NEW YORK INDEPENDENT SYSTEM OPERATOR

MANUAL 36

Public Policy Transmission Planning Process Manual

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Table of Contents

Table of Figures

Table of Tables

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Revision History

Version	Date	Revisions
1.0	mm/dd/2015	Initial Release

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1. OVERVIEW[1]

1.1 The Comprehensive System Planning Process

This Public Policy Transmission Planning Process Manual (Manual) describes the Public Policy Transmission Planning Process component of the NYISO's Comprehensive System Planning Process (CSPP).

The CSPP was approved by the Federal Energy Regulatory Commission (FERC) and its requirements are contained in Attachment Y of the NYISO's Open Access Transmission Tariff (OATT).

The CSPP is comprised of four components:

1. Local Transmission Planning Process (LTPP),
2. Reliability Planning Process (RPP),
3. Congestion Assessment and Resource Integration Study (CARIS), and
4. Public Policy Transmission Planning Process (PPTPP).

The first component in the CSPP cycle is the LTPP. Under this process, the local Transmission Owners (TOs) perform transmission studies for their transmission areas according to all applicable criteria. This includes identification and evaluation of solutions to local transmission needs driven by Public Policy Requirements. This process produces the Local Transmission Owner Plans (LTP), which feed into the NYISO's determination of system needs through the CSPP.

The second component in the CSPP cycle is the RPP. Its requirements are described in the RPP Manual and Attachment Y of the OATT. Under this biennial process, the reliability of the New York bulk power system is assessed, any Reliability Needs are identified, solutions to identified needs are proposed and evaluated for their viability and sufficiency to satisfy the identified needs, and the more efficient or cost-effective transmission solution to the identified needs, if any, is selected by the NYISO. This process was originally developed and implemented in conjunction with stakeholders, was approved by FERC in December 2004, and was revised in 2014 to conform to FERC Order No. 1000.

The RPP consists of two studies:

1. The Reliability Needs Assessment (RNA): The NYISO performs a biennial study in which it evaluates the resource adequacy and transmission system adequacy and security of the New York bulk power system over a ten year Study Period. Through this evaluation, the NYISO identifies Reliability Needs in accordance with applicable Reliability Criteria. This report is reviewed by NYISO stakeholders and approved by the Board of Directors.

[1] This Manual includes provisions that reflect revisions to the Public Policy Transmission Planning Process requirements set forth in Sections 31.1, 31.4, and 31.5 of Attachment Y of the NYISO OATT that were filed with FERC under Section 205 of the Federal Power Act on June 29, 2015 for its acceptance. The applicability of these requirements in the Manual are subject to FERC's acceptance of the NYISO's proposed tariff revisions.

2. The Comprehensive Reliability Plan (CRP): After the RNA is complete, the NYISO requests the submission of market-based solutions to satisfy the identified Reliability Needs. The NYISO also identifies a Responsible TO(s) and requests that the Responsible TO submit a regulated backstop solution and that any interested entities submit alternative regulated solutions to address the identified Reliability Needs. The NYISO evaluates the viability and sufficiency of the proposed solutions to satisfy the identified Reliability Needs and evaluates and selects the more efficient or cost-effective transmission solution to the identified need. In the event that market-based solutions do not materialize to meet a Reliability Need in a timely manner, the NYISO triggers regulated solution(s) to satisfy the need. The NYISO develops the CRP for the ten-year Study Period and sets forth its findings regarding the proposed solutions. The CRP is reviewed by NYISO stakeholders and approved by the Board of Directors.

The third component of the CSPP is the CARIS, the economic planning process that is based on the CRP. The CARIS Phase 1 examines congestion on the New York bulk power system, and the costs and benefits of generic alternatives to alleviate that congestion. During the CARIS Phase 2, the NYISO evaluates specific transmission project proposals for regulated cost recovery.

The fourth component of the CSPP is the Public Policy Transmission Planning Process. Under this process interested entities propose, and the New York State Public Service Commission (NYPSC) identifies, transmission needs driven by Public Policy Requirements. A Public Policy Requirement is defined in the tariff as a federal or state law or regulation, including a PSC rulemaking order adopted after public notice and comment under state law, that drives the need for transmission. The NYISO then requests that interested entities submit proposed solutions to the identified Public Policy Transmission Needs. The NYISO evaluates the viability and sufficiency of the proposed solutions to satisfy each identified Public Policy Transmission Need. The NYISO then evaluates and may select the more efficient or cost-effective transmission solution to each identified need. The NYISO develops the Public Policy Transmission Planning Report that sets forth its findings regarding the proposed solutions. This report is reviewed by NYISO stakeholders and approved by the Board of Directors.

In concert with these four components, interregional planning is conducted with the NYISO's neighboring control areas in the United States and Canada under the Northeastern ISO/RTO Planning Coordination Protocol. The NYISO participates in interregional planning and may consider Interregional Transmission Projects in its regional planning processes.

The NYISO CSPP is illustrated in Figure 1-1.

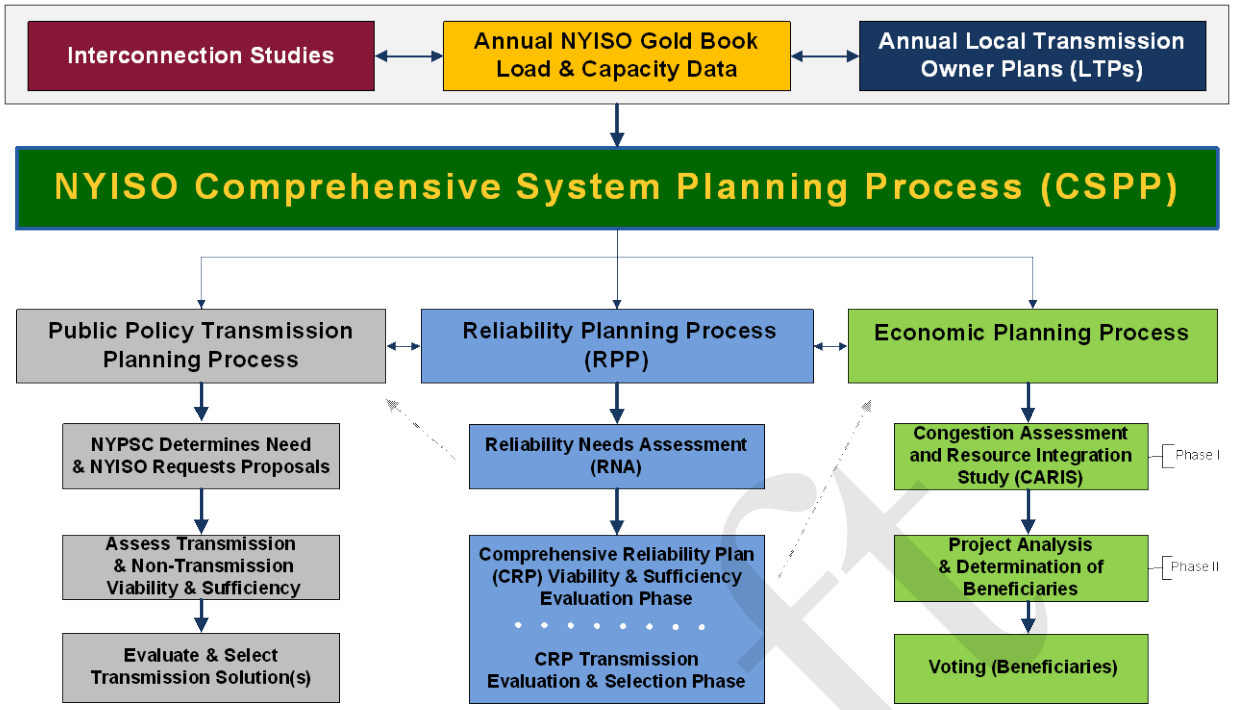

Figure 1-1: NYISO Comprehensive System Planning Process

Unless otherwise defined in this document, capitalized terms used herein shall have the meanings ascribed to them in Section 31.1.1 of Attachment Y of the NYISO OATT, and, if not defined therein, in Section 1 of the NYISO OATT.

1.2 The Public Policy Transmission Planning Process

The PPTPP supports the FERC Order No. 1000 directive requiring public utility transmission providers to consider Public Policy Transmission Needs, as defined in the tariffs, in their planning processes.

The PPTPP consists of four main steps: (1) the identification of Public Policy Transmission Needs, (2) the proposal of solutions to identified Public Policy Transmission Needs, (3) the evaluation of the viability and sufficiency of proposed transmission and non-transmission solutions to a Public Policy Transmission Need, and (4) the evaluation and selection of the more efficient or cost effective Public Policy Transmission Project to satisfy a Public Policy Transmission Need.

In the identification step, the NYISO solicits proposals for transmission needs driven by Public Policy Requirements, and the NYPSC (or LIPA, as described in Section 2 below) considers the proposals in order to identify the Public Policy Transmission Needs and determines for which of those the NYISO should solicit solutions. Subsequent to the identification of Public Policy Transmission Needs, the NYISO solicits proposed solutions, and Developers submit Public Policy Transmission Projects and Other Public Policy Projects to satisfy the identified Public Policy Transmission Needs. All submissions,

regardless of project type, are evaluated for their viability and sufficiency to meet the Public Policy Transmission Needs. Upon a confirmation by the NYPSC that a need for a transmission solution still exists, the NYISO then evaluates the proposed regulated Public Policy Transmission Projects that have satisfied the viability and sufficiency requirements and ranks them based on the quality of their satisfaction of numerous metrics. Based on this evaluation, the NYISO may select the more efficient or cost effective regulated Public Policy Transmission Project to satisfy the Public Policy Transmission Need(s), if any. A selected project is eligible for cost allocation under the NYISO OATT. The assumptions, inputs, methodologies, and results of the NYISO's analysis are published in the Public Policy Transmission Planning Report.

For each two-year CSPP cycle, the NYISO initiates the first step of the PPTPP after the draft RNA results are released. The process and timing of the PPTPP are described in Section 31.4.1 of Attachment Y. Pursuant to Section 31.1.8.7 of Attachment Y, the NYISO may extend, at its discretion, a deadline applicable to another party for a reasonable period of time if the extension is applied comparably to all parties and no reliability violation will result. Figure 1-2 shows a summary of the PPTPP process.

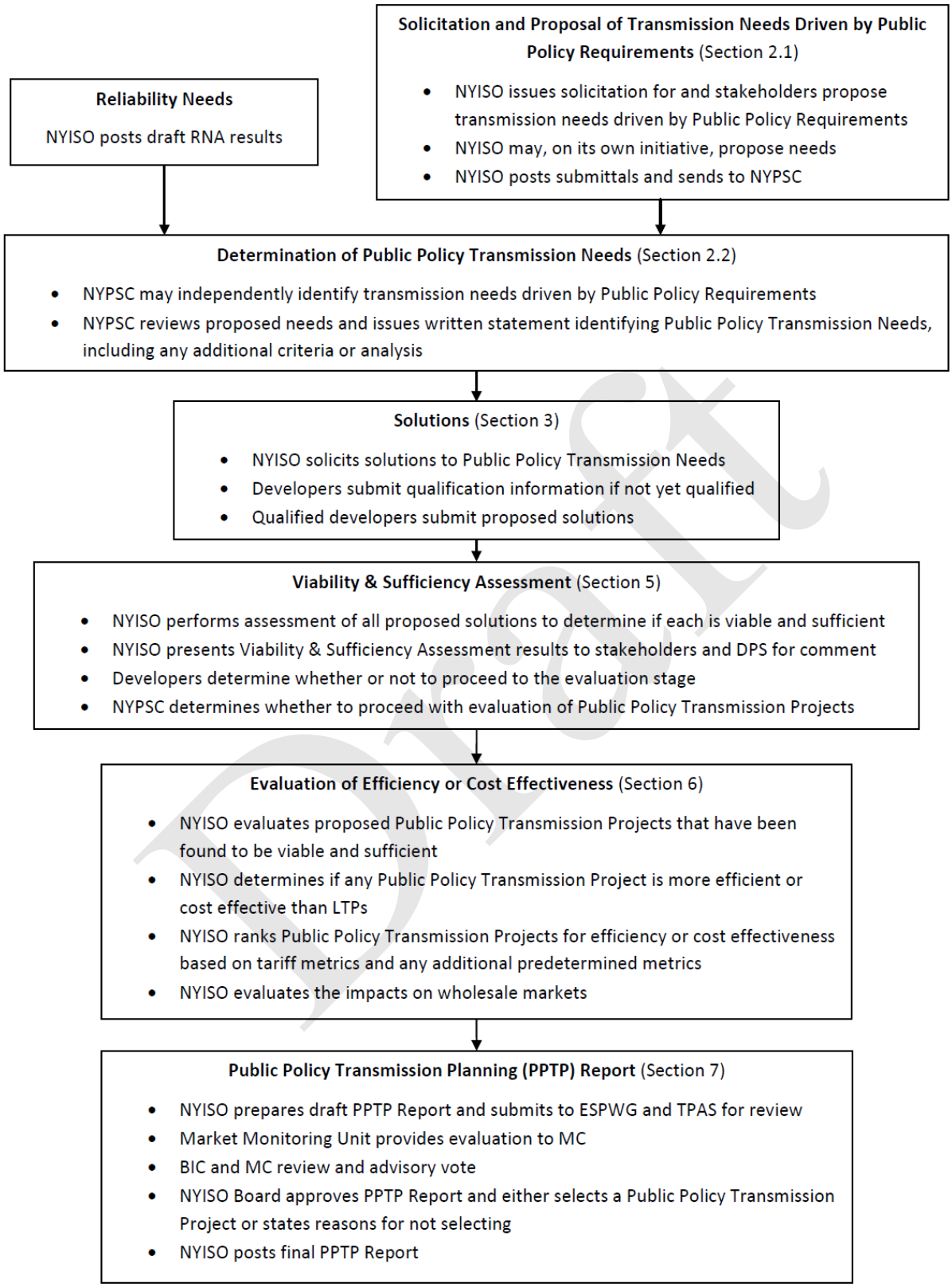

Figure 1-2: NYISO Public Policy Transmission Planning Process

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2. IDENTIFICATION AND DETERMINATION OF TRANSMISSION NEEDS

2.1 Solicit Proposed Transmission Needs

Pursuant to Section 31.4.2 of Attachment Y, the NYISO will initiate the PPTPP for the planning cycle by publicly soliciting, through its website and stakeholder mailing lists, the submission of proposed transmission needs driven by Public Policy Requirements for which transmission solutions should be requested and evaluated. Any stakeholder, interested party, or the NYISO, on its own initiative, may propose such needs within 60 days of the solicitation notice. Submittals should identify the proposed Public Policy Requirement(s) that the party believes is driving the need for transmission, propose criteria for the evaluation of transmission solutions to that need, and describe how transmission will satisfy the Public Policy Requirement(s). Submittals should be sent to the NYISO via e-mail to its Public Policy Planning Mailbox: PublicPolicyPlanningMailbox@nyiso.com

After the end of the 60-day period, the NYISO will post all submittals on its website and submit them to the NYPSC. The NYISO will also provide the Long Island Power Authority with all submittals to identify transmission needs that require a physical modification to transmission facilities in the Long Island Transmission District.

2.2 Determine Transmission Needs

The NYPSC will review the proposed transmission needs and identify the Public Policy Transmission Needs, if any, for which specific transmission solutions should be requested and evaluated by the NYISO under the PPTPP. The NYPSC may request that the NYISO assist with its analysis, including conducting the technical evaluation of alternative options to address the transmission needs driven by specific Public Policy Requirements.

The NYPSC may also independently identify transmission needs driven by Public Policy Requirements for evaluation. In such case, the identified need will be posted to the NYISO website with sufficient time, prior to the NYPSC's final determination of Public Policy Transmission Needs, for stakeholders and interested parties to provide input to the NYPSC.

If the NYPSC determines that a Public Policy Transmission Need exists, it will issue a written statement identifying Public Policy Transmission Needs for which the NYISO should solicit solutions, and the NYISO will post the written statement on its website. The statement will identify the Public Policy Transmission Need(s) that were identified, those that were rejected, explain the reasoning behind each decision, and include any additional criteria and type of analysis to be used by the NYISO in its evaluation of transmission solutions and non-transmission projects.

The Long Island Power Authority will, following consultation with the New York State Department of Public Service ("NYDPS"), identify and determine whether a Public Policy Requirement drives the need for a physical modification to transmission facilities solely in the Long Island Transmission District. The Long Island Power Authority will issue a

written statement explaining whether a Public Policy Requirement drives the need for physical modifications to transmission facilities solely within the Long Island Transmission District, explaining the reason why a Public Policy Requirement does not drive the need for a transmission solution, and describing its consultation with NYDPS. If the Long Island Power Authority identifies a transmission need in its written statement, it will transmit it to the NYPSC and request that the NYPSC review and determine whether a transmission need solely within the Long Island Transmission District should be considered a Public Policy Transmission Need for purposes of evaluation of solutions by the NYISO under the PPTPP. If the PSC does not determine that the need is a Public Policy Transmission Need, the transmission need will be addressed under the Long Island Power Authority's Local Transmission Plan.

3. SOLICITATION OF PROPOSED SOLUTIONS

3.1 Developer Qualifications

The NYISO must determine the qualifications of a Developer intending to propose a regulated Public Policy Transmission Project to an identified Public Policy Transmission Need and to use the cost allocation and cost recovery mechanism in the ISO OATT. A Developer seeking to be qualified by the NYISO must submit to the NYISO the qualification information described in Section 31.4.4.1 of Attachment Y, as set forth in the Developer Qualification Form in Attachment A of this Manual.

A Developer may submit its qualification information at any time prior to, or in response to, the NYISO's solicitation for solutions to satisfy a Public Policy Transmission Need. If the Developer submits its qualification information prior to the NYISO's solicitation for solutions, the NYISO will notify the Developer of its qualification status within 30 days of receiving all the required information. If the NYISO determines that the Developer is qualified, the Developer will remain qualified for a period of three years.

Once a Developer is determined to be qualified in one of the NYISO transmission system planning processes, it does not need to submit a qualification application in the other NYISO transmission planning processes, but need only provide updates to material changes to its qualification information when seeking to become qualified in each transmission planning process in which it wishes to participate.

A Developer that is qualified under the Reliability Planning Process or Economic Planning Process at the time of the NYISO solicitation for solutions in this Public Policy Transmission Planning Process may simply submit to the NYISO any material updates to its previously submitted Developer Qualification Form for the NYISO's consideration of its qualification for the Public Policy Transmission Planning Process.

A Developer that has not been determined to be qualified prior to the NYISO's solicitation for solutions may still seek to become qualified as described in Section 3.3.1 of this Manual. A Developer must inform the NYISO of any material change to its qualification information while its qualification status is being determined and within 30 days of any material change to its qualification information that occurs at any time during the Developer's qualification period.

3.2 Request for Proposed Solutions

Following the posting of the Public Policy Transmission Need(s) identified by the NYPSC, the NYISO will solicit the proposal of Public Policy Transmission Projects and Other Public Policy Projects to satisfy the identified needs, pursuant to Section 31.4.3.1 of Attachment Y. The solicitation window will remain open for a period of 60 days. Transmission Owners and Other Developers may propose solutions, whether transmission or non-transmission, to address the needs.

Proposed Interregional Transmission Projects that have been identified and evaluated in accordance with the "Analysis and Consideration of Interregional Transmission Projects"

section of the Interregional Planning Protocol may also be proposed as transmission solutions to meet the identified Public Policy Transmission Need(s).

Pursuant to Section 31.4.3.2 of Attachment Y, the NYPSC or Long Island Power Authority may request the appropriate Transmission Owner(s) or Other Developer(s) to propose a transmission solution. Developers proposing a transmission solution in this manner must satisfy the same developer qualification and project information requirements as any other project. The Developer of a proposed Public Policy Transmission Project prepared in response to a NYPSC or Long Island Power Authority request is eligible to recover certain preparation costs as described in Section 31.4.3.2, regardless of whether its project is ultimately selected by the NYISO.

3.3 Submission of Project Information

3.3.1 Project Proposals

Within the solicitation window for solutions to a Public Policy Transmission Need, Developers wishing to propose Public Policy Transmission Projects that are qualified as described in Section 3.1 of this Manual, and Developers wishing to propose Other Public Policy Projects, must submit all required project information to the NYISO as described in Sections 3.3.2 and 3.3.3 of this Manual. If: (i) the NYISO determines that the Developer's submission of its project information is incomplete, or (ii) the NYISO determines at any time in the planning process that additional project information is required, the NYISO shall request that the Developer provide additional project information within 15 days. A Developer's failure to provide the data requested by the NYISO within the timeframes described above will result in the rejection of the Developer's proposed project from further consideration during that planning cycle.

All project proposals should be submitted to the NYISO via e-mail to its Public Policy Planning Mailbox: PublicPolicyPlanningMailbox@nyiso.com

Any Developer that has not been determined by the NYISO to be qualified, but that wants to propose to develop a Public Policy Transmission Project, must submit to the NYISO its qualification information as described in Section 3.1 of this Manual within 30 days after the NYISO's request for solutions.

Developers shall submit any additional Developer qualification information or project information required by the NYISO under Section 31.4.4.3 of Attachment Y within 15 days of the NYISO's request.

Subject to the execution of appropriately drawn confidentiality agreements and the Commission's standards of conduct, the NYISO and the appropriate TO shall provide access to the system data that is necessary to develop proposed solutions.

The NYISO shall maintain the confidentiality of solutions to the extent set forth in Section 31.4.15 of Attachment Y.

3.3.2 Requirements for Public Policy Transmission Projects

As defined in Section 31.1.1 of Attachment Y, a Public Policy Transmission Project is a transmission project or a portfolio of transmission projects proposed by Developer(s) to satisfy an identified Public Policy Transmission Need and for which the Developer(s) seek to be selected by the NYISO for purposes of allocating and recovering the project's costs under the NYISO OATT.

A Developer proposing a Public Policy Transmission Project must within the timeframe described in Section 3.3.1 above:

(i) submit the information required in Section 31.4.5.1 of Attachment Y by completing and submitting to the NYISO the forms set forth in Attachments B and C to this Manual;

(ii) demonstrate to the NYISO that it has submitted, as applicable, a valid Interconnection Request for the project pursuant to Section 30.3.3 of Attachment X of the ISO OATT or a Study Request for the project pursuant to Sections 3.7.1 or 4.5.1 of the ISO OATT; and

(iii) execute a study agreement with the NYISO, which is set forth in Attachment E to this Manual, and submit to the NYISO a non-refundable application fee of $10,000 and a study deposit of $100,000. The Developer will be responsible for the actual costs of the NYISO's evaluation of its proposed Public Policy Transmission Project in accordance with the requirements set forth in Section 31.4.4.4 of Attachment Y and the study agreement, including the costs associated with the NYISO's use of subcontractors.

3.3.3 Requirements for Other Public Policy Projects

As defined in Section 31.1.1 of Attachment Y, an Other Public Policy Project is a non-transmission project or a portfolio of transmission and non-transmission projects proposed by a Developer to satisfy an identified Public Policy Transmission Need. An Other Public Policy Project may consist of transmission, generation, and/or demand-side projects.

A Developer proposing an Other Public Policy Project must within the timeframe described in Section 3.3.1 above:

(i) submit the information required in Section 31.4.5.2 of Attachment Y by completing and submitting to the NYISO the form set forth in Attachment B to this Manual; and

(ii) demonstrate to the NYISO that it has submitted, as applicable, a valid Interconnection Request for the project pursuant to Section 30.3.3 of Attachment X of the ISO OATT or a Study Request for the project pursuant to Sections 3.7.1 or 4.5.1 of the ISO OATT

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4. STUDY CASE DEVELOPMENT

4.1 Study Case Development Process

The intent of the study case development process for the Public Policy Transmission Planning Process is to establish reliable baseline and project study cases, the results of which will be compared to measure the impact of each proposed project. The NYISO will study proposed Public Policy Transmission Projects and Other Public Policy Projects using the most recent base case from the Reliability Planning Process, updates in accordance with this Manual, and compensatory megawatts as needed to resolve both Reliability Needs over the ten-year reliability study period and to maintain applicable reliability criteria for the study period for the Public Policy Transmission Need. Any regulated solution that has been selected under the Reliability Planning Process, the Economic Planning Process, or in a previous cycle of the Public Policy Transmission Planning Process will be included in the Public Policy Transmission Planning Process study cases, unless the regulated solution has been halted or applicable permits have been rejected or withdrawn.

As described in the following paragraphs, the NYISO will extend the most recent reliability planning models and economic planning assumptions for modeling solutions for Public Policy Transmission Needs by up to an additional twenty years, as appropriate, based upon the Public Policy Requirement and the identified Public Policy Transmission Need. The NYISO may develop scenarios which modify assumptions to evaluate the proposed Public Policy Transmission Projects according to the metrics for identification of the more efficient or cost effective Public Policy Transmission Project and the impact on NYISO wholesale electricity markets. The models and assumptions to be used for evaluating a Public Policy Transmission Need will be reviewed and discussed with the Transmission Planning Advisory Subcommittee (TPAS) and the Electric System Planning Working Group (ESPWG).

To establish a baseline case, compensatory megawatts will be added to the most recent Reliability Planning Process base case to maintain both resource adequacy and transmission security reliability criteria. Compensatory megawatts will be added as needed for each year of the study period for the Public Policy Transmission Need.

For each project case, the proposed project will be added to the most recent Reliability Planning Process base case in the appropriate model year according to the project's proposed in-service date. Then, similar to the baseline case, compensatory megawatts will be added to the project case to maintain reliability criteria. This method of determining the necessary compensatory megawatts unique to each project case will result in crediting each project with the reliability benefits it provides.

In the baseline and project cases, the location of the compensatory megawatts will be determined consistent with procedures in the Reliability Planning Process Manual. For the purpose of the Public Policy Transmission Planning Process, compensatory megawatts will be 250 MW blocks of generic natural gas fueled combined-cycle generation or 50 MW blocks of generic gas turbines, as appropriate to address reliability criteria violations that occur in the applicable model.

4.2 Study Case Types

Prior to commencing the viability & sufficiency assessment, the NYISO will identify the study cases that represent the most applicable model to perform the viability & sufficiency assessment of the proposed Public Policy Transmission Projects and Other Public Policy Projects (Section 5) and to evaluate the efficiency and cost effectiveness of the proposed Public Policy Transmission Projects for purposes of selection (Section 6) based on the relevant Public Policy Requirement and the identified Public Policy Transmission Need. The NYISO develops and maintains several power system planning models that may be utilized to perform evaluations.

The necessary study cases will also be determined based on the project evaluation criteria chosen by NYPSC (Section 2.2). Metric(s) to measure projects against the sufficiency criteria for the Public Policy Transmission Need will be dependent upon the criteria themselves and could require a study case from one or more power system perspectives, such as: (i) power-flow, (ii) dynamics, (iii) short-circuit, (iv) resource adequacy, and/or (v) production cost. Each perspective utilizes a different type of computer modeling tool for the respective analysis and the study cases may originate from one or more of the following sources:

Table 4-1: Study Case Types, Sources, and Software

Study Case Type	Source	Primary NYISO Software
Power Flow	NYISO FERC 715 NYISO RNA/CRP	Siemens PTI PSS/E Siemens PTI PSS/MUST PowerGEM TARA
Dynamics	NYISO FERC 715 NYISO RNA/CRP	Siemens PTI PSS/E
Short Circuit	NYISO FERC 715 NYISO RNA/CRP	ASPEN OneLiner
Resource Adequacy	NYISO RNA/CRP	GE MARS
Production Cost	NYISO CARIS	GE MAPS

The study case(s) should represent the most applicable model for the criteria being studied. Updates or modifications to the models may be necessary to properly assess viability and sufficiency and evaluate metrics for efficiency or cost effectiveness. The various study case types will be modified and maintained in a consistent manner. The NYISO may update the study case following the viability and sufficiency analysis prior to conducting the evaluation and selection of a Public Policy Transmission Project to satisfy a Public Policy Transmission Need.

4.2.1 Power Flow Case

Power flow cases model the network of generation, transmission, and electrical loads in New York as well as externally connected regions. Power flow cases are used to evaluate the steady-state behavior of the existing system under varying generation and load

conditions. Typically power flow cases are used as input into other types of analysis, such as those described in the remainder of this section.

The NYISO develops and submits a set of power flow cases to the FERC, on a yearly basis, via FERC Form No. 715, as described in the NYISO Reliability Analysis Data Manual.

The NYISO also develops a power flow case for use in the RNA study, which uses the FERC 715 case as a starting point. The RNA power flow is subject to specific inclusion rules to identify projects to be modeled for each of the ten forward looking study years. The RNA process also provides that the base case adheres to applicable transmission security and resource adequacy reliability standards and, if needed, generic blocks of capacity may be added to meet these standards.

Transmission security is an operating and deterministic concept which refers to the ability of the electric systems to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements. Transmission security cases include a power flow case and a set of pre-defined contingencies, which are applied to the case, and are used to evaluate the transmission network performance.

The NYISO evaluates transmission security in the RNA, the annual Area Transmission Review (ATR), and interregional studies. The applicable design criteria and performance requirements can be found in the NYSRC Reliability Rules, the NPCC Directory #1, and the NERC TPL and other relevant standards.

The design and performance metrics used during transmission security evaluations include line flows and bus voltages, which are evaluated against physical equipment thermal and voltage ratings.

4.2.2 Dynamics Case

Stability analysis is an analytical method used to check the ability of an electric system to maintain a state of equilibrium during normal and abnormal system conditions or disturbances. Stability cases are comprised of a power flow case and a dynamics model, which are combined to model the systems transient response during various contingencies.

The NYISO evaluates the dynamic performance of the NYCA in the annual ATR study, which typically covers a five-year horizon. The dynamic databases for evaluating New York State bulk power system stability performance are developed according to the procedures described in the NYISO Reliability Analysis Data Manual. Stability metrics are evaluated against the NERC TPL Transmission System Planning Performance Requirements.

For a stability simulation to be deemed stable following a disturbance, oscillations in angle and voltage must exhibit positive damping within ten seconds after initiation of the disturbance with due regard to reclosing. If a secondary mode of oscillation exists within the initial ten seconds, then the simulation time shall be increased sufficiently to demonstrate that successive modes of oscillation exhibit positive damping before the simulation may be deemed stable. Instability is any loss of synchronism of generators or insufficient damping torque that cannot be demonstrably contained to a well-defined local area.

4.2.3 Short Circuit Case

Short circuit studies determine the interrupting duty of circuit breakers within the New York State Transmission System and whether those breaker ratings would be exceeded or not. Short circuit cases are comprised of a detailed network model including substation equipment. The databases are updated annually in coordination with the New York Transmission Owners, as described in the NYISO Reliability Analysis Data Manual.

The NYISO performs short circuit evaluations in the RNA and ATR adhering to NERC, NPCC, and NYSRC performance requirements. The primary metric evaluated during short circuit studies is the breaker duty (current amperage required to be interrupted by breaker) during various bus faults. In addition, the evaluations can also provide information for the rating of new circuit breakers and capability remaining in the existing breakers.

4.2.4 Resource Adequacy Case

Resource adequacy evaluations identify the statistical likelihood that an inter-connected power system will experience a loss of load due to insufficient available resources. Typically a "pipe & bubble" representation of the network is used with statistical generator, transmission, and load models to perform a probabilistic "Monte Carlo" simulation that identifies system reliability issues.

The NYISO develops a resource adequacy case as part of the Reliability Planning Process, using results from a power flow case as the basis for the model. The resource adequacy database is updated at the beginning of each RNA and CRP study, as described in the NYISO Reliability Planning Process Manual. The reliability base case is used to evaluate the New York power system against NYSRC Section A criteria that plans the system to a probability of not more than one forced disconnection on the bulk power system in every ten years (expressed mathematically as 0.1 days per year) or less. The resource adequacy database can also be used to calculate capacity cost savings.

4.2.5 Production Cost Case

Production cost studies evaluate the physical and economic operation of an inter-connected power system/market. Simulations mimic the centralized security constrained least cost unit commitment and dispatch functions employed by power system operators and can be evaluated over a wide range of timelines.

The NYISO production cost base case is developed in the Economic Planning Process and is used to perform the CARIS study, which fulfills FERC Order No. 890 mandates concerning economic transmission system planning. The production cost base case is updated on an annual basis and is benchmarked against historical power system operation, as described in the NYISO Economic Planning Process Manual (available from the NYISO Web site at the following URL: http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp), using a power flow case as input for the network topology.

The production cost models used in the Public Policy Transmission Planning Process will use the most recent Reliability Planning Process base case for the network topology and the

most recent CARIS Assumptions Matrix for economic-related assumptions, which is developed in accordance with the NYISO Economic Planning Process Manual. Based on the Public Policy Transmission Need, modifications may be necessary to the production cost model assumptions.

There are numerous metrics developed during production cost simulations, with the primary metric being production cost itself. Secondary metrics such as generation dispatch, transmission line flows, transmission line congestion, and locational energy prices (LBMP), are readily available.

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5. VIABILITY & SUFFICIENCY ASSESSMENT OF PROPOSED SOLUTIONS

The NYISO will conduct three initial assessments to determine whether the submitted proposals are: (1) complete, (2) viable, and (3) sufficient to satisfy the Public Policy Transmission Need. When evaluating proposed solutions to a Public Policy Transmission Need from any Developer, the NYISO will assess all resource types – including generation, transmission, demand response, or a combination of these resource types – on a comparable basis as potential solutions.

The NYISO, after determining the completeness of each proposed solution, will evaluate each complete proposed solution to confirm whether the solution proposed by the Developer is viable as defined in 31.4.6.3 of Attachment Y. The NYISO will then evaluate each viable solution to confirm whether the proposed solution is fully sufficient to satisfy the Public Policy Transmission Need, including the project evaluation criteria chosen by the NYPSC (Section 2.2). The NYISO will reject from further consideration during that planning cycle proposals not deemed viable and sufficient. These individual assessments will be performed in the same general timeframe for all proposed solutions.

The NYISO will present the Viability and Sufficiency Assessment to stakeholders, interested parties, and the NYPSC for comment. The NYISO will include in the Public Policy Transmission Planning Report the results of this assessment.

5.1 Developer Determination to Proceed

A Public Policy Transmission Project is eligible for continued evaluation for purposes of the NYISO's selection of the more efficient or cost effective Public Policy Transmission Project to satisfy a Public Policy Transmission Need (Section 6) if: (i) the NYISO deemed the project viable and sufficient to meet the identified Public Policy Transmission Need, and (ii) the Developer submits, within 30 days of the NYISO's presentation of the Viability and Sufficiency Assessment, notification that it intends for its project to proceed to be evaluated by the NYISO for purposes of the NYISO's selection of the more efficient of cost effective Public Policy Transmission Project. This notice must include: (i) the Developer's consent to the NYISO's disclosure of the details of its proposed Public Policy Transmission Project in the Public Policy Transmission Planning Report in accordance with the confidentiality requirements in Section 31.4.15 of Attachment Y, and (ii) a demonstration that the Developer has executed, as applicable, an Interconnection Feasibility Study Agreement pursuant to Section 30.6.1 of Attachment X of the OATT or a System Impact Study Agreement pursuant to Section 3.7.2 of the OATT. If a Developer: (i) notifies the NYISO that it does not intend for its proposed Public Policy Transmission Project to proceed to be evaluated for purposes of the ISO's selection, or (ii) does not provide the required notification to the NYISO, the NYISO will remove the project from further consideration during that planning cycle.

5.2 NYPSC Determination to Proceed With Evaluation

Pursuant to Section 31.4.6.7 of Attachment Y of the OATT, following the NYISO's presentation of the Viability and Sufficiency Assessment, the NYPSC will review the Viability and Sufficiency Assessment and will issue an order explaining whether the NYISO should continue to evaluate transmission solutions to a Public Policy Transmission Need or whether non-transmission solutions should be pursued. If the NYPSC concludes that non-transmission solutions should be pursued, the NYPSC will indicate in its order that there is no longer a transmission need driven by a Public Policy Requirement that requires the NYISO's evaluation of potential transmission solutions. In such case, the NYISO will not perform an evaluation, or make a selection of, a more efficient or cost-effective transmission solution for that planning cycle.

6. EVALUATION OF PUBLIC POLICY TRANSMISSION PROJECTS FOR EFFICIENCY OR COST EFFECTIVENESS

The purpose of this phase of the PPTPP is for the NYISO to evaluate the viable and sufficient Public Policy Transmission Projects to identify the more efficient or cost effective Public Policy Transmission Project to satisfy a Public Policy Transmission Need in accordance with Section 31.4.8 of Attachment Y of the OATT. A Public Policy Transmission Project would be eligible for selection for purposes of cost allocation and recovery if: (i) the NYISO deemed the project viable and sufficient to meet the identified Public Policy Transmission Needs, and (ii) the Developer has provided the required notification to proceed described in Section 5.1 of this Manual.

6.1 Evaluation for Efficiency or Cost Effectiveness

The NYISO's selection of the more efficient or cost effective Public Policy Transmission Project will be based on the totality of its evaluation of the eligible Public Policy Transmission Projects using the metrics set forth in Section 31.4.8.1 of Attachment Y based on the project information provided by the Developer (Section 3.3.2 of this Manual) and all other information available to the NYISO. The NYISO may engage an independent consultant(s), the costs of which shall be paid for by the Developer, to review the reasonableness and utilization of the information submitted by a Developer.

In determining which of the eligible proposed regulated Public Policy Transmission Projects is the more efficient or cost effective solution to satisfy the Public Policy Transmission Need, the NYISO will consider the Public Policy Transmission Project's total performance under all of the selection metrics in making its determination. The NYISO may develop scenarios which modify assumptions to evaluate the proposed Public Policy Transmission Projects according to the selection metrics and the impact on NYISO wholesale electricity markets. The NYISO will consider and rank each proposed solution based on the quality of its satisfaction of the metrics. As described in Attachment Y Section 31.4.8.1, the metrics include: capital costs, cost per MW ratio, expandability, operability and performance of the solution, availability of property rights, schedule for project completion, and criteria specified by the NYPSC. The NYISO may consider other metrics in the context of the Public Policy Requirement, such as economic or emissions impacts, and/or additional metrics prescribed by the Public Service Commission as described in Section 6.1.2. The NYISO may also rely on the independent consultant's analysis in evaluating the proposed project using some or all of the metrics.

6.1.1 Predefined Metrics for Evaluation

The metrics as set forth in Attachment Y Section 31.4.8.1 will be evaluated as prescribed in that section and as further described below:

Capital costs for a proposed Public Policy Transmission Project will be evaluated for accuracy and reasonableness and will be performed on a comparative basis with other proposed Public Policy Transmission Projects. The Developer must submit detailed and credible estimates for the capital costs associated with the engineering, procurement, permitting, and construction of a proposed transmission solution as specified in Attachment C of this Manual. The total capital cost estimate must be accompanied by a cost certainty range surrounding the estimate to account for anticipated contingencies.

The metric "Cost per MW" is calculated by dividing the present worth of the total capital cost by the MW value. The present worth is calculated by using a discount rate which is the current weighted average cost of capital for the New York Transmission Owners as determined in the most recent CARIS Phase 1 study. The MW value is determined by adding the avoided compensatory megawatts, when compared to the baseline without the project, to any additional beneficial MW (on binding interfaces associated with the need for compensatory megawatts in the baseline) that the proposed project offers.

In assessing the expandability of the proposed project, the NYISO may consider the ease of physically expanding a facility, which can include consideration of future opportunities to economically expand a facility, and the facilitation of future transmission siting. Such consideration may include future modifications to increase equipment ratings of the proposed facilities, staging or phasing of future transmission development, or otherwise benefiting from the proposed facilities for future reliability or congestion relief purposes.

The assessment of the relative operability and performance of the proposed project may consider any improved or diminished operability and performance even if only a qualitative or relative impact can be attributed to these factors. The NYISO will consider and evaluate any claims of operability and performance impacts made by the Developer, as well as considering any potential impacts raised by NYISO operations, planning, or other personnel.

In assessing the availability of real property rights, the NYISO may use consultants, the knowledge of the NYDPS, other government agencies and departments, municipalities, and any information provided by the Transmission Owner(s) in the applicable Transmission District(s).

The schedules for project completion are first evaluated at a high level as part of the initial viability assessment and then again in the evaluation stage using the more detailed engineering and design information as required in Section 31.4.8.1.7 of Attachment Y to the OATT. The scheduling metric will ensure that each proposed solution remains viable to satisfy the Public Policy Transmission Need by the need date, if any.

6.1.2 Additional NYPSC Metrics

The NYISO will evaluate any additional metrics and consider any additional criteria identified by the NYPSC for the NYISO's determination of the more efficient or cost effective Public Policy Transmission Projects, to the extent the NYISO's compliance with the additional metrics and criteria are feasible. The NYPSC will identify the additional metrics and analysis when it identifies the Public Policy Transmission Needs, as described in Section 2.2 of this Manual.

6.1.3 Other Metrics

The NYISO will consider other metrics, as appropriate in the context of the Public Policy Requirements, in consultation with stakeholders. These metrics may include, but are not limited to: changes in production costs, LBMP, losses, emissions, ICAP costs, TCCs and TCC revenues, congestion, impact on transfer limits, and deliverability. These metrics will be identified and presented to ESPWG prior to commencing the NYISO's evaluation.

6.2 Evaluation of Proposed Solutions to Address Local Transmission Owner Plans

In accordance with the requirements set forth in Section 31.4.7 of Attachment Y to the OATT, the NYISO will review LTPs to determine whether: (i) any proposed regional Public Policy Transmission Project is more efficient or cost effective than the local transmission solutions proposed in the LTPs at satisfying a local need driven by a Public Policy Requirement identified in the LTPs, and (ii) any proposed regional Public Policy Transmission Project is more efficient or cost effective at satisfying a regional Public Policy Transmission Need that impacts more than one Transmission District than any local transmission solutions identified in the LTPs to address local transmission needs driven by Public Policy Requirements.

The NYISO will report the results of this evaluation in the Public Policy Transmission Planning Report.

6.3 Interregional Coordination

The NYISO will coordinate with ISO-NE and PJM to identify the consequences, if any, of a transmission solution driven by a Public Policy Requirement on the neighboring regions using the respective planning criteria of such regions. The NYISO will report the results of this evaluation in the Public Policy Transmission Planning Report.

6.4 Evaluation of Impact on NYISO Wholesale Electricity Markets

Using the metrics described in Section 6.1.3 of this Manual, the NYISO will evaluate the impacts on the NYISO-administered wholesale electricity markets of the eligible Public Policy Transmission Projects. The results of this analysis are included in the Public Policy Transmission Planning Report.

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7. PUBLIC POLICY TRANSMISSION PLANNING REPORT

7.1 Preparation of Draft Public Policy Transmission Planning Report

The Public Policy Transmission Planning (PPTP) Report provides summaries of identified Public Policy Transmission Needs and the projects proposed to address those needs. The report comprehensively describes the technical evaluations that were performed to compare the Public Policy Transmission Projects and identifies the more efficient or cost effective Public Policy Transmission Project, if any.

The NYISO will prepare a draft PPTP Report that sets forth the NYISO's assumptions, inputs, methodologies, and the results of its analyses and reflects any input from the NYDPS. The draft report will include a comparison to LTPs and identify the consequences to neighboring ISO/RTO regions. The draft report will contain: (i) a list of Developers and their proposed projects that qualified for evaluation in that cycle of the PPTPP, (ii) the proposed Public Policy Transmission Projects and Other Public Policy Projects that the NYISO determined satisfied the viability and sufficiency requirements, and (iii) the more efficient or cost-effective regulated Public Policy Transmission Project, if any, that NYISO staff recommends for selection for purposes of cost allocation and cost recovery under the NYISO OATT. The report will describe the basis for the overall ranking of the Public Policy Transmission Projects. The draft report will also include comparisons to Interregional Transmission Projects, if any, and the results of the NYISO's evaluation of impacts to NYISO-administered wholesale electricity markets.

7.2 Stakeholder Review of Draft PPTP Report

NYISO staff will submit the draft PPTP Report to the TPAS and ESPWG for review and comment. Following completion of the TPAS and ESPWG review, the draft PPTP Report with any revisions resulting from the review will be forwarded to the Business Issues Committee. Following discussion and an advisory vote by the Business Issues Committee, the PPTP Report will be submitted to the Management Committee for discussion and advisory vote.

7.3 Market Monitoring Unit Review

Concurrently with the TPAS and ESPWG review, NYISO staff will provide the draft PPTP Report to the Market Monitoring Unit for its review and consideration. The Market Monitoring Unit's evaluation, including its evaluation of the impacts on the NYISO-administered wholesale electricity markets, will be provided to the Management Committee prior to the Management Committee's advisory vote.

7.4 Board Review and Action

Following the Management Committee advisory vote, the PPTP Report will be submitted to the NYISO Board for its review and action. Concurrently, the Market Monitoring Unit's evaluation will be provided to the Board. The Board will act on the PPTP Report in accordance with Section 31.4.11.2 of Attachment Y. If the Board determines not to select a Public Policy Transmission Project to satisfy a Public Policy Transmission Need, the Board will state the reasons for its determination. Upon final approval of the PPTP Report, by the Board, the NYISO will issue the PPTP Report to the marketplace by posting the report to the Public Policy Transmission Planning Process section of its website.

8. POST-SELECTION DEVELOPER REQUIREMENTS

Upon the NYISO's selection of a Developer's proposed Public Policy Transmission Project, the Developer shall submit the selected project to the appropriate governmental agency(ies) and/or authority(ies) to begin the necessary approval process to site, construct, and operate the project to the extent such authorizations have not already been requested or obtained. The Developer shall also enter into a Development Agreement with the NYISO in accordance with the requirements set forth in Section 31.4.12.2 of Attachment Y to the OATT. Prior to energizing its Public Policy Transmission Project, the Developer of the selected Public Policy Transmission Project shall execute the ISO/TO Agreement or an operating agreement with the NYISO under comparable terms to the ISO/TO Agreement.

If the Developer does not enter into a Development Agreement in accordance with the requirements set forth in Section 31.4.12.2 or does not request that it be filed unexecuted with FERC, or the Development Agreement is terminated under the terms of the agreement prior to the completion of the term of the agreement, the NYISO may: (i) submit a report to the NYPSC and/or FERC, as appropriate, for its consideration and determination of whether action is appropriate under state or federal law, and (ii) take such action as it reasonably considers is appropriate, following consultation with the NYPSC, to ensure that the Public Policy Transmission Need is satisfied.

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9. COST ALLOCATION AND RECOVERY

The cost allocation principles and methodology for Public Policy Transmission Projects are contained in Section 31.5.5 of Attachment Y of the NYISO OATT. The cost recovery requirements are contained in Section 31.5.6 of Attachment Y of the NYISO OATT.

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10. MONITORING OF SELECTED PUBLIC POLICY TRANSMISSION PROJECTS

Section 31.4.13 of Attachment Y of the NYISO OATT establishes the responsibility of the NYISO to monitor the progress of a selected Public Policy Transmission Project to confirm that it continues to develop consistent with conditions, actions, or schedules for the project.

Upon selection of a Public Policy Transmission Project, the Developer shall submit a status report on a quarterly basis, or as requested by the NYISO, using the Project Status Report form set forth in Attachment D to this Manual. This form shall be used to document the current status of the project and to identify changes since the completion of the Public Policy Transmission Planning Report in which the project was selected. The updated information on the project status shall include, but not be limited to:

- Evidence of a commercially viable technology
- Major milestone schedule
- Demonstration of site control
- Status of any necessary contracts
- Status of NYISO interconnection studies
- Status of NYISO interconnection agreement
- Status of any required permits
- Status of equipment procurement
- Evidence of financing and regulatory approvals (*e.g., rate filings*)
- Material changes in financial condition (*e.g., bankruptcies, reduced bond ratings*)
- Any other information that is requested by the NYISO

The status reports shall be submitted electronically to Interconnect_Project_Status@nyiso.com on or before the first day of each calendar quarter, or as requested by the NYISO. The NYISO will treat any confidential data in accordance with the provisions of Attachment Y of the NYISO OATT, and the NYISO Code of Conduct, which is contained in Attachment F of the NYISO OATT.

10.1 Posting of Approved Solutions

Pursuant to Section 31.4.14 of Attachment Y of the NYISO OATT, the NYISO will maintain a list in the Public Policy Transmission Planning Process section of its website of all Developers who have accepted the terms and conditions of an Article VII certificate under the New York Public Service Law, or any successor statute, or any other applicable permits to build a Public Policy Transmission Project in response to a transmission need driven by a Public Policy Requirement.

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Attachment A: Developer Qualification Form

The NYISO Developer Qualification Form is available under the *Reliability Planning Process Manual* which is located in the Manuals > Planning folder on the NYISO Manuals & Guides Web site:

http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp

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Attachment B: Information for a Proposed Solution to a Public Policy Transmission Need

The form for Information for a Proposed Solution to a Public Policy Transmission Need is available under the *Public Policy Transmission Planning Process Manual* which is located in the Manuals > Planning folder on the NYISO Manuals & Guides Web site:

http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp

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Attachment C: Data Submission for Public Policy Transmission Projects

The form for Data Submission for Public Policy Transmission Projects is available under the *Public Policy Transmission Planning Process Manual* which is located in the Manuals > Planning folder on the NYISO Manuals & Guides Web site:

http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp

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Attachment D: Project Status Report

The Project Status Report is available under the *Reliability Planning Process Manual* which is located in the Manuals > Planning folder on the NYISO Manuals & Guides Web site:

http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp

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Attachment E: Study Agreement for Evaluation of Public Policy Transmission Projects

The Study Agreement Form is available under the *Public Policy Transmission Planning Process Manual* which is located in the Manuals > Planning folder on the NYISO Manuals & Guides Web site:

http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp

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