NYSEG

Deficiency Letter Response of New York State Electric & Gas Corporation

to Construct an Electric Transmission Line
Under Article VII of Public Service Law

Columbia County Transmission Project
Towns of Chatham, Ghent and Stockport
Columbia County, New York

Submission to
State of New York Public Service Commission

Prepared by

Burns & McDonnell
SINCE 1898

September 2012

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

Deficiency No. 1

The documents do not comply with the requirements of 16 NYCRR §85-2.10(a)(6) that the applicant provide proof of service on each member of the New York State Legislature through whose district any part of the facility, as primarily or alternatively proposed, would pass, in that Assembly member Didi Barrett (Assembly representative for the 103rd Assembly District) was not served.

Response

A copy of the application was served on Assemblywoman Didi Barrett via FedEx at the address below on Monday June 25, 2012.

Assemblywoman Didi Barrett
NY State Assembly, District 103
7578 North Broadway, Suite 4
Red Hook, NY 12571

NEW YORK STATE ELECTRIC & GAS CORPORATION

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Response to June 22, 2012 Deficiency Letter

Deficiency No. 2

The documents do not comply with the requirements of 16 NYCRR §86.3(a)(1) that the applicant submit maps at a scale of 1:24,000, in that maps at 1:30,000 scale equivalent were provided.

Response

Figures 2-1a and 2-1b of Exhibit 2 to the Application, which are the maps required by 16 NYCRR §86.3(a)(1), are provided as Attachment 2 to this filing. These maps are at a scale of 1:24,000 and replace Figure 2-1 in the Article VII Application.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

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Attachment 2

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

Deficiency No. 3

The documents do not comply with the requirements of 16 NYCRR §86.3(b)(1) that the applicant submit aerial photographs, in that the hard copy versions are lacking one sheet of the 10 pages represented as providing aerial photo coverage of the line (Figure 2-3d, page 4 of 10).

Response

Figure 2-3d, page 4 of 10 is provided as Attachment 3 to this filing.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

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Attachment 3

Response to June 22, 2012 Deficiency Letter

Deficiency No. 4

The documents do not comply with the requirements of 16 NYCRR §86.4(b) that the applicant indicate on appropriate maps any alternative route considered, in that map Figure 3-3 does not label facility routing Alternates 1 through 4 or the preferred and alternate switchyard sites.

Response

Figure 3-3a, 3-3b, 3-3c, and 3-3d, the aerial photographs that provide the information required by 16 NYCRR§86.4(b), are provided as an attachment to this filing. The attached figures supplement the one figure labeled 3-3 included in the Article VII Application. Figure 3-3a shows Alternative 1 and the preferred location for the proposed Ghent Switching Station. Figure 3-3b shows Alternative 2 (Proposed Route) and the preferred location for the proposed Ghent Switching Station. Figure 3-3c shows Alternative 3 and the alternate location for the proposed Ghent Switching Station. Figure 3-3d shows Alternative 4 and the alternate location for the proposed Ghent Switching Station. Alternatives and locations for the proposed Ghent Switching Station are labeled on each of the figures and all figures are presented at a scale of 1:24,000. Figures 3-3a, 3-3b, 3-3c, and 3-3d are included as Attachment 4 to this filing.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

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Attachment 4

Response to June 22, 2012 Deficiency Letter

Deficiency No. 5

The documents do not comply with the requirements of 16 NYCRR §86.5(b)(2)(i)-(iv) that the applicant state what efforts have been made to assure that any right-of-way avoids, or minimizes its visibility from, scenic, recreational and historic areas, areas of public view, heavily timbered areas, high points, ridge lines and steep slopes, and that the selection of any proposed right-of-way preserves the natural landscape and minimizes conflict with any present or future planned land use, in that the visual analysis must be supplemented by providing viewshed mapping to document project visibility and simulation views to demonstrate visual change that would result from installation of the facility from areas of public view. (Consultation with DPS staff is recommended in the development of these additional supporting materials).

Response

The Company respectfully disagrees with the Commission's assertion that 16 NYCRR § 86.5(b)(2) requires supplementation of the visual analysis in Exhibit 4 of the application with viewshed mapping and simulation views. The cited regulation requires only that Exhibit 4 "state" the "efforts, if any," made toward accomplishing these objectives. The Visual Resources section (Section 4.3) of the Company's Exhibit 4 provides multiple examples of statements of the Applicant's efforts to mitigate the project's impact on visual resources. Nonetheless, in the interest of cooperation with the Commission in furthering the progress of this proceeding, the Company, after consultation with Staff in the development of these materials, will provide the viewshed mapping and simulation views as part of its response to Paragraph J of the Commission's request for additional information (Appendix A of the June 22, 2012 letter). However, as referenced in the Response to Paragraph J, such materials are under development and will be provided by December 16, 2012.

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Response to June 22, 2012 Deficiency Letter

Deficiency No. 6

The documents do not comply with the requirements of 16 NYCRR §86.5(b)(7) that the applicant state what, if any, herbicide will be used in construction or maintenance of the proposed facility (including the volumes and manner of use), in that the applicant must describe chemicals and treatment methods and associated details. (Provision of information from the latest NYSEG Long-Range ROW Management Plan and the specifications in document FOR-2012, dated September 30, 2011 and filed in Case 10-E-0155 on April 5, 2012 would meet this requirement).

Response

The Company does not intend to apply herbicides in the construction of the proposed facility. Herbicides may be used in the routine maintenance of the facility in accordance with the September 30, 2011 Long Range Right-of-Way ("ROW") Management Plan for the NYSEG and RG&E Electric Transmission System (the "ROW Management Plan"), which was filed with the Commission on April 5, 2012 in Case 10-E-0155. The relevant parts of the ROW Management Plan (Section 5 - Transmission ROW Vegetation Management Procedures) and of the Detailed Specification for Transmission ROW Vegetation Maintenance FOR-2012 (Section 4 -Herbicide Applications, Section 5 - Herbicide Treatment Methods, and Section 6 - Herbicide Formulations) are provided as Attachment 6 hereto. Mr. James Crosier, NYSEG Manager Vegetation Management, who is being added to NYSEG's witnesses for the Application, will sponsor Attachment 6. Mr. Crosier's direct testimony is also included in Attachment 6.

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Attachment 6

Long Range Right-of-Way Management Plan For The NYSEG and RG&E Electric Transmission System

September 30, 2011

Weston J. Davis

Program Manager- Vegetation Management

5. Transmission Right-Of-Way Vegetation Management Procedures

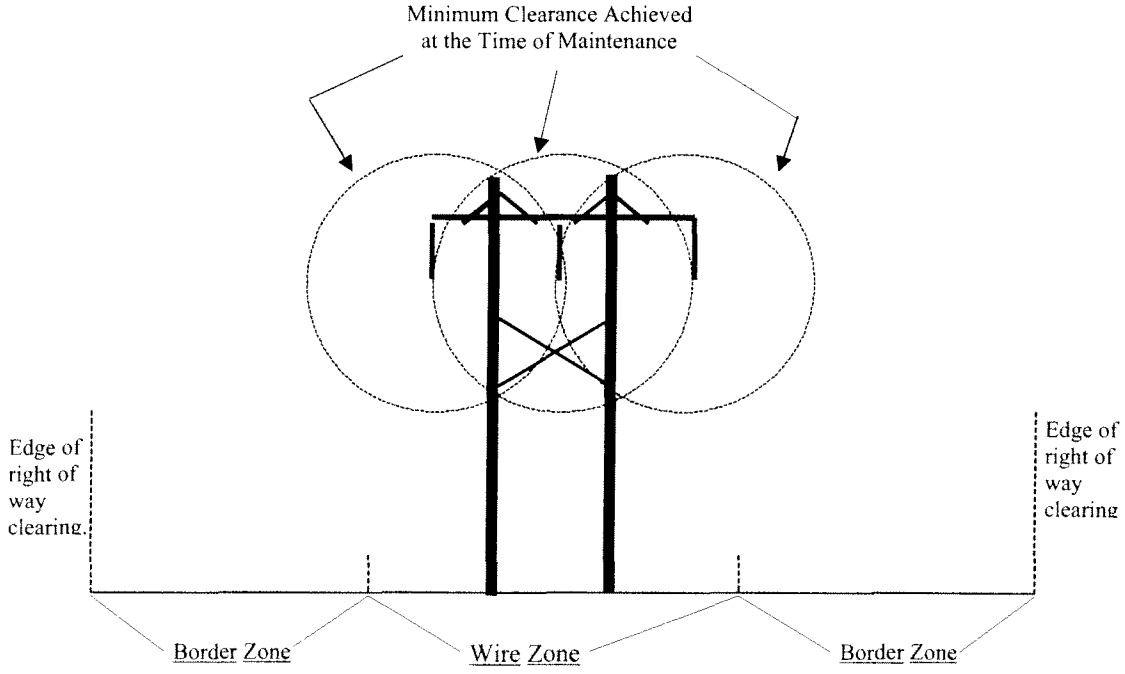
It is the responsibility of the Company vegetation management staff to design and implement a program to accomplish the previously identified goals utilizing the methods and techniques described in this plan.

A. The Wire Zone / Border Zone Method and Clearances

As previously described this method consists of managing the right-of-way as two distinct zones. The center portion of the right-of-way or wire zone is defined as the floor of the right-of-way that is both underneath the conductors and a specified outer distance measured horizontally from the outermost conductors.

- The wire zone outer distances are 15 feet beyond the outside conductors for bulk transmission lines and 10 feet beyond the outside conductors for non-bulk transmission lines.

- The border zone is the outer portion of the right-of-way floor, extending from the outside edge of the wire zone to the edge of the specified right-of-way clearing width.



1. The Wire Zone

The wire zone will be managed in accordance with The Minimum Clearance Zone, The Minimum Clearance Achieved At The Time of Maintenance, and Visibility and Ease of Movement.

The Minimum Clearance Zone. The wire zone will be managed to retain herbaceous vegetation and woody species that cannot fall or intrude into the Minimum Clearance Zone. Minimum clearances are designed to prevent flash over between vegetation and overhead ungrounded supply conductors. At no time will vegetation be allowed to grow closer than the distances listed on Table 1, as measured from the maximum sag under all rated operating conditions.

Table 1

Voltage	Minimum Wire Clearance under all rated operating conditions*
34.5 & 46kV	3 feet
69kV	3 feet
115kV	4 feet
230kV	6 feet
345kV	10 feet

* based on IEEE 516-2003 table 5 and increased to the next whole number

The Minimum Clearance Achieved At The Time of Maintenance. The wire zone will be managed to remove all woody species whose mature height could intrude into the Minimum Clearance Achieved At The Time of Maintenance, as measured from the maximum sag under all rated operating conditions. These woody species must be removed at the time vegetation management work is performed. The distances are listed in Table 2.

Table 2

Voltage	Minimum Wire Clearance under all rated operating conditions
34.5 & 46kV	17 feet
69kV	18 feet
115kV	18 feet
230kV	21 feet
345kV	25 feet

Exceptions to The Minimum Clearance Achieved At The Time of Maintenance may be granted under the following conditions.

- For <69kV lines, residential trees may be pruned/topped.
- When easement restrictions preclude removal of the vegetation.
- For non-bulk lines, exceptions may be granted for well maintained orchards, plantations, and nurseries. Exceptions will depend on wire

clearances. Any vegetation retained under this exception shall not, at a minimum, exceed 10 feet in height in the wire zone. Any vegetation retained under this exception on 69 kV to 115 kV shall not be topped or pruned.

These clearances, the Minimum Clearance Achieved At The Time of Maintenance and the Minimum Clearance Zone, are required to bring this Plan into compliance with the NERC Vegetation Management Standard FAC-003-1. These distances are measured under all rated operating conditions. See Appendix G, R.1.2.1 and R.1.2.2.

Visibility and Ease of Movement. The wire zone will also be managed to provide for visibility and ease of movement within the wire zone. Desirable vegetation within the wire zone will not be allowed to form a solid contiguous barrier that prevents a visual inspection either across or along the ROW to allow for identification of escaped undesirable stems under the conductors. Openings for ease of movement are necessary so that vegetation management workers can reach undesirable stems for treatment. The goal will be to keep up to 30% of the wire zone open or free of woody vegetation that matures at over five feet in height.

Example: a 345kV bulk transmission line, with mid-span conductor-to-ground clearances of 38 feet (at maximum sag) and Minimum Clearance Achieved At The Time of Maintenance of 26 feet can have shrubs with a mature height of up to 12 feet in that site. Shrubs capable of growing closer than that will be removed. As shrub densities in the wire zone exceed 70%, by span, taller growing shrubs may be targeted for removal in an effort to maintain visibility and ease of movement and access in the wire zone.

2. The Border Zone

The Minimum Clearance Zone. The border zone will be managed to retain herbaceous vegetation and woody species that cannot fall or grow into the Minimum Clearance Zone.

The Minimum Clearance Achieved At The Time of Maintenance.
The border zone will be managed to remove all woody species whose mature height could intrude into the Minimum Clearance Achieved At The Time of Maintenance, as measured from the maximum sag under all rated operating conditions. These woody species must be removed at the time vegetation management work is performed.

Exceptions to The Minimum Clearance Achieved At The Time of Maintenance may be granted under the following conditions

- For <69kV lines, residential trees may be pruned/topped.
- When easement restrictions preclude removal of the vegetation.

- For non-bulk lines, exceptions may be granted for well maintained orchards, plantations, and nurseries. Exceptions will depend on wire clearances and terrain. Any vegetation retained under this exception on 69 kV to 115 kV shall not be topped or pruned by the Company.

3. Mitigation Plans

Where easement or permit conditions limit the ability to completely remove undesirable vegetation from the ROW, a mitigation plan shall be developed to achieve sufficient clearances for the protection of the transmission facilities under all rated operating conditions. Any locations where the Minimum Clearance Achieved At The Time of Maintenance cannot be achieved will be inspected and treated as necessary to ensure that vegetation does not enter the Minimum Clearance Zone before the next scheduled treatment cycle. Inspection and treatment of these locations will be recorded on the Component Lines of the NYSEG and RG&E Transmission System list.

4. Undesirable Tall Growing Species

The following is a representative list of tall growing tree species that are considered undesirable in most right-of-way situations. Trees shall be removed from the right-of-way floor if the tree's mature height could (1) grow or fall into the Minimum Clearance zone (2) grow into the Minimum Clearance Achieved At The Time of Maintenance zone. See Section 5.A. 1 and 2 for possible exceptions to (2). All distances from the conductors shall be measured from the maximum sag under all rated operating conditions.

Undesirable Tall Growing Species

Ash	Hemlock
Aspen, Cottonwood	Hickory
Basswood	Hophornbeam
Beech	Maple
Birch	Mountain Ash
Black Gum/Tupelo	Oak
Locust	Pine
Black Walnut	Red Mulberry
Butternut	Sassafras
Catalpa	Spruce
Cedar	Sycamore
Cherry	Tamarack/Larch
Chestnut	Tree of Heaven
Cucumber Tree	Tulip/Yellow Poplar
Elm	Willow
Fir	

5. Tall Shrubs and Small Trees Primarily for the Border Zone

The following is a representative list of tall shrubs and small trees that may be compatible in the border zone of the right-of-way, except on narrower sub-transmission rights-of-ways. Since these species generally mature at a height greater than ten feet, they shall be removed from anywhere on the ROW floor if their mature height could (1) grow or fall into the Minimum Clearance zone (2) grow into the Minimum Clearance Achieved At The Time of Maintenance zone. See Section 5.A. 1 and 2 for possible exceptions to (2). All distances from the conductors shall be measured from the maximum sag under all rated operating conditions.

American Hornbeam	Red Cedar
Apple	Scrub Oak
Autumn Olive	Shadbush
Buckthorn	Shrub Willow
Choke Cherry	Speckled Alder
Common Pear	Striped Maple
Flowering Dogwood	Sumac
Hawthorn	Witchhazel
Hercules' Club	Witherod
Nannyberry	

6. Woody Shrubs

The following is a representative list of shrub species commonly found on rights-of-way across the service territory. These shrubs that generally mature at a height of ten feet or less While they are nearly always compatible in the border zone, in the wire zone some have the potential to grow closer to the conductors than the Minimum Clearance Achieved At The Time of Maintenance. If a given species is capable of growing tall enough to intrude into the Minimum Clearance Achieved At The Time of Maintenance, as measured the maximum sag under all rated operating conditions, it must be removed. See Section 5.A. 1 and 2 for possible exceptions.

Alternate Leaf Dogwood	Jerseytea
American Hazelnut	Mapleleaf Viburnum
Arrowood	Mountain Laurel
Beaked Hazelnut	Mountain Maple
Blueberry	Redosier Dogwood
Brambles	Rhododendron
Bush Honeysuckle	Rose
Common Elderberry	Scarlet Elderberry
Common Winterberry	Silky Dogwood
Gray Dogwood	Spicebush
Hobblebush	Spirea
List continues on next page	

Honeysuckle	Sweetfern
Huckleberry	

Note that some of the species on these lists can be classified as either exotic, invasive and/or noxious – particularly Autumn Olive and Multiflora Rose. In some situations management objectives within and adjacent to the right-of-way may warrant the removal of these species. Future discussions with State and Federal agencies to address invasive and exotic species on a landscape scale may require modifications of the current treatments for some species.

B. Selection of Vegetation Management Techniques

When selecting a technique, many factors are evaluated and their relative importance considered. These factors include:

- Height, density, and composition of undesirable vegetation.
- Susceptibility of undesirable vegetation to treatment techniques.
- Density and composition of desirable vegetation.
- Specific site conditions such as:
    - * Land use
    - * Presence of water bodies
    - * Presence of sensitive crops
    - * Accessibility
    - * Visual Sensitivity
    - * Soil Sensitivity
- Relative costs of using various techniques on the specific site.
- Past management activities.
- Conditions subject to governmental regulation.
- Easement restrictions

C. Definition of Vegetation Densities

The density of desirable and undesirable vegetation on the right-of-way is a very important factor when selecting a management technique. The following density classes, determined by a visual estimate, are used to describe woody vegetation:

Class	% Ground cover
Ultra Light	Less than 100 Stems/acre
Light	Up To 30% (100 to 1000 stems/acre)
Medium	30 - 60% (1000 to 2000 stems/acre)
Heavy	> 60% (more than 2000 stems/acre)

D. Description of Vegetation Management Techniques and Conditions of Use

Each technique currently used is described below, along with the right-of-way conditions for which that technique will typically be prescribed. The Lead Analyst Vegetation Management utilize their professional judgment to assess the site conditions and select one of these techniques.
Herbicide formulations that are utilized with the various techniques are included in the specification found in Appendix A.

1. Conventional Stem Foliar Technique

Using this technique, the entire stem and foliage of the target plant is thoroughly wetted to the point of run-off. The spray formulation is normally made up of a systemic herbicide in a water carrier. The herbicide enters the target plant primarily through absorption and translocates throughout the plant. Stem foliar sprays are applied during the growing season, after full leaf development and before dormancy begins. Stem foliar spraying that employs the proper herbicide formulation can be very effective in obtaining root kill, especially of root suckering species.

Stem foliar sprays are normally applied with hydraulic sprayers, equipped with 200 - 500 gallon tanks and two spray guns attached to hoses that are at least 100 feet long. Sprayers are mounted on 4-wheel drive or on all-terrain vehicles. Water is supplied to the spray vehicle with a 500 to 1000 gallon supply truck. The supply truck is not used for mixing or for transporting chemicals which ensures that sources of water used for spray operations will not be contaminated with herbicide. Stem foliar spray volumes normally range between 75 and 150 gallons of formula per acre. Over-spray is minimized by spraying at the lowest effective pressure from a distance no more than 10 feet from the target plant, by limiting applications to sites where the average height of undesirables is 15 feet or less, and by adding a drift control agent to the spray formulation. Some foliar spray formulations have the advantage of being selective in that they do not kill narrow-leaf herbaceous plants. The method is an efficient, economical technique for treating dense concentrations of undesirable vegetation. The stem foliar technique is utilized where brown-out of the vegetation is not a concern, and where:

- Densities of undesirable species are medium to heavy.
- Densities of undesirable species are light to medium, while desirable specie densities are scattered to light. This will result in smaller quantities of desirable vegetation being effected when utilizing the conventional stem-foliar technique.
- Undesirable species are primarily root-suckering types which are most effectively controlled by foliar-applied techniques.

In addition, the following sites are not treated with the conventional stem foliar technique:

- Within 50 feet of any stream or water body, or within 100 feet of a regulated wetland without a permit, or where specifically instructed by the Company Representative.
- Within 100 feet of a potable water supply.
- Within any orchard, nursery, or crop planting.
- Within 10 feet of a fence which encloses an active pasture.
- Within any area restricted by the herbicide label.
- Any other special site identified by the Lead Analyst Vegetation Management.

2. Low Volume Foliar Technique

Using this technique, a concentrated waterborne herbicide formulation is applied in a uniform pattern to the top and leads on all sides of the target plant. Coverage must be uniform so that most leaves are treated but not to the point of run-off. The herbicide enters the tree through the foliage and translocates throughout the plant. Low volume foliar sprays are applied during the growing season, after full leaf development and before dormancy begins.

Low volume foliar sprays are applied with a pump-up backpack sprayer or with a motorized back-pack sprayer. Sprayers are equipped with at least two types of nozzles for treatment of trees of different heights. Low volume foliar spray volumes normally range between 5 and 10 gallons of formulation per acre.

Because of the low volume of spray that is applied, and the low pressure provided by the back-pack sprayer, this method can be very selective. This technique requires a less precise application than selective basal sprays, allowing for greater production while at the same time giving the applicator the ability to be selective. This technique is an ideal method for treating undesirable vegetation up to eight feet in height that is light to medium in density. Occasionally the technique is also used on taller target plants up to twelve feet in height, so long as the applicator is prudent in avoiding over spray. The low volume stem foliar technique is utilized where brown-out of vegetation is not a concern.

In addition, the following sites will not be treated with the low volume stem foliar technique:

- Within 15 feet of any stream or water body, or within 100 feet of a regulated wetland without a permit, or where specifically instructed by the Company Representative.
- Within 100 feet of a potable water supply.
- Within any orchard, nursery, or crop planting.
- Within active pastures unless the herbicide label specifically allows for this, and the property owner or farm operator approves of the application.
- Within any area restricted by the herbicide label.
- Any other special site identified by the Lead Analyst Vegetation Management.

3. Basal Technique

Using this technique, the lower 12 - 18 inches of the stem of each target plant is thoroughly wetted with an oil-borne herbicide formulation. The purpose of the oil carrier is to facilitate bark penetration to carry the herbicide into the tree's system. To be effective, it is imperative that the treatment completely encircle the stem, and wet the root crown area and all exposed roots. Basal spraying is effective when applied at any time of the year, as long as snow or ice do not prevent spraying to the ground line. Since only the bottom 12 - 18 inches of each stem is treated and coarse sprays are used, this technique can be very selective with little chance of drift. The technique can also be very effective in achieving root-kill, except for several species that commonly root sucker after being top-killed. When performed during the dormant season, brown-out can be greatly reduced.

Hand-powered back-pack sprayers are used to apply the formulations. A wand or extension is attached to the spray gun, delivering the spray pattern directly to the target area and minimizing the size of the spray pattern. Historically, basal spraying has been more expensive than stem foliar spraying due to more intense labor requirements.

The selective basal spray technique is utilized where:

- Densities of the undesirable species are light.
- Densities of the undesirable species are light to medium, while the desirable densities are either light to medium or medium to heavy.
- Brown-out of the vegetation that would result from selective foliar sprays would be objectionable.
- The right-of-way agreement restricts the use of foliar techniques.
- Target vegetation is in a pasture and must be treated during the dormant season when livestock is not present.
- The site to be treated is inaccessible during the growing season due to the presence of crops and must be treated during the dormant season.
- The target vegetation is located in a hedgerow or other area that is too close to sensitive crops to utilize a foliar technique.
- Vegetation densities meet the criteria for foliar techniques, however the average height of the undesirable species is greater than 15 feet.

In addition, the following sites will not be treated with the selective basal technique:

- Within 15 feet of any stream or water body, or within 100 feet of a regulated wetland without a permit, or where specifically instructed by the Company Representative.
- Within 100 feet of a potable water supply.
- Within any orchard, nursery, or crop planting.
- Within active pastures.
- Within any area restricted by the herbicide label.
- Any other special site identified by the Lead Analyst Vegetation Management.

4. Cutting and Stump Treatment Technique

Using this technique, individual stems are cut, and the resulting stumps and root collars are treated with an herbicide to prevent resprouting. Cutting is usually performed with a chainsaw or a brush saw. An oil borne herbicide is applied to wet the outer perimeter of the stump, the bark, and all exposed roots. Water borne formulations are applied only to the cambium of the cut surface. The application equipment for oil borne formulations is the same as for the basal technique, described in the previous section. For water borne applications, a hand held squirt bottle is used.

Stump treatment prevents the emergence of dormant buds from the stump and the root collar; however stump treatment does not normally prevent root-suckering species from sprouting from dormant buds located along the root system. Vegetation that is cut using this technique is disposed of using several methods, depending on the sensitivity of the site. The following methods are listed in order of increasing cost:

- Lop and Scatter – Vegetation is felled and cut up so that it is in close contact with the ground. Access roads or a swath under the conductors is kept free of such cut vegetation to ensure access is not hindered.
- Windrow – Vegetation is cut and piled away from structures and outside of the access road.
- Chipping – Vegetation is cut and then reduced to chips with a brush chipper. Chips are normally left on site.
- Off-Site Disposal – Vegetation is completely removed from the site, although in some cases it may be moved to another site on the right-of-way.

Due to the additional labor required for cutting the vegetation, this technique is more costly than the basal technique. The cutting and stump treatment technique is utilized where:

- Standing dead stems would be objectionable due to aesthetic concerns.
- Clearance concerns exist where cutting is required to address the concern; i.e. the retention of tall treated stems that result from using one of the other methods would not leave adequate clearance.
- The right-of-way agreement requires that cut vegetation is to be removed.
- The presence of foliage that is potentially toxic to livestock requires that the vegetation either be cut during the dormant season, or cut and removed during the growing season.
- Vegetation to be removed is too tall to foliar spray (>15') and density is too high for cost effective basal spraying.

In addition, the cutting and stump treatment technique will not be used on the following sites:

- Within 5 feet of any stream or water body, or within 100 feet of a regulated wetland without a permit, or where specifically instructed by the Company Representative.

- Within 100 feet of a potable water supply.
- Within any orchard, nursery, or crop planting.
- Within active pastures unless the herbicide label specifically allows for this, and the property owner or farm operator approves of the application.
- Within any area restricted by the herbicide label.
- Any other special site identified by the Lead Analyst Vegetation Management.

5. Cutting/Pruning Technique (with no herbicide treatment)

Using this technique, undesirable vegetation is either cut down or partially removed by pruning those portions of the tree that are capable of intruding into the Minimum Clearance Achieved At The Time of Maintenance. Pruning is normally performed by using the drop-crotch or natural trimming technique where the limbs to be removed are cut back to the next lateral limb. The tree workers either manually climbing the tree or utilize aerial lifts. Cut vegetation is disposed of in the same manner as the cutting and stump treatment technique, described in the previous section. Cutting and pruning are labor intensive techniques, and to control re-growth, they must be repeated on shorter rotations than techniques using herbicides. Hence this technique is less cost effective than techniques employing herbicides.

The cutting/pruning technique is utilized where:

- The undesirable vegetation is located in a sensitive area such as residential lawn, park, etc. However, for 69kV and above lines, unless there is an easement restriction, there will be no pruning of target vegetation that is rooted within the specified ROW clearing width. Said vegetation must be cut down.
- The ROW agreement restricts the use of herbicides.
- Company specifications restrict the use of herbicides.
- Side encroachment exists on a site where the ROW agreement will not allow for the total removal of the targeted vegetation.

6. Mechanical Mowing Technique

Using this technique, the vegetation is cut with a large mowing machine attached to an all-terrain vehicle. The cutting swath is normally about 8 feet wide, making the technique relatively non-selective. Where the terrain allows for the use of this equipment, mechanical mowing is more cost-effective than hand cutting. If herbicides are not used in conjunction with mechanical mowing, the resulting re-growth will necessitate a short rotation, increasing the cost of using this technique compared to using other techniques that employ herbicides.

Mechanical mowing is utilized where the terrain is accessible to mowing equipment and:

- The use of herbicides is restricted, and the acreage is large enough to make the use of a mowing machine economically feasible.

- The density of the target vegetation meets the same criteria as the conventional stem foliar technique; however the average height of the target vegetation is over 15 feet. Under these conditions, mechanical mowing would be followed up where possible either by a stem foliar application after resprouting has occurred, or by using a mower that also applies herbicide to the cut surface of the mowed stubble.

E. Hazard Tree Program

Hazard trees are located outside of the specified clearing width of the ROW. These trees pose a threat to the reliability of the line. In order to threaten the line, the tree must be sufficiently tall to strike the line if it falls and it must exhibit one or more of the following characteristics that would make it likely to fall:

- The tree displays excessive lean toward the line.
- The tree is diseased or has a defect that increases the risk that it will fall toward or into the conductors.
- The root system is shallow due to moisture conditions or species characteristics, making wind throw a concern.

1. Hazard Tree Identification

Experience has shown that individual hazard trees are difficult to identify. Often trees that fall into the right-of-way that strike the conductors exhibit no outward characteristics that would have identified them as a hazard tree ahead of time. In other instances, a large tree located far outside the ROW (10'+) will fall and start a chain reaction that results in an otherwise sound or healthy tree along the edge being pushed into the conductors.

The hazard tree program starts at the time a line is built by clearing a right-of-way to a standard width that provides reasonable protection. The wider the right-of-way is initially cleared, the lower the probability that a tree falling into the right-of-way will hit the conductors. The Company has an ongoing effort to widen existing narrow rights-of-way, either to the standard width or to the maximum allowed by the easement, which ever is less.

Company Standard Right-Of- Way Dimensions

Voltage	Standard ROW Width
34.5kV to 69kV	100 feet
115kV single pole construction	100 feet
115kV H-frame / steel tower construction	125 feet
230kV H-frame construction	150 feet
345kV H-frame construction	175 feet

2. Hazard Tree Inspection Schedule

In addition to these widening efforts, every transmission line is inspected for hazard trees annually. The number of inspections is prioritized by voltage, with the bulk and any critical lines receiving the most inspections (NYSEG and RG&E do not currently have any 115kV deemed critical lines). The inspection schedule is as follows:

Voltage Class	Aerial Patrol	Ground Patrol	Vegetation Inventory & Follow-up Inspection
345 & 230kV Lines & any < 230kV critical lines	1 per year	1 per year	2 every 6 years
< 230kV Non- Critical Lines	1 per year	1 every 5 years	2 every 6 years

3. Hazard Tree Removal

By definition all hazard trees represent a threat to line reliability. Hazard tree removal is scheduled in accordance with the level of threat they represent. Some hazard trees represent an immediate threat to the line, such as trees that are leaning toward the line as a result of wind storms, flooding etc. Hazard trees posing such a threat are likely to fail at any time, even without the influence of additional forces such as wind, ice or snow load. Other hazard trees represent a long term threat, in that these trees may be dead and fail over time as they decay, losing their structural integrity; or they may have a defect or weakness that makes them vulnerable to failure during a storm event.

Immediate Threat
Hazard trees that are deemed an immediate threat are cut as soon as possible; however, in most cases, a tree presenting such a threat will require that the line be de-energized before the tree can be cut safely without endangering personnel or damaging the line. Once the hazard tree is identified, Regional Operations will determine whether to apply for a scheduled or emergency outage. If it is determined that an emergency outage is warranted, Regional Operations will coordinate the outage with the Energy Control Center (ECC) and the tree will be removed in accordance with the NYSEG and RG&E Accident Prevention Manual as soon as the line can be de-energized. If it is determined that the line must be de-energized but an emergency outage is not warranted, Regional Operations will submit an application for an outage to the ECC and the tree will be removed according to the schedule that is established.

Long Term Threat
Hazard trees that pose less than an immediate threat shall be cut as soon as arrangements can be made for removal, including a determination by Regional

Operations as to whether an outage is necessary or a Hot Line Clearance, scheduling a crew to do the removal, and securing the necessary rights if the easement does not have provisions for removing hazard trees. In some cases, cutting may be deferred for a time to take advantage of an outage that has already been scheduled for purposes other than the tree removal. In any case, hazard trees shall be removed before the next scheduled patrol.

4. Budgeting For Hazard Tree Removal

In order to maintain reliability, funds may be shifted from other less critical activities in order to fund hazard tree removal.

Detailed Specification for Transmission Right-Of-Way Vegetation Maintenance

New York State Electric & Gas Corporation
and
Rochester Gas and Electric Corporation

FOR-2012

Weston J Davis

Manager - Vegetation Management Operations

Date: 9/30/2011

Section 4 – Herbicide Applications

4.01 General

A. The Contractor shall be registered with the New York State Department of Environmental Conservation as a Pesticide Applicator Business for the current application year for work done in New York State. For work done within the Commonwealth of Pennsylvania, the Contractor shall hold a commercial pesticide application license issued by the Pennsylvania Secretary of Agriculture.

B. The Contractor shall abide by all State laws, rules, and regulations relating to the application of pesticides.

C. The application of herbicides shall be performed in accordance with the product label, appropriate governmental regulations, and these specifications. The Contractor shall be in compliance with the OSHA Hazard Communication standard 29 CFR 1910.1200.

D. All herbicide applications shall be done in a manner that will prevent damage to trees and property outside the ROW.

E. Application shall be discontinued when windy conditions may result in off-target herbicide drift.

F. The Company shall consider unskilled or careless application by workmen as just cause for stopping work or cancellation of the contract.

G. Foliar spray units shall be refilled with water from a supply vehicle. Water shall not be pumped directly from a water source into the spray tank.

H. Herbicide concentrate shall not be transported on a vehicle used for supplying water to foliar spray equipment.

I. Each vehicle used for herbicide application or for transportation of herbicide concentrate on the right-of-way shall be equipped with a shovel and absorptive material for containing and controlling spills. All herbicide spills shall be reported immediately to the Company Representative.

J. All evergreens over 5 feet in height that are scheduled to be removed shall be cut and disposed of unless otherwise directed. Evergreens under 5 feet in height that are scheduled to be removed may receive a foliar application of Formula H (a).

K. The Contractor shall periodically review the results of the work to insure adequate coverage of target species.

4.02 Record Keeping

The Contractor shall complete Field Crew Treatment Records for each treatment site on a daily basis. All information requested shall be supplied. Reports shall be turned over to the Company Representative at the completion of work on each transmission line. The Company may issue a stop work order when these reports become delinquent and withhold payment for work performed until all reports have been submitted. (See Appendix 4 for examples of the Field Crew Treatment Records.)

4.03 Security of Equipment and Herbicides

The Contractor shall take the following precautions to protect his equipment and materials from vandalism and unauthorized use when left unattended on the ROW or on Company property not within a locked fence:

A. Power-pack or back-pack sprayers shall be emptied or stored in locked compartments.

B. Ignition keys shall be removed for all vehicles used for herbicide treatment, vehicles containing herbicide concentrate, or herbicide solution.

C. Ignition keys shall be removed from engines which provide power to pumps on power-driven spray equipment. Engines without lockable ignition systems shall have the sparkplug wire disconnected or made inoperable in some similar fashion.

D. The opening to the spray tank, on power spray units, shall be locked.

E. Drains on spray tanks shall be fitted with lockable valves or threaded caps.

F. Containers carrying herbicide concentrate shall be securely locked or bolted to spray units or other vehicles used to transport herbicide concentrate.

G. Valves or barrel pumps on containers carrying herbicide concentrate shall be locked or removed and replaced with threaded plugs. Threaded plugs shall be mechanically tightened to prevent removal by hand.

H. The pressure control valve shall be closed.

I. Any equipment used for operations involving herbicide applications shall not be left unattended within 100 feet of any stream, water body, or State regulated wetland.

Section 5 – Herbicide Treatment Methods

5.01 Selective Cutting and Stump Treatment

All tall-growing woody vegetation shall be cut as described in Section 2.02 of these specification. All stumps of vegetation cut shall be treated in accordance with the following:

A. Herbicide Formulation – The formulation to be used shall be specified by the Company and it shall be one of those listed in Section 6.02 of these specifications. The formulation types are described below:

1. Low Volume - The herbicide concentrate is mixed with a mineral oil type carrier specifically designed and labeled for this purpose. The herbicide concentrate comprises 20% to 30% of the total mix.
2. Cut Surface Concentrate - The herbicide is applied as a ready-to-use concentrate or it is diluted with water.

B. Application – The formulation shall be applied in accordance with methods described below:

1. Low Volume - The formulation shall be applied to wet the cut surface, bark, root crown, and exposed roots. Particular attention shall be given to a complete encircling and wetting of the root collar at the ground line.
2. Cut Surface Concentrate - The concentrate shall be applied only to the cut surface of the stump. Particular attention shall be given to wetting the entire cambium area next to the bark.

C. Equipment – The application equipment to be used is dependent on the formulation type and shall be as follows:

1. Low Volume - Application to be made with a hand operated backpack sprayer equipped with a Spraying Systems Mode 23L-7676 gun and Spraying System 5500 Y2 Cone Jet nozzle or equivalent gun and nozzle.
2. Cut Surface Concentrate - Application to be made with a hand operated sprayer or trigger operated squirt bottle.

D. Weather Conditions – No application shall be made while rain is falling. Low volume formulations shall not be applied when snow or ice is two or more inches in depth around the stumps to be treated. Cut surface concentrates may be applied when snow or ice is present as long as the cut surface to be treated is free of ice and snow. Stumps treated one hour or less prior to rain shall be treated again but not until one hour after runoff has stopped.

E. Timing – The stump shall be treated before cutting (pre-treat) or immediately after they are cut. Where pre-treat is specified a waiting period between treatment and

cutting, established by the Company, shall be observed. Where a pre-treat is utilized, only formulations containing an oil type carrier may be used.

F. Restrictions – The following areas, even though within the ROW, are not to be treated with herbicides; vegetation to be removed shall be cut and disposed of as requested by the Company Representative:

1. Within 5 feet of any stream or water body or within 100' of a NYSDEC regulated wetland without a permit, or where specifically instructed by the Company Representative.
2. Within 100' of a potable water supply.
3. Within any orchard, nursery planting, or crop planting.
4. Within active pasture areas unless written permission is obtained from the property owner and the application is not a label violation.
5. Areas identified on VMS Treatment Maps or in written instructions to the Contractor.
6. Special Grape Growing Areas Extreme caution shall be exercised when applying herbicides in grape growing areas.
   a) During the growing season, from bud break until leaf fall, no application of formulas C or D shall be made within 500 feet of a grape vineyard and no application of formulas E, F, or P shall be made within 100 feet of a grape vineyard.
   b) During the dormant season, from leaf fall until bud break, no application of formulas C, D, E, F, or P shall be made within 100 feet of a grape vineyard.

5.02 Selective Basal Treatment

All tall-growing woody vegetation including but not necessarily limited to those listed in Appendix 2 shall be treated. Selective basal treatment shall be done in accordance with the following:

A. Herbicide Formulation - The formulation to be used shall be specified by the Company and it shall be one of those listed in Section 6.02 of these specifications. The herbicide concentrate is mixed with a mineral oil type carrier specifically designed and labeled for this purpose. The herbicide concentrate comprises 20% to 30% of the total mix.

B. Application - The solution shall be applied to each stem from a point 18 inches high on the stem to ground line completely encircling the stem and any exposed roots. The solution shall be applied only to wet the stem and all exposed roots. Where sprout growth originates from a stump, the treatment shall also be applied to completely encircle the stump and any exposed roots.

C. Equipment - Application to be made with a hand operated backpack sprayer equipped with a Spraying Systems Model 23L-7676 gun and Spraying Systems 5500 Y2 Cone Jet nozzle or equivalent gun and nozzle.

D. Weather Conditions - No application shall be made while rain is falling or when snow or ice is two inches or more in depth around the stems to be treated. Stems treated one hour or less prior to rain shall be treated again but not until one hour after runoff has stopped.

E. Timing - Basal treatment may be utilized at any time of the year unless the Company specifies dormant or growing season basal. Dormant selective basal treatment shall be done between the time of fall foliage coloration and bud break in the spring. All species of ash, oak, and hickory shall be cut and stump treated when treatment occurs between September 15 and March 1.

F. Restrictions - The following areas, even through within the ROW, are not to be treated with herbicides; vegetation to be removed shall be cut and disposed of as requested by the Company Representative.

1. Within 15 feet of any stream or water body, or within 100' of a NYSDEC regulated wetland without a permit, or where specifically instructed by the Company Representative.
2. Within 100' of a potable water supply.
3. Within any orchard, or nursery planting, or crop planting.
4. Within active pasture areas unless written permission is obtained from the property owner and the application is not a label violation.
5. Areas identified on VMS Treatment Maps or in written instructions to the Contractor.
6. Special Grape Growing Areas: Extreme caution shall be exercised when applying herbicides in grape growing areas.
   a) During the growing season, from bud break until leaf fall, no application of formulas C or D shall be made within 500 feet of a grape vineyard.
   b) During the dormant season, from leaf fall until bud break, no application of formulas C or D shall be made within 100 feet of a grape vineyard.

G. Special Conditions
1. All species of oak greater than two inches in diameter shall be cut and the stumps treated when using formula C.
2. In areas where the visual impact of brownout is a concern, professional judgment will determine the maximum height of vegetation to be treated with the basal method.

5.03 Selective Stem Foliar Treatment

All tall-growing woody vegetation including but not necessarily limited to those listed in Appendix 2 shall be treated. Selective stem foliar treatment shall be done in accordance with the following:

A. Herbicide Formulation - The formulation to be used shall be specified by the Company and it shall be one of those listed in Section 6.03 of these specifications.

B. Application - The solution shall be applied so as to thoroughly wet the entire stem and foliage to achieve runoff. The applicator shall stand within 10 to 15 feet of the target vegetation.

C. Equipment - The herbicide solution shall be applied with power-driven equipment. Spray nozzles shall be adjusted to produce a coarse spray of large droplets at a maximum of 50 pounds pressure at the nozzle. Spray nozzles shall be equipped with a No. 8 or larger orifice disc.

D. Weather Conditions.- Herbicide treatment shall not be done during rain or while rain is dripping from the foliage. Foliage treated one hour or less prior to rain shall treated again after run-off has stopped.

E. Timing - Herbicide treatment shall be done during the growing season while the foliage is fully developed and still has its normal green color and vigor, approximately from mid June to the end of August. Krenite mixes may be used until approximately mid September.

F. Restrictions - The following areas, even through within the ROW, are not to be treated with herbicides; vegetation to be removed shall be cut and disposed of as requested by the Company Representative.

1. Within 50 feet of any stream or water body, or within 100' of a regulated NYSDEC wetland without a permit, or where specifically instructed by the Company Representative.
2. Within 100' of a potable water supply.
3. Within any orchard, nursery, or crop planting.
4. Within active pasture areas or within ten feet of a fence which encloses an active pasture area unless written permission is obtained from the property owner and the application is not a label violation.
5. Areas identified on VMS Treatment Maps or in written instruction to be Contractor.
6. Special Grape Growing Areas: - Extreme caution shall be exercised when applying herbicides in grape growing areas.
   a) No application of formulas G, H, K, or S shall be made within 500 feet of grape vineyard.
   b) No application of formula M or N shall be made within 100 feet of a grape vineyard.

5.04 Selective Low Volume Foliar Treatment

All tall-growing woody vegetation including but not necessarily limited to those listed in Appendix 2 shall be treated. Selective low volume foliar treatment shall be done in accordance with the following:

A. Herbicide Formulation - The formulation to be used shall be specified by the Company and it shall be one of those listed in Section 6.04 of these specifications

B. Application - The solution shall be applied so as to partially wet all foliage. Emphasis shall be given to wetting the top and major branches. The applicator shall stand within 5 feet of the target vegetation. Target vegetation greater than 12 feet in height shall be cut and stump treated.

C. Equipment - The herbicide solution shall be applied with either a motorized or hand operated backpack sprayer.

   1. Motorized Backpacks - Motorized units shall operate at pressures from 50 to 90 p.s.i. and be used in conjunction with a foam adjuvant. The spray gun shall be equipped with at least two foam generating spray tips: one for tall and one for short vegetation.
   2. Hand Operated Backpacks - Hand operated units shall be equipped with spray guns that have at least two spray tips: one for tall and one for short vegetation.

D. Weather Conditions - Herbicide treatment shall not be done during rain or while rain is dripping from the foliage. Foliage treated one hour or less prior to rain shall be treated again after run-off has stopped.

E. Timing - Herbicide treatment shall be done during the growing season while the foliage is fully developed and still has its normal green color and vigor, approximately from mid June to the end of August. Krenite mixes may be used until approximately mid September.

F. Restrictions - The following areas, even though within the ROW, are not to be treated with herbicides; vegetation to be removed shall be cut and disposed of as requested by the Company Representative.

   1. Within 15 feet of any stream or water body, or within 100' of a NYSDEC regulated wetland without a permit, or where specifically instructed by the Company Representative.
   2. Within 100' of a potable water supply.
   3. Within any orchard, nursery, or crop planting.

4. Within active pasture areas or within ten feet of a fence which encloses an active pasture area unless written permission is obtained from the property owner and the application is not a label violation.
5. Areas identified on VMS Treatment Maps or in written instructions to the Contractor.
6. Special Grape Growing Area - Extreme caution shall be exercised when applying herbicides in grape growing areas.
   a) No application of formulas T, W, Y, or Z shall be made within 100 feet of a grape vineyard.

5.05 Access Path Follow-up Treatment

A selective stem foliar treatment shall be applied to areas cleared for access paths and designated for follow-up herbicide treatment by the company representative. The method is selective in order to retain grasses and broad leaf weeds for erosion control. This selective stem foliar treatment shall be applied one year after initial path clearing and in accordance with the following:

A. Herbicide Formulation - The formulation to be used shall be specified by the Company and it shall be one of those listed in Section 6.03 of these specifications.

B. Application - The herbicide formulation shall be uniformly applied over the area to be treated so as to wet all vegetation in the treated area. Each successive application pattern shall overlap the previous pattern to avoid untreated strips.

C. Equipment - The herbicide solution shall be applied with power-driven equipment. Spray nozzles shall be adjusted to produce a coarse spray of large droplets at a maximum of 50 pounds pressure at the nozzle. Spray nozzles shall be equipped with a No. 8 or larger orifice disc.

D. Weather Conditions - Herbicide treatment shall not be done during rain or while rain is dripping from the foliage. Foliage treated one hour or less prior to rain shall be treated again after run-off has stopped.

E. Timing - Herbicide treatment shall be done during the growing season while the foliage is fully developed and still has its normal green color and vigor, approximately from mid June to the end of August. Krenite mixes may be used until approximately mid September.

F. Restrictions - The following areas, even though within the ROW, are not to be treated with herbicides; vegetation to be removed shall be cut and disposed of as requested by the Company Representative.

   1. Within 50 feet of any stream or water body if using high volume equipment or within 25 feet for low volume equipment, or within 100' of a NYSDEC regulated

wetland without a permit, or where specifically instructed by the Company Representative.

2. Within 100' of a potable water supply.
3. Within any orchard, nursery, or crop planting.
4. Within active pasture areas or within ten feet of a fence which encloses an active pasture area unless written permission is obtained from the property owner and the application is not a label violation.
5. Areas identified on VMS Treatment Maps or in written instructions to the Contractor.
6. Special Grape Growing Areas: - Extreme caution shall be exercised when applying herbicides in grape growing areas.
   a) No application or formulas G, H, K, or S shall be made within 500 feet of a grape vineyard.
   b) No application of formula M or N shall be made within 100 feet of a grape vineyard.

Section 6 – Herbicide Formulations

6.01 General

All label restrictions for mixing shall be adhered to. The formulations listed in these specifications specify minimum quantities of active ingredients. The Contractor may increase the quantity of active ingredients as long as label recommendations are not exceeded. The Contractor shall seek the prior approval of the Company Representative concerning any deviation from the formulation specified by the Company.

Trade names are mentioned here only for ease of understanding. It does not constitute endorsement of one product over another. Any product, labeled by the appropriate State and Federal regulatory bodies for the specified use, which meets this specification, may be substituted. Each formulation shall be agitated sufficiently to insure proper mixing.

6.02 Formulations for Selective Basal and Stump Treatment

Formula	Type	Minimum Quantities of Active Ingredient	Quantity of Concentrate	Type and Quantity of Carrier
C	Low Volume Basal & Stump Treatment	4 lbs. Triclopyr	1 gal. Garlon 4 Ultra [1]	3 gallons of an approved mineral oil diluent that is labeled for this purpose
D	Low Volume Basal & Stump Treatment	3 lbs. Triclopyr .25 lbs. Imazapyr	3 qt. Garlon 4 Ultra [1] 16 oz. Stalker [2]	3 gallons of an approved mineral oil diluent that is labeled for this purpose
E	Stump Treatment	1.6 lbs. Glyphosate .08 lbs. Imazapyr	38 oz. Accord Concentrate [1] 5 oz. Arsenal [2]	85 oz. water 0.64 oz. Milliken or Exacto blue dye [3]
F	Stump Treatment	1 lb. 2,4-D 0.25 lb. Picloram	1 gal. Pathway [1]	Undiluted
P	Stump Treatment	2 lbs. Glyphosate	0.5 gal. Accord Concentrate [1]	0.5 gal. water 0.64 oz. Milliken or Exacto blue dye [3]

[1] Trademark of Dow Agrosciences LLC
[2] Trademark of BASF Corporation
[3] Trademark of Exacto Chemical Company

6.03 Formulations for Selective Stem Foliar Treatment

The Contractor shall add a drift control additive, a surfactant and any other adjuvant specified on the product label to all selective stem foliar treatment formulations. These adjuvants shall be mixed according to the manufacturer's directions. Adjuvants shall be selected for those listed under Section 6.05 of these specifications.

Formula	Minimum Quantities of Active Ingredient	Quantity of Concentrate	Type and Quantity of Carrier
G	6 lbs. Fosamine 1.5 oz. Imazapyr 0.6 oz. Metsulfuron Methyl	1.5 gal. Krenite S [3] 6 oz. Arsenal [8] 1 oz. Escort XP [3] ***- OR -*** 1.5 gal. Krenite S [3] 2.4 oz. Lineage Clearstand [3] 0.6 oz. Escort XP [3]	98.5 gal. Water
H	5 lbs. Glyphosate 1.5 oz. Imazapyr	4 qts. Accord Concentrate [2] 6 oz. Arsenal [8]	99 gal. Water
H (a)	5 lbs. Glyphosate 1.5 oz. Imazapyr 0.5 oz. Metsulfuron Methyl	4 qts. Accord Concentrate [2] 6 oz. Arsenal [8] 0.5 oz. Escort XP[3]	99 gal. Water
K	1.5 lb. Triclopyr 0.5 lb. Picloram	0.5 gal. Garlon 3A [2][7] 1 qt. Tordon K [2]	99.25 gal. Water
M [6]	5.4 lbs. Glyphosate	4 qts. Accord Concentrate [2]	99 gal. Water
N [6]	4 lbs. Glyphosate 0.6 oz Metsulfuron Methyl	3 qts. Accord Concentrate [2] 1 oz. Escort XP [3]	99.25 gal. Water
S [6]	2.25 lbs. Triclopyr 0.6 oz. Metsulfuron Methyl	3 qts. Garlon 3A [2][7] 1 oz. Escort XP [3]	99.25 gal. Water

[1] Trademark of Arborchem Product Company
[2] Trademark of Dow Agrosciences LLC
[3] Trademark of E.I. DuPont DeNemours & Co., Inc.
[4] Trademark of Monsanto Company
[5] Trademark of Exacto Chemical Company
[6] Add surfactant at the rate of 2 qts. per 100 gal. mix.
[7] 0.5 gal. of Garlon 4 Ultra may be substituted for Garlon 3A with the written authorization of the Company Representative.
[8] Trademark of BASF Corporation

6.04 Formulations for Selective Low Volume Foliar Treatment

The Contractor shall add a surfactant, and any other adjuvant recommended on the product label, to the formulation at the manufacturer's recommended rate. Adjuvants shall be selected from those listed under Section 6.05 of these specifications.

Formula	Minimum Quantities of Active Ingredient	Quantity of Concentrate	Type and Quantity of Carrier
T	21.6 lbs. Glyphosate .75 lbs. Imazapyr	4 gal. Accord Concentrate [5] 48 oz. Arsenal [3]	96 gal. Water
W	21.6 lbs. Glyphosate 1.8 oz. Metsulfuron Methyl	4 gal. Accord Concentrate [5] 3 oz. Escort XP [4]	96 gal. Water
Y	20 lbs. Fosamine 0.5 lbs. Imazapyr 1.8 oz. Metsulfuron Methyl	5 gal. Krenite S [4] 32 oz. Arsenal [3] 3 oz. Escort [4] ***- OR -*** 5 gal. Krenite S [4] 13 oz. Lineage Clearstand [4] 1 oz. Escort XP [4]	94.75 gal. Water
Z	27 lbs. Glyphosate	5 gal. Accord Concentrate [5]	95 gal. Water

[1] Trademark of Arborchem Product Company
[2] Trademark of Monsanto Company
[3] Trademark of BASF Corporation
[4] Trademark of E.I. DuPont DeNemours & Co., Inc.
[5] Trademark of Dow Agrosciences LLC

6.05 Adjuvants and Basal Oil Diluents

Drift control additives, surfactants and basal oil diluents shall be selected from those listed below or an equivalent. Equivalents shall be labeled for such use and approved by the Company Representative prior to use.

A. Drift Control Additives

1. Arborchem 38-F (Arborchem Products Co.)
2. Driftgard (Custom Chemicides)
3. More (Exacto Chemical Co.)

B. Surfactants

1. Agri-Dex (Helena Chemical Co.)
2. Arborchem Aquatic Surfactant (Arborchem Products Co.)
3. Arborchem Clean Cut (Arborchem Products Co.)
4. Nu-Film-IR (Miller Chemical Co.)
5. Ortho X-77 (Chevron Chemical Co.)
6. Paraspred Industrial (Custom Chemcides)
7. Unifilm Crop Oil Industrial (Custom Chemcides)

C. Basal Diluents

1. Arborchem Basal Oil (Arborchem Products Co.)
2. Hy-Grade EC (CWC Chemical, Inc.)
3. Unifilm Basal Bark Oil (Custom Chemcides)

STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE

PUBLIC SERVICE COMMISSION

Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Columbia County Transmission Project	PSC CASE NO. 12-T-0248

DIRECT TESTIMONY OF

James Crosier ON BEHALF OF

NEW YORK STATE ELECTRIC & GAS CORPORATION

Q. Mr. Crosier, please state your full name, employer and business address.

A. My name is James Crosier; I am employed by New York State Electric & Gas Corporation. My business address is 18 Link Drive, P.O. Box 5224, Binghamton, NY 13902-5224

Q. In what capacity are you employed?

A. I am the Manager of Vegetation Management Transmission for Iberdrola, USA.

Q. Please summarize your education and professional background.

A. I received an Associate of Science degree in Liberal Arts from Broome Community College and a Bachelor of Science degree in Resource Management from SUNY College of Environmental Science and Forestry. I am a Certified Commercial Pesticide Applicator in categories 3A and 6A in the State of New York.

I have more than 30 years of professional experience in right-of-way (ROW) cutting, spraying and pruning for utility projects. My work has involved overseeing electric transmission lines, gas pipelines, and substation projects.

Q. Please describe your role in the Columbia County Transmission Project.

A. For the Columbia County Transmission Project, I have provided advice on the NYSEG and RG&E Long Range Management Plan and its application to maintenance on NYSEG Transmission ROWs.

Q. What portions of the Application does your testimony support?

A. My testimony supports the portions of the Application concerning the Long Range Management Plan and how it applies to transmission line maintenance on the Columbia County Transmission Project.

Q. Does this conclude your testimony at this time?

A. Yes.

Deficiency No. 7

The documents do not comply with the requirements of 16 NYCRR §86.6(a) that the applicant submit design, profile and architectural drawings and descriptions of the proposed facility, including the length, width and height of any structure, in that several features were not provided, including: foundation or structural support information for steel dead-end structures; profile figures showing the height of structures and fencing at the proposed Ghent Switchyard; switchyard fencing and gate design and materials; height and materials of construction of the control house at the Ghent Switchyard; and, design drawings and details for any components, such as any portion of the tap into and extension of the National Grid Trunk line #15 to the proposed Ghent Switching Station, that will be built to National Grid specifications.

Response

Drawing SK-006 depicts the height of structures and fencing at the proposed Ghent Switchyard. The control house will be a steel frame prefabricated structure as noted in the response to Deficiency No. 10. Drawing C16,206-3 depicts the typical NYSEG steel dead end structures. The following standards depict the foundations likely to be used in the Ghent Switching Station: SFD-BFB-1A, SFD-BFB-1C, SFD-BFH-1C, SFD-DFA-BE, SFD-HMC-AC, SFD-M60-2C, SFD-P14-AC, and SFD-P20-AC. The above listed drawings are provided as Attachment 7 to this filing. The Iberdrola USA fencing specification (TM 2.71.09) is also included as part of Attachment 7. Profile drawings of the proposed transmission line structures are included in Exhibit 5 of the Article VII application.

Under the current agreement with National Grid ("NGrid"), NYSEG will construct and own the entire extension of the NGrid Trunk #15 115-kV transmission line but the line will be operated by NGrid. As a result, the structures will be designed and constructed to NYSEG standards that were provided in the Article VII application. NGrid standards have not been included because all structures will be designed to the appropriate NYSEG standards. The tap into the NGrid Trunk Link #15 is described in detail in the response to Deficiency No. 9.

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Attachment 7

2.5.15 The Engineer shall define, and specify provisions for the removal and replacement of unsuitable materials found at the project site. Corrective measures shall include the use of proof rolling for areas under structural foundations, equipment pads, travel lanes and pavement. Unsuitable materials include but is not limited to:

2.5.15.1 Saturated fine grain soils
2.5.15.2 Frozen earth
2.5.15.3 Structural fills and crushes stone containing organic matter or debris
2.5.15.4 Contaminated soils

2.5.16 The Engineer shall specify the percent compaction for all graded soil products and applications. Compaction shall reference the maximum density at optimum moisture as determined in accordance with the Modified Proctor test ASTM D 1557. Structural fills, select fill, roadway base and travel surface shall be specified at not less than ninety five (95) percent of the maximum density.

2.6 FENCING

2.6.1 General:

2.6.1.1 Physical security of Critical Electric Infrastructure sites is regulated by the North American Electric Reliability Council (NERC) per mandates established by the President of the United States in response to the attacks of September 11, 2001. The standards provided herein reflect the NERC security requirements as implemented by Iberdrola USA. The Iberdrola security implementation directive and criteria is not available for public release. Specific questions regarding these standards should be directed to the Owner's representative.

2.6.1.2 Where the site is an existing substation and the yard fence has already been established, expansion of the fence should typically match the design of the existing fencing, provided that the existing fence is at least six (6) feet high with three (3) stands of barbed wire on outriggers which effectively extend the fence an additional twelve (12) inches vertically.

2.6.1.3 Specific sites may require privacy fencing (in addition to the chain link fence) to comply with state or local requirements. The type of privacy fence shall be subject to approval from the appropriate governing bodies and shall meet the NERC security standards as implemented for the Iberdrola facilities.

2.6.1.4 Refer to the drawing entitled Typical Security Fence Details included as part of this standard for typical fence construction details and requirements.

2.6.2 Fence Products:

2.6.2.1 Fence Fabric-

2.6.2.1.1 The standard station fence shall be an aluminized steel, or galvanized steel chain link fence fabric manufactured from #9 AWG wire stock in accordance with ASTM A 116. The

fabric shall be eight (8) feet high except where six (6) foot height is permitted under Paragraph 2.6.1.2 above.

2.6.2.1.2 Provide fence fabric with two (2) inch diamond pattern, twisted and barbed top selvage and knuckled bottom selvage.

2.6.2.1.3 Fabric shall be one (1) piece from top to bottom of fence.

2.6.2.2 Posts-

2.6.2.2.1 Fence posts and frame components shall be fabricated from pipe stock in accordance with ASTM F 1043, for Group 1A products (Standard weight pipe).

2.6.2.2.2 Reference within this standard and the accompanying drawings to fence pipe dimensions are to nominal trade size pipe as listed in Table 1 of ASTM F 1043. Gate and corner posts larger than listed in ASTM F 1043 shall be ASTM A 53, Grade B galvanized NPS standard weight pipe.

2.6.2.2.3 Top and Bottom Rails, ASTM A 53 Grade B, NPS Standard weight galvanized pipe.

2.6.2.2.4 Gate posts shall include a domed top.

2.6.2.3 Components-

2.6.2.3.1 Fence components shall be fabricated in accordance with minimum requirements as specified in ASTM F 626 and ASTM A 702 as applicable unless otherwise indicated.

2.6.2.3.2 Barbed wire shall be galvanized dual strand with four (4) point barbs every five (5) inches.

2.6.2.3.3 Barbed wire extension arms shall be Type I steel arms extending at forty five (45) degrees toward the exterior of the yard, and having clips for three (3) strands of barbed wire. In areas of high rates of vandalism or substations requiring extra security double extension arm (Type III) may be provided which extend to the interior and exterior of the yard.

2.6.2.3.4 Pipe caps shall be galvanized iron or steel with brackets for top rails and extension arm mounting. Caps shall be fitted to the posts and secured in place with tamper proof attachments.

2.6.2.3.5 Rail ends and brace ends shall be steel.

2.6.2.3.6 Rail sleeves shall be steel and not less than six (6) inches long.

2.6.2.3.7 Fabric fasteners shall be interlocking flat wire ties preformed to fit completely around the post or rail. The tie shall be designed to mechanically interlock and lay flat against the pipe.

2.6.2.3.8 Tension bars shall be galvanized steel three sixteenth (3/16) inch by three quarter (¾) inch and extending the full height of the fence fabric.

2.6.2.3.9 Truss rod assembly shall be five sixteenth (5/16) inch galvanized steel.

2.6.2.4 Gates-

2.6.2.4.1 Gates shall be fabricated in accordance with ASTM F 900 from steel tubular stock.

2.6.2.4.2 All gates will be a length of eighteen (18) to twenty (20) feet according to access requirements. Gates will be fabricated from a two (2) inch minimum diameter galvanized Schedule 40 pipe frame with fabric inside the frame and barbed wire on the top. Gates will be constructed with sufficient braces and truss work to prevent any sagging of the gate; in no case shall gate framing members be placed farther than nine (9) feet apart. A fabric to match the main fence shall be installed in the gate frame by means of tension bars and required connectors.

2.6.2.4.3 Gates shall be supplied with the following hardware:

2.6.2.4.3.1 Hinges: Size and material to suit gate size, non lift off type, offset to permit 180 degree gate opening. Provide 1 1/2 pair of hinges for each leaf over 6' nominal height. Main gate hinges will be arranged for the gate to swing out and secondary gates will be arranged to swing inward. Hinges shall be secured with tamper resistant fasteners or welded.

2.6.2.4.3.2 Latch: Forked type to permit operation from either side of gate, with padlock eye as integral part of latch. High security chain will be used to secure the gate with a standard Iberdrola USA padlock.

2.6.2.4.3.3 Keeper: Provide keeper for vehicle gates, which automatically engages gate leaf and holds it in open position until manually released.

2.6.2.4.3.4 Double Gates: Include locking device and drop tube with padlock eyes as integral part of latch, permitting both gate leaves to be locked with single padlock and the gate secured with the drop tube engaged in the threshold stop.

2.6.2.4.3.5 Concrete Thresholds: Contractor shall supply and install concrete threshold in accordance with the Typical Security Fence Details drawing, attached. Threshold shall include a gate stop cast integral with the threshold.

2.6.2.4.4 When directed, a driveway security gate shall be required at the entrance to the substation access road. The gate shall consist of welded galvanized steel pipe, with 4" diameter gate posts as indicated by the attached Typical Security Fence Details drawing.

2.6.3 Fence Installation:

2.6.3.1 Fence and components shall be installed in accordance with ASTM F 900.

2.6.3.2 Fence fabric shall be secured with interlocking clips at the top and bottom rails, line posts and end posts at not more than twenty four (24) inches on center. Secure the fabric to the gates and gate post at not more than fifteen (15) inches on center.

2.6.3.3 Fence fabric and yard shall be designed such that clearance under the fence will not exceed two (2) inches at any location, including access gates.

2.6.3.4 Fence posts shall be anchored in concrete of not less than 3000 psi compressive strength. The concrete shall be cast in place using round fiber forms such as Sonotube concrete forms. Depth of concrete post foundations shall not be less than four feet unless underlain by ledge.

2.6.3.5 Where ledge is encountered into the ledge not less than two (2) feet and grouted into place.

2.6.3.6 Gate thresholds shall be pre-cast or cast in place and extend not less than twelve (12) inches beyond each face of the gate.

2.6.3.7 The threshold shall be constructed as indicated in the Typical Fence Details drawing attached. The design Engineer shall determine the design details including insulation requirements, cover depth and soil properties necessary to ensure frost heaving is within tolerable limits. Frost heave control shall be determined in accordance ASCE 32-01.

2.7 LANDSCAPE DEVELOPMENT

2.7.1 Refer to earthwork sections for requirements of general excavation, filling, and grading in areas to receive landscape work.

2.7.2 Quality Assurance:

2.7.2.1 Design shall comply with applicable federal, state, county, and local regulations and permits governing landscape materials and work. Permit requirements may supersede this specification.

2.7.2.2 Products incorporated into the design shall be as recommended by the Local County Extension Service or a Registered Landscape Architect.

2.7.3 Seeds-Selection of grass seed mixture shall be made in accordance with seeding requirements as specifically required by the approved project permits, or as provided in the State Best Management Practices for the substation locale.

2.7.4 Site grading shall be designed in such a way as to utilize as much existing topsoil as possible for use as loam. Additional topsoil meeting the State DOT material specifications shall be provided.

2.7.5 Topsoil shall be from local sources or from areas having similar soil characteristics to that found at the Site of work. Topsoil shall be from naturally well drained sites where topsoil occurs in depth of not less than four inches. Topsoil shall not be obtained from bogs or marshes.

2.7.6 The natural topsoil and topsoil imported to the site shall be fortified with soil amendments including Lime, Fertilizer, and trace minerals meeting the material specifications of the State DOT. Application rates of soil amendments shall be per County Extension Service test results from representative topsoil samples or as otherwise recommended by testing performed by a Registered Landscape Architect. For small sites less than one acre of landscape development, apply the soil amendments at a rate as recommended by the local county extension service, soil testing is not required.

2.7.7 Prepare planting beds in accordance with the Best Management Practices requirement if provided, or as specified by the State DOT Specifications.

2.7.8 Apply seeds and mulch at rates as required by the Best Management Practices if provided, or as recommended by a Registered Landscape Architect, or the local County Extension Service.

2.7.9 Engineer shall specify that the site shall be maintained by the contractor throughout the “turf establishment period” until a satisfactory stand of plant life has been established to permanently stabilize the soil. Engineer shall determine through consultation with the local County Extension Service the appropriate planting seasons, maintenance requirements and define the “suitable stand” for the particular species and locale.

3.0 DESIGN CRITERIA

3.1 The following design criteria were considered during the development of this standard. The design criteria and assumptions listed shall be verified for applicability by the Design Engineer:

3.1.1 Frost depth not exceeding 4’-0”.

3.1.2 Yard subgrade is not expansive soil.

3.1.3 Subgrade soil is inorganic clay, granular soil or rock having a bearing capacity of 2000 lb/sf or more.

3.2 SCHEDULE OF REQUIREMENTS

The following check list is provided for design QC and coordination. Any line item marked "No" or Not Applicable (N/A) shall be supported by a detailed explanation and make reference to the specific coordination with and approval by Iberdrola USA.

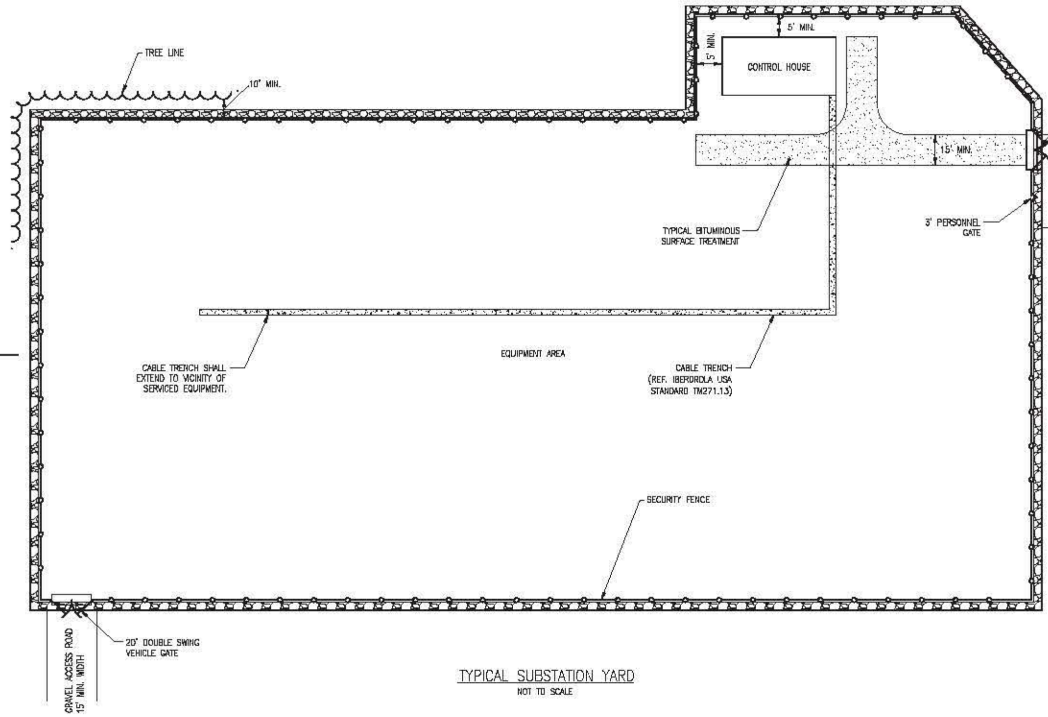
Determine whether the following design criteria can be applied to the site, based on site-specific conditions:

DESCRIPTION	YES	NO	N/A
Environmental Controls - (ref. 2.1)			
Clearing - (ref. 2.2)			
Site Design - (ref. 2.3)			
Surface and Subsurface Drainage - (ref. 2.4)			
Earthwork - (ref. 2.5)			
Fencing - (ref. 2.6)			
Landscape Development - (ref. 2.7)			
Frost depth does not exceed 4'-0" - (ref. 3.1.1)			
Yard subgrade is not expansive soils - (ref. 3.1.2)			
Subgrade soil is inorganic clay, granular soil, or rock having a bearing capacity of 2000 lb/sf or more - (ref. 3.1.3)			

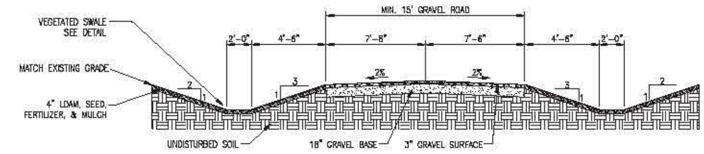
For any design criterion above that cannot be applied to the site, please provide the following:

1. Provide an explanation for why the criterion cannot be applied.
2. Describe the proposed alternative design to address the condition.

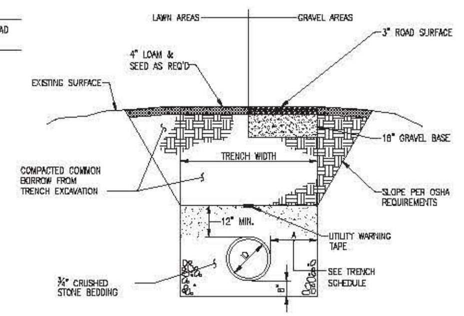
END OF STANDARD



TYPICAL SUBSTATION YARD
NOT TO SCALE



TYPICAL ACCESS ROAD SECTION
NOT TO SCALE

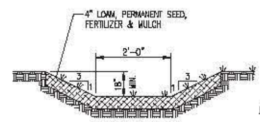


TYPICAL PIPE TRENCH SECTION
NOT TO SCALE

TRENCH SCHEDULE

ID	A (MIN.)
4"-12"	0'-10"
15"	0'-10"
18"	0'-10"
24"	0'-6"
30"	0'-6"
36"	0'-6"

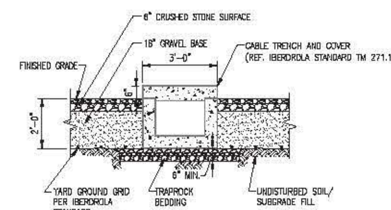
NOTE: SHORE TRENCH EXCAVATION AS REQUIRED TO MINIMIZE EXCAVATION AND IMPACTS TO ADJACENT UTILITIES STRUCTURES OR PAVEMENT. TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS.



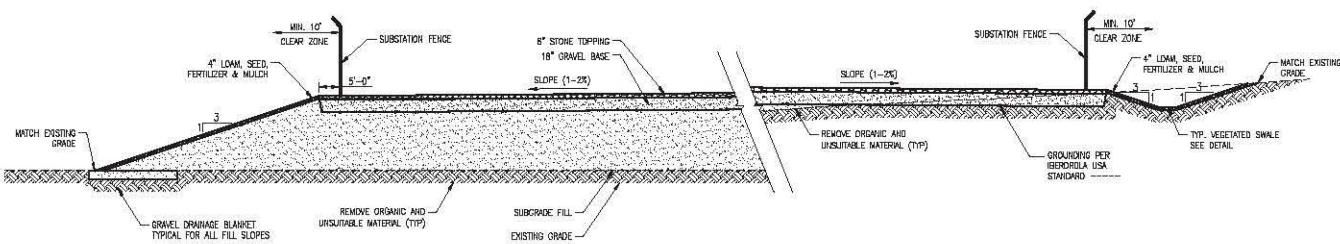
TYPICAL VEGETATED SWALE

NOTE:

1. PROVIDE SWALE AT ALL CUT AREAS. SWALE NOT REQUIRED AT FILL SLOPES.



TYPICAL CABLE TRENCH INSTALLATION
NOT TO SCALE



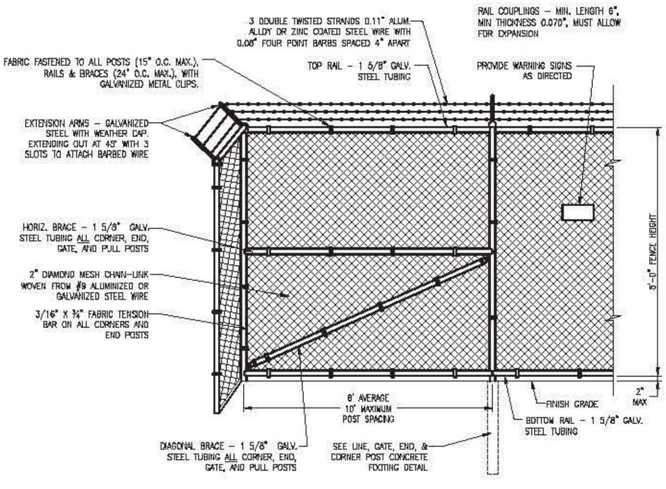
A TYPICAL YARD SECTION
NOT TO SCALE

NOTES:

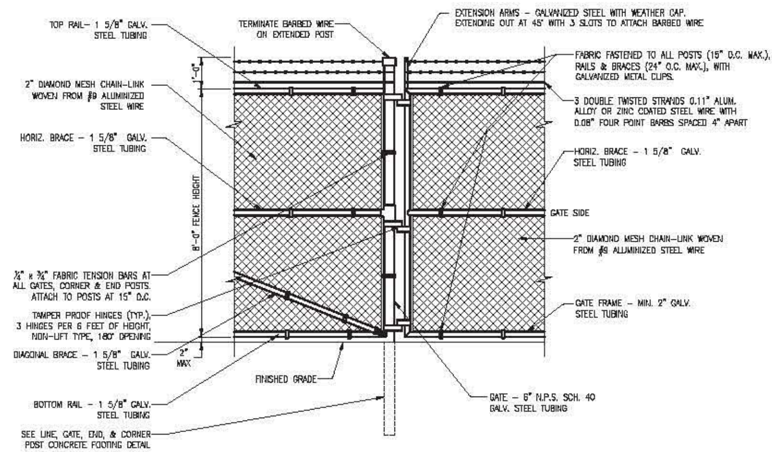
1. THE SUBSTATION DEPICTED IS FICTITIOUS AND USED ONLY TO CONVEY CONCEPTS AND CRITERIA ADDRESSED IN THE YARD AND FENCING STANDARD (TM 2.71.09).
2. REFER TO IBERDROLA USA STANDARD _______ FOR TYPICAL SUBDRAIN AND FOUNDATION CONSTRUCTION REQUIREMENTS.

VENDOR DRAWING #: D-12345687.DWG
VENDOR NAME: TRC SOLUTIONS, (207) 621-7740
CADD Drawing, DO NOT REVISE MANUALLY.

IBERDROLA USA	CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of Iberdrola, USA				TYPICAL SITE LAYOUT AND CROSS SECTIONS
					STATION 616 ______, MAINE
					DR. TRC / DES. TRC / CK. TRC / APP. -
					SCALE: AS NOTED / APPROVAL DATE: 07/18/11
					FILE: CMP - Site Layout & Details.dwg
REV. NO.	DATE	BY	DESCRIPTION	APP.	SUBSTATION ENGINEERING / TM 2.71.09 / REV. A

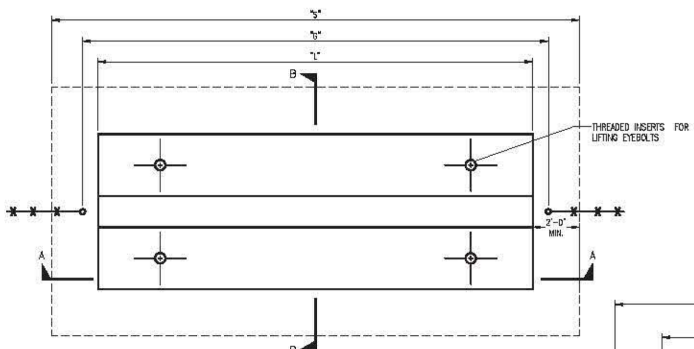


MATERIAL AND STRUCTURAL DETAILS
NOT TO SCALE

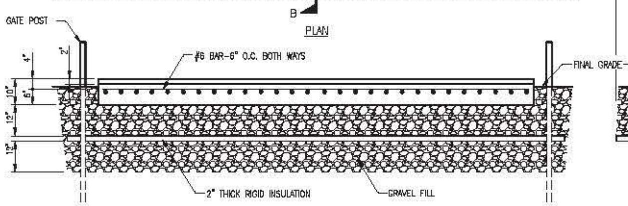


GATE FRAME DETAIL
NOT TO SCALE

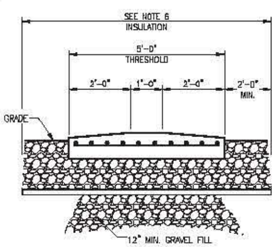
FENCE AND GATE NOTES:
1. ALL ITEMS SHALL BE GALVANIZED AND ZINC COATED TO ASTM SPECIFICATIONS, INCLUDING ALL POSTS, RAILS, GATES, AND HARDWARE.
2. FENCES AT CRITICAL FACILITIES SHALL INSTALL A DUAL TOP GUARD WITH ARMS EXTENDING INWARD AND OUTWARD.
3. RAZOR WIRE MAY BE USED IN PLACE OF BARBED WIRE IN HIGH RISK AREAS.
4. GATE FENCE FABRIC SHALL BE MOUNTED INSIDE THE FRAME.
5. BOLTS AND HINGES SHALL BE OF A TAMPER-PROOF TYPE.
6. EXPOSED BOLTS AND NUTS SHALL BE SPOT WELDED.
7. PROVIDE GROUNDING PER IBERDROLA STANDARD ______
8. REFER TO IBERDROLA STANDARD TM 271.13 FOR ADDITIONAL FENCE AND GATE REQUIREMENTS.



PLAN



SECTION A–A

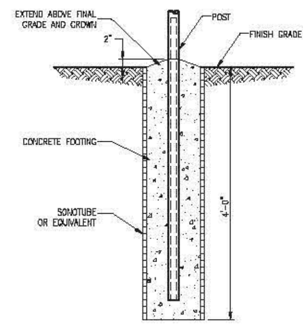


SECTION B–B

"G"	"L"	"S"			
GATE WIDTH (FT.)	LENGTH (FT.)	INSULATION (FT.)	CONCRETE VOLUME (CU YDS)	REBAR (FT.)	THRESHOLD WEIGHT (LBS.)
20	19	SEE NOTE 6	2.70	337	10350

NOTES:
1. CONCRETE FOR THRESHOLD MAY BE PRE-CAST OR CAST IN PLACE.
2. CHAMFER ALL EXPOSED EDGES 1".
3. 2" MINIMUM COVER ALL GRADE 60 REBAR.
4. CONCRETE SHALL BE MINIMUM 4000 P.S.I. AT 28 DAYS.
5. RIGID INSULATION: EXTRUDED POLYSTYRENE INSULATING BOARD CONFORMING TO AASHTO M230, TYPE V.
6. INSULATION SHALL BE DESIGNED PER ASCE 32-01.
7. MAX. CLEARANCE TO GATE SHALL BE 2".

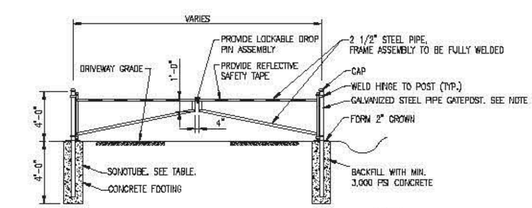
SUBSTATION GATE CONCRETE THRESHOLD DETAIL
NOT TO SCALE



POST USE	LINE	GATE	CORNER	END
ASTM F 1043 (INCHES)	3	6	4	4
SONOTUBE SIZE (INCHES)	12	24	12	12

FOOTING NOTES:
1. UNLESS OTHERWISE INDICATED, FENCE POST SIZES ARE INDUSTRY STANDARD NOMINAL SIZES IN ACCORDANCE WITH ASTM F 1043, GALVANIZED STEEL PIPE.
2. BACKFILL SONOTUBE WITH MIN. 3,000 PSI CONCRETE.
3. ALL CONCRETE SHALL BE SINGLE POUR TO FINAL GRADE.
4. WHEN INSTALLING POSTS IN CLAY:
   - POST HOLE DEPTH SHALL BE INCREASED TO 6 FEET.
   - BACKFILL 4 FEET WITH CONCRETE.
   - BACKFILL FINAL 2 FEET WITH NATIVE SOIL.

LINE, GATE, END, & CORNER POST CONCRETE FOOTING DETAIL
NOT TO SCALE



NOTES:
1. GATE POST SHALL BE MINIMUM 4-INCH DIAMETER. LARGER POST DIAMETER SHALL BE PROVIDED IN ACCORDANCE WITH ASTM F900.

ACCESS ROAD VEHICLE GATE DETAIL
NOT TO SCALE

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Property of Iberdrola, USA

TYPICAL SECURITY FENCE DETAILS

STATION 616 ______, MAINE

DR. TRC	DES. TRC	CK. TRC	APP. -
SCALE: AS NOTED		APPROVAL DATE: 07/15/11	

FILE: CMP - Fence Details 2011.dwg

REV. NO.	DATE	BY	DESCRIPTION	APP.	SUBSTATION ENGINEERING	TM 2.71.13	REV. A

VENDOR DRAWING #: D-1854867.DWG
VENDOR NAME: TRC SOLUTIONS, (207) 621-7000
CADD Drawing, DO NOT REVISE MANUALLY.

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

Deficiency No. 8

The documents do not comply with the requirements of 16 NYCRR §86.8(b) that the applicant's statement justifying its request that the Commission refuse to apply specified substantive local legal provisions fails to show that the request cannot be obviated by design changes to the proposed facility, that the request is the minimum necessary, and that the adverse impacts of granting the request are mitigated to the maximum extent practicable.

Response

See the revised Exhibit 7 – Local Ordinances, attached to this filing as Attachment 8, which replaces the entire Exhibit 7 previously filed as part of the Article VII application.

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Attachment 8

New York State Electric & Gas Corporation

Columbia County Transmission Project

Exhibit 7

Local Ordinances

TABLE OF CONTENTS

* * * * *

LIST OF TABLES

Page No.

* * * * *

LIST OF FIGURES

* * * * *

EXHIBIT 7: LOCAL ORDINANCES

7.1 Introduction

The Columbia County Transmission Project ("Project") is proposed to be sited in the following jurisdictions: County of Columbia, Town of Chatham, Town of Ghent, and Town of Stockport (each a "Locality").

This exhibit identifies, for each Locality, every substantive local legal provision (ordinance, law, regulation, standard, and requirement) potentially applicable to the proposed Project. Applicant requests that the New York State Public Service Commission ("Commission") refuse to apply to the Project those local legal provisions which are unreasonably restrictive in view of the existing technology, factors of cost or economics, or the needs of consumers as they apply to the Project. Except for those provisions the Applicant specifically requests that the Commission not apply, the Applicant will comply with, and the location of the Project as proposed conforms to, all substantive local legal provisions that are applicable to the Project.

Because of the preemptive effect of Public Service Law ("PSL") Section 130, no state agency, municipality, or any agency thereof may require any approval, consent, permit, certificate, or other condition for the construction or operation of the Project other than those provided by otherwise applicable state law for the protection of employees engaged in the construction and operation of the Project.

7.1.1 Compliance Summary Table

The Compliance Summary Table set forth below lists every substantive local legal provision potentially applicable to the Project. It specifies every such local legal provision that the Applicant requests that the Commission not apply, in whole or in part. Tables 7-2 through 7-4 at the end of this exhibit provide summaries of all waiver requests including justification and statutory basis for each request.

Table 7-1: Compliance Summary

	Local Ordinances	Compliance Summary
County of Columbia	Section 136 - Highway Law	Will Comply
	Local Law No. 2 - Littering	Will Comply
	Local Law No. 3 - Solid Waste	Will Comply
Town of Chatham	Chapter 83 - Dumping and Littering	Will Comply
	Chapter 108 - Vehicles and Traffic	Will Comply
	Chapter 180 - Zoning	
	District Regulations	Requests Partial PSC Refusal to Apply
	Public Utility Uses, Siting, and Structures	Requests Partial PSC Refusal to Apply
	Height Requirements	Requests Partial PSC Refusal to Apply
	Signs	Will Comply
	Noise	Will Comply
	Temporary Structures	Will Comply
	Grading Permits	Will Comply
Town of Ghent	Chapter 99 - Flood Damage Prevention	Will Comply
	Chapter 144 - Solid Waste	Will Comply
	Chapter 156 - Subdivision of Land	Requests Partial PSC Refusal to Apply
	Chapter 175 - Vehicles and Traffic	Will Comply
	Chapter 181 - Vehicles, Off-Road	Will Comply
	Chapter 190 - Zoning	
	District Regulations	Requests Partial PSC Refusal to Apply
	CI-3 District Regulations	Requests Partial PSC Refusal to Apply
	General Standards	Requests Partial PSC Refusal to Apply
	Height Requirements	Will Comply

	Local Ordinances	Compliance Summary
	Fences	Requests Partial PSC Refusal to Apply
	Signs	Will Comply
Town of Stockport	Chapter 99 - Solid Waste	Will Comply
	Chapter 120 - Land Use Law	
	District Regulations	Requests Partial PSC Refusal to Apply
	Height Exceptions	Will Comply
	Supplementary Regulations	Will Comply
	Signs	Will Comply
	Excavation	Will Comply
	Development near Streams, Wetlands, and Other Watercourses	Will Comply
	Screening	Requests Partial PSC Refusal to Apply

7.2 County of Columbia

All Project facilities, including Circuit #726, the extension of the National Grid Trunk #15 115-kV transmission line, and the new Ghent Switching Station are located within Columbia County. Existing facilities affected by the proposed Project, including Klinekill Substation and a portion of the right-of-way for Circuit #984, are also located within Columbia County.

7.2.1 Section 136 – Highway Law

Section 136 prohibits construction or improvement within a Columbia County road right-of-way of an entrance or connection to such road; construction of any works, structure, or obstruction in the County road right-of-way; or any overhead or underground crossings of the County road right-of-way without a work permit issued by the County Highway Superintendent.

The proposed Project will require overhead crossings of County Route 21 and County Route 22. The need for a work permit for the Project is preempted by PSL Section 130. Therefore, the

Applicant will not seek a work permit from Columbia County for the overhead crossings of County Routes 21 and 22.

7.2.2 Local Law No. 2 – Littering

Local Law No. 2 regulates littering in Columbia County. No person shall throw, dump, deposit, or place any solid waste, hazardous waste, infectious waste, or any nauseous or offensive matter in or upon any land in Columbia County except within a disposal facility or upon other land with the express consent of the owner.

7.2.3 Local Law No. 3 – Solid Waste

Local Law No. 3 regulates the disposition of solid waste at landfills, solid waste convenience stations, and solid waste transfer stations and establishes requirements for vehicles used to transport or dispose of solid waste.

7.3 Town of Chatham

Project activities in the Town of Chatham would include overhead construction of a portion of Circuit #726, which parallels and shares 50 feet of right-of-way with the existing Circuit #984, and improvements to the existing Klinekill Substation.

7.3.1 Chapter 83 – Dumping and Littering

§83.3 provides specific prohibitions and restrictions regarding the storage and disposal of waste materials. Garbage, rubbish, and construction and demolition debris, awaiting collection or removal, must be stored in a manner that does not impair public health or safety.

7.3.2 Chapter 108 – Vehicles and Traffic

§108-4 through 108-11 provides specific limitations and restrictions regarding the movement of motor vehicles. §108-11 prohibits the movement of trucks over certain weights from traveling on specific streets or parts of streets except for the pickup and delivery of materials on such streets. Any vehicle with a gross weight exceeding five tons is excluded from traveling on the entire length of Elliot Road. §108-12 through 108-16 provides specific limitations and restrictions regarding the parking, standing, and stopping of motor vehicles.

7.3.3 Chapter 180 – Zoning

7.3.3.1 Zoning Map and Districts

Figure 7-1, located at the end of Exhibit 7, is the Town of Chatham Zoning Map. The proposed Circuit #726 right-of-way is located in the Rural Land 2 (RL-2) and Business (B) districts. The existing Klinekill Substation is located in the B district.

7.3.3.2 District Regulations

Pursuant to §180-13, the minimum dimensional requirements of the RL-2 district include a lot area of five acres, lot width of 300 feet, and front, side, and rear yards of 50 feet each.

Pursuant to §180-15, the minimum dimensional requirements of the B district include a lot area of two acres, lot width of 200 feet, front yard of 25 feet, and rear yard of 50 feet. The Town of Chatham Planning Board may require side yards of up to 25 feet.

The Applicant requests that the Commission refuse to apply the lot area, lot width and yard size requirements in the Town of Chatham zoning ordinance to the portion of the Project in the Town except for the proposed Project improvements at the existing Klinekill Substation (because the improvements will not change the dimensions of that lot). Circuit #726 in the Town of Chatham is proposed to be constructed overhead and parallel to an existing electric transmission line; the existing line and Circuit #726 will share a 100-foot right-of-way. The ROW is comprised of lots owned by the Applicant in a contiguous linear path. These Town dimensional requirements have no relevance as applied to the Applicant's contiguous linear right-of-way lots. The Applicant could in theory acquire more property and take other steps to maximize the number of lots that satisfy these criteria, but such actions would only incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town. Thus, this request cannot be obviated by design changes to the Project.

The adverse impacts of granting the request are mitigated to the maximum extent practicable, including sharing right-of-way with an existing line. The Project does not require the greater width of right-of-way that would result from conformity to these requirements. A right-of-way of the width proposed by Applicant mitigates to the maximum extent possible the impact of the Project. Widening the right-of-way beyond the proposed 100 feet would maximize the number of

lots that satisfy these criteria; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Chatham.

7.3.3.3 Public Utility Uses, Siting, and Structures

Pursuant to §180-22, a "public utility use or structure" is allowed by special permit in both the RL-2 district and the B district. The need for a public utility special permit for the Project is preempted by PSL Section 130; therefore, the Applicant will not seek a special use permit from the Zoning Board of Appeals for the portion of the proposed Project in the Town of Chatham.

Section 180-22 also includes substantive provisions. The structures must be sited to have the least possible visual impacts on other lands within the Town of Chatham. Each aboveground utility structure must comply with zoning setback regulations and must be set back a distance at least equal to its height (Subsection E); no structure should be artificially lighted unless required by any state or federal agency having jurisdiction over the site. Structures must be constructed of such materials and painted in such colors to minimize visual impacts (Subsection F); existing on-site vegetation must be preserved to the maximum extent possible (Subsection G); in the event that the use of a utility structure is discontinued, the structure must be completely removed, and the property must be restored to its original condition (Subsection H).

The Applicant requests that the Commission refuse to apply the setback requirement of Subsection E summarized above as they apply to Circuit #726. This request cannot be obviated by Project design changes that alter structure locations along Circuit #726 because that would result in the individual structure locations being determined not by technical considerations of optimal structure separation like span lengths and conductor heights, but by a factor unrelated to those considerations: the distance by which structures are setback from the lot lines parallel to the path of the right-of-way. With structure heights proposed at and above 70 feet, compliance with this requirement would require a minimum ROW width of over 140 feet just for Circuit #726, and considerably wider in those locations where the Project would share the ROW with an existing transmission line. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy the setback requirements with respect to lot lines parallel to the path of the right-of-way; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of

Chatham. A right-of-way of the width proposed by the Applicant mitigates to the maximum extent possible the impact of the Project.

7.3.3.4 Height Requirements

§180-26 sets forth the height regulations for structures in all zoning districts. All structures must not exceed a height of 35 feet above average ground level unless approved by the Board of Appeals.

PSL Section 130 prohibits the Town of Chatham from requiring approval of the Board of Appeals for the Project's structures. The Applicant requests that the Commission refuse to apply this height limitation to the Project's structures. This request cannot be obviated by design changes to the Project. The Applicant has determined the optimal height for each structure of the Project based on NESC criteria and prudent engineering considerations, and in every case the height exceeds 35 feet. Based on those factors, the optimal height was determined to be at least approximately 70 feet for the Circuit #726 structures and, therefore, it is technologically impossible to change the Project design to comply with the Town's height restriction. By keeping the height of the Project structures to a minimum after taking into account the NESC criteria and prudent engineering considerations, the Applicant has mitigated to the maximum extent possible the impact of granting this request.

7.3.3.5 Signs

§180-32 sets forth the zoning ordinance regulations for signs. A temporary construction sign, not exceeding 24 square feet, is permitted on a property being developed. Such sign must be removed when development on the property is complete. Additionally, a business sign is permitted in connection with any legal industry if used for identification purposes.

7.3.3.6 Noise

§180-34 establishes the maximum noise level at each property line at 90 decibels.

During construction of Circuit #726, motorized equipment will be used for vegetation clearing, excavation, and the erection of structures. These activities typically produce composite noise levels between 80 and 90 decibels at a distance of 50 feet from the source and between 50 and 60 decibels at a distance of 1,000 feet from the source. Construction activities associated with

equipment modifications to the existing Klinekill Substation are not expected to produce significant noise levels. The permanent noise sources associated with the Project will include the corona effect of Circuit #726 during atmospheric conditions, including rain, fog, and high humidity, and the minor source from routine inspection and maintenance of the transmission line and substation. The proposed improvements at the existing Klinekill Substation to accommodate Circuit #726 will not change the sound levels at this substation during operation. Project construction and operational activities are expected to remain in compliance with this local ordinance. More details are provided in Exhibit 4.

7.3.3.7 Temporary Structures

§180-39 requires that temporary structures used in conjunction with construction work be permitted only while construction activities are in progress. Permits for temporary structures are issued for a twelve month period.

The Applicant will comply with the substantive provisions of §180-39; however, the need for a temporary structure permit for the Project is preempted by PSL Section 130. Therefore, the Applicant will not seek a temporary structure permit from the Town of Chatham for the portion of the proposed Project in the Town of Chatham.

7.3.3.8 Grading Permits

§180-40 requires a grading permit to move topsoil, sand, earth, and/or gravel from one portion of a construction site to another during building construction, improvement to land, or landscaping where greater than one acre of land is disturbed. No excavation of soil, natural products, or rock should adversely affect natural drainage, structural stability, or the safety of adjoining buildings or lands. Additionally, excavations must not create objectionable dust or noise nor create any kind of noxious or injurious substance or cause a public hazard.

The need for a grading permit for the Project is preempted by PSL Section 130; therefore, the Applicant will not seek a grading permit from the Town of Chatham for the portion of the proposed Project in the Town of Chatham.

7.4 Town of Ghent

Project facilities in the Town of Ghent include an overhead portion of Circuit #726, the proposed Ghent Switching Station, and a portion of the National Grid Trunk #15 115-kV transmission line extension.

7.4.1 Chapter 99 – Flood Damage Prevention

This chapter is applicable to all areas of special flood hazard within the jurisdiction of the Town of Ghent. §99-11 requires a development permit prior to the start of construction or other development activities within a special flood hazard area. §99-12 allows the local administrator to issue a stop-work order for floodplain development found ongoing without an approved development permit or not in compliance with the requirements of Chapter 99. §99-13 requires the following general standards to be adhered to in a special flood hazard area: all new construction must be anchored to prevent flotation, collapse, or lateral movement of the structure (Subsection A); all construction materials and utility equipment must be resistant to flood damage, and construction activities must be completed using methods and practices that minimize flood damage (Subsection B); and the cumulative effects of proposed development combined with existing and anticipated development must not increase the water surface elevation of the base flood more than one foot at any point (Subsection E).

The floodplains associated with Kline Kill in the Town of Ghent are crossed by Circuit #726, and a special flood hazard area is located within the Project right-of-way as identified and defined on the flood insurance rate map for Columbia County prepared by FEMA. The Project will adhere to the substantive provisions of the Flood Damage Prevention ordinance, but will not seek a development permit according to PSL Section 130.

7.4.2 Chapter 144 – Solid Waste

This chapter adopts the County of Columbia recycling regulations as the controlling solid waste regulations in the Town of Ghent.

7.4.3 Chapter 156 – Subdivision of Land

Article IV of Chapter 156 regulates lot size and arrangement, access, drainage improvements, and the preservation of natural features as they relate to the subdivision of the land in the Town

of Ghent. Subdividers of land must seek approval for each proposed subdivision from the Town of Ghent Planning Board. According to §156-12, land to be subdivided must be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood, or other menace. Additionally, all required improvements must be constructed or installed in conformance with Town specifications.

The following requirements in regards to street layout are presented in §156.13: streets must be of sufficient width, suitably located, and constructed to conform with the Town of Ghent Comprehensive Plan and to accommodate the prospective traffic and afford access for firefighting, snow removal, and other road maintenance equipment (Subsection A); minor streets must be laid out so that their use by through traffic will be discouraged (Subsection C); minor or secondary street openings into collector or major arterial roads must be at least 500 feet apart (Subsection H); streets must join each other so that for a distance of at least 100 feet the street is approximately at right angles to the street it joins (Subsection J).

§156.14 addresses the following street design requirements: minor roads must have a minimum right-of-way width of 50 feet and a minimum pavement width of 22 feet (Subsection A); grades of all streets must conform in general to the terrain and must not be more than three percent within 50 feet of any intersection (Subsection E); all changes in grade must be connected by vertical curves of such length and radius so that clear visibility is provided for a safe distance (Subsection F); all street right-of-way lines at intersections must be rounded by curves of at least 20 feet radius (Subsection G); steep grades and curves must be avoided (Subsection H).

§156-17 requires drainage improvements relating to the subdivision of land. The subdivider may be required by the Planning Board to carry away by pipe or open ditch any spring or surface water that may exist either previous to, or as a result of the subdivision. Drainage facilities must be located in the street right-of-way where feasible or in perpetual unobstructed easements of appropriate width (Subsection A). Any culvert or other drainage facility must be large enough to accommodate potential runoff from the entire upstream drainage area. The Town Engineer must approve the design and size of the facility based on anticipated runoff from a ten-year storm (Subsection B).

§156-18 states that a tree with a diameter of eight inches or more as measured three feet above the base of the trunk must not be removed without prior approval by the Planning Board.

The need for prior Planning Board approval to remove such trees is preempted by PSL Section 130; therefore, the Applicant will not seek such approval from the Planning Board for the portion of the proposed Project in the Town of Ghent. The Applicant will manage its ROW in accordance with the Commission-approved transmission ROW management program applicable to the ROW from time-to-time ("ROW Management Program"). The Applicant's latest ROW Maintenance Program is set forth in document FOR-2012, dated September 30, 2011 and filed in Case 10-E-0155 on April 5, 2012. The vegetation clearing measures that the Applicant will implement at the commencement of the proposed Project are identified and detailed in Section 4.1.2.1 and 4.5.1.1 of Exhibit 4. These procedures and practices are consistent with state law and have been developed with Commission oversight.

Chapter 156 does not regulate easements and, therefore, is not applicable to Circuit #726 and the National Grid Trunk #15 115-kV transmission line extension. The proposed site for the Ghent Switching Station will require the subdivision of a parcel of land. The proposed site is landlocked and will require a private access road from State Highway 9H. It will be somewhat screened from local traffic by existing vegetation along State Highway 9H. The Applicant will not seek approval from the Planning Board, since the requirement that such approval be obtained is barred by PSL Section 130.

The Applicant requests that the Commission refuse to apply the right-of-way width requirement set forth in Chapter 156 for the private access road to the Ghent Switching Station. The Applicant does not require the greater width of access road that would conform to this requirement, and use of the access road will be very limited following construction activities. The Applicant could widen its access road design to meet this requirement; however such action would only incur unnecessary cost to the Applicant, burden neighboring property owners, and be of no benefit to the Town of Ghent. The granting of Applicant's request will mitigate to the maximum extent possible the impact of the road that Applicant must build.

7.4.4 Chapter 175 – Vehicles and Traffic

§175-3 prohibits vehicles in excess of five tons from traveling on any Town of Ghent highway that is excluded from the truck route system. The truck route system includes Soller Heights Road from its intersection with NY State Route 66 to its intersection with Arch Bridge Road; Link Road; Letter S Road; Tallerico Road from County Route 30 as far as Tallerico/Spook Rock

Road; Tallerico/Spook Rock Road from County Route 30 south as far as Link Road; and Stockport Road from the Town of Stockport line to NY State Route 9H. §175-6 prohibits motor vehicles from parking within the legal right-of-way of a Town of Ghent highway from November 1 through April 15.

The Project is exempt from the restrictions addressed in Chapter 175 according to Subsection A of §175-4 under Article 1, which states that the Article "shall not be construed to prevent the delivery or pickup of merchandise or other property along the Town highways excluded from the truck route system".

7.4.5 Chapter 181 – Vehicles, Off-Road

§181-3 prohibits the operation of any off-highway vehicles (i.e., two- and four-wheel all-terrain vehicles) on private property within the Town of Ghent without written permission from the property owner or occupant.

Easement agreements with landowners in the Town of Ghent will grant NYSEG personnel permission to use off-highway vehicles during periodic right-of-way inspections and maintenance of Circuit #726 and the National Grid Trunk #15 115-kV transmission line extension.

7.4.6 Chapter 190 – Zoning

7.4.6.1 Zoning Map and Districts

Figure 7-2, located at the end of Exhibit 7, is the Town of Ghent Zoning Map. The proposed Circuit #726 and National Grid Trunk #15 115-kV transmission line extension rights-of-way are located in the following districts: Residential Agricultural (RA-1), Commercial Industrial (CI-3), and Flood Area Overzone (FAO). The proposed Ghent Switching Station is located in the CI-3 District. The requirements of the FAO district were discussed above in Section 7.4.1 (Chapter 99 – Flood Damage Prevention).

7.4.6.2 District Regulations

§190 Attachment 1 references public utility structures or rights-of-way as a permitted use in the RA-2 zoning district with a special permit. For the RA-2 district, §190 Attachment 2 requires (i) a two-acre minimum lot area, (ii) a five-acre minimum density per lot, (iii) a ten percent

maximum total lot area occupied by main and accessory buildings, (iv) a 200-foot minimum lot width, (v) a 35-foot maximum height, (vi) a 75-foot minimum front yard setback, (vii) a 40-foot minimum side yard setback for one side, (viii) an 80-foot total minimum setback for both side yards on an interior lot, (ix) a 50-foot minimum setback for a side yard abutting a side street on a corner lot, (x) a 40-foot minimum rear yard setback, and (xi) a 60-foot frontage.

§190 Attachment 3 references public utility structures or rights-of-way as a permitted use in the CI-3 zoning district with a special permit. For the CI-3 district, §190 Attachment 4 requires (i) a 40,000-square-foot minimum lot area, (ii) a fifty percent maximum total lot area occupied by main and accessory buildings, (iii) a 100-foot minimum lot width, (iv) a 35-foot maximum height, (v) a 50-foot minimum front yard setback, (vi) a 15-foot minimum side yard setback for one side, (vii) a 30-foot total minimum setback for both side yards on an interior lot, (viii) a 15-foot minimum setback for a side yard abutting a side street on a corner lot, (ix) a 40-foot minimum rear yard setback, and (x) a 60-foot frontage.

The Applicant requests that the Commission refuse to apply the above lot area, density per lot, lot width, setback, frontage and height requirements in the Town of Ghent zoning ordinance because they are unduly restrictive in view of the existing technology and cost factors. Circuit #726 and the National Grid Trunk #15 115-kV transmission line extension in the Town of Ghent are proposed to be constructed overhead and both are proposed to feed into the proposed Ghent Switching Station. A portion of Circuit #726 in this Town is proposed to be constructed parallel to an existing electric transmission line; the existing line and Circuit #716 will share a 100-foot right-of-way. This ROW is comprised of lots owned by the Applicant in a contiguous linear path. These Town lot area, density per lot, lot width, setback and frontage requirements have no relevance as applied to the Applicant's contiguous linear right-of-way lots. The Applicant could in theory acquire more property and take other steps to maximize the number of lots that satisfy these criteria, but such actions would only incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town. Thus, this request cannot be obviated by design changes to the Project

The adverse impacts of granting the request are mitigated to the maximum extent practicable, including sharing right-of-way with an existing line. The Project does not require the greater width of right-of-way that would result from conformity to these requirements. A right-of-way of

the width proposed by Applicant mitigates to the maximum extent possible the impact of the Project. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy these criteria; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Ghent.

This request cannot be obviated by Project design changes that alter structure locations along Circuit #726 because that would result in the individual structure locations being determined not by technical considerations of optimal structure separation like span lengths and conductor heights, but by a factor unrelated to those considerations: the distance by which structures are setback from the lot lines parallel to the path of the right-of-way. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy the setback requirements with respect to lot lines parallel to the path of the right-of-way; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Ghent. A right-of-way of the width proposed by the Applicant mitigates to the maximum extent possible the impact of the Project.

The Applicant has determined the optimal height for each structure of the Project based on NESC criteria and prudent engineering considerations and in every case the height exceeds 35 feet. Based on those factors, the optimal height was determined to be at least approximately 70 feet for the Circuit #726 structures and therefore it is technologically impossible to change the Project design to comply with the Town's height restriction. By keeping the height of the Project structures to a minimum after taking into account the NESC criteria and prudent engineering considerations, the Applicant has mitigated to the maximum extent possible the impact of granting this request.

7.4.6.3 CI-3 District Requirements

§190-13 presents a number of restrictions and design standards within the CI-3 zoning district: adequate access must be provided to and from a public highway, and ordinary streets may be planned to provide for ingress and egress to parking areas or commercial/industrial facilities (Subsection A); no building or use, other than parking, is permitted within 50 feet from the boundary line of any residential district (Subsection C); each parcel must reserve 20 percent of the parcel area for open space uses, which do not include any coverage of land with structures, parking lots, or vehicular rights-of-way. A detailed landscape plan, showing the location, size,

and all proposed plant species, must be developed, and the required planting must be maintained by the property owner (Subsection D); a buffer strip at least 30 feet in width must be provided along any parcel abutting a residential district, and a strip of land at least 15 feet in width which is immediately adjacent to any street right-of-way abutting the district must be planted or sodded in grass (Subsection E); at a minimum, evergreen species of such type, height, spacing, and arrangement must be planted to screen the use from the adjoining area. A wall or fence of location, height, and design may be substituted for the required planting (Subsection F); all areas not occupied by structures, parking, or driveways must be landscaped attractively with lawn, trees, shrubs, or other plant material and must not obstruct sight distance and traffic flow. The owner must adhere to a planting schedule and a two growing season replacement agreement (Subsection G); public utility facilities not having business offices on the premises must provide one parking space for each employee, including but not less than two spaces for each facility (Subsection I); adequate light must be provided for all parking areas, and exterior spotlights must not be directed off the premises or cause unnecessary glare to any adjacent properties. Lights should have hoods and should be no more than 25 feet in height (Subsection K).

The Applicant will manage its ROW in accordance with the ROW Management Program. The vegetation clearing measures that the Applicant will implement at the commencement of the proposed Project are identified and detailed in Section 4.1.2.1 and 4.5.1.1 of Exhibit 4. These procedures and practices are consistent with state law and have been developed with Commission oversight.

The Applicant requests that the Commission refuse to apply the Town of Ghent requirements regarding vegetation screening and management because, as applied to the Ghent Switching Station and the transmission line structures, they are unduly restrictive in view of the existing technology, cost factors and needs of the Applicant's consumers. This request cannot be obviated by design changes to the Project. It is technologically impossible to landscape or fence the transmission line structures in a manner that would screen the structures from adjoining properties, which would require screening the vertical extent of the Project.

According to the Institute of Electrical and Electronics Engineers ("IEEE") Guide for Electric Power Substation Physical and Electronic Security, "any landscaping treatment around substations should be carefully designed so as not to create potential security problems."

Larger vegetative screening outside of the Ghent Switching Station could provide a means of access into the station if climbed. The needs of the Applicant's consumers are best met by enabling the Applicant to construct the Project and operate and maintain it safely and reliably pursuant to procedures that are based on state law, reliability standards, and Commission precedent. The Applicant will mitigate the impact of the Ghent Switching Station to the extent possible considering security requirements. This waiver request is the minimum necessary.

7.4.6.4 General Standards

§190-18 provides a number of general standards for special permit uses in the Town of Ghent: the proposed use must not have a significant adverse impact on adjacent properties (Subsection C); site entrances and exits must not create traffic congestion or a potentially unsafe condition and must be clearly visible from the street (Subsection F); all proposed driveways must be approved by the appropriate agency having jurisdiction (Subsection G); adequate off-street parking must be provided, and parking spaces and driveways must be designed to address all safety issues (Subsection H); adequate buffering and screening must be located between the proposed site and adjoining properties (Subsection I); adequate provision must be made for the collection and disposal of all drainage and stormwater runoff from the site (Subsection K); the site owner must secure all necessary permits from federal, state, and local authorities (Subsection N); the site owner must comply with all wetlands and flood zone regulations (Subsection O); and the proposed use must have adequate lighting that does not shine directly on or cause unnecessary glare to adjacent properties (Subsection P).

The Applicant requests that the Commission refuse to apply the buffering and screening requirements of Subsection I summarized above because they are unduly restrictive in view of the existing technology, cost factors and the needs of the Applicant's consumers. This request cannot be obviated by a change in the design of the facilities. According to the IEEE Guide for Electric Power Substation Physical and Electronic Security, "any landscaping treatment around substations should be carefully designed so as not to create potential security problems". Larger vegetative screening outside of the Ghent Switching Station could provide a means of access into the station if climbed. The needs of the consumers are best met by allowing the Applicant to construct, operate, and maintain the Ghent Switching Station safely and reliably.

The Applicant will provide lower screening with shrubs. This waiver request is the minimum necessary.

The Project will obtain a SPDES General Permit for Stormwater Discharges from Construction Activity to discharge stormwater and will develop a SWPPP for use during Project construction activities. The Applicant will not seek separate approval of the stormwater plan from the Town of Ghent. Additionally, the Project is not subject to the permit requirements of the Freshwater Wetland Acts (Article 24 of the ECL), but will comply with the substantive provisions of this chapter and Article 24 of the ECL.

7.4.6.5 Height Requirements

§190-28 sets forth the height regulations for structures in all zoning districts. No structure erected to a height in excess of the height limit for the district in which it is to be constructed shall have a lot coverage in excess of ten percent of the lot area.

7.4.6.6 Fences

§190-31 states that the height for any fence must not exceed six feet.

The Applicant requests that the Commission refuse to apply the local provision regarding the height of fences because it is unduly restrictive in view of the Commission's reliability criteria, safety considerations, and the needs of the Applicant's consumers. This request cannot be obviated by changes to the design of the Project, and is the minimum request necessary. According to Section 11 General Requirements of the 2012 NESC, fence heights must be at least seven feet tall, either seven feet of vertical fence or a combination of six feet of fence and "an extension utilizing three or more strands of barbed wire to achieve an overall height of seven feet". The proposed site for the Ghent Switching Station is somewhat isolated from local roads and public areas, and because this facility will be critical energy infrastructure, security requirements will dictate the position, type, and materials for the security fence. The needs of the Applicant's consumers are best met by enabling the Applicant to construct the Project and operate and maintain it safely and reliably pursuant to procedures that are based on state law, reliability standards, and Commission precedent. The needs of the consumers outweigh the impact on this municipality that would result from the Commission's refusal to apply this local requirement.

7.4.6.7 Signs

§190-42 requires construction signs to be set back from front property lines a minimum of ten feet.

7.5 Town of Stockport

Project facilities in the Town of Stockport include a portion of the National Grid Trunk #15 115-kV transmission line extension.

7.5.1 Chapter 99 – Solid Waste

§99-3 requires the disposal of rubbish, garbage, and construction debris in a landfill or refuse disposal area. §99-4 prohibits the removal or transport of any offensive or toxic materials within the Town of Stockport except in a manner or by such conveyance that will prevent the creation of a nuisance or the loss or discharge of such material in a public place. According to Article II of Chapter 99, the Columbia County recycling regulations are in effect and enforced within the Town of Stockport.

7.5.2 Chapter 120 – Land Use Law

The Land Use Law of the Town of Stockport regulates the location, construction, alteration, and use of buildings and structures as well as the development and use of land within the Town of Stockport.

7.5.2.1 Zoning Map and Districts

Figure 7-3, located at the end of Exhibit 7, provides the Town of Stockport Zoning Map. The proposed National Grid Trunk #15 115-kV transmission line extension is located in the Residential Agricultural (RA) District.

7.5.2.2 District Regulations

The §120 Schedule of Use Regulations references public utility stations and structures as a permitted use in the RA zoning district with a special permit. For the RA district, the §120 Schedule of Area and Bulk Regulations requires (i) a ten percent maximum structure coverage; (ii) a seventy percent minimum open space, (iii) a 35-foot maximum structure height, (iv) a 200-

foot minimum lot width, (v) a 50-foot minimum front yard setback, (vi) a 50-foot minimum side yard setback, and (vii) a 50-foot minimum rear yard setback.

The Applicant requests that the Commission refuse to apply the above width and setback requirements in the Town of Stockport zoning ordinance because they are unduly restrictive in view of the existing technology and cost factors. The portion of the National Grid Trunk #15 115-kV transmission line extension in the Town of Stockport will be constructed overhead. The individual structure locations along the extension will depend upon possible span lengths regardless of dimensional requirements, and the size and configuration of any necessary easements will be based on required clearance and reliability criteria rather than minimum lot size.

The Project does not require the greater width of right-of-way that would result from conformity to the minimum dimensional and area requirements. These requirements have no relevance as applied to the Applicant's contiguous linear right-of-way lots. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy the area and dimensional criteria; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Stockport. Granting this request would mitigate the impact of the Project.

7.5.2.3 Height Exceptions

According to §120-14, the height limitations set forth in the Schedule of Area and Bulk Regulations are not applicable to transmission towers or cables. These structures are restricted to a maximum height of 100 feet above average finished grade at its base.

7.5.2.4 Supplementary Regulations

The following standards in §120-22 are applicable to non-residential or non-agricultural uses in all zoning districts in the Town of Stockport: no person shall create a sound level in the RA district that exceeds 57 dBa between 6:00 am to 7:00 pm and 53 dBa between 7:00 pm and 6:00 am (Subsection A); no dust, dirt, smoke, odor, or noxious gases that would not normally be associated with residential or agricultural premises must be disseminated beyond the boundaries of the lot where such use is located (Subsection B); those activities which emit electrical disturbance may not adversely affect the operation of any equipment other than that of the

creator of the disturbance (Subsection E); all activities involving the storage of inflammable and explosive materials must be provided with adequate safety devices against the hazard of fire and explosion and with adequate fire-fighting and fire-suppression equipment and devices standard in the industry (Subsection F); and all open portions of any developed lot must have adequate grading and drainage and must be continuously maintained in a dust-free and erosion-resistant condition by suitable landscaping with trees, shrubs, grasses or other planted ground cover or by paving with asphalt, concrete, crushed rock or by other material (Subsection G).

These general performance standards will be adhered to during the use of the National Grid Trunk #15 115-kV transmission line extension.

7.5.2.5 Signs

§120-24B permits temporary construction signs with a maximum size of 32 square feet in surface area that identify the parties involved in the construction on the premises where the sign is located.

7.5.2.6 Excavation

§120-26 permits the excavation of sand, gravel, shale, topsoil, or similar material to move such material from one part of a premise to another part of the same premise, when such excavation or removal is clearly incidental and necessary for improving the property for a use permitted in the land use district in which the property is located. Provision must be made to restore an effective cover crop to any area of land from which topsoil has been removed or covered within the first growing season following the start of such operation.

7.5.2.7 Development near Streams, Wetlands, and Other Watercourses

According to §120-27, all development proposed within 100 feet of the normal stream bank of any NYSDEC classified stream within the Town of Stockport or within 100 feet of the boundary of a freshwater wetland, as mapped by NYSDEC, is subject to special permit review.

No NYSDEC-classified streams or mapped freshwater wetlands are located in the Project right-of-way in the Town of Stockport.

7.5.2.8 Screening

§120-35 requires that any enclosed or unenclosed light industrial use permitted by the Land Use Law in the Town of Stockport be provided with a fence, screen, and/or landscaping sufficient to obscure objectionable aspects of such use from view from adjoining properties in residential land use districts and/or public rights-of-way. Adequate plans for the installation of required fences, screens, and landscaping must be reviewed by the Town Planning Board. The Applicant will manage its ROW in accordance with the ROW Management Program. The Vegetation clearing measures that the Applicant will implement at the commencement of the proposed Project are identified and detailed in Section 4.1.2.1 and 4.5.1.1 of Exhibit 4. These procedures and practices are consistent with state law and have been developed with Commission oversight.

The Applicant requests that the Commission refuse to apply Section 120-35 because it is unreasonably restrictive in view of the existing technology, cost factors and the needs of the Applicant's consumers. This request cannot be mitigated by changes in the design of the Project, and it is the minimum necessary to allow reliable operation of the Project. It is technologically impossible to install a fence or vegetative screen sufficient to obscure the National Grid Trunk #15 115-kV transmission line extension from view from adjoining properties so as to fully comply with the requirement that the use be provided with a fence, screen and/or landscaping sufficient to obscure objectionable aspects of such use from adjoining landowners. This would require screening the entire vertical extent of the Project. In addition, this screen planting requirement is impractical and contrary to industry standards and practices which require sufficient clearance between electric transmission lines and any object that could impact the lines or conduct high-voltage to persons or property in the vicinity. The needs of the Applicant's consumers are best met by enabling the Applicant to construct the Project and operate and maintain it safely and reliably pursuant to procedures that are based on state law, reliability standards, and Commission precedent. The needs of the consumers outweigh the impact on this municipality that would result from the Commission's refusal to apply these local requirements.

7.6 References

Town of Chatham, New York. Town Code. 2011. http://www.ecode360.com/CH1668.

Town of Ghent, New York. Town Code. 2007. http://www.ecode360.com/GH1743.

Town of Stockport, New York. 2007. Code of the Town of Stockport.

* * * * *

Table 7-2: Town of Chatham Local Ordinance Waiver Requests

Chapter	Description	Statutory Basis	Justification for Waiver Request
Zoning			
Zoning: RL-2 District		Existing technology and factors of cost and economics	The Applicant requests that the Commission refuse to apply the lot area, lot width and yard size requirements in the Town of Chatham zoning ordinance to the portion of the Project in the Town except for the proposed Project improvements at the existing Klinekill Substation (because the improvements will not change the dimensions of that lot). Circuit #726 in the Town of Chatham is proposed to be constructed overhead and parallel to an existing electric transmission line; the existing line and Circuit #726 will share a 100-foot right-of-way. The ROW is comprised of lots owned by the Applicant in a contiguous linear path. These Town dimensional requirements have no relevance as applied to the Applicant's contiguous linear right-of-way lots. The Applicant could in theory acquire more property and take other steps to maximize the number of lots that satisfy these criteria, but such actions would only incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town. Thus, this request cannot be obviated by design changes to the Project. The adverse impacts of granting the request are mitigated to the maximum extent practicable, including sharing right-of-way with an existing line. The Project does not require the greater width of right-of-way that would result from conformity to these requirements. A right-of-way of the width proposed by Applicant mitigates to the maximum extent possible the impact of the Project. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy these criteria; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Chatham.
§180-13	Pursuant to §180-13, the minimum dimensional requirements of the RL-2 district include a lot area of five acres, lot width of 300 feet, and front, side, and rear yards of 50 feet each.		
Zoning: B District			
§180-15	Pursuant to § 180-15, the minimum dimensional requirements of the B district include a lot area of two acres, lot width of 200 feet, front yard of 25 feet, and rear yard of 50 feet. The Town of Chatham Planning Board may require side yards of up to 25 feet.		

Chapter	Description	Statutory Basis	Justification for Waiver Request
Public Utility Uses, Siting, and Structures			
§180-22E	*Requires that each aboveground utility structure comply with zoning setback regulations and be setback a distance at least equal to its height.*	*Existing technology and factors of cost and economics*	*The Applicant requests that the Commission refuse to apply the setback requirement of Subsection E as they apply to Circuit #726. This request cannot be obviated by Project design changes that alter structure locations along Circuit #726 because that would result in the individual structure locations being determined not by technical considerations of optimal structure separation like span lengths and conductor heights, but by a factor unrelated to those considerations: the distance by which structures are setback from the lot lines parallel to the path of the right-of-way. With structure heights proposed at and above 70 feet, compliance with this requirement would require a minimum ROW width of over 140 feet just for Circuit #726, and considerably wider in those locations where the Project would share the ROW with an existing transmission line. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy the setback requirements with respect to lot lines parallel to the path of the right-of-way; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Chatham. A right-of-way of the width proposed by the Applicant mitigates to the maximum extent possible the impact of the Project..*

Chapter	Description	Statutory Basis	Justification for Waiver Request
Height Requirements			
§ 180-26	§180-26 sets forth the height regulations for structures in all zoning districts. All structures must not exceed a height of 35 feet above average ground level unless approved by the Board of Appeals.	Existing technology	PSL Section 130 prohibits the Town of Chatham from requiring approvals of the Board of Appeals for the Project's structures. The Applicant requests that the Commission refuse to apply this height limitation to the Project's structures. This request cannot be obviated by design changes to the Project. The Applicant has determined the optimal height for each structure of the Project based on NESC criteria and prudent engineering considerations, and in every case the height exceeds 35 feet. Based on those factors, the optimal height was determined to be at least approximately 70 feet for the Circuit #726 structures and therefore it is technologically impossible to change the Project design to comply with the Town's height restriction. By keeping the height of the Project structures to a minimum after taking into account the NESC criteria and prudent engineering considerations, the Applicant has mitigated to the maximum extent possible the impact of granting this request.

Table 7-3: Town of Ghent Local Ordinance Waiver Requests

Chapter	Description	Statutory Basis	Justification for Waiver Request
Subdivision of Land			
§156	Regulates lot size and arrangement, access, drainage improvements, and the preservation of natural features as they relate to the subdivision of land.	Needs of consumers and factors of cost and economics.	Chapter 156 does not regulate easements and, therefore, is not applicable to Circuit #726 and the National Grid Trunk #15 115-kV transmission line extension. The Applicant requests that the Commission refuse to apply the minimum right-of-way width requirement set forth in Chapter 156 for the private access road to the Ghent Switching Station. The Applicant does not require the greater width of access road that would conform to this requirement, and use of the access road will be very limited following construction activities. The Applicant could widen its access road design to meet this requirement; however such action would only incur unnecessary cost to the Applicant, burden neighboring property owners, and be of no benefit to the Town of Ghent. The granting of Applicant's request will mitigate to the maximum extent possible the impact of the road that Applicant must build.
Zoning			
Zoning: RA-2 District		Existing technology and factors of cost and economics	The Applicant requests that the Commission refuse to apply the above lot area, density per lot, lot width, setback, frontage and height requirements detailed in the Town of Ghent zoning ordinance because they are potentially unduly restrictive in view of the existing technology and cost factors. Circuit #726 and the National Grid Trunk #15 115-kV transmission line extension in the Town of Ghent will be constructed overhead and will both feed into the proposed Ghent Switching Station. A portion of Circuit #726 will parallel an existing electric transmission right-of-way; 50 feet of the 100-foot Circuit #726 right-of-way will be shared with the
§190 Attach. 1	Governs uses in the RA-2 district. Public utility structures and rights-of-way are permitted uses in the RA-2 district with a special permit. The district requires a two-acre minimum lot area, a five-acre minimum density per lot, a ten percent maximum total area occupied by main and accessory buildings, a 200-foot minimum lot width, a 35-foot maximum height, a 75-foot minimum front yard setback, a 40-foot		

Chapter	Description	Statutory Basis	Justification for Waiver Request
	minimum side yard setback for one side, an 80-foot total minimum setback for both side yards on an interior lot, a 50-foot minimum setback for a side yard abutting a side street on a corner lot, a 40-foot minimum rear yard setback, and a 60-foot frontage.		existing utility right-of-way. The individual structure locations along Circuit #726 and the National Grid Trunk #15 115-kV transmission line extension will depend upon possible span lengths regardless of dimensional requirements, and the size and configuration of any necessary easements will be based on required clearance and reliability criteria rather than minimum lot size. This request cannot be obviated by design changes to the proposed facility. The Project does not require the greater width of right-of-way that would be needed to conform to the minimum area and dimensional requirements. These requirements have no relevance as applied to the Applicant's contiguous linear right-of-way lots. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy these criteria; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Ghent. By sharing right-of-way with an existing line, Applicant mitigates to the extent possible the impact of this request. The Applicant has determined, based on NESC criteria and prudent engineering considerations, that the optimal height is 70 feet for Circuit #726 and the National Grid Trunk #15 115-kV transmission line structures. It is not technologically feasible to comply with the Town's height restrictions.
Zoning: CI-3 District			
§190 Attach. 3	Governs uses in the CI-3 district. Public utility structures and rights-of-way are permitted uses in the CI-3 district with a special permit. The CI-3 district requires a 40,000-square-foot minimum lot area, a fifty percent maximum total lot area occupied by main and accessory buildings, a 100-foot minimum lot width, a 35-foot maximum height, a 50-foot minimum front yard setback, a 15-foot minimum side yard setback for one side, a 30-foot total minimum setback for both side yards on an interior lot, a 15-foot minimum setback for a side yard abutting a side street on a corner lot, a 40-foot minimum rear yard setback, and a 60-foot frontage.		

Chapter	Description	Statutory Basis	Justification for Waiver Request
CI-3 District Regulations			
§190-13D	Requires the development of a detailed landscape plan, showing the location, size, and all proposed plant species. The required planting must be maintained by the property owner.	Existing technology, factors of cost and economics, and consumer needs	The Applicant requests that the Commission refuse to apply the Town of Ghent requirements regarding vegetation screening and management because as applied to the Ghent Switching Station and the transmission line structures, they are unduly restrictive in view of the existing technology, cost factors and the needs of the Applicant's consumers. This request cannot be obviated by design changes to the proposed Project. It is technologically impossible to landscape or fence the transmission line structures in a manner that would screen the structures from adjoining properties, which would require screening the vertical extent of the Project. The Applicant requests that the Commission refuse to apply the buffering and screening requirements of Subsection I because they are unduly restrictive in view of the existing technology, cost factors and the needs of the Applicant's consumers. This request cannot be obviated by a change in the design of the facilities. According to the IEEE Guide for Electric Power Substation Physical and Electronic Security, "any landscaping treatment around substations should be carefully designed so as not to create potential security problems". Larger vegetative screening outside of the Ghent Switching Station could provide a means of access into the station if climbed. The needs of the Applicant's consumers are best met by allowing the Applicant to construct, operate, and maintain the Ghent Switching Station safely and reliably. The Applicant will provide lower screening with shrubs. This waiver is the minimum necessary.
§190-13F	Requires evergreen species of such type, height, spacing, and arrangement to be planted to screen the use from the adjoining area. A wall or fence of location, height, and design may be substituted for the required planting.		
§190-13G	Requires that all areas not occupied by structures, parking, or driveways be landscaped attractively with lawn, trees, shrubs, or other plant material and not obstruct sight distance and traffic flow. The owner must adhere to a planting schedule and a two growing season replacement agreement.		
General Standards			
§190-18I	Requires adequate buffering and screening between the proposed site and adjoining properties.	Consumer needs and factors of cost and economics.	

Chapter	Description	Statutory Basis	Justification for Waiver Request
Stormwater			
§190-18K	Requires provisions for the collection and disposal of all drainage and stormwater runoff from the site.		The Applicant requests that the Commission refuse to apply the Town of Ghent stormwater collection and disposal requirement. The Project will obtain a SPDES General Permit for Stormwater Discharges from Construction Activity to discharge stormwater and will develop a SWPPP for use during Project construction activities. The Applicant will not seek separate approval of the stormwater plan from the Town of Ghent.
Fences			
§190-31	Requires that the height for any fence not exceed six feet.	Existing technology and customer needs	The Applicant requests that the Commission refuse to apply the local provision regarding the height of fences because it is unduly restrictive in view of the Commission's reliability criteria, safety considerations, and the needs of the Applicant's consumers. This request cannot be obviated by changes to the design of the Project and is the minimum request necessary. According to Section 11 General Requirements in the 2012 NESC, fence heights must be at least seven feet tall, either seven feet of vertical fence or a combination of six feet of fence and "an extension utilizing three or more strands of barbed wire to achieve an overall height of seven feet". The proposed site for the Ghent Switching Station is somewhat isolated from local roads and public areas, and because this facility will be critical energy infrastructure, security requirements will dictate the position, type, and materials for the security fence. The needs of the Applicant's consumers are best met by enabling the Applicant to construct the Project and operate and maintain it safely and reliably pursuant to procedures that are based on state law, reliability standards, and Commission precedent. The needs of the consumers outweigh the impact on this municipality that would result from the Commission's refusal to apply this local requirement.

Table 7-4: Town of Stockport Local Ordinance Waiver Requests

Chapter	Description	Statutory Basis	Justification for Waiver Request
Use Law			
District Regulations			
§120	The § 120 Schedule of Use Regulations references public utility stations and structures as a permitted use in the RA zoning district with a special permit. For the RA district, the § 120 Schedule of Area and Bulk Regulations requires (i) a ten percent maximum structure coverage, (ii) a seventy percent minimum open space, (iii) a 35-foot maximum structure height, (iv) a 200-foot minimum lot width, (v) a 50-foot minimum front yard setback, (vi) a 50-foot minimum side yard setback, and (vii) a 50-foot minimum rear yard setback.	Existing technology and factors of cost and economics	The Applicant requests that the Commission refuse to apply the width and setback requirements in the Town of Stockport zoning ordinance because they are unduly restrictive in view of the existing technology and cost factors. The portion of the National Grid Trunk #15 115-kV transmission line extension in the Town of Stockport will be constructed overhead. The individual structure locations along the extension will depend upon possible span lengths regardless of dimensional requirements, and the size and configuration of any necessary easements will be based on required clearance and reliability criteria rather than minimum lot size. The Project does not require the greater width of right-of-way that would result from conformity to the minimum dimensional and area requirements. These requirements have no relevance as applied to the Applicant's contiguous linear right-of-way lots. Widening the right-of-way beyond the proposed 100 feet would maximize the number of lots that satisfy the area and dimensional criteria; however, such action would incur unnecessary cost to the Applicant, impact neighboring property owners, and be of no benefit to the Town of Stockport. Granting this request would mitigate the impact of the Project.

Chapter	Description	Statutory Basis	Justification for Waiver Request
Screening			
§120-35	Requires that any enclosed or unenclosed light industrial use permitted by the Land Use Law in the Town of Stockport be provided with a fence, screen, and/or landscaping sufficient to obscure objectionable aspects of such use from view from adjoining properties in residential land use districts and/or public rights-of-way.	Existing technology and consumer needs	The Applicant requests that the Commission refuse to apply Section 120-35 because it is unreasonably restrictive in view of the existing technology, cost factors and the needs of the Applicant's consumers. This request cannot be mitigated by changes in the design of the Project, and it is the minimum necessary to allow reliable operation of the Project. It is technologically impossible to install a fence or vegetative screen sufficient to obscure the National Grid Trunk #15 115-kV transmission line extension from view from adjoining properties so as to fully comply with the requirement that the use be provided with a fence, screen and/or landscaping sufficient to obscure objectionable aspects of such use from adjoining landowners. This would require screening the entire vertical extent of the Project. In addition, this screen planting requirement is impractical and contrary to industry standards and practices which require sufficient clearance between electric transmission lines and any object that could impact the lines or conduct high-voltage to persons or property in the vicinity. The needs of the Applicant's consumers are best met by enabling the Applicant to construct the Project and operate and maintain it safely and reliably pursuant to procedures that are based on state law, reliability standards, and Commission precedent. The needs of the consumers outweigh the impact on this municipality that would result from the Commission's refusal to apply these local requirements.

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

Deficiency No. 9

The documents do not comply with the requirements of 16 NYCRR §88.1(f) that the applicant submit a detailed description of the proposed transmission line, including the design standards for each type of tower and tower foundation, in that the applicant does not address component facilities that tap into and extend National Grid Trunk line #15 to the proposed Ghent Switching Station, whereas a detailed explanation of who will own which facilities, including specific lines of demarcation, and details for any components that will be built to National Grid specifications, must be provided.

Response

The Company respectfully disagrees with the claim that 16 NYCRR § 88.1(f) mandates that project ownership information be detailed in Exhibit E-1. Notwithstanding the foregoing, in the interest of cooperation and in furthering the progress of this proceeding, the Company provides the following information.

In order to tap into the existing NGrid Trunk #15, the proposed lines must cross under the east NGrid circuit on the existing double circuit lattice tower line. The proposal is to use two 3-pole self-supporting steel structures on drilled shaft foundations in the configuration as shown on Figure 5-6 included in Attachment 9 hereto.

The line of demarcation will be the wire connecting the existing NGrid Trunk #15 lattice structures to the new dead end tap structures. NYSEG will own and construct all new structures associated with the extension of the NGrid Trunk #15 line. All structures will be built to NYSEG specifications and NYSEG will coordinate with NGrid on the final design.

Profile drawings showing the remaining design for the proposed lines are included in Exhibit 5 of the Article VII application.

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Attachment 9

Response to June 22, 2012 Deficiency Letter

Deficiency No. 10

The documents do not comply with the requirements of 16 NYCRR §88.2)a) that the applicant furnish a description of the equipment to be installed in any switching station, in that the height and materials of construction of the control house structure proposed to be sited within the Ghent Switching Station are not addressed.

Response

The Company respectfully disagrees with the position that 16 NYCRR §88.2(a) requires that Exhibit E-2 include a description of the height and materials of construction of the structure for the Ghent Switching Station control house. The cited regulation requires "a description of the equipment to be installed in any such station"; it lacks any listing of the types of details that description must include. The Applicant's Exhibit E-2 provides considerable descriptive information about the proposed Ghent Switchyard: its purpose and location, its internal electrical configuration, the site's footprint, and the approximate length and width of its control house. Nonetheless, the Company provided this information as part of its Response to Deficiency 7.

In specific, Drawing SK-006, included in the Response to Deficiency No. 7, depicts the width and height of a typical control house for the Ghent Switching Station. The control house will be a single-story steel framed prefabricated structure to be no taller than 16 feet 6 inches on a concrete foundation. The control house will house the protection, communication, and AC and DC system equipment.

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Deficiency No. 11

The documents do not comply with the requirements of 16 NYCRR §88.5 that the applicant submit a statement describing the anticipated effects of the proposed line and related facilities on television, radio and other communications systems, in that the applicant must provide information, including mapping of locations in relation to the proposed transmission facility for the seven registered communication towers within five miles of the proposed line and switching station (including FM radio, paging communications, cellular telephone and other towers).

Response

The Company respectfully disagrees with the assertion that 16 NYCRR § 88.5 requires that Exhibit E-5 provide "information, including mapping" of the registered communication towers within five miles of the proposed line and switching station. The cited regulation requires only that the applicant "submit a statement describing the anticipated effects of the proposed line and related facilities on television, radio and other communications systems." Notwithstanding the foregoing, the Company provides the following information.

The seven registered communication towers within five miles of the proposed line and switching station are depicted and labeled on Figures 2-1a and 2-1b and attached as Attachment 2. Table 1 below, taken from information in the Federal Communications Commission (FCC) database, provides the details of each tower.

Table 1 FCC Tower Index

Tower ID (Map Label)	Licensee/Entity	Call Sign	Tower Type
Tower 1	NYNEX Mobile Limited Partnership	KNKN786	Cellular
Tower 2	New Cingular Wireless PCS, LLC	KNKN512	Cellular
Tower 3	Berkshire Cable Corporation	KPE254	Paging
Tower 4	New Cingular Wireless PCS, LLC	KNKN512	Cellular
Tower 5	Northeast Gospel Broadcasting, Inc.	W272AZ	FM
Tower 6	Global Tower, LLC	N/A	Antennae Structure Registration
Tower 7	Spectrasite Communications, Inc. through American Tower, Inc.	N/A	Antennae Structure Registration

Effects on communication facilities are outlined in Exhibit E-5 of the Article VII application. Design drawings for the proposed structures and profile drawings are included in Exhibit 5 of the Article VII application. A detailed description of the transmission line design is included as Exhibit E-1 of the Article VII application.

Deficiency No. 12

In addition, the documents also do not comply with PSL §122 in that they do not comply with certain other Commission regulations establishing application requirements, given that NYSEG omitted the required information and requests waiver of the regulations. The waiver of Commission regulations constitutes a rule as defined in the State Administrative Procedure Act (SAPA) and the Commission will not be in a position to act on NYSEG's request until the notice and comment procedures specified in SAPA have been completed. The regulations for which waivers were requested are:

a. *16 NYCRR §86.3(a)(1)(i) regarding providing New York State Department of Transportation (NYSDOT) Topographic Edition Mapping showing the proposed right-of-way (with control points indicated), covering an area of at least five miles on either side of the proposed facility location;*

b. *16 NYCRR §86.3(a)(1)(ii) regarding mapping showing where the construction or reconstruction of the proposed facility would necessitate permanent clearing or other changes to the topography, vegetation or man-made structures;*

c. *16 NYCRR §86.3(a)(1)(iii) regarding maps showing the location of sensitive archeological sites;*

d. *16 NYCRR §86.3(a)(2) regarding providing New York State Department of Transportation 1:250,000 scale mapping;*

e. *16 NYCRR §86.3(b)(1)(iii) regarding submission of aerial photographs showing the location of access and maintenance routes;*

f. *16 NYCRR §86.4(b) regarding indication, on NYSDOT maps, of any alternative route considered; and*

g. *16 NYCRR §88.4(a)(4) regarding provision of appropriate system studies, showing expected flows on the line under normal, peak and emergency conditions.*

Response

On September 14, 2012, the Commission issued its Order on Waiver Requests in this proceeding. In accordance with the Order on Waiver Requests, NYSEG provides the following additional information:

16 NYCRR §86.3(a)(1),

The Commission granted NYSEG's request to waive 16 NYCRR §§86.3(a)(1), in view of the availability of effective substitutes as identified by Staff for the unavailable Department of Transportation maps and other information. The Order on Waiver Requests directs NYSEG to provide this information as indicated and in the formats requested by Department of Public Service Staff ("Staff").

In its July 23, 2012 comments on NYSEG's motion for waivers, Staff suggested that the Company consider using the USGS 2010 edition topographic quadrangles based on orthophotography rather than the traditional topographic quadrangles, which are dated 1980 for the project area coverage.

NYSEG has revised all maps included in the original application that used the traditional topographic quadrangles to use the 2010 edition topographic quadrangles. NYSEG also used the 2010 edition topographic quadrangles for all new maps created for other responses except for Figure 3-3a, Figure 3-3b, Figure 3-3c, Figure 3-3d, Figure 3-4, Figure 3-5, and Figure 5-7, which use the current aerial photography as the base map. All revised and new maps are attached to this filing. Specifically, the following maps are being replaced for this purpose:

- Figure 2-1 is replaced by Figure 2-1a and Figure 2-1b included as Attachment 2;
- Figure 4-2 is replaced by Figure 4-2 dated August 15, 2012 included in Attachment 12a;
- Figure 4-3 is replaced by Figure 4-3 dated August 15, 2012 included in Attachment 12a;
- Figure 4-4 is replaced by Figure 4-4 dated August 15, 2012 included in Attachment 12a; and
- Figure 4-5 is replaced by Figure 4-5 dated August 15, 2012 included in Attachment 12a.

New maps Figure 3-4 (Attachment B), Figure 4-6 (Attachment F), Figure 4-7 (Attachment F), Figure 4-8 (Attachment F), and Figure 4-9 (Attachment F) are based on the 2010 edition topographic quadrangles and added to this filing and included here as attachments.

16 NYCRR§86.4(b)

The Commission granted NYSEG's request for a waiver of the requirement to submit NYSDOT maps indicating any alternative routes considered, and allowed NYSEG to indicate the necessary information on aerial photographs.

DPS Staff supported the waiver request because the NYSDOT maps are no longer available and the 2011 aerial photographs on which NYSEG provided the required information effectively indicate the alternate routes considered for Circuit 726 and the alternative locations for the Ghent Switching Station.

In response to Deficiency No. 4, NYSEG is submitting with this filing four additional aerial photographs with the alternate routes for Circuit 726 and the alternative locations for the Ghent Switching Station labeled.

16 NYCRR §86.3 (b)(1)(iii)

The Commission granted in part and denied in part NYSEG's motion to waive 16 NYCRR §86.3 (b)(1)(iii). The Commission stated that NYSEG is not required to show the possible locations of access roads for the cross-country portions of the facility. However, the Commission required NYSEG to show the locations of existing access roads to or along those portions of the existing right-of-way shared with existing transmission facilities, both its own and those of National Grid and those designated in the Company's request for waivers of municipal road design standards related to the proposed Ghent Switching Station.

In response, NYSEG identified existing access points to the existing Circuit #984 ROW that will also serve as construction access points to the proposed ROW parallel to the existing Circuit #984 ROW. These access points include:

- Access to the existing Klinekill Substation off of State Route 203
- Access to the proposed Ghent Switching Station off of State Route 9H
- Access to the existing Circuit #984 ROW off of State Route 203 (West)
- Access to the existing Circuit #984 ROW off of Shufelt Road (North and South)

- Access to the existing Circuit #984 ROW off of County Route 22 (North and South)

NYSEG also identified a potential access route off of Cotswald Drive which NYSEG does not currently have access to but could serve as a potential access road for construction.

NYSEG also identified a potential access route to the existing NGrid Trunk #15 ROW off of Knitt Road. NYSEG engaged with NGrid personnel to identify existing access roads, however, the NGrid plan and profile drawings do not show any existing access roads in the vicinity of the proposed tap into the NGrid Trunk #15. NYSEG does not currently have access rights along this route but the route could serve as a potential access road for construction.

All identified access roads are shown on Figure 3-5 attached to this filing as Attachment 12b.

16 NYCRR §88.4(a)(4)

NYSEG's motion to waive the requirements of 16 NYCRR §88.4(a)(4) was granted conditionally. The Commission directed NYSEG to provide documentation of its correspondence and any other records of its consultation with the NYISO on the issue of a System Reliability Impact Study or a System Impact Study no later than November 1, 2012.

Correspondence with the New York Independent System Operator is attached to this filing as Attachment 12c.

Attachment 12a

Attachment 12b

Attachment 12c

Werth, Dusty

From: Manansala, Edgardo <ECManansala@nyseg.com>
Sent: Monday, December 20, 2010 1:23 PM
To: 'Bilgehan.Donmez@us.ngrid.com'
Cc: McKinney, Jeff; Hipius, Joseph J.
Subject: RE: Inquiry: Is an SIS (or SRIS) Necessary?

20 December 2010

Bilgehan,

Yes, our load-flow simulations indicated changes in the order of 1.5 MW (with calculated interface flows greater than 2330 MW) on the interface (CENTRAL EAST + FRASER – GILBOA).

NYSEG has decided on Option 2, i.e., to build a new substation near the National Grid Trunk #15 R-O-W. Route selection is projected within eight (8) weeks.

Thanks.
Edgardo

Edgardo Manansala
System Planning
NYSEG / RG&E
(607) 762-4206

From: Donmez, Bilgehan [mailto:Bilgehan.Donmez@us.ngrid.com]
Sent: Tuesday, December 14, 2010 4:25 PM
To: Manansala, Edgardo
Cc: McKinney, Jeff; Hipius, Joseph J.
Subject: RE: Inquiry: Is an SIS (or SRIS) Necessary?

Edgardo,

I talked to Joe. We don't think an SRIS is required for this project since the change in the interface flows is not significant (less than 10 MW) based on my simulations. Did you also run some simulations to look at the change in the interface flows?

Overall, how far along are you in this project? Have you picked one of the two options (Option 1: interconnect to Valkin, Option 2: build a new substation close to the #15 line ROW) we discussed in our last meeting?

Thanks,

Bilgehan

From: Donmez, Bilgehan
Sent: Friday, December 10, 2010 4:20 PM
To: 'Manansala, Edgardo'
Cc: McKinney, Jeff; Hipius, Joseph J.
Subject: RE: Inquiry: Is an SIS (or SRIS) Necessary?

Edgardo,

In my simulations, the maximum change in the interface flows due to the new 115 kV line to Klinekill is 2 MW for UPNY-SENY. So, I do not think a NYISO level study is required since this project will not impact the interface flows more than 10 MW.

To see the impact of this new line on the National Grid system, I ran two N-1 simulations using the Summer 2015 peak case. The first simulation was for the existing system. The second simulation was for the same case after adding the new line. The table below gives the top 10 changes in the flows due to the new line. Anything after the first 10 rows is not significant (change is below 0.4).

Facilities Loaded at or above 90% of LTE Rating				LTE %		Change
Overloaded Facility			Contingency	Existing	New 115 kV Line	
137545 TRINITY	115.00 137718 ALB3	115.00 2	GRNBSH77G	107.2	100.9	6.3
137502 GBSH+LGE	115.00 137718 ALB3	115.00 2	SB_GRB_R15	111.4	113.3	-1.9
137502 GBSH+LGE	115.00 137717 ALB2	115.00 1	ALB-GRNBSH 2	103.3	104	-0.7
137502 GBSH+LGE	115.00 137718 ALB3	115.00 2	ALB-GRNBSH 1	103.3	104	-0.7
137545 TRINITY	115.00 137718 ALB3	115.00 2	REYNLD99G	96.5	95.9	0.6
137545 TRINITY	115.00 137718 ALB3	115.00 2	SB_REYN_R16	97.6	97	0.6
137545 TRINITY	115.00 137718 ALB3	115.00 2	RYND-GRNBS 9	99.6	99.1	0.5
137545 TRINITY	115.00 137718 ALB3	115.00 2	SB_REYN_R2	96.4	95.9	0.5
125040 N.CAT. 1	115.00 137507 BOC 2T	115.00 2	HRLY 3-1 TB1	91.2	90.8	0.4
125040 N.CAT. 1	115.00 137507 BOC 2T	115.00 2	SB_HUR_30151	95.9	95.5	0.4

As you can see from the table, this project does not have any major impact on the National Grid system. However, before we jump to conclusion, let me check with my manager, Joe Hipius, to see if he wants me to run any more simulations.

I'll give you an update next week.

Thanks,

Bilgehan

Bilgehan Donmez | Transmission Planning

national**grid** | Reservoir Woods | W2.191
40 Sylvan Road, Waltham, MA 02451

Office: 781-907-2475
Bilgehan.Donmez@us.ngrid.com

From: Manansala, Edgardo [mailto:ECManansala@nyseg.com]
Sent: Thursday, December 09, 2010 3:24 PM
To: Donmez, Bilgehan
Cc: McKinney, Jeff
Subject: FW: Inquiry: Is an SIS (or SRIS) Necessary?

09 December 2010

Bilgehan,

As a follow-up to my voice mail, please find below an e-mail from the NYISO on conditions which determine when a project in the New York Control Area requires (or does not require) an SIS (or SRIS).

Could you possibly confirm that an SIS is not necessary for the 115kV transmission line project (from the National Grid Trunk #15 to the NYSEG KLINEKILL substation)?

Thanks.
Edgardo

Edgardo Manansala
System Planning
NYSEG / RG&E
(607) 762-4206

From: Groesbeck, Floyd [mailto:FGroesbeck@nyiso.com]
Sent: Tuesday, September 21, 2010 8:50 AM
To: Manansala, Edgardo
Subject: RE: Inquiry: Is an SIS (or SRIS) Necessary?

Edgardo:

From: **New York Independent System Operator System Reliability Impact Study Criteria and Procedures**

"An SRIS is not required for proposed transmission projects that are not expected to affect the Transfer Capability of any transmission interface, including the interfaces between New York and other Control Areas, by more than 10 MW. Such projects are subject to study or review by the TOs responsible for the projects."

More specific information would be required to determine if the above applies.

If you any additional questions please do not hesitate to contact me.

Regards,

Floyd Groesbeck
Supervisor, Interconnection Studies
Interconnection Projects

New York Independent System Operator
10 Krey Blvd., Rensselaer, NY 12144
(518) 356-6172
(518) 356-7524 (fax)
fgroesbeck@nyiso.com

From: Manansala, Edgardo [mailto:ECManansala@nyseg.com]
Sent: Thursday, September 09, 2010 10:40 AM
To: Groesbeck, Floyd
Cc: McKinney, Jeff; Annabathina, Bharath
Subject: Inquiry: Is an SIS (or SRIS) Necessary?

09 September 2010

Floyd,

May we ask if an SIS (or SRIS) is necessary for the following project description?

(1) There is no new load addition.

(2) There is no new generation addition.

(3) A new 115kV line will be tapping off an existing 115 kV line and going to an existing 115kV/34.5kV substation.

(4) The expected flow through the new line is approximately 40 MW under peak load conditions.

You reply would be most appreciated.

Thanks.
Edgardo

Edgardo Manansala
System Planning
NYSEG / RG&E
(607) 762-4206

Response to June 22, 2012 Appendix A Information Requests

Information Request A

Section 3.5.2 indicates that NYSEG and National Grid reviewed the existing National Grid Trunk #15 to determine the ideal location for a new switching station that would serve as the origination point for the new 115 kV transmission line, and identified the ideal location as to "where the existing line was nearest the Stockport/Ghent town line" (Application page 3-12): Provide the following: A list of criteria and supporting analysis used in the selection of the switching station – line origination point; all other alternative locations considered should be identified and mapped; any supporting analysis of those alternatives considered, but not included as "reasonable", should be provided. Additional information explaining the rationale and basis for rejection of the KlineKill – ValKin transmission line connection to National Grid should also be provided; include all work papers, decisional memoranda and correspondence between NYSEG and National Grid.

Response

NYSEG's original alternative, a new 115-kV transmission line connecting the existing NYSEG Klinekill Substation to the existing NGrid Valkin Substation, was reviewed by NGrid. Any connection point located south of the existing Valkin Substation along the existing Trunk #15 115-kV transmission line was preferable to NGrid due to the extensive transmission and substation work that would have been required at the Valkin Substation. This new connection point would serve as the origination point for NYSEG's new line. NYSEG, with input from the National Park Service, developed the following criteria for identifying and evaluating switching station alternative sites:

- Avoidance of mapped water bodies and wetlands
- Reasonable access from public roadways
- Generally flat terrain
- Compatibility of surrounding land use
- Close proximity to the NGrid Trunk #15 115-kV transmission line
- Outside viewshed of State Highway 9H
- Avoidance of National Park Service owned property

The two sites considered for the proposed Ghent Switching Station are presented in Exhibit 3. The proposed site is located in an area that is adjacent to existing industrial land use and the land is already zoned Commercial Industrial (CI-3). Due to the large number of constraints in the general locale and the apparent suitability of the two identified sites, NYSEG did not evaluate additional sites for the proposed Ghent Switching Station. Specifically, additional sites to the south were not identified due to

the proximity of the Columbia County Airport and associated airspace restrictions. Additional sites to the north were not identified due to the large wetland complex located north of the current industrial park and due to potential viewshed impacts to the National Historic Landmark (Martin Van Buren house) located just north of the study area. Sites identified either north or south of the two identified potential sites would experience difficulty routing lines into the potential site either as a result of the extensive wetlands (north) or the airspace restrictions (south).

Table 2 below illustrates the criteria for each of the two alternative switching station sites identified in the Article VII application.

Table 2 Potential Switching Station Site Criteria

Factor	Alternative Site 1	Alternative Site 2
Avoidance of mapped water bodies and wetlands	X	X
Reasonable access from public roadways	X	X
Generally flat terrain	X	X
Compatibility of surrounding land use	X	
Close proximity to the NGrid Trunk #15 115-kV transmission line	X	X
Outside viewshed of State Highway 9H	X	X
Avoidance of National Park Service owned property	X	X

Response to June 22, 2012 Appendix A Information Requests

See Attachment A for a document presented to NYSEG by NGrid on October 4, 2010 at a meeting in Syracuse. NGrid explained the 115 kV source configurations at Valkin and in Option 1, the extensive transmission and substation work that would be required for a connection at Valkin. NGrid also proposed in Option 2, the much simpler tapping of the #15 line and a new switching station concept. This meeting and NGrid's document were used as input for rejection of the Klinekill – Valkin transmission line connection to NGrid.

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Attachment A

Summary of Options for Klinekill Interconnection
Bilgehan Donmez
10/04/10

Option 1 – 115 kV Line Between Valkin and Klinekill (4-breaker Ring Bus)

There are two 115 kV taps into Valkin: #15 line tap and #14 line tap. Only one of the lines serves Valkin at a time. Under normal conditions, #14 tap is open. There is an automatic throwover scheme at Valkin that transfers Valkin substation from #15 line to #14 line when there is a fault at #15 line. In the new design of the Valkin substation, the connection to #14 line will be eliminated, and the tap to #14 line will be used to make #15 line loop in and out of Valkin substation as shown in Figure 1. Although the ring bus is shown to have four breakers, enough room is allocated for a future fifth breaker. Ring bus will provide three 115 kV sources into Valkin as opposed to two sources in the existing configuration. These sources are north and south section of #15 line, and Valkin-Klinekill line.

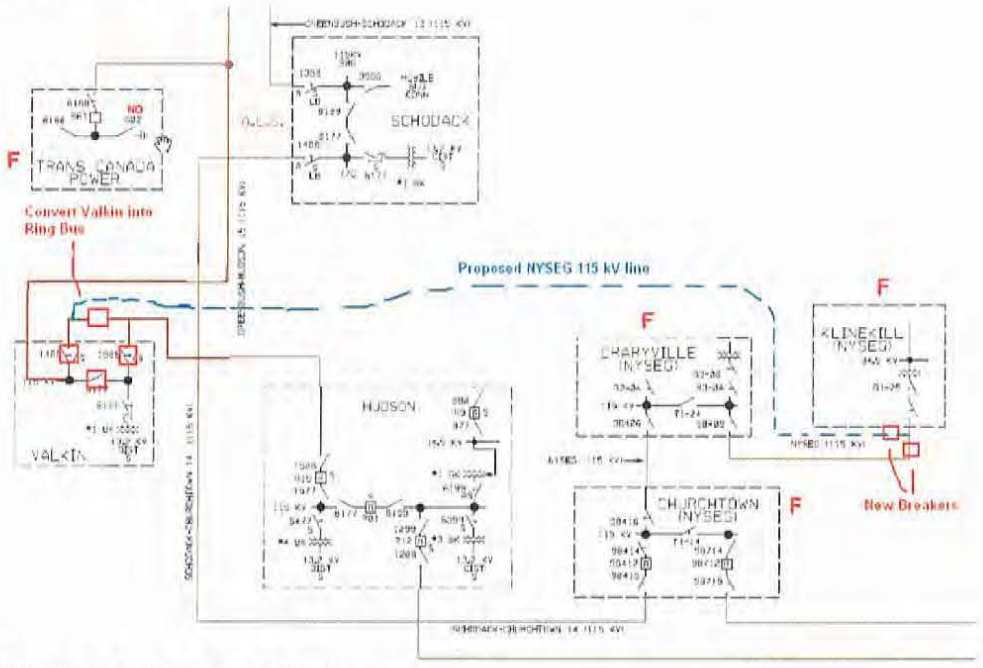

Figure 1. Ring Bus at Valkin

Option 2 – 115 kV Line Between Valkin and Klinekill (3-breaker Ring Bus), Recommended

Instead of modifying Valkin substation, the new 115 kV Valkin-Klinekill line will terminate at #15 line. This configuration will require three new breakers and a new station in the 115 kV ROW from Greenbush to Hudson as shown in Figure 2. From a reliability perspective, Options 1 and 2 are comparable since they both sectionalize #15 line. This option does not require any changes to the Valkin station.

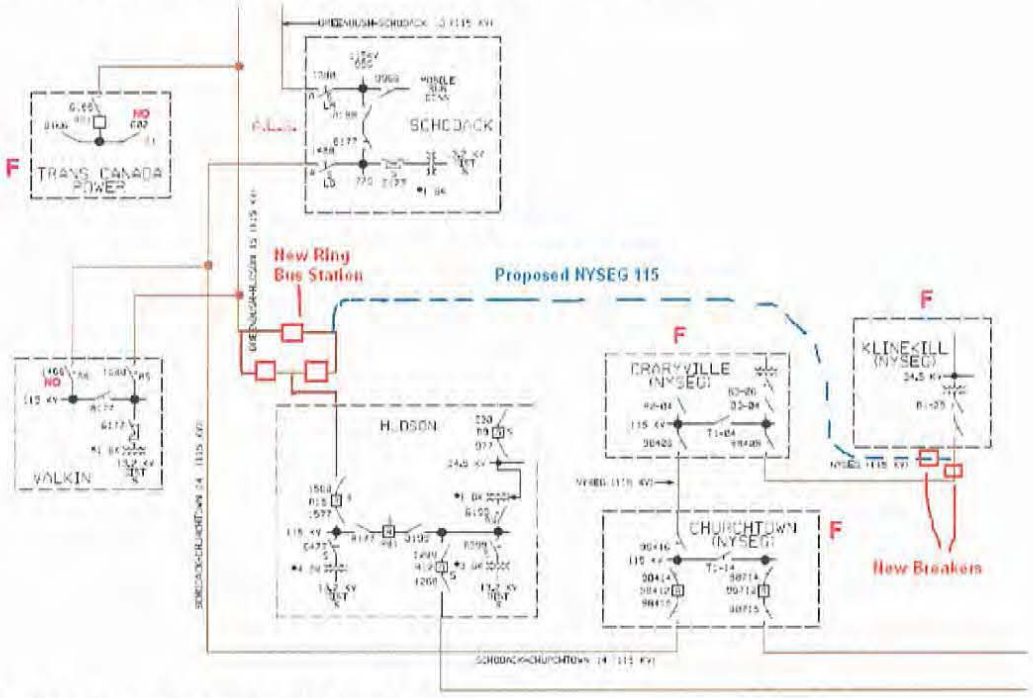

Figure 2. Ring Bus at #15 line ROW

Since Option 2 involves tapping #15 line at the ROW, there is no need to build the line through National Grid franchise territory in Kinderhook county. Instead the line can be built through NYSEG franchise territory in Ghent county as shown in Figure 3. And the distance will be similar to the Valkin-Klinekill distance. The actual substation site and line routing are flexible, and may be adjusted to reflect permitting and cost considerations.

Figure 3. Geographic map of the region.

Information Request B

Section 3.5.3 entitled "the 34.5 kV Alternative" provides an explanation of sub-transmission level facilities that could be used to address the stated need for the facility: Provide analysis of line locations and facilities needed for the 34.5 kV alternatives, including maps and descriptions of cost estimates, should be provided.

Response

NYSEG developed a 34.5-kV alternative (NYSEG 34.5-kV Alternative) that would adequately resolve the system reliability issue, although for a shorter time period, and with greater environmental impacts and greater costs than the 115-kV project.

The NYSEG 34.5-kV Alternative consisted of a new 115/34.5-kV substation installed in the Town of Ghent with two feeds to loop the NGrid Trunk #15 into the substation and two new 34.5-kV circuits that would tie into the existing 34.5-kV circuits #630 (located in the Town of Ghent) and #631 (located in the Town of Hillsdale). These 34.5-kV circuits, and the specific 34.5-kV tap points, were identified as the optimal 34.5-kV tap points by studies completed by NYSEG. The NYSEG identified tap points represent heavy load areas on the 34.5-kV network. By providing a new source into areas of heavy load, the NYSEG 34.5-kV Alternative provides more system reliability and thus is the most robust 34.5-kV alternative. By using these optimized tap points a 34.5-kV alternative can be made technically feasible (i.e., without causing submarginal voltage and thermal overload problems) while bringing about the most favorable system voltage profile along the distribution circuits. These studies used available load flow information for the 34.5-kV circuits served by the Klinekill and Craryville Substation, as well as contingencies determined by system configurations outside of the four 34.5-kV circuits (#610, #611, #630, and #631). By connecting the new circuits into these specific 34.5-kV tap points, the load would be more evenly distributed along the circuits, which allows the NYSEG 34.5-kV Alternative to resolve the thermal overload and submarginal voltage problems for a greater period of time. The tap points and the alternative route that was developed for a more detailed study of the NYSEG 34.5-kV Alternative are depicted on Figure 3-4, attached to this filing as Attachment B.

Environmental Analysis

The NYSEG 34.5-kV Alternative required the installation of approximately 2.5 miles of 115-kV transmission line to loop the existing NGrid Trunk #15 transmission line into the new 115/34.5-kV substation, and approximately 22.8 miles of new 34.5-kV transmission

line. NYSEG's standard ROW width for a 34.5-kV transmission line is 100 feet, which is the same width of ROW NYSEG has proposed for its 115-kV alternative (NYSEG's standard 115-kV transmission line ROW ranges from 100 feet to 125 feet wide depending on structure type used.) The NYSEG 34.5-kV Alternative also required more than three times the amount of clearing for the proposed ROW (approximately 188 acres) as the NYSEG-proposed 115-kV transmission line, largely due to the increased length of transmission line required. The NYSEG 34.5-kV Alternative would also require an additional 272 acres of ROW to be acquired; none of this line would be built along existing transmission line rights-of-way. In addition to these land use impacts, the routes for the NYSEG 34.5-kV Alternative would have five listed historic sites within one quarter of a mile with one site crossed. The NYSEG 34.5-kV Alternative would impact approximately five acres of wetlands (DEC and USCOE regulate) that would be located within the proposed ROW and would cross approximately five New York State Department of Environmental Conservation (NYSDEC) protected streams. In addition to these specific environmental impacts, the NYSEG 34.5-kV Alternative would affect more private land owners and would increase the potential for other environmental impacts due to the increased length and amount of ROW as compared to the NYSEG proposed 115-kV transmission project.

In addition to the above mentioned impacts from the NYSEG 34.5-kV Alternative, the option would cost approximately $13 million more than the proposed 115-kV alternative. The detailed cost estimate presented in Table 3 below was developed on a comparable basis to the cost estimate presented in Exhibit 9 of the CCTP Article VII Application.

Table 3 Cost of NYSEG 34.5-kV Alternative

Item	Description	General	115kV Interconnection	34.5kV Circuits	New Ghent Substation	Total
1	Land Acquisition, Easement and Right-of-Way Agreements and Surveys	$ -	$ 65,900	$ 1,656,600	$ 29,300	$ 1,751,800
2	Licensing & Permitting Including Fees for Legal	$ 457,070	$ -	$ -	$ -	$ 457,070
3	Materials, Equipment	$ -	$ 257,000	$ 2,437,000	$ 3,220,125	$ 5,914,125
4	Sales Tax (8%)	$ -	$ 20,560	$ 194,960	$ 257,610	$ 473,130
5	Utility Labor	$ -	$ -	$ -	$ -	$ -
6	Contractor Labor	$ -	$ 840,000	$ 7,116,500	$ 2,912,950	$ 10,869,450
7	Vegetation Management	$ -	$ 73,000	$ 2,251,000	$ -	$ 2,324,000
8	Access Roads Including Matting	$ -	$ 229,000	$ 521,000	$ -	$ 750,000
9	Environmental Control and Restoration	$ 53,280	$ 371,000	$ 3,217,000	$ -	$ 3,641,280
10	Engineering	$ -	$ 50,750	$ 225,000	$ 500,750	$ 776,500
11	NYSEG Management & Support (Note 1)	$ 2,430,000	$ -	$ -	$ -	$ 2,430,000
12	Program Manager/Owners Engineer (Note 2)	$ 2,144,540	$ -	$ -	$ -	$ 2,144,540
13	Administrative Overhead (Note 3)	$ 330,518	$ 123,969	$ 1,145,239	$ 449,848	$ 2,049,573
14	Contingencies (Note 4)	$ 508,489	$ 190,721	$ 1,761,906	$ 692,074	$ 3,153,190
15	AFUDC (Note 5)	$ 731,080	$ 274,209	$ 2,533,180	$ 1,105,587	$ 4,644,057
	Total	$ 6,654,977	$ 2,496,109	$ 23,059,385	$ 9,168,244	$ 41,378,715

Notes:

1. 6 FTE over 3 years @ $135,000 full loaded costs
2. 8% of Total Project Cost
3. Administrative Overhead is 6.5% of Project Cost
4. Contingencies are 10% of Project Cost
5. Allowance for Funds Used During Construction (AFUDC) is 13.5% of Project Cost and Overhead for General and T-Lines and is 15% for Substations.

Attachment B

Information Request C

Section 3.5.4 entitled Alternative Transmission Line Technologies provides one sentence dismissing underground cables as "not considered for the Project due to the high cost and additional environmental impacts of underground construction" (Application, page 3-13). Provide analysis developed to support the rejection of underground construction technologies as stated in the application.

Response

Summary of Capital Construction Cost

An evaluation of capital construction costs associated with both the overhead and underground transmission line alternatives was conducted. The results of the evaluation are presented in the Table 4 below.

The transmission ROW for both overhead and underground options follows the same route, which is outlined in the application as the preferred option and comprises of two parts:
Part 1 – the new circuit 726 (of an approximate distance of 8.6 miles) and
Part 2 – the extension of NGrid Trunk #15 (of an approximate distance of 2.5 miles).
As indicated in Table 4 the underground option is expected to have a capital construction cost of approximately $31,044,208 for the new circuit 726 and $10,701,447 for the extension of NGrid Trunk #15.
By comparison, the overhead option is expected to have a capital construction cost of $10,871,431 for the new circuit 726 and $2,496,109 for the extension of Trunk #15 (as shown in the Table 4 below and Exhibit 9, Table 9-1 of the Application).
Therefore, implementation of the project's preferred option of an overhead transmission line results in total project savings of approximately $28,378,116.

Assumptions

The capital cost estimate for the underground alternative includes materials and supplies, equipment purchases, contractor construction labor for installation of manholes, conduit systems, grounding, cables, splices and terminations.
Land acquisition cost, easement and ROW agreements and surveys; licensing & permitting including fees for legal; vegetation management, access roads including matting, environmental control and restoration, and engineering costs for the purpose of this comparison are assumed to be comparable between both options and for the purpose of this comparison were considered equal for both alternatives.

Sources of Information

The underground capital cost estimates presented in Table 4 are based on NYSEG's experience with similar transmission projects in upstate New York. Cost estimates of major equipment were obtained from vendors and manufacturers. Costs of labor and contract work are based on NYSEG's experience with similar projects. Because of the great discrepancy in cost between the overhead and the underground options, NYSEG did not attempt a more detailed study of the cost of constructing this facility underground. This estimate of the cost of underground construction is a general estimate of the cost of underground construction through a rural area of the type of facility required in this case.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Table 4 **Comparison of Cost of Proposed Facilities**

Item	Description	115kV Interconnection Overhead	115kV Interconnection Underground	115kV Line 726 Overhead	115kV Line 726 Underground
1	Land Acquisition, Easement and ROW Agreements and Surveys	$ 65,900	$ 65,900	$ 523,300	$ 523,300
2	Licensing & Permitting Including Fees for Legal	$ -		$ -	
3	Materials, Equipment	$ 257,000	$ 3,613,000	$ 994,000	$ 12,050,000
4	Sales Tax (8%)	$ 20,560	$ 289,040	$ 79,520	$ 964,000
5	Utility Labor	$ -	$ -	$ -	$ -
6	Contractor Labor	$ 840,000	$ 3,485,000	$ 2,872,000	$ 6,345,000
7	Vegetation Management	$ 73,000	$ 73,000	$ 563,000	$ 563,000
8	Access Roads Including Matting	$ 229,000	$ 229,000	$ 1,261,000	$ 1,261,000
9	Environmental Control and Restoration	$ 371,000	$ 371,000	$ 1,853,000	$ 1,853,000
10	Engineering	$ 50,750	$ 50,750	$ 160,750	$ 160,750
11	NYSEG Management & Support (Note 1)	$ -	$ -	$ -	$ -
12	Program Manager/Owners Engineer (Note 2)	$ -	$ -	$ -	$ -
13	Administrative Overhead (Note 3)	$ 123,969	$ 531,485	$ 539,927	$ 1,541,803
	Contingencies (Note 4)	$ 190,721	$ 817,669	$ 830,657	$ 2,372,005
14	AFUDC (Note 5)	$ 274,209	$ 1,175,604	$ 1,194,277	$ 3,410,350
	Total	$ 2,496,109	$ 10,701,447	$ 10,871,431	$ 31,044,208

Notes:

1 6 FTE over 3 years @ $135,000 full loaded costs
2 8% of Total Project Cost
3 Administrative Overhead is 6.5% of Project Cost
4 Contingencies are 10% of Project Cost
5 AFUDC is a percentage of Project Cost: 13.5% for General Overhead and T-Lines

As noted above, the cost to install an underground transmission line is more than triple the cost of installing an above ground line. Hence, cost was the primary basis for rejection of the underground transmission line. A site specific analysis of environmental impacts was not conducted. However, a general review of typical environmental impacts associated with the routing of a transmission line underground is discussed below. With the exception of visual impacts, the construction and future maintenance of an underground line can have more impacts to environmental resources. Such general impacts may include:

Wetland Impacts: NYSEG would typically attempt to locate utility poles outside of the wetland and span it. However, an underground line would require significant excavation within the wetland. Any future maintenance would again require disturbance of the wetland.

Stream Impacts: No utility poles will be located in a stream. In addition, NYSEG would attempt to avoid crossing any stream with equipment by approaching work areas from opposite directions. However, the installation of an underground line may require significant excavation within the stream bed and banks. Any future maintenance may again require disturbance of the stream bed and banks.

Agricultural Impacts: NYSEG would typically place mats in an agricultural field for access and at work structure work locations to limit impacts. An underground line would require excavation and potential impacts to existing drainage networks installed within the agricultural field.

Other Impacts: The transmission line right-of-way would be cleared regardless of whether construction was underground or overhead. Therefore, vegetation clearing, land usage, and wildlife habitat impacts would remain essentially the same for both methods of construction.

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Information Request D

Section 4.5.2.1.1: Provide, as available from NYSDEC, the rating forms and analysis of wetlands classification criteria, used for the NYS-regulated wetlands in this project study area.

Response

Based on conversations with NYSDEC Senior Wildlife Biologist Nancy Heaslip the requested forms are not available. The attached memo (Attachment D) summarizes the conversation with Nancy Heaslip regarding this issue.

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Attachment D

Memorandum

To: Carol A. Howland CPESC, CP

Lead Analyst - Environmental, Health & Safety Compliance

NYSEG

From: Heidi Childs

Environmental Scientist

URS Corporation

Date: August 28, 2012

Re: Public Service Commission's request for additional NYS-regulated wetland classification information related to NYSEG's Columbia County Transmission Project

Cc: Nancy Heaslip

Senior Wildlife Biologist

NYSDEC Region 4

In response to the Public Service Commission's request that NYSEG "provide, as available, the rating forms and analysis of wetlands classification criteria, used for the NYS-regulated wetlands in the project study area," URS staff spoke with NYSDEC Senior Wildlife Biologist Nancy Heaslip, who is assigned to Columbia County.

While a NYS-regulated wetland's recorded classification indicates its level of value, Ms. Heaslip notes that wetlands were originally classified decades ago, and that NYSDEC reviews wetlands "with fresh eyes" on a project-by-project basis for the purpose of gathering updated information about their many features. Review may include verifying current wetland boundaries and investigating current vegetation, hydrology, soils and ecological roles. As such, a wetland's classification provides a starting point for further investigation as needed. A wetland's functions and values are continually reassessed over time. Up to date wetland classification forms are not available. Further, the existing original forms used to assign classifications to wetlands when wetland maps were prepared in the early 1980s are neither up to date nor in a form that could be easily retrieved and converted into a useful format.

According to NYSDEC, NYS-regulated wetlands are ranked I through IV based on the benefits and values provided by each wetland. Class I wetlands have the highest rank. Different wetlands provide different functions and benefits and in varying degrees. Higher class wetlands provide the greatest level of benefits and have a higher level of protection. Lower class wetlands provide important functions and benefits, but typically require less protection to continue to provide these functions. According to 6 NYCRR Part 664: Freshwater Wetlands Maps and Classification (Statutory authority: Environmental Conservation Law §3-0301 and §24-1301), classification is determined by considering the following criteria:

- Vegetative Cover Type;
- Ecological Association;
- Special Features;
- Hydrological and pollution control features; and
- Distribution and location.

A discussion of wetland classification procedures and the criteria above are described in detail in Part 664, which can be viewed on the NYSDEC website at http://www.dec.ny.gov/regs/4612.html . URS staff is happy to contact the NYSDEC Region 4 office in the future if the Public Service Commission requests additional information.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request E

Section 4.5.2.1.1 and 4.5.2.2: Provide wetland delineation mapping and reports for wetlands occurring on the facility location, where NYSEG has existing access rights (along corridor shared with facility #984 south of KlineKill substation). Also, provide identification of areas where invasive species of concern to NYS occur along that shared ROW corridor.

Response

A wetland delineation is being developed for the existing corridor containing the Circuit #984. Additionally areas where invasive species of concern to NYS have been delineated. Both delineation reports are anticipated to be filed by December 16.

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Information Request F

Section 4.8.3: Provide mapping of soils locations using available soils classifications that demonstrate locations within study area that have any of the following characteristics: hydric soils; shallow depth to bedrock; shallow depth to groundwater; Prime Farmland soils; and Farmland of Statewide Importance.

Response

The requested mapping of hydric soils, shallow depth to bedrock, shallow depth to groundwater, Prime Farmland soils, and Farmland of Statewide Importance are included as Figures 4-6, 4-7, 4-8, and 4-9, attached to this response as Attachment F.

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Attachment F

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request G

Section 4.9.2: Provide the following:
site photos of the Kline Kill stream crossing locations at the existing NYSEG ROW and areas proposed for the new facility adjoining the existing NYSEG ROW; and
(2) An analysis of the need to install any stream crossing facilities for facility construction or for permanent ROW access across the KlineKill stream.

Response

1. Site photographs of the Kline Kill stream crossings, taken on July 31, 2012, are as follows:

North Channel of Kline Kill Creek looking North.

North Channel of Kline Kill Creek looking East from center of existing ROW.

North Channel of Kline Kill Creek looking west along from the center of the existing ROW.

South Channel of Kline Kill Creek looking East from the center of the existing ROW.

South Channel of Kline Kill Creek looking West from the center of existing ROW.

2. (2)A preliminary review of possible structure locations in the vicinity of Kline Kill Creek and of potential access points indicates that there are adequate access points to the existing and proposed ROW to both the north and south sides of Kline Kill Creek. As a result, NYSEG does not anticipate the need to cross the creek with any heavy machinery and currently plans to walk the conductors across the creek during the stringing phase of construction. If, during final design, it is determined that equipment does need to cross the creek, stream crossing methods would be installed in accordance with NYSDEC's Standard and Specifications for Temporary Access Waterway Crossing, attached to this filing as Attachment G.

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Attachment G

STANDARD AND SPECIFICATIONS
FOR
TEMPORARY ACCESS WATERWAY CROSSING

Definition

A temporary access waterway crossing is a structure placed across a waterway to provide access for construction purposes for a period of less than one year. Temporary access crossings shall not be utilized to maintain traffic for the general public.

Purpose

The purpose of the temporary access waterway crossing is to provide safe, environmentally sound access across a waterway for construction equipment by establishing minimum standards and specifications for the design, construction, maintenance, and removal of the structure. Temporary access waterway crossing are necessary to prevent construction equipment from damaging the waterway, blocking fish migration, and tracking sediment and other pollutants into the waterway. This standard and specification may represent a channel constriction, thus, the temporary nature of waterway access crossing must be stressed. They should be planned to be in service for the shortest practical period of time and removed as soon as their function is completed.

Conditions Where Practice Applies

The following standard and specification for temporary access waterway crossings are applicable in non-tidal waterways. These standard and specifications provide designs based on waterway geometry rather than the drainage area contributing to the point of crossing.

The principal consideration for development of the standard and specifications is concern for erosion and sediment control. Structural utility and safety must also be considered when designing temporary access waterway crossings to withstand expected loads.

The tree types of standard temporary access waterway crossings are bridges, culverts, and fords.

General Requirements

1. In-Stream Excavation: In-Stream excavation shall be limited to only that necessary to allow installation of the standard methods as presented in Subsection "Temporary Access Waterway Crossing Methods."

2. Elimination of Fish Migration Barriers: Of the three basic methods presented in Subsection "Temporary Access Waterway Crossing Methods," bridges pose the least potential for creating barriers to aquatic migration. The construction of any specific crossing method as presented in Subsection "Temporary Access Waterway Crossing Methods," shall not cause a significant water level difference between the upstream and downstream water surface elevations. Fish spawning or migration within waterways is from October 1 to April 30 for water classified for trout and from March 15 to June 15 for other streams. Restrictions imposed by the NYS Department of Environmental Conservation during these time periods may apply and must be checked.

3. Crossing Alignment: The temporary waterway crossing shall be at right angles to the stream. Where approach conditions dictate, the crossing may vary 15 degrees from a line drawn perpendicular to the centerline of the stream at the intended crossing location.

4. Road Approaches: The centerline of both roadway approaches shall coincide with the crossing alignment centerline for a minimum distance of 50 feet from each bank of the waterway being crossed. If physical or right-of-way restraints preclude the 50 feet minimum, a shorter distance may be provided. All fill materials associated with the roadway approach shall be limited to a maximum height of 2 feet above the existing flood plain elevation.

5. Surface Water Diverting Structure: A water diverting structure such as a swale shall be constructed (across the roadway on both roadway approaches) 50 feet (maximum) on either side of the waterway

crossing. This will prevent roadway surface runoff from directly entering the waterway. The 50 feet is measured from the top of the waterway bank. Design criteria for this diverting structure shall be in accordance with the "Standard and Specification" for the individual design standard of choice. If the roadway approach is constructed with a reverse grade away from the waterway, a separate diverting structure is not required.

6. Road Width: All crossings shall have one traffic lane. The minimum width shall be 12 feet with a maximum width of 20 feet.

7. Time of Operation: All temporary crossing shall be removed within 14 calendar days after the structure is no longer needed. Unless prior written approval is obtained, all structures shall be removed within one year from the date of the installation.

8. Materials

A. Aggregate: There shall be no earth or soil materials used for construction within the waterway channel. NYS DOT specifications for coarse aggregate designation No. 4 (3/4" to 4"), also referenced as AASHTO designation No. 1, shall be the minimum acceptable aggregate size for temporary crossings. Larger aggregates will be allowed.

B. Filter Cloth: Filter cloth is a fabric consisting of either woven or nonwoven plastic, polypropylene, or nylon used to distribute the load, retain fines, allow increased drainage of the aggregate and reduce mixing of the aggregate with the subgrade soil. Filter cloths such as Mirafi, Typar, Adva Filter, Polyfilter X, or approved equivalent shall be used, as required by the specific method.

Temporary Access Waterway Crossing Methods

The following criteria for erosion and sediment control shall be considered when selecting a specific temporary access waterway crossing standard method:

1. Site aesthetics: Select a standard design method that will least disrupt the existing terrain of the stream reach. Consider the effort that will be required to restore the area after the temporary crossing is removed.

2. Site location: Locate the temporary crossing where there will be the least disturbance to the soils of the existing waterway banks. When possible, locate the crossing at a point receiving minimal surface runoff.

3. Physical site constraints: The physical constraints of a site may preclude the selection of one or more of the standard methods.

4. Time of year: The time of year may preclude the selection of one or more of the standard methods due to fish spawning or migration restrictions.

5. Vehicular loads and traffic patterns: Vehicular loads, traffic patterns, and frequency of crossing should be considered in choosing a specific method.

6. Maintenance of crossing: The standard methods will require various amounts of maintenance. The bridge method should require the least maintenance, whereas the ford method will probably require more intensive maintenance.

7. Removal of the Structure: Ease of removal and subsequent damage to the waterway should be primary factors in considering the choice of a standard method.

Temporary Access Bridge (Figure 5A.36 on page 5A.84)

A temporary access bridge is a structure made of wood, metal, or other materials, which provides access across a stream or waterway.

Considerations

1. This is the preferred method for temporary access waterway crossings. Normally, bridge construction causes the least disturbance to the waterway bed and banks when compared to the other access waterway crossings.

2. Most bridges can be quickly removed and reused.

3. Temporary access bridges pose the least chance for interference with fish migration when compared to the other temporary access waterway crossings.

4. Restrictions and Permits: A permit from the New York State Department of Environmental Conservation, Division of Regulatory Affairs, Regional Permit Administrator, will be needed to install and remove temporary access culverts in streams with a classification of C(T) and higher. Installation and removal may not be permitted during the period of time from the start of trout spawning until the eggs have hatched. In some instances, restrictions may also be applied to bass spawning waters.

Construction Specifications

1. Restriction: Construction, use, or removal of a temporary access bridge will not normally have any time of year restrictions if construction, use, or removal does not disturb the stream or its banks.

2. Bridge Placement: A temporary bridge structure shall be constructed at or above bank elevation to prevent the entrapment of floating materials and debris.

3. Abutments: Abutments shall be placed parallel to and on stable banks.

4. Bridge Span: Bridges shall be constructed to span the entire channel. If a footing, pier, or bridge support is constructed within the waterway, a stream-disturbance permit may be required.

5. Stringers: Stringers shall either be logs, saw timber, pre-stressed concrete beams, metal beams, or other approved materials.

6. Deck Material: Decking shall be of sufficient strength to support the anticipated load. All decking members shall be placed perpendicular to the stringers, butted tightly, and securely fastened to the stringers. Decking materials must be butted tightly to prevent any soil material tracked onto the bridge from falling into the waterway below.

7. Run Planks (optional): Run planking shall be securely fastened to the length of the span. One run plank shall be provided for each track of the equipment wheels. Although run planks are optional, they may be necessary to properly distribute loads.

8. Curbs or Fenders: Curbs or fenders may be installed along the outer sides of the deck. Curbs or fenders are an option, which will provide additional safety.

9. Bridge Anchors: Bridges shall be securely anchored at only one end using steel cable or chain. Anchoring at only one end will prevent channel obstruction in the event that floodwaters float the bridge. Acceptable anchors are large trees, large boulders, or driven steel anchors. Anchoring shall be sufficient to prevent the bridge from floating downstream and possibly causing an obstruction to the flow.

10. Stabilization: All areas disturbed during installation shall be stabilized within 14 calendar days of that disturbance in accordance with the Standard and Specification for Temporary Critical Area Plantings on page 3.3.

Bridge Maintenance Requirements

1. Inspection: Periodic inspection shall be performed by the user to ensure that the bridge, streambed, and streambanks are maintained and not damaged.

2. Maintenance: Maintenance shall be performed, as needed to ensure that the structure complies with the standard and specifications. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of outside of the floodplain and stabilized.

Bridge Removal and Clean-Up Requirements

1. Removal: When the temporary bridge is no longer needed, all structures including abutments and other bridging materials shall be removed within 14 calendar days. In all cases, the bridge materials shall be removed within one year of installation.

2. Final Clean-Up: Final clean-up shall consist of removal of the temporary bridge from the waterway, protection of banks from erosion, and removal of all construction materials. All removed materials shall be stored outside the waterway floodplain.

3. Method: Removal of the bridge and clean-up of the area shall be accomplished without construction equipment working in the waterway channel.

4. Final Stabilization: All areas disturbed during removal shall be stabilized within 14 calendar days of that disturbance in accordance with the Standard and Specifications for Permanent Critical Area Plantings on page 5.5.

Temporary Access Culvert (Figure 5A.37 on page 5A.85)

A temporary access culvert is a structure consisting of a section(s) of circular pipe, pipe arches, or oval pipes of reinforcing concrete, corrugated metal, or structural plate, which is used to convey flowing water through the crossing.

Considerations

1. Temporary culverts are used where a) the channel is too wide for normal bridge construction, b) anticipated loading may prove unsafe for single span bridges, or c) access is not needed from bank to bank.

2. This temporary waterway crossing method is normally preferred over a ford type of crossing, since disturbance to the waterway is only during construction and removal of the culvert.

3. Temporary culverts can be salvaged and reused.

Construction Specifications

1. Restrictions and Permits: A permit from the New York State Department of Environmental Conservation, Division of Regulatory Affairs, Regional Permit Administrator, will be needed to install and remove temporary access culverts in streams with a classification of C(T) and higher. Installation and removal may not be permitted during the period of time from the start of trout spawning until the eggs have hatched. In some instances, restrictions may also be applied to bass spawning waters.

2. Culvert Strength: All culverts shall be strong enough to support their cross sectional area under maximum expected loads.

3. Culvert Size: The size of the culvert pipe shall be the largest pipe diameter that will fit into the existing channel without major excavation of the waterway channel or without major approach fills. If a channel width exceeds 3 feet, additional pipes may be used until the cross sectional area of the pipes is greater than 60 percent of the cross sectional area of the existing channel. The minimum size culvert that may be used is 12-inch diameter pipe.

4. Culvert Length: The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.

5. Filter Cloth: Filter cloth shall be placed on the streambed and streambanks prior to placement of the pipe culvert(s) and aggregate. The filter cloth shall cover the streambed and extend a minimum six inches and a maximum one foot beyond the end of the culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.

6. Culvert Placement: The invert elevation of the culvert shall be installed on the natural streambed grade to minimize interference with fish migration (free passage of fish).

7. Culvert Protection: The culvert(s) shall be covered with a minimum of one foot of aggregate. If multiple culverts are used, they shall be separated by at least 12 in. of compacted aggregate fill. At the minimum, the bedding and fill material used in the construction of them temporary access culvert crossings shall conform with the aggregate requirements cited in the General Requirements subsection.

8. Stabilization: All areas disturbed during culvert installation shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for Permanent Critical Area Plantings.

Culvert Maintenance Requirements

1. Inspection: Periodic inspection shall be performed to ensure that the culverts, streambed, and streambanks are not damaged, and that sediment is not entering the stream or blocking fish passage or migration.

2. Maintenance: Maintenance shall be performed, as needed in a timely manner to ensure that structures are in compliance with this standard and specification. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of and stabilized outside the waterway flood plain.

Culvert Removal and Clean-Up Requirements

1. Removal: When the crossing has served its purpose, all structures, including culverts, bedding, and filter cloth materials shall be removed within 14 calendar days. In all cases, the culvert materials shall be removed within one year of installation. No structure shall be removed during the spawning season (March 15 through June 15).

2. Final Clean-Up: Final clean-up shall consist of removal of the temporary structure from the waterway, removal of all construction materials, restoration of original stream channel cross section, and protection of the streambanks from erosion. Removed material shall be stored outside of the waterway floodplain.

3. Method: Removal of the structure and clean-up of the area shall be accomplished without construction equipment working in the waterway channel.

4. Final Stabilization: All areas disturbed during culvert removal shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for Permanent Critical Area Plantings.

Temporary Access Ford (Figure 5A.38 on page 5A.86)

A temporary access ford is a shallow structure placed in the bottom of a waterway over which the water flows while still allowing traffic to cross the waterway.

Considerations

Temporary fords may be used when the streambanks are less than four (4) feet above the invert of the stream, and the streambed is armored with naturally occurring bedrock, or can be protected with an aggregate layer in conformance with these specifications.

Construction Specifications

1. Restrictions and Permits: A permit from New York State Department of Environmental Conservation, Division of Regulatory Affairs, Regional Permit Administrator, will be needed to install, use, and remove temporary fords in streams with a classification of C(T) or higher. Installation and removal may not be permitted during the period of time from the start of trout spawning until the eggs have hatched. In some instances, restrictions may also be applied to bass spawning waters.

2. The approaches to the structure shall consist of stone pads constructed to comply with the aggregate requirements of the General Requirements subsection.

The entire ford approach (where banks were cut) shall be covered with filter cloth and protected with aggregate to a depth of four (4) inches.

3. Fords shall be prohibited when the streambanks are four (4) feet or more in height above the invert of the stream.

4. The approach roads at the cut banks shall be no steeper than 5:1. Spoil material from the banks shall be stored out of the floodplain and stabilized.

5. One layer of filter cloth shall be placed on the streambed, streambanks, and road approaches prior to placing the bedding material on the stream channel or approaches. The filter cloth will be a minimum of six (6) inches and a maximum one foot beyond bedding material.

6. The bedding material shall be course aggregate or gabion mattresses filled with coarse aggregate.

7. Aggregate used in ford construction shall meet the minimum requirements of the General Requirements subsection.

8. All fords shall be constructed to minimize the blockage of stream flow and shall allow free flow over the ford. The placing of any material in the waterway bed will cause some upstream ponding. The depth of this ponding will be equivalent to the depth of the material placed within the stream and therefore should be kept to a minimum height. However, in no case will the bedding material be placed deeper than 12 inches or one-half (1/2) the height of the existing banks whichever is smaller.

9. Stabilization: All areas disturbed during ford installation shall be stabilized within 14 calendar days of that disturbance in accordance with the Standard and Specifications for Temporary Critical Area Planting on page 3.3.

10. Ford removal and Clean-Up Requirements

A. Removal: When the temporary structure has served its purpose, excess material used for this structure need not be removed. Care should be taken so that any aggregate left does not create an impoundment or restrict fish passage.

B. Final Clean-Up: Final clean-up shall consist of removal of excess temporary ford materials from the waterway. All materials shall be stored outside the waterway floodplain.

C. Method: Clean up shall be accomplished without construction equipment working in the stream channel.

D. Approach Disposition: The approach slopes of the cut banks shall not be backfilled.

E. Final Stabilization: All areas disturbed during ford removal shall be stabilized within 14 calendar days of that disturbance in accordance with the Standard and Specifications for Permanent Critical Area Planting on page 3.3.

NOTE: Any temporary access crossing shall conform to the technical requirements of this Standard and Specifications as well as any specific requirement imposed by the New York State Department of Environmental Conservation. Permits may be required for streambank disturbance.

Figure 5A.36
Temporary Access Bridge

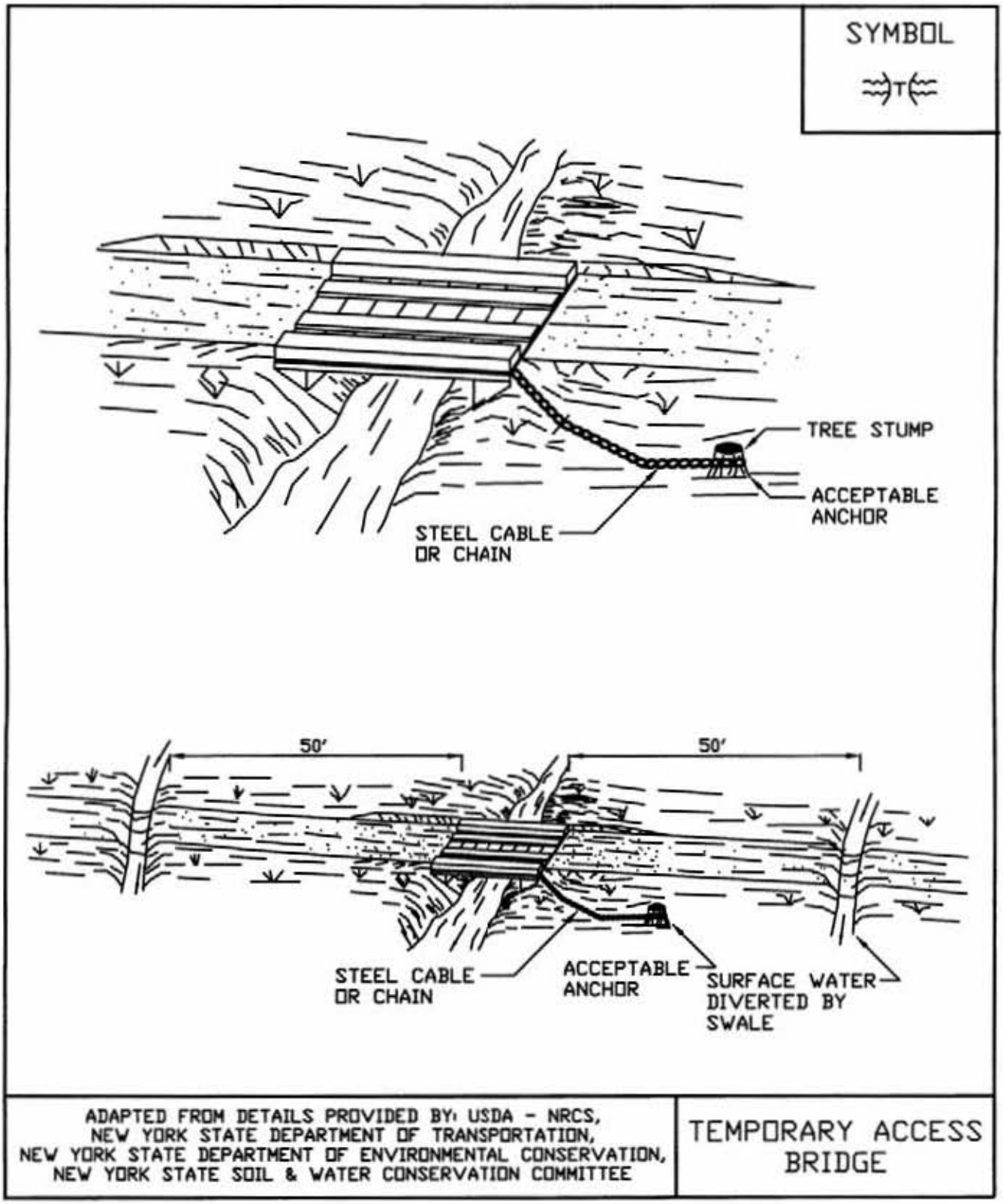


Figure 5A.37
Temporary Access Culvert

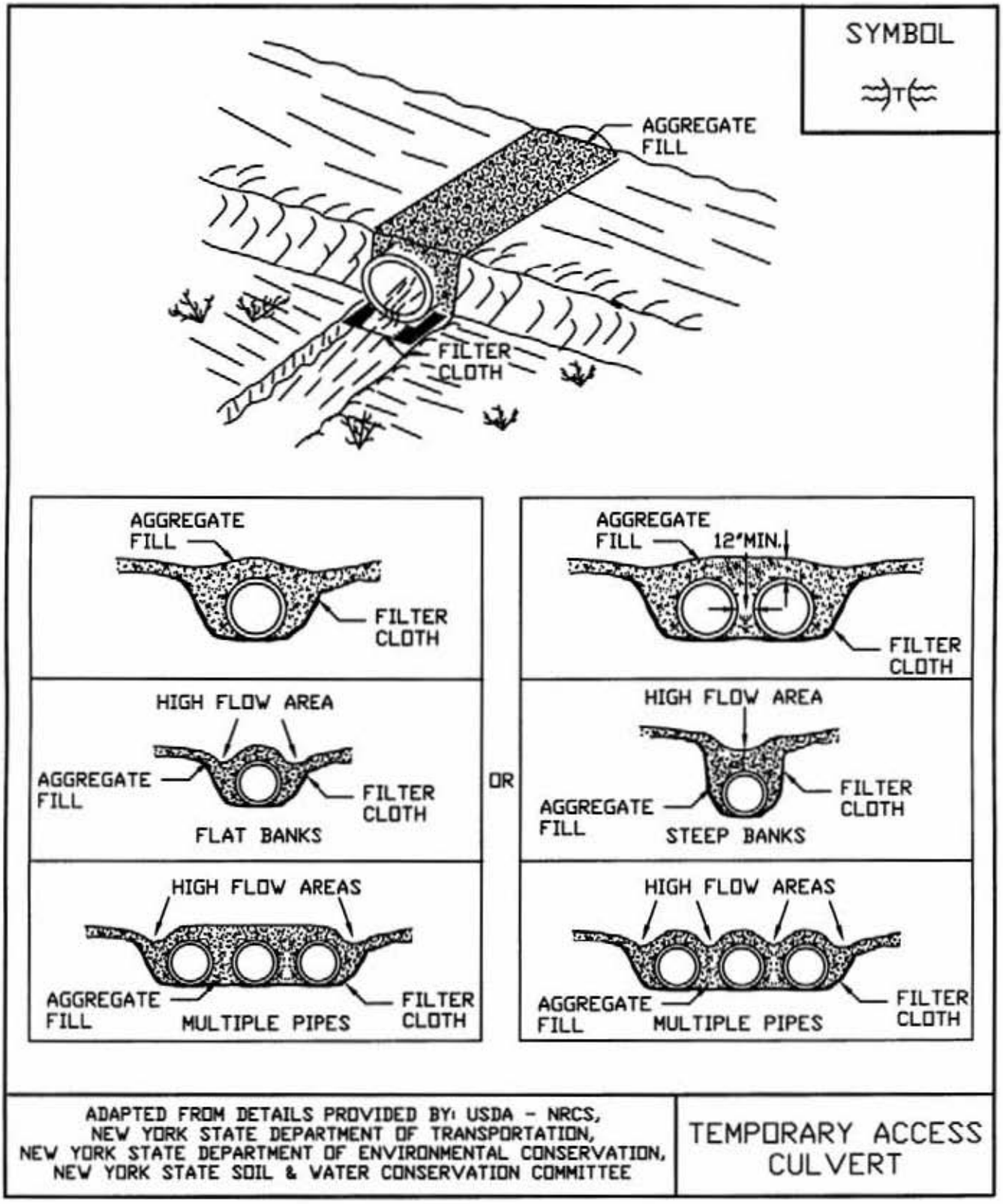
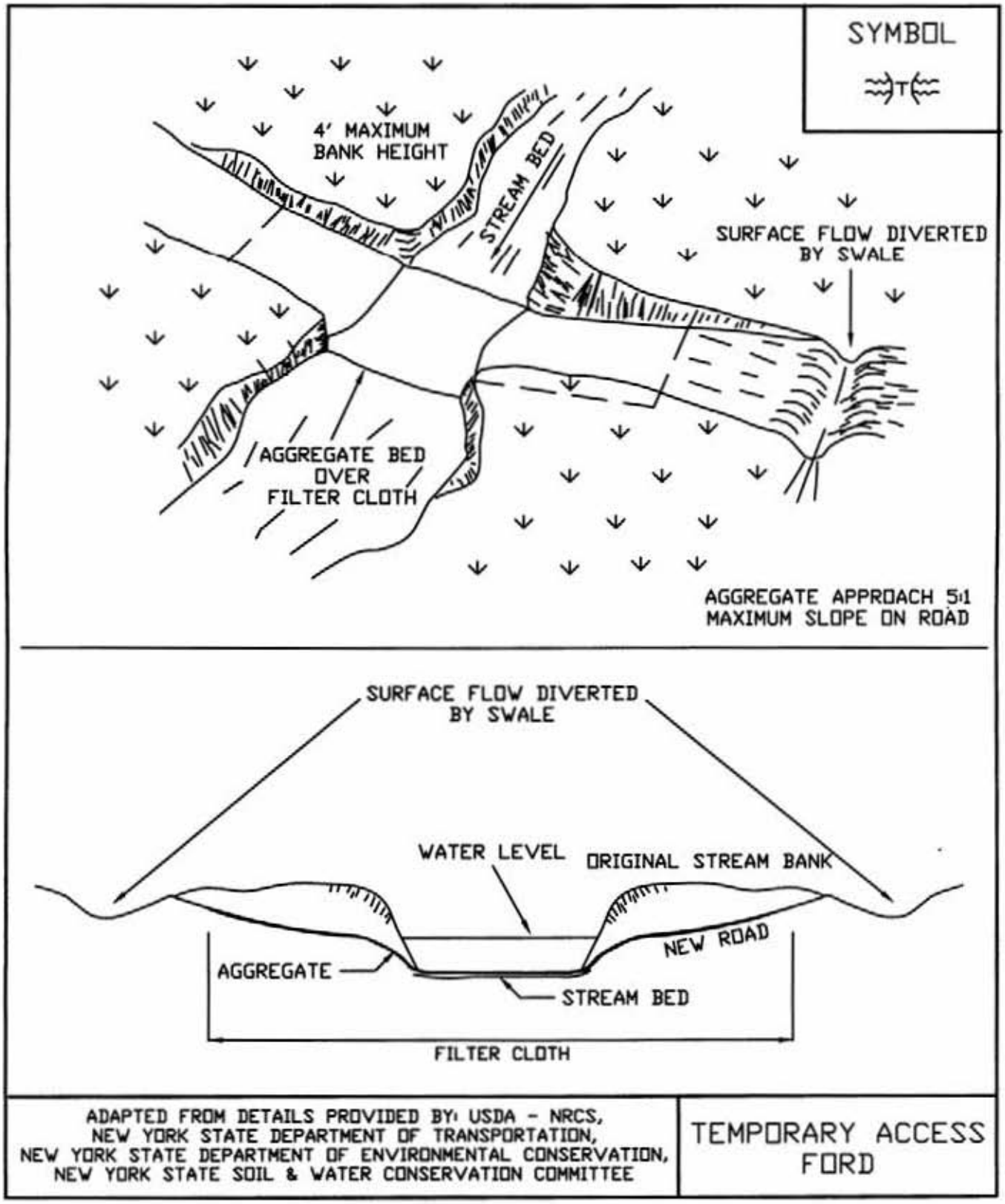


Figure 5A.38
Temporary Access Ford



Information Request H

Section 4.10.4: Provide an analysis of whether local noise regulations otherwise applicable to the project location apply to construction activities.

Response

The applicability of noise standards, as of July 24, 2012, for the towns of Chatham, Ghent, and Stockport to construction of the Columbia County Transmission Project is discussed below. Columbia County does not have noise regulations.

a. Town of Chatham

The Town of Chatham noise ordinance prohibits any noise which exceeds a maximum of 90 decibels at a property line. The ordinance is not simply directed at land use, and may be applicable to construction of the Project.

During construction of Circuit #726, motorized equipment will be used for vegetation clearing, excavation, and the erection of structures. These activities typically produce composite noise levels between 80 and 90 decibels at a distance of 50 feet from the source and between 50 and 60 decibels at a distance of 1,000 feet from the source; see Table 4-17 in Exhibit 4 of the Article VII Application. Construction activities associated with equipment modifications to the existing Klinekill Substation are not expected to produce noise levels that exceed 90 decibels. Project construction and operational activities are expected to remain in compliance with the Town of Chatham noise ordinance.

b. Town of Ghent

The Town of Ghent does not have any noise regulations applicable to the zoning districts in which the proposed Project will be located.

c. Town of Stockport

The Town of Stockport noise ordinance (§120-22) is applicable to non-residential or non-agricultural uses in all zoning districts. Because construction activities are not classified as a land use, noise levels produced during the construction of the NGrid Trunk #15 115-kV transmission line extension in the Town of Stockport are not subject to this noise ordinance. Operation of the NGrid Trunk #15 115-kV transmission line extension will not exceed the sound level limits.

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Information Request I

Section 5.2: Identify the criteria that will be applied in choosing locations for "dead-end" structures. Identify potential locations for dead-end structures based on application of appropriate criteria. Provide a detailed description of National Grid's participation in planning, construction, financing, operation and maintenance of specific portions of proposed facilities.

Response

Dead end structures are required at locations where the proposed transmission line would re-direct at angles greater than 30 degrees. Proposed dead end structures for the proposed alternative (Alternative B) as determined by preliminary engineering are shown on Figure 5-7 in Attachment I. Dead End structures within the proposed Ghent Switching Station fence were located in a way that allows for future site expansion. The North-South bay arrangement allows for future expansion to the East and also avoids future line tap crossings. The revised Figure SK-004 in Attachment I contains labels for the proposed dead end structure locations within the proposed Ghent Switching Station. The proposed dead end structure within the existing Klinekill Substation was located in a way that does not interfere with the current layout of the station while allowing the integration of the new required equipment. The revised Figure D-8223-1 in Attachment I contains labels for the proposed dead end structure location within the existing Klinekill Substation.

NGrid will not construct, or own any of the proposed facilities associated with the CCTP and as such has had very limited participation in discussions concerning the construction, financing, operation, and maintenance of the proposed facilities. Refer to the response to Information Request P for the detailed description of NGrid's participation.

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Attachment I

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request J

To support the application conclusions regarding the requirements of §86.5(b)(2)(ii), (iii) and (iv): Provide the following:

- *photographs, descriptions and analysis of views of the proposed facility location from areas of public view including: road crossing locations;*
- *resource locations listed in Table 4-3;*
- *areas of potential project visibility from SASS areas within the project study area;*
- *estimates of tree and vegetation heights considered to provide visual screening from areas of public views;*
- *simulation views of facility from areas identified as potentially having facility visibility from locations listed in Table 4-3 and locations in SASS areas;*
- *an assessment of the project's visual impact on Historic Resources;*
- *an assessment of visual impact on buildings that are potentially eligible for listing on the State or National Register(s) of Historic Places, within areas determined to have potential views to the project (from viewshed analysis required above) and within a one mile distance from the proposed facility location.*

Response

NYSEG is currently developing a viewshed analysis, photo simulations of the proposed line, and a visual impact summary as developed through consultations with DPS staff. Additionally NYSEG has undertaken a survey of architectural resources located within the viewshed and within one mile of the proposed transmission line in order to make a determination of the project's visual impact on Historic Resources. The detailed visual analysis is currently in progress and is anticipated to be submitted by December 16.

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Information Request K

The centerline profile of the ROW is provided pursuant to §86.6(c); however, the format size of the figure is too small to be useful: a larger format printout and data files of elevation information should be provided.

Response

The centerline profile of the ROW, Figure 5-5, is provided as Attachment K-1, attached to this filing. Attachment K-1 is the centerline profile with a horizontal scale of 1 inch equals 2,000 feet and is on a 34x22 sheet. Additionally a digital elevation model, based on LiDAR survey data, is provided in a dxf CAD format (on CD) and is attached to this filing as Attachment K-2.

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Attachment K-1

Attachment K-2

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request L

As required by §86.7, Exhibit 6 provides a statement and brief analysis of economic effects: Provide: clarification as to whether NYSEG will seek easements for ROW or it will negotiate for purchasing fee-owned ROW. This issue should be clarified separately for both the NYSEG and National Grid portions of the facility, as appropriate. Furthermore, the applicant should specify: (1) any restrictions on land uses for ROW to be acquired; (2) setback provisions that may apply for safe clearances and how they may affect land use; (3) analysis of effects on electric transmission ROW on property valuation generally.

Response

NYSEG is currently developing its response to the effects on electric transmission ROW on property valuation based on available published research studies. NYSEG will provide this analysis as well as answers to the two additional questions by December 16.

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NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request M

Regarding §86.10 Exhibit 9; Cost of the proposed facility: Provide an explanation of whether any or all costs of component facilities may be transferred to National Grid, for the extension of National Grid Trunk line #15, will be reimbursed by National Grid.

Response

Currently there is no plan to transfer any costs of the component facilities to NGrid or seek reimbursement from NGrid for the extension of the NGrid Trunk line #15. The line will be constructed and owned by NYSEG but will be operated by NGrid. NYSEG will need to reimburse NGrid to connect the extensions of the Trunk #15 line to the existing Trunk #15.

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Information Request N

Provide a supplement to §88.4 Exhibit E-4: Engineering justification that elaborates on the planning criteria and that is understandable to the average reader.

Response

Attachment N, Supplement to Exhibit E-4 - Plain Language Explanation of the Need for the Columbia County Transmission Project attached to this filing provides a supplement to Exhibit E-4 that elaborates on the planning criteria in a format understandable to the average reader.

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Attachment N

Supplement to Exhibit E-4
Plain Language Explanation of the Need for the Columbia County Transmission Project

The Columbia County Transmission Project (CCTP) will address the real potential for area-wide low voltage issues and imminent voltage collapse that is expected to occur as a result of either a forced (for example, as a result of a storm) or planned maintenance outage of one or more components of the 115-kV transmission line from Churchtown Substation to Craryville Substation during high load conditions.

A transmission system operating voltage equal to 90% of its designated level is the lowest acceptable operating voltage under both normal and outage conditions. For example, if the designated transmission system voltage is 34.5 kV, then the minimum acceptable lower limit on the operating voltage is 31.05 kV. Below this lower limit of 31.05 kV, low voltage could cause damage or misoperation of both NYSEG and customer-owned electrical equipment, or disconnection from electrical service.

For more than 50% of the hours of a given year, if the 115-kV transmission line from Churchtown Substation to Craryville Substation is out of service, the electrical system will be unable to keep voltage within an acceptable range – thus the potential for damage and misoperation. When this voltage issue occurs, as a precautionary measure, NYSEG would remotely disconnect nearly 10,000 customers (more than 19,000 kilowatts of load) in order to protect both NYSEG- and customer-owned electrical equipment. Absent this action, NYSEG would run the risk of a system voltage collapse.

In a system voltage collapse, low voltage conditions would persist not only in the area of the transmission outage, but across an entire network. This is the condition encountered from Craryville to North Stephentown upon loss of the 115-kV Churchtown Substation to Craryville Substation line segment under high load conditions.

Some consequences of low voltages on customer-owned equipment are:

(1) Overheating of motors.
(2) Overheating of electric wiring thus damaging the wiring insulation and the wire.
(3) Abnormal operation or misoperation of electrical and electronic devices.
(4) Damage to, or early aging of, electrical equipment.

Some consequences of low voltages on NYSEG-owned equipment are:

1) Overheating of substation transformers and transmission and distribution lines.
2) Reduced effectiveness of capacitor banks that help maintain acceptable voltage levels for voltages above 90% of designated value.
3) Overheating of electric wiring, thus damaging the wiring insulation and the conductor.
4) Damage to, or early aging of, equipment.
5) Loss of electricity service to customers

In order for NYSEG to perform required maintenance on the existing 115-kV line from Churchtown Substation to Craryville Substation, it is necessary for NYSEG to forecast the expected daily load for the area in order to ensure it will be low enough to alleviate the potential for widespread low voltage, which would cause NYSEG to have to cut power to its customers. Given the historical behavior of load in the area, there is an approximate 1 in 2 chance that load would be high enough to be a concern, and NYSEG would be unable to perform the maintenance on the facility. Over the last four years, there have been nine instances of planned maintenance outages of the 115-kV line connecting the Churchtown Substation and the Craryville Substation at times of low load. There have not been any forced outages of the line in the last four years.

The CCTP will eliminate the problems associated with either extremely low system voltages or the shedding of load during transmission outages at high load periods, thereby reducing significantly the chance of many NYSEG customers in the area losing electricity service.

The “IBERDROLA USA Electric System Planning Manual – Criteria and Processes” document can be found on the NYSEG website at www.nyseg.com

Information Request O

To supplement the information provided to address §88.6 Exhibit E-6: Effect on transportation, provide an analysis based on the clearance requirements of NYSDOT regulations at 17 NYCRR Part 75 pertaining to obstruction clearances for privately owned airports to support the application's conclusions regarding obstructions to air navigation.

Response

Burns & McDonnell performed the requested analysis and determined that none of the proposed alternatives would penetrate any of the imaginary surfaces including Primary Surface, Lateral Transition Surface, and Approach Surface for the Kline Kill airport. Table 5 depicts the analysis completed by Burns & McDonnell.

Table 5 Approach Surface Analysis

	Distance from Approach Surface Start	Approach Slope	Line Elevation	Runway Elevation	Change in Elevation of Approach Slope	Elevation of Approach Slope	Height Under Approach Slope
Alternative 1 & Alternative 3	4,819 ft.	20-1	438 ft.	380 ft.	241 ft.	621 ft.	183 ft.
Alternative 2 & Alternative 4	4,987 ft.	20-1	438 ft.	380 ft.	249 ft.	629 ft.	191 ft.

To complete the requested analysis Burns & McDonnell first digitized the three surfaces for the airport as outlined in 17 NYCRR Part 75. Burns & McDonnell then measured the distance from the start of the approach surface to where the alternative would cross the surface. The approach slope was determined by using the FAA records to determine the Kline Kill airport runway was a visual utility runway and then obtaining the slope (20 to 1) from Appendix A-6 of 17 NYCRR Part 75. The distance was then divided by 20 to determine the vertical rise for the slope. This value was then added to the FAA recorded elevation of the runway to obtain the elevation AMSL of the Approach Surface at that location. From this value the elevation of the ground at that location was subtracted giving the height of the Approach Surface above ground level. Because the height of the Approach Surface was more than the tallest anticipated structure for the proposed

transmission line there would be no impact on the Approach Surface for this airport. Because the Lateral Transition Surface begins at the Approach Surface and slopes up if the proposed structures would not penetrate the Approach Surface they also would not penetrate the Lateral Transition Surface. None of the proposed alternatives would cross the Primary Surface of this airport. As a result of the alternatives not penetrating any of the surfaces (and remaining well below any surface) as outlined in 17 NYCRR Part 75 the alternatives would have no adverse impact on the Kline Kill Airport. Further analysis was also completed by the FAA and included in Appendix A of the Article VII Application. Because the Kline Kill Airport is a privately owned airport but is operated as a public use airport it falls under the jurisdiction of the FAA's obstruction evaluation criteria. The FAA's obstruction evaluation criteria take into consideration more imaginary surfaces than those listed in the NY Regulations and thus provide a more restrictive analysis than the one provided in this response.

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request P

Provide a detailed description of National Grid participation in planning, construction, financing, operation and maintenance of specific portions of proposed facilities.

Response

NGrid Involvement with the Columbia County Transmission Project

- August 15, 2007
  - NG was provided with the planning study results for a 115kV reinforcement from Valkin to Klinekill Substation.
- November 20, 2008
  - NG was provided with the NYSEG study report for the Valkin to Klinekill 115kV project.
- January 7, 2009
  - Met with NG to review the NYSEG study results and agreed to a joint study.
- July 27, 2009
  - Met with NG to review the joint project study status.
- August 20, 2009
  - NG was provided with scan of preliminary 115kV transmission route selected by NYSEG back in 1989.
- February 9, 2010
  - Met with NG to review the project status.
- February 18, 2010
  - NG was provided with load-flow and load level information in the Chatham area.
- October 4, 2010
  - Met with NG and NG reviewed the work required at Valkin and proposed the 115kV switching station option.
- October 18, 2010
  - NG provided a geographic map of the area showing an option where the new 115kV line is routed mostly within the NYSEG service territory
- December 20, 2010
  - NG and NYSEG reached the common conclusion that the project (with the new 115kV switching station) will not have a significant impact on interface transfer limits and that an SIS is not required.

- December 22, 2010

  - NG inquired, and was told that
    - the project (with the new 115kV switching station) will be included in future FERC loadflow case representations
    - the name and location of the new station are still being determined and will be provided to them when they become available.
- May 10, 2011
  - NG was provided with information on the switching station configuration and expected finish date.
- January 5, 2012
  - NG was provided with the town name of the new switching station (Ghent), and the approximate distances between the new station and the NG substations Valkin and Hudson.
- January 12, 2012
  - NG was provided with our current project schedule, and design for the line segments.
- February 17, 2012
  - NG was asked for the new 115kV trunk number designation for the future sectionalized segments of NG trunk #15.
- February 24, 2012
  - NG provided a new trunk number designation #11 for the future sectionalized segment of NG trunk #15 Hudson - Ghent.
- March 23, 2012
  - Met with NG to review the status of the Columbia County Transmission Project.
- April 12, 2012
  - NG informed NYSEG that they do not plan to join the Article VII application as NYSEG will own all the 115kV lines and taps associated with the project.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request Q

Provide copies of municipal franchise agreements for electric facilities in the municipalities crossed by the proposed facilities.

Response

The requested municipal franchise agreements for electric facilities in the Town of Ghent and the Town of Chatham are attached to this filing as Attachment Q. NYSEG does not currently have a municipal franchise agreement for electric facilities in the Town of Stockport; however, since the extension of the NGrid Trunk #15 does not cross any public land in the Town of Stockport a municipal franchise agreement is not necessary.

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Attachment Q

* *
* In the matter of the application of the *
* NEW YORK STATE ELECTRIC & GAS CORPORATION *
*to place and maintain poles, wires, etc. for *
*the transmission of electricity for light, *
*heat and power purposes through, along and *
*over the highways and other public places in *
*the Town of Ghent *
*County of Columbia *
* *

WHEREAS, an application has been duly made to the Town Board of said town by the NEW YORK STATE ELECTRIC & GAS CORPORATION for permission to erect and maintain poles, lines, wires, insulators, transformers, arms and braces, and to suspend wires over, through and upon public highways, lanes, streets and other public places in said town for the purpose of conducting electricity over said wires,

And said Board having duly convened and heard said application, a quorum being present, and concluded that the grant thereof would be advantageous to the town and its inhabitants,

Now, therefore, on motion duly made and carried,

Resolved that said NEW YORK STATE ELECTRIC & GAS CORPORATION (hereinafter called the Company), its successors and assigns is hereby granted the right and privilege to lay underground conduits to contain wires for transmitting electricity and to erect and maintain in any of the streets, avenues, lanes, highways and public alleys and other public places in said town, poles, lines, wires, insulators, transformers, arms, braces and all other purposes and to connect said wires with and install said lights in all public and private buildings in said town for the purpose of lighting the same with electricity, and to transmit over said wires at all times such an electric current as shall be required and necessary and proper for such street lighting and for lighting the public and private buildings, and also

such electricity and electric current over said wires for the purpose of heat or power, to be used in any of said public or private buildings, That at all times after the placing of said poles and the installations of said wires, said company shall be permitted to examine the same and keep the same in proper condition and repair, and do all necessary work to properly maintain the construction thereof.

This grant and privilege is made upon the following terms:

1. That the poles shall be located under the direction of said Town Board or its duly authorized agent.

2. That all of said poles, wires and fixtures shall be placed, erected and maintained in a proper workmanlike manner so that the same shall in no way endanger the public, and the said company shall at all times indemnify and save harmless the said town and the members of said Town Board, from and against any and all actions, suits, damages, costs, charges and expenses by reason of the location and maintenance of said pipes, poles, wires and fixtures in any of the streets, avenues, lanes, and other public places, or by reason of any act done or ommitted to be done in the premises by said company.

3. This grant and permit is made upon condition that permission be secured from such public officers and commissions as is required by law, and the consideration thereof is the expenditure by said company of the funds necessary for the construction of said transmission and/or distribution lines and the proper maintenance thereof.

IN WITNESS WHEREOF, said Town Board of said town has caused these presents to be subscribed by its members this 18th day of August. 1930.

Clinton Gillette
Supervisor

R. Prince Allen
Town Clerk

Alvin Moore
J.P.

Clarence Legge
J.P.

Ward Ostrander
J.P.

Samuel E. Swift
J.P.

1085 X

CERTIFICATE OF TOWN CLERK

I, the undersigned, Town Clerk of said Town of Olean, do hereby certify that the foregoing is a counterpart original of a resolution and consent duly passed at a meeting of the Town Board of said Town, duly called and held on the Eighteenth day of August, 1930. I further certify that said resolution and consent were both duly filed in the Clerk's office of said town, and that the officers signing the same were members of the Town Board, and a majority thereof.

IN WITNESS WHEREOF, I have hereunto placed my hand and the official seal of said Town this 18th day of August, 1930.

R. Pierce Allen.
Town Clerk

SEAL

1085 X

* *
In the matter of the application of the *
NEW YORK STATE ELECTRIC & GAS CORPORATION to *
place and maintain poles, wires, etc. for the *
transmission of electricity for light, heat *
and power purposes through, along and over *
the highways and other public places in part *
of the Town of Chatham, County of Columbia. *
* *

Franchise
Chatham T

WHEREAS, an application has been duly made to the Town Board of said town by the NEW YORK STATE ELECTRIC & GAS CORPORATION for permission to erect and maintain poles, lines, wires, insulators, transformers, arms and braces, and to suspend wires over, through and upon public highways, lanes, streets and other public places in all of said town excepting School Districts One and Nine for the purpose of conducting electricity over said wires,

And said Board having duly convened and heard said application, a quorum being present, and concluded that the grant thereof would be advantageous to the town and its inhabitants.

Now, therefore, on motion duly made and carried,

RESOLVED, that said NEW YORK STATE ELECTRIC & GAS CORPORATION (hereinafter called the Company), its successors and assigns is hereby granted the right and privilege to lay underground conduits to contain wires for transmitting electricity and to erect and maintain in any of the streets, avenues, lanes, highways and public alleys and other public places in said above described part of said town, poles, lines, wires, insulators, transformers, arms, braces and all other necessary or usual attachments and devices and to suspend from the poles and wires to be so erected electric lights for street lighting and other purposes and to connect said wires and install said lights in all public and private buildings

in said above described part of said town for the purpose of lighting the same with electricity, and to transmit over said wires at all times such an electric current as shall be required and necessary and proper for such street lighting and for lighting the public and private buildings, and also such electricity and electric current over said wires for the purpose of heat or power, to be used in any of said public or private buildings. That at all times after the placing of said poles and the installations of said wires, said company shall be permitted to examine the same and keep the same in proper condition and repair, and do all necessary work to properly maintain the construction thereof.

This grant and privilege is made upon the following terms:

1. That the poles shall be located under the direction of said Town Board or its duly authorized agent.

2. That all of said poles, wires and fixtures shall be placed, erected and maintained in a proper workmanlike manner so that the same shall in no way endanger the public, and the said company shall at all times indemnify and save harmless the said town and the members of said Town Board, from and against any and all actions, suits, damages, costs, charges and expenses by reason of the location and maintenance of said pipes, poles, wires and fixtures in any of the streets, avenues, lanes, and other public places, or by reason of any act done or omitted to be done in the premises by said company.

3. This grant and permit is made upon condition that permission be secured from such public officers and commissions as is required by law, and the consideration thereof is the expenditure by said company of the funds necessary for the construction of said transmission and/or distribution lines and the proper maintenance thereof.

IN WITNESS WHEREOF, said Town Board of said town has caused these presents to be subscribed by its members this 3 day of April, 1931.

W. H. Smith
Supervisor

Otto P. Tripp
Town Clerk

Chas E. Finch
J.P.

C. G. Brown
J.P.

William Dowd
J.P.

Wm R. Shufelt
J.P.

CERTIFICATE OF TOWN CLERK

I, the undersigned, Town Clerk of said Town of Chatham, do hereby certify that the foregoing is a conterpart original of a resolution and consent duly passed at a meeting of the Town Board of said Town, duly called and held on the 3rd day of April, 1931. I further certify that said resolution and consent were both duly filed in the Clerk's office of said town, and that the officers signing the same were members of the Town Board, and a majority thereof.

IN WITNESS WHEREOF, I have hereunto placed my hand and the official seal of said Town this 3 day of April, 1931.

William P. Duffy
Town Clerk

SEAL

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request R

Provide GIS shape files of facility location and other original coverages developed by the applicant or its consultants for analysis in the application.

Response

GIS shapefiles of facility location and other original coverages developed by Burns & McDonnell are provided on DVD as Attachment R attached to this filing.

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Attachment R

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request S

Indicate the witnesses sponsoring Appendices A and B.

Response

The witness sponsoring Appendix A of the application is Dusty Werth of Burns & McDonnell Engineering.

The witness sponsoring Appendix B of the application is Derrick Bradstreet, PE of Burns & McDonnell Engineering.

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Exhibit 1

New York State Electric & Gas Corporation

Columbia County Transmission Project

Exhibit 1

General Information Regarding Application

EXHIBIT 1: GENERAL INFORMATION REGARDING APPLICATION

1.1 The name of the Applicant is:

New York State Electric & Gas Corporation ("NYSEG" or the "Applicant")

1.2 The Applicant's Address is:

New York State Electric & Gas Corporation
18 Link Drive
P.O. Box 5224
Binghamton, NY 13902-5224

1.3 The Applicant's telephone number is:

(866) 717-2202

1.4 The principal officer of the Applicant is:

Mark S. Lynch
President
New York State Electric & Gas Corporation
89 East Avenue
Rochester, NY 14649

1.5 Documents and correspondence are to be served upon:

Mark Mahlmeister
New York State Electric & Gas Corporation
18 Link Drive
P.O. Box 5224
Binghamton, NY 13902-5224
(607) 762-8856
MEMahlmeister@nyseg.com

and

Gina Speranza & Catherine Stelianou
Regulatory Administration
89 East Avenue
Rochester, NY 14649
NYregadmin@iberdrolausa.com

and

Noelle M. Kinsch. Esq
Iberdrola USA Management Corporation
99 Washington Avenue, Suite 2018
Albany, NY 12210
Noelle.Kinsch@iberdrolausa.com

and

John D. Draghi, Esq.
600 Third Avenue, 15th Floor
New York, NY 10016
(212) 557-9600
jddraghi@jddraghi.com

* * * * *