

May 14, 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: Joint Comments of Niagara Mohawk Power Corporation d/b/a National Grid and New York Transco LLC Regarding the New York Independent System Operator's Selection of Proposals to Satisfy the AC Transmission New York Public Policy Transmission Need**

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 continued 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 these additional comments concerning this ongoing PPTPP. These brief comments reinforce critical aspects of previously-submitted comments, renew certain requests contained therein, and highlight the critical flaws of several proposals.

**I. The NYISO Should Further Consider The Detailed, Previously-Provided Comments**

On May 3, 2018, National Grid and Transco jointly provided detailed comments to the NYISO concerning SECO's Technical Review Report (the "SECO Report") and other NYISO documentation related to the AC Transmission PPTN, as did competing developers NextEra Energy Transmission New York, Inc. ("NextEra") and North America Transmission Corporation ("NAT")/New York Power Authority ("NYPA"). Shortly thereafter, on May 7, 2018, the NYISO released its AC Transmission PPTN Evaluation Update, which included a preliminary ranking of the competing proposals into three tiers.

National Grid’s and Transco’s previously-provided comments outline how its projects (T018 and T019) satisfy all of the applicable selection metrics.<sup>1</sup> In addition, these prior comments highlight several potentially-insurmountable flaws associated with other pending proposals.<sup>2</sup> Given the extremely short period of time between providing these comments and the release of the NYISO’s Evaluation Update, it is possible that the NYISO has not yet had sufficient time to fully review the previously-provided comments and incorporate the information provided into its analysis. As such, National Grid and Transco respectfully request that the NYISO thoroughly review, analyze, and respond to their prior comments and take them into consideration before finalizing its project ranking.

National Grid and Transco’s joint comments amply demonstrate that projects T018 and T019 are, on balance, the more cost-effective and efficient solutions to satisfy the AC Transmission PPTN.<sup>3</sup> Importantly, these projects have remained unchanged since they were submitted to the NYISO in April 2016. In contrast, it appears that certain of the remaining proposals—T027, T029, and T030—were modified post-submission during the interconnection process.<sup>4</sup> For example, the SECO Report identifies the retirement of the New Scotland #13 115 kV line with respect to project T027, but this retirement plan is *not* included in the project’s SIS scope. For this reason, National Grid and Transco reiterate their—and other developers’—prior requests that the NYISO decline to consider any alterations that have been made to the remaining proposals during the interconnection process and focus its review solely on the projects as presented in response to the initial solicitation. Indeed, this approach would be consistent with the NYISO’s proposal at a recent Electric System Planning Working Group (“ESPWG”) meeting to modify the OATT in order to ensure that projects submitted in response to a NYISO solicitation cannot be modified during the interconnection process.<sup>5</sup> For these reasons National Grid and Transco renew their requests for the release of all project submittals as of the NYISO request for proposal (“RFP”) deadline (April 29, 2016), including the detailed design materials associated with each project.<sup>6</sup>

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<sup>1</sup> 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 the NYISO’s Open Access Transmission Tariff (“OATT”) as well as the criteria prescribed by the Commission in its December 17, 2015 order (individually, a “Selection Metric,” collectively, the “Selection Metrics”). To review the Selection Metrics, see Appendix A to National Grid and Transco’s May 3, 2018 comments.

<sup>2</sup> In fact, many of the flaws National Grid and Transco identified with respect to certain proposals were also discussed in NextEra’s May 3<sup>rd</sup> submittal.

<sup>3</sup> See generally 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 (dated May 3, 2018).

<sup>4</sup> There are many observed differences between the descriptions of projects T027, T029 and T030 in the SECO Report compared to those projects’ System Impact Studies (“SIS”).

<sup>5</sup> Alternatively, if the NYISO has already considered in its evaluation the modifications submitted during the interconnection process, National Grid and Transco request information on how the NYISO handled the inconsistencies in both the PPTPP and interconnection processes between the originally-submitted proposals and the proposals as described during the interconnection process.

<sup>6</sup> At this point in the PPTPP, there is no competitive or commercially-sensitive information to be obtained by the remaining developers if the NYISO provides the requested information. Further, releasing the requested information may serve to eliminate certain concerns the developers have raised throughout the PPTPP.

Further, National Grid and Transco respectfully request that the NYISO and SECO review the National Grid/Transco prior comments related to the Sub-Synchronous Resonance (“SSR”) Screening Study conducted with respect to project T019 and the addition of a new series compensation capacitor bank with bypass switching provisions at the new Knickerbocker switching substation, as well as the information provided about the resilient pole designs included in project T019.<sup>7</sup> As outlined in these comments, and contrary to the initial rankings released by the NYISO, these low-risk features render this project the more cost-effective and efficient Segment B project. As previously articulated, the SSR Screening Study did not show any SSR risks associated with the proposed series compensation capacitor bank at the Knickerbocker station. In fact, the screening work performed indicates that “there would be no SSR issues” associated with the interconnection of a series compensation capacitor bank at the Knickerbocker station.<sup>8</sup> As such, the addition of a series compensation capacitor bank does not present any “fatal” risk that, as discussed at the May 10, 2018 ESPWG meeting, would justify project T019’s categorization in Tier 3. Indeed, the NYISO and SECO have failed to identify any specific risk associated with the addition of a series compensation capacitor bank.<sup>9</sup>

Additionally, the pole designs included in project T019 present two distinct enhancements that are unique to National Grid and Transco’s proposals and that 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.<sup>10</sup> These attributes are consistent with the Moreland Commission on Utility Storm Preparation and Response’s report, which emphasized the importance of resilient transmission pole designs to withstand the “new normal”<sup>11</sup> of severe weather in New York.<sup>12</sup> Following a complete review of the SSR Screening Study and the necessary resiliency of the pole designs, the NYISO should elevate project T019’s ranking to Tier 1 due to its cost-effective and efficient features.<sup>13</sup>

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<sup>7</sup> Specifically, please refer to National Grid and Transco’s joint comments filed on May 3, 2018, and a previously-submitted letter on this topic from Burns & McDonnell dated February 5, 2018.

<sup>8</sup> If the NYISO or SECO have conducted any study or evaluation to identify an SSR risk, National Grid and Transco request a copy of the same.

<sup>9</sup> As National Grid and Transco noted at the recent ESPWG meeting, it is not reasonable to compare the proposed series compensation in project T019 with that at NYPA’s Marcy Station, because, unlike the Marcy Station, the proposed series compensation capacitor bank is not in electric proximity of nuclear and/or other major generating plants.

<sup>10</sup> These structural enhancements are also proposed in project T018.

<sup>11</sup> Andrew M. Cuomo, *We Will Lead On Climate Change*, New York Daily News (Nov. 15, 2012), Op-Ed (shortly after Superstorm Sandy, Governor Cuomo observed that “[e]xtreme weather is the new normal”).

<sup>12</sup> See Moreland Commission, *Utility Storm Preparation and Cost, Final Report* (Dated June 22, 2013), at 13 (recommending that “the utilities harden their systems by prioritizing investments in infrastructure to be more resilient to the ever-increasing threat of severe weather.”).

<sup>13</sup> For a description of the benefits of the proposed series compensation capacitor bank—including maintaining voltage stability and increasing power transfer capability by reducing inductive line impedance—see National Grid and Transco’s joint comments provided to the NYISO on May 3, 2018.

National Grid and Transco also take this opportunity to renew the requests set forth in its prior comments, including, but not limited to: (1) that the NYISO produce a copy of the electric magnetic field (“EMF”) report that was relied upon to evaluate project T027’s electric field (“EF”) levels, and (2) that the NYISO incorporate and consider a more comprehensive viewshed analysis, such as the “incremental viewshed analysis” previously conducted by National Grid/Transco and provided to Department of Public Service Staff, to properly isolate new structure permitting concerns. As previously discussed, the EMF report should include the EF levels calculated for the existing transmission line configuration as a baseline to ensure that all projects are using the same input assumptions and are starting with the same calculated EF levels for the existing line configuration. This report is necessary because National Grid/Transco have been unable to duplicate SECO’s assertion that project T027 will *reduce* the existing EF to an acceptable level.<sup>14</sup> Additionally, a more robust and detailed viewshed analysis, similar to the incremental viewshed analysis previously performed by National Grid and Transco specific to the project routes for T018 and T019 should be incorporated or adopted by the NYISO. 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 are clear—projects T018 and T019 do not have permitting risk as a result of the height of the proposed new structures.

## **II. The NYISO Should Eliminate Proposals T025, T026, T027, T028, And T031 From Further Consideration Because They Likely Violate A Core Selection Metric Or Categorize These Proposals As Tier 3 Projects Due To Their High Regulatory Risk**

Proposals T025, T026, T027, T028, and T031 likely violate a core Selection Metric and, at minimum, face significant siting, cost, and scheduling risks. Accordingly, the NYISO should eliminate these proposals from further consideration under the PPTPP or categorize all of them as Tier 3 projects due to their high regulatory risk.

The SECO Report correctly notes that projects T025, T026, T027, T028, and T031 propose a new 345 kV Rotterdam substation that will be located “*directly over* two existing gas transmission lines and is likely to be resisted by the owner of that facility.”<sup>15</sup> As a result, for safety reasons, these projects can only be constructed if the existing gas transmission lines (PL-E18 and PL-E36) or the existing Rotterdam substation are removed and relocated to a different location. Although SECO recognized that the relocation of the existing gas transmission lines could “require relocating the [existing] substation and/or [require the] purchas[e] [of] additional property,”<sup>16</sup> SECO did not conclude—as it must—that the relocation of the gas transmission lines or the related real property complications associated therewith represent fatal flaws that

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<sup>14</sup> Even assuming that the proposed design of project T027 *maintains* the current EF level, the current EF level is too high to be approved by the Commission. Therefore, simply maintaining the present EF level does not eliminate the need to mitigate EMF.

<sup>15</sup> SECO Report, at 53, 57, 59, 62, 65 (emphasis added).

<sup>16</sup> *Id.*

preclude these proposals from being considered to satisfy the AC Transmission PPTN.<sup>17</sup> Instead, SECO improperly attempted to salvage these flawed proposals by (1) assuming that the gas pipelines can readily be relocated without any regulatory or siting risks or the need to acquire new property for the relocated pipelines or the existing Rotterdam substation as proposed, and (2) insignificantly increasing the cost estimates for these proposals to account for relocating the gas transmission lines. SECO's impermissible and unilateral mitigating solution caused the NYISO to fail to identify the relocation of existing gas transmission lines or the new Rotterdam substation as Selection Metric violations or siting risks in its tiered ranking of Segment A projects.<sup>18</sup> The NYISO should remedy this failure by eliminating these proposals from further consideration in the PPTPP or categorizing all of these proposals as Tier 3 projects.

- a. The acquisition of additional property rights to relocate the existing gas transmission lines or move the Rotterdam substation violates a core Selection Metric

The Commission's first evaluation criterion plainly states: "No transmission solution shall be selected 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>19</sup> The Commission further limited its de minimis exception to situations where "[t]he impacts of such are generally minor, often temporary in nature and can be managed or minimized through the Commission's Environmental Management and Construction (EM&CP) process."<sup>20</sup> The developers of projects T025, T026, T027, T028, and T031 failed to demonstrate that the Rotterdam substation can be constructed as proposed—which requires the relocation of existing gas transmission lines—without acquiring additional real property rights. In other words, these developers did not establish satisfaction of this critical Selection Criteria.

In light of the known location of the existing gas transmission lines and the minimal remaining real estate within National Grid's existing right-of-way to the west of these pipelines, it is very likely that projects T025, T026, T027, T028, and T031 will require the acquisition of new permanent property rights to relocate the existing gas transmission lines or Rotterdam substation.<sup>21</sup> Any acquisition of additional property rights to relocate the gas transmission lines or the existing Rotterdam substation will, for at least two reasons, violate the Commission's overarching Selection Metric.

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<sup>17</sup> Notably, SECO recently admitted during the May 10, 2018 ESPWG meeting that it does not have any experience relocating or siting the relocation of gas pipelines.

<sup>18</sup> See Dawei Fan and Timothy Duffy, NYISO System and Resource Planning, *AC Transmission PPTN: Evaluation Updates* (Dated May 10, 2018), at 15.

<sup>19</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) (the "December PPTN Order"), Appendix B, at 2. (emphasis added).

<sup>20</sup> *Id.* at 41 n 17.

<sup>21</sup> SECO Report, at 53, 57, 59, 62, 65 (emphasis added). The NYISO does not have the authority to modify these projects to accept SECO's recommendation that the developers move and rebuild the Rotterdam substation. Such a recommendation would require substantial and impermissible modifications to be made to the proposals.



First, as evidenced by the project T018's superior design, the rebuild of the Rotterdam substation can be accomplished while maintaining the necessary 25-foot barrier between the rebuilt station and the existing gas transmission lines and *avoiding* the need to acquire additional land. As proposed by project T018, constructing a Gas Insulated Substation ("GIS") with a footprint small enough to avoid the existing gas transmission lines in the vicinity of the existing Rotterdam substation does not require the acquisition of new permanent transmission rights-of-way.

Second, as described below, such acquisitions will not be "managed or minimized through the Commission's" EM&CP process. Instead, the acquisition of real property rights associated with the relocation of gas transmission lines will occur during an independent Public Service Law ("PSL") Article VII application process.

In sum, the NYISO must not select any of these projects to satisfy the AC Transmission PPTN because it appears that the developers of these projects failed to provide any description, maps, drawings, or other documentation demonstrating how the existing gas transmission lines can be removed and relocated without the need to acquire additional real property. It is not SECO or the NYISO's responsibility to perform the initial work necessary to demonstrate that projects T025, T026, T027, T028, or T031 satisfy the core Selection Metric discussed above. Instead, pursuant to the OATT, it is the NYISO's responsibility to eliminate these projects from consideration or categorize all of them as Tier 3 proposals.

- b. Even putting aside the likely Selection Metric violation, removing and relocating the gas transmission lines is a major regulatory undertaking that carries significant siting, cost, and scheduling risks

Assuming the relocation of gas transmission lines PL-E18 and PL-E36 do not necessitate the acquisition of new transmission rights of way, projects T025, T026, T027, T028, and T031 nonetheless must be categorized as Tier 3 projects due to the significant regulatory risks associated with the relocation of PL-E18 and PL-E36.

Since PL-E36 is an existing PSL Article VII-approved gas transmission line, the owner of the facility<sup>22</sup> will almost certainly need to secure a modification of its Certificate of Environmental Compatibility and Public Need ("CECPN") before removing or relocating this pipeline.<sup>23</sup> The minimum time frame to complete an Article VII amendment process would likely be six months due to the focus on environmental impacts of the relocation project.<sup>24</sup> Moreover, if

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<sup>22</sup> National Grid is the current owner of both PL-E18 and PL-E36.

<sup>23</sup> Above and beyond the necessary amendments to the existing CECPN, if either existing gas transmission line needs to be reconstructed, upgraded, or recertified, the current provisions of 16 NYCRR Part 255, including current safety and design provisions, will apply.

<sup>24</sup> Noteworthy environmental concerns associated with the relocation of pipelines PL-E18 and 36 include, but are not limited to: (1) the pipelines' proximity to the Great Flats Aquifer/Schenectady Aquifer (or one of its protection zones), which provides drinking water for five Schenectady County municipalities—this was a major obstacle in the original Article VII process to site this pipeline; (2) a Stormwater Pollution Prevention Plan ("SWPPP") and other

the CECPN amendment is contested, which is likely,<sup>25</sup> the regulatory process to secure the approvals necessary to relocate the pipelines will take substantially longer to complete.<sup>26</sup> Even absent public opposition, New York's current posture against the expansion of natural gas infrastructure could preclude the owner of PL-E36 from securing the necessary CECPN amendment to relocate the pipeline.<sup>27</sup> Thus, National Grid and Transco encourage the NYISO to earnestly question SECO's assumption that the gas transmission lines can be relocated with "minimum risk."

Assuming the pipeline relocation can be permitted, the design, procurement, and construction period for natural gas transmission pipeline construction is typically a minimum of two to four years. In addition to the very lengthy design, procurement, and permitting processes that must occur before PL-E18 and PL-E36 can be modified, the owner will be limited to performing construction work during certain timeframes within which the pipelines can be taken out of service to avoid causing customer outages. The timeline to complete the relocation of PL-E18 and E36 could be exponentially extended if the owner is unable to connect the relocated pipelines to the existing drilled portions of the pipes beneath the Mohawk River. If the existing drilled portions cannot be connected to the relocated line, the owner will need to perform two new HDDs beneath the River.<sup>28</sup> During the original Article VII siting process for PL-E36, the impact that HDD work would have on the Great Flats Aquifer garnered significant public comment.<sup>29</sup> Contrary to SECO's assessment of "minimum risk," the NYISO should fully

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permitting by the New York State Department of Environmental Conservation/MS4; (3) wetland delineation/potential stream crossing(s); and (4) the pipeline's proximity to the Mohawk River and the potential need to conduct horizontal directional drilling ("HDD") to relocate the pipeline.

<sup>25</sup> See 01-T-1160, *Application of Niagara Mohawk Power Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of Approximately 9.16 Miles of 24-inch Natural Gas Pipeline, in the Towns of Rotterdam and Glenville, Schenectady County, and the Town of Charlton, Saratoga County*, Order Granting Certificate Of Environmental Compatibility And Public Need And Acknowledging Filing Of Certified Statement (Issued Nov. 26, 2002) (the "PL-E36 Approval Order"), at 11 (noting that many property owners "abutting the proposed" right of way "either expressed concerns or object[ed] to the" facilities).

<sup>26</sup> Due to the installation year of PL-E18 (1964), PL-E18 is a grandfathered line since it was constructed before PSL Article VII took effect. However, if the relocation and rebuild of PL-E18 requires the construction of 1,000 feet or more of new transmission pipeline (of the same diameter and pressure as existing PL-E18), Article VII would likely be triggered. Regardless, if PL-E18 is relocated, it would need to be made "piggable" to satisfy Commission requirements. Due to the proximity of the relocation area to the Mohawk River, and the fact that the drilled section below the River is not presently piggable, an HDD of the River to replace that section of the pipeline may be required (see 16 NYCRR § 255.150).

<sup>27</sup> See e.g. Katherine Landergan, *Cuomo's Pipeline Positions*, POLITICO (Sept. 25, 2017) ("As he winds down his second term, Gov. Andrew Cuomo is taking an increasing stand against the construction of new natural gas infrastructure"); Marie French, *Cuomo Tells Environmentalists He Won't Approve New Natural Gas Plants*, POLITICO (May 11, 2018); Meghan Mandel, *New York Denies Water Permit for Transco's Northeast Supply Enhancement Project*, Troutmans and Energy Report (April 30, 2018), available at <https://www.troutmansandersenergyreport.com/2018/04/new-york-denies-water-permit-transcos-northeast-supply-enhancement-project/>; Scott Waldman, *Cuomo Administration Rejects Constitution Pipeline*, POLITICO (April 22, 2016).

<sup>28</sup> Moreover, existing high-pressure gas service runs off PL-E18 to provide fuel for emergency generators at the Rotterdam Substation. These services would require replacement as part of any relocation of PL-E18 near the Rotterdam Substation.

<sup>29</sup> See Case 01-T01160, *supra*, PL-E36 Approval Order, at 13.

understand and appreciate the significant costs, schedules and feasibility risks and should accordingly reflect this in its Tiered rankings.

- c. SECO impermissibly provided a mitigating solution to salvage projects T025, T026, T027, T028, and T031 from their apparent fatal design flaws

SECO's role in the PPTPP is set forth in the OATT and limited in nature—to “review the reasonableness and comprehensiveness of the information submitted by the Developer[.]”<sup>30</sup> Clearly, SECO is *not* authorized to modify proposals—especially those that likely violate a Selection Metric(s)—to try to salvage them from elimination.

While it is apparent that T025, T026, T027, T028 and T031 failed to recognize the fact that the projects were being proposed over existing gas pipelines, it is not SECO or the NYISO's role to suggest a solution that has significant siting and regulatory risks, as well as impermissibly add an unreasonably low cost estimation to account for the time and expense required to relocate the gas transmission lines, which almost certainly will trigger a violation of a core Selection Metric. The OATT simply does not empower SECO to provide solutions to fatally flawed projects, particularly in this situation which requires specific expertise regarding the relocation of gas transmission pipelines. SECO's attempt to rescue these proposals while ignoring the significant and potentially-insurmountable risks associated with removing and relocating the existing gas transmission line infrastructure was improper. Accordingly, the NYISO should decline to accept SECO's proposed solution and realistically recognize that the siting, cost, and scheduling risks associated with these projects are significantly “high.”

### III. Conclusion

In selecting the most cost-effective and efficient solution to satisfy the AC Transmission PPTN, the NYISO is bound by the Selection Metrics. As demonstrated above, projects T025, T026, T027, T028, and T031 likely violate the Commission's overarching Selection Metric due to the need to remove and relocate existing gas transmission lines or the Rotterdam substation. This virtually-certain violation cannot be ignored and, at a minimum, the siting process, costs and schedule delays must be identified as a significant risk.

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<sup>30</sup> OATT, Attachment Y, 31.4.8.



National Grid and Transco look forward to the NYISO's and SECO's review of these comments and further review of its May 3, 2018 comments and thank them for their willingness to continue to receive and consider additional comments. 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*

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