STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 15-T-0305 - Application of Niagara Mohawk Power Corporation for a Certificate of Environmental Compatibility and Public Need for its Clay-Dewitt Line 3 & Clay-Teall Line 10 Rebuild & Reconductor Project in Onondaga County.

ORDER GRANTING CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

Issued and Effective: April 23, 2018

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on April 19, 2018

COMMISSIONERS PRESENT:

John B. Rhodes, Chair
Gregg C. Sayre
Diane X. Burman
James S. Alesi

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BY THE COMMISSION:

INTRODUCTION

In this order, we grant Niagara Mohawk Power Corporation d/b/a National Grid (National Grid) a Certificate of Environmental Compatibility and Public Need (Certificate), pursuant to Public Service Law (PSL) Article VII. This Certificate authorizes National Grid to construct and operate a new substation in the Town of Cicero and relocate and selectively reconductor and reconstruct two existing 115kV transmission lines, the Clay to Teall Line 10 (Line 10) and the Clay to DeWitt Line 3 (Line 3) in the Towns of Clay, Cicero, DeWitt, and Salina, in Onondaga County (Project). The completion of this Project will enable National Grid to maintain reliable transmission services in its Central Region.

BACKGROUND AND PROCEDURAL HISTORY

On May 29, 2015, National Grid applied for a Certificate, pursuant to PSL Article VII. National Grid sought authorization to relocate and selectively reconductor and reconstruct two existing 115kV transmission lines, Line 10 and Line 3, in the Towns of Clay, Cicero, DeWitt, and Salina, in Onondaga County. The proposed work would involve the reconductoring or rebuilding of approximately 15.5 miles of Line 10 and almost 13 miles of Line 3.

The existing transmission lines share a right-of-way (ROW) that generally runs in a southerly direction from National Grid's Clay substation, located in the Town of Clay, to its Teall substation, located in the Town of Salina. The ROW for these lines also passes through the Towns of Cicero and DeWitt. Most of the Project was proposed to be located within the Existing ROW. However, at certain points, the acquisition of additional property would be required. In addition, the proposed transmission structures would be taller than the structures they replaced. National Grid stated that the purpose of the Project is to relieve post-contingency overloads affecting these existing lines, thereby maintaining reliable transmission services in National Grid's Central Region.

By letter dated July 1, 2015, National Grid was notified that its May 2015 application contained several deficiencies that needed to be cured before the application could be deemed to comply with PSL §122. National Grid filed supplements to its application in August and September.

In a motion filed simultaneously with its application, National Grid initially sought waivers of two regulatory requirements. In its September 1 supplement, National Grid withdrew one of the waiver requests. Following notice and opportunity to comment on the remaining waiver

request, National Grid's motion was granted.[1] By letter dated September 22, 2015, National Grid was informed that its application complied with PSL §122 as of September 18, 2015.

In a November 2015 filing, National Grid supplemented its Certificate application to include a request for authority to construct and operate a new substation in Cicero, New York. The new substation was proposed to be located on property adjacent to the transmission corridor, approximately 0.28 miles north of the intersection of Route 11 and Route 31 in the Town of Cicero.

On December 2, 2015, the presiding Administrative Law Judge (ALJ) held a public statement hearing at the DeWitt Community Room in East Syracuse during which eight people spoke.[2]

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[1] The remaining request sought a waiver of 16 NYCRR §86.3(b)(2)'s requirement for "[a]erial photographs of urban areas and urbanizing fringe areas ... taken within six months of the date of filing" (in this case, the photographs should have been taken no earlier than December 15, 2014). National Grid's request to instead use aerial photographs taken on May 16, 2013, was granted because the 2013 photos accurately reflected current conditions, and thus provided the substantive information required by the regulation. See Order Granting Waiver (issued September 18, 2015), pp. 3-4.

[2] The Supplemental Notice of Public Statement Hearing, issued November 16, 2015, was published in the local newspaper prior to the hearing.

On February 12, 2016, National Grid filed a Notice of Impending Settlement Negotiations.[3] Settlement negotiations ensued and continued for an extended time after the notice was filed. The negotiations ultimately led to the filing of a Joint Proposal (JP) that was signed by National Grid, Trial Staff of the New York State Department of Public Service designated to represent the public interest in this proceeding (DPS Staff), New York State Department of Agriculture and Markets (Ag & Markets), and New York State Department of Environmental Conservation (DEC).[4]

The JP describes the Project as proposed by the signatory parties and discusses the statutory findings required for the issuance of an Article VII certificate. Two significant changes reflected in the JP as compared to the Application are

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[3] In accordance with 16 NYCRR §3.9, the presiding ALJ reported on the adequacy of the notice to the Commission on February 16, 2016. The Notice of Impending Settlement Negotiations also was mailed to landowners and local public libraries. In addition, on February 26, 2016, National Grid certified that it had served a notice on landowners, pursuant to PSL §122(2)(c). Section 122(2)(c) was added to PSL Article VII by Chapter 521 of 2015, which became law on December 11, 2015. It states that "to the greatest extent practicable, each landowner of land on which any portion of such proposed facility is to be located shall be served by first class mail with a notice that such landowner's property may be impacted by a project, including a description of the project and an explanation of how to file with the commission a notice of intent to be a party to the certification proceedings and the timeframe for filing such application."

[4] The JP was submitted in several parts. The original version of the JP along with related documents was filed on November 16, 2017; supplemental, related documents were filed on November 20 and 22, 2017, and the JP, revised to reflect the addition of DEC as a signatory, was again filed on December 4, 2017, accompanied by additional, related documents. On March 29, 2018, National Grid identified two more marshalling yards that it will be authorized to prepare and use pursuant to conditions of the Certificate granted herein.

the substation location and the proposal to implement Option C7.[5] The JP includes appendices, several of which set forth proposed Commission findings, ordering clauses, and Certificate Conditions, specifications for developing the Environmental Management and Compliance Plan (EM&CP), and a proposed Water Quality Certification (WQC).[6] The JP also includes general provisions that articulate the signatory parties' agreements and understandings.[7] The signatory parties request that we approve the Project and grant the Certificate in this case by fully adopting the JP's terms and provisions.

On December 20, 2017, a Notice of the Joint Proposal and Opportunity for Public Comment (JP Notice) was issued. Two additional public comments were filed after the JP Notice was issued.

Public Outreach[8]

The JP highlights the public outreach that was conducted by National Grid regarding the application. Such efforts included legal notice of the filing, published in the Syracuse Post Standard for two consecutive weeks prior to the Article VII application filing; National Grid's provision of copies of the application for public inspection to the DeWitt Community Library, Northern Onondaga Public Library at Cicero,

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[5] National Grid originally proposed to locate the substation on a site located east of U.S. Route 11, in the Town of Cicero. In response to objections by the Town of Cicero to that site, a new site, located in the General Commercial zoning district of the Town of Cicero, is proposed in the JP. See JP ¶15 and Appendix B; see also Exhibits 22 and 23. National Grid has completed its review of the new site and has determined it to be a viable location. See JP ¶15.

[6] See JP Appendices C-F.

[7] See JP ¶¶ 1-3 and 5-7.

[8] JP ¶103.

Northern Onondaga Public Library at North Syracuse, Northern Onondaga Public Library at Brewerton, and Salina Free Library; letters, mailed February 2015, to all landowners, as defined in PSL §120(5), notifying them that the Project may affect their property and providing instructions on how to become a party to this proceeding; and letters, mailed April 2015, to owners of property within 150 feet of the Project ROW notifying them of National Grid's intention to file the application and including a map of the Project area and the toll-free number for people seeking additional information about the Project. The JP notes that a June 2016 letter was sent to owners of properties abutting the new substation location, notifying them of National Grid's proposal to use that site, rather than the originally proposed site, for the Cicero Substation.

The JP mentions National Grid's written communications with elected representatives of and landowners residing in the municipalities traversed by the Project and the conversations and in-person meetings and communications that National Grid representatives had throughout this proceeding. It notes that National Grid representatives were present prior to the December 2nd public statement hearings in DeWitt to conduct informational meetings and informally address the public's questions and concerns. Finally, it mentions the informational open houses conducted by National Grid on September 29, 2015, and September 30, 2015, along with the May 24, 2017, informational meeting conducted by National Grid and DPS Staff for the benefit of residents who live near the ROW where implementation of Option C7 is proposed.

The JP indicates that National Grid will notify adjacent landowners and residents of Project construction prior to its commencement and include a safety message and the toll-

free phone number that can be used to obtain additional information.

Public Comments

Most of the public comments in this case were filed before the JP was filed.[9] Many of the pre-JP commenters expressed concern about potential negative health effects of electric and magnetic fields emanating from the rebuilt and reconductored lines, especially on children. They urged more study of Electric and Magnetic Fields (EMFs) and more exploration and consideration of placing the lines underground. Some opined that the taller poles will have negative aesthetic and visual impacts that will devalue their properties. There were comments filed by persons associated with one of the businesses located along the ROW (on Route 11) expressing concerns, *inter alia*, that the Project will limit the ability to expand the business and that the taller poles will have negative visual impacts on customers. There also were some concerns about the extent to which de-vegetation has and will be pursued by National Grid. A school district official requested that work be performed when school is not in session to minimize disruption.

The two post-JP public comments are from two couples that reside near Segment 5 of the Project.[10] Both couples oppose the Project, asserting that the proposed 50 feet of additional easement will significantly impact their property line and potential resale value of their property. One couple reiterates previously articulated concerns about the extent to which

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[9] One of the commenters inquired about party status but subsequently indicated that he no longer wished to become a party.

[10] A comment opposing the location of the substation also was filed by an individual who had obtained party status.

property has been and will be cleared, adding, among other things, that they fear additional clearing will eliminate the wildlife.[11] They state that their requests for a picture and location of the new metal poles have not been answered.[12] They question whether there are possible health effects associated with EMFs from high voltage lines. Finally, they state that they do not wish to spend time negotiating to keep their property in a "reasonable state."

Public comment in Article VII proceedings is welcomed and actively solicited by the Commission, as it helps to inform the parties and the Commission of the issues that are important to those members of the public that live or work near a proposed project. Such comments provide an opportunity to explore relevant and jurisdictional concerns and impacts and craft ways to address them. As noted in the discussion section, below, it appears that such concerns and impacts were considered by the parties during this proceeding and, where appropriate, have resulted in changes or in practices, protocols, or conditions that are designed to address them.

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[11] Record evidence indicates that wildlife species that utilize the areas proposed to be cleared for Project-related work may be temporarily and minimally impacted by Project construction, but should be largely unaffected by the Project, generally, as they will continue to have a significant amount of suitable habitat available within the Project ROW. See, e.g., Exhibit 4, §4.6.

[12] Pictures of the poles are provided in the application (see, e.g., Exhibit 5) but final pole locations and designs will be provided in the EM&CP. National Grid will be required to provide a copy of the EM&CP Filing Notice to persons required to be served with the Application by statute or regulation and owners of properties (i) that abut the ROW and (ii) on which property rights are required. See, JP Appendix D, ¶26.

Description of the Proposed Project/Facilities[13]

As noted above, the Project entails the reconstruction and reconductoring of portions of two existing 115 kV National Grid electric transmission lines, Lines 3 and 10, and the construction and operation of a new substation in the Town of Cicero. Both transmission lines originate at the Clay Substation, but terminate at different points southeast of the Clay Substation. Work will be performed on approximately 15.5 miles of Line 10 and approximately 12.9 miles of Line 3. The lines are designed to operate at a nominal voltage of 115 kV alternating current (AC), the same as their voltage of initial operation.

Proposed Route and Segments

As shown in Exhibit 4, Figure 4-1, there are seven Project Segments. Existing Lines 3 and 10 will be removed from Segments 1 and 2 and relocated to Segment 7, thus minimizing the need to acquire additional ROW in densely populated residential areas and adjacent to an elementary school in Segment 2.

Segment 1 extends from the Clay Substation to Existing Structure 293 (Mile 2.72) in a generally northward direction.[14]

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[13] The following is a summary of the description and location information, set forth in JP Appendix B, filed November 16, 2017. If there are any conflicts or inconsistencies between this summary and JP Appendix B, the latter governs. Please note that Project components (the transmission lines and/or the substation) at times may be referred to as transmission facilities or facilities.

[14] As indicated in footnote 2 of JP Appendix B, the capitalized term "Mile" refers to the approximate linear ROW distance measured from the Clay Substation (Mile 0.0) to the Teall Avenue Substation (Mile 15.53), but "since Segment 7 is not contiguous with the end of Segment 6, its distance is measured with the notional assumption that the Clay Substation is at Mile 15.53 and Structure 326 is at Mile 18.03." Segment 1 is depicted on sheets 1, 13 and 14 of 17 of Exhibit 2, Figure 2-5 of the Application.

Segment 1 is comprised of the Existing ROW and includes National Grid fee-owned parcels that are maintained to a width of about 200 feet and National Grid easements with widths ranging from 150 to 160 feet. Segment 1 contains Existing Lines 3 and 10 and National Grid's T6400 Line 4. Most of Segment 1's Lines 4, 3, and 10 assets will be retired.

Segment 2 extends from Existing Structure 293 (Mile 2.72) to the existing Bartell Road Substation, generally heading to the east.[15] Segment 2 is comprised of the Existing ROW ranging from 80 to 110 feet wide. For most of Segment 2, only Existing Lines 3 and 10, which transition into double circuits, occupy the Existing ROW. However, for about the last .8 mile of Segment 2, National Grid's existing Line 33 (the Mallory-Cicero sub-transmission line) runs parallel to Existing Lines 3 and 10, but on a different ROW. All of Segment 2's existing double circuit Lines 3 and 10 will be retired and removed.

Segment 3 extends from the Bartell Road Substation to Existing Structure 326 (Mile 6.22) in a generally northward direction.[16] Segment 3 is comprised of the existing 100-foot wide ROW that National Grid owns in fee, along with an adjacent, but different ROW corridor that contains Line 33. Existing Lines 3 and 10 will be rebuilt for the full length of Segment 3,

[15] Segment 2 is depicted on sheets 14 and 15 of 17 of Exhibit 2, Figure 2-5 of the Application.

[16] Segment 3 is depicted on sheets 16 and 17 of 17 of Exhibit 2, Figure 2-5 of the Application.

approximately 38 feet to the east of the Existing ROW centerline.[17]

Segment 4 extends from Existing Structure 326 (Mile 6.22) to Existing Structure 349 (Mile 8.77) and generally runs from north to south.[18] For most of Segment 4, the National Grid fee-owned ROW is about 100 feet wide. In the areas adjacent to NYS Route 31 (for about .43 mile), the ROW narrows to about 31 feet. Segment 4 contains Existing Lines 3 and 10, supported by double circuit structures, parallel to existing Line 33. Existing Lines 3 and 10 will be rebuilt for almost the full length of Segment 4, continuing with the same offset position that will be used in Segment 3.

The exception to the positioning of the new structures in Segment 4 will be in the much narrower ROW section located adjacent to NYS Route 31. Due to width constraints in this area, additional rights on land adjacent to the western edge of the Existing ROW and a permit on New York State Department of Transportation (NYSDOT) land adjacent to the eastern edge will be required. These additional rights will be sought so that the parallel 115kV lines can be relocated adjacent to their present location without creating adverse impacts on nearby businesses. This positioning will involve transitioning the Lines 3 and 10 from their proposed 38-foot easterly offset to a centerline location approximately 4 feet west of the existing centerline. In all locations of Segment 4, the structure centerline of

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[17] Benefits of repositioning the ROW centerline include significantly reducing the need to acquire additional rights to comply with National Grid's currently applicable Transmission Right-of-Way Management Program (TROWMP) or to ensure conformance with electric and magnetic field guidelines and reducing the need for long-term outages and the load-at-risk created by the Project.

[18] Segment 4 is depicted on sheets 4, 5, and 6 of 17 of Exhibit 2, Figure 2-5 and Figure 2S-1 of the Application.

double circuit Lines 3 and 10 will be kept 50 feet from the western edge of ROW, with the Interstate 81 ROW bounding the corridor to the east. Double circuit Lines 3 and 10 will be supported by weathering steel, monopole, phase-over-phase double circuit structures.

Segment 5 extends from Existing Structure 349 (Mile 8.77) to Structure 389.5 (Mile 12.95), generally continuing its run from north to south.[19] At the beginning of Segment 5, the double circuit lines transition to single circuit structures. For most of Segment 5, the Existing ROW is comprised of transmission easements that are 100 feet wide, with trimming rights extending an additional 25 feet to the west. For parts of Segment 5, there are one or more additional but different rights-of-way adjacent to the ROW for Lines 3 and 10. Project work on Line 3 ceases at the end of Segment 5.

Option C7 is endorsed for a 1.5-mile long portion at the beginning of Segment 5.[20] Option C7 involves moving the centerline of Line 10 20 feet to the east and the centerline of Line 3 ten feet to the east with respect to the existing centerline locations, thus reducing the separation between the two transmission lines from 50 feet to 40 feet. To implement Option C7, National Grid will need to obtain transmission line construction and operational easement rights on a 50-foot-wide corridor of land east of the existing 100-foot transmission ROW in this section of the Project. On the rest of Segment 5, Line 3 and Line 10 would be retained on the same centerlines as Existing Line 3 and Existing Line 10. To facilitate the

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[19] Segment 5 is depicted on sheets 6, 7, 8, 9, and 10 of 17 of Exhibit 2, Figure 2-5.

[20] Option C7 would be implemented from Structure 350 (Mile 8.77) to Structure 364 (Mile 10.26) and is depicted in National Grid's December 4, 2017, filing letter, Attachment C.

installation of the new conductor, select structures on Line 3 and all structures on Line 10 will be replaced. A 75-foot width of ROW will be acquired adjacent to double circuit Lines 2 and 5 to allow for Line 3 to remain supported by H-Frame structures and remain in conformance with electric and magnetic field guidelines between Mile 11.04 and Structure 389.5.

The Project includes installation of an intermediate structure on Line 3 two spans to the southeast of the location where work ceases on Line 3 and it departs Segment 5. This installation is intended to ensure that the appropriate conductor clearance to an underbuilt distribution line is maintained.

Segment 6 extends from Existing Structure 389.5 (Mile 12.95) to Teall Avenue Substation (Mile 15.53), generally heading west.[21] It contains Existing Line 10 and the Existing ROW consisting of 200- to 300-foot wide easements (with trimming rights extending an additional 25 feet from the western edge of the ROW). Line 10 will be rebuilt on the same centerline for the full length of this segment. Replacement structures will generally be located between five and ten feet ahead or back of existing structure locations.

Segment 7 extends from the Clay Substation (Mile 15.53) to Structure 326 (Mile 18.03).[22] The full length of Segment 7 is adjacent to an existing ROW that contains the New York Power Authority's (NYPA) 345kV Lines 1 and 2, National Grid's 345kV Line 13, and National Grid's T2050 Line 5 (with the latter two lines sharing double circuit lattice structures). The width of the existing transmission corridor varies, ranging

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[21] Segment 6 is depicted on sheets 10, 11, and 12 of 17 of Exhibit 2, Figure 2-5.

[22] Segment 7 is depicted on sheets 1, 2, and 3 of 17 of Exhibit 2, Figure 2-5.

from 300- to 450-foot-wide easements. As part of the Project, the first two spans of Line 3 and Line 10, located immediately outside of the Clay Substation in Segment 1, will continue to be energized as Line 3 and Line 10. The second structure from the Clay Substation on each line will be replaced and the conductor, shield wire, and first structure outside the Clay Substation on each line will remain as they are at present.

From Mile 15.66 to Mile 16.20 of Segment 7, acquisition of 250 feet of permanent easements and danger tree rights will be needed to ensure existing and proposed facilities are located on land with National Grid-owned rights and to bring the corridor into conformance with National Grid's TROWMP. From Mile 16.20 to Mile 18.03, an additional 50 feet of operational easement in addition to danger tree rights will be needed to bring the corridor into conformance with National Grid's TROWMP.

Proposed Structure Types

Several different structure types will be used. All double circuit structure types will be weathering tubular steel pole structures, a material which maintains a brown, rust colored finish due to the weathering. In Segments 3, 4, and 7, double circuit Lines 3 and 10 will be supported by the same double circuit tubular steel structures, replacing the double circuit lattice towers currently supporting existing double circuit Lines 3 and 10 in those segments. The predominant structure type for double circuit Lines 3 and 10 is phase-over-phase configured davit arm monopole structures, to be used for both dead-end and suspension structures. The average height of the double circuit steel pole structures is approximately 90

feet and the average span length is approximately 605 feet.[23] Proposed Line 10 is to be located on the west side of the double circuit structure and Line 3 on the east.

Single circuit structures replacing those presently supporting Existing Line 3 and Existing Line 10 in Segments 5 and 6 will typically be weathering steel delta configured monopole structures. The predominant structure type for single circuit Line 3 and Line 10 is weathering steel delta configured monopole structures, sometimes referred to as compact structure design. This structure type is proposed for dead-end and suspension structures. The average height for the single circuit structures for the Project is approximately 75 feet and the average span length is approximately 515 feet.[24]

The wood pole structures that are not being replaced as part of the Project (i.e., on Line 3 in Segment 5 between Mile 11.04 and Mile 12.95) will need modifications. Approximately eight H-Frame suspension structures will require the addition of a cross-brace and span guys (tip-to-tip and tip-

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[23] The average height of the proposed new double circuit structures is provided in JP Appendix B. Comparisons of existing versus proposed structure heights are shown in Exhibit 5, Figure 5-2 (proposed ROW cross-section drawings for the various segments). The Figure 5-2 cross-section drawings show, for example, that, in Segments 3 and 4, the existing 65-foot, 7-inch structures would be replaced with proposed 80-foot structures, and, in Segment 7, where there two existing structures belonging to NYPA (87-foot height) and one belonging to National Grid (Line 13, 134-foot height), the height of the proposed double circuit structures for Line 3 and 10 would be 95 feet.

[24] The Segment 5 and Segment 6 proposed ROW cross-section drawings show that most of the existing structures (Line 3's 65.5-foot structures and Line 10's 57.5-foot structures) would be replaced with 80-foot structures (see Exhibit 5, Figure 5-2).

to-arm stays), and one H-Frame suspension structure will need to have the cross-arm raised and the existing span guys reframed.

Cicero Substation[25]

The Cicero Substation will be equipped with two 115-13.2 kV, 24/32/40 megavolt amperes (MVA) load tap change transformers in an eight-feeder open air breaker configuration (six of which would be fully built out). The 115 kV tap lines will provide a dual supply feed from Line 3 and Line 10 to the substation. The Line 3 and Line 10 tap lines will be approximately 250 feet and 160 feet in length.

The proposed location for the Cicero Substation is on the approximately 4-acre eastern portion (Substation Site) of an approximately 6.07-acre site owned by the Town of Cicero (Town), located east of U.S. Route 11, west of Interstate 81, and north of Gillette Road, in the Town of Cicero, Onondaga County. The Substation Site currently is used by the Town's Department of Public Works for offices, vehicle maintenance and parking, salt storage, gravel storage, metal/rubber/plastic storage, scrap appliance and scrap metal storage, and plow storage.

The proposed size of the Cicero Substation is about 240 feet by 200 feet (1.1 acres). The substation will be surrounded by a fence and surfaced in crushed stone. Equipment installed within the fenced enclosure will include, among other things, transformers, circuit switchers, disconnect switches supported by galvanized steel structures, instrument transformers in the form of 115 kV Capacitive Voltage

[25] A more detailed description is set forth in JP Appendix B, filed November 16, 2017. If there are any conflicts or inconsistencies between this summary and JP Appendix B, the latter governs. For an aerial photograph, please refer to Exhibit 22.

Transformers, a strain bus, a rigid bus, lightning masts, a control house enclosure, and station service transformers.

Other Permits

The JP calls for issuance of a water quality certificate pursuant to §401 of the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act).[26] The JP therefore includes a proposed water quality certificate which states that the transmission facility will comply with the applicable requirements of the Clean Water Act and will not violate any New York State water quality standards and requirements.

National Grid also must obtain, as required, authorization for work performed at state and municipal road and highway crossings, including New York State Department of Transportation highway work and use permits; U.S. Army Corps of Engineers (USACE) permits for construction in federal wetlands affected by the facility; a permit pursuant to §404 of the Federal Clean Water Act; and the State Pollutant Discharge Elimination System (SPDES) General Permit.[27]

DISCUSSION

The JP in this case is supported by four parties that have been active in this proceeding – National Grid, DPS Staff, Ag & Markets, and DEC. It addresses the statutory and regulatory issues pertaining to National Grid's Certificate request, adequately discusses all probable environmental impacts, and addresses the steps needed to ensure that the Project as proposed represents the minimal adverse environmental

[26] The WQC would be signed by the Department of Public Service's Director of the Office of Energy Efficiency and the Environment. See JP Appendix F.

[27] See, e.g., JP Appendix D, Certificate Conditions 6 and 36.

impact, considering the state of available technology and the nature and economics of various alternatives and other pertinent considerations. The process provided all interested parties and the public a full opportunity to participate, and the parties adhered to our settlement rules and guidelines.[28]

The process employed provided numerous opportunities for public input and the record establishes that the proposal advanced by the JP signatories is responsive to the public comments and input they received. As noted above, several commenters expressed concerns about EMFs from the existing and proposed lines, including concerns that the Project would result in increased magnetic fields in the Lisi Gardens development, and asked that undergrounding be explored. In response, additional studies were performed[29] and the record evidence demonstrates that in the Lisi Gardens section of the Project, the magnetic field levels (as well as electric field levels) of Lines 3 and 10 at each line's annual average load will be lower after completion of the Project than such levels are today.[30]

Two other alternatives also were considered as possible responses to such concerns. The first, the "Lisi Gardens Bypass," is not recommended by the JP signatories because it would cost about $5 million more than the proposed route, would result in additional environmental impacts (including to wooded areas, wetlands, and forested lands), and would require new property rights on 15 separate tax parcels, 12 of which are not currently traversed or immediately adjacent to

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[28] Parties were provided with the opportunity to submit proposal(s) for further process in this case. Only National Grid responded, proposing an unopposed process that included, *inter alia*, a 30-day public comment period on the JP and submission of a report to the Commission for its decision.

[29] See Exhibit 26.

[30] See Exhibit 24.

the Existing ROW established in 1942.[31] The second, Option C7, which would require the acquisition of additional easements, an outcome opposed by several public commenters, is endorsed by the JP signatories.[32] With respect to Option C7, DPS Staff asserts that it is reasonable to follow a "prudent avoidance" policy. In support of this option, DPS Staff notes that Option C7 has the advantage of significantly reducing the average magnetic fields at the edge of the western right-of-way at a cost that is comparable to implementing the Project without Option C7.[33] We find these arguments persuasive and conclude that the record overall provides sufficient bases for approving this option.

Undergrounding also was explored and considered but is not supported or recommended by the JP signatories due to its substantially higher cost and technical inferiority to the Project as proposed (e.g., greatly increased complexity, longer restoration times, load hogging issues, and voltage control issues).[34]

Objections to the proposals to increase the height of the structures in the segments where the existing lines are to be rebuilt were received from some commenters. However, such objections must yield to practical and objective considerations of and requirements to comply with applicable safety and engineering standards. In addition, in response to these objections and to other concerns about the Project's potential impacts to activities presently enjoyed by residents living near the Existing ROW, we note that the JP proposes protocols and procedures to help ensure that the clearing of the ROW is done

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31 See JP ¶86.

32 See JP ¶87.

33 See Prepared Testimony Leka Gjonaj, dated September 2017, pp. 7-9.

34 See JP ¶¶94-99.

in a manner which is compatible with areas that are environmentally sensitive or have high visual sensitivity and in a way that maintains aesthetic values to the extent practicable, and avoids conflicts with existing land use activities like agriculture or gardening.[35]

With respect to the substation, the JP endorses a change in the location that addresses objections raised by the Town of Cicero to the originally proposed site and results in the use of a site that promotes compatibility with existing and future land use. The only objection to this change fails to offer any valid basis or justification why it should not be approved.

The JP produced a reasonable result that is in the public interest and consistent with applicable State and the Commission policies.

Basis of the Need[36]

Based on information provided in the record, we find that the Project is needed as soon as practical to maintain reliable transmission service within National Grid's Central Region. National Grid's existing 115 kV Line 3 and Line 10 are identified as Bulk Power System elements. As the lines experience conditions outside their accepted limits during single- and multiple-element contingencies, including outages of both Bulk Power and Non-Bulk Power elements, mitigating measures are required. The thermal capacity of these lines is unacceptable. In this scenario, post-contingency flows for these two lines are between the long-term and short-term emergency ratings for N-1 contingencies. For N-1-1 contingencies, the worst-case post-contingency flow for existing

[35] See, e.g., Exhibit 21 (§2).

[36] PSL §126(1)(a).

Line 3 is between its long-term and short-term emergency ratings. The worst-case post-contingency flow for existing Line 10 is above its short-term emergency rating. The Project would resolve these capacity issues.

Furthermore, National Grid's North Syracuse distribution study area is the northern suburb of the City of Syracuse, which has received most of the new housing development in the Syracuse metropolitan area. In the North Syracuse area, there are significant capacity and outage exposure issues that need to be resolved. Two major substations that need to be relieved are the Pine Grove Substation and the Bartell Road Substation. In addition to the relief needed at these two existing substations, there are existing distribution feeders with thermal overloads that need to be addressed. The Cicero Substation element of the Project is needed to provide the required load relief.

Probable Environmental Impacts[37]

The JP summarizes the nature of the probable environmental impacts as they relate to the following areas: land use; visual, cultural, terrestrial, wildlife, wetland and water resources; topography and soils; transportation; noise and debris; communications; and electric and magnetic fields.[38] The JP notes that the Project has been reviewed with respect to these potential impacts, adding that with the modifications developed by the JP signatories, the Project represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations.

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[37] PSL §126(1)(b) and (c).

[38] JP, pp. 9-28.

Land Use

Project construction activities would occur primarily within existing electric transmission rights-of-way, which National Grid holds by a combination of fee ownership and easement rights. Within the one-mile study area, vacant land is the most prevalent land use (32%), followed by residential use (28%) and commercial land use (15%). Residential use occurs most frequently on Segments 2, 4 and 5, while commercial land uses are concentrated heavily along the Route 11 and I-81 corridors on Segments 2, 3, and 4, and the Northern Boulevard and Molloy Road area on Segment 6. Industrial/utility uses also are present and tend to be concentrated near the Clay and Teall substations and along the southern portion of the Project on Segments 5 and 6.

The Project will require the acquisition of some additional permanent easement rights, predominantly on Segments 3, 4, 5, 6 and 7. For the most part, the new rights will be acquired along the west side of the Existing ROW, and are relatively small (up to 25 feet wide) and at discrete locations. However, to implement Option C7, National Grid will need to obtain transmission line construction and operational easement rights east of the existing transmission ROW, while Segment 7 requires the establishment of a new ROW.

Trees and shrubs within the Project's access roads, wire zones, and work areas will be mowed or cleared as necessary to provide unimpeded and safe access to proposed work sites. Shrubs and low growing vegetation, as well as buffers at streams or in visually sensitive areas, will be maintained, provided they do not interfere with construction activities or the operational integrity of the facilities on the ROW.

The conversion of existing forestland in these easement areas to herbaceous cover and low-growing compatible

shrub species is not anticipated to significantly affect land use patterns or uses along the Project ROW. Permanent easement rights to remove trees outside of the easement area that may pose a danger or hazard to Project facilities, also known as Danger Tree Rights, are required for portions of Segments 3, 4, 6, and 7.

The Project is not anticipated to change the existing residential, commercial, and industrial uses adjacent to the ROW or in surrounding areas. Any potential encroachments in the Project ROW determined by National Grid to contravene its property rights will be addressed by National Grid on a case specific basis.

The Project is consistent with the goals of the 2009 New York State Open Space Conservation Plan, in that the plan recognizes that energy production and distribution capacity are important to New York State and the Northeast generally and the Project makes use of a statewide planning and siting process that takes into consideration natural and recreational open spaces as well as the state's natural and cultural heritage. Local land use plans or policies of the towns of Clay, Cicero, DeWitt, and Salina were considered in the routing, locations, and configurations of Lines 3 and 10 and the Cicero Substation, with the goal of promoting compatibility with existing and future land use. The Project does not traverse any state or local parks.

Visual Resources

Generally, construction on Segments 1, 2, 3, and 6 will require minor clearing, consisting of mowing of brush to allow clear and safe work areas and access to work locations; this clearing is expected to result in only a temporarily change to vegetative conditions and no significant changes to visual

quality.[39] Tree removal in Segments 3, 4, 5, and 6 will occur at the edge of the Existing ROW. And, in Segment 7, the widening of the ROW by 50 feet will include approximately 4.1 acres of tree removal.[40]

A short section of the Project ROW on Segment 4, between Structures 343 to 349, will require the clearing of a vegetative strip between the existing double circuit Line 10 and Line 3 and existing Line 33. This clearing, which is necessary to shift the proposed new centerline of Lines 10 and 3 to the east, will result in a higher visibility of Line 33 and the transmission corridor, but there will be some remaining vegetation along the ROW edges to backdrop and partially screen the Project.

On Segment 7, some existing forestland along the new ROW will be converted to herbaceous cover and low growing shrub species. This change in vegetative cover type, however, will not significantly change the overall composition of the vegetative cover types found along this segment. Thus, it is not anticipated to have a significant or noticeable visual effect on the area.

On Segment 1, the removal of two sets of H-frame structures (on Lines 4 and 10) will improve the visual setting. Similarly, removal of all the existing double circuit steel lattice towers on Segment 2 will significantly improve the visual appearance in this area. Where the lines are rebuilt and

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[39] The visual study area was identified in the DEC's Program Policy DEP-00-2 (*Assessing and Mitigating Visual Impacts* (NYSDEC, 2000)). The DEC policy notes that the State's interest with respect to aesthetic resources is to protect those resources whose scenic character has been recognized through national or state designations.

[40] National Grid intends to include such tree removal in an Environmental Management and Construction Plan (EM&CP) phase that it submits to the Commission for approval.

reconductored on taller structures, the visual impact of the Project will be only incremental to the existing visual condition.

Due largely to its relatively modest size and the screening that National Grid intends to install post-construction to screen views from the south and from sensitive resources and receptors within the study area, the Cicero Substation is anticipated to result in limited visual impact. According to the JP signatories, neither scenic quality nor viewer sensitivity suggests that the limited visual contrast presented by the new substation could be considered a significant adverse visual impact.

Cultural Resources

The JP reports that OPRHP has indicated that the Project will have no impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places. The Certificate conditions proposed by the JP signatories and adopted herein by us include requirements for final review of archeological surveys by OPRHP and other appropriate authorities and specify the actions to be taken to avoid and mitigate impacts to any cultural resources, if they are encountered.[41]

[41] See JP Appendix D, ¶¶77-81.

Terrestrial Ecology and Wetlands

Vegetative communities[42] within the Project ROW will be temporarily disturbed by construction activities and equipment access, resulting in changes in the mix of the various vegetation community found in and adjacent to the ROW. The establishment of a new ROW for Segment 7 will have an incremental impact to vegetative communities because it is immediately adjacent to an existing transmission corridor and, for the most part, represents a relatively small widening of existing conditions.

Additional forest and forested wetland will continue to exist beyond the new ROW. Post-construction, the vegetation on all segments of the Project will be maintained in accordance with National Grid's TROWMP and will return to the same shrub and herbaceous vegetative cover type that presently exists on the Project ROW. The anticipated impacts to vegetative communities attributable to construction and operation of the Project are expected to be minimal.

Direct impacts to wildlife are anticipated to correlate to the impacts to plant communities, meaning there will be a minimal, temporary disturbance with a negligible impact on wildlife. Those wildlife species utilizing any areas of scrub-shrub or woodlands where clearing is proposed may be temporarily affected by the loss of woody species for food, shelter and nesting. However, the wooded areas located adjacent to or near the Project ROW will be unaffected and continue to

[42] Vegetation within the Project ROW includes forest, emergent and forested wetland, a small amount of agricultural land, lawns, early successional meadows, and shrub land communities. The typical wildlife expected to occur within the Project area includes generalist species as well as species adapted for early successional meadows, shrub land communities, and the deciduous forest that borders the Project ROW.

provide this habitat component. A large portion of the existing plant communities that are in early successional stages will remain unaltered by the Project. Therefore, wildlife species that utilize these cover types will be largely unaffected.

A variety of meadows, marshes and scrub-shrub wetlands associated with rivers, perennial streams and intermittent streams occur within the Project ROW. A total of 69 wetlands within and adjacent to the Project ROW were delineated in the field.

Proposed tree clearing in the newly acquired easement on Segment 7 will result in some conversion of forested wetland to scrub-shrub/emergent wetland. In addition, there will be some conversion on Segment 4 due to shifting the new line approximately 38 feet to the east, but none of the conversion on Segment 4 will occur in DEC-regulated wetlands. Impacts from the vegetative conversion on Segments 7 and 4 will be addressed in a compensatory wetland mitigation plan to be developed in consultation with DEC and included in the EM&CP. Permanent impacts to wetlands associated with the proposed placement of new structures will be minimized by locating structures outside of wetlands, to the extent practicable, where the alternative of spanning the wetland exists. All existing wood pole structures that are proposed to be removed (Segments 1, 5 and 6) will be removed from wetland areas, except where it is determined that cutting and leaving such structures in place would cause less disturbance to the wetland.

Significant environmental impacts to wetlands and water resources will be avoided or mitigated. In addition, erosion and sediment control measures designed to maintain and protect soil and water resources both during and after construction will be prescribed for all areas where soil

disturbance occurs. With implementation of National Grid's *Best Management Practices for Article VII Electric Transmission Line Projects* (BMPs), the Substation facilities are not anticipated to have an adverse impact on water quality within the on-site wetlands or any off-site wetlands or streams.

Project construction activities in wetlands and other waters over which the USACE has regulatory jurisdiction will be authorized by the USACE under Section 404 of the Clean Water Act (33 U.S.C. §1344). National Grid will follow the construction practices contained in the Certificate Conditions set forth in JP Appendix D to identify and address potential invasive species hazards.

Topography and Soils

No topography or soil related impacts are anticipated because of this Project. There are no unique geologic or topographic features that will be permanently affected by the construction or operation of the Project, and grading operations for access roads and at structure work areas along the Project ROW will be designed to protect soils from erosion, compaction, and soil mixing. Construction activities required for structure installation will be confined to access roads and work areas that are laid out on a structure-by-structure basis, taking soil type and slope into consideration. Temporarily stockpiled soils will be protected to prevent erosion and to keep stormwater runoff from reaching adjacent areas. Vegetative clearing and slash disposal techniques will be prescribed in the EM&CP to minimize disturbance to areas of sensitive or unstable soils and steep slopes, as will measures to prevent or minimize impacts associated with topography and soils.

Transportation

There are five airports within 20,000 feet of the Project ROW. The Project ROW also is adjacent to and crosses

over a railroad corridor (CSX Transportation, Inc.) in Clay and Cicero, but National Grid does not anticipate the need to temporarily use any of the active railroad corridors for construction access to the Project ROW. The final designs for the Project will incorporate appropriate transmission facility design criteria, line clearance requirements, and railroad safety clearances. National Grid will review the final Project designs with the railroad company and coordinate its construction activities with the railroad companies to ensure that such activities do not conflict with railroad operations and freight movements and to ensure that appropriate railroad safety precautions are implemented.

The Project ROW crosses 35 interstate, state, county, and local roadways in Cicero, Clay, DeWitt, and Salina. During construction, the Project ROW will be accessed from these road crossings. Construction access points from local roads will be located to ensure maintenance of safe traffic operations at the road crossings. A Maintenance and Protection of Traffic (MPT) Plan will be developed for each location where construction vehicles will access the Project ROW frequently from local roadways, and a safe construction work zone near the edge or within a traffic lane for construction activities within the road ROW will be provided. The MPT Plan traffic control measures will be incorporated into the EM&CP.

To minimize potential conflicts with traffic patterns and lane usage, transmission structures have been located outside of road rights-of-way and as far from road crossings as feasible. Construction-related activities will be conducted so as not to impede safe roadway operation and to otherwise minimize traffic disruption and incremental traffic volume. Each marshalling yard that requires a State Pollution

Discharge Elimination System General Permit for construction site runoff will qualify for one. In addition, required work permit applications will be submitted for all applicable road crossings and National Grid will fully comply with conditions contained therein. All work within state highway rights-of-way will be designed and performed in accordance with applicable traffic and safety standards.

The Project ROW intersects one known multi-use trail, maintained by the Snow Owls of Clay/Cicero (a snowmobile club). The snowmobile club was notified that its License Agreement with National Grid will be suspended until the Project is completed. Appropriate construction safety practices, such as temporary barricades and fencing, to be identified in the EM&CP, will be implemented.

Water Resources

A total of 41 stream crossings are identified along the Project ROW, four of which are named streams as follows: Young's Creek (Segment 1), Mud Creek (Segment 4), North Branch Ley Creek (Segment 6), and Ley Creek (Segment 6). The Project ROW traverses one Class B stream, Ley Creek, and 20 Class C streams, none of which are designated as trout waters. The Project ROW also crosses 20 unclassified intermittent streams, most of which are drainage channels or ditches that exhibit flow certain times of the year. Construction of the Project will not require new installation of permanent stream crossings in any of the named streams traversed by the Project ROW.

There are no significant waterbodies, i.e., large ponds, lakes, or reservoirs, located within the Project ROW. Because the Project will be installed on overhead lines exclusively, structures will be located to span streams within the Project ROW. Construction will avoid the discharge of fill material to jurisdictional wetlands that would require a permit.

Additionally, the Project will not be constructed in, on, or over a navigable water body.

Impacts to surface waters could potentially result from clearing and grading in areas adjacent to, within, and downstream of the Project ROW for construction access, installation and maintenance of the Project lines. Erosion and sediment control practices and BMPs will be prescribed on a site-by-site basis in the EM&CP, and no impacts to surface waters are anticipated.

Vehicular access across streams and other watercourses will be avoided. DEC may enter and inspect the Project to assess compliance with any DEC-issued permit or applicable substantive statute or regulation under DEC's jurisdiction; DEC will notify the DPS Staff representative and appropriate National Grid representatives of any activities that violate, or may violate, either the terms of the Certificate or the Environmental Conservation Law.

Noise

Overhead transmission line construction will generate noise levels that are periodically audible along the Project route, access roads, structure sites, conductor pulling sites, staging areas, and marshalling yards. Noise sources will include power tools and construction equipment, like that used during typical public works projects and tree service operations. Construction at substations other than the proposed Cicero Substation will include equipment modification and installation of new equipment and is not anticipated to be a significant source of construction noise.

Construction of the proposed Cicero Substation will involve the use of heavy equipment, such as, bulldozers, dump trucks, and cement mixers, during excavation and concrete pouring activities. Noise generated during construction will be

primarily from diesel engines that power the equipment. Since exhaust noise usually is the predominant source of diesel engine noise, all diesel engine equipment involved in the construction activity will have functional mufflers. Noise transmitted from the construction site will be attenuated by a variety of mechanisms, the most significant being the diversion of the sound waves with distance. Construction noise will be temporary in nature and, as such, no long term or significant noise impacts due to construction are anticipated.

Noise generated by the operation of 115kV transmission lines typically contributes little to area noise levels. Operation of the proposed transmission lines is not expected to result in adverse noise impacts.

Operation of substations involves switching, protection and control equipment and typically one or more transformers, which generate the sound generally described as a low humming. This sound will attenuate with distance at different rates depending on the transformer dimensions, voltage rating, and design. The Noise Study (Exhibit 20) shows that the noise produced by the operation of the Cicero Substation at the Substation Site as proposed in the JP is not anticipated to impose a limitation on the current or future use of adjacent commercial lands or generate complaints from those occupying them. At the property boundaries of the commercial uses that abut the Substation Site, sound levels from the substation transformers are expected to be inconsequential because they are generally comparable to or below measured typical daytime background levels. As a result, no noise mitigation measures beyond those measures already incorporated into the design of the Cicero Substation assumed in the Noise Study are proposed. Substation maintenance will generate short-term, daytime traffic

noise during Project maintenance and inspection, but is not expected to result in adverse noise impacts.

Communications

The Project is not expected to have any adverse effects on communications (e.g., cellular, television, radio) during construction or operation, but if any such complaints are received, interference that is determined to result from the Project will be resolved by National Grid.

Electric and Magnetic Fields

We are approving the implementation of Option C7 because it is a reasonable way to reduce the annual average level of magnetic fields associated with this Project at nearby homes. This approach is consistent with other Commission "prudent avoidance" precedents in electric transmission cases where the Commission made fact-specific determinations of levels of magnetic fields that could be avoided. We also note that Exhibit 18 demonstrates that the maximum calculated electric and magnetic fields (measured on a momentary peak basis) are within the Commission's guidelines.

Alternatives[43]

As noted above, alternatives were considered including alternative routes, undergrounding, and alternative methods of fulfilling the energy requirements. The JP indicates that the Project, as described in JP Appendix B, is preferable to any of the alternatives that were considered because, on balance, the substation location has relatively minimal impacts to wetlands, floodplains, topography, and residential areas, and the selected route and configurations use existing electric transmission corridors and avoid impacts to existing land uses. We concur.

[43] JP, pp. 29-38.

The substation site National Grid originally proposed had disadvantages, including being incompatible with the Town of Cicero's long-term development plan for the U.S. Route 11 corridor. No viable, entirely new routes were identified for relocating the entire length of the Project. Hancock International Airport, located directly to the north of the Teall Avenue Substation and large wetland areas, such as the Cicero Swamp to the east of the Project area and the Hamlin Marsh to the west of the Project area, severely limit the availability of entirely new alternate routes that would have less impact than the proposed Project route. Moreover, any such alternative route would significantly impact residential or commercial industrial areas and would direct the existing lines away from the six substations presently served by one or both lines. The re-use of the Existing ROW for the entire length (i.e., Segments 1, 2, 3, 4, 5 and 6) also was considered, but was rejected because it would require the acquisition of additional operation easements in densely populated residential areas.

We agree that a no-build alternative is ineffective because it does not serve the growing Central Region load or eliminate projected post-contingency thermal overloads on Lines 10 and 3. And, with the relatively short distances involved, the installation of direct current electric transmission appropriately was rejected as cost-prohibitive. Finally, for the reasons summarized in the JP, adding sufficient demand and/or supply resources at strategic locations within the Central Region, also would be an infeasible alternative.

Based on the information provided in the record and consistent with the above discussion, we find that the nature of the probable environmental impacts resulting from the Project includes: (a) minimal incremental visual impacts from the

construction of the Proposed Line and the busing, relocation, and reconstruction of certain existing lines; (b) construction impacts on certain regulated wetlands and protected streams and waterbodies; (c) selective clearing of undesirable woody species or saplings on some segments of the Project's right-of-way, but because almost the entire Project will be built along existing electric transmission corridors, the amount of clearing is more limited than it would be if new corridors were being created; (d) temporary disturbance and inconvenience, including noise and debris, associated with construction activities; (e) temporary construction impacts on a small amount of active agricultural lands, which will be minimized by using existing transmission corridors to the maximum extent practicable; and (f) the reduction of average annual exposure to magnetic fields at nearby homes and maximum calculated electromagnetic fields at the edge of the Project's right-of-way (measured on a momentary peak basis) that comply with the Commission's guidelines. We further find that the Project represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and the ownership and easement rights of the impacted property. By utilizing existing transmission corridors to the maximum extent practicable, the effect of the Project on agricultural lands, wetlands, and river corridors traversed is minimized.

We note that, while there are references in the record to the five airports that are within 20,000 feet of the Project ROW and to an obstruction evaluation that was performed pursuant to the Federal Aviation Administration (FAA) criteria set forth in CFR Title 14 Part 77.13, there appears to be no mention of the status or outcome of the obstruction evaluation or of the steps, if any, that will be taken to ensure that the Project's

final design elements will not impact these airports.[44] Therefore, after the Project design is finalized and set forth in the approved EM&CP, we require National Grid to obtain and provide evidence of the FAA determination that the final design of the structures proposed for the Project will have no impact (or will have impacts mitigated by FAA-directed modifications to the final design) on these airports.

Active Farming Operations That Produce Crops, Livestock, and Livestock Products[45]

The JP notes that the Project ROW does not cross any designated Agricultural Districts in Onondaga County. Where it does cross approximately 700 linear feet of agricultural land located north of Caughdenoy Road on Segment 1, the three, single circuit wood pole H-frame structures (Lines 4, 3, and 10) that are on agricultural land are proposed to be removed, resulting in an overall benefit to agricultural activities. Agricultural operations may be disrupted on a short-term basis, depending upon the timing of construction and any seasonal constraints on construction activities. National Grid's construction activities will be coordinated with any ongoing farming activities in effort to minimize disruption and crop damage. In addition, site-specific protection and restoration measures, such as rehabilitation of drainage tile and deep tilling of compacted areas, will be prescribed and shown in the EM&CP. Accordingly, we find that the Project represents a minimum adverse impact on active farming operations that produce crops,

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[44] The original application states that, in accordance with the *Notice Criteria Tool* on the FAA's Obstruction Evaluation website, National Grid likely will need to file a *Notice of Proposed Construction or Alteration* with the FAA for multiple structure locations associated with the Project. See Exhibit E-6, §E-6.2.

[45] PSL §126(1)(d).

livestock and livestock products, as defined in section three hundred one of the agriculture and markets law, considering the state of available technology and the nature and economics of various alternatives, and the ownership and easement rights of the impacted property.

Undergrounding/Conformance to Long-Range Plan[46]

No part of the Project will be located underground. As noted above, undergrounding the Project would have significantly increased costs, environmental and construction impacts, and system operating impacts.

Based on information provided in the record, we find that the Project conforms to the requirements and planning objectives of the New York Independent System Operator, and is consistent with National Grid's long-range plans for the expansion of its transmission facilities, and will serve the interests of electric system economy and reliability.

Conformance to State and Local Laws[47]

We note that in Exhibit 7, National Grid identifies, for each local jurisdiction, every substantive local legal provision (ordinance, law, regulation, standard, and requirement) potentially applicable to the Project and every such local legal provision that National Grid requests the Commission not apply because, as applied to the Project, such local legal provision is unreasonably restrictive in view of the existing technology, factors of costs or economics, or the needs of consumers. National Grid requests that we not apply several local laws including, for example, local laws pertaining to (i) time restrictions on construction noise because exceptions may be required for safety or continuous operation requirements;

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[46] PSL §126(1)(e).

[47] PSL §126(1)(g).

(ii) prohibitions on sign placement near utility poles because the placement of warning and safety signs is warranted and appropriate to most effectively warn the general public of dangers associated with energized electrical equipment; (iii) minimum lot width, frontage, and depth requirements, because these requirements have no necessary nexus or relevance when considered in light of National Grid's contiguous linear ROW lots; (iv) maximum height requirements, because compliance is technologically impossible; and (v) landscaping and/or screening requirements and prohibitions on cutting existing vegetation, on the grounds that these requirements cannot be reconciled with the Clearing and Slash Disposal Procedures in the EM&CP and National Grid's TROWMP. No local jurisdiction has filed any objection to these requests. We will not apply the local laws identified in Exhibit 7 because we find that, as applied to the Project, such requirements are unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality. We further find that the location of the Project conforms to applicable State and local laws and regulations issued thereunder, except for the local laws and regulations we have refused to apply.

Provisions Not Adopted

With respect to the general provisions set forth in section I of the JP, we note that, for the most part, these are routine terms governing the parties' relationships which we are not required to make any findings about to determine whether a Certificate should be issued. Therefore, except for JP paragraph 4 (relating to dispute resolution), we do not adopt the provisions in JP Section I.

Conclusion/Public Interest Finding

In conclusion, and consistent with the discussion, *supra*, we find that the Project, as approved herein, will serve the public interest, convenience and necessity.[48]

The Commission orders:

1. Except as modified in and to the extent consistent with the discussion in this Order, the terms and provisions of the Joint Proposal attached to this Order, are adopted and incorporated into and made a part of this Order.

2. Subject to the conditions adopted in this Order, Niagara Mohawk Power Corporation d/b/a National Grid is granted a Certificate of Environmental Compatibility and Public Need (Certificate) authorizing it to construct and operate a new substation in the Town of Cicero and relocate and selectively reconductor and reconstruct two existing 115kV transmission lines, the Clay to Teall Line 10 and the Clay to DeWitt Line 3 in the Towns of Clay, Cicero, DeWitt, and Salina, in Onondaga County.

3. The Certificate Conditions included as Joint Proposal Appendix D, attached to this Order, are hereby approved and incorporated into this Order.

4. The Water Quality Certification included as Joint Proposal Appendix F is authorized to be signed and issued by the Chief of the Environmental Certification and Compliance Section in the Office of Electric, Gas, and Water of the New York State Department of Public Service.

5. Niagara Mohawk Power Corporation d/b/a National Grid shall secure and provide to the Secretary prior to commencement of construction evidence of a Federal Aviation

[48] PSL §126(1)(h).

Administration (FAA) determination that the final design of the structures proposed for the Project will have no impact (or will have impacts mitigated by FAA-directed modifications to such final design) on the five public-use airports that are within 20,000 feet of the Project Right-of-way.

6. Except for deadlines established by statute, the Secretary may extend any deadlines established by this order for good cause shown.

7. This proceeding is continued.

By the Commission,

(SIGNED) KATHLEEN H. BURGESS
Secretary

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Case 15-T-0305 - Application of Niagara Mohawk Power Corporation d/b/a National Grid for a Certificate of Environmental Compatibility and Public Need for its Clay – Dewitt Line 3 & Clay – Teall Line 10 Rebuild & Reconductor Project in Onondaga County

JOINT PROPOSAL

By:
Niagara Mohawk Power Corporation d/b/a National Grid
Staff of the New York State Department of Public Service
New York State Department of Agriculture and Markets

Dated: October 23, 2017
Albany, New York

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Case 15-T-0305 - Application of Niagara Mohawk Power Corporation d/b/a National Grid for a Certificate of Environmental Compatibility and Public Need for its Clay – Dewitt Line 3 & Clay – Teall Line 10 Rebuild & Reconductor Project in Onondaga County

JOINT PROPOSAL

This Joint Proposal, which includes Appendices A through F attached hereto and incorporated herein, is made as of the 23rd day of October, 2017 by and among the following (collectively referred to as the "Signatory Parties"): Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or "Applicant"); Staff of the New York State Department of Public Service designated to represent the public interest in this proceeding ("DPS Staff"); and the New York State Department of Agriculture & Markets ("NYSDAM").

INTRODUCTION

On May 29, 2015, the Applicant filed with the New York State Public Service Commission ("Commission") application documents, pursuant to Article VII of the Public Service Law ("PSL") and the Commission's regulations thereunder, for a Certificate of Environmental Compatibility and Public Need ("Certificate") authorizing the relocation and selective reconductoring and reconstruction of two existing 115kV transmission lines, approximately 15.53 miles of the Clay to Teall Line 10 ("Line 10") and approximately 12.95 miles of the Clay to DeWitt Line 3 ("Line 3") (Line 3 and Line 10, as National Grid proposes to relocate and reconductor them, referred to collectively as the "Transmission Facilities"), in the Towns of Clay, Cicero, DeWitt, and Salina, all in Onondaga County.

On August 3, 2015, the Applicant filed with the Commission a replacement Figure 2-5 to Exhibit 2 and an addendum to Exhibit E-2. On September 1, 2015, the Applicant filed with the Commission a replacement Figure 2-4 of Exhibit 2. In a letter dated September 22, 2015, the

Secretary to the Commission found that the application was filed or otherwise in compliance with PSL §122 as of September 18, 2015.

On November 10, 2015, National Grid filed with the Commission a replacement Exhibit 9.

On November 13, 2015, National Grid filed a supplement to the application with materials detailing National Grid's proposed new 115 kV/13.2 kV distribution substation ("Cicero Substation") in the Town of Cicero, New York, as well as the 115kV tap lines that would connect the substation to the two electric transmission lines that are the subject of the application materials filed on May 29, 2015. On August 3, 2016, National Grid filed with the Commission a replacement Noise Study that replaces the Noise Study that the Applicant had originally filed with the Commission on November 13, 2015 as Appendix F to the application, replacement Sheets 33E and 33P for Figure 5-2 of Exhibit 5, and a replacement to the Electric and Magnetic Field ("EMF") Study ("EMF Study") that the Applicant had originally filed with the Commission on May 29, 2015 as Appendix D to the application and supplemented on November 13, 2015. On August 12, 2016, National Grid filed with the Commission a supplement to the replacement Noise Study that was filed on August 3, 2016 (collectively, the "Noise Study") (the application documents, inclusive of the foregoing supplements and replacements, are referred to as the "Application").

National Grid held informational "open houses" for the public on September 29, 2015, at Cicero Town Hall in Cicero, New York, and on September 30, 3015, at the DeWitt Community Room in East Syracuse, New York. A Public Statement Hearing was held before Administrative Law Judge Ben Wiles on December 2, 2015, at the DeWitt Community Room in East Syracuse, New York, preceded by an informational session for the public. A procedural conference of the

active parties was held before Administrative Law Judge Wiles in Albany, New York on January 28, 2016.

After exploratory discussions among the parties, a Notice of Impending Settlement Discussions was sent to all active parties and other interested persons and duly filed with the Commission on February 12, 2016. Settlement conferences were held in person or by telephone on March 3, 2016, March 4, 2016, March 16, 2016, March 31, 2016, April 6, 2016, April 21, 2016, June 7, 2016, June 22, 2016, December 20, 2016, and October 16, 2017. Electronic communications were also utilized to facilitate settlement discussions.

After thorough discussion of the issues, the Signatory Parties recognize that the parties' various positions could be addressed through settlement and agree that settlement is feasible. The Signatory Parties further believe that this Joint Proposal gives fair and reasonable consideration to the interests of customers, transmission owners, and the public in assuring the provision of safe and adequate service.

TERMS OF JOINT PROPOSAL

I. GENERAL PROVISIONS

1. It is understood that each provision of this Joint Proposal is in consideration and support of all the other provisions of this Joint Proposal and is expressly conditioned upon approval of the terms of this Joint Proposal in full by the Commission. If the Commission fails to adopt the terms of this Joint Proposal in full, or adds additional terms, the Signatory Parties to the Joint Proposal shall be free to accept the Commission's terms or to individually pursue their respective positions in this proceeding without prejudice.

2. The Signatory Parties agree to submit this Joint Proposal to the Commission along with a request that the Commission adopt the terms and provisions of this Joint Proposal as

set forth herein. The Signatory Parties agree that construction, reconstruction, operation and maintenance of the project described in this Joint Proposal in compliance with the Joint Proposal and with the Proposed Certificate Conditions set forth in Appendix D attached hereto will comply with PSL Article VII and with the substantive provisions of applicable state law referenced in the Proposed Commission Findings set forth in Appendix C attached hereto.

3. All Signatory Parties fully support approval of the Joint Proposal in its entirety. The Signatory Parties recognize that certain provisions of this Joint Proposal contemplate actions to be taken by various parties in the future to fully effectuate this Joint Proposal. Accordingly, the Signatory Parties taking those actions agree to cooperate with all other Signatory Parties in good faith to the extent allowed by their authority.

4. In the event of any disagreement over the interpretation of this Joint Proposal or implementation of any of the provisions of this Joint Proposal which cannot be resolved informally among the Signatory Parties, such disagreement shall be resolved in the following manner:

a. the Signatory Parties shall promptly convene a conference and in good faith attempt to resolve any such disagreement; and

b. if any such disagreement cannot be resolved by the Signatory Parties, any Signatory Party may petition the Commission for resolution of the disputed matter.

5. This Joint Proposal shall not constitute a waiver by the Applicant of any rights it may otherwise have to apply for additional or modified permits, approvals, or certificates from the Commission or any other agency in accordance with relevant provisions of law.

6. This Joint Proposal shall not constitute a waiver of authority by any state agency with respect to the enforcement of applicable laws and regulations that are the subject of its jurisdiction.

7. This Joint Proposal is being executed in counterpart originals and shall be binding on each Signatory Party when the counterparts have been executed.

II. EVIDENTIARY RECORD

8. Appendix A attached hereto lists the testimony, affidavits, and exhibits that constitute the evidence agreed upon by the Signatory Parties to be admitted as record evidence in this proceeding (collectively, the "Evidentiary Record"). The Evidentiary Record includes responses to certain information requests ("IRs") produced in this proceeding, which the Signatory Parties believe contribute accurate, material and relevant information to the Evidentiary Record in support of the project described in this Joint Proposal. The Signatory Parties have not included all other IR responses in the Evidentiary Record because they have either been superseded by changes to information in the Evidentiary Record, or are not required to support the project described in this Joint Proposal.

III. DESCRIPTION OF PROJECT

9. The Signatory Parties agree that the Description and Location of Project set forth in Appendix B attached hereto accurately describes the location and configuration of the project they recommend be approved by the Commission (the "Project").

IV. ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

10. The Commission must consider the totality of all relevant factors in making its determination of environmental compatibility and public need. The relevant factors include, without limitation, the basis of the need, cost, environmental impact, impact on active farming operations, availability and impact of alternatives, undergrounding considerations, conformance to long-range plans, electric system reliability, state laws and regulations, local laws, and the public interest, convenience, and necessity.

A. Need for the Project

11. The Project is comprised of two primary elements:

a. The relocation and selective reconductoring and reconstruction of Line 10 and Line 3; and
b. The construction and operation of the Cicero Substation.

12. Exhibit E-4 of the Application[1] (Exhibit 13 of the Evidentiary Record and referred to herein as "Exhibit E-4") states that the Project is required as soon as practical to maintain reliable transmission service within National Grid's Central Region. Existing Line 3 and Line 10 are identified as Bulk Power System elements. The performance of these lines during power-flow analysis is summarized in Table E-4.5.2 of Exhibit E-4. As the lines experience conditions outside their accepted limits during single- and multiple-element contingencies, including outages of both Bulk Power and Non-Bulk Power elements, mitigating measures are required.

[1] All references to Exhibit E-4 of the Application are intended to refer also to Exhibit E-4S. Similarly, all references to every other exhibit are intended to refer to the supplement, if any, to such exhibit as filed on November 13, 2015.

13. For summer 2015, Table E-4.5.2 in Exhibit E-4 shows unacceptable performance with respect to the thermal capacity of Existing Line 3 and Existing Line 10. In this scenario, post-contingency flows for these two lines are between the long-term and short-term emergency ratings for N-1 contingencies. For N-1-1 contingencies, the worst-case post-contingency flow for Existing Line 3 is between its long-term and short-term emergency ratings. The worst-case post-contingency flow for Existing Line 10 is above its short-term emergency rating. The Project would resolve these capacity issues.

14. Exhibit E-4 further states that a significant benefit of implementing the Project is a reduced dependence on generation within the Central Region. Power-flow analyses show that the Project eliminates post-contingency thermal overloads which are currently mitigated by dispatching generation (East Syracuse Co-Gen). Reduced dependence on generation within the Central Region removes potential constraints on the mix of generation necessary for adequate reliability within the region, and is therefore expected to result in a more economic generation dispatch.

15. National Grid originally proposed to locate the Cicero Substation on an approximately 5.1 acre site located east of U.S. Route 11, in the Town of Cicero, Onondaga County. After settlement negotiations with other parties, including the Town of Cicero, which raised objections to the original site, National Grid has decided to propose a different site for the Cicero Substation. Like the original site, the new site (the "Substation Site") is located in the Town of Cicero and in the Town's General Commercial District (GC) zoning district. The Substation Site, currently the site of a Town of Cicero Department of Public Works ("DPW") garage, is more fully described in Appendix B attached hereto and in Exhibits 22 and 23 of the Evidentiary Record. National Grid has completed its review of the new Substation Site and has determined it to be a viable location for the Cicero Substation.

16. The primary driver for the Cicero Substation is load relief. As stated in Exhibit E-4, there are significant capacity and outage exposure issues that need to be resolved in the North Syracuse distribution area, which has received the majority of the new housing development in the Syracuse metropolitan area. Two major substations that need to be relieved are the Pine Grove Substation and the Bartell Road Substation.

17. In addition to the relief needed at these two existing substations, there are existing distribution feeders with thermal overloads that need to be addressed. The recommended solution to these concerns is to add distribution capacity to the area by constructing the Cicero Substation. The Cicero Substation will be designed to address the capacity, outage exposure, and thermal overload issues outlined above and allow for future growth in the North Syracuse area.

B. Cost

18. The Applicant's estimated Project cost is set forth in the replacement Exhibit 9 of the Application that National Grid filed with the Commission on November 10, 2015 (Exhibit 9 of the Evidentiary Record) and in the Applicant's responses to Information Requests DPS-12 and -16 (Exhibit 24). The Project's cost and the Project's construction activities, which are of relatively short duration, will not impact the local area sufficiently to induce any significant changes in the economic or local residential, commercial, agricultural or industrial land use patterns. Accordingly, no mitigation is deemed necessary for economic impacts or for changes in residential, commercial, agricultural, or industrial land use patterns in the Project.

C. Environmental Impact

19. The Evidentiary Record describes the nature of the probable environmental impacts of the Project, which are briefly summarized below. Based on the Evidentiary Record, the environmental impacts are expected to be minimal and generally limited to temporary, construction-related disturbances and inconveniences.

20. Based on its review of the evidence, DPS Staff has determined that the Project, as this Joint Proposal proposes it to be located and configured, represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations. The proposed route and configuration are preferred because the Project makes use, to a great extent, of existing right-of-way ("ROW"), avoids or minimizes the disturbance of natural habitat, is reasonable in terms of cost, and minimizes disturbance of residential, agricultural and commercial properties and activities and traffic.

21. The Project has been reviewed with respect to potential impacts to land uses, visual, cultural, terrestrial, wildlife, wetland and water resources, topography and soils, transportation, noise, debris, communications, and electric and magnetic fields. With the modifications developed by the Signatory Parties and described in paragraphs 15 and 88 of this Joint Proposal, DPS Staff, based on its review of the evidence, has determined the Project represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations.

22. Categorized by type of impact, the following sections address the potential for environmental impacts to result from the proposed construction, reconstruction and reconductoring of the Project.

a. Land Use

23. Project construction activities would occur primarily within existing electric transmission ROW, which National Grid holds by a combination of fee ownership and easement rights.

24. As noted in Exhibit 4 of the Application (Exhibit 4 of the Evidentiary Record and referred to herein as "Exhibit 4"), vacant land is the most prevalent land use within one mile of the Project, making up 32 percent of the one mile study area. Residential use makes up 28 percent of the study area and occurs most frequently on Segments 2, 4 and 5. Commercial land uses (15 percent of the one mile study area) are concentrated heavily along the Route 11 and I-81 corridors along Segment 2, 3 and 4 and the Northern Boulevard and Molloy Road area along Segment 6, while industrial/utility uses tend to be concentrated near the Clay and Teall substations and along the southern portion of the Project on Segments 5 and 6.

25. In the locations described in Appendix B, the Project will require the acquisition of some additional permanent easement rights, predominantly on Segments 3, 4, 5, 6 and 7. For the most part, the new rights will be acquired along the west side of the existing ROW and are small (up to 25 feet in width) and at discrete locations. To implement "Option C7" (discussed below), National Grid will need to obtain transmission line construction and operational easement rights on a 50-foot wide corridor of land east of the existing 100 foot transmission ROW for an approximately 1.5 mile section of Segment 5.

26. Segment 7 requires the establishment of a new ROW and will require the acquisition of a 250-foot wide easement for approximately 0.54 miles and a 50-foot wide easement for approximately 1.83 miles. The types of activities that would be permitted by these easements include, without limitation, transmission line construction, reconstruction and relocation; clearing and tree removal; ROW access; and other Project-related activities.

27. Trees and shrubs within the Project's access roads, wire zones, and work areas will be mowed or cleared as necessary to provide unimpeded and safe access to proposed work sites. Shrubs and low growing vegetation, as well as buffers at streams or in visually sensitive areas, will be maintained if they do not interfere with the construction activities or operational integrity of any of the facilities on the ROW. Existing forestland in these easement areas that is converted to herbaceous cover and low-growing compatible shrub species is not anticipated to significantly affect land use patterns or uses along the Project ROW. Permanent easement rights to remove trees outside of the easement area that may pose a danger or hazard to Project facilities ("Danger Tree Rights") are required for portions of Segments 3, 4, 6 and 7.

28. The Project is not anticipated to change the existing residential, commercial and industrial uses adjacent to the ROW or in surrounding areas. Any potential encroachments in the Project ROW that the Applicant determines may contravene the Applicant's property rights will be addressed by the Applicant on a case-by-case basis.

29. The Project is consistent with the goals of the 2009 New York State Open Space Conservation Plan, in that the plan recognizes that energy production and distribution capacity are important to New York State and the Northeast as a whole, and the Project makes use of a statewide planning and siting process that takes into consideration natural and recreational open spaces as well as the state's natural and cultural heritage. The Applicant considered local land use plans or policies of the towns of Clay, Cicero, DeWitt, and Salina within Onondaga County to guide routing, locations and configurations of the Transmission Facilities and Cicero Substation to promote compatibility with existing and future land use.

30. The Project does not traverse any state or local parks.

b. Visual Resources

31. As discussed in Exhibit 4, in order to conduct a visual assessment of the Project, an inventory of significant scenic and aesthetic resources within the visual study area as identified in the New York State Department of Environmental Conservation's ("NYSDEC") Program Policy DEP-00-2 entitled *Assessing and Mitigating Visual Impacts* (NYSDEC, 2000) was developed. The policy states that the State's interest with respect to aesthetic resources is to protect those resources whose scenic character has been recognized through national or state designations.

32. Generally, construction on Segments 1, 2, 3, and 6 will require only the mowing of brush to allow clear and safe work areas and access to work locations. This minor clearing will result in only a temporarily change to vegetative conditions and no significant changes to visual quality. Tree removal in Segments 3, 4, 5 and 6 will occur at the edge of the existing ROW. In Segment 7 the widening of the ROW by 50 feet will include approximately 4.1 acres of tree removal; the Applicant intends to include such tree removal on Segment 7 in an Environmental Management and Construction Plan ("EM&CP") phase that it submits to the Commission for approval.

33. A short section of the Project ROW on Segment 4 (Structures[2] 343 to 349) will require the clearing of a vegetative strip between the existing double circuit Line 10 and Line 3 and the existing Mallory-Cicero #33 sub-transmission line in order to provide the clearances necessary to shift the proposed new centerline of Line 10 and Line 3 to the east. The clearing in this short section will result in a higher visibility of the Mallory-Cicero #33

[2] All references to structure numbers in this Joint Proposal are intended to refer to the identifying numbers of existing structures, not proposed structure numbers.

sub-transmission line and the transmission corridor; however, there will be some remaining vegetation along the ROW edges to backdrop and partially screen the Project.

34. On Segment 7, some existing forestland along the new ROW will be converted to herbaceous cover and low growing shrub species; however, this change in vegetative cover type will not significantly change the overall composition of the vegetative cover types found along this segment and is not anticipated to have a significant or noticeable visual effect on the area.

35. On Segment 1, two sets of H-frame structures (Line 4 and Existing Line 10) will be removed, leaving only those assets associated with Existing Line 3. The removal of the H-frame structures will result in an improved visual setting. Similarly, all of the existing double circuit steel lattice towers on Segment 2 will be removed, causing a significant improvement to the visual appearance in this area.

36. The Cicero Substation is anticipated to result in limited visual impact, even in the closest, most open views available. This is largely the result of its relatively modest size and screening that National Grid intends to install following construction to screen views from the south of the site. Views of the Cicero Substation will be screened from sensitive resources/receptors within the study area. Therefore, neither scenic quality nor viewer sensitivity would suggest that the limited visual contrast presented by the Cicero Substation could be considered a significant adverse visual impact.

37. Since the overall visual impact of the Project will be minimal, no mitigation is proposed.

c. Cultural Resources

38. As discussed in Exhibit 4, a Phase 1A archeological sensitivity assessment and Literature Review and Phase 1B archeological field reconnaissance were conducted for the Project area. The Phase 1A archeological sensitivity assessment was submitted to the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") on April 1, 2014, and the Phase 1B archeological field reconnaissance report was submitted on July 9, 2014.

39. Archaeological site files maintained by the OPRHP and the New York State Museum, and available cultural resource management ("CRM") reports, were examined to identify recorded archeological sites within one half mile of the Project area. A total of 14 recorded archaeological sites were found. The only sites which included portions of the Project area were three large zones of precontact activity, as identified based on local informants, often farmers, for the site locations. Another large site centered on the Cicero Swamp east of the project corridor comes within 500 feet of the Project corridor in the vicinity of Taft Road.

40. Computer files at OPRHP and available CRM reports were examined to identify historic aboveground properties within one half mile of the Project ROW. A total of three aboveground properties were listed or determined eligible for inclusion on the National Register of Historic Places. None of these structures is located within the Project ROW; rather, all are adjacent to it. Twenty one additional sites were inventoried within one half mile of the Project ROW, but have either been determined to be ineligible for the National Register or their status has yet to be determined.

41. Sections of the Project ROW are considered low to moderate sensitivity for pre-contact resources and for historic cultural resources given mapped nearby historic structures.

Based upon the review of the Phase 1A and 1B Reports, OPRHP provided National Grid a letter, dated October 29, 2014, indicating that the Project will have no impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places.

42. The Applicant intends to submit a Project Review Cover Form and associated supporting documentation to the NYS OPRHP requesting an opinion regarding the Cicero Substation's potential impact on cultural resources.

d. Terrestrial Ecology and Wetlands

43. The terrestrial ecology that occurs within the Project ROW has been characterized based on a review of orthophotography, agency correspondence, and field surveys that were conducted in August 2013. The vegetation within the Project ROW includes forest, emergent and forested wetland, a small amount of agricultural land, lawns, early successional meadows, and shrub land communities. The typical wildlife expected to occur within the Project area includes generalist species as well as species adapted for early successional meadows, shrub land communities and the deciduous forest that borders the Project ROW. As described in Section 4.6 of Exhibit 4, based on a review of United States Fish and Wildlife Service database and correspondence received from the New York State Natural Heritage Program, six federally-listed and five state-listed rare species may occur within or near the Project area.

44. Vegetative communities within the Project ROW will be temporarily disturbed by construction activities and equipment access. Within the Project ROW, trees and shrubs will be mowed or cleared to provide unimpeded and safe access to proposed structure work sites. This activity will result in changes in the mix of the various vegetation community found in and adjacent to the ROW. The establishment of a new ROW for Segment 7 will have only an incremental impact to vegetative communities, since it is immediately adjacent to an already

existing multi-line transmission corridor and for the most part represents only a widening of 50 feet of the already existing conditions. Additional forest and forested wetland will continue to exist beyond the new ROW. Following construction, the vegetation on all segments of the Project will be maintained in accordance with National Grid's *Transmission Right-of-Way Management Program* ("TROWMP") and will return to the same shrub and herbaceous vegetative cover type that presently exists on the Project ROW. The anticipated impacts to vegetative communities as a result of construction and operation of the Project are expected to be minimal.

45. Direct impacts to wildlife are anticipated to correlate to impacts to plant communities discussed above. Temporary disturbance to plant communities will be minimal, with the greatest disturbance occurring at each new structure location. This disturbance will have a negligible impact on wildlife, since each new structure location is in close proximity to an already existing structure and construction activities at any single structure location will be short term, generally lasting for only three to five days. Those wildlife species utilizing any areas of scrub-shrub or woodlands where clearing is proposed may be temporarily affected by the loss of woody species for food, shelter and nesting; however, the wooded areas located adjacent to or in close proximity to the Project ROW will be unaffected and will continue to provide this habitat component. A large portion of the existing plant communities that are in early successional stages will remain unaltered by the Project. Therefore, wildlife species that utilize these cover types will be largely unaffected as they will continue to have a significant amount of suitable habitat available within the Project ROW.

46. As stated in Exhibit 4, a variety of meadows, marshes and scrub-shrub wetlands associated with rivers, perennial streams and intermittent streams occur within the Project

ROW. A total of 69 wetlands within and adjacent to the Project ROW were delineated in the field in July and August of 2013 and summer 2014.

47. Proposed tree clearing in the newly acquired easement on Segment 7 will result in some conversion of forested wetland to scrub-shrub/emergent wetland. In addition, there will be some conversion on Segment 4 due to the shifting of the new line approximately 38 feet to the east. None of the conversion on Segment 4 will occur in NYSDEC regulated wetlands. Exhibit 28 of the Evidentiary Record contains tables summarizing the potential Project impacts to U.S. Army Corps of Engineers ("USACE") jurisdictional wetlands and to NYSDEC jurisdictional wetlands and adjacent areas based on approximate acreages as of October 2017. Impacts from the vegetative conversion on Segments 7 and 4 will be addressed in a compensatory wetland mitigation plan to be developed in consultation with NYSDEC and included in the EM&CP. The plan will mitigate for the loss of functions and values to federally regulated wetlands and state regulated wetlands and adjacent areas, including permanent conversion of forested and scrub-shrub wetlands to emergent wetlands.

48. Permanent impacts to wetlands associated with the proposed placement of new structures will be minimized by locating structures outside of wetlands, to the extent practicable, where the alternative of spanning the wetland exists. All existing wood pole structures that are proposed to be removed (Segments 1, 5 and 6) will be removed from wetland areas, with the exception that certain structures may be cut at ground level and left in place if it is determined that pulling the pole would cause significant disturbance to the wetland.

49. Significant environmental impacts to wetlands and water resources will be avoided by using and/or improving existing access roads or paths to the maximum extent possible and by properly locating any new access roads that may be required. Mitigation measures such

as the use of tracked, low ground pressure equipment and timber mats will be prescribed on a site-by-site basis in environmentally sensitive areas such as streams and wetlands. In addition, erosion and sediment control measures designed to maintain and protect soil and water resources both during and after construction will be prescribed for all areas where soil disturbance occurs.

50. With implementation of National Grid's *Best Management Practices for Article VII Electric Transmission Line Projects* ("BMPs"), the Substation facilities are not anticipated to have an adverse impact on water quality within the on-site wetlands or any off-site wetlands or streams.

51. Project construction activities in wetlands and other waters over which the USACE has regulatory jurisdiction will be authorized by the USACE under Section 404 of the Clean Water Act (33 U.S.C. §1344). Authorization will be sought from the USACE for the Transmission Facilities concurrently with the submission for approval of the EM&CP phase covering such facilities, and for the Cicero Substation concurrently with the submission for approval of the EM&CP phase covering such facility.

52. To identify and address potential invasive species hazards, the Applicant will follow the construction practices contained in the Certificate Conditions set forth in Appendix D.

e. Topography and Soils

53. As noted in Exhibit 4, the Project is located within the Erie-Ontario Lowlands, just north of the Alleghany Plateau. This region is generally underlain mostly by Silurian shales and sandstones, with a surficial cover of Quaternary glacial and alluvial deposits.

54. According to the USGS topographic maps of the area, the Project ROW crosses gentle rolling hills with a maximum grade of 7.2% and an average grade of 0.9%. The

Project ROW begins at approximately 384 feet Above Mean Sea Level ("AMSL") at the Clay Substation in Clay and ends at approximately 394 feet AMSL at the Teall Substation in Salina. The route crosses six noticeable stream valleys which are generally oriented NW/SE and correspond to changes in elevation of approximately 30 to 40 feet. By virtue of these features being valleys, the elevations on both sides of the crossings are approximately the same.

55. Several types of soils derived mainly from glacial till are crossed by the Project ROW. Soils in Onondaga County consist mainly of glaciolacustrine silt loams, mainly Niagara and Collamer silt loam. Some soils types are water-sorted sand and gravel directly from glacier outwash planes, kames, eskers, and alluvial deposits. The depth to bedrock in these soils ranges from 0 to 40 inches or are not reported. The soils along the Project ROW range from well drained to poorly drained.

56. No topography or soil related impacts are anticipated as a result of this Project. There are no unique geologic or topographic features that will be permanently affected by the construction or operation of the Project. Grading operations for access roads and at structure work areas along the Project ROW will vary with soil type, land use, and topography, and will be designed to protect soils from erosion, compaction, and soil mixing. Construction activities required for structure installation will be confined to access roads and work areas that are laid out on a structure-by-structure basis, taking soil type and slope into consideration. Temporarily stockpiled soils will be protected to prevent erosion and to keep stormwater runoff from reaching adjacent areas. Vegetative clearing and slash disposal techniques will be prescribed in the EM&CP to minimize disturbance to areas of sensitive or unstable soils and steep slopes.

57. The EM&CP will prescribe measures to prevent or minimize impacts associated with topography and soils.

f. Transportation

58. There are five (5) airports listed in the 2009-2010 New York State Airport Directory that are within 20,000 feet of the Project ROW. The Project ROW is approximately 3,750 (.71 miles) east of the Syracuse Hancock International Airport (FAA id: SYR) runway in the City of Syracuse, Onondaga County. Airline Enterprise Airport (FAA id: 1H1) is located in the Town of Clay in Onondaga County approximately 3,250 feet (.62 miles) due west of the Project ROW. The Caughdenoy Airport (FAA id: 1NY9), in the Town of Hastings in Oswego County, is located approximately 15,870 feet (3 miles) north of the Project ROW. The Riveredge Airpark Airport (FAA id: 19NK) is located in the town of Hastings in Oswego County, approximately 4,500 feet (.85 miles) north of the Project ROW. The Syracuse Suburban Airport (FAA id: 6NK), in the Town of Hastings is approximately 15,000 feet (2.8 miles) north of the Project ROW.

59. As stated in Exhibit E-6 of the Application (Exhibit 15 of the Evidentiary Record and referred to herein as "Exhibit E-6"), the Project ROW is adjacent to and crosses over a railroad corridor (CSX Transportation, Inc.) in the Town of Clay and in the Town of Cicero. National Grid does not anticipate the need to temporarily use any of the active railroad corridors for construction access to the Project ROW because there are existing off-ROW access roads that will be used for equipment mobilization to the ROW. The final designs for the Project will incorporate appropriate transmission facility design criteria, line clearance requirements, and railroad safety clearances. National Grid will review the final Project designs with the railroad company and obtain an outside party number for CSX flagging when removing aerial wire from the CSX corridor, prior to the commencement of

construction of the Project. Construction activities will also be coordinated with the railroad companies to ensure that construction activities do not conflict with railroad operations and freight movements and to ensure that appropriate railroad safety precautions are implemented.

60. The Project ROW crosses 35 interstate, state, county, and local roadways in the Towns of Cicero, Clay, DeWitt, and Salina in Onondaga County. During construction, the Project ROW will be accessed from these road crossings. Construction access points from local roads will be located to ensure maintenance of safe traffic operations at the road crossings. To ensure safe and continued traffic flow and to maintain access to local residences, a Maintenance and Protection of Traffic ("MPT") Plan will be developed for each location where construction vehicles will access the Project ROW frequently from local roadways, and to provide a safe construction work zone near the edge or within a traffic lane for construction activities within the road ROW (i.e., removal of existing conductors and pulling of new conductors). The MPT Plan will indicate temporary signage, lane closures, placement of temporary barriers, and traffic diversion patterns during construction activity.

61. The MPT Plan traffic control measures will be developed as part of the final design of the Project and will be incorporated into the EM&CP.

62. To minimize potential conflicts with traffic patterns and lane usage, National Grid has located transmission structures outside of road rights-of-way and as far from road crossings as feasible. Should temporary parking along the local roadways be required, all vehicles will be situated such that the safe operation of the roadway is not impeded and appropriate safety signage is provided.

63. The number of trips generated by the construction crews for ROW clearing, transmission structure erection, and conductor stringing will be minimal and short-term.

Construction-related truck traffic will consist of equipment and material deliveries to the structure sites and removal of cleared vegetation and construction debris from the ROW. The locations of construction marshalling yards have been identified and are provided in Exhibit 27 of the Evidentiary Record. Each marshalling yard that requires a State Pollution Discharge Elimination System General Permit for construction site runoff will qualify for same. Construction workers will likely arrive at and depart from these areas outside of morning and evening peak travel periods. Deliveries of oversized equipment will be scheduled during off-peak periods to minimize traffic disruption.

64. All required work permit applications will be submitted for all applicable road crossings. The Applicant will fully comply with the permit conditions contained within such work permits.

65. All work within state highway rights-of-way will be designed and performed in accordance with the traffic and safety standards and other substantive requirements contained in 17 NYCRR Part 131, entitled *Accommodation of Utilities Within State Highway Right-of-Way*, applicable design standards of the American Association of State Highway and Transportation Officials, including the Manual of Uniform Traffic Control Devices, the Highway Design Manual, and the Policy and Standards for Entrances to State Highways.

66. The Project ROW intersects one known multi-use trail maintained by the Snow Owls of Clay/Cicero. The trail intersects Segment 1 and then runs parallel to Segment 7 until it reaches Segment 3. As the trail approaches Segment 3, it turns south and runs parallel to the Project ROW towards Segment 4. The Snow Owls of Clay/Cicero has been notified that its License Agreement with National Grid will be suspended until the Project is completed. National Grid will implement appropriate construction safety practices, to be identified in the EM&CP, such as temporary barricades and fencing, to prevent pedestrians from entering

construction work zones and avoid potential conflicts with pedestrian traffic during construction along this trail.

g. Water Quality and River Corridors

67. As stated in Exhibit 4, there are a total of 41 stream crossings identified along the Project ROW, four of which are named streams: Young's Creek (Segments 1), Mud Creek (Segment 4), North Branch Ley Creek (Segment 6), and Ley Creek (Segment 6). The Project ROW traverses 1 Class B stream (Ley Creek) and 20 Class C streams, none of which are designated as trout waters. The Project ROW also crosses 20 unclassified intermittent streams, most of which are drainage channels or ditches that exhibit flow certain times of the year. Construction of the Project will not require new installation of permanent stream crossings in any of the named streams traversed by the Project ROW. There are no significant waterbodies (i.e., large ponds, lakes, or reservoirs) located within the Project ROW.

68. Because the Project will be installed on overhead lines exclusively, structures will be located to span streams within the Project ROW and will avoid the discharge of fill material to jurisdictional wetlands that would require a USACE permit pursuant to Section 404 of the Clean Water Act, to the extent practicable. Additionally, the Project will not be constructed in, on, or over a navigable water body therefore, a Section 10 permit is not anticipated.

69. Project-related impacts to surface waters could potentially result from clearing and grading in areas adjacent to, within, and downstream of the Project ROW for construction access, installation and maintenance of the Project lines. Erosion and sediment control practices and BMPs will be prescribed on a site-by-site basis in the EM&CP, and no Project related impacts to surface waters are anticipated.

70. Vehicular access across streams and other watercourses will be avoided, to the maximum extent practicable, by interrupting access along the Project ROW and precluding traffic through these areas. These areas will be designated "No Vehicular Access" on EM&CP plan and profile drawings. If possible, stream crossing will take place when stream beds are dry or where existing stream crossings are available to the extent possible. Stream crossings will utilize equipment mats and other minimally-intrusive bridge materials that are designed to minimize stream bed and bank disturbance and water quality impacts. The Applicant will identify each stream crossing type for each crossing location on the plan and profile drawings to be provided in the EM&CP.

71. Nothing herein will limit the right of NYSDEC to enter and inspect the Project to assess compliance with any NYSDEC-issued permit or applicable substantive statute or regulation under NYSDEC's jurisdiction. NYSDEC Staff field representatives will notify the DPS Staff representative and the Applicant's appropriate representatives of any activities that violate, or may violate, either the terms of the Certificate or the Environmental Conservation Law.

h. Noise

72. Overhead transmission line construction will generate noise levels that are periodically audible along the Project route, access roads, structure sites, conductor pulling sites, staging areas and marshalling yards. Noise sources may also include power tools and construction equipment. The construction equipment to be used is similar to that used during typical public works projects and tree service operations. Construction at substations (other than the proposed Cicero Substation) will include equipment modification and installation of new equipment and is not anticipated to be a significant source of construction noise.

73. Construction of the proposed Cicero Substation will involve the use of heavy equipment (e.g., bulldozers, dump trucks, cement mixers, etc.) during excavation and concrete pouring activities. Noise is generated during construction primarily from diesel engines which power the equipment. Exhaust noise usually is the predominant source of diesel engine noise, so all diesel engine equipment involved in the construction activity will have functional mufflers. Noise transmitted from the construction site will be attenuated by a variety of mechanisms. The most significant of these is the diversion of the sound waves with distance (attenuation by divergence). Additional reductions will be afforded by atmospheric absorption and built features at the site. Construction noise will also be temporary in nature and, as such, no long term or significant noise impacts due to construction are anticipated.

74. Noise generated by the operation of 115kV transmission lines typically contributes little to area noise levels. Since the Project design is below the corona threshold, operation of the proposed transmission lines is not expected to result in adverse noise impacts.

75. The operation of substations involves switching, protection and control equipment and typically one or more transformers, which generate the sound generally described as a low humming, which will attenuate with distance at different rates depending on the transformer dimensions, voltage rating, and design. The Noise Study (Exhibit 20 of the Evidentiary Record) shows that the noise produced by the operation of the Cicero Substation at the newly proposed site (*i.e.*, the Substation Site) is not anticipated to impose a limitation on the current or future use of, or generate complaints from, adjacent commercial lands. At the property boundaries of the commercial uses that abut the Substation Site, the conservatively estimated sound levels from the substation transformers are expected to be of no consequence whatsoever because they are generally comparable to or below measured

typical daytime background levels. The ambient survey measurements indicate that, during the week, daytime residual (L90) sound levels are roughly in the 40-50 dBA L-90 range, for the backyards of homes fronting on West Gillette Road. Ambient sound levels of 40-60 dBA L-90 were measured at locations near I-81 and US Route 11. All locations show spikes of noise associated with ongoing heavy equipment operations at the DPW garage site. The predicted Cicero Substation sound level, based on a 75 dBA near field sound pressure level transformer, will not exceed about 52 dBA at the nearest site boundary to the south and has been estimated as between 40-45 dBA L-90 in the backyards of the homes that front on West Gillette Road. The sound analysis model, prepared using the standard 75 dBA near field transformer, found that the predicted facility sound will be lower than or within the existing sound level measured at locations surrounding the site. Such levels, even if they are somewhat tonal in nature, probably will be largely imperceptible and highly unlikely to constitute a disturbance of any kind at the adjacent commercial enterprises. Use of the transformer that produces less sound (i.e., the 65 dBA near field sound level transformer) will further reduce the possibility of neighborhood disturbance by limiting sound levels at West Gillette Road to approximately 31 dBA (August 5, 2016 Supplemental Noise Impact Assessment Results Based on 65 dBA Transformer Noise Guarantee, part of Exhibit 20). Based on the foregoing, the Signatory Parties propose no noise mitigation measures beyond those measures already incorporated into the design of the Cicero Substation (use of a 65 dBA near field sound level transformer) that were assumed in the Noise Study.

76. Substation maintenance will generate short-term, daytime traffic noise during Project maintenance and inspection that is not expected to result in adverse noise impacts.

i. Communications

77. The Project is expected to have no adverse effects on communications (e.g., cellular, television, radio) during construction or operation. The Applicant will comply with applicable sections of the latest version of the National Electrical Safety Code ("NESC") related to appropriate spacing between power and communication cables. The Applicant has not received any complaints from communication facility operators or the public about suspected interference with radio, television or other communications from the Project; however, if the Applicant receives any such complaints, interference that is determined to result from the Project will be resolved by the Applicant.

78. A telephone circuit will be provided to the Cicero Substation from the local telecom provider, and will be used for telecommunications between the substation and National Grid's regional control center. There will be no microwave communications associated with the substation. The Cicero Substation is not expected to have any adverse effects on communications (e.g., television, radio, etc.) during construction or operation.

79. The Applicant will identify any existing underground facilities crossed by the Project on the EM&CP Plan and Profile drawings based on input from the facility owner and any above ground features. Any existing underground facilities that would potentially interfere with the design of the Project will be verified via an actual field mark out and surveyed for accurate placement on the drawings for the EM&CP.

j. Electric and Magnetic Fields

80. The EMF Study (Exhibit 18 of the Evidentiary Record) indicates that the maximum calculated electric and magnetic fields are within the Commission's guidelines in all cases.

81. Under the Commission's September 11, 1990, "Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities," the peak field at the edge of the

ROW as measured at one meter above ground when the circuit phase currents are equal to the winter normal conductor rating shall not exceed 200 milligauss ("mG"). The calculated magnetic field for the winter normal rating for the Project varies greatly from 0.0 mG in areas where retired lines are removed completely to a maximum of 190.5 mG at the edge of the ROW for the various Project cross sections investigated, which is within the standard limit. Under the standard set forth in Commission Opinion No. 78-13, the maximum electric field at the edge of the ROW shall not exceed 1.6 kV/m. The calculated electric field for the Project ranges from 0.0 kV/m in areas where retired lines are removed completely to a maximum of 1.45 kV/m for the various cross sections analyzed, which is within the standard limit.

D. Impact on Active Farming Operations That Produce Crops, Livestock, and Livestock Products

82. As stated in Exhibit 4, the Project ROW does not cross any designated Agricultural Districts in Onondaga County and only crosses approximately 700 linear feet of agricultural land located north of Caughdenoy Road on Segment 1. There are presently three single circuit wood pole H-frame structures (Line 4, Line 3 and Line 10) on the agricultural land; however, the Project as proposed would result in the removal of two of the structures (Line 4 and Line 10), thereby having an overall benefit on agricultural activities.

83. Agricultural operations may be disrupted on a short term basis, depending upon the timing of construction and any seasonal constraints on construction activities. National Grid will make every effort to coordinate construction activities with ongoing farming activities in effort to minimize disruption and crop damage. Protection measures and restoration measures such as rehabilitation of drainage tile and deep tilling of compacted areas will be prescribed on a site-by-site basis and will be shown in the EM&CP. The Project will have a

minimum adverse impact on active farming operations that produce crops, livestock and livestock products, as defined in section three hundred of the agriculture and markets law, considering the state of the available technology and the nature and economics of the various alternatives, and ownership and easements rights of the impacted property.

D. The Availability and Impact of Alternatives

84. The Application and exhibits agreed upon by the Signatory Parties to be admitted as record evidence in this proceeding describe the availability and impact of alternatives to the Project and are briefly summarized below. Based on its review of the evidence and considering all factors, DPS Staff has determined that the Project as described in Appendix B is preferable, on balance, to any of the alternatives considered. The location is preferred due to its relatively minimal impacts to wetlands, floodplains, topography, and residential areas. The selected route and configurations are preferred because they use existing electric transmission corridors and avoid impacts to existing land uses.

85. The site National Grid originally proposed for the Cicero Substation had a number of disadvantages compared to the new Substation Site. These include the fact that the original site was incompatible with the Town of Cicero's long- term development plan for the U.S. Route 11 corridor. While the Town conducts numerous activities and has facilities on the Substation Site, it has stated that it intends to move those operations off of the site in 2017. A Phase 1 environmental review was conducted on the Substation Site and, while it noted some data gaps that require follow-up, no significant issues were identified.

86. DPS Staff requested National Grid to examine an alternative route for the Project (the "Lisi Gardens Bypass") that would bypass the Lisi Gardens residential development. This development is located along the Project ROW from Structure 357 to Structure 359. National Grid's responses to Information Requests DPS-46 and -47, which are set forth in

Exhibit 24, contain detailed results of National Grid's examination of the Lisi Gardens Bypass. In summary, this examination included an analysis of cost, environmental impacts, and additional real property rights. National Grid found that the incremental cost for the Lisi Gardens Bypass, compared to the Applicant's proposed route, would be approximately $5,020,725. It determined that the Lisi Gardens Bypass would result in additional environmental impacts, specifically:

- Approximately 3.17 acres of NYSDEC CIC-14 and 2.14 acres of the regulated adjacent area of NYSDEC CIC-14 are wooded and would need to be cleared. The Lisi Gardens Bypass also would traverse approximately 0.92 acres of NYSDEC CIC-14 emergent wetland, which will not need any clearing.
- Impacts associated with fill from structures located in the wetlands or regulated adjacent areas, matting for access, matting for work pads, matting for stringing pads and the clearing of forested areas which would result in the conversion of forested wetland to shrub wetland. The impacts associated with fill from structure placement and the clearing of forested areas would be permanent, while the impacts associated with matting for access, work pads and stringing pads would be temporary and only for the duration of construction.
- The primary change to the character of the area that would result from constructing the Lisi Gardens Bypass is associated with the clearing of approximately 6.26 acres of forested land to the north and east of Lisi Gardens. The forested areas are primarily mature hardwoods that currently shelter the Lisi Gardens development from potential surrounding visual and noise impacts. The removal of the forested areas would most likely result in major changes to the viewshed from Lisi Gardens, especially from the backyards of the nine residential lots that are located along the easternmost side of the Lisi Gardens development. In addition, these same lots may experience some increase in traffic noise from Totman Road and Northern Boulevard as a result of removing the forested areas that lie between the residences and the subject highways.

The Lisi Gardens Bypass would affect 15 separate tax parcels that would be either traversed by or immediately adjacent to the new ROW required for the Lisi Gardens Bypass. A new property right in the form of either a danger tree easement or an operational easement would be required on each of those 15 parcels. Twelve of those parcels would be neither traversed by nor immediately adjacent to National Grid's originally-proposed route, which follows the existing ROW established in 1942. No new property rights would be required on any parcels

along National Grid's originally-proposed route. The Signatory Parties agree that either Option C7 or National Grid's originally-proposed route through the Lisi Gardens development, as compared to the Lisi Gardens Bypass, would result in fewer negative environmental impacts, lower cost to ratepayers, and lesser impact to adjacent landowners.

87. DPS Staff also requested that National Grid model the EMF levels for alternative configurations of the proposed facilities within cross section 20. National Grid's September 14, 2016 response ("September 2016 EMF Analysis"), which is set forth in Exhibit 26, gives the results of this modeling. The September 2016 EMF Analysis included the conclusion that Option C7, which involves moving the centerlines of Line 10 twenty feet to the east and Line 3 ten feet to the east of their existing locations (thus reducing the separation between the two transmission lines from 50 feet to 40 feet), would result in reduced EMF levels on the west side of the transmission ROW by increasing the separation between the 115kV transmission line conductors and dwellings on that side. To implement Option C7, National Grid would need to obtain transmission line construction and operational easement rights on a 50-foot wide corridor of land east of the existing 100 foot transmission ROW and, upon doing so, the width of the transmission ROW in this section of the Project will increase from 100 feet to 150 feet. EMF values for the transmission lines at cross-section 20 would be 0.2 kV/m for electric fields and 69.5 mG for magnetic fields on the east edge (with the expanded transmission ROW), and 0.4 kV/m for electric fields and 55.0 mG for magnetic fields on the west edge under winter normal conditions. EMF values for the transmission lines at cross-section 20 would be 0.2 kV/m for electric fields and 6.3 mG for magnetic fields on the east edge (with the widened transmission ROW), and 0.4 kV/m for electric fields and 8.7 mG for magnetic fields on the west edge under average annual conditions. Option C7 would achieve similar results for proposed cross sections 18 and 19. The Signatory Parties agreed to include

in this Joint Proposal the proposal to use Option C7 at cross sections 18, 19, and 20, from Structure 350 to Structure 364, and for National Grid to include in the EM&CP the need to obtain new transmission line construction and operational easement rights on the 50-foot wide corridor of land east of the existing 100 foot transmission ROW in that section of the Project.

88. A party to this proceeding stated the concern that the EMF Study, which is set forth in Exhibit 18 of the Evidentiary Record, shows that the Project will result in an increase in magnetic field levels in the Lisi Gardens development to 135 mG from levels in the range of 5 to 25 mG that he obtained by direct measurement. This assertion is inaccurate because it compares magnetic field levels under two vastly different conditions. The primary assumption required for EMF modeling under the Commission's September 11, 1990 "Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities" and the Commission's standard set forth in Opinion No. 78-13 is that the lines are operating at winter normal levels, an extremely rare condition that results in the highest EMF levels. The Commission's EMF guidelines require this assumption, as it produces intentionally conservative results. In addition, the assumed elevation of the conductor above grade is based on the minimum value established by the NESC. On the other hand, direct measurement of the lines with a gauss meter while they are operating on any given day will give lower magnetic field levels than the winter normal load assumption; it is not a like-to-like comparison. Moreover, it is not possible to model the magnetic field levels that will result from the Project that allows for an accurate like-for-like comparison with this party's actual readings in the range of 5 to 25 mG. This is because of the number of variables associated with the calculation of EMF for a specific loading condition on a specific day. The actual loads of the lines at the time he made his measurements are neither known nor

calculable; likewise, the specific elevation of the conductors associated with each circuit and the exact location the individual was standing in whilst taking the readings are unknown. The closest one can come to a like-for-like comparison with his methodology is to compare, today and after completion of the Project, modeled magnetic field levels at annual average loads. This was done in the Applicant's response to Information Request DPS-45, which is set forth in Exhibit 24. This response shows that, in the Lisi Gardens section of the Project (not modified by Option C7), the magnetic field levels (as well as electric field levels) of Lines 3 and 10 at each line's annual average load will be lower after completion of the Project than such levels are today. This remains true for the Project modified by Option C7, including the required expansion of the width of the transmission ROW to 150 feet. Specifically, the Project as modified by Option C7 will reduce the maximum within ROW magnetic field level at cross-section 20 from 71.8 mG today to 31.6 mG after the Project is built; similarly, at the east and west edges of the expanded 150 foot ROW, respectively, the Project will result in annual average magnetic field reductions from 26.8 mG to 6.3 mG, and from 36.1 mG to 8.7 mG.

Alternative Routes

89. As stated in Exhibit 3 of the Application (Exhibit 3 of the Evidentiary Record and referred to herein as "Exhibit 3"), National Grid performed a screening level analysis for potential alternate routes to relocate Existing Line 3 and Existing Line 10 in their entirety between the Clay Substation, DeWitt Substation and the Teall Avenue Substation. National Grid also performed a screening level analysis for the possibility of extending the relocation of Lines 3 and 10 parallel to National Grid's existing 115kV Clay-DeWitt Line 5 and 345kV Clay-DeWitt Line 13 east of Segment 7. These new routing options proved to be either

overly circuitous or impactful to significant lengths of densely developed areas in the Towns of Clay, Cicero, DeWitt, and Salina.

90. Initial screening with aerial photography showed that there are no entirely new routes available that would not significantly impact existing residential developments or commercial / industrial areas surrounding the Syracuse area. In addition, Hancock International Airport, located directly to the north of the Teall Avenue Substation and large wetland areas such as the Cicero Swamp to the east of the Project area and the Hamlin Marsh to the west of the Project area severely limit the ability to find entirely new alternate routes that would have less impact that the proposed Project route. Additionally, a new route would direct Line 3 and Line 10 away from the six substations presently served by one or both circuits.

91. As no viable new rights-of-way were identified for relocating the entire length of the Project, the Signatory Parties considered and rejected the re-use of the existing ROW for the entire length; i.e., Segments 1, 2, 3, 4, 5 and 6 (referred to as the "Northern Alternative").

92. Using the Northern Alternative would require the acquisition of an additional 20 feet of operational easement along the Project ROW in predominantly suburban residential areas along Segments 1 and 2. Specifically, if the Northern Alternative was selected, it is estimated that Segment 1 would require an operational easement on approximately 3.8 acres of land involving 11 parcels and Segment 2 would require an operational easement on approximately 1.1 acres of land involving 22 parcels. The difficulty and potential impacts associated with acquiring additional operational easements in the residential areas surrounding a densely populated portion of Segment 2 is the primary reason that the Northern Alternative was rejected.

93. An additional benefit of the proposed Project route is that on Segment 1, the Project would result in the removal of the existing assets supporting both Existing Line 10 and existing T6400 Line 4 for the entire length of Segment 1 (approximately 50 wood pole H-frame structures), which is a positive impact. It would also result in the removal of two wood pole H-frame structures from active agricultural lands, providing a benefit to local agricultural activities. Additionally, the elimination of Line 4 and Line 10 assets would allow the shrub covered edges of the existing ROW on Segment 1 to revert back to forest land (approximately 13 acres) through natural succession. On Segment 2, the Project would result in the complete removal of the existing double circuit steel lattice towers (approximately 11 towers) from the two residential subdivisions, the commercial areas on either side of Route 11 and the Brewerton Elementary School yard. The complete removal of the existing facilities in these specific land use settings would result in a positive impact to the local community.

94. An underground transmission line alternative that would place Existing Line 3 and Existing Line 10 underground was considered. In order to provide a transmission system reasonably equivalent to the one proposed by the Project, several different cable segments and intermediate switching stations were required for the underground alternative. There are three existing distribution substations tapped off the existing lines between Clay Substation and Teall Avenue Substation, (Bartell Road Substation, Pine Grove Substation, and East Malloy Substation) in addition to the proposed Cicero Substation. Because the underground alternative would still need to supply these intermediate substations, the underground alternative route had to closely follow the Project ROW, and 115kV switching stations were required to allow the underground lines to be tapped at the intermediate substations.

95. The cable system for all of the various underground segments would consist of one set of 3,000 kcmil copper cross-linked polyethylene (XLPE)-insulated 115kV underground transmission cables per circuit. The cables for each circuit would be installed in a concrete encased ductline consisting of nine 6-inch polyvinyl chloride (PVC) conduits. Three conduits would contain 115kV power cables, three would be spares for future power cables, one would contain a ground continuity conductor, and the remaining conduits would contain relaying/communication cables. In order to reduce the possibility of common mode failure (such as a significant dig-in), the two ductlines would be separated by a minimum of 10 feet.

96. As discussed in detail in Exhibit 3, the underground alternative is substantially more expensive than the Project, and the underground alternative also would have significant operational issues, including greatly increased complexity, longer restoration times, load hogging issues, and voltage control issues. In this case, the underground alternative would be technically inferior to the Project. Although difficult to compare directly, it can be expected that underground construction will result in temporary construction related impacts and has the potential for permanent land use and visual impacts associated with the need for new switching and transition stations. For the foregoing reasons, the Signatory Parties do not support this 14.5 mile underground alternative.

97. As discussed in detail in National Grid's responses to Information Requests DPS-37 and -40, which are set forth in Exhibit 24, the Applicant considered undergrounding a portion of the Project from Structure 342 (the last structure located before the Project ROW crosses over I-81) to Structure 365 (the last structure located before the Project ROW crosses over Route 481).

98. This underground alternative would present all of the problems discussed in the foregoing paragraph, as well as a number of additional ones. In order to provide a

transmission system reasonably equivalent to the one proposed by the Project, several different cable segments and intermediate switching stations would be required for this underground "dip" (building a portion of an overhead transmission line underground) alternative. The underground dip would represent a substantial cost increase over the Project between Structures 342 and 365. Additional equipment and land rights would be necessary in order to construct the transition stations that are necessary to build an underground "dip."

99. For all of the foregoing reasons, the Signatory Parties also do not support these underground alternatives.

Alternative Methods to Fulfill Energy Requirements

100. Alternative methods to fulfill energy requirements considered by the Applicant included a "no-action" alternative, alternative transmission line technologies, and the feasibility of demand-side management and distributed generation.

101. As stated in Exhibit 3, the no-action alternative does not serve the growing Central Region load or eliminate projected post-contingency thermal overloads on Existing Line 10 and Existing Line 3. Therefore, it is not an effective alternative to the Project.

102. The Applicant examined one possible alternative transmission technology: use of direct current ("DC") electric transmission. To install a new DC transmission line between the Clay and Teall Avenue Substations to replace Existing Line 10 and second new DC transmission line between the Clay and DeWitt Substations to replace Existing Line 3, National Grid would need to build three new power conversion facilities and interconnect them to the existing Clay, DeWitt, and Teall Avenue Substations, which presently are designed to handle alternating current ("AC") circuits. Because of the relatively short ROW distance between the Clay and Teall Avenue Substations and the Clay and DeWitt Substations, the installation of a DC circuit and associated conversion facilities would be

cost-prohibitive. This result is to be expected for a short-distance DC transmission line incorporated into an AC system. DC circuits are typically utilized to transfer bulk power from point to point over long distances with interconnection into the AC system. Additionally, the existing substations served off of Existing Line 3 and Existing Line 10 would require either a different source or significant modification and expansion to become DC-to-AC conversion facilities. Accordingly, the DC alternative was not considered further for Lines 3 and 10.

103. The reliability concerns addressed by the Project could theoretically be deferred or resolved by adding sufficient demand and/or supply resources at strategic locations within the Central Region. National Grid assessed the feasibility of this approach consistent with its *Guidelines for the Consideration of Non-Wires Alternatives in Transmission and Distribution Planning* ("Guidelines"). While the Existing Line 10 and Existing Line 3 are network lines, the loading on these lines is most directly affected by load served from the Ash Street, Teall Avenue and Oneida Substations. These substations serve approximately 285 MW of load. In order to bring post-contingency loadings in line with existing line ratings, the load served from these three substations would need to be reduced by approximately 160 MW, or 60%. This 60% required reduction in load is far above the 20% maximum reduction threshold specified in the Guidelines. In addition, the Guidelines specify that a non-wire alternative is viable only when the need for the start of construction is at least 36 months in the future. However, the Project is needed immediately, with a target construction start date of April 2018. The Applicant does not have the 36 months required under the Guidelines to create, market and execute a non-wire alternative to address the post-contingency overloads identified in Exhibit E-4.

E. Conformance to Long-Range Plans for Expanding the Electric Power Grid

104. The Project conforms to the requirements and planning objectives of the New York Independent System Operator (NYISO) and is consistent with the Applicant's long-range plans for the expansion of its transmission facilities. The Project will serve the interests of electric system economy and reliability. Completion of this Project will improve the reliability of the transmission system for the loads served by the Project.

F. System Impact Study

105. The NYISO has indicated that the Project would not adversely impact the New York State Transmission System because the Project is expected to affect NYISO interface transfer capability by less than 10 MW. The NYISO requires a system impact study for Transmission Owner transmission projects that are expected to affect interface transfer capability by more than 10 MW.

G. State and Local Laws

106. Exhibit 7 of the Application (Exhibit 7 of the Evidentiary Record and referred to herein as "Exhibit 7") identifies, for each local jurisdiction, every substantive local legal provision (ordinance, law, regulation, standard, and requirement) potentially applicable to the Project, as well as every such local legal provision that the Applicant requests that the Commission not apply because, as applied to the Project, such local legal provision is unreasonably restrictive in view of the existing technology, factors of costs or economics, or the needs of consumers. Except for those local legal provisions the Applicant specifically requested that the Commission refuse to 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. Due to the preemptive effect of PSL Section 130, procedural requirements to obtain any State or local approval, consent, permit, certificate or other

condition for the construction or operation of the Project do not apply, except for permits or approvals issued or required by the NYSDEC pursuant to regulations implementing federal environmental programs.

107. The following are examples of local laws that the Applicant requests the Commission not apply, as well as the corresponding justifications for such requests: (i) time restrictions on construction noise, on the grounds that exceptions may be required for safety or continuous operation requirements; (ii) prohibitions on sign placement near utility poles, on the grounds that the placement of warning and safety signs is warranted and appropriate to most effectively warn the general public of dangers associated with energized electrical equipment; (iii) minimum lot width, frontage, and depth requirements, because these requirements have no necessary nexus or relevance when considered in light of the Applicant's contiguous linear ROW lots; (iv) maximum height requirements, because compliance is technologically impossible; and (v) landscaping and/or screening requirements and prohibitions on cutting existing vegetation, on the grounds that these requirements cannot be reconciled with the Clearing and Slash Disposal Procedures in the EM&CP and the Applicant's TROWMP.

108. No local jurisdiction has filed any objection to the Applicant's requests, set forth in Exhibit 7, that the Commission not apply specified local laws. The Signatory Parties agree that the justifications set forth in Exhibit 7 provide sufficient basis for the Commission to refuse to apply the identified ordinances.

H. Public Interest, Convenience, and Necessity

109. The Applicant conducted public outreach and information efforts in support of the Project. A Public Notice was published in the *Syracuse Post Standard* for two consecutive weeks prior to filing the Application. In addition, copies of the Application and Supplement

were provided to the following libraries for public inspection: DeWitt Community Library, Northern Onondaga Public Library at Cicero, Northern Onondaga Public Library at North Syracuse, Northern Onondaga Public Library at Brewerton, and Salina Free Library. On February 25, 2015, all "Landowners," as defined in PSL § 120(5), were served by first-class mail with a letter notifying them that the Project may affect their property and providing detailed instructions on how to become a party to this proceeding. By letter dated April 30, 2015, owners of property within 150 feet of the Project ROW were notified of National Grid's intention to file the Application. This document included a map of the Project area and the toll-free number for people seeking additional information about the Project. By letter dated June 24, 2016, owners of properties abutting the Substation Site were notified of National Grid's proposal to use that site, rather than the originally-proposed site, for the Cicero Substation. In April and July of 2013, property owners adjacent to the proposed Project ROW were sent notification letters regarding preliminary ROW activities for the proposed Project. In July 2013 and April 2015, representatives of the Applicant sent written communications elected representatives of and landowners residing in the municipalities traversed by the Project, and representatives of the Applicant have engaged in conversations and in-person meetings with these elected officials through the present time. The Applicant conducted an informational meeting prior to the Commission's Public Statement Hearing held on December 2, 2015, and representatives of the Applicant familiar with all aspects of the Project were available to informally address questions and concerns from the public. The Applicant held informational "open houses" for the public on September 29, 2015, and September 30, 2015. On May 24, 2017, the Applicant and DPS Staff conducted an informational meeting about Option C7 for residents who live near the ROW in the approximately 1.5 mile section of the Project between Structure 350 and Structure 364, and

representatives of the Applicant and DPS Staff familiar with that option were available to informally address questions and concerns. Shortly before commencement of construction, the Applicant will notify adjacent landowners and residents of construction commencement and include a safety message and the toll-free phone number that can be used to obtain additional information.

V. PROPOSED FINDINGS

110. DPS Staff has determined that the record in this proceeding supports the Proposed Commission Findings set forth in Appendix C attached hereto.

VI. PROPOSED CERTIFICATE CONDITIONS

111. The Signatory Parties agree that the Proposed Certificate Conditions set forth in Appendix D attached hereto are acceptable and appropriate for inclusion in a Certificate of Environmental Compatibility and Public Need authorizing construction and operation of the Project.

VII. ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PLAN

112. The Signatory Parties agree that the Specifications for the Development of the Environmental Management and Construction Plan set forth in Appendix E attached hereto are acceptable and appropriate for application to the Project as described herein.

VIII. **WATER QUALITY CERTIFICATION**

113. The Signatory Parties agree that the record in this proceeding supports the water quality certification substantially in the form of Proposed 401 Water Quality Certification set forth in Appendix F attached hereto.

IN WITNESS WHEREOF, the Signatory Parties hereto have this day signed and executed this Joint Proposal.

Lisa M. Zafonte

Niagara Mohawk Power Corporation d/b/a National Grid

By: Lisa M. Zafonte, Esq.

IN WITNESS WHEREOF, the Signatory Parties hereto have this day signed and executed this Joint Proposal.

Heather P. Behnke

Staff of the New York State Department of Public Service

Designated to represent the public interest in this proceeding

By: Heather P. Behnke, Esq.

IN WITNESS WHEREOF, the Signatory Parties hereto have this day signed and executed this Joint Proposal.

New York State Department of Agriculture & Markets

By: Diane Smith, Esq.

APPENDIX A
LIST OF TESTIMONY, AFFIDAVITS AND EXHIBITS TO BE ADMITTED

Testimony:

Direct Testimony of Leka Gjonaj, Anthony Vincent, Jessica Farrell, Frank Sciortino, Adam Barnello, David Campilii, Stephen Wood, Dianne McLean, Thomas Canino, Dilip Kommineni, John Hecklau, and Timothy Walter sponsoring Exhibits 1 through 9 (Exhibits 1 through 9 to the Application as supplemented in this proceeding (the "Application")), Exhibits 10 through 15 (Exhibits E-1 through E-6 to the Application), and Exhibits 16 through 28.

Affidavits:

Affidavits of Leka Gjonaj, Anthony Vincent, Jessica Farrell, Frank Sciortino, Adam Barnello, David Campilii, Stephen Wood, Dianne McLean, Thomas Canino, Dilip Kommineni, John Hecklau, and Timothy Walter.

Exhibits:

Exhibit 1: The Application, and General Information (Exhibit 1 to the Application)

Exhibit 2: Location of Facilities (Exhibit 2 to the Application[1])

Exhibit 3: Alternatives (Exhibit 3 to the Application)

Exhibit 4: Environmental Impacts (Exhibit 4 to the Application)

Exhibit 5: Design Drawings (Exhibit 5 to the Application)

Exhibit 6: Economic Effects of Proposed Facility (Exhibit 6 to the Application)

Exhibit 7: Local Ordinances (Exhibit 7 to the Application)

Exhibit 8: Other Pending Filings (Exhibit 8 to the Application)

Exhibit 9: Cost of Proposed Facilities (Replacement Exhibit 9 to the Application, filed with the Commission on November 10, 2015)

Exhibit 10: Description of Proposed Transmission Facilities (Exhibit E-1 to the

[1] All references to Exhibit 2 of the Application are intended to refer also to Exhibit 2S. Similarly, all references to every other exhibit are intended to refer to the supplement, if any, to such exhibit as filed on November 13, 2015.

Application)

Exhibit 11: Other Facilities (Exhibit E-2 to the Application)

Exhibit 12: Underground Construction (Exhibit E-3 to the Application)

Exhibit 13: Engineering Justification (Exhibit E-4 to the Application)

Exhibit 14: Effect on Communications (Exhibit E-5 to the Application)

Exhibit 15: Effect on Transportation (Exhibit E-6 to the Application)

Exhibit 16: Agency Correspondence (Appendix A to the Application[2])

Exhibit 17: Outreach and Education Plan (Appendix C to the Application)

Exhibit 18: Replacement EMF Study (Replacement Appendix D to the Application, filed with the Commission on August 3, 2016)

Exhibit 19: Invasive Species (Appendix E to the Application)

Exhibit 20: Replacement Noise Study (Replacement Appendix F to the Application, filed with the Commission on August 3, 2016 and supplemented on August 12, 2016)

Exhibit 21: National Grid's Best Management Practices for Article VII Electric Transmission Line Projects (June 2016)

Exhibit 22: Aerial Location of Cicero Substation

Exhibit 23: Site Plan for Cicero Substation

Exhibit 24: Responses to DPS-1 – DPS-47 (except DPS-19 and DPS-41)

Exhibit 25: Responses to NYSDEC-1 – NYSDEC-5

Exhibit 26: September 2016 EMF Analysis (filed with the Commission on September 14, 2016)

Exhibit 27: Town of Cicero Site Plan Approval of Marshalling Yards, and Applications to Town of Cicero for same

[2] All references to Appendix A of the Application are intended to refer also to the Supplement to Appendix A. Similarly, all references to every other appendix (except Replacement Appendix D to the Application) are intended to refer to the supplement, if any, to such appendix as filed on November 13, 2015.

Exhibit 28: Approximate Project Impact Acreages -- NYSDEC Wetlands and USACE Wetlands (October 2017)

APPENDIX B
DESCRIPTION AND LOCATION OF FACILITY

General Project Description

The project ("Project") proposed by the Applicant is the relocation and selective reconductoring and reconstruction of two existing 115 kV transmission lines predominately within the existing right-of-way ("ROW"), and the construction and operation of a new 115 kV/13.2 kV distribution substation ("Cicero Substation") and associated 115 kV tap lines ("the "115 kV Tap Lines" and, collectively with the Cicero Substation, the "Substation Facilities"). The two 115 kV transmission lines are approximately 15.53 miles of the Clay to Teall Line 10 ("Line 10") and approximately 12.95 miles of the Clay to DeWitt Line 3 ("Line 3") (Line 3 and Line 10, as National Grid proposes to relocate and reconductor them, referred to collectively as the "Transmission Facilities").

Line 3 and Line 10 are designed to operate at a nominal system voltage of 115 kV alternating current ("AC"). Their voltage of initial operation will also be 115 kV.

As described in further detail below and outlined in Exhibit 2 of the Application[1] (Exhibit 2 of the Evidentiary Record and referred to as "Exhibit 2"), the Project consists of seven distinct Segments. Existing Line 3 and Existing Line 10 are to be removed from Segments 1 and 2 (Clay Substation to Mile 4.03[2]) and relocated to Segment 7 in an effort to minimize the need to acquire additional ROW in densely populated residential areas and adjacent to an elementary school in Segment 2.

The proposed conductor type for Line 3 and Line 10 is 1113 kcmil 54/19 ACSR "Finch" conductor. Line 10 is designed with a single 1113 ACSR "Finch" conductor per phase for 14.00 circuit miles from the Clay Substation to the Teall Avenue Substation. Line 3 is designed with a single 1113 ACSR "Finch" conductor per phase for 11.42 miles from the Clay Substation to Structure 389.5.[3] The winter STE rating for Line 3 and Line 10 where they are reconductored with 1113 ACSR "Finch" is 2,030 amps. All conductor proposed to be installed as part of the Project would have a non-specular finish.

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[1] All references to Exhibit 2 of the Application are intended to refer also to Exhibit 2S. Similarly, all references to every other exhibit are intended to refer to the supplement, if any, to such exhibit as filed on November 13, 2015.

[2] The capitalized term "Mile" means the approximate linear ROW distance measured from Mile 0.0, which is located at the Clay Substation, to Mile 15.53, which is located at the Teall Avenue Substation; provided, however, that since Segment 7 is not contiguous with the end of Segment 6, its distance is measured with the notional assumption that the Clay Substation is at Mile 15.53 and Structure 326 is at Mile 18.03.

[3] All references to structure numbers in this Exhibit B are intended to refer to the identifying numbers of existing structures, not proposed structure numbers.

The aerial ground wire type proposed to be utilized on Line 3 will be a 48 count fiber optic ground wire ("OPGW") where it shares double circuit structures with Line 10. Where proposed Line 3 is located on single circuit H-Frame structures, two aerial ground wires are proposed. The first will be the same OPGW as proposed on the double circuit structures and the second will be a 3/8" extra high strength ("EHS") 7 strand steel cable. Where Line 3 is located on single circuit delta davit arm structures, the proposed aerial ground wire is OPGW. The aerial ground wire type utilized on proposed Line 10 where it shares a double circuit structure with proposed Line 10 will be a 3/8" EHS 7 strand steel cable. Where Line 10 is located on single circuit structures, one 48 count OPGW aerial ground wire is proposed.

Insulator design for the Transmission Facilities will be suspension type ball and socket insulators. In all suspension applications, regardless of structure type, insulator strings will consist of ten porcelain ball and socket insulators. Suspension structures located at critical crossings such as highways, railroads, and water crossings will utilize double insulator strings; thus they will have two strings of ten porcelain ball and socket insulators. Dead-end and angle structures will utilize two parallel strings of ten ball and socket insulators. Where required, restrained porcelain insulator assemblies will be utilized to mitigate the effects of conductor blow-out and to facilitate the appropriate clearance between the conductor and the grounded surfaces of the structure. Porcelain post type insulators will be utilized on switching devices associated with the Project. The color of the insulators proposed for the Project is brown for all applications.

Several different structure types will be used for the Project. All double circuit structure types will be weathering tubular steel pole structures, a material which maintains a brown/rust colored finish due to the weathering. In Segments 3, 4, and 7, Double Circuit Lines 3 and 10 will be supported by the same double circuit tubular steel structures, replacing the double circuit lattice towers currently supporting Existing Double Circuit Lines 3 and 10 in those segments. Proposed Line 10 is to be located on the west side of the double circuit structure and Line 3 on the east. Single circuit structures replacing those presently supporting Existing Line 3 and Existing Line 10 in Segments 5 and 6 will typically be weathering steel delta configured monopole structures.

The predominant structure type for Double Circuit Lines 3 and 10 is phase-over-phase configured davit arm monopole structures. This structure type is proposed for dead-end and suspension structures alike. Of the estimated 60 double circuit structures to be installed, National Grid currently estimates the quantities of different structure types as follows: 43 are to be phase-over-phase configured steel monopole double circuit davit arm suspension structures and 12 are to be phase-over-phase configured steel monopole double circuit dead-end structures; a total of five vertically configured steel two pole dead-end structures are proposed in areas where line switches are proposed or constructability considerations dictate the need; there are a total of two vertically configured steel two pole dead-end switch structures proposed and three vertically configured steel two pole dead-end structures proposed; interspersed with the proposed Double Circuit Lines 3 and 10 are four weathering steel three pole dead-end tap structures, two weathering steel vertically configured single pole dead-end tap structures, two weathering steel H-Frame switch structures and two steel pole H-Frame dead-end structures. The average height of the double circuit steel pole structures associated with the Project is proposed to be approximately 90 feet and the average span length is proposed to be approximately 605 feet.

The predominant structure type for single circuit Line 3 and Line 10 is weathering steel delta configured monopole structures, sometimes referred to as compact structure design. This structure type is proposed for dead-end and suspension structures alike. Where insulator swing angles and conductor blowout are a concern, restrained insulator assemblies will be utilized. Of the estimated 110 single circuit structures to be installed, National Grid currently estimates the quantities of different structure types as follows: 67 weathering steel delta configured restrained suspension structures, 13 weathering steel single pole dead-end structures, nine weathering steel three pole dead-end structures, eleven weathering steel delta configured dead-end structures, four weathering steel single pole dead-end switch structures, two weathering steel H-Frame switch structures, and four wood pole H-Frame suspension structures.

In addition, modifications need to be made to those wood pole structures not being replaced as part of the Project on Line 3 in Segment 5 between Mile 11.04 and Mile 12.95. National Grid currently estimates that eight H-Frame suspension structures will each require the addition of a cross-brace and span guys (tip-to-tip and tip-to-arm stays), and the one remaining H-Frame suspension structure will need to have the cross-arm raised and the existing span guys reframed. The average height proposed for the single circuit structures for the Project is approximately 75 feet and the average span length is proposed to be approximately 515 feet.

Specific Facility Components and Location

The Project is located in the Towns of Clay, Cicero, DeWitt, and Salina, all in Onondaga County (Central Region of National Grid's Central New York Service Territory). Existing Line 3 and Line 10 both originate at the Clay Substation and terminate at different points southeast of the Clay Substation. Starting at the Clay Substation, Line 3 and Line 10 run parallel to each other, first heading generally north for approximately 2.72 miles, then generally east for another nearly 0.66 miles, and then generally south for approximately 9.57 miles to Structure 389.5. At Structure 389.5, the two lines split onto separate ROW. Existing Line 3 continues east and then south, and Project work proposed for this line ceases two structures east of Structure 389.5. Existing Line 10 continues southward from Structure 389.5 for another nearly 2.58 miles to the Teall Avenue Substation in Salina, New York.

Transmission Facilities

The Transmission Facilities portion of the Project consists of a number of different activities involving Existing Lines 3 and 10 on each of seven different Segments. The details of proposed Project activities on these Segments are explained below. These Project details include implementation of Option C7 (discussed below) in an approximately 1.5 mile section of Segment 5, which differs from the Project as proposed by the Applicant in Exhibit 2 and in other parts of the Application.

Segment 1 – Clay Substation (Mile 0.00) to Structure 293 (Mile 2.72)

From the Clay Substation to Mile 0.84, the Existing ROW is comprised of National Grid fee-owned parcels that are maintained to a width of about 200 foot wide. North of Mile 0.84, the Existing ROW is comprised of easements, with general widths of 160 feet from Mile 0.84 to Mile 2.40 and 150 feet from Mile 2.40 to Structure 293 (Mile 2.72). Segment 1 contains Existing Lines 3 and 10 and the Applicant's T6400 Line 4. T6400 Line 4 is the most westerly of the three circuits on Segment 1, with Existing Line 3 located 50 feet to its east at the center of the ROW, and Existing Line 10 located 50 feet further to the east on the easternmost side of the ROW.

As part of the Project, the Applicant proposes to retire the assets associated with T6400 Line 4 and Existing Line 10, from two spans outside of the Clay Substation to Structure 293. The Applicant would then "relocate" T6400 Line 4 by energizing the Existing Line 3 assets to function as T6400 Line 4. This relocation of T6400 Line 4 will include the installation of a single new weathering steel three pole dead-end structure two structures from the Clay Substation, the installation of a single new single pole dead-end structure located at the northernmost point of Segment 1, and adjustment of existing underbuilt OPGW in two spans. For the first two spans of Line 3 and Line 10 located immediately outside of the Clay Substation in Segment 1, the two lines will continue to be energized as Line 3 and Line 10. The second structure from the Clay Substation on each line will be replaced with a new weathering steel three pole dead-end structure designed to allow the line to transition to Segment 7. The conductor, shield wire, and first structure outside the Clay Substation on each line will remain as they are at present.

Segment 2 - Structure 293 (Mile 2.72) to Bartell Road Substation (Mile 4.03)

At Structure 293, the Existing ROW turns generally to the east, and existing Line 3 and Line 10 transition onto double circuit structures. From Structure 293 to Mile 3.38, the Existing ROW is 80 feet wide and owned in fee by the Applicant, and here the structure centerline of Existing Double Circuit Lines 3 and 10 is located 20 feet from the northernmost edge of the ROW. From Structure 293 to Mile 3.22, Existing Double Circuit Lines 3 and 10 are the only occupants of the Existing ROW. At Mile 3.22, while those two lines continue to run generally to the east on the ROW, the Applicant's existing 34.5kV Line 33 begins to run parallel to them on a different ROW corridor.

At Mile 3.38, all three circuits turn south towards the Bartell Road Substation and occupy a 110 foot wide ROW (20 foot wide easements on the western side and the remaining 90 foot fee-owned) to Mile 3.51. From Mile 3.38 to 3.51, the structure centerline of Existing Double Circuit Lines 3 and 10 is located 17 feet from the westernmost edge of ROW, and Line 33 is located just inside the easternmost edge of the Existing ROW. The final portion of Segment 2 runs from Mile 3.51 to the Bartell Road Substation, where the Existing ROW containing Existing Double Circuit Lines 3 and 10 is a 100 foot wide fee-owned ROW adjacent to a different ROW corridor containing Line 33. In this portion, the structure centerline of Existing Double Circuit Lines 3 and 10 is located approximately 12 feet from the westernmost edge of the Existing ROW.

The Applicant proposes to retire Existing Double Circuit Lines 3 and 10 in Segment 2. The Existing ROW would be monumented and existing transmission assets completely removed in conformance with National Grid Transmission Engineering Standards. No work is proposed as part of the Project for Line 33.

Segment 3 - Bartell Road Substation (Mile 4.03) to Structure 326 (Mile 6.22)

In Segment 3, Existing Double Circuit Lines 3 and 10 are located in a 100 foot wide fee-owned ROW adjacent to a different ROW corridor containing Line 33. The structure centerline of Existing Double Circuit Lines 3 and 10 is located approximately twelve feet from the western edge of the Existing ROW. As part of the Project, the Applicant proposes to rebuild Lines 3 and 10 for the full length of Segment 3 on new weathering steel, monopole, phase-over-phase double circuit structures.

The new structure centerline will be located on the centerline of the Existing ROW, approximately 38 feet to the east of the existing structure centerline. One benefit of positioning these lines on the ROW centerline rather than in their current location is that it significantly reduces the need to acquire additional rights to comply with the Applicant's currently applicable *Transmission Right-of-Way Management Program* ("TROWMP") or to ensure conformance with electric and magnetic field guidelines. Another benefit is that it reduces the need for long-term outages and the load-at-risk created by the Project.

Segment 4 - Structure 326 (Mile 6.22) to Structure 349 (Mile 8.77)

In this segment, which runs generally north to south, Existing Double Circuit Lines 3 and 10 are supported by double circuit structures. The Existing ROW is generally 100 foot wide fee-owned ROW, except that during the construction of the interchange between Interstate 81 and New York State (NYS) Route 31 the ROW's width was reduced to as narrow as approximately 31 feet for approximately 0.43 miles in the area adjacent to NYS Route 31. Line 33 is located parallel to Existing Double Circuit Lines 3 and 10 for the entire length of Segment 4. The centerline of the double circuit structures supporting Existing Double Circuit Lines 3 and 10 is generally located 12 feet from the western edge of the Existing ROW.

As part of the Project, the Applicant proposes to rebuild Lines 3 and 10 for almost the full length of Segment 4 on new weathering steel, monopole, phase-over-phase double circuit structures. The new structure centerline will be located on the centerline of the Existing ROW, approximately 38 feet to the east of the existing structure centerline. Thus, Double Circuit Lines 3 and 10 will continue in Segment 4 the same offset established in Segment 3.

The one exception to this will be in the narrower ROW in the area adjacent to NYS Route 31. Here, the potential to expand the Existing ROW is constrained by the interchange between I-81 and NYS Route 31 on the east and existing commercial developments on the west. In order to locate Double Circuit Lines 3 and 10 in a similar location to the existing facilities, additional ROW rights on land adjacent to the western edge of the Existing ROW and a permit on New York State Department of Transportation (NYSDOT) land adjacent to the eastern edge will be required. These additional rights are being sought so that the parallel 115kV lines can be

relocated adjacent to their present location without creating adverse impacts on nearby businesses. This involves transitioning Double Circuit Lines 3 and 10 from the 38 foot easterly offset of the Existing Double Circuit Lines 3 and 10 to a centerline location approximately 4 feet west of the centerline of Existing Double Circuit Lines 3 and 10. In all locations, the structure centerline of Double Circuit Lines 3 and 10 will be kept 50 feet from the western edge of ROW, with highway right-of-way associated with Interstate 81 bounding the corridor to the east. Double Circuit Lines 3 and 10 will be supported by weathering steel, monopole, phase-over-phase double circuit structures.

In order to facilitate this reconfiguration of Double Circuit Lines 3 and 10, the Applicant proposes to underground its 34.5kV Line 33 for a distance of approximately 1.02 miles. Existing structure 206 on Line 33 will be converted to a riser pole structure with a switch to transition Line 33 to underground cable. This underground relocation will continue on Line 33 until existing structure 182, which will also be converted to a riser pole structure with a switch, to be located on the east side of Interstate 81. Installation of the new underground 34.5kV facilities will involve the use of directional drilling techniques under NYS Route 31 and Interstate 81.

Segment 5 - Structure 349 (Mile 8.77) to Structure 389.5 (Mile 12.95)

At the beginning of Segment 5, the Existing Double Circuit Lines 3 and 10 transition back to single circuit structures. In this segment, Existing Line 3 and Existing Line 10 are supported by single circuit H-Frame structures. From Mile 8.77 to Mile 11.15, the Existing ROW is comprised of 100 foot wide transmission easements with trimming rights extending an additional 25 feet to the west. An easement ROW containing the sub-transmission 34.5kV Line 33 and 34.5kV Line 32 is located to the east. Double Circuit Lines 2 and 5 are located adjacent to the Existing ROW at approximately Mile 11.04 and join the Existing ROW at Mile 11.15. Double Circuit Lines 2 and 5 continue to run parallel to Existing Line 3 and Existing Line 10 for the remainder of Segment 5.

For the approximately 1.5 mile section of Segment 5 from Structure 350 to Structure 364 (Mile 8.77 to Mile 10.26), Option C7 will be implemented. This option, which differs from the Project as proposed by the Applicant in Exhibit 2 and in other parts of the Application, involves moving the centerline of Line 10 twenty feet to the east and the centerline of Line 3 ten feet to the east with respect to the existing centerline locations. This has the effect of reducing the separation between the two transmission lines from 50 feet to 40 feet. To implement Option C7, National Grid will need to obtain transmission line construction and operational easement rights on a 50 foot wide corridor of land east of the existing 100 foot transmission ROW in this section of the Project.

In the rest of Segment 5, the Project includes retaining Line 3 and Line 10 on the same centerlines as Existing Line 3 and Existing Line 10. In order to facilitate the installation of the new conductor, select structures on Line 3 and all structures on Line 10 will be replaced.

From Mile 8.77 to Mile 11.04, both Line 3 and Line 10 will be reconstructed on weathering steel single circuit restrained delta davit arm suspension structures, weathering steel single circuit delta davit arm dead-end structures, and weathering steel single circuit single pole dead-end

structures. Reconstruction of both circuits is being undertaken to ensure conformance with electric and magnetic field guidelines.

From Mile 11.04 to Mile 12.95, the majority of existing structures associated with Line 3 will be re-used. Where replacement of Existing Line 3 suspension structures is necessary, the replacement structures are to be wood pole H-Frame suspension structures with weathering steel cross-arms. Dead-end replacement structures will be weathering steel single circuit H-Frame dead-end and weathering steel single circuit three pole dead-end structures. As part of the Project, an additional 75 foot width of ROW will be acquired adjacent to Double Circuit Lines 2 and 5. This width allows for Line 3 to remain supported by H-Frame structures and remain in conformance with electric and magnetic field guidelines between Mile 11.04 and Structure 389.5.

In this area, all structures associated with Line 10 will be replaced. Suspension structures will be weathering steel single circuit restrained delta davit arm suspension structures. Dead-end structures will be weathering steel single circuit delta davit arm dead-end structures or weathering steel single circuit single pole dead-end structures. Replacement structures will generally be located between 5 and 10 feet ahead or back of existing structure locations. Structure spotting criteria will consider locating adjacent structures in lock-step. Pole heights will be specified such that adjacent structures will be of similar height to the greatest extent possible, while still ensuring conformance to governing clearance criteria.

The Project includes installation of an intermediate structure on Line 3 two spans to the southeast of Structure 389.5, where Line 3 departs Segment 5. This is proposed to ensure that the appropriate conductor clearance to an underbuilt distribution line is maintained. Existing Line 3 is thermally limited to ensure compliance with the applicable governing clearance criteria. At the completion of the Project, it is essential that Line 3 be operable at the maximum value allowable based on conductor rating. The intermediate structure is to be a wood pole H-Frame suspension structure with a weathering steel cross-arm set in the span between existing structures 1 and 2.

In order to provide the appropriate clearance to the underbuilt Line 3 where it transitions from Segment 5, Structures 26 and 928 on the T2670 Line 2 and structures 927 and 928 on the T2680 Line 5 will require replacement. The replacement structures will be wood pole H-Frame suspension structures for structures 26 and 927 for Line 2 and Line 5 respectively and weathering steel single pole dead-end structures for Structures 928 on both circuits.

Segment 6 - Structure 389.5 (Mile 12.95) to Teall Avenue Substation (Mile 15.53)

In Segment 6, Existing Line 10 is the westernmost circuit in the Existing ROW. T2650 Line 4 is located 50 feet to its east, T2680 Line 5 is located 50 feet to the east of T2650 Line 4, and Line 2 located 50 feet to the east of T2680 Line 5.

The Existing ROW varies in width over the length of this segment. From Mile 12.95 to Mile 13.31, the Existing ROW is generally 250 foot wide transmission easements with trimming rights extending an additional 25 feet from the western edge of the ROW. Line 10 is located 25

feet from the western edge of ROW. From Mile 13.31 to Mile 13.77, the Existing ROW is generally 200 feet wide transmission easements with trimming rights extending an additional 25 feet from the western edge of the ROW. Line 10 is located 25 feet east of the edge of the Existing ROW. From Mile 13.77 to Mile 13.97, the Existing ROW is 250 foot wide easements. Line 10 is located 25 feet from the western edge of the ROW. From Mile 13.97 to Mile 14.06, the Existing ROW is 250 feet wide easements. Line 10 is located 30 feet from the western edge of ROW. From Mile 14.06 to Mile 14.16, the Existing ROW is 270 feet wide easements. Line 10 is located 50 feet from the western edge of ROW. From Mile 14.16 to Mile 15.28, the Existing ROW is 300 foot wide easements. Line 10 is located 50 feet from the western edge of ROW. From Mile 15.28 to Mile 15.53, the Existing ROW is 200 foot wide easements. Line 10 is located 25 feet from the western edge of ROW.

Line 10 will be rebuilt on the same centerline for the full length of Segment 6. Replacement structures will generally be located between five (5) and ten (10) feet ahead or back of existing structure locations. Structure spotting criteria will consider locating adjacent structures lock-step with adjacent structures in the ROW. Replacement structures will be weathering steel single circuit restrained delta davit arm suspension structures, weathering steel single circuit delta davit arm dead-end structures, and weathering steel single circuit single pole dead-end structures.

Segment 7 – Clay Substation (Mile 15.53) to Structure 326 (Mile 18.03)

The full length of Segment 7 is adjacent to an existing ROW that contains the New York Power Authority's ("NYPA") 345kV Lines 1 and 2, National Grid's 345kV Line 13, and National Grid's T2050 Line 5 (with the latter two lines sharing double circuit lattice structures). From Mile 15.66 to Mile 16.20, the existing transmission corridor is 300 foot wide easements and contains the two NYPA 345kV lines. National Grid's 345kV Line 13 and 115 kV T2050 Line 5 are presently adjacent to the existing ROW corridor. From Mile 16.20 to Mile 18.03, the existing transmission corridor is 450 foot wide easements and contains the two NYPA 345kV lines and National Grid's Line 13 / T2050 Line 5 double circuit structures.

As discussed above in connection with Segment 1, the Applicant proposes that the first two spans of Line 3 and Line 10, located immediately outside of the Clay Substation in Segment 1, will continue to be energized as Line 3 and Line 10. The second structure from the Clay Substation on each line will be replaced with a new weathering steel three pole dead-end structure designed to allow the line to transition to Segment 7, and the conductor, shield wire, and first structure outside the Clay Substation on each line will remain as they are at present.

In the rest of Segment 7, the Applicant proposes to install weathering steel, monopole, phase-over-phase double circuit structures to comprise Double Circuit Lines 3 and 10 located 75 feet to the south of the Line 13/T2050 Line 5 centerline, and for those lines to enter the Existing ROW at the point where Segments 3 and 4 meet, which is at Structure 326 (the eastern end of Segment 7). Structures will be spotted to be lock-step with existing structures on the ROW or to continue diagonals to the greatest extent practical.

From Mile 15.66 to Mile 16.20, acquisition of 250 feet of permanent easements and danger tree rights will be needed to ensure existing and proposed facilities are located on land with Applicant-owned rights and to bring the corridor into conformance with the Applicant's TROWMP. From Mile 16.20 to Mile 18.03, an additional 50 feet of operational easement in addition to danger tree rights will be needed to bring the corridor into conformance with the Applicant's TROWMP.

Cicero Substation

As noted in Exhibit 2, at page 2-1S, the Cicero Substation would be equipped with two 115-13.2 kV, 24/32/40 megavolt amperes ("MVA") load tap change ("LTC") transformers in an eight-feeder open air breaker configuration (six of which would be fully built out). The 115 kV Tap Lines will provide a dual supply feed from Line 3 and Line 10 to the substation. The Line 3 tap line will be approximately 250 feet in length and the Line 10 tap line will be approximately 160 feet in length.

The Applicant proposes to locate the Cicero Substation on the approximately 4 acre eastern portion ("Substation Site") of an approximately 6.07 acre site owned by the Town of Cicero, located east of U.S. Route 11, west of Interstate 81, and north of Gillette Road, in the Town of Cicero, Onondaga County. The Substation Site is currently used by the Town of Cicero Department of Public Works for offices, vehicle maintenance and parking, salt storage, gravel storage, metal/rubber/plastic storage, scrap appliance and scrap metal storage, and plow storage. In the vicinity of the Substation Site, Line 3 and Line 10 are proposed to be located in the same National Grid fee-owned ROW as Existing Line 3 and Existing Line 10, which runs generally north to south immediately to the east of the Substation Site. The portion of the 115 kV Tap Lines not located on the Substation Site will be located on this National Grid fee-owned ROW.

The proposed size of the Cicero Substation is approximately 240 feet by 200 feet (1.1 acres). The substation will be surrounded by a fence and surfaced in crushed stone. The following equipment will be installed within the fenced enclosure:

- Two 24/32/40 megavolt amperes MVA, 115 kV/13.2 kV power transformers.
- Two S&C model 2010, 115 kV, 2000A, 40 kA circuit switchers and supporting structure installed on the high side of each transformer on a concrete foundation.
- Four 115 kV, 2000A disconnect switches supported by galvanized steel structures. Three of the 115 kV disconnect switches will be motor operated.
- Instrument transformers in the form of 115 kV Capacitive Voltage Transformers installed on the 115 kV terminal structures.
- Strain bus consisting of aluminum cable running between the 115 kV terminal structures, the circuit switcher, the transformers, and the secondary equipment.
- Rigid bus within the high side structures to connect the main and tie disconnect switches. The rigid bus will be 2-3 inch diameter aluminum tube.
- Four lightning masts, consisting of galvanized steel tubular poles, to provide protection for the equipment from lightning strikes. Two of the masts will be installed on separate concrete foundations on the west end of the station, and the other two will be installed on

the 115 kV terminal structures at the east end of the station. The maximum height of all four lightning masts will be approximately 60 feet tall.

- A control house enclosure, approximately 24 feet wide by 30 feet long by 12 feet high, to house various protective relays, instruments, and controls for the station, as well as the AC and DC power panels and the DC batteries.
- Two station service transformers, to be located outside of the control house enclosure on a separate galvanized steel structure and reinforced concrete foundation.

Each of the two power transformers will have the following ratings: three phase Delta to Y grounded 24/32/40 MVA oil natural air natural / oil natural air forced 65 deg. rise @ 115 kV to 13.2 kV transformer TR1 and TR2 complete with LTC, control cabinets, Beckwith paralleling equipment, and associated communication devices. Each transformer will be supported on a reinforced concrete foundation. Each transformer contains approximately 7,200 gallons of mineral oil used for insulation. Containment will be constructed around each transformer with sufficient volume to retain the transformer's entire contents in the event of a catastrophic spill.

Exhibits 22 and 23 of the Evidentiary Record are, respectively, an aerial photograph depicting the location of the Substation Site and a Site Plan for the Cicero Substation.

APPENDIX C
PROPOSED COMMISSION FINDINGS

1. Based upon the information provided in Exhibit 13, supported by the testimony of Adam Barnello, Jessica Farrell and Dilip Kommineni, the electric transmission project ("Project") for which Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or "Applicant") seeks a certificate is needed as soon as practical to maintain reliable transmission service within National Grid's Central Region. National Grid's existing 115 kV Line 3 and Line 10 are identified as Bulk Power System elements. As the lines experience conditions outside their accepted limits during single- and multiple-element contingencies, including outages of both Bulk Power and Non-Bulk Power elements, mitigating measures are required. For summer 2015, the thermal capacity of Existing Line 3 and Existing Line 10 is unacceptable. In this scenario, post-contingency flows for these two lines are between the long-term and short-term emergency ratings for N-1 contingencies. For N-1-1 contingencies, the worst-case post-contingency flow for Existing Line 3 is between its long-term and short-term emergency ratings. The worst-case post-contingency flow for Existing Line 10 is above its short-term emergency rating. The Project would resolve these capacity issues. Furthermore, National Grid's North Syracuse distribution study area is the northern suburb of the City of Syracuse, which has received the majority of the new housing development in the Syracuse metropolitan area. In the North Syracuse area, there are significant capacity and outage exposure issues that need to be resolved. Two major substations that need to be relieved are the Pine Grove Substation and the Bartell Road Substation. In addition to the relief needed at these two existing substations, there are existing distribution feeders with thermal overloads that need to be addressed. The Cicero Substation element of the Project is needed to provide the required load relief.

2. Based upon the information provided in Exhibits 2, 3, 4, 14, 15, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27 and 28, supported by the testimony of Leka Gjonaj, Frank Sciortino, Steve Wood, Anthony Vincent, Jessica Farrell, David Campilii, Dianne McLean, Thomas Canino, and John Hecklau, the Project will be designed, constructed and operated in a manner that avoids or minimizes impacts to environmental resources. The nature of the probable environmental impacts resulting from the Project includes:

    (a) minimal incremental visual impacts from the construction of the Proposed Line and the busing, relocation, and reconstruction of certain existing lines;
    (b) construction impacts on certain regulated wetlands and protected streams and waterbodies;
    (c) selective clearing of undesirable woody species or saplings on some segments of the Project's right-of-way, but because almost the entire Project will be built along existing electric transmission corridors, the amount of clearing is more limited than it would be if new corridors were being created;
    (d) temporary disturbance and inconvenience, including noise and debris, associated with construction activities;
    (e) temporary construction impacts on a small amount of active agricultural lands, which will be minimized by the use of existing transmission corridors to the maximum extent practicable; and

(f) maximum calculated electromagnetic fields at the edge of the Project's right-of-way that comply with the Commission's guidelines.

3. Based upon the information provided in Exhibits 2, 3, 4, 14, 15, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27 and 28, supported by the testimony of Leka Gjonaj, Frank Sciortino, Steve Wood, Anthony Vincent, Jessica Farrell, David Campilii, Dianne McLean, Thomas Canino, and John Hecklau, the Project represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations. By utilizing existing transmission corridors to the maximum extent practicable, the effect of the Project on agricultural lands, wetlands, and river corridors traversed is minimized. The Project does not traverse any parklands. The Project will cross Young's Creek (Segments 1), Mud Creek (Segment 4), North Branch Ley Creek (Segment 6), and Ley Creek (Segment 6) and their associated tributaries.

4. No part of the Project will be located underground. Underground alternatives to the Project were examined; however, undergrounding the Project would have significantly increased: costs, environmental and construction impacts, and system operating impacts.

5. Based upon the information in Exhibit 13, supported by the testimony of Adam Barnello, Jessica Farrell and Dilip Kommineni, the Project conforms to the requirements and planning objectives of the New York Independent System Operator and is consistent with the Applicant's long-range plan for the expansion of its transmission facilities. The Project will serve the interests of electric system economy and reliability.

6. Based upon the information provided in Exhibit 7, sponsored by Anthony Vincent and Dianne McLean, the location of the Project conforms to the substantive provisions of the applicable local laws and regulations issued thereunder, except those local laws and regulations which the Commission refuses to apply because it finds, based on the justifications set forth in Exhibit 7, that as applied to the Project, such are unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality.

7. Based upon the information provided in Exhibit 4, supported by the testimony of Frank Sciortino, Steve Wood, and John Hecklau, the Project represents a minimum adverse impact on active farming operations that produce crops, livestock and livestock products, as defined in section three hundred one of the agriculture and markets law, considering the state of available technology and the nature and economics of various alternatives, and the ownership and easement rights of the impacted property.

8. Based on the entire record as listed on Appendix A, the Project will serve the public interest, convenience and necessity.

APPENDIX D

PROPOSED CERTIFICATE CONDITIONS

The Certificate of Environmental Compatibility and Public Need (the "Certificate") for Case 15-T-0305 granted to Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or the "Certificate Holder"), pursuant to Article VII of the New York Public Service Law ("PSL"), authorizing a project (the "Project") to relocate and selectively reconductor and reconstruct two existing 115kV transmission lines (collectively, the "Transmission Facilities") and to construct the Cicero Substation (collectively with the Transmission Facilities, the "Facility"), is subject to the following conditions:

A. Conditions of the Order

1. The Certificate Holder shall, within 30 days after the issuance of the Certificate, file with the Secretary to the Commission (the "Secretary") either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate. Failure to comply with this condition shall invalidate the Certificate.

2. If the Certificate Holder decides not to commence construction of any portion of the Facility, it shall so notify the Secretary in writing within 30 days of making such decision and shall serve a copy of such notice upon all parties in the same manner and at the same time as it files with the Secretary.

3. If construction of the Project hereby certified is not commenced within 18 months after the Certificate Holder files a verified statement that it accepts and will comply with the Certificate, the Certificate may be vacated with notice to the Certificate Holder.

4. Except for deadlines established by statute, the Secretary may extend any deadlines established by this order for good cause shown.

5. The Certificate Holder shall construct the Facility in a manner that conforms to the then-current Building Code of New York State and all applicable standards of the American National Standards Institute ("ANSI") including, without limitation, the National Electrical Safety Code ("NESC"), Institute of Electrical and Electronics Engineers ("IEEE") Standard IEEE C2-2012, 2017, and any stricter standards adopted by the Certificate Holder.

6. a) The Certificate Holder shall coordinate all work performed at state and municipal road and highway crossings with the appropriate state and municipal officials and shall obtain the required authorization for such work, subject to the Commission's continuing jurisdiction as appropriate.

b) The Certificate Holder shall coordinate with the appropriate municipal agencies and police departments for traffic management of roads under municipal jurisdiction.

c) A copy of each such authorization shall be provided to the Secretary by the Certificate Holder before commencement of construction across the affected municipal road or highway.

7. If the Certificate Holder believes that any action taken, or determination made, by a State or municipal agency in connection with this Certificate is unreasonable or

unreasonably delayed, with the exception of issues arising under federal environmental permits or regulations administered by the New York State Department of Environmental Conservation ("NYSDEC"), the Certificate Holder may petition the Commission, upon reasonable notice to that agency, to seek a resolution of any such unreasonable or unreasonably delayed requirement. Such agency may respond to the petition, within five (5) business days, to address the reasonableness of any requirement or delay. For issues arising under federal environmental permits or regulations administered by the NYSDEC, the Certificate Holder shall contact the NYSDEC to request a resolution of any action or approval which the Certificate Holder believes is unreasonable or unreasonably delayed.

B. Public Health and Safety

8. The Certificate Holder shall design, engineer and construct the Project such that its operation shall comply with the electric and magnetic field standards established by the Commission in Opinion No. 78-13, issued June 19, 1978, and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities, issued September 11, 1990.

9. The Certificate Holder shall engineer and construct the Facility to be fully compatible with the operation and maintenance of nearby electric, gas, telecommunication, water, sewer, and related facilities; details of such other facilities and measures to protect the integrity, operation and maintenance of those facilities shall be presented in the Project's Environmental Management & Construction Plan(s) ("EM&CP"). The Facility shall be designed and constructed to avoid adverse effects on the cathodic protection system and physical conditions of existing structures and any fuel gas pipelines.

10. The Certificate Holder shall keep local fire department and emergency management teams apprised of on-site hazardous chemicals and waste. All such chemicals and waste shall be secured in a locked and controlled area.

11. The Certificate Holder shall notify the NYSDEC of any fuel or chemical spill it is required to report in accordance with NYSDEC regulations and guidance and shall notify New York State Department of Public Service ("DPS") staff ("Staff") as soon as possible thereafter.

12. The Certificate Holder shall take appropriate measures to minimize fugitive dust and airborne debris from construction activity. Exposed soils and roadways shall be wetted as needed during extended dry periods to minimize dust generation. To the extent practicable, water for dust control shall come from municipal water supplies/sources. If surface waters are used, equipment shall be disinfected afterwards.

13. The Certificate Holder shall ensure that parking for Project construction workers shall be in designated areas which do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses. These parking areas shall be designated in the EM&CP.

14. Direct vehicular disturbance to properties shall be minimized by accessing the Project right-of-way ("ROW") from existing roadways or approved off-ROW access roads identified in the EM&CP.

15. For each road crossing and location where construction vehicles will access the Project ROW frequently from local roadways, the Certificate Holder shall implement a

Maintenance and Protection of Traffic ("MPT") plan that identifies procedures to be used to maintain traffic and provide a safe construction zone for those activities within the roadway right-of-way. The MPT plan shall address temporary signage, lane closures, placement of temporary barriers and traffic diversion.

a) All signage utilized shall comply with the New York State Department of Transportation ("NYSDOT") Manual of Uniform Traffic Control Devices. Placement of signs shall be determined in consultation with the jurisdictional agency.

b) Flagmen shall be present at all times when equipment is crossing any road, when equipment is being loaded or unloaded, and where two-lane traffic has been reduced to one lane. All flagging operations shall comply with 17 NYCRR Part 131.

16. The Certificate Holder or its supplier, as the case may be, shall obtain any permits from applicable agencies required for the delivery of oversized components for the Project.

17. The Certificate Holder shall have the right to require that any person seeking to access the Project area first be appropriately trained in environmental protection and safety.

C. Environmental Management and Construction Plans(s)

18. Except where this Certificate requires otherwise, the terms of the Certificate and the environmental protection measures contained in the Application shall be incorporated into the EM&CP. These environmental protection measures shall be applied during construction, operation and maintenance of the Project. Applicable provisions of the Certificate, EM&CP, and orders approving the EM&CP shall be accommodated in any design, construction, ownership, or maintenance contracts associated with the Project.

19. The EM&CP for the Transmission Facilities portion of the Project shall be developed in accordance with these Certificate Conditions and shall not be inconsistent with the Certificate Holder's then-effective *Transmission Right-of-Way Management Program* adopted by the Commission pursuant to 16 NYCRR Part 84 ("TROWMP"), except where a conflict with a provision of the Certificate would be created.

20. Prior to filing the EM&CP for the Transmission Facilities portion of the Project, the Certificate Holder shall contact the NYSDEC Region 7 Natural Resources Supervisor, NYS Natural Heritage Program and the United States Fish and Wildlife Service ("USFWS") to check for any updates or changes of known threatened or endangered plant or animal species, or special concern species listed in New York, (collectively, "RTE" species) or habitat or Significant Natural Communities in the Project area. After the Certificate Holder learns of any updates regarding RTE species, it will inform DPS Staff of such updates. The Certificate Holder may meet its obligation to inform DPS of such an update by including it in the EM&CP.

21. Deviations from the certified centerline, design height, location, number of structures, and structure types shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a provision of the Certificate would be created. An explanation for the proposed deviation and supporting documentation shall be provided in the EM&CP.

22. A separate EM&CP for the Cicero Substation will be prepared. The Cicero Substation transformer will meet the proposed National Grid sound performance level

identified in the application and noise studies as a near field 65 dBA pressure level transformer.

23. If the Certificate Holder includes in the EM&CP any environmental protection or mitigation measure(s) not set forth in *National Grid's Best Management Practices for Article VII Electric Transmission Line Projects* attached as Exhibit 21 as indicated in Appendix A of the Joint Proposal (the "BMPs"), the Certificate Holder shall also include with the EM&CP a listing of each such measure, where the Certificate Holder proposes to use such measure, and an explanation as to why the Certificate Holder selected that measure rather than a measure included in the BMPs.

24. The Certificate Holder shall not commence construction of any portion of the Project, the preparation of the site for the construction of any portion of the Project, or any proceedings under the Eminent Domain Procedure Law ("EDPL") to acquire permanent ROW, temporary ROW, or off-ROW access with respect to any portion of the Project until the Commission has approved the EM&CP for such portion of the Project. To calculate the three-year period for acquisition of property pursuant to the EDPL, the date of Commission approval of the EM&CP covering the affected parcel shall be regarded as the date on which this Article VII proceeding was completed. The following activities do not constitute the construction of any portion of the Project or the preparation of the site for the construction of any portion of the Project: (a) surveying, soils testing and such other activities as are necessary for preparation of the final design plans for the Project; and (b) routine mowing of the existing ROW pursuant to the Certificate Holder's then-effective TROWMP. Notwithstanding the foregoing provisions of this paragraph, National Grid is hereby authorized to prepare the marshalling yards described in Exhibit 27 of the Evidentiary Record for use as marshalling yards for the Project, and to use them for such purpose.

25. The Certificate Holder shall file an electronic copy of its proposed EM&CP with the Secretary and, unless otherwise directed by the Secretary, serve one electronic copy on each of: the staff of the Deputy Permit Administrator, Major Projects Bureau of the NYSDEC Central Office in Albany; the Natural Resources Supervisor of the Region 7 office of the NYSDEC; the staff of the New York State Department of Agriculture & Markets ("NYSDAM"); the staff of the Region 3 office of the NYSDOT; any other New York State agency that requests the document; and any party on the service list who requests the document. Within seven days after the Certificate Holder files the proposed EM&CP with the Secretary, it shall deliver four hard copies to DPS Staff, one hard copy to the staff of the NYSDEC Central Office in Albany and another hard copy to the Region 7 office of the NYSDEC. The Certificate Holder also shall place one electronic copy or one hard copy for inspection by the public in a convenient location in each municipality in which construction will take place, which location for a given municipality may be a repository (*e.g.*, library) in such municipality identified in the Service List for the Application. The Certificate Holder will also make the EM&CP accessible on its Project website by way of either direct PDF download(s) or a web link to the DPS website page(s) where the EM&CP is available.

26. Contemporaneously with filing and serving the proposed EM&CP, the Certificate Holder shall disseminate, in the manner specified below, a written notice, in language reasonably understandable to the average person, that the proposed EM&CP has been filed (the "EM&CP Filing Notice").

a) The Certificate Holder shall serve a copy of the EM&CP Filing Notice on all parties to this proceeding (except those upon whom the foregoing paragraph requires the Certificate Holder to serve a copy of the proposed EM&CP) and on all persons required to be served with the Application by statute or regulation.

b) The Certificate Holder shall deliver by first class mail a copy of the EM&CP Filing Notice to the owners of all properties that abut the ROW and all properties on which property rights are required.

c) The Certificate Holder shall include a copy of the EM&CP Filing Notice in the proposed EM&CP.

d) The Certificate Holder shall publish a copy of the EM&CP Filing Notice in a newspaper or newspapers of general circulation near the Facility.

e) The EM&CP Filing Notice delivered to the owners of properties on which property rights are to be acquired shall be accompanied by a description of the type of property rights required for the Project with respect to such property (*e.g.*, fee, easement, lease, etc.).

27. The EM&CP Filing Notice shall contain, at a minimum, the following:

a) a statement that the proposed EM&CP has been filed;

b) a general description of the certified Facility and of the content of the proposed EM&CP;

c) a listing of the locations and the websites where the Certificate Holder and DPS have made the proposed EM&CP available for public inspection;

d) a statement that any person desiring additional information about a specific geographical location or specific subject may request it from the Certificate Holder;

e) the name, address, and telephone numbers of an appropriate Certificate Holder representative;

f) the e-mail address and postal address of the Secretary and the DPS website; and

g) a statement that any person may be heard by the Commission on any matter or objection regarding the proposed EM&CP by filing written comments with the Secretary and the Certificate Holder within 38 days of the date the proposed EM&CP was filed with the Commission, or within 38 days of the date of the newspaper publication of a copy of the EM&CP Filing Notice, whichever is later.

28. A certificate of service indicating upon whom all the EM&CP Filing Notices were served shall be filed with the Secretary within three (3) business days after the time the proposed EM&CP is filed, and shall be a condition precedent to approval of the EM&CP. When available, proof of publication of the newspaper notice(s) of filing the proposed EM&CP, including a copy of such notice, shall be filed with the Secretary.

29. After the EM&CP has been approved by the Commission:

a) The Certificate Holder shall report any changes it proposes to DPS Staff. If the change involves the jurisdictional area of another agency, DPS Staff will consult such agency. DPS Staff will refer any proposed changes that will not result in any increase in adverse environmental impacts or are not directly related to contested issues decided during the proceeding to the Chief of Environmental Certification and Compliance ("EC&C")

Section of the Office of Electric, Gas and Water for approval. DPS Staff will refer all other proposed changes to the Commission for approval.

b) Upon being advised that DPS Staff will refer a proposed change to the Commission, the Certificate Holder shall notify all parties as well as property owners or lessees whose property is affected by the proposed change. The notice shall: (1) describe the original conditions and the requested change; (2) state that documents supporting the request are available for inspection at specified locations, (3) state that persons may comment by writing or calling (followed by written confirmation) to the Commission within twenty-one (21) days of the notification date, and (4) provide the Secretary's email address, phone number, and mailing address. Any delay in receipt of written confirmation will not delay Commission action on the proposed change.

c) The Certificate Holder shall not execute any proposed change until it receives written approval from the Chief of EC&C or the Commission, except in emergency situations threatening personal injury, property damage, or severe adverse environmental impact, or as specified in the approved EM&CP.

D. Notices and Public Complaints

30. The Certificate Holder shall make available to the public a toll-free or local phone number of an agent or employee who will, for the duration of construction of the Project, be available to receive complaints, if any, from the public about the construction of the Project. That number shall include a recorded outgoing message that will, when a call is not answered by a person, provide the caller with: (i) the number to be called at any time in case of emergency, (ii) the phone number and email address of the Secretary, and (iii) the phone number of the Commission's Environmental Compliance Section.

31. The Certificate Holder's Project website shall provide a means for the public to communicate to the Certificate Holder about the Project (*e.g.*, to register complaints or ask questions) through either a direct link to a complaint form or email or by providing the contact information (phone and/or email address) of a representative of the Certificate Holder who can respond to communications that include questions and concerns about the Project from members of the public.

32. The Certificate Holder shall report to DPS Staff every complaint that cannot be resolved, and describe the actions taken to address the complaint, within ten (10) business days after receipt of the complaint.

33. a) No less than two weeks before commencing site preparation, the Certificate Holder shall notify the public of the anticipated date that site preparation will commence, as follows:

(1) provide notice to local officials, Onondaga County Department of Emergency Communications and emergency personnel along the entire Facility route;

(2) provide notice to local media for dissemination;

(3) provide notice for display in the repositories identified in the Service List of the Application, the Certificate Holder's Project website, and other

public places (such as general stores, post offices, community centers and conspicuous community bulletin boards).

b) The notice or notices under this paragraph shall be written in language reasonably understandable to the average person and shall contain:

(1) a map of the Project;

(2) a brief description of the Project;

(3) the anticipated date for start of site preparation and estimated date for Project completion (inclusive of restoration);

(4) the name, mailing address, local or toll-free telephone number, and email address of an employee or agent of the Certificate Holder who will, for the duration of construction of the Project, be available to receive complaints, if any, from the public about the construction of the Project; and,

(5) a statement that the Project is under the jurisdiction of the New York State Public Service Commission, which is responsible for enforcing compliance with environmental and construction conditions, and which may be contacted at an address, email, and telephone number to be provided in the notice.

c) Upon distribution, a copy of the form of the notice or notices under this paragraph shall be submitted to the Secretary.

d) The Certificate Holder shall notify all persons who own properties that are crossed by or abut the Project ROW, and all persons who are non-owner residents on such properties, of the planned construction activities and anticipated schedule affecting the abutting properties at least fourteen (14) days, but no more than forty-five (45) days (or longer on the specific request of the Certificate Holder agreed to by DPS Staff), prior to the commencement of construction. The Certificate Holder shall deliver such notice by first class mail or, for any one or more non-owner residents, the Certificate Holder, at its option, may instead affix the notices to the doors of the residences. The Certificate Holder shall provide a copy of the generic form of such notice to the Secretary prior to the commencement of construction.

34. The Certificate Holder shall notify all persons who own properties that abut the site of the Cicero Substation, and all persons who are non-owner residents on such properties, of the planned activities in construction of the Cicero Substation and anticipated schedule affecting the abutting properties at least fourteen (14) days, but no more than forty-five (45) days (or longer on the specific request of the Certificate Holder agreed to by DPS Staff), prior to the commencement of construction on the Cicero Substation. The Certificate Holder shall deliver such notice by first class mail or, for any one or more non-owner residents, the Certificate Holder, at its option, may instead affix the notices to the doors of the residences.

35. For the duration of Project construction, the Certificate Holder shall post and maintain on its Project website a schedule that includes at least general-level information for the public about Project activities scheduled to occur during the upcoming two week period.

36. The Certificate Holder shall provide all contractors providing services for construction of the Project ("Contractors") with complete copies of the Certificate, the

approved EM&CP, the order(s) approving the EM&CP, updated construction drawings, and any site-specific plans prepared in accordance with Article 145 of the New York State Education Law, the State Pollutant Discharge Elimination System ("SPDES") General Permit for Stormwater Discharge from Construction Activity (Permit No. GP-0-15-002) ("SPDES General Permit"), any permit issued pursuant to Section 404 of the Federal Clean Water Act and the Section 401 Water Quality Certification. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the Contractors prior to the execution of such contracts.

37. The Certificate Holder shall notify all Contractors that the Commission may seek to recover penalties for violation of the Certificate and other orders issued in this proceeding, not only from the Certificate Holder, but also from its Contractors, and that Contractors also may be liable for other fines, penalties and environmental damage.

38. The Certificate Holder shall inform the Secretary in writing at least five days before commencing construction of the Facility.

39. The Certificate Holder shall provide DPS Staff and the NYSDEC with weekly status reports summarizing construction of the Transmission Facilities portion of the Project and indicating construction activities and locations scheduled for the next week.

40. Within ten (10) days after the Transmission Facilities portion of the Project is fully constructed and placed in service, the Certificate Holder shall notify the Secretary in writing of that fact.

41. Within ten days of the completion of final restoration of the Transmission Facilities portion of the Project, the Certificate Holder shall notify the Secretary in writing that all restoration has been completed in compliance with this Certificate and the order(s) approving the EM&CP.

E. ROW Construction, Operation, Maintenance, and Restoration

42. a) At least two (2) weeks prior to the start of construction of the Project, the Certificate Holder shall hold a preconstruction meeting to which it shall invite its contractors, DPS Staff, NYSDAM, NYSDOT, and the NYSDEC. An agenda, the location, and an attendee list shall be agreed upon between DPS Staff and the Certificate Holder.

b) Maps showing designated travel routes, construction worker parking and access road locations and a general project schedule will be available at the meeting for the attendees.

c) The Certificate Holder shall supply draft minutes from this meeting to a representative of DPS Staff, NYSDAM, NYSDOT, and the NYSDEC for corrections or comments, and thereafter the Certificate Holder shall issue the finalized meeting minutes to all attendees.

d) If, for any reason, the Contractors cannot finish the construction of the Project, and one or more new contractors are needed, there shall be another preconstruction meeting with the same format as outlined above.

43. The Certificate Holder shall confine construction and subsequent maintenance to the Project ROW or as otherwise certified and to additional work areas as detailed in the EM&CP.

44. Each construction activity shall be described in detail in the EM&CP.

45. Before construction begins in any area, the Certificate Holder shall, in such area: a) delineate both edges of the Project ROW, as certified; and c) stake and/or flag all off-ROW access roads and all work pads and pulling pads; d) mark wetland boundaries based on approved plans; and e) notify DPS Staff when the above-described field stakeout is completed in such area.

46. Construction activities on the Project shall be confined to the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday. If, due to safety or continuous operation requirements, construction activities are required to occur on Sundays or after 6:00 p.m., the Certificate Holder shall notify DPS Staff and the affected municipality. Such notice shall be given at least 24 hours in advance unless the Sunday or after 6:00 p.m. construction activities are required for safety reasons that arise less than 24 hours in advance.

47. In connection with the felling of trees to construct the Project, the Certificate Holder shall:

a) not clear or alter any area outside the boundaries of the Project ROW (or fell any tree that is not a danger tree) without prior notice to the owner(s) of the land to be cleared or altered, and the Certificate Holder also shall cause Contractors in its employ to comply with this prohibition;

b) negotiate in good faith with each landowner appropriate compensation for the merchantable logs the Certificate Holder has determined it shall remove from such landowner's property;

c) comply with the provisions of 6 NYCRR Part 192, Forest Insect and Disease Control, and ECL § 9-1303 and any quarantine orders issued thereunder;

d) note the disposal of all woody material resulting from clearing the Project ROW on the EM&CP drawings;

e) not create a maximum chip depth greater than three (3) inches, except for chip roads or for invasive species control;

f) not store chips in wetlands, active agricultural fields, or within 25 feet of streams, and not permanently store chips within NYSDEC regulated adjacent areas;

g) not fell any danger tree except pursuant to one of the following clauses:

(i) at least two weeks before Project construction begins, mark any then-known danger trees on land adjacent to either edge of the ROW as certified; after Project construction begins, the Certificate Holder may fell any danger tree so marked, except any tree that DPS Staff informs the Certificate Holder, prior to felling, is not a danger tree;

(ii) after the initial phase of tree clearing, including danger trees, in a Project location, the Certificate Holder may fell any additional danger trees that it determines will require removal, provided the Certificate Holder marks and notifies DPS Staff of such trees; such notice may be given via any means reasonably calculated to give actual notice to DPS Staff, including without limitation in person, by telephone, by email, or in a weekly report or another Project work scheduling notice, and DPS Staff, within 24 hours after receiving such notice, shall inform the Certificate Holder that DPS Staff either authorizes the felling of such tree(s) or requires a site inspection to determine whether or not to give such authorization; and

(iii) in forested areas, the Certificate Holder may fell isolated danger trees found when removing other danger trees, provided the Certificate Holder attempts to contact DPS Staff and records the locations of such danger trees.

48. Except for clearing pursuant to the EM&CP, all trees over two inches in diameter breast height or shrubs over four feet in height damaged or destroyed by activities during construction, regardless of where located, shall be replaced within the following year by the Certificate Holder with the equivalent type of trees or shrubs (though not necessarily the same size), except if:

a) equivalent type replacement trees or shrubs would interfere with the proper clearing, construction, operations or maintenance of the certified Facility;

b) replacement would be contrary to sound ROW management practices, or to any approved long-range ROW management plan applicable to the Facility or adjoining transmission facilities; or,

c) the owner of land where the damaged or destroyed trees or shrubs were located declines replacement (or other recorded easement or license holder with the right to control replacement declines replacement).

49. The EM&CP shall include a plan for removal, re-use, recycling and disposal of all existing equipment (*e.g.*, transformers, wood poles, conductors, etc.). The Certificate Holder shall handle creosote-treated wood poles in its control in accordance with Title 25 of Article 27 of the Environmental Conservation Law. Existing transmission facility components removed or replaced as part of the Project shall be removed from the ROW to appropriate destinations and handled appropriately for re-use as available based on conditions. Recovered facility components will be stored in an orderly fashion and collected as necessary during construction. To the extent allowed by easements or lease agreements, debris found in the ROW that will interfere with maintenance of the ROW is to be removed during construction. Certificate Holder shall not bury construction debris in the ROW.

50. a) A licensed professional engineer or land surveyor retained or employed by the Certificate Holder will certify that off-ROW access easements provide sufficient space for movement of equipment and materials.

b) Neither the Certificate Holder nor any Contractors in its employ shall construct any new, or improve any existing, access road unless such road is: (i) located on the ROW authorized for the Project; (ii) located on other utility ROW to be utilized in the construction or operation and maintenance of the certified Project; or, (iii) described in the EM&CP. Should the need arise for additional off-ROW access, the Certificate Holder shall follow the procedures recited in Certificate Condition number 29.

51. a) The Certificate Holder shall adhere to the NYSDEC's then effective "New York State Standards and Specifications for Erosion and Sediment Control," ("NYSSESC") also known as the "Blue Book."

b) The Certificate Holder's proposed SWPPP for the Project shall be submitted with the EM&CP.

c) Prior to construction at a location requiring the installation of temporary erosion control as indicated in the EM&CP, the Certificate Holder shall install such measures, which shall be maintained at the end of the work day in which site disturbance occurs.

52. Disturbed areas, ruts, and rills shall be restored to original grades and conditions with permanent re-vegetation and erosion controls appropriate for those locations. Disturbed pavement, curbs and sidewalks shall be restored to their original preconstruction condition or improved.

53. The Certificate Holder shall be responsible for checking all culverts and drainage structures to ensure that they are not crushed or blocked and to propose, in the proposed EM&CP, repair or replacement of existing culverts if necessary to maintain proper drainage. If a culvert is blocked, crushed, or otherwise damaged by construction or restoration of the Project, the Certificate Holder shall repair the culvert or replace it. In terms of determining the proper size of replacement culverts and selecting an embedment method conducive to aquatic and benthic life movement, the Certificate Holder shall consider the provisions of National Grid's BMPs.

54. The Certificate Holder shall, upon completion of construction of the Transmission Facilities portion of the Project:

a) conduct an assessment of the need for additional restoration work, and landscape improvements, including vegetation planting, earthwork or installed features to screen or landscape the Transmission Facilities with respect to road crossings, residential areas, and substations;

b) prepare plans for any visual mitigation found necessary, and, in connection therewith, removal, rearrangement and supplementation of existing landscape improvements or plantings should be considered, as appropriate;

c) consult with DPS Staff on the content and execution of its assessment, resultant landscaping plan specifications and materials list that use native plants that are not favored as forage by deer;

d) conduct an assessment of the need for specific drainage improvements or ditch excavation to establish the pre-existing grade or flow line in the ditch; and

e) present draft assessments and plans to DPS Staff for review, and file a final plan with the Secretary within one year after the completion of construction of the Transmission Facilities portion of the Project.

55. The Certificate Holder shall, upon completion of construction of the Cicero Substation portion of the Project:

a) conduct an assessment of the need for landscape improvements at the Cicero Substation site;

b) prepare plans for any visual mitigation found necessary, and, in connection therewith, removal, rearrangement and supplementation of existing landscape improvements or plantings should be considered, as appropriate;

c) consult with DPS Staff on the content and execution of its assessment, resultant landscaping plan specifications and materials list; details shall include measures for third party or wildlife damage to any landscape and vegetation plantings; and,

d) present draft assessments and plans to DPS Staff for review, and file a final plan with the Secretary within one year after the completion of construction of the Cicero Substation portion of the Project.

56. The EM&CP shall include plans to prevent unauthorized access to and along the Project ROW. Plans may include the following:

a) posting signs at the ROW edges in those locations where the ROW intersects public roads;

b) performing outreach to educate and inform the public concerning the risks and impacts of unauthorized access;

c) working with local law enforcement officials in an effort to prevent future trespassing;

d) identifying construction and material details of gates and berms; and/or

e) identifying existing and proposed gate locations on the Plan and Profile drawings. Final determination of locations of gates and berms shall be made during a post-construction assessment of the Facility, in consultation with DPS Staff.

F. Herbicide Use

57. Only herbicides specified in the EM&CP may be used in any Federal wetland, State-regulated wetland, or State-regulated wetland 100 foot adjacent area (collectively "Regulated Wetlands") in accordance with the NYS label. In all cases, label instructions and restrictions shall apply, as well as any other applicable requirements of the PSL and ECL, and regulations issued thereunder. In addition, the ROW will be managed in accordance with regulations at 16 NYCRR Part 84 Transmission Facilities Management.

58. The application of herbicides shall be made under the supervision of a NYS Certified Applicator who shall own or be employed by a New York State-registered business. The supervising certified applicator shall be familiar with and understand the provisions of this Certificate and shall be present in the field to ensure compliance.

59. Herbicide spraying within Regulated Wetlands shall be performed only by backpack or squirt bottle treatment.

60. No equipment wash water or excess herbicide shall be allowed to enter Regulated Wetlands, streams, or waterbodies. Empty containers shall be disposed of in accordance with label instructions and applicable regulations.

61. The ROW and adjoining properties shall be posted and notified by using the NYSDEC-approved format (ECL Article 33 and 6 NYCRR Part 325).

G. Environmental Supervision

62. On the Transmission Facilities portion of the Project, the Certificate Holder shall use at least five (5) inspectors (or fewer if the Certificate Holder elects to use the same individual in more than one role): (a) at least one environmental monitor employed full-time on the Project; (b) at least one construction inspector employed full-time on the Project; (c) at least one agricultural inspector employed part-time on the Project; (d) at least one safety

inspector who will inspect the work site from time to time; and (e) at least one quality assurance inspector who will inspect the work site from time to time. On the Cicero Substation portion of the Project, the Certificate Holder shall use at least four (4) inspectors (or fewer if the Certificate Holder elects to use the same individual in more than one role): (a) at least one environmental monitor employed at least part-time on the Project; (b) at least one construction inspector employed at least part-time on the Project; (c) at least one safety inspector who will inspect the work site from time to time; and (d) at least one quality assurance inspector who will inspect the work site from time to time. The environmental monitor shall have stop work authority over all aspects of the Project.

63. The environmental monitor(s) and the construction inspector(s) shall be equipped with sufficient documentation and transportation and communication equipment to effectively monitor each Contractor's compliance with the provisions of every order issued in this proceeding and applicable sections of the PSL, the ECL and regulations issued thereunder, the §401 Water Quality Certification, and the EM&CP.

64. The names and qualifications of the environmental monitor(s) and the construction inspector(s) shall be submitted to the Secretary at least two weeks prior to the start of construction. The environmental monitor's qualifications shall satisfy those of a "Qualified Inspector" pursuant to the SPDES General Stormwater Permit for construction activity (GP-0-15-002).

65. The Certificate Holder's employees, contractors and subcontractors assigned to the construction of the Project and inspection of such construction work shall be properly trained in their respective responsibilities.

66. The Certificate Holder shall regard DPS Staff representatives (authorized pursuant to PSL §8) as the Commission's designated representatives in the field. In the event of any emergency resulting from specific construction or maintenance activities that violate or may violate the terms of the Certificate or any other order in this proceeding, such DPS Staff representatives may issue a stop work order for that location or activity.

67. A stop work order shall expire 24 hours after issued unless confirmed by a single Commissioner. If a stop work order is so confirmed, the Certificate Holder may seek reconsideration from the confirming Commissioner or the whole Commission.

68. Stop work authority will be exercised sparingly and with due regard to potential environmental impacts, economic costs involved, possible impact on construction activities, and whether an applicable statute or regulation is violated. Before exercising such authority, DPS Staff representatives will consult (wherever practicable) with the Certificate Holder's representatives possessing comparable authority. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the Certificate Holder's Project Manager and the DPS Chief of EC&C. In the event that a DPS Staff representative issues a stop work order, neither the Certificate Holder nor the Contractor will be prevented from undertaking any safety-related activities as they deem necessary and appropriate under the circumstances. The issuance of a stop work order or the implementation of measures as described below may be directed at the sole discretion of the DPS Staff representative during these discussions.

a) If a DPS Staff representative discovers a specific activity that represents a significant environmental threat that is or immediately may become a violation of the Certificate or

any other order in this proceeding, the DPS Staff representative may -- in the absence of responsible Certificate Holder supervisory personnel, or in the presence of such personnel who, after consultation with the DPS Staff representative, refuse to take appropriate action -- direct the field crews to stop the specific potentially harmful activity immediately. If responsible Certificate Holder personnel are not on site, the DPS Staff representative will immediately thereafter inform the Construction Inspector or Environmental Monitor of the action taken. The stop work order may be lifted by the DPS Staff Representative if the situation prompting its issuance is resolved;

b) If the DPS Staff representative determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific corrective measures, the DPS Staff representative may, in the absence of responsible Certificate Holder supervisory personnel, or in the presence of such personnel who, after consultation with the DPS Staff representative, refuse to take appropriate action, direct the Certificate Holder or its Contractors to implement the corrective measures identified in the approved EM&CP. The field crews shall comply with the DPS Staff representative's directive immediately. The DPS Staff representative will immediately thereafter inform the Certificate Holder's Construction Inspector or Environmental Monitor of the action taken.

69. The Certificate Holder shall organize and conduct site-compliance audit inspections for DPS Staff as needed, but for the Transmission Facilities portion of the Project not less frequently than once per month during the site preparation, construction, and restoration phases. Such inspections shall conclude upon the final sign-off of the SWPPP by the SWPPP inspector.

a) The monthly inspections shall include a review of the status of compliance with all conditions contained in the Certificate and any other order issued in this proceeding and with all other legal requirements and commitments, as well as a field review of the Facility site, if necessary. The inspections also shall include:

    (1) review of all complaints received, and their proposed or actual resolutions;

    (2) review of any significant comments, concerns or suggestions made by the public, local governments, or other agencies, and the Certificate Holder's response(s);

    (3) review of the status of the Project in relation to the overall schedule established prior to the commencement of construction; and,

    (4) other items the Certificate Holder or DPS Staff considers appropriate.

b) The Certificate Holder shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to all agencies involved in the inspection audit and as part of its scheduled construction update reports.

H. Roads and Highways

70. The Certificate Holder shall delineate on the EM&CP drawings, the locations of proposed temporary roads, proposed permanent roads and existing access roads. Proposed access road improvements and measures for environmental impact minimization and access control shall be included in the EM&CP.

71. The Certificate Holder shall minimize the impact of the construction of the Project on traffic circulation. Traffic control personnel and safety signage shall be employed to ensure safe and adequate traffic flow when secondary roadways are affected by construction.

72. The Certificate Holder shall consult periodically with municipal highway transportation agencies about traffic conditions near the Project site and shall notify each such transportation agency of the approximate date work will begin in its jurisdiction, using access points that take direct access from the highways in that jurisdiction.

73. In preparing the proposed EM&CP, the Certificate Holder shall consult with each transportation department or agency normally having jurisdiction over any roads in the Project vicinity that will be crossed by the certified Project ROW, or used for direct access to the ROW. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holder shall notify each relevant transportation department or agency of the approximate date when work will begin. The EM&CP will include a scope and methods to assess the pre-construction condition of municipal roads. The assessment will include an evaluation of road pavement, road base, stormwater facilities, sidewalks, street furniture and other amenities found in the road ROW. The resulting assessment may be requested by DPS Staff.

74. NYSDOT and New York State Thruway Authority (NYSTA) shall have authority to place inspectors on site to monitor and observe the Certificate Holder's activities on state highways, or to request the presence of state or local police to ensure the safety of freeway travelers, at such times and for such periods as NYSDOT deems appropriate. All costs thereof shall be borne by the Certificate Holder.

75. The Certificate Holder shall coordinate with DPS Staff, NYSDOT and NYSTA for all work to be performed in the State highway rights-of-way. Prior to submitting its construction plan for any State highway right-of-way segment, the Certificate Holder shall provide to DPS Staff and NYSDOT a preliminary design marked to avoid conflict with potential future transportation projects that NYSDOT may seek to undertake in the future and shall offer to consult with NYSDOT concerning any comments it may offer and shall use reasonable efforts to accommodate any NYSDOT concerns.

76. In preparing the proposed EM&CP, the Certificate Holder shall consult with NYSDOT and NYSTA regarding any State highways and/or related structures in the Project vicinity that will be crossed by the Project or used for direct access to the Project ROW. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holder shall notify NYSDOT and NYSTA of the approximate date when work will begin. Work hours in NYSDOT and NYSTA ROW will be under the control of the respective transportation agency or authority.

I. Cultural Resources

77. The Certificate Holder shall not undertake construction in previously undisturbed areas where archeological surveys have not been completed until such time as the appropriate authorities, including New York State Office of Parks Recreation & Historic Preservation ("OPRHP") and DPS Staff, have reviewed the results of any additional historic properties and archeological surveys that are required.

78. Should archeological materials be encountered during construction, the Certificate Holder shall stabilize the area and cease all construction activities in the immediate vicinity of the find, and protect the find from further damage. Within twenty-four (24) hours of such discovery, the Certificate Holder shall notify and seek to consult with DPS Staff and the OPRHP Field Services Bureau to determine the best course of action. No construction activities shall be permitted in the immediate vicinity of the archeological materials until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation has been determined.

79. Should human remains or evidence of human burial(s) be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the vicinity of the find shall be halted immediately and the remains shall be protected from further disturbance. Within twenty-four (24) hours of any such discovery, the Certificate Holder shall notify and consult with DPS Staff and the OPRHP Field Services Bureau. Treatment and disposition of any human remains that may be discovered shall be managed in a manner consistent with the OPRHP's *Human Remains Discovery Protocol*. All archaeological or remains-related encounters and their handling shall be reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections.

80. The Certificate Holder shall avoid creating adverse impacts on heritage resource sites, archeological sites, and historic structures in the vicinity of the Project by implementing specific Project location, design, vegetation management, resource protection, and construction scheduling measures described in the EM&CP.

81. The Certificate Holder shall have a continuing obligation during the duration of Project construction to respond promptly to complaints of negative archeological impacts and to mitigate any negative archeological impacts through on-site design modifications and off-site mitigation techniques developed in consultation with the OPRHP Field Services Bureau.

J. Terrestrial and Wildlife Resources

82. In order to reduce the likelihood of a take of Indiana bats, the USFWS recommends that any required tree-clearing (trees greater than 3" DBH) be conducted between October 1 and March 31 to avoid the time of year when Indiana bats use trees as roosting and maternity sites. Indiana bats are present in their hibernacula during this time period. The Certificate Holder shall adhere to the recommendations and shall limit tree clearing (trees greater than 3" DBH) on all segments of the Project to between October 1 and March 31. This limitation will also protect against the likelihood of a take of the Northern Long-Eared Bat.

83. The New York State Natural Heritage Program has breeding records of the sedge wren and suitable habitat for the species occurs within various portions of the Project area. Potential direct effects on the sedge wrens include destruction of nests, if nests are present where clearing or construction activities are taking place. Prior to conducting clearing or construction activities on Segment 1 during the nesting period (4/23-8/15), the Certificate Holder will conduct a survey to determine if any active nests are present and will prescribe a seasonal restriction or avoidance of the target area if nesting is observed. If any clearing or construction activities are proposed within the nesting period, the Certificate Holder shall

provide the NYSDEC Region 7 Wildlife Manager with a proposed survey protocol which describes requirements for determining presence and site use by state-listed threatened/endangered and rare grassland bird species, and the protocol will be included in the EM&CP.

84. The Certificate Holder shall promptly notify DPS Staff and the NYSDEC Region 7 Wildlife Manager if any RTE species is encountered on the Project ROW, access roads, marshalling yards, and any other areas where Project activities are conducted, so as to determine the appropriate measures to be taken to protect such species. If necessary to protect a species or its habitat from immediate harm, the Certificate Holder shall secure the immediate area and cease construction in that area. The Certificate Holder shall refer to 6 NYCRR Part 182 and http://www.dec.ny.gov/animals/7494.html for lists of RTE species. Prior to the commencement of construction, the Certificate Holder shall provide all workers with pertinent information on protected species in the Project area.

K. Waterbodies and Wetlands

85. The Certificate Holder shall minimize adverse effects to streams, waterbodies, wetlands, and the one hundred (100) foot adjacent area associated with any State-regulated wetland during the construction, operation, and maintenance activities of the Project.

a) Wetland locations, and wetland adjacent areas located within the ROW or crossed by the ROW or any off-ROW access road constructed, improved or maintained for the Project, shall be delineated in the field as indicated on the EM&CP drawings.

b) Any activities which may affect wetlands shall be designed and controlled to minimize adverse impacts, giving due consideration to (i) the environmental features such as hydrology, soil condition, slope and functions of the wetlands, and (ii) the extent to which a wetland adjacent area, or an upland area that is not a wetland adjacent area, may be used as an alternative to the wetland.

c) The Certificate Holder shall, to the maximum extent practicable, avoid direct impacts on state-regulated wetlands and wetland adjacent areas.

d) Marshalling yards shall not be used or configured such that areas of disturbance are within wetlands, within wetland adjacent areas, or within fifty feet of streams.

e) Construction through NYSDEC wetlands shall be done with low-ground-pressure equipment or on temporary mats or geotextile/gravel access roads and shall be restricted to access roads and work areas set forth in the EM&CP. In the event that temporary matting will be placed in NYSDEC wetlands and/or NYSDEC regulated adjacent areas, those mats will be removed and wetlands hydrology soils and vegetation will be restored to the extent possible.

f) Equipment shall not be washed in any stream, waterbody, or wetland. No wash water shall directly enter into these areas.

g) Any excess excavated material resulting from structure installation that is to be removed from any stream, waterbody, or wetland shall not be stored inside wetlands or the one hundred (100) foot adjacent areas associated with any State-regulated wetlands unless it is on a construction mat and managed in accordance with other applicable requirements. Excavated excess material shall be disposed of in approved upland locations. Disposal

locations shall be specified in the approved EM&CP, and shall be subject to review by DPS Staff to verify the absence of State-regulated wetlands and adjacent areas. DPS Staff shall be free to consult with NYSDEC with respect to such verification if DPS Staff deems it necessary.

h) In wetlands, slash that is cut may be left in place (drop and lop). Any slash that is not left in place shall be removed from the wetland. No slash shall be collected and permanently piled in the wetland, whether adjacent to an access road or not.

i) Construction vehicle access across protected streams and waterbodies (streams classified as C(T) or higher) shall be limited to existing bridges, culverts or fords and to crossings installed in accordance with the provisions set forth in the EM&CP, except fords are not permitted in protected streams.

j) During periods of work activity, flow immediately downstream of the worksite shall equal flow immediately upstream of the worksite.

k) There shall be no increase in turbidity downstream of the construction activity that will cause a substantial visible contrast to natural conditions.

l) Unless otherwise specified in the EM&CP, work in streams, when necessary, shall be prohibited between October 1 and May 31 for cold water fisheries habitat, and between March 1 and July 15 for warm water fisheries habitat.

m) Dewatering operations shall discharge into a temporary straw bale/silt fence barrier or filter bag to settle suspended silt material. Direct dewatering discharges to wetlands, streams, and waterbodies are prohibited.

n) Before the proposed EM&CP is filed, the Certificate Holder shall work with the NYSDEC and DPS Staff to develop the Wetland Mitigation Plan to mitigate for the loss of function and values to federally regulated wetlands and state regulated wetlands and adjacent areas, including permanent conversion of forested and scrub-shrub wetlands to emergent wetlands, and shall follow the NYSDEC's wetland mitigation guidelines and US Army Corps of Engineer requirements as set forth in 33 CFR 332– Compensatory Mitigation for Losses of Aquatic Resources. The final Wetland Mitigation Plan, if different than the plan approved in the EM&CP, shall require an EM&CP change under the procedures recited in Certificate Condition number 29.

86. The Certificate Holder shall inform USACE of any changes in the design of the Project that have the potential to impact any water resources under USACE jurisdiction and shall provide a copy of such correspondence to the Secretary.

87. NYSDEC Staff field representatives shall be permitted on the Project site. The NYSDEC Staff field representatives will notify the DPS Staff representative and the Certificate Holder's appropriate representative of any activities that violate or may violate either the terms of the Certificate, any permits issued by the NYSDEC, and/or the Environmental Conservation Law.

L. Agricultural Resources

88. The Certificate Holder shall retain a qualified Agricultural and Soil Conservation Specialist/Inspector ("Agricultural Inspector"), subject to approval of NYSDAM, for each phase of Project development, including: development and design of the EM&CP for the

Transmission Facilities portion of the Project, construction, initial restoration, post-construction monitoring and follow-up restoration. The Agricultural Inspector shall be available to provide site-specific agricultural information as necessary for EM&CP development for the Transmission Facilities portion of the Project through field review as well as to have direct contact with affected farm operators, County Soil and Water Conservation Districts, NYSDAM and others. The Agricultural Inspector shall maintain regular contact with the Environmental Monitor or the Construction Inspector throughout the construction phase. The Agricultural Inspector shall remain on site during all Project activities on agricultural lands. The Agricultural Inspector also shall maintain regular contact with the affected farmers and County Soil and Water Conservation Districts concerning farm resources and management matters pertinent to the agricultural operations and the site-specific implementation of the EM&CP for the Transmission Facilities portion of the Project. Whenever the Certificate Holder submits a request for a change to the approved EM&CP for the Transmission Facilities portion of the Project that might affect agriculture, it shall consult with NYSDAM.

89. The Certificate Holder shall identify Black Cherry trees located on the Project ROW near active livestock use areas in the EM&CP for the Transmission Facilities portion of the Project. During the clearing phase, such vegetation shall be disposed of in a manner which prevents access by livestock.

90. In agricultural areas, logs, stumps, brush, or chips shall not be piled or buried in active agricultural fields or improved pasture.

91. As part of the line-location surveys conducted during the preparation of the proposed EM&CP for the Transmission Facilities portion of the Project, the Certificate Holder shall locate all commercial sugarbushes maintained for maple syrup production within the Transmission Facilities ROW. The Certificate Holder shall attempt to adjust the centerline location to avoid such operations.

92. The Certificate Holder shall design the Facility to the extent practicable to avoid or limit the placement of structures on crop fields or on other active agricultural land where the structures may significantly interfere with normal agricultural operations or activities. Where the location of a structure on such agricultural land is unavoidable, the Certificate Holder shall attempt to site the structure in a location that minimizes impact to normal farming operations.

93. During preparation of the proposed EM&CP for the Transmission Facilities portion of the Project, a detailed drainage line repair procedure shall be developed, in consultation with the local Soil and Water Conservation District, for the repair of crushed/severed clay tile and plastic drain lines. Drawings showing the generic technique to be implemented for drain line repairs shall be provided by the Certificate Holder. All new plastic drain tubing shall meet or exceed the AASHTO M252 specifications. The plan for the replacement of functional stone drainage systems severed during construction shall be prepared during the restoration phase, in consultation with NYSDAM and the local Soil and Water Conservation District.

94. Where construction entrances are required from public roadways to the Project ROW in agricultural fields, an underlayment of durable, geotextile fabric shall be placed over the exposed subsoil surface prior to the use of temporary gravel access fill material. In locations where underground utilities are located within 10 feet of the shoulder of the

roadway, the Certificate Holder may elect, in order to minimize disturbance and protect the underground utilities, to place the geotextile fabric directly over the surface without stripping topsoil. In locations where underground utilities are located 10 feet or more from the shoulder of the roadway but still within the limits of the construction entrance, the Certificate Holder may elect to mat over the underground utilities instead of placing geotextile fabric and gravel access fill material. Complete removal of the construction entrance upon completion of the Project and restoration of the affected site is required prior to topsoil replacement, except where retention of the construction entrance would be more conducive to the existing land use than removal.

95. Segments of farm roads utilized for access shall be improved as required following consultation with the farm operator and NYSDAM prior to use. Such improvements shall include the installation of geotextile fabric and crushed stone.

96. The Certificate Holder shall rebuild to as-good or better condition, at or prior to completion of construction, any of the following that is damaged by construction: (i) fences and gates on the Certificate Holder's fee-owned ROW that are not incompatible with the Facility; (ii) fences and gates off of the Certificate Holder's fee-owned ROW; and (iii) any farm drainage features. The base of all new posts shall be secured to a reasonable depth below the surface to prevent frost heave.

97. Where repeated temporary access is necessary across agricultural portions of the Project ROW, topsoil shall be removed, including all of the "A" horizon down to the beginning of the subsoil "B" horizon, generally not to exceed a maximum of 12 inches. Topsoil removal up to a depth of 16 inches may be required in specially-designated soils encountered along the route. All topsoil shall be stockpiled directly adjacent to the travel way on the Project ROW and separated from other excavated materials. The Agricultural Inspector shall determine depth of topsoil stripping on each affected farm by means of the County Soil Survey and on-site soil augering, if necessary. All topsoil material shall be stripped, stockpiled, and uniformly returned to restore the original soil profile. During the clearing/construction phase, site-specific depths of topsoil stripping shall be monitored by the Agricultural Inspector.

98. Mats may be installed as an alternative to topsoil stripping. If so, the mats shall be layered where necessary to provide a level access surface. Once access is no longer required across agricultural areas, the mats shall be removed and the Agricultural Inspector shall use a soil penetrometer to determine if soil compaction has occurred as a result of construction activities. All compacted areas shall be remediated as specified below.

99. In agricultural areas of till over bedrock where blasting is required, the Certificate Holder shall use matting or controlled blasting to limit the dispersion of blast rock fragments. All blasted rock not used as backfill shall be removed from croplands, hay lands and improved pastures. The till and topsoil shall be returned in natural sequence to restore the soil profile. Farm owners/operators shall be given timely notice prior to blasting on farm property.

100. Temporary work space in agricultural areas shall be of sufficient size to allow for positioning of conductor reels, tensioners, pullers, wire spools and other mechanized equipment required during pulling activities.

101. In all agricultural sections of the Project ROW disturbed during construction, the Certificate Holder shall break up the subsoil compaction to a depth of 18 inches (unless

bedrock is encountered at a depth less than 18 inches) with deep tillage by such devices as a deep-ripper (subsoiler). Final soil compaction results shall not be more than 250 pounds per square inch (PSI) as measured with a soil penetrometer. Following the deep ripping, all stone and rock material 4 inches and larger in size which has been lifted to the surface shall be collected and taken off site for disposal. The topsoil that has been temporarily removed for the period of construction shall then be replaced. Finally, deep subsoil shattering shall be performed with a subsoiler tool having angled legs. Stone removal shall be completed, as necessary, to eliminate any additional rocks and stones brought to the surface as a result of the final subsoil shattering process. Should subsequent construction and/or restoration activities result in compaction, then restoration activities shall include additional deep tillage.

102. All structures and guy anchors removed from agricultural areas as part of the construction activities shall be removed to a minimum depth of 48 inches below the soil surface. All holes or cavities created by the removal of the old facilities shall be filled to the same level as the adjacent area, plus 6 to 12 inches of additional soil to allow for settling. All material used for fill shall be similar to native soil. All fill material shall be compacted.

103. Wherever existing structures are removed from agricultural fields, the area shall be restored to allow agricultural activities. Such restoration shall include the removal of all vegetation from the structure area and grading of the ground surface to match the adjacent field. All rocks 4 inches and greater in size shall be removed from the surface.

104. Excavated subsoil material and stockpiled topsoil shall be used to restore the original soil profile at new structure locations. All holes or cavities created by structure installation shall be filled to the same level as the adjacent area, plus 6 to 12 inches of additional soil to allow for settling. Excess substratum material not used for backfill shall be removed from agricultural areas.

105. At the end of all construction, the Project ROW and other areas, including guying wire assembly and disassembly sites, where Project construction occurred shall be thoroughly cleared of debris related to electric line construction or removal, such as nuts, bolts, spikes, wire, pieces of steel, and other assorted items.

106. The Certificate Holder shall provide a monitoring and remediation period of two growing seasons following completion of Project ROW restoration in active agricultural areas. The Certificate Holder shall retain the services of an Agricultural Inspector on at least a part-time basis through this period. The monitoring and remediation phase shall be used to identify any remaining agricultural impacts associated with Project construction that are in need of mitigation and to implement the follow-up restoration. During this phase, the Agricultural Inspector shall maintain a list of invasive species observed on the Project ROW in agricultural areas. In locations where invasive species are documented, the Certificate Holder will determine whether such species were present during the pre-construction survey of invasive species on the ROW. If the species were not noted prior to construction, the Certificate Holder shall consult with the farm operator, DPS Staff and NYSDAM to determine the appropriate control measures to implement.

107. During the monitoring and remediation period, on-site monitoring shall be conducted in active agricultural areas at least three times during each growing season and shall include a comparison of growth and yield for crops on and off the Project ROW. When the subsequent crop productivity within the affected ROW is less than that of the

adjacent unaffected agricultural land, the Agricultural Inspector, in conjunction with the Certificate Holder and other appropriate organizations, shall help to determine the appropriate rehabilitation measures for the Certificate Holder to implement (soil de-compaction, topsoil replacement, etc.). During the various stages of the Project, all affected farm operators shall be periodically apprised of the duration of remediation by the Agricultural Inspector. Because conditions which require remediation may not be noticeable at or shortly after the completion of construction, the signing of a release form prior to the end of the remediation period shall not obviate the Certificate Holder's responsibility to fully redress all Facility impacts. After completion of the specific remediation period, the Certificate Holder shall continue to respond to the reasonable requests of the farmland owner/operators to correct Facility-related effects on the impacted agricultural resources. The requirements of this paragraph shall not apply to lands owned in fee by the Certificate Holder.

108. The Certificate Holder shall provide all farm owners/operators with a toll-free or local telephone number to facilitate direct contact with the Certificate Holder and the Agricultural Inspector(s) through all of the stages of the Project. The farm owner/operators shall also be provided with a toll-free or local telephone number to facilitate direct contact with the Certificate Holder's Project Manager for the Facility during operation and maintenance of the transmission line.

109. The Agricultural Inspector shall work with the farm operators during the planning phase to develop a plan to delay the pasturing of the Project ROW, following construction until pasture areas are adequately revegetated. The Certificate Holder shall be responsible for maintaining the temporary fencing on the Project ROW until the Agricultural Inspector determines that the vegetation on the ROW is established and able to accommodate grazing. At such time, the Certificate Holder shall be responsible for removal of the fences. The requirements of this paragraph shall not apply to lands owned in fee by the Certificate Holder.

110. On affected farmland, restoration practices shall be postponed until favorable (workable, relatively dry) topsoil/subsoil conditions exist. Restoration shall not be conducted while soils are in a wet or plastic state. Stockpiled topsoil shall not be regraded until plasticity, as determined by the Atterberg field test, is significantly reduced. No restoration activities shall occur in agricultural fields between the months of October through May unless favorable soil moisture conditions exist. The Certificate Holder shall monitor and advise NYSDAM and DPS Staff regarding tentative restoration planning. Potential schedules shall be determined by conducting the Atterberg field test at appropriate depths into topsoil stockpiles, and below the traffic zone for a mutual determination of adequate field conditions for the restoration phase of the Project.

111. Following restoration of all disturbed areas, excess topsoil shall be distributed in agricultural areas of the site, provided this is practicable and can be accomplished without having any adverse impact on site drainage. All such activity shall be as directed by the Agricultural Inspector, based on guidance provided by the landowner. The requirements of this paragraph shall not apply to lands owned in fee by the Certificate Holder.

112. After the moisture of the soil profile on the affected portion of the Project ROW has returned to equilibrium with the adjacent off-ROW land, subsoil compaction shall be tested using an appropriate soil penetrometer or other soil-compaction measuring device.

113. Topsoil stockpiles on agricultural areas left in place prior to October 31 shall be seeded with Aroostook Winter Rye or equivalent at an application rate of 3 bushels (168 #) per acre and mulched with straw mulch (or another material acceptable to the Agricultural Inspector) at a rate of 2 to 3 bales per 1000 Sq. Ft. Topsoil stockpiles left in place between October 31 and May 31 shall be mulched with straw mulch (or another material acceptable to the Agricultural Inspector) at a rate of 2 to 3 bales per 1000 Sq. Ft. Straw mulch (or another material acceptable to the Agricultural Inspector) shall be used to prevent soil loss on stockpiled topsoil from October through May.

114. After topsoil replacement, seedbed preparation (final tillage, fertilizing, liming) and seeding shall follow either NYSDAM recommendations as contained in *Fertilizing, Lime and Seeding Recommendations for Restoration of Construction Projects on Farmlands in New York State* (revised 9-25-2012) or landowner specifications.

M. Petroleum and Hazardous Substances

115. The EM&CP shall include Fuel and Chemical Handling Procedures, and a spill response and route emergency plan, including the NYSDEC spill reporting contact number. This plan shall provide proposed methods of handling spills of petroleum products and any hazardous or controlled substance which may be stored or utilized during construction, operation, or maintenance of this Facility.

116. All Certificate Holder and Contractor vehicles working on the Project shall have a spill kit that is appropriate for the volume of fuel carried by the vehicle.

117. The Certificate Holder's contractor will retain a qualified spill response company for the duration of the Project and provide that company with maps showing access roads, marshalling yards, and other information that will facilitate response to a spill location.

118. Refueling of mobile equipment within 100 feet of a stream or wetland is prohibited, except that refueling of hand equipment, or refueling of construction equipment that is stationary or in a fixed position (e.g., drill rigs or compressors) to complete a construction operation within 100 feet of a stream or wetland may be refueled when the environmental monitor is at that location and the procedures described in the relevant section of the Certificate Holder's BMPs are followed.

N. Contractors and Contractor Supplies/Materials

119. DPS Staff will provide the name of a contact person(s) ("DPS Staff Representative") and the contact information (mailing address, phone number, e-mail, etc.) of that individual for purposes of this Certificate Condition and Certificate Condition numbers 120 through 121 of this Certificate. If an OSHA Recordable accident occurs in connection with work on the Project, the Certificate Holder shall report any such accident to the DPS Staff Representative as soon as possible. A copy of the accident report, if any, shall be provided to the DPS Staff Representative after it has been finalized.

120. The Certificate Holder shall provide the DPS Staff Representative with a copy of any police report and any insurance claim filed in connection with any theft of Project-related materials, as well as a list of the stolen items.

121. A field review shall be conducted by the Certificate Holder to determine compliance with its design on a bi-weekly basis and prepare a written report of the Company's findings on whether the Project is being constructed in accordance with the EM&CP design for the Project. The Certificate Holder shall provide a copy of each such report to the DPS Staff Representative within three (3) business days after the Certificate Holder receives the report. The Certificate Holder shall notify the DPS Staff Representative of when the field reviews will occur.

122. If the Contractor installs materials, structures, or components that do not conform to the specifications for same described in the EM&CP, the Certificate Holder shall, after becoming aware of such incident, prepare and deliver to the Chief of EC&C a summary report detailing the incident, the steps to be taken to rectify the mistake, the material and labor costs associated with rectifying the incident, and the manner in which such costs will be accounted for separately from other Project costs.

123. The Certificate Holder shall develop a quality control plan ("Quality Control Plan") for inclusion in the EM&CP for the Transmission Facilities portion of the Project describing how it will ensure that the major transmission line components it purchases for the Project conform to the specification for such components described in such EM&CP. At a minimum, the Quality Control Plan shall include: (i) the qualifications of the individual(s) who will conduct audits under the Qualify Control Plan ("Quality Control Audits"); and (ii) the frequency with which the Quality Control Audits will be performed.

124. Manufacturer recommendations for materials storage will be followed and materials will be stored in an orderly fashion, secured and protected from damage.

125. To better ensure a safe working environment for all persons at each Project work site, the Certificate Holder shall require its contractors or subcontractors, before any person who is authorized by the Certificate Holder to be present at the site that day, or any representative of a regulatory agency present on official business, commences performing or observing Project activities, to give such person an on-site tailboard safety briefing. The Certificate Holder shall ensure that: (a) any document that a person participating in a tailboard safety briefing is required to sign at such briefing is legible; and (b) the person conducting the briefing shall use his/her best efforts to give accurate and complete responses to all requests by such persons for clarification of the scope of work, construction methodology, and other pertinent personal safety information. If a person participating in a tailboard safety briefing who signed such a document desires a copy thereof, he/she shall request it in writing and the Certificate Holder shall provide a copy thereof to the requester within 48 hours of the request.

O. Invasive Species

126. The Certificate Holder shall perform the following activities to identify and address potential invasive species hazards:

(a) The invasive species survey previously conducted by the Certificate Holder shall be updated by a new field survey that inventories only the plant and insect species of special concern (*i.e.*, invasive species which present an environmental or human health hazard that warrants the prescription of measures to control the spread or eradication, of such

species during construction ("Invasive Species of Special Concern")) along or within the existing or proposed ROW.

(b) Include on the EM&CP drawings and text prescribed procedures for invasive species management actions to prevent their transport.

(c) In order to prevent the potential introduction of invasive species from other areas or regions to the Project area: require that vehicles, equipment, and materials (including mats) be inspected for, and cleaned of, any visible soils, vegetation, insects, and debris before bringing them to the Project area. On a site-by-site basis and as prescribed on the approved EM&CP drawings, equipment and material shall be cleaned prior to leaving the ROW. The cleaning method shall include, but not be limited to, brushing, scraping and/or the use of compressed air to remove visible soils and vegetation. Any matter cleaned from equipment and material shall remain within the infested area. The Certificate Holder has adopted and will utilize the Environmental Energy Alliance of New York's (EEANY) "New York Utility Company Best Management Practices for Preventing the Transportation of Invasive Plant Species," dated January, 2015, and the list of Invasive Plant Species in New York State contained in therein. The aforementioned Best Management Practices has been reviewed and accepted by the NYSDEC.

(d) Where practicable, in upland areas identified for invasive species control, brush and wood shall be chipped into a layer of at least six (6) inches over access pathways on the ROW, thus providing a barrier between plant material and equipment. Areas where this shall be implemented shall be noted on the EM&CP drawings. The condition of this access shall be monitored by the Environmental Monitor during construction. Provided this barrier remains intact, the Environmental Monitor may exempt specific types of potential transporters, *e.g.*, pickup trucks and pedestrians, from cleaning requirements.

(e) Project contractor(s) and subcontractor(s) shall be trained on the various cleaning methods to be used on the Project. As part of its environmental training, National Grid will train all employees, contractors, and subcontractors on the invasive species management procedures prior to the start of construction.

(f) Minimize ground disturbances and vegetation removal as much as practicable. The contractor(s) and subcontractor(s) shall be instructed to stay within access paths and work areas that are designated on the EM&CP drawings.

(g) Any transported fill materials, topsoil, and mulches shall come from sources visibly free of invasive species.

(h) Stabilization and re-vegetation of disturbed sites shall utilize seed and other plant materials that have been checked and certified as noxious-weed-free and that have a labeled weed content that does not exceed the weed content maximums for such seeds under Agriculture and Markets Law Section 138(A)(4).

(i) Removal of any wood from the ROW shall be pursuant to the NYSDEC's firewood regulations to protect forests from invasive species found in 6 NYCRR Part 192, and any applicable NYSDEC quarantine orders and/or NYSDAM quarantine regulations.

(j) Clearing crews shall be trained to identify the Asian Longhorned Beetle, the Emerald Ash Borer, and any other insects that the NYSDEC identifies as a potential problem. If evidence of the existence of these insects is found, they shall be reported immediately to the appropriate NYSDEC regional forester.

(k) Invasive Species Cleaning Stations need to limit the amount of post construction waste by selecting wood chips, soil and gravel that can be left in the ROW following construction and limit the amount of contaminated wood chips, soil and gravel that has to leave the site for disposal.

(l) When soil debris will be the primary material collected at a site, separate containment enclosure may not be required. If debris to be collected can be lost due to wind, a containment area of hay that is free of undesirable seeds, or straw bales or construction fence or dumpsters may be required.

P. Water Quality Certification

127. Concurrent with Commission approval of the EM&CP for this Project, the Chief of EC&C, pursuant to §401 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §1341, and PSL Article VII, will execute an appropriate certification that the Project will comply with the applicable requirements of §§301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act, as amended, and will assure compliance with applicable New York State water quality standards, limitations, criteria and other requirements set forth in 6 NYCRR §608.9(a), Parts 701 through 704, and Part 750.

APPENDIX E

SPECIFICATIONS FOR THE DEVELOPMENT OF ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PLAN

Section A of the Specifications for the Development of Environmental Management and Construction Plan ("Specifications") addresses the development of the plan and profile drawings, and maps portion of the Environmental Management and Construction Plan ("EM&CP"). Section B addresses the description and statement of objectives, techniques, procedures, and requirements, i.e. the textual portion of the EM&CP. The EM&CP shall be consistent with and incorporate the requirements of the Article VII Certificate.

If any particular requirement of the Specifications is not applicable, so indicate and briefly explain.

A. EM&CP Plan and Profile Drawings and Maps

The EM&CP maps, charts, orthoimagery maps, and illustrations shall include, but need not be limited to, all of the following information:

1. Plan and Profile Details

A Line[1] Profile (at an appropriate scale) and plan drawings (scale minimum 1 inch = 200 feet)[2] showing:

a. The boundaries of any new, existing, and/or expanded right-of-way (ROW)[3] or

[1] The lowest conductor of an overhead design shall be shown in relation to ground at the maximum permissible conductor temperature for which the line is designed to operate, i.e., normally the short-time emergency loading temperature specified by the New York ISO. If a lesser conductor temperature is used for the line profile, the maximum sag increase between the conductor temperature the maximum conductor temperature shall be indicated for each ruling span. For underground project design, show relation of Project to final surface grade, indicating design depth-of-cover.

[2] Contour lines (preferably at 2-foot intervals) are desirable on the orthoimagery map if they can be added without obscuring the required information.

[3] The term "right-of-way" in these *Specifications* includes property, whether owned in fee or easement, to be used for substations, disposal sites, underground terminals, storage yards, and other associated facilities. Where such

road boundaries, and where cables are to be constructed overhead or underground; plus areas contiguous to the ROW or street within which the Certificate Holder will obtain additional rights are to be shown. Lines weight, graphic symbols, lettering and colors on the plan and profile drawings will be distinct and contrasting with the drawing sheet background to improve legibility of the drawing. Standard symbols will be used when possible.

b. The location of each Facility structure (showing its height, material, finish and color, and type), structural foundation type (*e.g.*, concrete, direct bury), fence, gate, down-guy anchor, and any counterpoise required for the Facility (typical counterpoise drawings will suffice recognizing that before field testing of installed structures the Certificate Holder may be unable to determine the specific location of all required counterpoise), conductors, insulators, splices, and static wires and other components attached to Facility structures.

c. Existing utility and non-utility structures on the ROW, and indicate those to be removed or relocated (include circuit arrangements where new structures will accommodate existing circuits, indicate methods of removal of existing facilities, and show the new locations, types and configurations of relocated facilities). Depict each Facility conductor's clearance from the nearest overhead distribution or communications facility.

d. Any underground utility or non-utility structure including the approximate depth of the structure.

e. The relationship of the Facility to nearby fence lines; roads; railways; airfields; property lines; hedgerows; fresh surface waters; wetlands; regulated adjacent areas; other

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properties cannot reasonably be shown on the same plan or photo-strip, maps, or plan drawings used for the transmission line, additional maps or drawings at convenient scales should be used.

water bodies;

f. Significant habitats; associated facilities; flowing water springs; nearby buildings or structures; major antennas; oil or gas wells, and blowdown valves. The location of any proposed new or expanded switching station, substation, or other terminal or associated utility or non-utility structure (attach plan[4] - plot, grading, drainage, and electrical - and elevation views with architectural details at appropriate scales). Indicate the type of outdoor lighting, including design features to avoid off-site illumination and minimize glare; the color and finish of all structures; the locations of temporary or permanent access roads, parking areas, construction contract limit lines, property lines, designated floodways and flood-hazard area limits, buildings, sheds, relocated structures, and any plans for water service and sewage and waste disposal.

g. The location and boundaries of any areas whether located on- or off- ROW proposed to be used for fabrication, designated equipment parking, staging, access, lay-down, and conductor pulling and splicing. Indicate any planned fencing, surface improvements, and screening of storage and staging or marshalling yard areas.

h. The locations for ready-mix concrete chute washout and any other cleaning activities (e.g., control of invasive species and resource recovery).

i. Plan index will identify the company or person responsible for the preparation of the drawings

2. <u>Stormwater Pollution Prevention</u>

a. Include on the plan and profile drawings the draft or approved Storm Water Pollution Prevention Plan (SWPPP) details. Include the locations of soil erosion and sediment control measures developed in accordance with the latest version of the

[4] Preferably 1" = 50' scale with 2-foot contour lines.

New York Standards and Specifications for Erosion and Sediment Control (e.g., stabilized construction entrances, silt fences, check dams, and sediment traps).

b. Include on the plan and profile drawings the draft or approved SWPPP locations of all permanent stormwater management controls that are required based on site-specific conditions or conditions of the Certificate.

c. Identify whether the erosion and sediment control practices are designed in conformance with technical standards found in NYS Standards and Specifications for Erosion and Sediment Control dated November 2016 (Blue Book), or revised Blue Book with a more recent date.

d. Concrete washout best management practices shall be based on the then effective Blue Book and a minimum 10 mil plastic liner will be required. Straw bale perimeters that are air-dried and free of undesirable seed and course material are acceptable. The EM&CP will state that locations are to be adjusted in the field based on site conditions. Basin size and type will be based on the expected volume of concrete wash out discharges.

3. <u>Vegetation Clearing and Disposal Methods</u>

Identify on the plan and profile drawings:

a. the locations of sites requiring trimming or clearing of vegetation and the geographic limits of such trimming or clearing;

b. the specific methods for the type and manner of cutting and disposition or disposal method for cut vegetation (e.g., chip; cut and pile; salvage merchantable timber, etc.);

c. the methods for management of vegetation to be cut or removed at each site;

d. any geographical area bounded by distinctly different cover types requiring different cut-vegetation management methods;

e. any geographical area bounded at each end by areas requiring distinctly different cut-vegetation methods due to site conditions such as vegetation cover type, land use differences, population density, habitat or site protection, soil or terrain conditions, fire hazards, or other factors;

f. different property-owners requesting specific vegetation treatment or disposal methods;

g. desirable vegetation species;

h. areas requiring (off-ROW) danger tree removal; and,

i. the location of any areas where specific vegetation protection measures will be employed and the details of those measures to avoid damage to specimen tree stands of desirable species, important screening trees, or hedgerows.

4. <u>Building and Structure Removal</u>

Indicate the locations of any buildings or structures to be acquired, demolished, moved, or removed.

5. <u>Waterbodies</u>

a. Indicate the name or EM&CP designation, water quality classification and location of all rivers and streams (whether perennial and intermittent), and drainages crossed by, the proposed ROW or any off-ROW access road constructed, improved or maintained for the Facility. On the plan and profile drawings, by symbol or label indicate:

1) stream crossing method and delineate any designated streamside "protective or buffer zone" in which construction activities will be restricted to the extent necessary to minimize impacts on rivers and streams;

2) the activities to be restricted in such zones; and,

3) identify any designated floodways or flood hazard areas to be traversed by the Facility or access roads, or otherwise used for Facility construction or the site of associated facilities.

b. Show the location of all potable water sources, including springs and wells on the ROW or within 100 feet of the ROW or access roads indicating on a site-by-site basis, precautionary measures to be taken to protect each water source.

6. <u>Wetlands</u>

a. Boundaries of all federal and state wetlands and state wetland 100-foot adjacent areas ("adjacent areas") located within the ROW, crossed by the ROW, or located on or crossed by any off-ROW access road constructed, improved, or maintained for the Facility, including temporary access roads, shall be depicted on EM&CP drawings.

b. Indicate the location and type (i.e., identification code for regulated town, state, or federal wetlands) of any wetland (e.g., marsh, meadow, bog, or scrub-shrub or forested swamp) within or adjoining the ROW or any access road, as determined by site investigation and delineation.

c. Indicate type and location of precautionary measures (e.g., mats) to be taken to protect all wetlands, associated drainage patterns and wetland functions.

d. New York State Wetlands under Article 24 (State Wetlands) will be illustrated as a single boundary based on field identification. Approximate map boundaries should not be illustrated on the EM&CP drawing when field wetland identification has been completed.

e. Identify on plans or in notes any restoration activities that will occur in wetlands and adjacent areas.

7. <u>Land Uses</u>

a. <u>Agricultural Areas</u>

1) Indicate the locations of sites under cultivation or in active agricultural use including rotational pasture, pasture, hayland, and cropland.
2) Indicate the location of any unique agricultural lands including maple sugarbushes, organic muckland and permanent irrigation systems, as well as areas used to produce specialty crops such as vegetables, berries, apples, and grapes.
3) Indicate the location of vulnerable soils in agricultural areas that are more sensitive than other agricultural soils to construction disturbance due to slope, soil wetness, and shallow depth to bedrock.
4) Indicate the location of all land and water management features including subsurface drainage, surface drainage, diversion terraces, buried water lines, and water supplies.
5) Designate the site-specific techniques and entry restrictions by posting signs at gates to be implemented to minimize or avoid construction-related impacts to agricultural resources.

b. Sensitive Land Uses and Resources

Indicate the location and identification of sensitive land uses and resources that may be affected by construction of the Facility or by construction-related traffic (e.g., hospitals, emergency services, sanctuaries, schools, and residential areas).

c. Geologic, Historic, and Scenic or Park Resources

Indicate the locations of geologic, historic, and existing or planned scenic or park resources and specify measures to minimize impacts to these resources (e.g., fencing, signs).

d. Recreational

Indicate the locations where existing or planned recreational use areas, would affect or be

affected by the Facility location, construction or other ROW preparation.

8. Access Roads, Marshalling yards and Workpads

a. Indicate the locations of temporary and permanent on- and off-ROW access roads, marshalling yards and workpads. Provide construction type, material, dimensions and grading or site preparation required to develop the location for construction. Indicate provisions for upgrading any existing access roads. Identify each in ROW access road by a letter, number or name.

b. Provide a map of the designated travel routes and off-ROW parking areas other than marshalling yards.

c. Provide a detail that superimposes the planned turning radius on the proposed typical work pad or pole lay down area designed to accommodate expected material delivery by large trucks.

9. Noise Sensitive Sites

Show the locations of noise-sensitive areas along the proposed ROW. On the notes for the Plan and Profile drawings, identify work hours.

10. Ecologically and Environmentally Sensitive Areas

a. Indicate the general locations of any known ecologically and environmentally sensitive sites (e.g., archaeological sites; fish and wildlife habitat; rare, threatened, and endangered species or habitats; forest and vegetation; open space; areas of important aesthetic or scenic quality; deer winter yards, etc.), within or nearby the proposed or existing ROW or along the general alignment of any access roads to be constructed, improved or maintained for the Facility. Specify the measures that will be taken to protect these resources (e.g., fencing, flagging, signs “Sensitive Environmental Areas, No Access”).

b. On the plan and profile indicate the type of temporary signage to be used and provide a description of measures to be completed in order to comply with the specific directives of the sign.

11. <u>Invasive Species of Special Concern</u>

a. Identify the location(s) of Invasive Species of Special Concern based on the most recent field survey and the prescribed method to control the spread and/or eradicate the identified species.

b. Invasive Species Cleaning Stations will include: a work surface that is easy to clean with a shovel, a safe work area outside of access road travel way, walking surface will be stable in all weather conditions and trip hazards between surfaces will be minimized.

c. Identify those areas where brush and wood shall be chipped into layers of at least 6 inches over access pathways on the ROW.

d. Identify the area where equipment and materials will be cleaned prior to leaving the ROW and the method of cleaning (Invasive Species Cleaning Area).

12. <u>Herbicide</u>

On the plan and profile drawing notes, indicate areas where herbicides will not be used, and describe or illustrate areas to be posted when herbicides are applied (ECL Article 33 and 6 NYCRR Part 325).

B. Description and statement of objectives, techniques, procedures and requirements

The EM&CP text will provide details of the analysis completed to support the development of the plan set. Individuals or consultants will be identified that have prepared various portions of the EM&CP. If the drawings are prepared by the utility company it will be stated that plans are prepared in conformance with Education Law Article 145 §7208.l - Exempt persons for the

professions of engineering and land surveying. The textual portion of the EM&CP for the Facility shall include, but need not be limited to, all of the following information:

1. Facility Location and Description

Describe the location and limits of the site or ROW and explain the need for any additional rights. For each structure type, indicate the GSA—595A Federal standard color designation or manufacturer's color specification to be used for painted structures. State any objections raised by Federal, State or local transportation (highways, waterways, or aviation) officials to the final location or manner of installation of, or access to, the certified Facility. Provide a rationale for the inclusion of any splice locations proposed.

2. Stormwater Pollution Prevention

a. Include the information from the draft or approved SWPPP.

b. In areas of coastal erosion hazard, include plans to demonstrate compliance with the standards for coastal erosion hazard protection as required by 6 NYCRR Part 505 - Coastal Erosion Management.

c. Include a list of Municipal Separate Storm Sewer System (MS-4) administrators or inspector and their contact information.

3. Vegetation Clearing and Disposal Methods

a. Describe the specific methods and rationale for the type and manner of cutting and disposition or disposal methods for cut vegetation.

b. Detail specific measures employed to avoid damage to specimen tree stands of desirable vegetation, rare, threatened and endangered species, important screening trees, and hedgerows. Identify the factors such as the attributes of the site, outcome of landowner negotiations, and attributes of the logs, upon which Certificate Holder's removal of the merchantable logs resulting from clearing the ROW for the Facility will be

based.

c. Describe methods of compliance with 6 NYCRR Part 192 – Forest Insect and Disease Control, applicable New York State Department of Environmental Conservation (NYSDEC) quarantine orders, and New York State Department of Agriculture and Markets ("NYSDAM") regulations.

4. Building and Structure Removal

Indicate the locations of any buildings or structures to be acquired, demolished, moved, or removed. Provide the rationale for the acquisition and removal of buildings or structures.

5. Waterbodies

a. Describe the measures to be taken to protect stream bank stability, stream habitat, and water quality including, but not limited to: crossing technique; crossing structure type; timing restrictions for in-stream work; stream bed and bank restoration measures; vegetation restoration measures; and other site-specific measures to minimize impacts, protect resources, and manage Facility construction.

b. In a separate report indicate the procedures that were followed to inventory such resources and provide copies of any resulting data sheets and summary reports.

c. Develop a table of waterbodies crossed by the Facility and include: Town (location), Existing Structure Span (mileposts), Stream Name, Field/Map Identification Name, Perennial or Intermittent, New York Stream Classification, Water Index Number, Crossing Method and Length, Fishery Type, and GPS coordinates.

6. Wetlands

a. For each federal and state-regulated wetland, indicate the following: town (location); existing Structure Span (milepost); wetland field designation; NYSDEC classification code; wetland type; proposed structure located within wetland; total area of

temporary disturbance/impact; total area of permanent disturbance (sq. ft.); area crossed by Facility (sq. ft.); and conversion of federal and state-regulated forested wetlands (sq. ft.).

b. Describe all activities that will occur within State-regulated wetlands or adjacent areas (e.g., construction, filling, grading, vegetation clearing, and excavation) and assure that the activity is consistent with the weighing standards set forth in 6 NYCRR §§663.5(e) and (f). Describe how impacts to wetlands, adjacent areas, associated drainage patterns and wetland functions will be avoided, and how impacts will be minimized.

c. Describe the precautions or measures to be taken to protect all other wetlands (e.g., town, federal wetlands) associated drainage patterns, and wetland functions.

7. Land Uses

a. Agricultural Areas

1) Describe programs, policies, and procedures to mitigate agricultural impacts such as soil compaction. Explain how construction plans either avoid or minimize crop production losses and impacts to vulnerable soils.

2) Indicate specific techniques and references to appropriate agricultural protection measures recommended by NYSDAM.

b. Sensitive Land Uses

Describe the sensitive land uses (e.g., hospitals, emergency services, sanctuaries, schools, residential areas) that may be affected by construction of the Facility or by construction-related traffic and specify measures to minimize the impacts on these land uses.

c. Geologic, Historic and Scenic or Park Resources

Describe the geologic, historic, and scenic or park resources that may be affected by construction of the Facility or by construction-related traffic and specify measures to minimize impacts on these resources. Indicate the procedures that were followed to

identify such resources and specify the measures that will be taken to protect or preserve these resources. Reports prepared to identify and analyze such sites and previously submitted will be identified and new or more detail documentation of the above features shall be made available to Staff upon request.

d. Recreation Areas

Explain how proposed or existing recreation areas will be avoided or accommodated during construction, operation, and maintenance of the Facility.

8. Access Roads, Marshalling Yards and Workpads

a. Discuss the necessity for access to the ROW, including the areas where temporary or permanent access is required; and the nature of access improvements based on natural features, equipment constraints, and vehicles to be used for construction and maintenance, and the duration of access needs through restoration and the maintenance of the Facility.

b. Discuss the types of access which will be used and the rationale for employing that type of access including consideration of:

1) temporary installations (e.g., corduroy, mat, fill, earthen road, geotextile, geogrid underlayment, gravel surface, etc.);
2) permanent installations (e.g., cut and fill earthen road, geotextile under-layment, gravel surface, paved surface, etc.);
3) use of roads, driveways, farm lanes, rail beds, etc.; and,
4) other access, e.g. helicopter or barge placement.

c. For each temporary and permanent access type, provide a figure or diagram showing a typical installation (include top view, cross section and side view with appropriate distances and dimension). Where existing access ways will be used, indicate provisions for upgrading for Facility construction.

d. Indicate the associated drainage and erosion control features to be used for access road construction and maintenance. Provide diagrams and specifications (include plan and side views with appropriate typical dimensions) for each erosion control feature to be used, such as:

1) staked straw bale or check dam (for ditches or stabilization of topsoil);

2) broad-based dip or berm (for water diversion across the access road);

3) roadside ditch with turnout and sediment trap;

4) French drain;

5) diversion ditch (water bar);

6) culvert (including headwalls, aprons, etc.);

7) sediment retention basin (for diverting out-fall of culvert or side ditch); and,

8) silt fencing.

e. Indicate the type(s) of stream crossing method to be used in conjunction with temporary and permanent access road construction. Provide diagrams and specifications (include plan and side view with appropriate dimensions) for each crossing device and rationale for their use. Stream crossing devices may include but not be limited to:

1) timber mat;

2) culverts including headwalls;

3) bridges (either temporary or permanent); and,

4) fords.

f. All diagrams and specifications should include material type and size to be placed in streams and on stream approaches.

g. Provide justification for any access and workpad areas which are proposed to be located in a wetland, adjacent area or stream or waterbody.

9. <u>Noise Sensitive Sites</u>

Specify procedures to be followed to minimize noise impacts related to ROW clearing, and construction and operation of the Facility. Indicate the types of major equipment to be used in construction or Facility operation; sound levels at which that equipment operates; days of the week and hours of the day during which that equipment will normally be operated; any exceptions to these schedules; and any measures to be taken to reduce audible noise levels caused by either construction equipment or Facility operation.

10. Ecological and Environmentally Sensitive Sites

Indicate the procedures that were followed to identify ecological and environmental resources (e.g., archaeological sites; fish and wildlife habitat; rare, threatened, and endangered species or habitats; forest and vegetation; open space; areas of important aesthetic or scenic quality; deer winter yards) and specify the measures that will be taken to protect, preserve or improve these resources. Reports prepared to identify and analyze such sites shall be identified, and made available upon request.

11. Invasive Species of Special Concern

a. Provide an invasive species prevention and management plan for Invasive Species, prepared in consultation with DPS, NYSDEC and NYSDAM, based on the pre-construction invasive species survey of invasive species within the ROW.

b. The plan shall include measures that will be implemented to minimize the introduction of Invasive Species and the spread of existing invasive species, during construction (e.g., soil disturbance, vegetation clearing, transportation of materials and equipment, and landscaping/revegetation).

c. Describe the type and extent of training to be provided on invasive species management to workers, including any instructions necessary to implement the Certificate Conditions relating to Invasive Species Management and Control.

12. Herbicides

Include a herbicide use plan for all vegetation clearing that:

a. Specifies the locations where herbicides are to be applied. Provide a general discussion of the site conditions (e.g., land use, target and non-target vegetation species composition, height and density) and the choice of herbicide, formulation, application method and timing.

b. Describes the procedures that will be followed during application, including any label instructions, to protect non-target vegetation, streams, wetlands and adjacent areas, potable waters and other water bodies, and residential areas and recreational users on or near the ROW.

13. Fugitive Dust Control

Specify appropriate measures that will be used to minimize fugitive dust and airborne debris from construction activity.

14. Petroleum and Chemical Handling Procedures

a. Include a plan for the storage, handling, transportation, and disposal of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances which may be used during, or in connection with, the construction, operation, or maintenance of the Facility. Indicate areas where such activities are prohibited and areas where an environmental monitor must be present to conduct such activities. Address how to avoid spills and improper storage or application in the vicinity of any wetland, adjacent area, river, creek, stream, lake, reservoir, spring, well, or other ecologically sensitive site, or existing recreational area along the ROW and access roads. Identify methods to refuel stationary equipment in wetlands, adjacent areas or near waterbodies.

b. Include a plan for reporting, responding to and remediating the effects of any spill

of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances in accordance with applicable State and Federal laws, regulations, and guidance, and include proposed methods of handling spills of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances which may be stored or utilized during the construction and site restoration, operation, and maintenance of the Facility.

c. Identify the notification and reporting responsibilities for laborers, equipment operators, supervisors, managers and environmental monitors.

d. Describe the training on spill response to be given to laborers, equipment operators, supervisors, mangers and environmental monitors.

e. All vehicles will have a spill kit appropriate to the size of the fuel tank.

15. <u>Environmental Supervision</u>

a. Describe protocols for supervising demolition, vegetation clearing, use of herbicides, SWPPP compliance, and construction, and site restoration activities to ensure minimization of environmental impact and compliance with the environmental protection provisions specified by the Certificate Conditions.

b. Specify the titles and qualifications of personnel proposed to be responsible for ensuring minimization of environmental impact throughout the demolition, clearing, construction and restoration phases, and for enforcing compliance with environmental protection provisions of the Certificate, the SWPPP and the EM&CP. Indicate the amount of time each supervisor is expected to devote to the project.

c. Specify responsibilities for personnel monitoring all construction activities, such as clearing, sensitive resource protection, site compliance, EM&CP change notices, etc.

d. Explain how all environmental protection provisions will be incorporated into

contractual specifications, and communicated to those employees or contractors engaged in demolition, clearing, construction, and restoration.

e. Describe the procedures to "stop work" in the event of a Certificate violation. Identify the company's designated contact including 24/7 emergency phone number, for assuring overall compliance with Certificate conditions.

16. <u>Clean-up and Restoration</u>

Describe the Certificate Holder's program for ROW clean-up and restoration, including:

a. the removal of any temporary roads; restoration of lay-down or staging areas; the finish grading of any scarified or rutted areas; the removal of waste (e.g. excess concrete), scrap metals, surplus or extraneous materials or equipment used;

b. plans, restoration goals, standards and a schedule for the restoration of vegetative cover; including, but not limited to, specifications to address:

1) design standards for ground cover:

a) species mixes and application rates by site;

b) site preparation requirements (soil amendments, stone removal, subsoil treatment, or drainage measures);

c) acceptable final cover % by cover type;

d) schedule for post construction inspections and reporting of the results of the restoration efforts to DPS Staff;

2) planting installation specifications and follow-up responsibilities;

3) a schedule or projected dates of any seeding and/or planting;

4) plans to prevent unauthorized access to and along the ROW; and

5) identify the person responsible for restoration by office, title and name.

17. Visual Impact Mitigation

Provide details of screening or landscape plans prescribed at road crossings and for adjacent property owners. Discuss existing or proposed landscape planting, earthwork, or installed features to screen or landscape substations and other Facility components. The Certificate Holder will identify by office title and name the person responsible for assessing, implementing and reporting on visual impact mitigation.

18. Protection of Existing Facilities Plan

Provide a plan indicating the details and design measures to protect the cathodic protection system and physical conditions of nearby facilities and structures, including any underground facilities. The plan shall include appropriate mitigation measures such as grounding and the upgrade of existing protection devices or other facilities as appropriate for, and identified in cooperation with, owners or operators of adjacent or nearby structures, pipelines, tanks, fences or facilities.

19. Blasting Plan

A Blasting Plan will be developed as required.

20. ROW Encroachment Plan

Provide detailed plans for identifying and resolving potential encroachments to the existing and proposed ROW.

21. Wetland Mitigation Plan

Provide detailed plans for mitigating all permanent impacts to State-regulated wetlands and adjacent areas and Federally-regulated wetlands, if prescribed by the Army Corps of Engineers and NYSDEC, including, but not limited to, the permanent conversion of forested wetland to scrub/shrub wetland. For State-regulated wetlands, mitigation plans shall separately address impacts to each of the wetlands benefits described in ECL § 24-0105(7). To the extent

practicable, plans shall provide for wetland mitigation in the same watershed and in connection with an existing State-regulated wetland.

APPENDIX F
PROPOSED 401 WATER QUALITY CERTIFICATION

NEW YORK PUBLIC SERVICE COMMISSION
WATER QUALITY CERTIFICATION

Pursuant to: §401 of the Federal Water Pollution Control Act, 33 U.S.C. §1341, and Article VII of the New York Public Service Law

Certification Issued to: **Niagara Mohawk Power Corporation**
d/b/a National Grid
300 Erie Boulevard West
Syracuse, New York 13202

Location of Project

Niagara Mohawk Power Corporation, d/b/a National Grid ("National Grid" or "the Company") proposes the relocation and selective reconductoring and reconstruction of two existing 115 kV transmission lines, predominately within the existing right-of-way ("ROW"), and the construction and operation of a new 115 kV/13.2 kV distribution substation ("Cicero Substation") and associated 115 kV tap lines ("the "115 kV Tap Lines" and, collectively with the Cicero Substation, the "Substation Facilities"). The two 115kV transmission lines are approximately 15.53 miles of the Clay to Teall Line 10 ("Line 10") and approximately 12.95 miles of the Clay to DeWitt Line 3 ("Line 3" and collectively with Line 10, the "Existing Lines") (Line 3 and Line 10, as National Grid proposes to relocate and reconductor them, are referred to collectively as the "Transmission Facilities"). The proposed route will traverse Towns of Clay, Cicero, DeWitt, and Salina, all within Onondaga County.

Project Description

Presently, Line 3 and Line 10 both originate at the Clay Substation in Clay, NY and terminate at different points southeast of the Clay Substation. These 115kV circuits travel a distance of approximately 12.95 miles parallel to each other on the same right-of-way ("ROW"), the width of which varies from 80 feet to 300 feet. Some additional real property rights immediately adjacent to one or both sides of portions of the Existing ROW will be required to expand the ROW for this Project. Additionally, real property rights in a corridor of varying widths, from approximately 50 feet to approximately 250 feet, will be required over a distance of approximately 2.37 miles alongside an existing utility ROW heading east out of the Clay Substation.

The Project also includes replacing existing conductors on the Existing Lines with new higher capacity conductors, replacing or modifying a majority of the pole and tower structures

associated with the Existing Lines, relocating some of the Existing Lines to the center of the ROW, and relocating other portions of the Existing Lines to a different ROW corridor. Most of the lines rebuilt or relocated in the Project will be supported by either: weathering steel, monopole, phase-over-phase double circuit structures; or weathering steel, single circuit, delta davit arm restrained suspension structures. Structure types are described in more detail in Exhibit E-1 - Description of Proposed Transmission Facilities.

The Project also includes the construction of the Substation Facilities. The Cicero Substation would be equipped with two 115-13.2 kV, 24/32/40 megavolt amperes load tap change transformers in an eight-feeder open air breaker configuration (six of which would be fully built out). The 115 kV Tap Lines will provide a dual supply feed from Line 3 and Line 10 to the substation. The proposed size of the Cicero Substation is approximately 240 feet by 200 feet (1.1 acres), and is proposed to be located in the Town of Cicero, New York.

As described in further detail in Exhibit 2 of the Application (Exhibit 2 of the Evidentiary Record and referred to as "Exhibit 2"), the Project consists of seven distinct Segments. Existing Line 3 and Existing Line 10 are to be removed from Segments 1 and 2 (Clay Substation to Mile 4.03) and relocated to Segment 7 in an effort to minimize the need to acquire additional ROW in densely populated residential areas and adjacent to an elementary school in Segment 2.

The Project right-of-way ("ROW") traverses 41 streams (1 Class B stream (Ley Creek) and 20 Class C streams), four of which are named streams: Young's Creek, Mud Creek, North Branch Ley Creek, and Ley Creek.

National Grid will employ best management practices, detailed in Exhibit 21 (National Grid's Best Management Practices for Article VII Electric Transmission Line Projects [BMPs]) and a Stormwater Pollution Prevention Plan, as required by the SPDES General Permit for Stormwater Discharges from Construction Activity - GP-0-15-002, to ensure that the construction of the Project will not contravene applicable New York State water quality standards in 6 NYCRR 608.9 and 6 NYCRR Parts 701, 702, 703, 704, and 750. Among other measures, tracked vehicles and swamp mats will be used as necessary when working in wetlands, adjacent areas, and near stream banks to protect vegetation root systems, reduce compaction, and minimize ruts. Appropriate temporary erosion and sediment controls will be installed to prevent erosion of soils into streams and any associated wetlands. In addition, if possible, work activities in wetlands will be scheduled during dry or frozen periods to facilitate access and minimize disturbance. A wetland compensatory mitigation plan has been or will be prepared to mitigate any unavoidable wetland losses.

The EM&CP will specify the work procedures to be utilized in wetlands, at stream crossings and in other environmentally sensitive areas, and appropriate restoration and mitigation measures, consistent with the Article VII Certificate, the requirements of the SWPPP and the environmental protection measures set forth in the BMPs.

Operation of the Project in accordance with the Certificate of Environmental Compatibility and Public Need ("Certificate"), the EM&CP, and National Grid's Transmission Right-of-Way Management Program approved by the Commission in Case 27605 and is

anticipated to cause the project to be constructed in compliance with New York State water quality standards in 6 NYCRR 608.9 and 6 NYCRR Parts 701, 702, 703, 704, and 750.

Certification

The New York State Public Service Commission hereby certifies, pursuant to §401 of the Water Pollution Control Act (33 U.S.C. §1341) and Article VII of the New York Public Service Law that the Project, as conditioned herein, complies with applicable requirements of §§ 301, 302, 303, 306 and 307 of the Federal Water Pollution Control Act, as amended, and applicable New York State water quality standards, limitations, criteria and other requirements set forth in 6 NYCRR §608.9(a) and Parts 701 through 704, and Part 750 provided that all of the conditions listed herein are met. This certification ("Certification") is issued in conjunction with the Article VII Certificate sought by National Grid in, and based on the record of, Case 15-T-0305.

Conditions

1. Construction of the Project may not commence until National Grid has prepared a SWPPP and filed a Notice of Intent in accordance with the SPDES General Permit for Stormwater Discharges from Construction Activity - GP-0-15-002.

2. Construction of the Project may not commence until National Grid has received approval from the Commission for its EM&CP which shall include a compensatory wetland mitigation plan developed in consultation with NYSDEC.

3. No in-water work shall commence until all pre-construction conditions relating to such work contained in the Certificate and any Order approving the EM&CP have been met to the satisfaction of the Department of Public Service.

4. Construction and operation of the Project shall at all times be in conformance with (a) the Application (as amended and supplemented) and Joint Proposal of Settlement filed in Case 15-T-0305, to the degree not superseded by the Certificate, (b) all conditions of approval contained in the Certificate, (c) the EM&CP, and (d) all conditions incorporated in any order approving the EM&CP in Case 15-T-0305, to the extent such documents referenced in (c) and (d) above pertain to National Grid's compliance with New York State Water Quality Standards necessary and appropriate for issuance of, and compliance with, this Certification.

5. National Grid shall provide a copy of this Certification to the U.S. Army Corps of Engineers and the New York State Department of Environmental Conservation (NYSDEC), along with a copy of the Application, Joint Proposal, including all documents referenced in Appendix A, Article VII Certificate, EM&CP, and order(s) approving the EM&CP in Case 15-T-0305, so that the U.S. Army Corps of Engineers and NYSDEC will have a complete record of the conditions that apply hereto.

6. National Grid shall provide to all construction contractors performing work on the Project complete copies of this Certification, the Article VII Certificate, the approved EM&CP, and order(s) approving the EM&CP.

Certified by:

_____

_____, Chief
Environmental Certification and Compliance Section
Office of Electric, Gas and Water
New York State Department of Public Service
Three Empire State Plaza
Albany, New York 12223