



# Operating Procedures

ISO New England Operating Procedure No. 3

*Transmission Outage Scheduling – Appendix C –  
ISO New England Right-of-Way Vegetation  
Management Standard*

Effective Date: February 1, 2005  
Revision No. 1

## **APPENDIX C - ISO NEW ENGLAND RIGHT-OF-WAY VEGETATION MANAGEMENT STANDARD**

### **I. OBJECTIVE**

In order to achieve and maintain a high degree of reliability for the New England Transmission System, the Transmission Committee adopts the following standard for vegetation management of rights-of-way.

### **II. GENERAL**

One of the factors affecting reliability is the control of vegetation in and near the transmission rights-of-way. The Vegetation Management Standards Task Group has established right-of-way clearing standards for transmission lines that are important to the New England Transmission System. These standards apply to original clearing for line construction and ongoing preventative maintenance.

It is recognized that individual company rights-of-way vegetation management practices vary for a number of valid reasons. Initially, rights-of-way are generally clear-cut to facilitate construction. Thereafter, ongoing preventive maintenance is necessary to maintain a low growing plant community. The general practice in most areas is to maintain as much growth of non-interfering species as necessary for visual screens at road crossings, residential yards adjacent to sensitive areas, or at locations such as ravines or river crossings where conductors are higher than normal above ground, with clear-cutting restricted to structure locations and along access roads.

Due to regulatory, economic and environmental considerations, transmission lines within New England are presented with a variety of vegetation control issues. Many areas require “buffers” or “screens” at highway crossings and other sensitive locations such as residential yards and agricultural areas. These areas will require special attention. Despite these compromises, vine, shrub and tree growth in selectively cut locations must not be allowed to develop to the point that they seriously hamper access to structures.

This standard establishes clearances, patrol cycles and best management practices to limit tree caused risk to the transmission lines. This standard does not suggest that all tree caused outages will be eliminated. The political, social and environmental expectations placed on utilities in New England prevent the clearing required to guarantee total system protection from falling trees. In severe weather events (hurricanes, micro bursts, tornadoes and ice storms) trees may fail and fall into lines.

### **III. CLEARANCE BETWEEN CONDUCTORS AND VEGETATION**

The clearances established herein between conductor and vegetation are not intended to change the practices of individual Transmission Owners. These are the standard clearances that all companies will seek to maintain. Any company policy or practice which establishes clearances equal to or greater than specified herein is acceptable. It is also recognized that in certain situations, rights may not be obtainable from property owners to remove trees adjacent to the right-of-way. In these situations, other solutions should be explored. Transmission Owners will have one full maintenance cycle to become fully compliant with any changes adopted to this standard. One full maintenance cycle is usually 4-6 years for vegetation growing within the right-of-way and 10 years for vegetation growing from outside the edge of the right-of-way.

The standard clearances between conductors and vegetation are diagrammed on the attached sketch: Standard Clearance Between Conductors and Vegetation.

In addition to establishing and maintaining clearance from vegetation growing into conductors, danger trees can develop along the edges of rights-of-way. Danger trees are defined as sideline trees that due to their species, location and physical condition pose a significant risk to a conductor or structure. Best management practices will utilize contemporary forestry and arboricultural practices to mitigate the risk from danger trees.

## IV. RIGHT-OF-WAY INSPECTION STANDARDS

Growth rates of vegetation vary due to species, soil, site and climatic conditions. It is therefore required that each critical line be periodically patrolled for the specific purpose of detecting locations where minimum clearances are approached.

### A. Frequency

1. Scheduled patrols shall be the responsibility of each Transmission Owner.
2. An aerial or foot patrol shall be performed at least once a year to determine where vegetation is not in compliance with the standard clearances. If an aerial patrol is utilized, it shall be followed, where necessary, by a foot patrol.

### B. Nature of Vegetation Patrol

1. Observe and record all vegetation conditions which might immediately affect the operation or maintenance of the lines.
2. The following list is representative of observations to make:
  - a. Heights of vegetation in the transmission corridor.
  - b. Clearance of road crossing screens/buffers.
  - c. Vegetation which is not in compliance with standard clearances.
  - d. Any evidence of vegetation-conductor contact or burning caused by contact.
  - e. Trees which because of their condition are an immediate threat to the lines.

### C. Action Following Patrols

When vegetation is not in compliance with the standard, action shall be initiated within a reasonable time frame to obtain the conductor to vegetation clearance described in this Appendix.

## V. EXCEPTIONS TO THE STANDARDS

The Transmission Committee recognizes that unusual local circumstances may occasionally justify deviations from these standards. The Transmission Owner is expected to bring such conditions to the attention of the committee. The reported deviations will be limited to cases where conditions exist over the entire length or significant length of a line, not individual spans.

## VI. SUMMARY

It is commonly recognized that vegetation can contribute to electrical disturbances on transmission lines. Vegetation Management practices on rights-of-way vary throughout New England for many reasons. This standard establishes clearances, patrol cycles and best management practices as the criteria necessary to contribute to overall system reliability. Historically, similar guidelines have proven to be effective in achieving a high degree of system reliability.

PREPARED BY:

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**OP 3 APPENDIX C REVISION HISTORY**

**Document History** (This Document History documents action taken on the equivalent NEPOOL Procedure prior to the RTO Operations Date as well revisions made to the ISO New England Procedure subsequent to the RTO Operations Date.)

<b>Rev. No.</b>	<b>Date</b>	<b>Reason</b>
Rev 1	02/01/05	Updated to conform to RTO terminology