

National Grid  Right-of-Way Vegetation Mowing Specification: 2016 -2017	Revision No.	3
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## FOREWORD

This Vegetation Mowing Specification (VMSpec) documents the objectives, strategies, practices and procedures for vegetation mowing (grass mowing and selective mowing) on National Grid electric rights-of-way (ROWS). The VMSpec also defines the responsibilities of Company personnel and contractors, identifies procedures to be followed by contractors performing all work and defines the requirements to maintain vegetation acceptable to the Company.

Questions or inquiries regarding information provided in this document should be referred to the National Grid's Manager of Vegetation Strategy.

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Date 4/29/2015

Date of Review/Revision:		
Revision	Date	Description
0	October 21, 2009	Original Specification
1	September 28, 2011	Updates for 2011 Procurement Event
2	July 31, 2013	Updates for 2014 Procurement Event
3	July 16, 2014	Updates for 2015 Procurement Event
4	April 29, 2015	Updates for FY17 Procurement Event

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## LIST OF APPENDICES:

- Appendix 1: Contact Information
- Appendix 2: National Grid – Environmental Policy

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## 1.0 Introduction

### 1.1 Purpose

The purpose of this Right-of-Way Management (ROW) Specification (VMSpec) is to document the requirements for mowing vegetation (grass mowing and selective mowing) on existing electric ROW for National Grid. This VMSpec defines:

- Mowing requirements for vegetation to enable National Grid to comply with municipal ordinances and maintain safe, visually acceptable electric ROWs;
- Responsibilities of Company personnel and contractors;
- Procedures to be followed by contractors performing all work within the scope of this VMSpec.

The Vegetation Strategy group is responsible for preparation of this specification. National Grid Foresters will manage and audit the work performed by the contractor.

### 1.2 Scope

The requirements of the VMSpec apply to all National Grid electric ROW.

## 2.0 Definitions

**Contractor** – The mowing contractor.

**Right-of-Way (ROW)** – For this VMSpec (Mowing) a ROW is a cleared corridor of land over which electric lines are located. The companies may own the land in fee, own an easement, or have certain franchise or license rights to construct and maintain electric facilities. This definition does not address the specific width of any ROW. Specific widths will be supplied by the Company where necessary.

**Mowing** – The use of mechanical equipment such as a tractor with mounted rotary or reel type mower to cut vegetation at a uniform height above the surface of the soil. Common equipment types are Brush Hogs or Hydro-ax.

**National Grid Forester** – Representative of National Grid who manages all aspects of vegetation management on electric ROWs.

**Selective Mowing** – Mowing small areas of high-density target species, or dense woody vegetation encroaching upon roadways or trails to structures or adjacent to structures.

**Sensitive Area** – Areas on ROWs where legal, visual, or environmental impacts/concerns require compromises to the general Integrated Vegetation Management (IVM) Program.

**Sub-transmission** – Includes all electric lines 23kV – 69kV in New York and 13.8kV – 46kV in New England.

**Transmission** – Includes all electric lines 115kV and higher in New York and 69kV and higher in New England, used to transport electricity between various generation, switching, and distribution substations.

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**Visual Buffer** – Areas of vegetation preserved on the ROW, on both sides of selected improved road crossings, yards, for the purpose of minimizing the visual impacts and linear view of the ROW for motorists.

**Water** – Standing or running water, existing at the time of maintenance operations, which has impact outside the ROW.

### 3.0 Mowing Standards

#### 3.1 Grass Mowing

- Mow sites will typically be mowed twice each year. Municipal ordinances and public concerns sometimes necessitate additional work.
- Mowing vegetation shall include cutting of grass and herbaceous weeds to a height no more than four (4) inches above the surface of the soil. Mowers used shall be of a type which causes clippings to be distributed evenly over the cut area. Grass and other vegetation cut will not be removed from National Grid property.
- All existing grassy areas on the ROW shall be mowed for the full ROW width.
- Prior to mowing, the ROW shall be inspected by the contractor for debris, heavy ruts or any other impediment to safe mowing operations. The contractor is to inform the National Grid Forester if such impediments exist.
- Vegetation shall be mowed to within one (1) foot of all structures, poles, guy wires, anchors, and pad mounted equipment. Municipal ordinance violations may necessitate full clearing of grass around specific structures which will be handled on a case-by-case basis.
- After mowing, clippings and other debris are to be swept off paved areas such as private driveways and public walkways and roads.

#### 3.2 Woody Vegetation Mowing (Selective Mowing)

- Selective mowing sites consist of mowing small areas of high-density target species such as extensive Sumac, Buckthorn or Multi-flora Rose, particularly in wire zone mid-spans, or dense woody vegetation encroaching upon roadways or trails to structures.
- Use extreme care in order to provide for the safety of workers and the general public.
- Prior to mowing, the ROW shall be inspected by the contractor for debris, heavy ruts or any other impediment to safe mowing operations. The contractor is to inform the National Grid Forester if such impediments exist.
- Crews must mark all obstructions including poles and guy wires with flagging.
- In the case of guy wires or other irregular obstructions, flagging shall, at minimum, be located at mower deck level (anchor point), eye level and above the vegetation.
- Crews must hand cut all woody growth from around the flagged obstructions within 15 feet. Provide a mechanism, such as a buffer to shield operations that are carried out close to residences or high public use areas.

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- Cut stumps as close to the ground as practical, making sure that stumps do not exceed three (3) inches in height unless otherwise directed by National Grid Forestry staff.

#### **4.0 National Grid Roles and Responsibilities**

##### **4.1 Transmission Owner**

National Grid companies own and are responsible for ensuring proper clearance of their transmission, sub-transmission and distribution electric facilities on ROW.

##### **4.2 Transmission Forestry Department**

The Transmission Forestry Department is responsible for system-wide design, planning, coordination and supervision of all ROW vegetation management operations.

##### **4.3 Location of Work**

The location of work mow sites will be provided by the National Grid Forester.

#### **5.0 Contractor Duties and Responsibilities**

Vegetation mowing operations must be conducted according to this VMSpec and according to the written directives of the company's on-site representative or other contract documents.

##### **5.1 Environmental and Safety Compliance**

The Contractor shall comply with all applicable Federal, State and local laws and regulations and with the requirements of all permits and approvals obtained by National Grid.

National Grid is committed to minimizing its impacts to the environment and requires contractors to demonstrate the same level of commitment as National Grid in the management of the environment. National Grid's commitment to the environment is communicated in the National Grid – Environmental Policy (Appendix 2).

The contractor shall immediately notify the Company of any release of any quantity of oil or hazardous material. The contractor is responsible to make all required notifications of releases to appropriate regulatory agencies and to ensure that the response to the release is prompt and done in a proper manner.

National Grid Contractor Safety Requirements establish safety requirements for contractors. This document has been provided during the contractor qualification and bidding process.

All safety incidents must be reported to a National Grid Forester immediately after the incident occurs, as soon as it is safe to make the notification, on the day of the incident. The initial call should be to a National Grid Forester. All incidents are required to be entered in the National Grid Incident Management System.

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## 5.2 Qualifications

Contractor shall utilize only experienced and/or trained workers who are appropriately licensed or certified. Workers must conduct themselves professionally at all times.

Contractor shall utilize appropriately licensed or certified supervisors who are knowledgeable with regard to all aspects of vegetation mowing, and who are responsive to the guidance of the National Grid Foresters. Each supervisor must be able to effectively communicate with the public. They must also effectively supervise contractor crews in order to ensure the satisfactory completion of the treatment operation.

## 5.3 Training

Contractor shall provide their employees with training that includes, but is not limited to, recognition of electrical hazards, working in proximity to energized facilities, identification of operating voltages, minimum approach distances, and other applicable rules and regulations associated with worker safety.

## 5.4 Commencement of Operations

Contractor may not initiate activities without a Purchase Order, with Terms and Conditions attached, from the National Grid Procurement Department. The Terms and Conditions attached to the Purchase Order are incorporated in this VMSpec. Contractor shall contact National Grid Forestry staff if a Purchase Order has not been received by the time the ROWs are scheduled for treatment. The contractor must return the signed acknowledgement copy of the Purchase Order to the Procurement Department before any work is done.

## 5.5 Notifications to National Grid

At least one (1) week prior to the initiation of vegetation mowing operations on a specific ROW, the contractor must specify to National Grid Forestry staff the date work will begin. The contractor will notify National Grid Forestry staff of the approximate work schedule the contractor's crew will follow during the project. The contractor must keep National Grid Forestry staff informed about crew location, conditions encountered, and problems that arise while work progresses. Work shall be completed on each ROW with as few work interruptions as possible.

At least one (1) week prior to the completion of mowing activities, the contractor must specify to National Grid Forestry staff the date work on that ROW will end unless otherwise directed by the Forester.

When working in a sub-transmission or transmission ROW, unless otherwise directed, the contractor must supply crew work locations on a daily basis by calling the Transmission Call-in system, and/or other parties specified by Company Forestry staff, before the beginning of the workday. The location information will include the ROW segment number, the contractor company and foreman name, the number of crew members, and the nearest line structure number. Each crew shall call off the system at the completion of the workday and when relocating to another ROW.

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Should a contractor cause an event on an electric line, the contractor must immediately notify the appropriate Control Center, then the National Grid Forester. Refer to Appendix 1 for a listing of National Grid Forestry staff and Control Center contact information.

The contractor must supply completed weekly time sheet(s) with information for all time and materials worked as per direction of National Grid Forestry staff.

The contractor shall notify the National Grid Forester and provide copies of any records/reports of any regulatory inspection by federal, state or municipal officials.

#### **5.6 Interaction with Public**

The Company strives in every way possible to maintain good relations with the property owner and general public. The actions of the Contractor reflect on the Company; therefore, the Contractor shall give diligent consideration to the interests of property owners, tenants, and the general public, whenever involved, and shall carry out the work in such a manner as to cause a minimum inconvenience.

The contractor, or his representative, will only respond to inquiries regarding what work they are performing, where they are working, and when they will be working. Copies of appropriate plans or permits may be shown as well. Refer all other inquiries to National Grid Forestry Staff.

Landowner complaints must be forwarded immediately by telephone to National Grid Forestry staff. The contractor must provide the name, address and telephone number of the major people involved, as well as the complaint or question.

#### **5.7 Demands to Cease Operations**

Handle demands to cease operations as follows:

- Immediately make the work area safe to the public, then move all personnel, equipment and materials to another property and continue work.
- Notify National Grid Forestry staff as soon as practical, if not immediately, of a demand that operations cease. Upon contacting National Grid Forestry staff, relate the chain of events and current status of the situation.
- Do not return to that site until National Grid Forestry staff has notified the contractor when and under what circumstances the crew may return.

#### **5.8 Access**

Enter a site through the ROW on established roadways whenever possible. Permission to enter by any other means must be obtained from the landowner by the contractor.

Access to the ROW shall be limited to public road crossings. Where this is not possible, the Contractor shall obtain permission for the use of private roads, driveways, and other access to the ROW from the property owners involved and shall be responsible for any damage thereto. When permission for off ROW access cannot be obtained from the property owners involved, and other

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ingress/egress is unavailable, the Contractor shall notify the National Grid Forester or their designee.

In general, vehicular traffic shall be restricted to a twenty (20) foot wide roadway into and along the ROW. When present, existing roads into and along the ROW shall be used as the primary access, and maintained in as good or better condition for the duration of the Contractor's use. Access to the overall ROW is allowed only for vehicles performing selective vegetation maintenance activities. Other vehicles must remain on the designated access roads. Appropriate efforts to minimize unnecessary or excessive environmental or vegetation damage are required. Repair or replacement of excessive or unnecessary damage shall be the responsibility of the Contractor.

#### **5.9 Site Conditions**

Unreasonable site damage or destruction during any phase of the vegetation mowing operation by the contractor, his agents or employees, must be repaired immediately to the satisfaction of National Grid Forestry staff at no cost to National Grid companies. National Grid Forestry staff will determine what constitutes unreasonable site damage. Contractor shall make reasonable efforts to complete work during favorable site conditions so as to prevent unnecessary damage.

The Contractor shall leave all culverts, stream fords, fences, gates, walls and roads in the same or better condition as when they commenced their work. Care shall be taken that all fences and gates are closed or left in such condition that livestock cannot escape. If fences or gates of an active pasture along the ROW are in a state of disrepair prior to the start of clearing and could allow livestock to escape, the contractor shall attempt to notify both the property owner and the National Grid Forester of this condition. Where movement of the Contractor's equipment is required through existing fences, the Contractor shall make appropriate openings and adequate facilities for closing these openings during and after their use.

#### **5.10 Equipment**

The contractor crew supervisor or foreman must be equipped with a cellular telephone.

Clearing crews should carry with them at all times a shovel, a broom, heavy-duty plastic bags or other leak-proof container, absorptive clay and activated charcoal. (Chemical Spill Kit or Universal Kit)

Contractor's equipment must be sufficient to maintain the highest practical level of efficiency and effectiveness. Equipment must be maintained in good visual and working condition.

### **6.0 Work Precautions**

#### **6.1 Safety**

As a contractual term, National Grid requires all contractors to comply with all appropriate state and federal safety laws and regulations. This includes applicable

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sections of the Occupational Safety and Health Act (OSHA) and all worker safety-related statements.

It shall be understood and agreed to by the Contractor that mowing and/or hand cutting near existing electric lines shall be undertaken while lines are presumed to be energized and operating at voltages up to and including 345kV AC and 450kV DC. The Contractor shall provide competent, trained personnel to complete the work.

In order to ensure the safety of their employees, the general public and continuity of service in the energized lines, the Contractor shall exercise extraordinary precautions in mowing vegetation that is in close proximity to structures, poles, guy wires, anchors, pad mounted transformers or switches on the ROW.

## **6.2 Sensitive Areas**

Sensitive Areas are defined as areas on ROWs where legal, visual or environmental impacts/concerns require compromises to the general vegetation management program. Sensitive Areas include: public surface, public well and private well drinking water supplies; lakes, ponds, rivers, streams, and any other surface waters; wetlands; endangered species sites; agricultural areas including croplands, orchards, tree plantations and animal pastures; buffers at road crossings; buffers at residential and/or commercial yards; and easement restrictions and/or landowner agreements.

These sensitive areas have varying legal definitions in each of the states in which National Grid companies have electric facilities. Permits for vegetation management activities in these states vary as well. For purposes of this document, sensitive areas and vegetation management within them are discussed in a general way.

## **6.3 Visual and Protective Buffers**

Visual buffers, consisting of trees and/or shrubs, screen the general public from potentially objectionable views of structures and substations. They may be maintained at road crossings, recreational areas, residential or commercial yards. Specific dimensions for visual buffers may be set by State regulations and/or permit conditions and/or National Grid company policy.

Use shrub buffers on most road crossings or on vantage points where a visual screen is determined to be desirable. Utilize tree/shrub buffers only when legally required or where sites are extremely sensitive visually and shrub growth is inadequate for screening.