

May 3, 2018

**VIA ELECTRONIC MAIL:**  
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NYISO Public Policy Planning Group  
New York Independent System Operator  
10 Krey Boulevard  
Rensselaer, New York 12144

**RE: Comments of Niagara Mohawk Power Corporation d/b/a National Grid and New York Transco LLC Regarding Substation Engineering Company's AC Transmission New York Public Policy Transmission Need Technical Review Report**

Dear NYISO Public Policy Planning Group:

Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid") and New York Transco LLC ("Transco") appreciate the significant efforts the New York Independent System Operator ("NYISO") and its consultants, including Substation Engineering Company ("SECO"), have undertaken to date in the ongoing Public Policy Transmission Planning Process ("PPTPP") to select the more efficient or cost-effective electric transmission projects to satisfy the Public Policy Transmission Need ("PPTN") the New York Public Service Commission (the "Commission") identified to provide additional transmission capacity to move power from upstate to downstate over the Central East and Upstate New York/Southeast New York ("UPNY/SENY") interfaces (the "AC Transmission PPTN"). National Grid and Transco also value the opportunity to provide the following comments, which discuss their project proposals (T018 and T019) and SECO's technical evaluation that is summarized in its report released March 30, 2018, as modified on April 23, 2018, entitled *AC Transmission New York Public Policy Transmission Need Technical Review Report* (the "SECO Report").

National Grid and Transco's joint comments begin with a brief summary of the history of the Commission's underlying AC transmission proceedings and highlight the main features of projects T018 and T019, a number of which favorably distinguish them from the other proposals the NYISO is considering in the PPTPP. The joint comments then focus on how projects T018 and T019 satisfy three core metrics that should drive the NYISO's selection process, particularly in light of the AC Transmission PPTN's unique elements: siting and constructability, schedule, and costs. In contrast, among other concerns about certain other proposals under consideration, the joint comments note that project T025 does not satisfy the Commission's Hudson River crossing evaluation criteria and thus should be eliminated from consideration. As demonstrated below, and as supported by the SECO Report's analysis, projects T018 and T019 are, on balance, the more efficient or cost-effective transmission solutions to address the AC Transmission PPTN based on their total performance under all of the selection metrics and because, unlike many of

the other proposals, projects T018 and T019 can be sited, constructed, and placed into service in an efficient, timely, and cost-effective manner.

## I. The Commission’s AC Transmission Proceedings and the NYISO’s PPTPP

The Commission initiated the AC transmission proceeding and its subsequent companion proceedings (Case 12-T-0502, *et al.*) (collectively, the “AC Transmission Proceedings”) to consider whether to address the persistent transmission congestion that exists at the Central East and UPNY/SENY electrical interfaces.<sup>1</sup> As part of this assessment, the Commission sought proposals from transmission owners and other developers to increase the transfer capacity across these interfaces by approximately 1,000 megawatts (“MW”).<sup>2</sup> After receiving an initial round of proposals that raised certain siting concerns, the Commission called for revised proposals that better utilize existing rights-of-way and better match the scale of proposed power line structures to the existing facilities already in the transmission corridor.<sup>3</sup> This was consistent with Governor Andrew M. Cuomo’s declaration in the 2014 State of the State Address that the State must encourage utilities and transmission developers to build wholly within existing transmission corridors, where possible, to minimize impacts and responsibly site projects in a way that addresses the concerns of local communities.

In response to the call for revised proposals, the Commission received 21 proposals (1 of which had 2 components) in January 2015 from 4 entities: North America Transmission LLC and North America Transmission Corporation (“NAT”); NextEra Energy Transmission New York, Inc. (“NextEra”); Boundless Energy NE, LLC (“Boundless”); and the New York Transmission Owners (“NYTO”). These projects were referred to at the Commission as P1 through P21. Two of the proposals (P6 and P11) submitted to the Commission by the NYTOs are nearly identical to projects T019 and T018, respectively, which were eventually submitted to the NYISO by National Grid and then newly-formed Transco for evaluation.

After these proposals were received, among other events, Department of Public Service Staff (“Staff”) issued a report outlining the results of its and the NYISO’s comparative evaluation of the project proposals.<sup>4</sup> This report states that P6 and P11, the National Grid/Transco projects, were among the “most promising [projects] from an electric system benefit perspective, and [are] significantly more environmentally compatible primarily because [they are] designed to use existing rights-of-way, and generally replace existing facilities with

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<sup>1</sup> See Case 12-T-0502, *Proceeding on Motion of the Commission to Examine Alternating Current Transmission Upgrades*, Order Instituting Proceeding (Issued Nov. 30, 2012). In this proceeding, the Commission identified the AC transmission corridor traversing the Mohawk Valley Region, the Lower Hudson Valley region, and the Capitol Region as a source of persistent congestion. These regions include facilities connected to Marcy, New Scotland, Leeds, and the Pleasant Valley Substations, along with two major electrical interfaces. The Commission referred to these interfaces as “Central East” and “UPNY/SENY.”

<sup>2</sup> See Case 12-T-0502, *supra*, Order Instituting Proceeding (Issued Nov. 30, 2012), at 2.

<sup>3</sup> See Case 12-T-0502, *supra* Order Authorizing Modification of the Process to Allow for Consideration of Alternative Proposals (Issued Feb. 21, 2014), at 4; Case 12-T-0502, *supra*, AC Transmission – Trial Staff Final Report (Filed Sept. 22, 2015), at xi (“Staff’s Final Report”).

<sup>4</sup> See generally Case 12-T-0502, *supra*, Staff’s Final Report.

new facilities while largely avoiding significant new intrusions into existing communities, landscapes, and farmland.”<sup>5</sup> Following this report, the Commission declared the AC Transmission PPTN and referred the Central East (“Segment A”) and UPNY/SENY (“Segment B”) transmission needs to the NYISO for the solicitation and evaluation of potential solutions.<sup>6</sup>

In response to the NYISO solicitation, National Grid and Transco submitted projects T018 and T019 to the NYISO for review.<sup>7</sup> After conducting a viability and sufficiency assessment of the 16 project proposals submitted to the NYISO in response to its Commission-ordered solicitation, the NYISO declared projects T018 and T019, along with 11 other proposals – submitted by NextEra, ITC, and NAT jointly with the New York Power Authority (“NYPA”) – viable and sufficient to satisfy the AC Transmission PPTN.<sup>8</sup> The 13 remaining proposals, broken down by project segment, are:

Segment A:

T018	National Grid/Transco
T021	NextEra
T025	NAT/NYPA
T026	NAT/NYPA
T027	NAT/NYPA
T028	NAT/NYPA
T031	ITC

Segment B:

T019	National Grid/Transco
T022	NextEra
T023	NextEra
T029	NAT/NYPA
T030	NAT/NYPA
T032	ITC

Following the issuance of the NYISO’s *AC Transmission Public Policy Transmission Need Viability & Sufficiency Assessment* report, the Commission confirmed the AC Transmission PPTN, and the NYISO commenced its evaluation of the 13 viable and sufficient projects for selection of the more efficient or cost-effective solutions to satisfy the AC Transmission PPTN.<sup>9</sup>

<sup>5</sup> See *id.* at 164.

<sup>6</sup> See Case 12-T-0502, *supra*, Order Finding Transmission Needs Driven by Public Policy Requirements (Issued Dec. 17, 2015), at 2. Based on the results of the initial comparative evaluation and the high rankings that P6 and P11 received, the Commission specifically requested that the NYTOs submit projects P6 and P11, with certain necessary add-ons, to the NYISO during its solicitation process. The Commission did not invite Boundless to propose its projects to the NYISO for consideration (*see id.* at 70-71).

<sup>7</sup> See Niagara Mohawk Power Corporation, d/b/a National Grid with New York Transco LLC Joint Submission, NEW YORK ENERGY SOLUTION PROJECT FOR EACH SEGMENT A And SEGMENT B In response to NYISO PROJECT SOLICITATION for AC TRANSMISSION PUBLIC POLICY TRANSMISSION NEED, (Submitted on April 26, 2016) (the “National Grid and Transco Joint Submission”). ITC New York Development (“ITC”), which had not proposed any projects to the Commission during the AC Transmission Proceedings, submitted proposals to satisfy the AC Transmission PPTN to the NYISO for review in response to the NYISO’s Commission-ordered solicitation.

<sup>8</sup> Case 12-T-0502, *supra*, NYISO AC Transmission PPTN VSA Report (Filed Oct. 28, 2016).

<sup>9</sup> See Case 12-T-0502, *supra*, Order Addressing Public Policy Transmission Need for AC Transmission Upgrades (Issued Jan. 24, 2017), at 1-3.

In selecting the more efficient or cost-effective solutions to satisfy the AC Transmission PPTN, the NYISO is required to apply and consider the evaluation metrics identified in Section 31.4 of Attachment Y of NYISO's Open Access Transmission Tariff ("OATT") as well as the criteria prescribed by the Commission in its December 17, 2015 order (collectively, the "Selection Metrics").<sup>10</sup> As detailed below, projects T018 and T019's total performance under all of the Selection Metrics best satisfies the identified PPTN for new 345 kV major electric transmission facilities to provide additional transmission capacity to move power from upstate to downstate over the Central East and UPNY/SENY interfaces. Accordingly, as supported by the analysis in the SECO Report, projects T018 and T019 are, on balance, the more efficient or cost-effective transmission solutions to address the AC Transmission PPTN, particularly with respect to siting and constructability, schedule, and cost.

## II. Overview of Projects T018 and T019

National Grid and Transco have carefully designed projects T018 (also known as "New York Energy Solution Segment A")<sup>11</sup> and T019 (also known as "New York Energy Solution Segment B")<sup>12</sup> to be the most efficient and cost-effective transmission solutions to address the AC Transmission PPTN. Projects T018 and T019 fully satisfy the Selection Metrics as they follow existing rights-of-way; avoid any crossing of the Hudson River; present high operability and performance values; increase transfer capacity; have reasonable and attainable schedule durations; and provide new, reliable, enhanced, and expandable facilities.

Although the SECO Report reflects that several of the 13 remaining proposals perform well under certain metrics, projects T018 and T019 satisfy *all* of the Selection Metrics.<sup>13</sup>

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<sup>10</sup> The Selection Metrics (*i.e.*, the OATT metrics and Commission criteria) are detailed in **Appendix A** attached hereto.

<sup>11</sup> Project T018 includes the following major work items: a new 345 kV line from the existing Edic Substation to the existing New Scotland Substation; upgrades to, and expansion of, the existing New Scotland Substation to terminate the new Edic – New Scotland 345 kV line; upgrades to the existing Edic Substation; a new Rotterdam 345 kV Substation (converted from 230 kV), including two new 345/115 kV autotransformers connecting the new 345 kV gas insulated substations ("GIS") switchyard to the existing Rotterdam 115 kV switchyard, one new 345/230 kV autotransformer connecting the new Rotterdam 345 kV GIS switchyard to Eastover Road #38 line, and a new 135 MVar capacitor bank connected to the new Rotterdam 345 kV GIS switchyard; two new overhead Princetown Junction – Rotterdam 345 kV lines; and the retirement of two aging existing Porter – Rotterdam 230 kV lines (#s 30 and 31).

<sup>12</sup> Project T019 features the following major work items: construction of a new 345 kV Knickerbocker Switching Station (which is expandable), connecting existing New Scotland – Alps #2 345 kV line; construction of a new double-circuit 345/115 kV line from the new Knickerbocker 345 kV Switching Station that will include a 50% series compensation device to the existing Pleasant Valley 345/115 kV Substation; a complete rebuild of the Churchtown 115 kV Switching Station to provide for a 6-terminal breaker and one-half configuration; upgrades to the existing Pleasant Valley 345/115 kV Substation, including two new 135 MVar capacitor banks; the rebuild of existing Blue Stores 115 kV Line Tap; multiple 345 kV Substation terminal upgrades; construction of a new double-circuit 138 kV line from the existing Shoemaker 138 kV Substation to the existing Sugarloaf 138 kV Substation; and the retirement of several aging 115 kV double-circuit lines.

<sup>13</sup> See National Grid and Transco Joint Submission; see also Niagara Mohawk Power Corporation, d/b/a National Grid with New York Transco LLC, The New York Energy Solution; NYISO AC Transmission PPTN Presentation (dated Oct. 23, 2017).

Additionally, projects T018 and T019 have several unique features that favorably distinguish them from the other submissions, including:

- Project T018 increases bulk system capacity while *avoiding* the need for a new Princetown station, which eliminates additional utility and non-utility land acquisition and increased costs to customers.
- Project T019 is the only proposal to add controllable series compensation equipment at the new Knickerbocker Substation, which will assist in maintaining voltage stability and increase power transfer capability by reducing inductive line impedance.<sup>14</sup>
- Projects T018 and T019 are the most advanced in terms of planning and development when compared against the other project proposals. For example, an N-1-1 analysis was completed for projects T018 and T019 prior to project submission and was updated in 2017. Additionally, as discussed below, National Grid and Transco have secured Preliminary Jurisdictional Determinations (“PJD”) from the Army Corps of Engineers (“ACOE”).
- Projects T018 and T019 will include elements (*i.e.*, capacitor banks at Rotterdam and Pleasant Valley) that will assist local area 115 kV system reliability.
- Projects T018 and T019 were designed after a careful review of the landscape and existing rights-of-way and do not interfere with any existing gas pipeline infrastructure.
  - In contrast, most other proposals submitted face real risks associated with their proposed construction paths because they impact existing natural gas pipelines within the subject rights-of-way.
- Projects T018 and T019 were designed to allow National Grid and Transco to secure timely licenses, permits, and approvals and efficiently complete construction.

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<sup>14</sup> It is important to note that National Grid and Transco commissioned and submitted to the NYISO interconnection process a topology screening study to identify potential sub-synchronous resonance (“SSR”) issues. Notably, the study did not identify any SSR issues for the interconnection of the Q543 (T019) project. As indicated in the SSR report, if selected, National Grid/Transco will perform an in-depth SSR study, including a Sub-Synchronous Control Interaction (“SSCI”) study for the potential control interaction of nearby dynamic devices during the next phase of the study process. Nevertheless, the screening results demonstrate that there are no significant risks that would be considered a distinguishing factor for the purpose of this stage of the PPTPP. In addition, National Grid and Transco have recent experience owning, operating, maintaining, and implementing series compensation given their collective and separate experience in successfully implementing the Fraser Station 345 kV Series Compensation that went in-service on June 1, 2016, without any issues, and National Grid’s close working experience with NYPA to successfully implement its scope of the “Marcy South Series Compensation” project.

- Projects T018 and T019 were designed to allow live line maintenance. Given the increasing difficulty to obtain planned line outages for electric transmission, this is an important capability for both operators and owners to ensure minimal bulk system performance interruptions.

In sum, projects T018 and T019 are designed to readily and cost-effectively be sited and constructed and provide key operability benefits to the State's transmission grid, production cost savings, high total performance, and operational flexibility. For these reasons, projects T018 and T019 satisfy all of the Selection Metrics. As a result, the NYISO should conclude that projects T018 and T019 are the more efficient and cost-effective transmission solutions to address the AC Transmission PPTN.

### **III. Projects T018 and T019 Present Minimal Siting Concerns, Reliable Schedules, and are the Most Cost-Effective Solutions to Satisfy the AC Transmission PPTN**

Although each of the Selection Metrics is important, these joint comments focus on three core metrics that should drive the NYISO's remaining PPTPP review to identify the more efficient or cost-effective solutions to satisfy the AC Transmission PPTN: (1) siting and constructability, (2) schedule, and (3) costs. These three metrics are interrelated and can significantly impact one another. For example, as siting issues arise for a project, that project's schedule and costs will necessarily increase as a result. As such, to select the projects that will be constructed in an efficient, timely, and cost-effective manner, the NYISO should select the projects that are the most likely to be sited and built without undue delay.

Projects T018 and T019 best satisfy the three core metrics of siting and constructability, schedules, and costs:

- a. Projects T018 and T019 have minimal, if any, siting concerns and are both constructible

Projects T018 and T019 present minimal environmental, permitting, and electromagnetic field ("EMF") concerns when compared against the other remaining proposals; only nominal property acquisitions are required to construct these projects; and projects T018 and T019 are high-performing projects that allow for significant improvements and expandability to existing and aging infrastructure. As further described below, projects T018 and T019 are the projects that are least likely to encounter disruptive issues during the siting or construction phases because they have been developed by entities that have significant experience developing and operating electric transmission lines in New York and that have already completed significant public outreach with potentially-impacted communities.

On balance, the SECO Report supports the conclusion that projects T018 and T019 have the least risks for siting and constructability and achieve the most favorable result in using existing facilities and properties while allowing for future expansion. In contrast, the SECO Report correctly notes certain significant siting and constructability risks and issues with other projects, most notably T025 and T027.

Specifically, projects T018 and T019 have the following components that best satisfy the siting and constructability metric:

*i. Significant developer and operator experience*

The Commission has expressed its desire to have the projects selected to satisfy the AC Transmission PPTN developed and constructed by a developer(s) with experience operating major transmission projects on an interconnected AC transmission system and securing the necessary Public Service Law Article VII certificate and related permits and approvals.<sup>15</sup> When compared against other developers, National Grid/Transco is unquestionably the most experienced developer – including with securing the necessary regulatory approvals – and operator of electric transmission facilities in New York.

Since 2006, National Grid has filed over a dozen petitions<sup>16</sup> with the Commission pursuant to Article VII seeking either new Certificates of Environmental Compatibility and Public Need (“CECPNs”) or amendments to existing CECPNs related to electric transmission facilities.<sup>17</sup> Many of these petitions dealt with major electric transmission projects that included robust public involvement. National Grid successfully navigated the Article VII process and secured the requested amendment or newly-issued CECPN.<sup>18</sup> As a result of its efforts, National Grid has constructed, or secured permission to construct, new substations and approximately 100 miles of new electric transmission line, with a total estimated cost of well over \$200 million since 2006 to ensure continued reliability of the State’s electric grid for the benefit of its customers. The following is a list and description of the projects National Grid has sought/secured Article VII approval to construct since 2006:

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<sup>15</sup> See Case 12-T-0502, *supra*, Order Finding Transmission Needs Driven by Public Policy Requirements (Issued Dec. 17, 2015), at 49.

<sup>16</sup> This figure does *not* include any Article VII applications filed in the AC Transmission Proceedings.

<sup>17</sup> This figure does *not* include National Grid’s equally-extensive and relevant experience with Article VII applications for natural gas lines.

<sup>18</sup> One of these petitions is currently pending before the Commission, while the remainder have been decided.

Case #	Brief Summary of Petition	Status of Petition
<p>16-T-0499 (amendment to existing CECPN)</p>	<p>Permission to construct and operate a new 115 kV/34.5 kV distribution substation, associated 115 kV lines (~700 feet long each) and 34.5 kV facilities, and a gravel access road.</p>	<p>Petition currently pending with Commission; no evidentiary hearing will be required before a Commission determination.</p>
<p>15-T-0384 (amendment to existing CECPN)</p>	<p>Permission to construct and operate of a new 115 kV three breaker ring bus station, 2 new 100-foot long 115 kV transmission loop taps, and the attachment of an all-dielectric self-supporting fiber optic cable between the newly-constructed station and an existing substation.</p>	<p>Order granting amendment of the CECPN issued on 9/18/15.</p>
<p>15-T-0305 (seeking new CECPN)</p>	<p>Permission to relocate and selective reconductoring and reconstruction of approximately 28.5 miles of existing 115 kV electric transmission lines and construct and operate a new substation.</p>	<p>Order granting CECPN issued on 4/23/18</p>
<p>13-T-0235 (joint application of National Grid and New York State Electric &amp; Gas Corporation [“NYSEG”] seeking a new CECPN)</p>	<p>Permission to construct, in part, a new 14.5 mile 115 kV electric transmission line from an existing NYSEG substation to an existing National Grid substation and relocate, reconductor, and bus 10.3 miles of existing 115 kV electric transmission circuits.</p>	<p>Order granting CECPN, which adopts the terms and conditions presented in a Joint Proposal (“JP”), issued on 2/25/16.</p>
<p>13-T-0077 (amendment to existing CECPN)</p>	<p>Permission to construct and operate a new 345/115 kV transmission station, 2 new 345 kV transmission loops (appx. 250 feet long each) and 4 new 115 kV transmission loops (appx. 650 feet long each) to connect three existing transmission lines.</p>	<p>Order granting amendment to CECPN issued on 8/22/14.</p>
<p>11-T-0068 (seeking new CECPN)</p>	<p>Permission to reconstruct and reconductor approximately 14.2 miles of its 115 kV electric transmission lines.</p>	<p>Order granting CECPN issued on 9/24/13.</p>



<p>10-T-0080 (seeking new CECPN)</p>	<p>Permission to construct, operate, and maintain a major utility transmission facility that would include three components: (1) busing together of 2 existing 115 kV lines, (2) constructing a new 33-mile single-circuit 115 kV transmission line, and (3) rebuilding or reconductoring 4.2 miles of an existing 115 kV line.</p>	<p>Order granting CECPN issued on 2/24/11.</p>
<p>10-T-0080 (amendment to existing CECPN)</p>	<p>Permission to construct and operate a new 115 kV-13.2 kV substation and associated 115 kV tap lines (Sodeman Road Station).</p>	<p>Order granting amendment to CECPN issued on 4/22/16.</p>
<p>10-T-0080 (amendment to existing CECPN)</p>	<p>Permission to construct and operate a new 115 kV-13.2 kV substation, including a single 15/20/25 megavolt amperes (“MVA”) power transformer and a four feeder 15 kV metal-clad switchgear, and associated 115 kV tap lines (Lasher Road Station).</p>	<p>Order granting amendment to CECPN issued on 7/18/17.</p>
<p>09-T-0870 (seeking new CECPN)</p>	<p>Permission to reconstruct an approximately 56-mile segment of an existing 115 kV transmission line.</p>	<p>Order granting CECPN issued on 12/17/10.</p>
<p>06-T-1040 (seeking new CECPN)</p>	<p>Permission to reconstruct approximately 21 miles of an existing 115 kV double-circuit transmission facility.</p>	<p>Order granting CECPN, which, in part, adopts the terms of a JP, issued on 4/24/09.</p>

In contrast, neither NextEra, NAT, nor ITC has secured any CECPNs or amended CECPNs during that same time frame.<sup>19</sup> NYPA has secured only two amendments to CECPNs in that same time period.<sup>20</sup> In short, the National Grid/Transco team clearly has the most

<sup>19</sup> Similarly excluding Article VII filings related to the AC Transmission Proceedings, NextEra has one petition for a CECPN pending with the Commission.

<sup>20</sup> NYPA has a pending application to construct 86 miles of new 345 kV electric transmission line in the North Country (Case 18-T-0207).

development, siting, and permitting experience of any developer that the NYISO is considering to satisfy the AC Transmission PPTN.

Additionally, National Grid's New York electric transmission system consists of approximately 6,000 miles of transmission line operating at voltages ranging from 69 kV to 345 kV, 310 transmission substations, more than 533 large power transformers, and over 809 circuit breakers at operating voltages above 69 kV. National Grid is the largest electricity transmission service provider in New York by reference to the length of these high voltage transmission lines. In addition, Transco has successfully owned and operated major transmission facilities in New York for almost two years.<sup>21</sup>

*ii. Less environmental risk*

The SECO Report identified 16 risks that SECO believes to be “common” to all proposals. Of these 16 risks, 5 are directly related to environmental concerns, including: (1) securing environmental approvals, (2) performing environmental studies that are time-sensitive, (3) discovery of unknown environmental conditions during construction, (4) violation of environmental requirements during construction, and (5) the crossings of highways, railways, and navigable waterways.<sup>22</sup> For the reasons outlined below, projects T018 and T019 are less susceptible to these risks than other proposals, or National Grid and Transco have already taken steps to substantially mitigate these risks.

Because of National Grid's significant experience developing and constructing electric transmission lines, it also has comparable experience securing the necessary environmental permits and approvals and mitigating environmental risks during the development and construction stages of a new transmission project. National Grid is fully aware of the nuances involved in securing the necessary environmental approvals before construction of T018 or T019 can begin and has an established track record of regularly and efficiently securing these approvals. To that end, National Grid and Transco have already taken several steps to mitigate environmental risks associated with projects T018 and T019.

For example, National Grid and Transco designed projects T018 and T019 to minimize impacting wetlands. As outlined in the SECO Report, projects T018 and T019 have the least impact to wetlands when compared against the other Segment A and Segment B proposals. In addition, National Grid and Transco recognized at the outset of this process that their projects span two ACOE districts (Buffalo and New York) and that there would be certain time consuming field studies that would need to be accomplished before National Grid and Transco could secure the required PJDs from both ACOE districts. For example, National Grid and

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<sup>21</sup> See Case 16-E-0012, *Joint Petition of New York State Electric & Gas Corporation and New York Transco LLC for Approval of a Transfer or Lease of Assets*, Order Authorizing Transfers Subject to Conditions and Modifications (Issued April 21, 2016); Case 16-E-0013, *Joint Petition of Orange and Rockland Utilities, Inc., Consolidated Edison Company of New York, Inc., and New York Transco LLC for Approval of a Transfer or Lease of Assets*, Order Authorizing Transfers Subject to Conditions and Modifications (Issued April 21, 2016).

<sup>22</sup> See SECO Report, at 44-49.

Transco knew that the required wetland delineations of Segments A and B would take a full season (April through November) of field studies to complete. As such, National Grid and Transco completed their wetland delineations during the development of projects T018 and T019 and were able to secure – after lengthy consultation with the ACOE – a PJD from each ACOE district.<sup>23</sup>

Although the PJDs indicate that the projects would likely trigger the ACOE’s permitting jurisdiction, they go on to indicate that the projects would likely satisfy the conditions of Nationwide Permit 12 (“NY NWP-12”), provided that the projects meet the permit’s less than one acre threshold. Thus, National Grid and Transco can construct T018 and T019, in compliance with NY NWP-12, by simply filing a pre-construction notification with the ACOE District Engineer prior to commencing construction if all seven enumerated conditions are met. National Grid and Transco believe their projects are the only ones to have reached this milestone in the ACOE regulatory process, putting them well ahead of the other projects since the typical duration of this activity is a minimum of 12 months between field surveys and ACOE consultation. For this reason, all of the other projects that have not secured their PJDs from the ACOE should have an additional 12 months added to their scheduled siting and construction duration.<sup>24</sup>

Moreover, since National Grid and Transco are familiar with the environmental studies that need to be performed to ensure that the projects’ design and associated environmental management and construction plans (“EM&CP”) adequately minimize, mitigate, or avoid environmental impacts, including the time-sensitive nature of conducting some of these studies, they have already contracted the work to perform field surveys for invasive and rare, threatened and endangered species that are only identifiable during the spring months. Surveys for State-protected rare, threatened and endangered species will be required for certification of the projects, while surveys for invasive species are needed to complete EM&CP preparation. A survey of federally-protected rare, threatened and endangered species will also be needed for processing the ACOE authorization. Lacking this seasonal data could delay certification and ACOE permit efforts as well as adversely impact preparation of EM&CPs concurrent with the Article VII CECPN process. For these reasons, National Grid and Transco will have these surveys performed in the spring of 2018 in a manner that is recognized and accepted by regulators. Conducting these surveys proactively at this early stage will allow National Grid and Transco to immediately proceed with permit activities if selected by the NYISO without the delay of waiting until the spring of 2019 to perform such surveys.

Additionally, National Grid and Transco have contracted with a consultant to complete the Phase 1A cultural resource survey report this spring for review by the NYS Parks, Recreation

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<sup>23</sup> The PJDs are attached hereto as **Appendix B**.

<sup>24</sup> Further, the ACOE strongly encourages that the boundaries of delineated waters be re-evaluated after five years following the delineation surveys. Given the short time period within which wetland delineation surveys remain acceptable to the ACOE, developers who completed wetland delineation surveys in 2013 or 2014 but have not yet submitted them to the ACOE are at risk of needing to update these surveys before securing PJDs. Such updates could significantly delay project siting because this survey can only be performed during the field season.

and Historic Preservation State Historic Preservation Office (“SHPO”). The results of the Phase 1A report will be the basis for a Phase 1B shovel testing program that SHPO will need to concur with. Phase 1B shovel testing is needed for the preparation of the EM&CP documentation, making this especially important for preparing EM&CPs concurrent with the Article VII CECPN process. Conducting this testing now will also allow National Grid and Transco to immediately proceed with permit activities without the potential delay of waiting for the SHPO Phase 1B concurrence.

Having the above studies/tests in place will allow National Grid and Transco to avoid eight or more months of potential delays in their permit acquisition program. In addition, National Grid and Transco’s development and construction experience with major electric transmission projects minimizes the risk that the companies would encounter environmental violations or difficulties during construction. This further demonstrates that projects T018 and T019 are not subject to the same environmental concerns that SECO correctly attributes to the other projects.

National Grid and Transco also seek clarification regarding the SECO Report’s estimate that 40 acres of land will need to be “heavily cleared” to construct project T019. This estimate is nearly double National Grid and Transco’s estimates, which accounted for open spaces along the corridor, such as areas currently utilized for agriculture. This estimate is also two to four times higher than the amount of heavy clearing required to construct other Segment B projects. This tree clearing assessment discrepancy is seemingly incorrect in light of the fact that all of the other Segment B projects are similar in nature and scope to T019 in that they will all be upgrading this corridor to a 345 kV bulk transmission system corridor, which will require any selected project to clear all of the vegetation within the limits of the right-of-way in order to be in compliance with North American Electric Reliability Corporation (“NERC”) requirements. As such, National Grid and Transco respectfully request that SECO re-estimate the amount of clearing required for each Segment B project and adjust the associated environmental risk assessment accordingly.

*iii. Availability of real property*

The Selection Metrics require the NYISO to consider the availability of real property rights, including whether the proposed developer has completed a transmission routing study, *and* prohibit the NYISO from selecting a transmission solution that requires the “acquisition of new permanent transmission rights-of-way, except for de minimis acquisitions that cannot be avoided due to unique circumstances.”<sup>25</sup> The acquisition of real property rights is a core Selection Metric because any project(s) that requires the acquisition of real property outside of an existing right-of-way will surely face increased siting concerns, increased costs, and scheduling delays.

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<sup>25</sup> See Appendix A, at 1.

National Grid and Transco do not need to acquire non-utility land to construct projects T018 or T019 (aside from possibly for EMF mitigation, similar to many, if not all, other developers) and would only need to acquire minimal lands from other utilities to complete certain station work for T019. Thus, consistent with the Commission's directive, the NYISO should favor these solutions.

In contrast, according to the SECO Report, project T021 requires the acquisition of approximately 24-acres of property from non-utility owner(s) to construct its proposed new substation located between Princetown Junction and Rotterdam, and project T025 is estimated to require the acquisition of 40.5 acres of utility-owned property to complete proposed substation work. Similarly, project T031 proposes a new Princetown Switching Station that does not fit within National Grid's existing right-of-way, and Projects T025, T027, and T028 each propose a new Princetown Switching Station that "just fit[s]" within the existing National Grid right-of-way, posing real property risks if the final designs expand the footprint of the respective new stations. In addition, as the NYISO recently shared, project T025 will require an additional 242.9 acres of real property to properly mitigate EMF.<sup>26</sup> Assuming it is even feasible to attain this significant amount of acreage, the time and effort required to do so will undoubtedly increase the cost to construct and the schedule to site this project.<sup>27</sup>

In addition to the above-mentioned known real property acquisition concerns, projects T025, T026, T027, and T028 all face measurable and still un-quantified real property concerns due to the fact that these projects are all proposed to be constructed over existing gas pipelines. As a result of these construction designs, these projects may not be constructed unless the existing gas transmission lines are relocated, the developer(s) purchase additional property to relocate their projects, or the projects are redesigned (which will inevitably increase the costs and extend the estimated construction schedules) to avoid the gas pipelines. In contrast, projects T018 and T019 do not have these concerns because National Grid and Transco intentionally avoided these existing gas facilities when designing the projects.

Finally, National Grid and Transco have already completed a real estate rights review and have the ability to acquire all necessary property needed to construct and operate projects T018 and T019, satisfying the Selection Metric that developers have completed a transmission routing study.

In short, when compared to the identified, significant real property concerns associated with other projects, it is clear that projects T018 and T019 should be viewed most favorably by the NYISO during the PPTPP for this Selection Metric.

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<sup>26</sup> See NYISO Report, *Transmission Line Row Estimated for EMF Mitigation*, April 18, 2018.

<sup>27</sup> Relatedly, although not addressed in the SECO Report, there are significant access issues associated with a new Princetown Junction Switching Station. Specifically, if projects T025, T027, T028, and T031 each plan to construct a new switching station that either does not fit or "just fits" within the existing right-of-way, it raises the question of how the developer will get past the new station to work on the lines on the other side. The answer is likely that they will need to extend the right-of-way to allow for continued access.

*iv. Public outreach*

National Grid and Transco recognize that public involvement is a critical component of the Article VII process and a major driver of schedule and, by extension, costs. National Grid, in particular, knows from its extensive, proven development history<sup>28</sup> that early preparation and execution of a robust Public Involvement Plan (“PIP”) encourages schedule and cost savings throughout the siting process.

The Commission’s AC Transmission Proceedings have already attracted significant public attention. There are over 100 parties in these proceedings, and more than 3,000 public comments have been filed. It was because of this that National Grid and Transco implemented a nimble and robust PIP that utilized the Commission’s established goals of alerting the public to the proposed AC transmission projects, explaining their contents, eliciting feedback, establishing a presence, and updating the public. National Grid and Transco have met the Commission’s goal with their prior, proactive public involvement.

Starting in October 2013, National Grid and Transco made public involvement a prominent part of the AC transmission permitting process and continue to employ a robust PIP. Execution of the PIP included holding local open houses, attending municipal and legislative meetings, engaging focus groups, and holding landowner “kitchen table” meetings, among other efforts.

Public outreach has been very effective in eliciting feedback on project design. As a direct result of this public input, National Grid and Transco made significant revisions to the projects. Specifically, public concerns and subsequent project design changes were reported in several publications:

- “National Grid created a website and hotline for residents to voice their opinions and questions about the project. ‘The idea of this is really to spur on more conversation about what our customers want to see,’ [Jim] Bunyan [of National Grid] said.”<sup>29</sup>
- “New Scotland has also been at the center of the ‘energy Superhighway’ project, as it is home to a power substation and some of the widest portions of the existing utility corridor. Recently, the PSC gave the companies a chance to resubmit their proposals . . . . The companies are not required to submit new proposals that stay within the height and width of the existing utility corridor, or right-of-way, but New Scotland Town Board member Daniel Mackay expects that they will. The PSC saw the political activism surrounding the energy Superhighway, Mackay

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<sup>28</sup> See *supra* at Point III (a) (i).

<sup>29</sup> Lisa Nicole Viers, *If giant power lines cross Albany County, will local views or health be spoiled?*, THE ALTAMONT ENTERPRISE (Jan. 16, 2014).

said, and ‘read it appropriately,’ responding with this new opportunity for the utility companies.”<sup>30</sup>

- “[Ned Sullivan of Scenic Hudson] and others met with representatives from National Grid, who gave them a preview of the company’s reworked proposal. ‘The good news is they stayed within the corridor, and eminent domain is off the table[.]’”<sup>31</sup>

As a result of these early, proactive public outreach efforts, National Grid and Transco have laid the groundwork for further successful execution of the PIP. If the NYISO selects projects T018 and T019 as the more efficient or cost-effective solutions to the AC Transmission PPTN, the experienced National Grid/Transco project team will be able to pick up where they left off with the PIP in terms of public outreach, calling on already-established relationships within the affected communities. This is beneficial from a scheduling perspective because National Grid and Transco can turn to gathering information from the public that is needed for developing a comprehensive EM&CP rather than initiating a new public outreach effort as the other developers will need to do. Developers that did not utilize robust PIPs to date would not have that ability, having not gathered the initial public feedback, confidence, or support needed for their proposed projects. This would likely have a significant negative impact on schedule and ultimately costs, as unknown design changes may be requested from the public, and ultimately, the Commission.

*v. Proposed poles do not pose siting concerns*

The Commission has stated that structure heights will be an important issue in the future Article VII siting process for whichever projects the NYISO selects. As such, the NYISO should consider pole height and structure during its evaluation. However, the Commission has not indicated – and the NYISO should not mandate – that structure heights cannot increase at all over existing structures. To the contrary, the Commission has acknowledged the potential for increased tower heights and, importantly, has noted that increased heights of up to 25-feet will not “significantly impair the physical visual character” of the rights-of-way and that higher poles may positively result in a “degree of increased visibility.”

Projects T018 and T019 are consistent with the Commission’s guidance as the projects will not only reduce the overall quantity of structures in the existing rights-of-way, they will be self-supporting, eliminating the need for potentially-unsightly guys and anchors, allowing for the additional space for agricultural compatibility. Additionally, and perhaps more importantly, National Grid and Transco have performed an “incremental viewshed analysis”<sup>32</sup> suitable for

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<sup>30</sup> Lisa Nicole Viers, *Utility companies can re-submit plans*, THE ALTAMONT ENTERPRISE (June 27, 2014).

<sup>31</sup> Penelope Green, *With Power Comes Ambivalence*, NY TIMES (May 14, 2014).

<sup>32</sup> The viewshed analysis isolates areas of potential visual impact by comparing areas where a computer model shows the current line is visible and one where the new lines will be visible, taking into consideration the location and height of the existing and proposed structures. The difference between these two viewshed areas – the area of new visibility – is considered the “incremental viewshed.”

review by Staff and the Commission specific to the project routes for T018 and T019. The incremental viewshed analysis considers mitigating factors such as mature tree stands and rolling topography and therefore provides a better estimate of potential visual impacts than the SECO Report, which uses a simplistic metric of a straight delta of a 10-foot height increase between new poles and existing poles to indicate “severe impacts.” The results of National Grid/Transco’s viewshed analysis, which were provided to Staff during their comparative analysis of proposed projects in 2015, were clear – projects T018 and T019 do not have permitting risk as a result of the height of the proposed new structures. The results of this viewshed analysis are consistent with Staff’s conclusion, mentioned above, that National Grid and Transco’s project proposals “avoid[ ] significant new intrusions into existing communities, landscapes, and farmland” and were among the most promising projects presented to the Commission for evaluation.<sup>33</sup>

Although the average height of a newly-installed pole for project T019 is greater than the existing structures, National Grid and Transco’s early, diligent public outreach efforts negate SECO’s concern that pole height is the “highest risk” associated with T019. For example, National Grid and Transco conducted two focus groups in December 2014 within the Segment B territory to ask local constituents and abutting landowners about their response to the proposed structure type and cross-section information. Participants were shown a series of visual simulations for the Knickerbocker to Pleasant Valley component of project T019. In general, the focus groups found that the monopole project structures were *more* acceptable than what exists today. In addition, during its initial outreach efforts, National Grid and Transco determined that the public was more concerned with the structure *design* versus the structure *height*. For example, in Segment A (T018), National Grid and Transco’s proposed structure heights were of little concern to the public. Due to its rural nature, adjoining landowners and other residents were more concerned with—and pleased by—the reduction of the existing transmission structure footprint, the reduction of lattice structures overall, and an overall improvement in the viewshed of the right-of-way. The reduced footprint also benefits agricultural lands, making more land available for crops and making farming operations easier. In addition, by removing the existing 230 kV line #s 30 and 31, National Grid/Transco will be able to site and locate the new structures in more environmentally-compatible locations, thus minimizing permitting delays.

For all of these reasons, the height of the proposed poles should not be categorized as a “risk” for project T018 or T019, and National Grid/Transco respectfully request that SECO and the NYISO incorporate the more comprehensive viewshed analysis approach to isolating new structure permitting concerns into the final review process.

*vi. High-performance projects*

Projects T018 and T019 are high-performing projects that exceed the Commission’s transfer requirements across both interfaces for all of the scenarios that SECO studied. Based on the preliminary results, projects T018 and T019, when combined, provide the best overall performance results as the more efficient or cost-effective solutions to satisfy the AC

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<sup>33</sup> Case 12-T-0502, *supra*, Staff’s Final Report, at 164.



Transmission PPTN. Specifically, as stated in the SECO Report, the T018 and T019 projects increase transfer capacity by +425 MW and +1,600 MW on the Central East and UPNY/SENY interfaces, respectively.

In addition to increasing transfer capacity along the congested corridors, National Grid and Transco have the ability to perform live maintenance on projects T018 and T019. The NYISO should favor the ability to perform live maintenance on these projects because, after construction, outages for maintenance will be minimized, providing maximum performance by the new facilities. In summary, projects T018 and T019 are high-performing projects.

In contrast, there is concern surrounding project T027's performance and load-at-risk during construction and feasibility due to the retirement of the 115 kV Line #13 between Rotterdam and New Scotland. National Grid and Transco believe that the results of this project's system impact study ("SIS") could impact the NYISO's analysis of the feasibility and performance of this project.<sup>34</sup>

*vii. Minimal EMF mitigation required*

National Grid and Transco have performed extensive EMF analysis of both the Segment A and Segment B transmission line corridors and agree with SECO's findings that the existing transmission lines between Princetown Junction and New Scotland Substation are currently estimated to exceed Commission's 1.6 kV/m limit for Electric Field ("EF") levels measured at the edge of right-of-way.<sup>35</sup> This is most likely attributable to the proximity of the existing 345 kV Line #14 to the "western" edge of the right-of-way. Furthermore, National Grid and Transco agree with SECO's statement that the T018 project design appears to slightly improve the condition, but not enough to meet the EF limit. Short of rebuilding the existing 345 kV Line #14 into a vertically-phased configuration and moving it further away from the edge of the right-of-way, it is likely that the EF levels along this section of Segment A will exceed the guidelines. Nonetheless, the minimal mitigation National Grid and Transco would need to complete in order to comply with applicable guidelines can be performed within the proposed scheduling duration.

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<sup>34</sup> National Grid and Transco recognize that there has been a great deal of work completed by both SECO and the NYISO in evaluating each developer's proposals. However, National Grid and Transco renew its request that the NYISO share with the remaining developers the detailed design materials associated with each project so that each developer can understand what the other developers provided in their submittal(s). For example, the removal of the 115kV Line #13 associated with project T027 is a critical work element but was not described nor included in the scoping meeting as part of the SIS process, and it still has not been discussed nor presented to the Transmission Planning Advisory Subcommittee. To avoid these unknown project elements, National Grid and Transco request that all developers be provided access to all other developers' submittals so that they can confirm the elements necessary to construct and build what was proposed have been properly included in the proposals.

<sup>35</sup> National Grid and Transco's analysis of project T025, with its 765 kV upgrade, produced EF results that correlate closely with the NYISO/SECO "Segment A Transmission Line ROW Estimated for EMF Mitigation" summary report dated 4/18/2018, suggesting that the software and methodology that National Grid and Transco is utilizing produces results that are consistent with the method relied upon by SECO for these cases.

However, National Grid and Transco find it counter-intuitive that adding two new 345 kV lines to the Princetown – New Scotland corridor, as proposed by project T027, will have an EF reducing impact on the existing 345 kV Line #14, as the SECO Report indicates. In fact, National Grid and Transco were able to reproduce similar results for all proposed projects in line with the SECO table provided on April 19, 2018, with the exception of the T027 project. During its T027 EF analysis, which included several double-circuit 345 kV line configurations and locations, National Grid and Transco were unable to identify a new 345/345 kV double-circuit configuration that would reduce the EF levels any more than a new 345 kV single-circuit could obtain, and certainly not below the limits that would require no additional easements as was reported for T027. Given that project T027 is introducing one more 345 kV line to the Princetown Junction – New Scotland corridor than the other projects, National Grid and Transco expect that the EF level would actually be the same or higher than the single circuit project's levels, which is supported by preliminary EMF computations.

National Grid and Transco request clarification regarding the methodology used to produce the EMF levels reported by SECO for the competing projects, specifically the T027 project. Moreover, National Grid and Transco respectfully request that SECO re-estimate the amount of additional right-of-way required to mitigate EMF effects of project T027 and adjust the associated line design risk assessment associated with the need for additional easements.

*viii. Measurable upgrades to existing structures*

Consistent with the Commission's evaluation criteria, projects T018 and T019 will both significantly upgrade existing infrastructure. For example, project T018 will upgrade the existing Rotterdam 230/115 kV Substation to a new 345 kV GIS switchyard. The total replacement of the aging infrastructure at this location will avoid the staged replacement of the compartmentalized and aging existing yard in the future. Similarly, project T019 will rebuild the Churchtown Switching Station.

Contrary to SECO's categorization, National Grid and Transco's upgrades at Pleasant Valley are *not* a risk for project T019. National Grid/Transco have been working closely throughout the NYISO interconnection process to fully satisfy all Consolidated Edison Company of New York, Inc. ("Con Edison") interconnection requirements and station layouts, including the possibility that a new line from the Cricket Valley Energy Center generation facility may enter the substation. During these efforts and reviews, National Grid and Transco did not identify any demonstrable or measurable risks associated with this component of the project.

- b. Projects T018 and T019, unlike other project proposals, are most likely to be completed within SECO's proposed timeframe

National Grid and Transco put forth the most reasonable and accurate schedule durations for Segments A and B given the scope of their proposed projects. Indeed, National Grid and Transco's proposed scheduled duration for permitting and constructing T018 was the only estimated schedule duration that SECO accepted without modification. In contrast, SECO increased the estimated schedule duration for T021, which could purportedly be sited and

constructed in only 29 months, to 48 months. In addition, given the siting concerns the SECO Report outlines for other projects, it is likely that National Grid and Transco's projects are the only ones that can be sited and constructed within SECO's estimated time frames. Further, National Grid and Transco's extensive prior public outreach efforts and planned future outreach efforts should enable National Grid and Transco to remain on schedule. In addition, National Grid and Transco will be able to capture certain synergies (*i.e.*, shared labor resources), in satisfaction of a Commission evaluation criterion, during the siting and construction process if they are selected to construct both T018 and T019 that will result in National Grid/Transco achieving the estimated timeframe.

National Grid and Transco remain concerned that the SECO Report and estimate of schedule durations did not fully reflect the siting and permitting risks SECO articulated for the other proposed projects. For example, project T025 is estimated by SECO to only take two months longer to site and construct than project T018. However, the proposed 765 kV construction of project T025 will most certainly raise siting concerns that will not be applicable to T018, including expanded rights-of-way, overall public concern with unprecedented 765 kV operation, and increased EMF mitigation requirements.<sup>36</sup> These siting concerns will inevitably extend the siting process for project T025 beyond the two additional months that SECO estimated. As such, National Grid and Transco respectfully request that the NYISO and SECO reevaluate schedule estimates, taking into account the siting risks posed by the other proposed projects, particularly T025 and T027.

c. Projects T018 and T019 are the most cost-effective

The above-referenced attributes of projects T018 and T019, including the likelihood of efficient siting and construction processes, render these proposals the most cost-effective solutions under consideration in the PPTPP. In addition, as outlined below, projects T018 and T019 benefit from a Federal Energy Regulatory Commission ("FERC")-approved cost containment mechanism which reduces cost risks and provides an accurate depiction of cost recovery. Further, National Grid and Transco believe that the foundation costs calculated by Kenny Construction ("Kenny") for projects T018 and T019 are overstated.

i. *Projects T018 and T019 benefit from a FERC-approved cost containment mechanism*

For purposes of evaluating the accuracy of the cost estimates included in each of the bids, SECO engaged Kenny to prepare independent estimates of each proposal's construction costs. These independent estimates were prepared in accordance with the Association for the Advancement of Cost Engineering International Recommended Practice for Class 4 Accuracy. The NYISO included a contingency rate of 30% over Kenny's estimate to account for a contingency rate pre-determined by the Commission in its estimate template.

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<sup>36</sup> National Grid's recent experience before the Commission in Case 15-T-0305 supports that project T027 is incrementally at risk for further siting delays due to the project's unique EMF concerns.

National Grid and Transco recognize that the NYISO has stated that it will not review or consider cost containment or cost sharing provisions included in a developer's bid; however, nothing in the OATT prevents the NYISO from assessing the relative cost risks, for reasonableness and accuracy, associated with any cost commitments that are already approved rather than promised. Stated simply, a FERC-approved cost containment mechanism should not be ignored. The cost containment provisions approved by FERC provide reduced cost risks and a more accurate depiction of the expected cost recovery for projects T018 and T019, including a lower 18% contingency, in the event the projects are selected for the development of Segments A and B.

In comparison, the uncertainty of schedules and resulting costs associated with, for example, project T025 is a significant risk for customers and the assessed overnight costs. In particular, in referring to the 765 kV Conversion Feasibility Study, SECO noted:

additional detailed engineering study, survey, and field testing must be performed prior to implementation of the project. The review team also believe [sic] that the final cost of this conversion may vary widely depending on the potential remedial work recommended as the result the more detailed study. NAT/NYPA have provided rough estimates to indicate possible ranges of costs (SECO Report, at 125).

In addition to the possible range of costs relating to the 765 kV conversion that could significantly vary, thereby creating a high level of uncertainty and a high risk of inaccuracy, the SECO Report also mentions a number of costs that were not included in the T025 proposal, including: ground clearance, insulation, public opposition, potential additional property for Princetown Substation, Corona, easements for EMF, relocating gas pipelines, and remedial costs. The extent of items and the potential level of costs of those items identified above clearly raises such a significant risk of higher and inaccurate costs that project T025 should not be considered to be the more efficient or cost-effective solution to the AC Transmission PPTN.

#### *ii. Foundation Costs*

National Grid and Transco have extensive experience with severe weather events in upstate New York. Given this experience, the proposed structure design for projects T018 and T019 is more robust than other projects and, as a result, slightly more expensive. There are two distinct enhancements that are unique to National Grid and Transco's proposals, which are recognized in the SECO Report: (1) National Grid and Transco's design includes dead-end structures located at intervals no greater than two miles to limit the potential impact of a cascading failure, and (2) National Grid and Transco have increased ice loading and have applied a wind factor to this ice loading. These features were included based on National Grid and Transco's familiarity with the territory and in response to a freezing rain event in southern Quebec between January 5-10, 1998, which toppled an estimated 1,000 steel lattice structures, damaging 24,000 wood poles, leaving thousands of kilometers of power lines downed and 1.4

million customers in the dark.<sup>37</sup> Climatological studies performed in upstate New York following the 1998 storm have shown that there is an increasing chance that the National Electric Safety Code (“NESC”) design criteria will be exceeded in the lifetime of the project T018 and T019 assets. These design criteria enhancements included in the National Grid/Transco proposal increase reliability and reinforce the system. An additional enhancement that would lead to slightly higher structure costs is the increased spacing between phases that National Grid and Transco utilize on delta structures. This feature allows maintenance crews to perform live line maintenance, thus eliminating the need to take these lines out of service to perform routine maintenance in the future.

The combined additional costs to employ these three enhancements can be estimated at approximately 5-10%, which is borne out by a comparison of cost estimates of projects with similar basic design configurations as T018 and T019 (*i.e.*, T026 and T029, respectively). These features, which add reliability and improve operability and maintenance of the transmission system, are investments that National Grid/Transco expect will pay for themselves many times over during the life of the proposed transmission lines.

Notwithstanding the more robust design, however, National Grid and Transco believe that the foundation costs estimated by SECO for projects T018 and T019, which are 1.6 to 2.5 times more costly than comparative projects T026 and T029, do not accurately reflect the relative differences of the installed foundation costs that should be expected. Typically, foundation type, size, and cost are a function of two primary variables: (1) subsurface conditions, and (2) loading applied to the foundation by the structure. Estimating foundation costs for high voltage transmission lines based on preliminary levels of engineering can be very challenging and is typically the most significant cost risk for a project because the subsurface conditions must be assumed. Actual subsurface conditions will not be known until a localized geotechnical investigation is complete and boring logs of actual subsurface conditions are developed. As part of the proposal development process, each developer assumed subsurface conditions to estimate foundation types, sizes, and costs. Those assumptions likely vary significantly, and with time, most will ultimately prove to be incorrect.

To develop an independent estimate, foundation types, sizes, and costs should be estimated independently of each developer’s assumptions. This is particularly true since each of the proposals traverse the same ground, eliminating subsurface conditions as a variable between proposals. Using the same subsurface assumptions across all proposals would prevent one developer from taking advantage of very aggressive assumptions and penalizing another developer for more conservative assumptions. Simply stated, proposals from two different developers traversing the same route with similar structure types and similar loadings should have similar foundation costs.

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<sup>37</sup> Andy Riga, *20 Years After the Ice Storm: With More Extreme Weather Expected, Are We Ready?*, MONTREAL GAZETTE (Jan. 4, 2018).

Page 124 of the SECO Report states that the geotechnical data provided by NYPA/NAT was reviewed and substantiates the adequacy of their lower cost designs. National Grid/ Transco respectfully question the adequacy of the cited geotechnical report, which was likely a “desk-top” evaluation. A desk-top report simply should not be relied upon to accurately predict the sub-surface conditions that will affect the final foundation design or the amount of rock excavation to eventually be encountered during construction.

National Grid and Transco propose that foundation costs be normalized across all projects based on a comparison of the types and sizes of structures proposed for each project, utilizing the same sub-surface assumptions for all projects. National Grid/Transco would expect that incremental foundation costs between similar competing projects would correlate closely with the incremental structure cost differences between the same. This can be observed by comparing the incremental structure and foundation cost differences between T029 and T030. The only obvious difference between these two projects is that the number of conductors for each phase was increased from two-bundle to three-bundle, which would increase the wire loading and thus the structure cost proportionately. However, it should be noted that for these 2 projects, the increase in structure costs reported is approximately 7%, while the reported foundation costs increased by only 2%.

Given the amount of uncertainty with respect to all proposed foundation designs, National Grid and Transco respectfully request that SECO re-evaluate proposals with similar structure quantities, types, and loadings using similar foundation costs since subsurface conditions are the same among the proposals. This will prevent unsubstantiated foundation cost differences from becoming a differentiating criterion.

#### **IV. Projects T018 and T019 are the Most Efficient and Cost-Effective**

For the reasons outlined above, the NYISO’s preliminary results demonstrate that when the real and material scheduling and cost risks associated with siting, permitting and licensing of projects ranked as performing higher in certain categories are accounted for, the cost per MW ratio and production costs savings for projects T018 and T019 are among the best and top performing across various operational scenarios. Thus, even setting aside any established and approved cost risk mitigations applicable to the National Grid/Transco projects, the NYISO should conclude that projects T018 and T019 are the most cost-effective and efficient solutions because they provide the many advantages discussed in these comments and deliver the benefits assessed in the NYISO preliminary evaluation results in a timely manner and at the most reasonable level of overnight costs.<sup>38</sup>

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<sup>38</sup> See NYISO, Western New York Public Policy Transmission Planning Report (Issued Oct. 17, 2017), at iii.

## V. Project T025 Should be Eliminated from Consideration

Project T025, also known as “Segment A + 765 kV,” should be eliminated from consideration because it violates the Hudson River crossing Selection Metric. This project proposes, in part, to construct a new Knickerbocker Substation with two new 765/345 kV transformers and to convert the existing 345 kV line between Marcy and Knickerbocker to a 765 kV line (bypassing the New Scotland 345 kV Substation). The conversion of the existing 345 kV line between Marcy and Knickerbocker will require the development and construction of a transmission facility across the Hudson River. This construction violates the Commission’s evaluation criterion that strictly prohibits developers from crossing the Hudson River with any new transmission facilities to satisfy the AC Transmission PPTN.<sup>39</sup>

By way of background, the Commission directed the NYISO *not* to select any project that “includes a crossing of the Hudson River, either overhead, underwater, in riverbed, or underground, or in any other way by any component of the transmission facility.”<sup>40</sup> Contrary to the Commission’s clear directive, project T025 involves the complete rebuild of the 12 miles of the New Scotland to Knickerbocker three-bundle line that crosses the Hudson River and the addition of new wire to those facilities.

The T025 project not only violates the Commission’s explicit evaluation criteria, the project scope will require significant permitting, including the issuance of a CECPN under Article VII of the Public Service Law.<sup>41</sup> This will result in significantly higher licensing and permitting costs than initially calculated by the NYISO’s consultants and will likely increase the schedule by more than 24 months, if the project can even be sited.

Accordingly, National Grid and Transco respectfully request either a description of how project T025 does not violate the Commission’s evaluation criterion or, more appropriately, that the NYISO remove project T025 from consideration.<sup>42</sup> At minimum, a full evaluation and description of siting risks must be considered.

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<sup>39</sup> National Grid and Transco recognize that the NYISO’s Viability and Sufficiency Assessment report concluded in Table 2 that project T025 satisfied the Hudson River crossing criterion (*see* Case 12-T-0502, *supra*, NYISO AC Transmission PPTN VSA Report [Filed Oct. 28, 2016], at 14). However, the NYISO did not include any narrative description within that report detailing how this project could avoid extending new electric transmission facilities across the Hudson River.

<sup>40</sup> *See* Appendix A.

<sup>41</sup> Importantly, this line was never sited to be operated at 765 kV when it was constructed. Moreover, the NYISO, through SECO, confirmed that slide 18 of its PowerPoint presentation (dated April 19, 2018) shows an estimated \$107,000,000 expense for the reconductor work from the New Scotland Substation to the Knickerbocker Switching Station.

<sup>42</sup> If the NYISO elects the former, National Grid and Transco renew its request for an explanation of the work and analysis SECO performed to confirm that there will not be a need for structure or foundation replacement within the critical Hudson River viewshed.

**VI. Conclusion**

As demonstrated above, when reviewed under the Selection Metrics, projects T018 and T019's total performance under all of the Selection Metrics best satisfies the identified PPTN for new 345 kV major electric transmission facilities to provide additional transmission capacity to move power from upstate to downstate over the Central East and UPNY/SENY interfaces. Accordingly, as supported by the analysis in the SECO Report, projects T018 and T019 are, on balance, the more efficient or cost-effective transmission solutions to address the AC Transmission PPTN, particularly with respect to siting and constructability, schedule, and cost.

We thank the NYISO and SECO for all of their efforts to date in the PPTPP and appreciate the willingness to engage in an open dialogue with developers. We hope that these comments are helpful in the final stages of the selection process as the NYISO identifies, and ultimately its Board selects, the more efficient or cost-effective solutions to the AC Transmission PPTN. If you have any questions about or would like to discuss these comments, please do not hesitate to contact Nabil Hitti at (781) 907-2657.

Sincerely,

/s/ Nabil Hitti

Nabil Hitti, Director

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Enclosures



# APPENDIX

## A

Section 31.4 of Attachment Y of New York Independent System Operator's (the "NYISO") Open Access Transmission Tariff (the "OATT") requires the NYISO's Staff and Board to consider the following metrics before selecting the more efficient or cost-effective projects to satisfy New York's AC Transmission New York Public Policy Transmission Need (the "AC Transmission PPTN"):

1. Developer experience,
2. Capital costs,
3. Cost per MW,
4. Ease of physically expanding a facility for future opportunities,
5. Relative operability and performance of the proposed project,
6. Availability of real property rights, including whether the developer has completed a transmission routing study,
7. Scheduling metric, and
8. Evaluation of impact on NYISO wholesale electricity markets.

In addition, the New York State Public Service Commission (the "Commission") directed the NYISO to consider the following 14 criteria as a part of its evaluation of projects proposals to satisfy the AC Transmission PPTN:<sup>1</sup>

1. No transmission solution shall be selected that requires the acquisition of new permanent transmission rights-of-way, except for de minimus acquisitions that cannot be avoided due to unique circumstances. For the purposes of this criterion, the transfer or lease of existing transmission right-of-way property or access rights from a current utility company owner to a developer of the transmission solution shall not be considered such an acquisition.
2. The selection process for transmission solutions shall favor transmission solutions that minimize the acquisition of property rights for new substations and substation expansions. For the purposes of this criterion, the transfer or lease of existing property rights from a current utility company owner to a developer of the transmission solution shall not be considered such an acquisition.
3. No transmission solution shall be selected that includes a crossing of the Hudson River, either overhead, underwater, in riverbed, or underground, or in any other way, by any component of the transmission facility.

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<sup>1</sup> Case 12-T-0502, *Proceeding on Motion of the Commission to Examine Alternating Current Transmission Upgrades*, Order Finding Transmission Needs Driven by Public Policy Requirements (Issued Dec. 17, 2015), at Appendix B.

4. No transmission solution shall be selected for Segment B that provides less than a 900 MW increase in normal transfer capability (NTC) across the UPNY/SENY interface pursuant to the methodology employed by the NYISO for the Trial Staff report in the AC Transmission proceedings.
5. No transmission solution shall be selected for Segment B that does not incorporate certain specified add-ons that would be constructed (i.e., upgrades to the Rock Tavern Substation; upgrades to the Shoemaker to Sugarloaf transmission lines), unless the NYISO determines that such add-ons, jointly or severally, are not material to the accomplishment of the purpose of the transmission solution for Segment B.
6. The selection process for transmission solutions for Segment B shall not use the costs of upgrades to the Rock Tavern Substation and upgrades to the Shoemaker to Sugarloaf transmission lines as a distinguishing factor between bids. The developers shall include the upgrade costs in their bids at the same level using the cost estimates for the upgrades provided in the Trial Staff report as a placeholder for the actual costs.
7. No transmission solution shall be selected for Segment A that provides less than a 350 MW increase in normal transfer capability (NTC) across the Central East interface pursuant to the methodology employed by the NYISO for the Trial Staff report in the AC Transmission proceedings.
8. No transmission solution shall be selected for Segment A unless a transmission solution is selected for Segment B.
9. No transmission solution shall be selected for Segment A except on condition that the transmission solution selected for Segment A shall not be implemented until there is reasonable certainty established in a manner to be determined by the NYISO that the transmission solution selected for Segment B will be implemented.
10. The selection process for transmission solutions shall favor transmission solutions that result in upgrades to aging infrastructure.
11. Project selection shall be competitive by segment, but synergies produced by being selected to provide both segments may be considered.
12. No transmission solution shall be selected unless the developer has submitted a cost estimate or bid that does not exceed the cost estimate at the level estimated by Trial Staff for the applicant's project unless the applicant can demonstrate to the NYISO that upward estimates are necessary to correct errors or omissions made by Trial Staff for the components that were added or adjusted by Trial Staff.
13. The selection process for Segment B shall not use the cost to do the necessary upgrades to the Shoemaker to Sugarloaf facilities and the Rock Tavern Substation as

a distinguishing factor between bids. For the purposes of bids, all developers should include the upgrade costs in their bids at the same level, using the estimates provided in the Trial Staff report as a placeholder for the actual costs.

14. The percentage rates applied to account for contingencies and revenue requirement should all be treated uniformly across all estimates so that those factors are not manipulated by the bidders to confuse or artificially skew the results. The selection process shall not use the percentage rates applied to account for contingencies and revenue requirement as a distinguishing factor between bids. For the purposes of bids, all developers should account for contingencies and revenue requirement at the percentage rates provided in the Trial Staff report as a placeholder for the actual rates.

\*\*\*

# **APPENDIX**

## **B**



**DEPARTMENT OF THE ARMY**  
U.S. Army Corps of Engineers, ATTN: CENAN-OP-RU  
Upstate Regulatory Field Office  
1 Buffington St., Building 10, 3<sup>rd</sup> Fl. North  
Watervliet, New York 12189-4000

AUG 10 2017

Upstate New York Section

**SUBJECT:** Preliminary Jurisdictional Determination  
Permit Application Number NAN-2016-00800-USH  
by National Grid

**LOCATION:** Towns of Minden, Canajoharie, Root, Charleston, Glen, and Florida in Montgomery County; Towns of Duanesburg, Princetown, and Rotterdam in Schenectady County; Towns of Guilderland and New Scotland in Albany County; Town of Schodack in Rensselaer County; Towns of Stuyvesant, Stockport, Ghent, Claverack, Livingston, Gallatin, and Clermont in Columbia County; and the Towns of Milan, Clinton, and Pleasant Valley in Dutchess County.

James Bunyan  
National Grid  
1125 Broadway  
Albany, New York 12204

Dear Mr. Bunyan:

On September 12, 2016, the New York District of the U.S. Army Corps of Engineers received a request for a Department of the Army jurisdictional determination for an existing National Grid utility right-of-way that spans through two U.S. Army Corps of Engineers Regulatory Districts, Buffalo District (LRB) and New York District (NAN). This letter and attached documentation pertains to the 3,819-acre portion of the right-of-way that is present within New York District. This request was made by Tetra Tech, Inc., as consultant for National Grid. The sites are located in the Mohawk and Upper Hudson watersheds, within the towns and counties listed above.

The documentation for the 1,046-acre portion of the right-of-way that is present within Buffalo District will be processed and sent under separate cover from that District, and will be referenced under No. LRB-2016-00589.

The submittal received by this office on September 12, 2016, included proposed delineations of the extent of waters of the United States within the project boundary. A site inspection was conducted by representatives of this office on November 17, 2016, in which it was agreed that revised drawings were needed and that the modified drawings would be submitted to this office. On March 3, 2017, this office received the modified delineation.

It has been determined that there are 590.36 acres of wetlands, 89,642 linear feet of stream channel and 3.34 acres of open water, within the 3,819-acre review

PLEASE USE THE ABOVE 18-CHARACTER FILE NUMBER ON ALL CORRESPONDENCE WITH THIS OFFICE

area, that may be jurisdictional under Section 404 of the Clean Water Act. This determination is based upon the submittals entitled:

1. "Wetland Delineation Report", prepared by Tetra Tech, dated October 2014, and last revised August 2016; and
2. Drawings entitled:
  - a. "Delineated Wetlands and Surface Waterbodies, Overview Map, Edic-Princetown-Rotterdam, NY District", Sheets 1 through 9 of 9, prepared by Tetra Tech, and dated February 2017;
  - b. "Delineated Wetlands and Surface Waterbodies, Edic-Princetown-Rotterdam, NY District", Sheets 1 through 161 of 161, prepared by Tetra Tech, and dated February 2017;
  - c. "Delineated Wetlands and Surface Waterbodies, Edic-Princetown-Rotterdam, Princetown Junction, NY District", prepared by Tetra Tech, and dated February 2017;
  - d. "Delineated Wetlands and Surface Waterbodies, Edic-Princetown-Rotterdam, Rotterdam Substation, NY District", prepared by Tetra Tech, and dated February 2017;
  - e. "Delineated Wetlands and Surface Waterbodies, Overview Map, Edic-Princetown-Rotterdam, 230kV Deviation, NY District", prepared by Tetra Tech, and dated February 2017;
  - f. "Delineated Wetlands and Surface Waterbodies, Overview Map, Edic-Princetown-Rotterdam, 230kV Deviation, NY District", Map Sheets 1 through 18 of 18, prepared by Tetra Tech, and dated February 2017;
  - g. "Delineated Wetlands and Surface Waterbodies, Overview Map, Princetown-New Scotland, NY District", Sheets 1 through 4 of 4, prepared by Tetra Tech, and dated February 2017;
  - h. "Delineated Wetlands and Surface Waterbodies, Princetown-New Scotland, New Scotland Substation, NY District", prepared by Tetra Tech, and dated February 2017;
  - i. "Delineated Wetlands and Surface Waterbodies, Princetown-New Scotland, NY District", Sheets 1 through 84 of 84, prepared by Tetra Tech, and dated February 2017;

- j. "Delineated Wetlands and Surface Waterbodies, Overview Map, Knickerbocker-Churchtown, NY District", Sheets 1 through 5 of 5, prepared by Tetra Tech, and dated February 2017;
- k. "Delineated Wetlands and Surface Waterbodies, Knickerbocker-Churchtown, NY District", Sheets 1 through 87 of 87, prepared by Tetra Tech, and dated February 2017;
- l. "Delineated Wetlands and Surface Waterbodies, Princetown-New Scotland, Knickerbocker Substation, NY District", prepared by Tetra Tech, and dated February 2017;
- m. "Delineated Wetlands and Surface Waterbodies, Overview Map, Churchtown-Pleasant Valley, NY District", Sheets 1 through 6 of 6, prepared by Tetra Tech, and dated February 2017;
- n. "Delineated Wetlands and Surface Waterbodies, Churchtown-Pleasant Valley, NY District", Sheets 1 through 126 of 126, prepared by Tetra Tech, and dated February 2017;
- o. "Delineated Wetlands and Surface Waterbodies, Churchtown-Pleasant Valley, Pleasant Valley Substation, NY District", prepared by Tetra Tech, and dated February 2017;
- p. "Delineated Wetlands and Surface Waterbodies, Overview Map, Churchtown-Pleasant Valley, Blue Stores Tap, NY District", prepared by Tetra Tech, and dated February 2017; and
- q. "Delineated Wetlands and Surface Waterbodies, Churchtown-Pleasant Valley, Blue Stores Tap, NY District", Sheets 1 through 9 of 9, prepared by Tetra Tech, and dated February 2017.

This preliminary jurisdictional determination (JD) is non-binding and indicates that there may be waters of the United States, including wetlands, within the review area. A preliminary JD is advisory in nature, and may not be appealed. As you requested, enclosed is a copy of the Preliminary Jurisdictional Determination Form signed by this office. Please be aware that for purposes of computation of impacts, compensatory mitigation requirements, and other resources protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected by the permitted activity as jurisdictional. If you wish, prior to commencement of any work on the site you may request an approved JD, which may be appealed, by contacting the New York District, U.S. Army Corps of Engineers for further instruction. To assist you in this decision and address any questions you may have on the differences between preliminary and approved jurisdictional determinations, please review U.S. Army Corps of Engineers Regulatory Guidance Letter No. 16-01, which can be found at:



<http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/>

In accordance with Regulatory Guidance Letter 05-02, "Preliminary jurisdictional determinations are not definitive determinations of areas within regulatory jurisdiction and do not have expiration dates." However, it is strongly recommended that the boundaries of the delineated waters be re-evaluated by a qualified consultant after five years of the date of this letter. This will ensure that any changes are appropriately identified and you do not inadvertently incur a violation of Federal law while working on your project site.

These determinations may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is strongly recommended that the development of the site be carried out in such a manner as to avoid as much as possible the discharge of dredged or fill material into the delineated waters of the United States. If the activities proposed for the site involve such discharges, authorization from this office may be necessary prior to the initiation of the proposed work. The extent of such discharge of fill will determine the level of authorization that would be required.

In order for us to better serve you, please complete our Customer Service Survey located at:

<http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>

If any questions should arise concerning this matter, please contact Brad Sherwood, of my staff, at (518) 266-6355.

Sincerely,



Amy L. Gitchell  
Chief, Upstate New York Section

Enclosures

cc: NYSDEC, Region 3, New Paltz  
NYSDEC, Region 4, Schenectady  
Delahunty, R. – Tetra Tech  
Town of Minden  
Town of Canajoharie  
Town of Root  
Town of Charleston  
Town of Glen  
Town of Florida  
Town of Duanesburg  
Town of Princetown  
Town of Rotterdam  
Town of Guilderland  
Town of New Scotland  
Town of Schodack  
Town of Stuyvesant  
Town of Stockport  
Town of Ghent  
Town of Claverack  
Town of Livingston  
Town of Gallatin  
Town of Clermont  
Town of Milan  
Town of Clinton  
Town of Pleasant Valley





REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
BUFFALO DISTRICT, CORPS OF ENGINEERS  
1776 NIAGARA STREET  
BUFFALO, NEW YORK 14207-3199

February 21, 2017

Regulatory Branch

SUBJECT: Preliminary Jurisdictional Determination for Department of the Army Application  
No. LRB-2016-00589

National Grid - New York Energy Solution  
1125 Broadway  
Albany, New York 12204  
Attn: James Bunyan

Dear Mr. Bunyan:

I have reviewed your request for wetland boundary verifications located within an existing National Grid right-of-way identified as the Edic to Princetown Junction and Rotterdam (a portion of Segment A), which spans through two U.S. Army Corps of Engineers Districts; Buffalo (LRB) and New York (NAN). This letter and attached documentation pertains only to the portion of Segment A that occurs within the Buffalo District, referenced as File No. LRB-2016-00589. The study area spans through various municipalities within Oneida and Herkimer Counties, New York.

Please be advised that documentation for the portion of work occurring in the New York District (Montgomery and Schenectady Counties) will be processed and sent under separate cover from that District; referenced as NAN-2016-00800.

I have evaluated the wetland delineation maps and have determined that the wetland and water boundaries shown on the map accurately represent on-site conditions. Please note that this is a Preliminary Jurisdictional Determination (JD). Preliminary JDs are non-binding written indications that there may be waters of the United States (WOUS) on your parcel and approximate locations of those waters. Preliminary JDs are advisory in nature and may not be appealed.

Pursuant to Regulatory Guidance Letter 16-01, any permit application made in reliance on this Preliminary JD will be evaluated as though all wetlands or waters on the site are regulated by the Corps. Further, all waters, including wetlands will be used for purposes of assessing the area of project related impacts and compensatory mitigation. If you require a definitive response regarding Department of the Army jurisdiction for any or all of the waters identified on the submitted drawings, you may request an approved jurisdictional determination (AJD) from this office. If an AJD is requested, please be aware that this is often a lengthy process and we may require the submittal of additional information.



Regulatory Branch

SUBJECT: Preliminary Jurisdictional Determination for Department of the Army Application No. LRB-2016-00589

I have enclosed the signed Preliminary JD Form with this letter. The form and attached table identify the extent of waters on the site and specific terms and conditions of the Preliminary JD.

In accordance with Regulatory Guidance Letter 05-02, "Preliminary jurisdictional determinations are not definitive determinations of areas within regulatory jurisdiction and do not have expirations dates." However, I strongly recommend that the boundaries of WOUS be re-evaluated by a qualified wetland biologist after five years of the date of this letter. This will ensure that any changes are appropriately identified and you do not inadvertently incur a violation of Federal law while constructing your project or working on your project site.

Lastly, this determination has been conducted only to identify the limits of waters that may be subject to Corps Clean Water Act or Rivers and Harbors Act jurisdiction. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

A copy of this letter has been sent to Mr. Richard Delahunty and Brad Sherwood, Project Manager in the New York District.

Questions pertaining to this matter should be directed to me at 716-879-6330, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: [judy.a.robinson@usace.army.mil](mailto:judy.a.robinson@usace.army.mil).

Sincerely,



Judy Robinson, Biologist  
Project Manager

Enclosures



**Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM**

**BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR PJD:** February 16, 2017

**B. NAME AND ADDRESS OF PERSON REQUESTING PJD:**

National Grid - New York Energy Solution  
1125 Broadway  
Albany, New York 12204  
Attn: James Bunyan

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Buffalo District, Auburn Field Office;  
National Grid – New York Energy Solution (Edic to Princetown Junction/Rotterdam Section);  
File No. 2016-00589

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:** The delineation was conducted within an existing right-of-way (identified as a portion of Segment A) for National Grid. The project is to upgrade an existing utility from the Edic Substation in Oneida County in the Buffalo District (LRB); terminating in Princetown Junction and Rotterdam, in Schenectady County, New York which is in the New York District (NAN). This PJD is for aquatic resources identified in Oneida and Herkimer Counties within LRB only. The aquatic resources associated with the project identified within NAN will be processed under separate cover by NAN.

**(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)**

State: New York	County: Oneida and Herkimer	City: Various
Edic Substation:	Latitude 43.1574383249	Longitude -75.2272249943
Herkimer Endpoint:	Latitude 42.93255059	Longitude -74.75100881
Name of nearest waterbody: Various		

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

- Office (Desk) Determination. Date: February 16, 2017
- Field Determination. Date(s): November 17, 2016



A-WDE-1	Scrub/Shrub	3.03	ACRE	43.11913	-75.1614	Section 404
A-WDE-2	Scrub/Shrub	1.65	ACRE	43.1204	-75.1644	Section 404
A-WDE-3	Scrub/Shrub	10.25	ACRE	43.1351	-75.1984	Section 404
A-WDE-4	Forested	1.94	ACRE	43.13873	-75.203	Section 404
A-WDE-5	Scrub/Shrub	13.71	ACRE	43.14211	-75.2061	Section 404
B-WDE-1	Emergent	1.94	ACRE	43.12734	-75.1815	Section 404
B-WDE-10	Scrub/Shrub	0.19	ACRE	43.12905	-75.1849	Section 404
B-WDE-11	Emergent	0.74	ACRE	43.12959	-75.1873	Section 404
B-WDE-12	Scrub/Shrub	0.41	ACRE	43.13127	-75.1899	Section 404
B-WDE-13	Emergent	2.62	ACRE	43.1319	-75.193	Section 404
B-WDE-14	Scrub/Shrub	2.77	ACRE	43.13261	-75.1951	Section 404
B-WDE-15	Scrub/Shrub	1.68	ACRE	43.13311	-75.1947	Section 404
B-WDE-16-DD	Emergent	0.31	ACRE	43.14542	-75.2107	Section 404
B-WDE-17-DD	Scrub/Shrub	1.34	ACRE	43.14566	-75.2114	Section 404
B-WDE-18-DD	Scrub/Shrub	2.33	ACRE	43.14607	-75.2131	Section 404
B-WDE-2	Emergent	0.54	ACRE	43.12657	-75.1796	Section 404
B-WDE-3	Emergent	0.88	ACRE	43.12574	-75.1772	Section 404
B-WDE-4	Scrub/Shrub	0.34	ACRE	43.12474	-75.1752	Section 404
B-WDE-5	Scrub/Shrub	2.12	ACRE	43.12414	-75.1733	Section 404
B-WDE-6	Emergent	0.09	ACRE	43.12235	-75.1684	Section 404
B-WDE-7	Emergent	0.81	ACRE	43.12744	-75.1824	Section 404
B-WDE-8	Emergent	0.24	ACRE	43.12811	-75.1844	Section 404
B-WDE-9	Emergent	0.29	ACRE	43.12833	-75.1839	Section 404
B-WMA-1	Emergent	6.17	ACRE	43.15444	-75.224	Section 404
B-WMA-10	Scrub/Shrub	8.5	ACRE	43.15838	-75.2251	Section 404
B-WMA-11	Emergent	2.24	ACRE	43.15684	-75.225	Section 404
B-WMA-12	Emergent	11.18	ACRE	43.15577	-75.223	Section 404
B-WMA-13	Emergent	23.11	ACRE	43.15519	-75.2281	Section 404
B-WMA-14	Emergent	0.08	ACRE	43.15352	-75.2263	Section 404
B-WMA-15	Emergent	1.97	ACRE	43.15731	-75.2218	Section 404
B-WMA-16	Emergent	2.93	ACRE	43.15778	-75.2301	Section 404
B-WMA-2	Emergent	2.76	ACRE	43.15039	-75.2198	Section 404
B-WMA-3	Emergent	3.09	ACRE	43.14976	-75.2198	Section 404
B-WMA-4	Emergent	0.46	ACRE	43.14802	-75.2178	Section 404
B-WMA-5	Emergent	0.47	ACRE	43.14862	-75.2181	Section 404
B-WMA-6	Emergent	1.28	ACRE	43.14709	-75.2163	Section 404
B-WMA-7	Emergent	2.18	ACRE	43.14651	-75.2151	Section 404
B-WMA-8	Scrub/Shrub	0.26	ACRE	43.14696	-75.217	Section 404
B-WMA-9	Emergent	0.31	ACRE	43.14754	-75.2173	Section 404
A-SDE-1	Perennial	251.62	FOOT	43.12045	-75.1646	Section 404
A-SDE-2	Perennial	254.73	FOOT	43.12085	-75.1655	Section 404
A-SDE-3	Intermittent	381.28	FOOT	43.13506	-75.1983	Section 404
A-SDE-4	Perennial	297.98	FOOT	43.13732	-75.2007	Section 404
A-SDE-5	Perennial	493.38	FOOT	43.13737	-75.2011	Section 404
A-SDE-6	Perennial	405.69	FOOT	43.13878	-75.2031	Section 404
B-SDE-1	Intermittent	506.61	FOOT	43.12708	-75.1811	Section 404
B-SDE-10	Intermittent	537.46	FOOT	43.12829	-75.1842	Section 404

B-SDE-11	Intermittent	420.61	FOOT	43.12886	-75.1853	Section 404
B-SDE-12	Intermittent	407.8	FOOT	43.12928	-75.1864	Section 404
B-SDE-13	Intermittent	435.28	FOOT	43.12977	-75.1875	Section 404
B-SDE-14	Intermittent	259.16	FOOT	43.1298	-75.187	Section 404
B-SDE-15	Perennial	445.78	FOOT	43.13021	-75.1889	Section 404
B-SDE-16	Perennial	427.08	FOOT	43.1313	-75.1913	Section 404
B-SDE-17	Intermittent	404.88	FOOT	43.1316	-75.192	Section 404
B-SDE-2	Intermittent	426.59	FOOT	43.12652	-75.1796	Section 404
B-SDE-3	Intermittent	418.8	FOOT	43.12612	-75.1788	Section 404
B-SDE-4	Intermittent	346.98	FOOT	43.12602	-75.1783	Section 404
B-SDE-5	Intermittent	365.7	FOOT	43.1249	-75.1755	Section 404
B-SDE-6	Intermittent	261.22	FOOT	43.12363	-75.1721	Section 404
B-SDE-7	Intermittent	261.8	FOOT	43.12321	-75.1712	Section 404
B-SDE-8	Intermittent	182.3	FOOT	43.12211	-75.1689	Section 404
B-SDE-9	Intermittent	421.78	FOOT	43.12754	-75.1823	Section 404
B-SMA-1	Perennial	349.84	FOOT	43.15207	-75.2219	Section 404
B-SMA-11	Ephemeral	347.35	FOOT	43.15341	-75.2225	Section 404
B-SMA-12	Intermittent	748.53	FOOT	43.1559	-75.223	Section 404
B-SMA-13	Perennial	740.26	FOOT	43.15835	-75.2291	Section 404
B-SMA-2	Perennial	449.18	FOOT	43.14826	-75.2179	Section 404
B-SMA-3	Perennial	359.98	FOOT	43.15866	-75.223	Section 404
B-SMA-4	Perennial	1203.71	FOOT	43.15557	-75.2217	Section 404
B-SMA-5	Ephemeral	314.27	FOOT	43.15688	-75.2262	Section 404
B-SMA-6	Intermittent	622.36	FOOT	43.15777	-75.2285	Section 404
B-SMA-7	Ephemeral	655.43	FOOT	43.15808	-75.2266	Section 404
B-SMA-8	Perennial	1032.22	FOOT	43.15636	-75.2309	Section 404
B-SMA-9	Ephemeral	313.54	FOOT	43.15648	-75.2298	Section 404
A-WFR-1	Scrub/Shrub	0.46	ACRE	43.00532	-75.0863	Section 404
A-WFR-10	Scrub/Shrub	1.91	ACRE	43.04714	-75.1463	Section 404
A-WFR-11	Scrub/Shrub	0.82	ACRE	43.04917	-75.1473	Section 404
A-WFR-12	Scrub/Shrub	7.4	ACRE	43.07074	-75.161	Section 404
A-WFR-13	Emergent	2.22	ACRE	43.0751	-75.1642	Section 404
A-WFR-14	Scrub/Shrub	0.83	ACRE	43.08189	-75.1634	Section 404
A-WFR-15	Scrub/Shrub	1.19	ACRE	43.08309	-75.1634	Section 404
A-WFR-16	Scrub/Shrub	0.36	ACRE	43.08417	-75.163	Section 404
A-WFR-2	Scrub/Shrub	0.25	ACRE	43.00725	-75.0896	Section 404
A-WFR-3	Scrub/Shrub	0.26	ACRE	43.00764	-75.0899	Section 404
A-WFR-4	Scrub/Shrub	2.59	ACRE	43.00954	-75.0916	Section 404
A-WFR-5	Scrub/Shrub	0.71	ACRE	43.01141	-75.0938	Section 404
A-WFR-6	Scrub/Shrub	3.21	ACRE	43.01639	-75.0983	Section 404
A-WFR-7	Scrub/Shrub	0.15	ACRE	43.019	-75.1012	Section 404
A-WFR-8	Emergent	4.08	ACRE	43.04188	-75.1417	Section 404
A-WFR-9	Scrub/Shrub	4.06	ACRE	43.04331	-75.144	Section 404
A-WGF-1	Scrub/Shrub	0.41	ACRE	42.97132	-74.9892	Section 404
A-WGF-2	Emergent	0.36	ACRE	42.98231	-75.0102	Section 404
A-WGF-3	Scrub/Shrub	10.95	ACRE	42.98635	-75.0187	Section 404
A-WLF-1	Scrub/Shrub	0.15	ACRE	42.9558	-74.8873	Section 404

A-WLF-2	Emergent	0.15	ACRE	42.9564	-74.8909	Section 404
A-WLF-3	Scrub/Shrub	0.33	ACRE	42.9571	-74.8959	Section 404
A-WLF-4	Emergent	2.05	ACRE	42.95885	-74.9076	Section 404
A-WLF-4B	Scrub/Shrub	1.03	ACRE	42.95899	-74.9098	Section 404
A-WLF-5	Scrub/Shrub	0.87	ACRE	42.95958	-74.9167	Section 404
A-WLF-6	Scrub/Shrub	0.86	ACRE	42.95974	-74.9195	Section 404
A-WLF-7	Scrub/Shrub	0.09	ACRE	42.96006	-74.9256	Section 404
A-WLF-8	Scrub/Shrub	0.15	ACRE	42.96034	-74.9328	Section 404
A-WSC-1	Scrub/Shrub	1.43	ACRE	43.10396	-75.1595	Section 404
A-WSC-2	Scrub/Shrub	0.59	ACRE	43.10543	-75.1591	Section 404
A-WST-1	Scrub/Shrub	1.29	ACRE	42.93966	-74.7879	Section 404
A-WST-2	Forested	0.59	ACRE	42.94103	-74.7942	Section 404
A-WST-3	Scrub/Shrub	1	ACRE	42.94182	-74.7979	Section 404
A-WST-4	Scrub/Shrub	0.22	ACRE	42.9436	-74.8084	Section 404
B-WFR-1	Scrub/Shrub	1.66	ACRE	43.03235	-75.1299	Section 404
B-WFR-10	Emergent	0.67	ACRE	43.04059	-75.1395	Section 404
B-WFR-100	Emergent	0.16	ACRE	43.02117	-75.0983	Section 404
B-WFR-101	Emergent	0.1	ACRE	43.02091	-75.0969	Section 404
B-WFR-102	Emergent	0.12	ACRE	43.02084	-75.096	Section 404
B-WFR-103	Emergent	0.11	ACRE	43.01942	-75.0909	Section 404
B-WFR-104	Emergent	0.05	ACRE	43.01882	-75.0893	Section 404
B-WFR-105	Emergent	0.06	ACRE	43.01751	-75.0853	Section 404
B-WFR-106	Emergent	0.07	ACRE	43.0153	-75.0787	Section 404
B-WFR-107	Emergent	0.09	ACRE	43.0119	-75.0709	Section 404
B-WFR-108	Emergent	0.09	ACRE	43.01103	-75.07	Section 404
B-WFR-109	Emergent	0.11	ACRE	43.00783	-75.0656	Section 404
B-WFR-11	Forested	6.78	ACRE	43.03741	-75.1359	Section 404
B-WFR-110	Emergent	0.61	ACRE	43.00714	-75.0644	Section 404
B-WFR-12	Scrub/Shrub	0.01	ACRE	43.06693	-75.1586	Section 404
B-WFR-13	Emergent	0.51	ACRE	43.06559	-75.1574	Section 404
B-WFR-14	Emergent	1.24	ACRE	43.06419	-75.1559	Section 404
B-WFR-15	Emergent	1.13	ACRE	43.06159	-75.154	Section 404
B-WFR-16	Emergent	1.62	ACRE	43.05926	-75.1521	Section 404
B-WFR-17	Emergent	0.08	ACRE	43.05818	-75.1516	Section 404
B-WFR-18	Emergent	0.08	ACRE	43.05544	-75.1498	Section 404
B-WFR-19	Emergent	0.06	ACRE	43.05358	-75.1489	Section 404
B-WFR-2	Scrub/Shrub	0.35	ACRE	43.02903	-75.1254	Section 404
B-WFR-20-DD*	Emergent	21.35	ACRE	43.09405	-75.1614	Section 404
B-WFR-3	Emergent	0.49	ACRE	43.02894	-75.1248	Section 404
B-WFR-4	Emergent	2.15	ACRE	43.02682	-75.1221	Section 404
B-WFR-5	Emergent	0.09	ACRE	43.02638	-75.1222	Section 404
B-WFR-6	Emergent	0.11	ACRE	43.02349	-75.1179	Section 404
B-WFR-7	Scrub/Shrub	1.33	ACRE	43.02259	-75.116	Section 404
B-WFR-8	Scrub/Shrub	1	ACRE	43.03391	-75.1312	Section 404
B-WFR-9	Emergent	0.45	ACRE	43.03994	-75.139	Section 404
B-WGF-1	Emergent	0.4	ACRE	42.96181	-74.9501	Section 404
B-WGF-10	Emergent	0.1	ACRE	42.98955	-75.0526	Section 404

B-WGF-100	Emergent	0.33	ACRE	43.00594	-75.0627	Section 404
B-WGF-101	Emergent	0.81	ACRE	43.00039	-75.0492	Section 404
B-WGF-102	Emergent	0.06	ACRE	42.99765	-75.0437	Section 404
B-WGF-11	Emergent	0.91	ACRE	42.99178	-75.0567	Section 404
B-WGF-2	Emergent	0.37	ACRE	42.96215	-74.9507	Section 404
B-WGF-3	Emergent	1.84	ACRE	42.96123	-74.9435	Section 404
B-WGF-4	Emergent	0.32	ACRE	42.9636	-74.9639	Section 404
B-WGF-5	Emergent	0.09	ACRE	42.98917	-75.0464	Section 404
B-WGF-6	Emergent	0.07	ACRE	42.98926	-75.0457	Section 404
B-WGF-7	Emergent	0.04	ACRE	42.98948	-75.0434	Section 404
B-WGF-8	Emergent	0.06	ACRE	42.98942	-75.043	Section 404
B-WGF-9	Emergent	0.14	ACRE	42.98993	-75.0321	Section 404
B-WST-1	Scrub/Shrub	6.17	ACRE	42.93816	-74.7798	Section 404
B-WST-10	Emergent	0.19	ACRE	42.94782	-74.8386	Section 404
B-WST-11	Emergent	3.05	ACRE	42.95449	-74.8769	Section 404
B-WST-12	Scrub/Shrub	2.43	ACRE	42.95511	-74.8804	Section 404
B-WST-13	Scrub/Shrub	6.72	ACRE	42.95285	-74.8693	Section 404
B-WST-14	Scrub/Shrub	0.1	ACRE	42.95383	-74.8732	Section 404
B-WST-2	Emergent	0.01	ACRE	42.9373	-74.7745	Section 404
B-WST-3	Scrub/Shrub	0.93	ACRE	42.93654	-74.7721	Section 404
B-WST-4	Emergent	0.3	ACRE	42.93582	-74.7687	Section 404
B-WST-5	Scrub/Shrub	1.14	ACRE	42.93515	-74.7659	Section 404
B-WST-6	Scrub/Shrub	2.54	ACRE	42.95025	-74.8537	Section 404
B-WST-7	Emergent	0.61	ACRE	42.94871	-74.8435	Section 404
B-WST-8	Scrub/Shrub	0.49	ACRE	42.94817	-74.8394	Section 404
B-WST-9	Scrub/Shrub	4.16	ACRE	42.9476	-74.8362	Section 404
A-SFR-1	Intermittent	103.12	FOOT	43.0049	-75.0854	Section 404
A-SFR-10	Intermittent	64.09	FOOT	43.0443	-75.1454	Section 404
A-SFR-11	Perennial	286.51	FOOT	43.04485	-75.1453	Section 404
A-SFR-12	Intermittent	353.31	FOOT	43.04604	-75.1458	Section 404
A-SFR-13	Perennial	276.06	FOOT	43.04756	-75.1465	Section 404
A-SFR-14	Perennial	294.47	FOOT	43.04936	-75.1473	Section 404
A-SFR-15	Perennial	311.13	FOOT	43.04983	-75.1476	Section 404
A-SFR-16	Intermittent	291.8	FOOT	43.06752	-75.1586	Section 404
A-SFR-17	Perennial	1251.88	FOOT	43.07085	-75.1615	Section 404
A-SFR-18	Perennial	290.82	FOOT	43.07277	-75.1623	Section 404
A-SFR-19	Intermittent	92.78	FOOT	43.08326	-75.1629	Section 404
A-SFR-2	Intermittent	187.39	FOOT	43.00511	-75.0855	Section 404
A-SFR-20	Perennial	261.22	FOOT	43.08432	-75.1631	Section 404
A-SFR-21-DD	Perennial	201.92	FOOT	43.00342	-75.0812	Section 404
A-SFR-22-DD	Perennial	301.4	FOOT	42.99934	-75.0708	Section 404
A-SFR-3	Intermittent	188.04	FOOT	43.00575	-75.087	Section 404
A-SFR-4	Intermittent	28.24	FOOT	43.00763	-75.09	Section 404
A-SFR-5	Intermittent	251.83	FOOT	43.01821	-75.1002	Section 404
A-SFR-6	Perennial	189.38	FOOT	43.021	-75.1035	Section 404
A-SFR-7	Perennial	300.18	FOOT	43.04271	-75.1429	Section 404
A-SFR-8	Intermittent	162.14	FOOT	43.04264	-75.1432	Section 404

A-SFR-9	Intermittent	107.46	FOOT	43.04382	-75.1443	Section 404
A-SGF-1	Perennial	241.54	FOOT	42.96432	-74.9706	Section 404
A-SGF-10	Perennial	299.45	FOOT	42.97046	-74.9868	Section 404
A-SGF-11	Intermittent	304.49	FOOT	42.97281	-74.9924	Section 404
A-SGF-12	Perennial	264.37	FOOT	42.97367	-74.994	Section 404
A-SGF-13	Perennial	128.72	FOOT	42.97367	-74.9943	Section 404
A-SGF-14	Perennial	234.95	FOOT	42.97421	-74.9951	Section 404
A-SGF-15	Ephemeral	201.82	FOOT	42.97495	-74.9964	Section 404
A-SGF-16	Intermittent	205.85	FOOT	42.97534	-74.9971	Section 404
A-SGF-17	Perennial	249.18	FOOT	42.97574	-74.998	Section 404
A-SGF-18	Intermittent	226.51	FOOT	42.9771	-75.0004	Section 404
A-SGF-19	Intermittent	225.63	FOOT	42.97844	-75.0029	Section 404
A-SGF-2	Perennial	229.36	FOOT	42.96463	-74.9711	Section 404
A-SGF-20	Perennial	202.63	FOOT	42.98014	-75.0061	Section 404
A-SGF-21	Perennial	189.59	FOOT	42.99464	-75.0613	Section 404
A-SGF-22	Perennial	209.37	FOOT	42.99629	-75.0651	Section 404
A-SGF-23	Intermittent	191.27	FOOT	42.99782	-75.0671	Section 404
A-SGF-24	Intermittent	194.13	FOOT	42.9981	-75.0678	Section 404
A-SGF-3	Perennial	204.51	FOOT	42.96604	-74.9748	Section 404
A-SGF-4	Perennial	319.97	FOOT	42.96754	-74.979	Section 404
A-SGF-5	Intermittent	266.35	FOOT	42.96859	-74.9816	Section 404
A-SGF-6	Ephemeral	146.98	FOOT	42.96851	-74.9819	Section 404
A-SGF-7	Perennial	200.65	FOOT	42.96901	-74.9828	Section 404
A-SGF-8	Ephemeral	290.36	FOOT	42.96927	-74.9835	Section 404
A-SGF-9	Perennial	207.71	FOOT	42.96983	-74.985	Section 404
A-SLF-1	Perennial	229.52	FOOT	42.95636	-74.8891	Section 404
A-SLF-2	Perennial	561.3	FOOT	42.95595	-74.8877	Section 404
A-SLF-3	Intermittent	357.72	FOOT	42.95647	-74.8898	Section 404
A-SLF-4	Ephemeral	132.71	FOOT	42.95868	-74.9051	Section 404
A-SLF-4B	Perennial	366.5	FOOT	42.95903	-74.9092	Section 404
A-SLF-5	Perennial	427.94	FOOT	42.95969	-74.9166	Section 404
A-SLF-6	Perennial	423.42	FOOT	42.95967	-74.9236	Section 404
A-SLF-7	Intermittent	223.92	FOOT	42.96009	-74.9265	Section 404
A-SLF-8	Perennial	205.11	FOOT	42.96033	-74.9303	Section 404
A-SSC-1	Perennial	429.02	FOOT	43.10441	-75.1595	Section 404
A-SST-1	Perennial	288.04	FOOT	42.93965	-74.7879	Section 404
A-SST-2	Perennial	412.8	FOOT	42.94123	-74.7941	Section 404
A-SST-3	Intermittent	31.02	FOOT	42.94332	-74.8087	Section 404
A-SST-4	Intermittent	229.38	FOOT	42.94461	-74.8154	Section 404
A-SST-5	Intermittent	186.77	FOOT	42.94471	-74.8165	Section 404
A-SST-6	Ephemeral	375.07	FOOT	42.9449	-74.8181	Section 404
B-SFR-1	Perennial	259.73	FOOT	43.029	-75.1252	Section 404
B-SFR-10	Ephemeral	266.94	FOOT	43.06173	-75.1544	Section 404
B-SFR-100	Perennial	201.35	FOOT	43.02121	-75.0994	Section 404
B-SFR-101	Intermittent	38.16	FOOT	43.02128	-75.0984	Section 404
B-SFR-102	Intermittent	39.07	FOOT	43.02103	-75.0958	Section 404
B-SFR-103	Perennial	126.81	FOOT	43.02054	-75.0946	Section 404

B-SFR-104	Perennial	131.16	FOOT	43.01957	-75.0916	Section 404
B-SFR-105	Ephemeral	122.74	FOOT	43.01918	-75.0905	Section 404
B-SFR-106	Ephemeral	56.47	FOOT	43.01858	-75.0885	Section 404
B-SFR-107	Perennial	126.53	FOOT	43.01809	-75.0873	Section 404
B-SFR-108-1	Ephemeral	41.56	FOOT	43.01736	-75.0855	Section 404
B-SFR-108-2	Ephemeral	109.86	FOOT	43.01685	-75.0837	Section 404
B-SFR-109	Perennial	182.03	FOOT	43.01442	-75.0765	Section 404
B-SFR-11	Intermittent	310.44	FOOT	43.0599	-75.1528	Section 404
B-SFR-110	Intermittent	121.38	FOOT	43.01383	-75.0747	Section 404
B-SFR-111	Perennial	115	FOOT	43.01287	-75.0726	Section 404
B-SFR-112	Perennial	122.84	FOOT	43.00905	-75.0672	Section 404
B-SFR-113	Intermittent	33.72	FOOT	43.00796	-75.0654	Section 404
B-SFR-12	Ephemeral	277.45	FOOT	43.05904	-75.1521	Section 404
B-SFR-13	Ephemeral	254.36	FOOT	43.05814	-75.1516	Section 404
B-SFR-14	Intermittent	254.68	FOOT	43.05764	-75.1512	Section 404
B-SFR-15	Intermittent	276.9	FOOT	43.05673	-75.1507	Section 404
B-SFR-16	Ephemeral	266.93	FOOT	43.05108	-75.1481	Section 404
B-SFR-17-DD	Perennial	1188.42	FOOT	43.08714	-75.163	Section 404
B-SFR-18-DD	Ephemeral	122.62	FOOT	43.08682	-75.1624	Section 404
B-SFR-19-DD	Perennial	258.1	FOOT	43.09383	-75.1614	Section 404
B-SFR-2	Perennial	37.9	FOOT	43.02543	-75.1215	Section 404
B-SFR-20-DD	Perennial	271.18	FOOT	43.09616	-75.161	Section 404
B-SFR-3	Perennial	351.69	FOOT	43.02519	-75.1205	Section 404
B-SFR-4	Perennial	298.03	FOOT	43.02244	-75.1143	Section 404
B-SFR-5	Perennial	265.3	FOOT	43.02151	-75.1086	Section 404
B-SFR-6	Intermittent	316.28	FOOT	43.03993	-75.139	Section 404
B-SFR-7	Ephemeral	165.34	FOOT	43.03608	-75.134	Section 404
B-SFR-8	Ephemeral	256.96	FOOT	43.03624	-75.1338	Section 404
B-SFR-9	Ephemeral	293.07	FOOT	43.06695	-75.158	Section 404
B-SGF-1	Perennial	209.74	FOOT	42.96232	-74.9533	Section 404
B-SGF-10	Perennial	291.82	FOOT	42.96321	-74.9604	Section 404
B-SGF-100	Perennial	101.11	FOOT	43.00419	-75.0605	Section 404
B-SGF-102	Intermittent	124.97	FOOT	42.99466	-75.0379	Section 404
B-SGF-103	Intermittent	174.9	FOOT	42.99648	-75.0416	Section 404
B-SGF-104	Intermittent	181.38	FOOT	42.99734	-75.0432	Section 404
B-SGF-105	Perennial	414.82	FOOT	42.99889	-75.0465	Section 404
B-SGF-106	Perennial	105.18	FOOT	42.99935	-75.0472	Section 404
B-SGF-11	Intermittent	334.57	FOOT	42.96259	-74.9566	Section 404
B-SGF-12	Intermittent	322.19	FOOT	42.98924	-75.0465	Section 404
B-SGF-13	Intermittent	203.32	FOOT	42.98944	-75.0458	Section 404
B-SGF-14	Intermittent	205.33	FOOT	42.98964	-75.0447	Section 404
B-SGF-15	Intermittent	212.05	FOOT	42.98963	-75.0435	Section 404
B-SGF-16	Intermittent	219.14	FOOT	42.98963	-75.0432	Section 404
B-SGF-17	Intermittent	238.89	FOOT	42.9897	-75.0422	Section 404
B-SGF-18	Ephemeral	210.2	FOOT	42.98969	-75.0416	Section 404
B-SGF-19	Intermittent	345.11	FOOT	42.98978	-75.0412	Section 404
B-SGF-2	Intermittent	211.14	FOOT	42.96192	-74.9498	Section 404

B-SGF-20	Intermittent	453.97	FOOT	42.98976	-75.0357	Section 404
B-SGF-21	Ephemeral	195.76	FOOT	42.98895	-75.0481	Section 404
B-SGF-21-DD	Perennial	410.86	FOOT	42.98984	-75.0395	Section 404
B-SGF-22	Ephemeral	59.12	FOOT	42.99001	-75.0527	Section 404
B-SGF-23	Perennial	187.83	FOOT	42.99012	-75.0535	Section 404
B-SGF-24	Perennial	193.59	FOOT	42.99083	-75.0553	Section 404
B-SGF-3	Ephemeral	168.21	FOOT	42.96188	-74.9488	Section 404
B-SGF-4	Intermittent	210.64	FOOT	42.96168	-74.9475	Section 404
B-SGF-5	Perennial	203.49	FOOT	42.96101	-74.9416	Section 404
B-SGF-6	Perennial	190.19	FOOT	42.96072	-74.9384	Section 404
B-SGF-7	Perennial	253.83	FOOT	42.96397	-74.9679	Section 404
B-SGF-8	Perennial	569.58	FOOT	42.96379	-74.9653	Section 404
B-SGF-9	Ephemeral	26.12	FOOT	42.96382	-74.9641	Section 404
B-SST-1	Perennial	1356.92	FOOT	42.93797	-74.7783	Section 404
B-SST-10	Perennial	214.77	FOOT	42.95368	-74.8732	Section 404
B-SST-11	Intermittent	19.44	FOOT	42.95381	-74.8725	Section 404
B-SST-12	Perennial	269.58	FOOT	42.95148	-74.8632	Section 404
B-SST-13	Intermittent	313.86	FOOT	42.95176	-74.8639	Section 404
B-SST-2	Ephemeral	241.08	FOOT	42.94997	-74.852	Section 404
B-SST-3	Perennial	274.61	FOOT	42.94834	-74.841	Section 404
B-SST-4	Perennial	265.33	FOOT	42.94835	-74.8402	Section 404
B-SST-5	Perennial	238.7	FOOT	42.94805	-74.8388	Section 404
B-SST-6	Perennial	583.9	FOOT	42.94556	-74.8214	Section 404
B-SST-7	Intermittent	319.72	FOOT	42.94624	-74.8263	Section 404
B-SST-8	Perennial	297.12	FOOT	42.9464	-74.8274	Section 404
B-SST-9	Perennial	19.14	FOOT	42.948	-74.8367	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that:

(1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources;

(2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions;

(3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization;

(4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary;

(5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD;

(6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and

(7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331.

If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable.

This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:



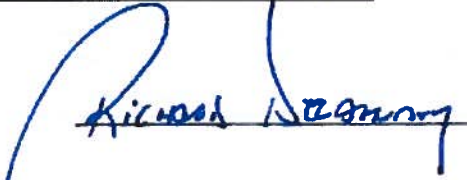
**SUPPORTING DATA. Data reviewed for PJD (check all that apply)**

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:  
Map: National Wetland Inventory, NYS Department of Environmental Conservation  
Freshwater Wetland Map, U.S. Department of Agriculture Soil Maps.
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - Office concurs with data sheets/delineation report. Note that discrepancies found in the data sheets have been addressed. New data sheets reflecting any corrections were not requested.
  - Office does not concur with data sheets/delineation report. Rationale: \_\_\_\_\_.
- Data sheets prepared by the Corps: \_\_\_\_\_.
- Corps navigable waters' study: \_\_\_\_\_.
- U.S. Geological Survey Hydrologic Atlas: \_\_\_\_\_.
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 24000k; South Trenton, Utica East, Ilion, Millers Mills, Jordanville, VanHornesville
- Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey  
Due to the extent of the project, refer to the Delineation Report for all details regarding soils.
- National Wetlands Inventory map: Cite name: South Trenton, Utica East, Ilion, Millers Mills, Jordanville, VanHornesville
- State/local wetland inventory map: South Trenton, Utica East, Ilion, Millers Mills, Jordanville, VanHornesville
- FEMA/FIRM maps: \_\_\_\_\_
- 100-year Floodplain Elevation is: \_\_\_\_\_. (National Geodetic Vertical Datum of 1929)
- Photographs:
  - Aerial (Name & Date): Bingmaps.com; Esri, DigitalGlobe, GeoEye, Earthstar Geographics, USDA FSA NAIP 2015 Aerial Imagery
  - Other (Name & Date): Submitted with application
  - Previous determination(s). File no. and date of response letter: \_\_\_\_\_.
  - Other information (please specify): This PJD is for aquatic resources identified in Oneida and Herkimer Counties within LRB only. The aquatic resources associated with the project identified within NAN will be processed under separate cover by NAN.

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

ROBINSON.JUDY. Digitally signed by  
ROBINSON.JUDY.A.1284100103  
DN: cn=JES, o=U.S. Government, ou=DoD, ou=PEI,  
ou=ISA, cn=ROBINSON.JUDY.A.1284100103  
Date: 2017.02.18 11:09:52 -0500  
A.1284100103  
Judy Robinson

 Richard DeLong 2/20/2017

Signature and date of Regulatory  
staff member completing PJD

Signature and date of person requesting PJD  
(REQUIRED, unless obtaining the signature  
is impracticable)<sup>1</sup>

<sup>1</sup> Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.