be of good quality, sound operating condition, be equipped with industry safety features and are subject to approval by PHI. Additionally, equipment used in the application of pesticides is to be calibrated. PHI reserves the right to decline equipment, shut down crews and/or rescind this contract due to unsatisfactory equipment performance.

All materials are subject to approval by PHI. Vehicles provided personnel must be equipped appropriately to access off-road as well as on-road assignments. PHI may assign each vehicle an identification number, and will provide numbers that shall be attached to the back of each truck, as directed by PHI. Contractor shall use the type, quality and quantity of materials and supplies specified that are fit for the particular purpose(s) intended by PHI. No substitutions may be used without the prior written authorization from PHI.

**Communication Facility** – The contractor shall have a central communication facility, equipped with a telephone, a facsimile machine and a computer with email capability. The central communication facility is to maintain contact information for emergency medical facilities and hazardous chemical responders near the areas in which crews will be operating. Contact information to be provided to crews in the event of an emergency. The telephone must have message recording capabilities for times when personnel are not available to answer the phone. The facsimile machine must be on a dedicated phone line, and capable of both sending and receiving messages. The telephone and the facsimile machine are to be on at all times. The Contractor must check for messages, facsimiles and emails at least once each business day.

**Cellular Telephones** – The Contractor shall equip each foreman with a cellular telephone which has a range that covers the PHI transmission system area. The cellular telephone is to remain on the foreman, in proper working order, at all times during working hours.

**Technology** – The Contractor shall equip each general foreman with the proper tools and technology to facilitate coordination of crews, communication with PHI, and record keeping. A laptop computer is required equipment for a general foreman. Additional equipment such as a printer, GPS navigation, and camera are highly suggested. Any additional technology, tools, or equipment which improves the value to PHI will be considered in the bid evaluation.

**Herbicide Chemistry and Application:** PHI reserves the right to select herbicide composition. At present, Cut Stubble and Basal selective applications or chemistry is employed for upland applications. PHI will entertain recommendations from the Contractor concerning alternative mixes. Selective application is the choice method of foliar treatment in wetland areas, with broadcast applications used as needed for areas of dense brush. .

### **Complaints and Damages**

Regarding damages or complaints received during the course of the proposed operation, PHI stipulates the following conditions as part of the Specification:

**Damages** - The Contractor will provide protection that, in the opinion of PHI, will prevent damage to property (including lawns, roads, fences, buildings, drains, bridges, and pipelines) by passage of equipment. This includes adverse incidents relating to herbicides. The Contractor assumes sole responsibility for damages thereby incurred and shall notify PHI immediately if and when such damage should occur. Damage to property shall be repaired in a timely manner to a condition that is as good as or better than the original, and appropriate corrective action taken to remediate adverse incidents as mentioned above.

**Complaints** – The Contractor shall immediately inform PHI of any complaints which arise. The Contractor shall also immediately respond to the claimant. Within 10 days of receiving a complaint, the Contractor shall make arrangements, which are satisfactory to the claimant, for the settlement of the complaint. The Contractor shall keep PHI informed of the status of each complaint and of any settlement made with the claimant. Where it is deemed necessary by PHI, a representative of PHI will accompany the Contractor’s agent in the settlement of claims. An executed copy of the release for every damage claim settled shall be furnished to PHI. For claims not settled in a timely manner, PHI reserves the right to negotiate a settlement and the Contractor shall pay all expenses.

### **Completion and Audit**

**Completion and Cleanup by Job** - As the vegetation maintenance work is completed in each area, the Contractor shall promptly remove all tools and equipment and clean up the area. Any remediation that is necessary must be performed by the Contractor to the complete satisfaction of PHI prior to invoicing. Remediation activities resulting from the application of pesticides are to be documented in Adverse Incident Reports.

Audit can occur at anytime during the vegetation maintenance activities or application season and can extend into the growing season of year following application. Representatives of PHI and the Contractor shall inspect the managed areas of Rights-of-Way and determine which areas, in PHI's opinion, have received unsatisfactory completion or incomplete chemical treatment. All re-treating work shall be done at the Contractor's expense and shall be subject to inspection by, and approval of, PHI.

The Contractor accepts all responsibility for proper herbicide application and is ultimately responsible for 100% control of targeted areas. The unit prices submitted are not to be based on an application to the ROW; they are **based upon 100% vegetative control of the ROW**. If PHI is not satisfied with the level of vegetative control, the Contractor will be required to perform follow-up applications at the Contractor's own expense until an acceptable level of control is achieved. Due to the seasonal restrictions of foliar herbicide treatments, this obligation can extend in to the following spray season.

## **SECTION VI – GENERAL STANDARDS**

### **15. Integrated Vegetation Management and Best Management Practices**

#### **Integrated Vegetation Management (IVM)**

Two methods of vegetation clearing operations are prescribed by PHI, defined as Type I and Type II. Details concerning these methods of operation are described below:

**Type I Reclamation** - All trees and brush within the designated clearing limits of the Right-of-Way shall be cut and/or treated, as required by these specifications except as otherwise specified.

When designated for "Type I" clearing, all tree growth within the designated clearing limits is to be removed and/or treated. Clearing may be performed with timber harvesters, mowers, or by power saw. For ecological reasons, the use of shears, bulldozers or similar equipment may not be used without prior approval of PHI.

**Type II Selective Clearing** - When designated for "Type II" clearing, all vegetation within the "Wire Zone" of the Right-of-Way that exceeds 3 feet at maturity shall be cut and/or treated. All vegetation within the "Border Zone" of the Right-of-Way that exceeds 15 feet in height at maturity shall be cut and/or treated.

#### **Best Management Practices (BMP)**

**Herbicide Season:** Foliar and cut stubble herbicide applications for each year shall start on the last week of May and reach completion before mid-October. These dates are weather dependent and must be approved by PHI prior to work. The chemical solution and method of

application used for this work shall be designated by PHI. Basal applications are applied year-round.

**Herbicide Records:** Before the herbicide season begins each year the applicators should provide updated application information for inclusion with the PDMPs. Eg. List of pesticides that will be applied that year, MSDS sheets and labels, updated license information, and contact information. Records are to be submitted weekly with timesheets. The Contractor shall use only those herbicides and solutions which have been registered by the E.P.A. and approved by PHI. All chemical treatment is to be according to label directions and must abide by all local, state, and federal laws. A copy of all labels and appropriate MSDS sheets for any materials on site must be kept on the job site at all times and presented when requested. The chemical solution shall be applied using appropriate pressure and nozzle type.

**Herbicide Standard Operating Procedure:** Treat all undesirable vegetation as prescribed on the unit map plan. Should the crew encounter trees too tall for foliar herbicide treatment; the crew is to treat all trees except the tall individuals. The tall trees are to be cut down and stumps treated, if work can be accomplished in less than one hour. If removals cannot be completed in one hour; the crew will document the circuit, grid cell and date on a Unworkable Site Form.. Crew will also call General Foreman and/or Planner to inform of this location.

**Herbicide Effectiveness:** The Contractor accepts all responsibility for proper herbicide application and is ultimately responsible for **100% control of targeted areas**. The unit prices submitted are not to be based on simply an application to the ROW; they are to be based upon 100% vegetative control of the ROW. If PHI is not satisfied with the level of vegetative control, they may require the Contractor to perform follow-up applications at the Contractor's own expense as necessary over the next two years.

**Livestock:** Under no circumstances will it be permissible to treat cherry trees in a pasture or in an area where livestock might have an opportunity to eat the leaves. The Contractor must document the location on the Unworkable (Skip) Form and consult the PHI Forester. Any cut portions and all leaves of cherry trees left as a result of cut work shall be immediately removed from the pasture area.

**Herbicide Chemistry:** PHI reserves the right to select herbicide composition. At present, selective chemistry is employed for upland applications. We will entertain recommendations from the Contractor concerning alternative mixes.

**Herbicide Applications:** Selective application is the choice method of foliar treatment with broadcast applications used as needed for areas of dense brush. Extreme care shall be taken to avoid over spray or drift onto desirable species and surface waters. There shall be no chemical application when the wind velocity exceeds 20 mph. The chemical solution shall not be applied when the stems or stumps are wet from precipitation. It is the responsibility of the Contractor to ensure proper application and uptake of the herbicides to control the vegetation. Rain and other types of inclement weather may affect the uptake of the chemicals by the vegetation and require reapplication.

**Facilities and Structures:** Under no circumstances shall the Contractor attach any ropes or winch cables to any pole, tower, or foundation, or use any such structures as anchors for winching equipment.

**Mowing and Hand Cutting:** All undesirable vegetation within the designated clearing limits of the Right-of-Way shall be cut not more than 3 inches from the ground. The tree trunk and branches shall be completely severed from the stump.

**Desirable Species:** Every effort will be made to prevent damage to desirable plants. Adequate precautions shall be taken so as not to remove or damage existing ground cover, brush or vegetation designated for preservation – either as herein noted or as directed by PHI. The moving of logs, limb-wood and brush shall be done with regard to saving all desirable species practicable. The clearing operation shall be planned so that there is a minimum of equipment movement in the areas where desirable species occur. Only equipment approved by PHI will be permitted for this work to insure the integrity of low vegetation growth and the maintenance of valuable ground cover.

**Wetlands:** All clearing in designated wetlands shall be performed with hand held equipment and tools or mechanized equipment with matting. All debris is to be hauled out of the wetland to an upland location at the predetermined distance as set by regulatory agencies. There shall be no rutting or soil disturbance in wetland areas. No logs, brush, chips or debris are to be left in wetlands, transitional areas ditches, drains, creeks or floodplains of any description. Debris of any kind may not be left below the mean high water mark of tidal waterways. Drainage of any kind will not be altered from its original course without the prior, written and specific approval of PHI. The Contractor may propose alternative methods of clearing in wetlands which minimize soil disturbance. This method must be approved by PHI prior to implementation. Non-tidal wetlands and wetland buffer areas may be treated using an approved aquatic low volume foliar application method, unless otherwise directed by PHI.

**Uplands:** In upland areas, every effort should be made to minimize rutting or soil disturbance. Should the Contractor create deep ruts, stump holes or mounding terrain either on the ROW or on neighboring property, such property shall be graded to conform to previous natural ground levels and this work will be performed by the Contractor to the complete satisfaction of PHI. Upland Herbicide mixes are forbidden to be used in areas not applicable to the label.

**Windrowing Brush** may be acceptable with prior approval from PHI. Occasionally, small cut trees and limbs under 3" diameter may be stacked along the woods-line. The Contractor must have property owner's permission and accepts full responsibility if future clean up is required.

**Erosion:** The Contractor shall conduct operations to avoid any increase in the hazard of soil erosion. Existing root structures are to be left intact. On edges and banks of streams and other natural watercourses susceptible to erosion, clearing shall be performed in such a manner as to minimize surface soil disturbance. Chips are not to be placed in this area. All stream crossings shall be subject to approval of PHI. If required, the Contractor shall install proper sediment



erosion control measures to meet regulatory requirements.

**Stumps and Debris:** All stumps shall be cut parallel with the ground as low to the ground as possible. Unless otherwise specified, all stumps of live trees of species capable of re-sprouting shall be treated immediately with the low volume basal solution or other solution approved by PHI. Unless otherwise directed by PHI, disposal of all wood, including brush and slash shall become the responsibility of the Contractor and shall be removed from the ROW. Chips are to be removed from the ROW or spread over the ROW area to a maximum depth of three inches (3") with specific permission from the property owner. The Contractor shall inform PHI of any debris found on the rights-of-way. If PHI instructs the Contractor to remove the debris, the Contractor shall remove it and dispose of it in a legal manner.

**Wood:** Wood is not allowed to be left on the ROW. With PHI and landowner approval, logs and limb-wood four inches (4") in diameter and larger, can be cut into designated lengths and stacked along the edge of the ROW. Wood may not be stacked outside specified Right-of-Way without permission of the property owner. All roads and paths, regardless of whether or not they show recent use, shall be left clear of logs, except as designated by PHI. Logs, branches, chips, etc. are not to be left in ditches, drains or creeks of any description.

**Trash:** Contractor shall not litter on the ROW. Oil jugs, water bottles, lunch wrappers, etc. must not be left on the ROW.

**Logging:** Written approval of PHI must be obtained for any commercial logging.

**Road Screens:** PHI does not promote any road screens and will seek removal during the scheduled maintenance cycle. However, certain areas throughout the territory are sensitive to the management of these buffers. PHI will direct maintenance activity when these screens are encountered.

**Invasive Species:** Every reasonable effort will be made to eradicate invasive tree species. Invasive species shall be addressed when on or impeding access to PHI facilities, including but not limited to gates, barricades, pole and tower structures, or when so instructed by PHI. Phragmites is an exception, and requires attention only when so advised by PHI.



**REQUEST FOR PROPOSAL**

**PHI SERVICE OWNER**

**ACE a PHI Owner**

**DPL a PHI Owner**

**August 18, 2010**

**DETAILED SPECIFICATIONS FOR VEGETATION CONTROL**

**DELMARVA POWER ELECTRIC AND ATLANTIC CITY ELECTRIC TRANSMISSION**

**RIGHTS-OF-WAY**

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## **SECTION I – GENERAL BID OVERVIEW1    Request for Proposals**

This document serves as a request for proposals for transmission vegetation management. Bidders should submit one proposal for Atlantic City Electric and one separate proposal for Delmarva Power. The scope, all specifications, and details of this document apply to both proposals.

The undersigned, in anticipation of rendering services and/or supplying materials, machinery or equipment pursuant to the terms and conditions of the PHI Service Owner Construction Contract Standard Terms and Conditions Vers. 10.5, 1/17/07 (“Master Terms and Conditions”), to PHI Service Owner (“PHI”) for the benefit of PHI and/or any of its affiliates, including but not limited to Delmarva Power, Atlantic City Electric Owner, and Potomac Electric Power Owner hereby agrees to the terms and conditions of this Rider which supplements and modifies the Master Terms and Conditions. In the event of any conflict between the terms and conditions of this Rider and the Master Terms and Conditions, the terms and conditions of this Rider shall control. This Rider, in combination with the Master Terms and Conditions, is a request for proposal.

**1.2** All capitalized terms shall have the meanings used in the Master Terms and Conditions unless expressly stated otherwise in this Rider.

**1.3** If a Contractor is uncertain as to the meaning of any part of the Master Terms and Conditions, this Rider or as to any other Project requirement, it shall submit to PHI, prior to the date the proposals are due, a written request for an explanation or interpretation thereof. Any explanation or interpretation shall be made and issued by PHI as an addendum to the Rider or Master Terms and Conditions, as appropriate. A copy of each such addendum will be mailed (electronically and/or hard copy) or faxed to each Contractor receiving the applicable Rider and/or Master Terms and Conditions.

Requests for interpretation or other correspondence or questions shall be in writing and directed as follows:

88MK67  
Michael Mozer, Strategic Sourcing  
Pepco Holdings, Inc .  
PO Box 231  
Wilmington, DE 19899-0231  
(Overnight: 630 Martin Luther King Jr Blvd – Wilmington, DE 19801)  
e-mail: bob.wynne@pepcoholdings.com  
Phone: (302) 429-3544  
Fax: (302) 429-3855  
Cell: (302) 530-2231

PHI shall not be bound by any other explanations or interpretations of the Master Terms and Conditions or this Rider, except those requested and provided in accordance with Sections 1.3a and 1.3b herein.

PHI reserves the right to reject any and all proposals, and to waive any informalities or irregularities in the proposals received. Any contract awarded by PHI as a result of this request for proposal will be awarded the Contractor whose proposal will be most advantageous to PHI as determined in PHI’s sole discretion. Price and other factors will be considered. Therefore, a contract may not necessarily be awarded to the Contractor with the lowest price.

**1.5** All proposals must be received by PHI's Representative as set forth in Section 1.3b by not later than **Noon on October 1, 2010. Email or hard copies with CD of the proposals are acceptable, given that the necessary signatures are included.** Proposals received after the due date may not be considered.

**1.6** All information contained in this Rider and the Master Terms and Conditions is confidential and proprietary to PHI. This document is being supplied to you solely for your internal use with regard to formulating and submitting the requested proposal and must be returned to PHI's designated representative upon demand. All proposals submitted pursuant to this request for proposal shall, upon receipt by PHI, become the property of PHI and will not be returned to Contractor.

Please sign below to evidence your concurrence with the foregoing obligations and return this page with your Proposal to PHI's Representative designated in Section 1.4.

\_\_\_\_\_  
Contractor Owner

By: \_\_\_\_\_  
Signature of Authorized Representative

Name: \_\_\_\_\_  
Printed

Title: \_\_\_\_\_

## SECTION II – STATEMENT OF WORK

### **2. Scope of Work**

**Project:**

Vegetation Management on Delmarva Power and Atlantic City Electric Transmission Systems

**Office Locations:**

Atlantic City Electric Office is located at 5100 Harding Hwy, Mays Landing, NJ 08330.

Delmarva Regional Office is located at 401 Eagle Run Road, Newark, DE 19714.

**Transmission System:**

Delmarva Power – approx. 1540 miles of transmission lines and 10,000 acres for management

Atlantic City Electric – approx. 1160 miles of transmission lines and 8000 acres for management

PHI intends to contract vegetation maintenance work on the Transmission systems of Atlantic City Electric and Delmarva Power, but may include limited work on Distribution and Sub-Transmission in emergency or necessary situations. The contract period will be for four (4) years. The timeframe of this contract is targeted for the Contractor to begin January 1, 2011. However, depending upon award; the date will be sixty (60) days after notification of award. The work included in this contract will be planned electric transmission right-of-way clearance and reactive work such as aerial patrol hazards, capital projects and emergency support to provide clearance for any PHI distribution or transmission facility, and any other tree work assigned by PHI.

For purposes of this document the words PHI and Owner shall mean PHI Service Owner or such other affiliate of PHI Service Owner that enters into this contract with Contractor. Contractor shall mean the entity providing goods and/or performing the services as specified in this contract. All work will be performed in accordance with the latest version of the PHI Service Owner Construction Contract Standard Terms and Conditions (referred to as Master Terms & Conditions).

The contract is unit based for all planned work, unless otherwise directed by PHI. Reactive work will initially be done on a time & material (T&M) basis with the option to establish and implement unit pricing where appropriate and at mutually agreed upon pricing. For all work associated with the contract the Contractor is solely responsible for safety and meeting all requirements set forth in the Master Terms & Conditions. Part of the requirement will to ensure all individuals working under the contract have attended a safety orientation and signed the Safety Acknowledgement (refer to Attachment).

**2.1 Quantity of Work Not Guaranteed:** PHI does not guarantee the amount of work or any portion thereof that will be awarded under this contract. The estimates provided are an illustration only of the work that has or may be experienced and the magnitude of work may vary. PHI makes no guarantees of quantities expressed in this Rider or attachments.

**2.2 Lump Sum Work:** PHI reserves the option to request a lump-sum price for any project or job such as but not limited to large capital projects. PHI reserves the right to bid any portion of work and the right to use other contractors to perform work within the contract Area.

**2.3 Normal Work Week:** The Contractor's work schedule shall consist of forty (40) hours, Monday through Friday excluding holidays between the hours of 6:30 a.m. to 5:30 p.m., unless

otherwise agreed upon with PHI. Based upon mutual agreement, the Contractor may either work five (5) eight (8) hour days or four (4) ten (10) hour days. Such 10 hour days (Monday through Friday) shall be considered normal working hours for the first 40 hours. No work shall be performed on Saturday, Sunday, holidays or at overtime rates unless so ordered by PHI. For reporting purposes, the work week will begin at 00:01 hours Sunday morning and end at 24:00 hours the following Saturday.

**2.4 Term of Contract:** The term of this contract will be for four years, with the first two years being firm pricing, and the third and fourth year to be negotiated. A standardized rate review process will be utilized for negotiations. Price increases for the third and fourth year can not exceed 2% or CPI. Proposed work shall be scheduled within the time period by the Owner. Work may commence on Jan 1, 2011 and will proceed to the end of the contract. All work shall be performed only to the extent indicated and as directed by the Owner. Restrictions and/or special provisions shall be strictly observed by the Owner. This contract can be revoked at any time by the Owner for any justified reason. The Owner shall be the sole judge of what is considered justifiable grounds for dismissal.

**2.5 Energized Electrical Conductors:** The Contractor shall perform all clearance work while PHI's electrical conductors remain energized, unless otherwise directed by PHI. The Contractor shall ensure that their employees are trained and qualified to perform utility line clearance work.

### **3. Regulatory Compliance**

All work is to be performed in compliance with all applicable federal, state, county, local and Owner requirements. This includes all regulations, licenses, permits, insurance, etc.

#### **OSHA & ANSI Standards**

Pruning shall be performed according to the latest ANSI A-300 guidelines for Utility Pruning. All Utility Pruning shall be performed in a manner as to protect tree health, condition and natural symmetry. Cuts shall be made according to the latest version of the Utility Pruning section of American National Standards Institute for Tree Care Operations, ANSI A-300, unless permission is granted by Owner to use mechanical pruning equipment. Note: If 25% or more of the tree's crown must be removed in the pruning operation, the tree should be removed. Any exceptions must be pre-approved by PHI.

#### **Safety Compliance**

All work is to be performed in compliance with all applicable federal, state and Owners safety requirements. This includes OSHA 29CFR Part1910.269 ® and ANSI-Z133.1. Contractor shall provide for the protection of its employees all and such safety equipment as is prescribed by the common practice for the type of work being performed or as required by any laws, rules or

regulations or the exercise of prudence. Such safety equipment shall include, but not be limited to; hard hats, hearing protection, gloves, safety glasses, chaps, first-aid kits, and other necessary equipment.

Each foreman (or crew leader) will be a working foreman. Foremen must have at least one year of experience in the type of work performed and support a thorough knowledge of plant and tree identification in both the dormant and growing seasons. Foremen must remain on the job at all times, supervising the work. Contractor shall be responsible for notification/permission of any and all property owners and regulatory authorities relative to Rights-of-Way matters necessary for work to be performed.

ACE specific for vegetation management activities on electric transmission right-of-ways: New Jersey Board of Public Utilities has implemented new notification policies for 2007. All work in the State of New Jersey must adhere to these regulations.

The Contractor will promptly comply with all reasonable requests of the property owners and tenants relative to the Right-of-Way access and to the general conduct of work. He shall not, however, enter into any agreements with property owners or tenants that constitute a detriment to Regulatory Compliance, the Owner or work in progress. He shall cease to perform any further operations against the objections of the property owner or tenant until the matter(s) has been resolved to the satisfaction of the property owner, tenant and Owner.

If an adjacent property owner objects to this work and the Contractor is unable to resolve the situation, then the Contractor shall inform the Owner and shall not perform any work in that area until instructed to do so by the Owner.

If the Owner directs the Contractor to skip a portion of the work due to adjacent property owner problems (or any other reason), the Owner may, after the problem has been resolved, direct the Contractor to return to that area and complete the work, as long as the Owner takes such action prior to the expiration date of this Contract.

## **9. Access**

- 1 If an adjacent property owner objects to this work and the Contractor is unable to resolve the situation, then the Contractor shall inform the Company and shall not perform any work in that area until instructed to do so by the Company.



If the Company directs the Contractor to skip a portion of the work due to adjacent property owner problems (or any other reason), the Company may, after the problem has been resolved, direct the Contractor to return to that area and complete the work, as long as the Company takes such action prior to the expiration date of this Contract. Before entering any private property the Contractor must obtain the permission of the landowner or lessee.

**The Contractor will establish and stake a baseline for the Right-of-Way. There shall be no chemical application or cutting outside of PHI rights-of-way.** Prior to the start of vegetation management activity, the Contractor will mark the ROW edge and boundaries of other sensitive areas. The Contractor shall take all necessary precautions to protect wetlands, threatened and endangered species populations and other sensitive areas. The Owner reserves the right to designate the starting points of all clearing operations and, from time to time instruct the Contractor to clear any specific section or sections.

When a contractor uses an access road, culvert, bridge, and / or fence opening it shall be left in as “good or better” condition by the Contractor when his clearing operations are concluded. Where new roads or other means of access (such as bridges, neighboring properties, etc.,) are required to enter or traverse the Right-of-Way for construction and/or maintenance of the line, the work will be performed by the Contractor under the direction of the Owner.

The Contractor shall keep all gates closed and shall be responsible for any problems resulting from any open gate attributable to the Contractor’s work

Where necessary to move equipment through cultivated fields, the Contractor shall use existing farm roads with the approval of the landowner. The Contractor shall make every effort not to damage gardens or crops located on the rights-of-way. There may be situations where the Owner will approve crop damages; but a thorough investigation of alternative access routes must be conducted beforehand. Areas not possible to treat chemically due to proximity to crops shall be chemically treated after the crops have been harvested.

The Contractor shall be responsible for excessive and/or unapproved damages to crops in excess of those provided for by the Owner. Written documentation to the Owner is required for any area rendered inaccessible for treatment.

### **Contractor Required Reporting**

**Pre-Planned Maps** – Crew foreman and/or supervision is to document each day’s progress on the map by initialing and dating the completion of each prescriptive entry. Herbicide maps require further documentation; including but not limited to product mix, gallons used and weather. Additionally, changes to work, customer interactions, or other relevant information must be

recorded. With the completion of each job or circuit, the pre-planned map must be returned to the Owner.

**Daily Location Report** – During the progress of the work, the Contractor shall call **(302) 454-4107** for DPL and **(609) 625-6020** for ACE each morning by 7:00 a.m. and report each crew's work location(s) including the ROW, the number of personnel, the type of work being performed that day, and parking locations.

**Timesheets:** Contractor crew timesheets are to be submitted to the Owner every Monday on a weekly basis.

**Herbicide Records:** Chemical reports are to be submitted to the owner with timesheets on a weekly basis.

**Weekly Production Report** – At the beginning of each week, the Contractor shall submit to the Owner a written report detailing the previous week's work. If requested by the Owner, the Contractor shall also provide this information at times other than the normal reporting time. The written report will summarize planned maintenance units completed by circuit. This data will correlate with the planned maintenance units data previously collected by the Owner. Additionally the report shall include all completed work, unit or time and material, PM, RM, or Capital, fly-list units by circuit. A sample of this document will be supplied by the Owner, attached with the bid.

**Job Completion Form** – Attached to the front of all pre-planning maps will be a job completion form, listing the region, circuit, type of work, start date, completion date, and any changes. Signatures will show approval by planner, general foreman, auditor, and forester when each step has been completed. A sample of this document will be supplied by the Owner, attached with the bid. This form is to be completed and returned to the Owner with the pre-planned map.

**Unworkable Sites (Skip) Form** – Any planned work, especially herbicide, that can not be completed for any reason must be documented on the Unworkable Form. This includes locations where the Contractor believes vegetation is too tall to treat or is inaccessible. When such a location is found, the general foreman is responsible for notifying their own supervisor, the utility planner, and the Owner Forester. The document must be attached to the front of pre-planning maps and returned with the map upon work completion. The Contractor will be responsible for completing skipped work that is not properly documented.

**Monthly Reporting Form** - At the beginning of each month, the Contractor supervision will submit to the Owner a monthly reporting form. This form documents all work completed during the previous month. A sample of this document will be supplied by the Owner.

**Herbicide Records** – Records of herbicide applications, including name of herbicide, location of application, rate of application, method of application, etc. must be documented daily. A copy of the herbicide record is to be submitted to the Owner weekly with timesheets.

**Storm Roster and Manifest** – The Contractor's General Foreman must provide documentation of all equipment and laborers available for storm work. If storm work is necessary, the General Foreman must also provide documentation of hours worked.

**Contractor Specific Reporting** – Contractors are encouraged to submit additional reporting. Forms and reports that provide valuable information or save time and money for PHI will be considered in the bid process.

## **11. Invoicing**

The Contractor will be responsible for submitting invoices for units and T&M work separately. The invoices must be in an agreed upon format and submitted electronically. For unit work, field maps and Job Completion Forms and Unworkable (Skip) form must be returned to the Owner prior to submitting invoice for payment. The invoices shall be in a summary format. All payments will be made in accordance with the Master Terms and Conditions. The process will be as follows:

**Unit Invoicing:** Invoicing for unit work will be submitted monthly and will be only for completed units. The invoice should include the circuit name and number being worked, the units billing sheet, and associated documentation.

**Billing for T&M:** Weekly invoice for T&M will include circuit name & number being worked, percentage of work completed, labor, equipment, materials details and associated documentation.

**Reporting:** Contractor shall provide periodic (weekly, monthly, year-to-date) reports of work progress as requested by PHI.

**Fuel Escalators and Price Adjustments:** There will be no adjustment of unit or T&M prices or additional charges from the Contractor to PHI due to future changes in the market price of fuel.

## **12. Equipment, Tools, and Materials**

2 The Contractor's personnel must be competent and experienced in the type of work to be performed. The Company reserves the right to have any employee of the Contractor removed from the job if he or she is considered to be incompetent or otherwise unfit.

3 Communication Facility – The contractor shall have a central communication facility, equipped with a telephone, a facsimile machine and a computer with email capability. The telephone must have message recording capabilities for times when personnel are not available to answer the phone. The facsimile machine must be on a dedicated phone line, and capable of both sending and receiving messages. The telephone and the facsimile machine are to be on at all times. The Contractor must check for messages, facsimiles and emails at least once each business day.

Cellular Telephones – The Contractor shall equip each foreman with a cellular telephone which has a range that covers the PEPCO transmission system area. Working Hours – The days and hours that

the Contractor may work are restricted to daytime hours on non-holiday weekdays. observed by the Company, without prior permission from the Company.

Daily Location Report – During the progress of the work, the Contractor shall call (202) 388-2220 each morning by 7:00 a.m. and inform the Company of the location(s), number of personnel and type of work being performed that day.

Weekly Report – Each week, on a date specified by the Company, the Contractor shall submit to the Company a written report detailing the previous week’s work, If, requested by the Company, the Contractor shall also provide this information at times other than the normal reporting time. All measurements shall be horizontal distances. All measurements and computations are subject to examination by, and approval of, the Company. From the weekly report submitted by the Contractor, the Company shall prepare and forward to the Contractor a statement summarizing the work together with a check for the work completed. report shall include the following information:

Contractor’s name

Foreman’s name

Dates covered by the report

The quantities of unit work performed and the time and material quantities for any time and material work.

On a form supplied by the Company, the Contractor shall provide a sketch of each area treated or cut, showing the size of each area and the location by indicating structure numbers, roads, streams, fences and other landmarks.

The Contractor shall furnish all supervision, equipment, tools, supplies and materials necessary to perform all operations covered by this Contract. All equipment, tools and materials must be of good quality, sound operating condition, be equipped with industry safety features and are subject to approval by the Owner. The Owner reserves the right to decline equipment, shut down crews and/or rescind this contract due to unsatisfactory equipment performance.

15 Under no circumstances shall the Contractor attach any ropes or winch cables to any pole, tower, or foundation, or use any such structures as anchors for winching equipment.

16 The Contractor shall inform the Company of any debris found on the rights-of-way. If the Company instructs the Contractor to remove the debris, the Contractor shall remove it and dispose of it in a legal manner.

All materials are subject to approval by PHI. Vehicles provided personnel must be equipped appropriately to access off-road as well as on-road assignments. PHI may assign each vehicle an identification number, and will provide numbers that shall be attached to the back of each truck, as directed by PHI. Contractor shall use the type, quality and quantity of materials and supplies specified that are fit for the particular purpose(s) intended by PHI. No substitutions may be used without the prior written authorization from PHI.

**Communication Facility** – The contractor shall have a central communication facility, equipped with a telephone, a facsimile machine and a computer with email capability. The telephone must have message recording capabilities for times when personnel are not available to answer the phone. The facsimile machine must be on a dedicated phone line, and capable of both sending and receiving messages. The telephone and the facsimile machine are to be on at all times. The Contractor must check for messages, facsimiles and emails at least once each business day.

**Cellular Telephones** – The Contractor shall equip each foreman with a cellular telephone which has a range that covers the PHI transmission system area. The cellular telephone is to remain on the job site, in proper working order, at all times during working hours.

**Technology** – The Contractor shall equip each general foreman with the proper tools and technology to facilitate coordination of crews, communication with PHI, and record keeping. A laptop computer is required equipment for a general foreman. Additional equipment such as a printer, GPS navigation, and camera are highly suggested. Any additional technology, tools, or equipment which improves the value to PHI will be considered in the bid evaluation.

**Herbicide Chemistry and Application:** PHI reserves the right to select herbicide composition. At present, selective chemistry is employed for upland applications. The Owner will entertain recommendations from the Contractor concerning alternative mixes. Selective application is the choice method of foliar treatment with broadcast applications used as needed for areas of dense brush. Cut Stubble and Basal treatments are used only on occasion.

### **13. Complaints and Damages**

Regarding damages or complaints received during the course of the proposed operation, the Owner stipulates the following conditions as part of the Specification:

**Damages** - The Contractor will provide protection that, in the opinion of the Owner, will prevent damage to property (including lawns, roads, fences, buildings, drains, bridges, and pipelines) by passage of equipment. The Contractor assumes sole responsibility for damages thereby incurred and shall notify the Owner immediately if and when such damage should occur. Damage to property shall be repaired in a timely manner to a condition that is as good as or better than the original.

**Complaints** – The Contractor shall immediately inform the Owner of any complaints which arise. The Contractor shall also immediately respond to the claimant. Within 10 days of receiving a complaint, the Contractor shall make arrangements, which are satisfactory to the claimant, for the settlement of the complaint. The Contractor shall keep the Owner informed of the status of each complaint and of any settlement made with the claimant. Where it is deemed necessary by the Owner, a representative of the Owner will accompany the Contractor’s agent in the settlement of claims. An executed copy of the release for every damage claim settled shall be furnished to the Owner. For claims not settled in a timely manner, the Owner reserves the right to negotiate a settlement and the Contractor shall pay all expenses.

**14. Completion and Completion and Cleanup by Job** - As the vegetation maintenance work is completed in each area, the Contractor shall promptly remove all tools and equipment and clean up the area. Any remediation that is necessary must be performed by the Contractor to the complete satisfaction of the Owner prior to invoicing.

Audit can occur at anytime during the vegetation maintenance activities or application season and can extend into the growing season of year following application. Representatives of the Owner and the Contractor shall inspect the managed areas of Rights-of-Way and determine which areas, in the Owner’s opinion, have received unsatisfactory completion or incomplete chemical treatment. All re-treating work shall be done at the Contractor’s expense and shall be subject to inspection by, and approval of, the Owner.

The Contractor accepts all responsibility for proper herbicide application and is ultimately responsible for 100% control of targeted areas. The unit prices submitted are not to be based on an application to the ROW; they are based upon 100% vegetative control of the ROW. If the Owner is not satisfied with the level of vegetative control, the Contractor will be required to perform follow-up applications at the Contractor’s own expense until an acceptable level of control is achieved. Due to the seasonal restrictions of foliar herbicide treatments, this obligation can extend in to the following spray season.

## **SECTION VI – GENERAL STANDARDS**

### **15. Integrated Vegetation Management and Best Management Practices**

#### **Integrated Vegetation Management (IVM)**

Two methods of vegetation clearing operations are prescribed by the Owner, defined as Type I and Type II. Details concerning these methods of operation are described below:

**Type I Reclamation** - All trees and brush within the designated clearing limits of the Right-of-Way shall be cut and/or treated, as required by these specifications except as otherwise specified.

When designated for “Type I” clearing, all tree growth within the designated clearing limits is to be removed and/or treated. Clearing may be performed with timber harvesters, mowers, or by power

saw. For ecological reasons, the use of shears, bulldozers or similar equipment may not be used without prior approval of the Owner.

**Type II Selective Clearing** - When designated for “Type II” clearing, all vegetation within the “Wire Zone” of the Right-of-Way that exceeds 3 feet at maturity shall be cut and/or treated. All vegetation within the “Border Zone” of the Right-of-Way that exceeds 15 feet in height at maturity shall be cut and/or treated.

### **Best Management Practices (BMP)**

**Herbicide Season:** Herbicide applications for each year shall start on the last week of May and reach completion before the mid-October. These dates are weather dependent and must be approved by the Owner prior to work. The chemical solution and method of application used for this work shall be designated by the Owner.

**Herbicide Records:** Records are to be submitted weekly with timesheets. The Contractor shall use only those herbicides and solutions which have been registered by the E.P.A. and approved by the Owner. All chemical treatment is to be according to label directions and must abide by all local, state, and federal laws. A copy of all labels and appropriate MSDS sheets for any materials on site must be kept on the job site at all times and presented when requested. The chemical solution shall be applied using appropriate pressure and nozzle type.

**Herbicide Standard Operating Procedure:** Treat all undesirable vegetation as prescribed on the unit map plan. Should the crew encounter trees too tall for foliar herbicide treatment; the crew is to treat all trees except the tall individuals. The tall trees are to be cut down and stumps treated, if work can be accomplished in less than one hour. If removals can not be completed in one hour; the crew will document the circuit, grid cell and date on a Unworkable Site Form.. Crew will also call General Foreman and/or Planner to inform of this location.

**Herbicide Effectiveness:** The Contractor accepts all responsibility for proper herbicide application and is ultimately responsible for **100% control of targeted areas**. The unit prices submitted are not to be based on simply an application to the ROW; they are to be based upon 100% vegetative control of the ROW. If the Owner is not satisfied with the level of vegetative control, they may require the Contractor to perform follow-up applications at the Contractor’s own expense as necessary over the next two years.

**Livestock:** Under no circumstances will it be permissible to treat cherry trees in a pasture or in an area where livestock might have an opportunity to eat the leaves. The Contractor must document the location on the Unworkable (Skip) Form and consult the PHI Forester. Any cut portions and all leaves of cherry trees left as a result of cut work shall be immediately removed from the pasture area.

**Herbicide Chemistry:** PHI reserves the right to select herbicide composition. At present, selective chemistry is employed for upland applications. We will entertain recommendations from the Contractor concerning alternative mixes.

**Herbicide Applications:** Selective application is the choice method of foliar treatment with broadcast applications used as needed for areas of dense brush. Cut Stubble and Basal treatments are used only on occasion. Extreme care shall be taken to avoid over spray or drift onto desirable species. There shall be no chemical application when the wind velocity exceeds 20 mph. The chemical solution shall not be applied when the stems or stumps are wet from precipitation. It is the responsibility of the Contractor to ensure proper application and uptake of the herbicides to control the vegetation. Rain and other types of inclement weather may affect the uptake of the chemicals by the vegetation and require reapplication.

**Facilities and Structures:** Under no circumstances shall the Contractor attach any ropes or winch cables to any pole, tower, or foundation, or use any such structures as anchors for winching equipment.

**Mowing and Hand Cutting:** All undesirable vegetation within the designated clearing limits of the Right-of-Way shall be cut not more than 3 inches from the ground. The tree trunk and branches shall be completely severed from the stump.

**Desirable Species:** Every effort will be made to prevent damage to desirable plants. Adequate precautions shall be taken so as not to remove or damage existing ground cover, brush or vegetation designated for preservation – either as herein noted or as directed by the Owner. The moving of logs, limb-wood and brush shall be done with regard to saving all desirable species practicable. The clearing operation shall be planned so that there is a minimum of equipment movement in the areas where desirable species occur. Only equipment approved by the owner will be permitted for this work to insure the integrity of low vegetation growth and the maintenance of valuable ground cover.

**Wetlands:** All clearing in designated wetlands shall be performed with hand held equipment and tools or mechanized equipment with matting. All debris is to be hauled out of the wetland to an upland location at the predetermined distance as set by regulatory agencies. There shall be no rutting or soil disturbance in wetland areas. No logs, brush, chips or debris are to be left in wetlands, transitional areas ditches, drains, creeks or floodplains of any description. Debris of any kind may not be left below the mean high water mark of tidal waterways. Drainage of any kind will not be altered from its original course without the prior, written and specific approval of the Owner. The Contractor may propose alternative methods of clearing in wetlands which minimize soil disturbance. This method must be approved by the Owner prior to implementation. Non-tidal wetlands and wetland buffer areas may be treated using an approved aquatic low volume foliar application method, unless otherwise directed by the Owner.

**Uplands:** In upland areas, every effort should be made to minimize rutting or soil disturbance. Should the Contractor create deep ruts, stump holes or mounding terrain either on the ROW or on neighboring property, such property shall be graded to conform to previous natural ground levels



and this work will be performed by the Contractor to the complete satisfaction of the Owner. Upland Herbicide mixes are forbidden to be used in areas not applicable to the label.

**Windrowing Brush** may be acceptable with prior approval from the Owner. Occasionally, small cut trees and limbs under 3" diameter may be stacked along the woods-line. The Contractor must have property owner's permission and accepts full responsibility if future clean up is required.

**Erosion:** The Contractor shall conduct operations to avoid any increase in the hazard of soil erosion. Existing root structures are to be left intact. On edges and banks of streams and other natural watercourses susceptible to erosion, clearing shall be performed in such a manner as to minimize surface soil disturbance. Chips are not to be placed in this area. All stream crossings shall be subject to approval of the Owner. If required, the Contractor shall install proper sediment erosion control measures to meet regulatory requirements.

**Stumps and Debris:** All stumps shall be cut parallel with the ground as low to the ground as possible. Unless otherwise specified, all stumps of live trees of species capable of re-sprouting shall be treated immediately with the low volume basal solution or other solution approved by the Owner. Unless otherwise directed by the Owner, disposal of all wood, including brush and slash shall become the responsibility of the Contractor and shall be removed from the ROW. Chips are to be removed from the ROW or spread over the ROW area to a maximum depth of three inches (3") with specific permission from the property owner. The Contractor shall inform the Owner of any debris found on the rights-of-way. If the Owner instructs the Contractor to remove the debris, the Contractor shall remove it and dispose of it in a legal manner.

**Wood:** Wood is not allowed to be left on the ROW. With Owner and landowner approval, logs and limb-wood four inches (4") in diameter and larger, can be cut into designated lengths and stacked along the edge of the ROW. Wood may not be stacked outside specified Right-of-Way without permission of the property owner. All roads and paths, regardless of whether or not they show recent use, shall be left clear of logs, except as designated by the Owner. Logs, branches, chips, etc. are not to be left in ditches, drains or creeks of any description.

**Trash:** Contractor shall not litter on the ROW. Oil jugs, water bottles, lunch wrappers, etc. must not be left on the ROW.

**Logging:** Written approval of the Owner must be obtained for any commercial logging.

**Hazard Trees:** A Hazard Tree is defined as a structurally unsound tree that could strike a target (Owner's facilities) if it fails. Contractor shall identify and remove hazard trees along Right-of-Way edges, with specific permission from the property owner. If so designated by the Owner, hazard trees may be topped below the electrical facilities at a maximum of 30 feet. The trunk could be left standing to serve as a wildlife den tree with prior Owner approval. If the hazard tree is a live tree growing up from underneath electrical facilities, it must cut at ground level.

- 3.0 Under no circumstances will it be permissible to leave cut cherry trees in a pasture or in an area where livestock might have an opportunity to eat the leaves. When cherry trees occur in a pasture area, the cut portions of the trees shall be removed from the pasture area.
- 3.1 The Contractor shall use only those herbicides and solutions which have been registered by the E.P.A. and approved by the Company. All chemical application is to be according to label directions. A copy of all labels and appropriate MSDS sheets for any materials on the site must be kept on the job site at all times and presented when requested. The chemical solution shall be applied using appropriate pressure and nozzle type.
- 3.2 Extreme care shall be taken to avoid over spray or drift onto desirable species.
- 3.3 There shall be no chemical application when the wind velocity exceeds 20 mph.
- 3.4 The chemical solution shall not be applied when the stems or stumps are wet.
- 3.5 It is the responsibility of the Contractor to ensure proper application and uptake of the herbicides to kill the vegetation. Rain and other types of inclement weather may affect the uptake of the chemicals by the vegetation and require reapplication.
- 3.6 Low Volume Basal Application – The low volume basal application method shall be utilized from October 1st to March 31<sup>st</sup> or as directed by the Company. Personnel shall not attempt to spray stems or stumps that are more than 12 inches from the nozzle.
- 3.7 The chemical solution shall be applied to the stumps of all selected cut trees so as to completely wet the entire cambium area.

4 The Company shall designate the areas where the undesirable vegetation is to be chemically controlled. Alternative Chemicals, Solutions and Methods of Application – Alternative chemical, solutions and methods of application may be considered if recommended by the Contractor. However, before any change of application commences, a description of each proposed chemical, solution and/or method of chemical application and any cost adjustment must be submitted to, and approved by, the Company.

16.10 Mechanical Vegetation Control Any portion of the designated area which the contractor is unable to mechanically cut shall be chemically or manually controlled as directed by the Company and in accordance with these specifications.

17 There are areas where due to topography or lack of ready access for vehicles it will be necessary for the undesirable vegetation is to be manually controlled. In these areas the Contractor shall comply with the following unless otherwise directed by the Company.

17.10 and all vines growing up any towers, poles or guy wires shall be cut. Also, any desirable species exceeding 10 feet in height shall be out. All Stumps shall be cut **parallel** with the ground.

18 In these areas the Contractor shall comply with the following unless otherwise directed by the Company:

18.10 All woody vegetation shall be cut, with the stumps cut parallel to the ground and as close to the ground line as possible. Stumps higher than 2 inches will not be acceptable.

19 Complaints – The Contractor shall immediately inform the Company of any complaints which arise. Within 10 days of receiving a complaint, the Contractor shall make arrangements, which are satisfactory to the claimant, for the settlement of the complaint. The Contractor shall keep

the Company informed of the status of each compliant and of any settlement made with the claimant. Where it is deemed advisable by the Company, a representative of the Company will accompany the Contractor's agent in the settlement of claims. An executed copy of the release for every damage claim settled shall be furnished to the Company. For claims not settled in a timely manner, the Company reserves the right to negotiate a settlement and the Contractor shall pay all expenses.

All re-treating work shall be done at the Contractor's expense and shall be subject to inspection by, and approval of, the Company. The chemical solution and method of application used for this work shall be designated by the Company. **Road Screens:** PHI does not promote any road screens and will seek removal during the scheduled maintenance cycle. However, certain areas throughout the territory are sensitive to the management of these buffers. The Owner will direct maintenance activity when these screens are encountered.

**Invasive Species:** Every reasonable effort will be made to eradicate invasive species. Invasive species shall be addressed when on or impeding access to Owner facilities, including but not limited to gates, barricades, pole and tower structures, or when so instructed by the Owner. Phragmites is an exception, and requires attention only when so advised by the Owner.

## **Appendix F: Detailed Specifications for Mowing**

TM-SPECS Revised: March 5, 2010

### **POTOMAC HOLDINGS INC**

### **DETAILED SPECIFICATIONS FOR TRACTOR MOWING**

### **ON PEPCO RIGHTS-OF-WAY**

1. General Scope - The work covered by this Contract involve two types.

The first will primarily be mowing grass and weeds on PEPCO rights-of-way. The work is typically performed with a farm tractor pulling a "bush-hog" mower. This work usually occurs 3 – 5 times per year between April and November. At times the grass and weeds may be tall and thick, and generally the terrain is rough. This work is to be bid per acre per cycle on lines 1 & 2 on the bid sheet and is further described below.

The second type of work covered by this Contract will primarily be mowing grass and very light brush on PEPCO rights-of-way on an annual basis usually between August 15 and April 15 of the following year. However, there may be occasions where an area will need to be mowed outside this timeframe. The work is typically performed with a farm tractor pulling a "bush-hog" mower. At times the grass and brush may be tall and thick, and generally the terrain is rough. This work is to be bid per acre annually on lines 3 & 4 on the bid sheet. Generally the work is assigned for an entire RW, including all acres suitable for the annual mow prescription. Pepco currently has approximately 2000+ acres which are maintained in this manner and assigns the work to several contractors.

This Contract also includes weedeater work and miscellaneous work.

2. Unit Contract - The overwhelming majority of the work covered by this Contract shall be

performed as unit work. The Contractor's unit price shall include all of the Contractor's expenses necessary to perform the unit. The Company shall pay the Contractor for the number of units completed at the applicable unit price. Time and material work is also included in these specifications and the Company anticipates performing a portion of the work on a time and material basis. However, work will only be performed on time and material rates if the Company deems such action necessary, and so instructs the Contractor. The areas to be grass mowed are as described on the included scanned 'nine span' sheets for Montgomery and Prince George's counties. Portions of the RWs may extend into the adjacent Maryland counties.

The areas to be annual mowed include portions of the RWs which are included in the brush control program. The Company reserves the right to assign or reserve this work based on work load and other conditions. The attached sheets describing the Burches Hill – Chalk Point is descriptive of this type of work.

3. Quantity of Work Not Guaranteed - The Company does not guarantee the estimated quantities of work. Payment shall be made only for work actually completed by the Contractor.
4. Four Year Contract - This Contract shall cover the time period between April 1, 2010 and March 31, 2014. The work shall be scheduled within that time period by the Company. Pricing shall be fixed for work performed during the first two years of the contract and upon agreement between the Company and Contractor, may be increased by no more than the CPI for the Washington DC area in the subsequent two years.
5. Personnel - The Contractor shall furnish the supervision and labor necessary to perform the work covered by this Contract. The Contractor's personnel must be competent and experienced in the type of work to be performed. A tractor operator or crew leader who has at least one year of experience in the type of work being performed shall supervise each

crew working under this Contract. The crew leader may be a working foreman, but must remain on the job at all times, supervising the work. The Company reserves the right to have any employee of the Contractor removed from the job if he or she is considered to be incompetent or otherwise unfit.

6. Equipment, Tools and Materials - The Contractor shall furnish the equipment, tools, and materials necessary to perform the work covered by this Contract. All equipment, tools and materials must be of good quality, and are subject to approval by the Company.
7. Communication Facility - The Contractor shall have a central communication facility, equipped with a telephone and email capability. A Blackberry or similar device is acceptable. The telephone must have message recording capabilities for times when personnel are not available to answer the phone. The telephone and email capability are to be on at all times. The Contractor must check for messages at least once before noon and once before the end of each business day.
8. Cellular Telephones - The Contractor shall equip each crew foreman with a cellular telephone, which has a range that covers the PEPCO transmission system area. The cellular telephone is to remain on the job site, in proper working order, at all times during working hours.
9. Adjacent Property Owner Objections - If an adjacent property owner objects to this work and the Contractor is unable to resolve the situation, then the Contractor shall inform the Company and shall not perform any work in that area until instructed to do so by the Company.
10. Advance Notification - The Company maintains an Adjacent Property Owner Advance Notification List because certain adjacent property owners have expressed concern about our work in the past. The Contractor shall be informed as to which properties these are, and shall exercise due care. If the Company directs the Contractor to skip a portion of the work

due to adjacent property owner problems (or any other reason), the Company may, after the problem has been resolved, direct the Contractor to return to that area and complete the work, as long as the Company takes such action prior to the expiration date of this Contract.

11. Right-of-Way Mowing Schedule –

Grass Mow Areas: (Lines 1 & 2 on the bid sheet)

The transmission line acres are to be mowed at least three times per year, unless otherwise directed by the Company. The Company shall specify the dates for beginning each of the mowings. For first and second mowings, each mowing shall proceed without interruption and each mowing shall be completed within six weeks of its starting date. For the remaining mowing(s), each mowing shall proceed without interruption and each mowing shall be completed within six weeks of its starting date. If any of the mowings are not completed within the limits stated above, then payment to the Contractor shall be reduced by \$200.00 for each work day over the applicable limit. The Company may extend the period of time allowed for any of the mowings if conditions permit. The Company may waive part or the entire penalty if the Company deems such action appropriate.

Annual Mowing: ( Lines 3 & 4 on the bid sheet)

The transmission line acres are to be mowed once a year between August 15 and April 15 of the following year, unless otherwise directed by the Company. If any of the mowings are not completed within the limits stated above, then payment to the Contractor shall be reduced by \$200.00 for each work day over the applicable limit. The Company may extend the period of time allowed for the mowing if conditions permit. The Company may waive part or the entire penalty if the Company deems such action appropriate.

12. Location of Work - The Grass Mowing will take place primarily in Montgomery and Prince George's Counties. The Annual Mowing will be on the Company's Transmission System which includes portions of the following counties in Maryland: Frederick, Montgomery,



Howard, Prince George's, Charles, Saint Mary's and Calvert.

13. Height of Mowing - All vegetation 2 inches or less in diameter at the base, shall be completely severed at a height of 4 inches or less.
14. Mow Entire Designated Area - The Contractor shall mow the complete width and length of each section of the right-of-way or substation designated by the Company, with the exception of obstacles such as gardens, crops, impassable terrain, wet areas and foreign objects. Single, movable objects shall be moved so that the entire area may be mowed. The Contractor shall mow within 6 inches or less of all other obstacles on right-of-way or substation properties.
15. Weedeater Work on Rights-of-Way - The Contractor shall use a string type trimmer to cut the grass and weeds growing around the Company's barricade posts on the rights-of-way. Typically, the Company will assign this task one time each year, toward the end of the growing season. This work is a separate unit, paid for at the price bid by the Contractor.
16. Mowing Debris - Mowing debris shall be removed from public sidewalks and all streets and roads, either public or private.
17. Boundaries - It shall be the Contractor's responsibility to determine, in the field, the boundaries of the areas to be mowed. The width and length of each section of right-of-way is given in the specification appendix.
18. Miscellaneous Work - Miscellaneous work includes miscellaneous mowing, miscellaneous weedeater work, and other manual vegetation control, such as removal of small trees, brush and/or debris, as directed by the Company. The Contractor will only be assigned work, which can be performed utilizing the Contractor's personnel and equipment. Some miscellaneous work is not suited to be paid using the Contractor's unit prices and therefore is paid for at the time and material rates submitted by the Contractor. Miscellaneous work may be located anywhere on the PEPCO transmission or distribution systems. The

following shall apply to miscellaneous work performed on the time and material rates:

- 19.1. The Contractor shall perform only the miscellaneous work assigned by the Company.
- 19.2. All miscellaneous work shall be done as directed by the Company and in accordance with these specifications.
- 19.3. The tractor operator or crew foreman is a working foreman.
- 19.4. Two hours labor will be paid if the work is postponed due to inclement weather after the crew has reported to the job site. There shall be no payment for equipment hours spent on standby due to inclement weather.
- 19.5. Overtime is defined as hours of work required by the Company in excess of the Contractor's normal work day or in excess of 40 hours in a normal work week. Overtime shall be paid at the overtime rates included in the Contractor's quotation. There shall be no overtime unless otherwise directed by the Company.
20. Winching - Under no circumstances shall the Contractor attach any ropes or winch cables to any pole, tower, or foundation, or use any such structures as anchors for winching equipment.
21. Damage to Crops - The Contractor shall make every effort not to damage gardens or crops located on the rights-of-way.
22. Access via Private Property - Before entering any private property the Contractor must obtain the permission of the owner or lessee.
23. Debris - The Contractor shall inform the Company in writing of any debris found on Company property. If the Company instructs the Contractor to remove the debris, it shall be done as miscellaneous work and shall be disposed of in a legal manner.
24. Laws - The Contractor shall comply with all Federal, state and local laws, rules and regulations applicable to the work performed under this contract.

25. Keep Gates Closed - The Contractor shall keep all gates closed and shall be responsible for any problems resulting from any open gate attributable to the Contractor's work.
26. Complaints - The Contractor shall immediately inform the Company of any complaints, which arise. Within 10 days of receiving a complaint, the Contractor shall make arrangements, which are satisfactory to the claimant, for the settlement of the complaint. The Contractor shall keep the Company informed of the status of each complaint and of any settlement made with the claimant. Where it is deemed advisable by the Company, a representative of the Company will accompany the Contractor's agent in the settlement of claims. An executed copy of the release for every damage claim settled shall be furnished to the Company. For claims not settled in a timely manner, the Company reserves the right to negotiate a settlement and the Contractor shall pay all expenses.
27. Working Hours - The days and hours that the Contractor may work are restricted to daytime hours on non-holiday weekdays. No work is to be performed on weekends, or holidays observed by the Company, without prior permission from the Company.
28. Daily Location Report - During the progress of the work, the Contractor shall call (202) 388-2220 or forward an email to Richard M Clark/BENN/PEP, each morning by 7:00 a.m. and inform the Company of the location(s) where the Contractor will be working that day and the number of personnel working.
29. Invoicing for Work and Payment – Upon completion of each cycle of mowing for each jurisdiction, the Contractor shall submit to the Company a written report detailing the work on a form provided by the Company and an invoice for the work completed. If requested by the Company, the Contractor shall also provide this information at times other than the normal reporting time. From the report and invoice submitted by the Contractor, the Company shall prepare and forward to the Contractor a statement summarizing the work together with a check for the work completed. The report shall include the following

information:

- 29.1. Contractor's name
  - 29.2. Foreman's name
  - 29.3. Dates covered by the report
  - 29.4. The quantities of unit work performed and the time and material quantities for any time and material work.
30. Adding or Deleting Work - The Company reserves the right to add or delete work. If the Company elects to alter the scope of the work, it shall first evaluate the change with regard to the original unit prices. If, in the Company's opinion, the scope of the work will be changed to the extent that the original prices are no longer equitable, then the Contractor shall have the opportunity to submit adjusted unit prices.
31. Interruption of Mowing Schedule - The Contractor shall, if directed by the Company, interrupt the planned mowing schedule and move to any location specified by the Company. The Contractor shall mow the area designated by the Company in accordance with these specifications and then return to the planned mowing schedule.
32. Satisfactory Completion - All work done shall be entirely satisfactory to the Company and shall be subject to inspection by, and approval of, the Company. The Contractor at the Contractor's expense shall correct any work, which is not entirely satisfactory to the Company.

## **Appendix G – Schedule 12e Filings**

**Transmission Provider:** Delmarva Power

**Date:** 6/8/04

**Source of Performance Delay/Prevention:** Amtrak Railroad.

**Subject:** Amtrak Access Restrictions

**Concern Level:** Low

**Description:**

Access for hazard tree work is restricted on circuits 23010, 23012, 23013, 23015. Rights-of-way width varies as these circuits are constructed along Amtrak railroad lines with vegetation management rights restricted to the width of the railroad property rights. Access is limited and restricted and must be coordinated with railroad safety personnel. No vegetation management rights exist on private property outside of the railroad rights-of-way. This necessitates frequent removal or topping of off-ROW hazard trees.

**Transmission Provider:** Atlantic City Electric

**Date:** 6/8/04

**Source of Performance Delay/Prevention:** Atlantic City Expressway, Garden State Parkway.

**Subject:** Tree Clearing Restrictions

**Concern Level:** High

**Description:**

Rights-of-way width varies on Circuit 2310 as it parallels the Atlantic City Expressway where access and tree removals are restricted. The narrow widths of many sections of this right-of-ways necessitate close inspections and annual tree pruning or hazard tree removals.

**Transmission Provider: Atlantic City Electric**

**Date:** 6/8/04

**Source of Performance Delay/Prevention:** Pinelands Commission

**Subject:** Ban on Herbicide Use

**Concern Level:** Medium

**Description:**

The Pinelands Commission Management Plan prohibits the use of herbicides for vegetation management on utility rights-of-way. This restricts maintenance practices to mechanical or manual cutting of non-compatible vegetation. Cutting only serves to perpetuate the non-compatible, tall growing plants that threaten safety and reliability and inhibit emergency and repair crew access. Approximately 300 miles of Atlantic City Electric transmission rights-of-way is located within the Pinelands area.

In addition to restrictions on herbicide use, the Pinelands Commission has placed clearing restrictions on removal of trees, or mandated reduced clearances that necessitate frequent cycle pruning. Vegetation Management within the Pinelands is conducted in accordance with the New Jersey Pinelands Electric-Transmission Right-of-Way Vegetation Management Plan located at

[http://www.state.nj.us/pinelands/science/complete/row/Final\\_ROW\\_Report\\_033109.pdf](http://www.state.nj.us/pinelands/science/complete/row/Final_ROW_Report_033109.pdf)

Circuits include:

2317 Cedar – Cardiff,

2318 Cedar – Oyster Creek,

2310 New Freedom - Cardiff,

2307 Cumberland - Dennis

**Transmission Provider:** Atlantic City Electric

**Date:** 4/30/12

**Source of Performance Delay/Prevention:** Garden State Parkway, Restriction due to narrow ROW, short poles, and low conductor clearance.

**Subject:** Tree Clearing / Pruning Restrictions

**Concern Level:** High

**Description:**

Rights-of-way width is constricted along the entire Circuit 2317/2318, as it parallels the Garden State Parkway, and elsewhere. The narrow widths and low conductor clearances of many sections of this right-of-way necessitate close inspections, annual tree pruning and floor treatment, and/ or hazard tree removals.



**Transmission Provider:** PEPCO

**Date:** 5/7/04

**Source of Performance Delay/Prevention:** U.S. Fish & Wildlife Service, Patuxent Wildlife Research Center

**Subject:** Burtonsville –Bowie 230kv Easement property, USFW dictate vegetation management.

**Concern Level:** Low

**Description:**

The Patuxent Wildlife Research Center has dictated how Pepco maintains the vegetation throughout the entire USFW property, 13 spans (77acres). They hire a botanist and the staff wildlife biologist to monitor our work and only certain tree species can be treated with herbicide while others have to be cut at a height of 15 feet. The section of right-of-way is considered a major stop over for the neo-tropical migratory birds as food source during their flights north and south. In addition, we are constrained to perform vegetation/line maintenance, only during the months of September, October, November and December, because of the reproductive cycle of the whooping crane, which is an endangered species. We have to inspect this area every year and perform the necessary maintenance every 2 years, instead of the 4 year cycle.

**Transmission Provider:** PEPCO

**Date:** 5/7/04

**Source of Performance Delay/Prevention:** David Lines adjacent property owner.

**Subject:** Hawkins Gate to Morgantown 230kV- Wildlife area off route 6 in LaPlata, Maryland

**Concern Level:** Low

**Description:**

Pepco purchased this right-of-way property from the Lines' many years ago. The majority of the Lines' large farm, over 600 acres, is an established wildlife management area and for agriculture crops. We maintain the trees, brush and scrubs to a greater density and height than normal over our four year cycle. We must monitor this area every 2 years and take corrective action before the vegetation height encroaches our minimum clearance standards.

**Transmission Provider:** PEPCO

**Date:** 5/7/04

**Source of Performance Delay/Prevention:** Brinkwood compression area

**Subject:** Brighton to Burtonsville 230 & 500kV- Residential community with tall trees at the edge.

**Concern Level:** Low

**Description:**

Pepco purchased this right-of-way property for use of two 230kv towers and a 500kV line was compressed on the same property at a later date. This is the closest area for side clearance, on our 500kV system, of only 52 feet. There are “conflict” trees off the right-of-way that must be monitored every year, since some of them are over 100 feet tall and the wire sag is below that level.



## Appendix H: Glossary of Terms

**Biological control methods:** Control of vegetation using plant competition, allelopathy, animals, insects, or pathogens.

**Border zone:** Portion of electric utility right-of-way on either side of the wire zone and extending to the outer edge of the established right-of-way, selectively managed to include a mix of compatible herbaceous and woody vegetation below a specified height.

**Chemical control methods:** Management of incompatible vegetation through the use of herbicides or growth regulators.

**Cultural control methods:** Management of vegetation through alternative use of right-of-way that precludes the growth of incompatible vegetation through the use of crops, pastures, parks or other managed landscapes.

**Hazard tree:** A structurally unsound tree that could strike a target when it fails. As used here, the target of concern is electrical supply lines.

**Integrated Vegetation Management (IVM):** A system of managing plant communities in which compatible and incompatible vegetation is identified, action thresholds are considered, control methods are evaluated, and selected control(s) are implemented to achieve a specific objective. Choice of control methods is based on effectiveness, environmental impact, site characteristics, safety, security and economics.

**Maintenance cycle:** Planned length of time between vegetation management activities.

**Manual control method:** Control of vegetation using hand-operated tools.

**Mechanical control methods:** Control of vegetation using equipment-mounted saws, mowers, or other devices.

**Right-of-way reclamation:** Reestablishing IVM on a right-of-way that is not currently managed to the full extent of its easement or ownership rights and intended purpose. 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 initial non-selective methods of mowing or hand-cutting, or broadcast application of herbicides.

**Selective management:** Methods used to control specific vegetation within a prescribed area while retaining compatible vegetation.

**Standard, ANSI A300:** The performance parameters established by (tree care) industry consensus as a rule for the measure of extent, quality, quantity, value or weight used to write specifications.

**Utility right-of-way (ROW):** A corridor of land over or through which utility facilities are located. The utility may own the land in fee, own an easement, or have certain franchise, prescription, or license rights to construct and maintain utility facilities.

**Utility facilities:** Any privately, publicly, or cooperatively owned line, structure, or system for producing, transmitting, or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, or storm water, which directly or indirectly serves the public.

**Vegetation, compatible:** Vegetation that is desirable and/or suitable to the intended use of the site.

**Vegetation, incompatible:** Vegetation that is undesirable, presents a safety hazard, or is unsuitable to the intended use of the site.

**Vegetation manager:** An individual engaged in the profession of vegetation management who, through appropriate experience, education, and related training, possesses the competence to provide for or supervise an integrated vegetation management program.

**Wire zone:** Portion of electric utility right-of-way directly beneath electric supply lines and extending outward to a utility-specified distance, managed to promote only low-growing, primarily herbaceous vegetation.

**References:**

ANSI A300 Parts 1, 7. 9: Tree, Shrub, and other Woody Plant Management, Tree Care Industry Association, 2008, 2012, and 2011

OSHA 1910.269, Subpart R; U.S Department of Labor Occupational Safety and Health Administration, 1994

Integrated Vegetation Management Best Management Practices; International Society of Arboriculture 2007

Tree Risk Assessment Best Management Practices; International Society of Arboriculture, 2011

## **Appendix I. PHI Integrated Vegetation Management Program Overview**

PHI companies practice Integrated Vegetation Management on their transmission ROW's, utilizing multiple vegetation control methods based upon many factors such as site characteristics, environmental impact, safety, and security. Specific factors such as voltage, regulations, ROW width, facilities built on the ROW, etc., all affect the methods utilized on PHI transmission ROW's.

Because of enhanced compliance requirements of NERC standards, vegetation management on higher voltage transmission corridors is critical to PHI's regulatory performance. PHI manages 80,000 acres of vegetation on corridors such as these, and lower voltage corridors as well.

PHI follows the six steps of IVM:

- **Set Objectives:** While each PHI company may customize its objectives to suit local conditions, PHI transmission foresters must comply with company-wide objectives:
  - Zero transmission outages;
  - Minimize incidents of vegetation that exceeds NERC standards;
  - Compliance with PHI TVMP for appropriate voltages;
  - All work completed safely;
  - All work accomplished in an environmentally-responsible manner
  
- **Evaluate Site:** All transmission vegetation management is planned and mapped ahead of implementation; to identify existing facilities and vegetation conditions, topography, environmental impact, sensitive or protected species, ownership, adjacent land use, and regulations. In the PHI TVMP, this is called a 'comprehensive inspection'.
  
- **Define Action Thresholds:** Based upon PHI objectives, the PHI TVMP, and site evaluations of vegetation and other conditions on the ROW, the PHI forester decides when vegetation management work should be implemented.
  
- **Evaluate and Select Control Methods:** After completing the previous steps, the PHI forester chooses available control methods. Methods should promote selectivity.
  
- **Implement IVM:** Control methods are implemented by vegetation management contractor(s), based upon agreed-upon contract work specifications.
  
- **Monitor, Quality Assurance, and Adjustment:** Once work is completed, PHI forester, contractor, and work planner monitor completed work, and make sure contract work specifications are met. This may be immediately after work is completed, but may also be a season later to determine if herbicide treatments are successful. Results of monitoring are used to request further work (go-backs), and adjust IVM program going forward.



## Appendix J: 48-Hour Reporting Form





## 48-Hour Reporting Form Vegetation-Related Transmission Outage

### Requirements

All Category 1 or Category 2 vegetation-related transmission line trips on lines of 200 kV or higher and any other lower voltage lines designated by the Regional Reliability Organization (RRO) to be critical to the reliability of the electric system will be reported by the Regional Entity to NERC **within 48-hours** of knowledge of the contact.

### Reporting Instructions

All sustained transmission line outages shall be reported where the cause of the outage is contact with vegetation, except:

- Multiple sustained outages on an individual line, if caused by the same vegetation, shall be reported as one outage regardless of the actual number of outages within a 24-hour period.

### Outage Reporting Disclaimer

The following sustained transmission line outages caused by vegetation are not required to be reported:

1. Vegetation-related outages due to human or animal activity shall not be considered reportable (examples of human or animal activity that could cause a non-reportable outages include, but are not limited to, logging, animal severing tree, vehicle contact with tree, arboricultural activities or horticultural or agricultural activities, or removal or digging of vegetation).

Reporting Entity: \_\_\_\_\_

Reported by: \_\_\_\_\_

Title: \_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: \_\_\_\_\_ Date of Report: \_\_\_\_\_

Please complete this form and email it to [compliance@rfirst.org](mailto:compliance@rfirst.org)

### Individual Vegetation Related Transmission Line Outages:

For **EACH** outage experienced, complete the following table.

**Outage 1**

Name of Transmission Owner (TO):	
NERC Compliance Registry ID (NCR ID):	
Name of Transmission Line:	
Voltage of Transmission Line: *Please mark one	<input type="checkbox"/> 230 kV class <input type="checkbox"/> 345 kV class <input type="checkbox"/> 500 kV class <input type="checkbox"/> 765 kV class  <input type="checkbox"/> RRC Designated Critical Lines <200 kV
Time and date of outage:	
Duration of outage:	
Line-loading (% of normal rating) of the outaged line at the time of line trip:  <b>NOTE:</b> This information should be provided whenever vegetation grew up from within or outside of the ROW and contacted the line, or if the line sagged into the vegetation.	
Description of cause of outage:	
Caused by Category 1 or Category 2 vegetation:  <b>NOTE:</b> Please check whether or not a Category 1 outage occurred as a result of a tree from inside or outside the right-of-way.	<input type="checkbox"/> <b>Category 1 — Grow-ins:</b> Outages caused by vegetation growing into lines from vegetation inside and/or outside of the right-of-way. <input type="checkbox"/> Inside the right-of-way <input type="checkbox"/> Outside the right-of-way <input type="checkbox"/> <b>Category 2 — Fall-ins:</b> Outages caused by vegetation falling into lines from inside the right-of-way.
Counter measures or corrective steps taken by TO including timeframe to prevent future outages:	
Additional comments:	