

DRAFT FOR COMMENT

NYISO
Comprehensive Planning Process
for Reliability Needs

February 26, 2004

NYISO Comprehensive Reliability Planning Process
Table of Contents
TO BE REVISED

1. Introduction	1
2. Stakeholder Process	1
3. Planning Criteria and Objectives	2
3.1. Reliability Criteria	3
3.1.1. NERC.....	3
3.1.2. NPCC	4
3.1.3. NYSRC.....	4
3.2. Objectives.....	4
3.2.1. Reliability Needs Assessment	4
3.2.2. Historic Congestion	4
4. Process	5
4.1. Overview	5
4.2. Input Stage.....	5
4.2.1. Baseline.....	5
4.2.2. Input Requirements.....	5
4.2.2.1. Load and Capacity Data Report.....	5
4.2.2.2. Existing Reliability Assessments.....	5
4.2.2.3. Short Circuit Data.....	6
4.2.3. Input from Neighboring Control Areas	6
4.2.3.1. Forecasted Load, Facilities and System Conditions.....	6
4.2.4. Input from Stakeholders.....	6
4.2.5. Reliability Scenario Development	7
4.3. Analysis Stage.....	7
4.3.1. Historic Congestion	7
4.3.1.1. Summary Reports.....	7
4.3.1.2. Detailed Cause Analysis.....	8
4.3.2. Baseline Reliability Needs Assessment	8
4.3.3. Evaluation of Alternate Reliability Scenarios.....	8
4.3.4. Report Preparation.....	9
4.4. Review Process.....	9
4.4.1. Stakeholder Review.....	9
4.4.2. Board Action.....	9
5. Issuance of Final Report	9
5.1. Follow Up Discussions	9
6. References	10
7. Figures	10

1. Introduction

The NYISO Initial Planning Process, approved by the Operating Committee on September 10, 2003, was the first phase in the development of a comprehensive planning process for the NYISO. This process is being developed by NYISO Staff with assistance of the Electric System Planning Working Group (“ESPWG”), an ad-hoc committee comprised of BIC and OC member companies. This proposal, “A Comprehensive Planning Process for Reliability Needs”, builds on the Initial Planning Process reliability-based analyses and retains the initial steps in that process. The Comprehensive Process, however, extends the scope of the Initial Planning Process beyond the simple identification of reliability needs. It provides a framework which includes consideration of both market-based and regulated solutions to identified needs and a procedure to ensure that reliability needs will be met in a timely manner. It also provides a backstop cost allocation and recovery mechanism for reliability upgrades. (See Attachment A for the Process Flow Diagram depicting the major elements of the Comprehensive Reliability Planning Process).

The work already approved by the OC and underway at the NYISO regarding the collection and reporting of historic congestion costs will continue under this Proposal.

This scope for the NYISO Comprehensive Reliability Planning Process is being brought forward to the OC for discussion and action at the XXX meeting. Following OC approval, a tariff filing will be prepared for MC and Board approval for submission to FERC.

It is anticipated that further development efforts on the Phase 2 “Comprehensive” Planning Process will continue immediately upon the OC/MC approval of the Reliability Process. These efforts will consider the various FERC planning requirements of Order 2000, the SMD NOPR, the Wholesale Market Design Whitepaper and the January 9, 2004 Pat Wood letter to the NYISO regarding the extension of the Comprehensive Planning Process to include economic issues. The scope for this Comprehensive Reliability Planning Process may need further modifications based upon the outcome of the Phase 2 process. It is anticipated that a future FERC filing will also be required.

- 2. Stakeholder Process [NOTE: NEED TO DETERMINE WHETHER TO CONTINUE THIS DUAL ROLE FOR ESPWG AND TPAS. THIS DRAFT ASSUMES THAT THIS DUAL PROCESS WILL CONTINUE FOR THE IMPLEMENTATION OF THE COMPREHENSIVE RELIABILITY PLANNING PROCESS. THIS DRAFT ALSO ASSUMES THAT THE CURRENT AGREEMENT BETWEEN BIC AND THE OC REGARDING VOTING ON THE PLANNING PROCESS AT THE OC WILL CONTINUE]**

In light of the fact that the Comprehensive Reliability Planning Process contains both reliability and business issues, it has been agreed that both the Transmission Planning Advisory Subcommittee (“TPAS”) and the ESPWG will participate in the implementation process. This participation will consist of parallel input and review stages similar to the process for the Initial Planning Process as shown in **Attachment B. .**

TPAS will have primary responsibility for the reliability analyses, while the ESPWG will have primary responsibility for providing commercial input and assumptions utilized in the development of reliability assessment scenarios and the reporting and analysis of historic congestion costs. Coordination will be established between these two groups and with NYISO Staff during each stage of the planning process.

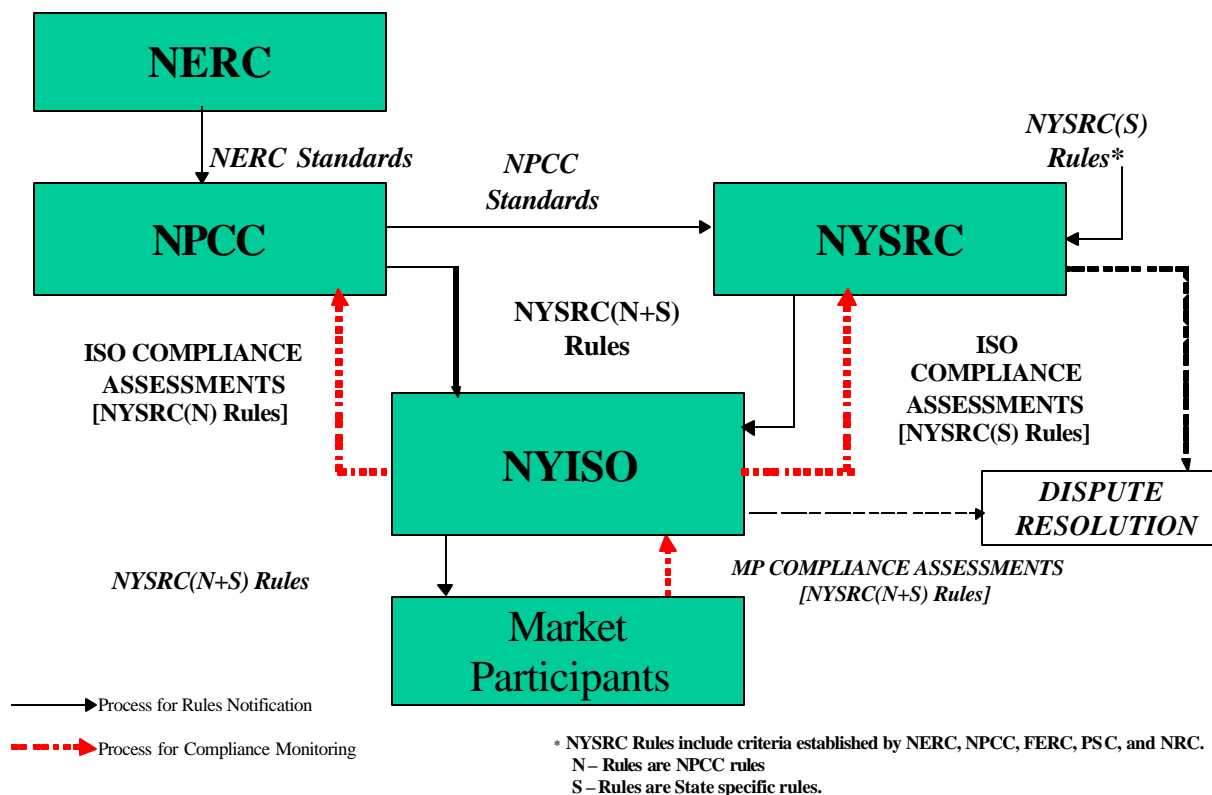
The intention is to achieve consensus at both TPAS and the ESPWG. While no formal voting process is established at this level, which is typical for NYISO working groups, an opportunity for reporting majority and minority views will be provided in the absence of a consensus.

Following TPAS and ESPWG review, the Draft Report will be forwarded to the Operating Committee (“OC”) for discussion and action and subsequently to the Management Committee for discussion and action prior to submission to the NYISO Board for approval. See Section 4.4.1 for a further description of the Stakeholder Review Process.

3. Planning Criteria and Objectives [NO SUBSTANTIVE REVISIONS WERE MADE TO THIS SECTION]

The New York Control Area (“NYCA”) power system is planned and operated to the planning and operating policies, standards, criteria, guidelines, procedures and rules promulgated by the North American Electric Reliability Council (“NERC”), Northeast Power Coordinating Council (“NPCC”), and the New York State Reliability Council (“NYSRC”). NERC establishes operating policies and planning standards for North America which includes the United States of America and the Provinces of Canada. NPCC criteria, guideline and procedures which apply to the five areas comprising NPCC (New York State, the New England States, and the Canadian Provinces of Quebec, Ontario and the Maritimes) may be more specific or more stringent than NERC standards and policies by recognizing regional characteristics or reliability needs – e.g., “the one day in ten years” loss of load expectation criteria. The NYSRC rules that apply to NYCA may be more specific or stringent than NERC and NPCC by recognizing NYCA characteristics and reliability needs – e.g., locational capacity requirements. The NYISO is the primary interface between market participants and the reliability councils. The chart below presents an overview of those interfaces.

Overview of the NYISO Reliability Interfaces



The objective of the NYISO’s Comprehensive Reliability Planning Process is to provide a comprehensive evaluation of the reliability needs of the NY system and will strive: 1) to demonstrate that the NYCA power system expansion plans are consistent with the reliability rules and will ensure the continued reliability (i.e., adequacy and security) of the power system consistent with good utility practice; 2) to identify, through reliability scenarios development, factors and issues that might adversely impact the reliability of the power system; and 3) to provide, through the analysis of historical system LBMP congestion costs, information to market participants about historical congestion including the causes for that congestion so that market participants can make appropriately informed decisions; and 4) to coordinate the reliability assessment with Neighboring Control Areas.

3.1. Reliability Criteria

3.1.1. NERC: Establishes standards and policies for North America which includes the United States of America and the Provinces of Canada. The NERC Operating Policies and Planning Standards can be found on the NERC web site at <http://www.nerc.com/standards/>.

3.1.2. NPCC: Establishes criteria, guideline and procedures which apply to the five areas comprising NPCC (New York State, the New England States, and the Canadian Provinces of Quebec, Ontario and the Maritimes) may be more specific or more stringent than NERC standards and policies by recognizing regional characteristics or reliability needs. The NPCC criteria, guides, and procedures can be found on the NPCC web site at <http://www.npcc.org/CriteriaGuidesProcedures.htm>.⁽¹⁾

3.1.3. NYSRC: Establishes rules that apply to NYCA that may be more specific or stringent than NERC and NPCC by recognizing NYCA characteristics and reliability needs. NYSRC rules can be found on the NYSRC web site at <http://www.nysrc.org/documents.html>. See Reliability Rules Revision No. 2, Version 7 (adopted May 9, 2003).⁽²⁾

3.2. Objectives

3.2.1. Reliability Needs Assessment

The baseline system as defined for the Annual Transmission Reliability Assessment (ATRA)⁽³⁾ will be assessed to determine if it meets all the reliability criteria for both resource and transmission adequacy. The ATRA focuses on the first five years of the planning horizon. Reliability needs will be defined in terms of quantities and not necessarily in terms of specific facilities. For instance, the MW quantity of additional transfer capability or MW quantity of additional resources would be specified.

In addition, the baseline system will be evaluated for robustness against factors and issues identified through reliability scenario analysis that might adversely impact the reliability of the power system for years one through ten. This evaluation of the baseline system for robustness will only identify conditions under which the reliability criteria may not be met. It will not identify or propose additional needs.

3.2.2. Historic Congestion

The NYISO will prepare summaries and detailed analysis of historic congestion across the New York system. This will include analysis to identify the significant causes of historic congestion.

These reports will be based upon the definitions of congestion developed by the ESPWG and approved by the Operating Committee on November 6, 2003.

4. Process

4.1. Overview

It has been stated that the planning process is as important as the plan itself, if not more important. This is certainly true for the NYISO's planning process. The purpose of the Comprehensive Reliability Planning Process is to facilitate the exchange of information between the NYISO, Market Participants and interested stakeholders regarding the future reliability of the NYCA power system and the historical economic performance of the transmission system. In addition, a framework is established which provides for the consideration of both market-based and regulated solutions to ensure that reliability needs will be met in a timely manner. The ATRA will provide the baseline for the study for the first five years. The expansion plans used in these reliability assessments for the second five years will be those proposed by market participants based upon criteria to be developed during the implementation phase. In addition, alternate reliability scenarios will be developed in consultation with Market Participants. The key elements of the initial planning process are described further below. See **Attachment C** [TBD] for the proposed timeline for the first report resulting from the NYISO Comprehensive Reliability Planning Process.

4.2. Input Stage (See Attachment D) **[NO SUBSTANTIVE REVISIONS WERE MADE TO THIS SECTION]**

4.2.1. Baseline

The ATRA will be used to set the baseline for the study for the first five years of the Comprehensive Reliability Planning Process.

4.2.2. Input Requirements

The input to be used for the second five years of the Comprehensive Reliability Planning Process includes: published data sources, existing standard reliability assessments, data for additional reliability analysis, input from Neighboring Control Areas, input from stakeholders, and input from the ESP Working Group regarding alternate reliability scenarios.

4.2.2.1. Load and Capacity Data Report

The NYISO Load and Capacity Data Report
(http://www.nyiso.com/services/documents/planning/pdf/2003_gold_boo)

[k.pdf](#)) will be the primary reference resource for the Initial Planning Process.

4.2.2.2. Existing Reliability Assessments

The existing standard reliability assessments that will be used in the Comprehensive Reliability Planning Process include:

- The NPCC New York Area Transmission Review (ATR) ⁽⁴⁾
- The NYISO Annual Transmission Reliability Assessment (ATRA)
- The NPCC New York Resource Adequacy Review (RAR) ⁽⁵⁾
- The NYSRC Installed Reserve Margin (IRM) Study ⁽⁶⁾
- The NYISO Locational Installed Capacity Study

4.2.2.3. Short Circuit Data

The Comprehensive Reliability Planning Process would use the information from the NYISO Annual Transmission Reliability Assessment (ATRA

4.2.3. Input from Neighboring Control Areas

The Comprehensive Reliability Planning Process will use the most recent power flow data collected through the annual regional (NPCC) and inter-regional (NERC) base case development process as the primary reference resource for the Neighboring Control Areas.

4.2.3.1. Forecasted Load, Facilities and System Conditions

The NYISO also will coordinate directly with the Neighboring Control Areas to exchange additional supplemental information for the study including: forecasted load, significant new or modified generation and transmission facilities, and anticipated system conditions.

4.2.4. Input from Stakeholders

In addition to information published in the NYISO Load and Capacity Data Report, the NYISO will solicit stakeholders directly for additional supplemental information for the initial planning study. This input will include:

- Transmission system – existing and planned additions – Transmission Owners

- Merchant transmission proposals – Merchant developers
- Generation additions/retirements – Generator Owners & Developers
- Demand response programs – Demand Response Providers
- Long-term firm transmission requests – NYISO and Transmission Owners

4.2.5. Reliability Scenario Development

The ESP Working Group will provide input regarding alternate reliability scenarios for additional reliability analyses. Reliability scenarios will be developed in two time frames: the next five years (first five years), and the next five years after that (second five years). Variables for consideration in the development of these reliability scenarios include:

- Load Forecast Uncertainty
- Fuel (prices and availability of supply)
- New Resources
- Retirements
- Transmission network topology (e.g., changes in procedures of lines that are normally open; change in contingencies based on breakers being operated normally open or closed; etc.)
- Limitations imposed by proposed environmental legislation

4.3. Analysis Stage **[NO SUBSTANTIVE REVISIONS WERE MADE TO THIS SECTION]**

4.3.1. Historic Congestion

The NYISO will prepare summaries and detailed analysis up to the past year of historic congestion across the New York system. This will include analysis to identify the significant causes of the historic congestion.

4.3.1.1. Summary Reports [See **Attachment E**: “Matrix”]

The NYISO will prepare various reports of historic congestion costs. These reports will be based upon the actual congestion data from the NYISO day-ahead market, and will include summaries, aggregated by month and calendar year, such as:

- By NYCA
- By zone
- By contingency in rank order
- By constraint in rank order
- Total Dollars

- Number of Hours

Congestion will be reported as the change in bid production costs. In addition, the following elements of congestion will also be reported:

- Impact on load payments
- Impact on generator payments
- Hedged and unhedged congestion payments

These reports will be based upon the definitions of congestion developed by the ESPWG and approved by the Operating Committee on November 6 2003. [See **Attachment E**]

4.3.1.2. Detailed Cause Analysis

The NYISO will perform an analysis to identify the cause of unusual events causing significant congestion levels. Such analysis will include the following elements:¹

- Identification of the cause of major transmission outages
- Quantification of the market impact of relieving historic constraints.

4.3.2. Baseline Reliability Needs Assessment

The NYISO will evaluate the reliability needs of the New York system for the first five-year and second five-year baseline. The evaluation will address resource and transmission adequacy over both periods. It also will address short circuit fault duty only for the first five-year period, and will be consistent with the ATRA process. The evaluation will be based on information from the existing standard reliability assessments (see §4.2.2.2) and additional reliability analysis will be performed to include the effects of input from Stakeholders and the Neighboring Control Areas for the second five-year period.

The analyses for the baseline reliability needs assessment will first determine whether or not the baseline resources and transmission system would meet all applicable reliability criteria (per §3.1). Then, if any reliability criteria would not be met, additional analyses will be conducted to determine the additional resources and/or transmission that would be needed to meet criteria, and to determine the expected first year of need for those additional resources and/or transmission. The study will not seek to identify specific additional facilities.

¹ Some of this information may be deemed sensitive and will need to be handled with care to protect national security interests.

4.3.3. Evaluation of Alternate Reliability Scenarios (Robustness of Baseline)

After completion of the baseline reliability needs assessment, the NYISO will conduct additional reliability analyses for the alternate reliability scenarios specified by the ESP Working Group. These evaluations will test the robustness of the baseline needs assessment. The reliability needs may increase in some reliability scenarios and may decrease, or even be eliminated, in others.

4.3.4. Reliability Needs Assessment Report Preparation

Once all the analyses have been completed, the NYISO will prepare a comprehensive report including assumptions, criteria and results.

4.4. Review Process (**See Attachment B**)

4.4.1. Stakeholder Review

At least two stakeholder review stages are anticipated for the Reliability Needs Assessment Report. Following review of the Staff's Draft Report by TPAS and the ESPWG, it will be forwarded to the OC for a vote. Interested representatives from the Business Issues Committee ("BIC") are invited to attend the OC meeting at which the Draft Report is under consideration. Following the OC vote, the Draft Report will be transmitted to the Management Committee ("MC") for a vote.

4.4.2. Input from NYS Public Service Commission

The Staff of the NYS Department of Public Service are expected to be an active participant in the NYISO's Comprehensive Reliability Planning Process. Input from the PSC will be considered and reflected in the final Reliability Needs Assessment Report.

4.4.3. Board Action

Following the MC vote, the Reliability Needs Assessment Report resulting from the NYISO Comprehensive Reliability Planning Process, with working group, OC and MC input, will be forwarded to the NYISO Board for action. Upon acceptance by the Board, the report will be finalized by NYISO Staff.

5. Issuance of Reliability Needs Assessment Report

Following Board acceptance, the NYISO Staff will issue the final Reliability Needs Assessment Report to the marketplace. This report will identify potential reliability needs determined under various future reliability scenario assumptions and will provide reports and analyses of historic congestion costs.

5.1. Public Information Sessions

In order to provide the ample exposure for the marketplace to understand the identified reliability needs the NYISO will provide various opportunities for market participants and other stakeholders to discuss the final Reliability Needs Assessment Report. Such opportunities may include presentations at various NYISO stakeholder committees, focused discussions with various sectors, and/or presentations in other public venues.

6. Request for Solutions **[NEW SECTION]**

Concurrent with issuance of the final Reliability Needs Assessment Report, the NYISO will solicit proposed solutions to the identified reliability needs from the marketplace. This solicitation is not envisioned to be a formal “RFP” process but rather to allow a sufficient time for both market-based responses and regulated responses to be developed in response to meet the identified needs in a timely manner.

6.1. Market-Based Responses

Market-based responses will be requested from all interested market participants. Such responses are open to all resources, including generation, demand response and merchant transmission developers.

6.2. Regulated Responses

The New York TOs will assume the obligation to prepare a regulated proposal to meet the reliability needs identified by the NYISO’s needs assessment. The NYISO will designate the responsible TO, which will normally be the TO in whose Transmission District the need occurs. Such proposals would not be limited solely to transmission solutions and will consider all feasible alternatives.

6.2.1. It is intended that regulated proposals will be reviewed by the PSC prior to submission by the TO to the NYISO.

6.2.2. The PSC will establish a process for the review of such regulated proposals which will provide for the consideration of alternative resources. This process shall provide an opportunity for public input.

6.3. Establishment of Lead Time for Responses

The NYISO will establish the lead time for responses to identified reliability needs based upon the lead time required for the regulated solution. Normally, the NYISO will only issue a request for solutions in cases where there is an imminent need for action to ensure reliability. However, for the first round of the Comprehensive Reliability Planning Process, the NYISO will request solutions to all identified needs in order to establish the lead time for the regulated backstop solution as the benchmark for the future.

6.4. Qualifications For a Valid Response

The NYISO will develop qualifications for a valid market-based solution in conjunction with ESPWG. Such qualifications shall recognize the differences between various resources' characteristics and development time lines.

7. NYISO Evaluation of Proposed Solutions [NEW SECTION]

NYISO Staff shall perform an evaluation of market-based and regulated proposals to determine whether such proposals will meet the identified needs in a timely manner.

7.1. Market Based Responses

If market-based responses are found by the NYISO to be sufficient to meet an identified need in a timely manner, the NYISO will so state in the Comprehensive Reliability Plan Report.

7.1.1. The NYISO will not select from among the market-based responses if there are more than one response which will meet an identified need.

7.1.2. The NYISO will monitor the status of market-based projects to ensure their continued viability to meet the reliability need as part of its ongoing annual planning process. The NYISO will develop criteria, in conjunction with the ESPWG, to determine the continued viability of such projects.

7.1.3. The NYISO will develop criteria for determining the cutoff date for a determination that a market-based project will not be available to meet an identified reliability need.

- 7.1.4. If there are no viable market-based responses to the reliability needs identified by the NYISO, the NYISO will undertake to investigate whether that is due to market failure, and if so, will examine the appropriate modifications to its market rules with market participants.

7.2. Regulated Responses

If the NYISO determines that there is no viable market-based response to meet an identified reliability need, it will designate a regulated solution, that is found to be both timely and viable, in the Comprehensive Reliability Plan Report.

- 7.2.1. The NY TOs will assume the backstop obligation to provide a regulated solution to a need identified in the NYISO's Reliability Needs Assessment Report, considering all feasible alternatives, subject to the opportunity to fully recover their prudently incurred costs.
- 7.2.2. The TO will submit their regulated proposal to the appropriate regulatory agency(-ies) to begin the approvals process
- 7.2.3. In its review of the TOs regulated proposal, the NYSPSC will give deference to the findings of the NYISO's Comprehensive Reliability Planning Process.
- 7.2.4. The NYISO, in conjunction with ESPWG, will develop the criteria for halting a regulated project that is already underway because of the entry of a viable market-based project that will meet the identified reliability need. Such criteria shall also establish a cut-off point following which a regulated project may not be cancelled regardless of the appearance of a market-based project.
- 7.2.5. The NYISO, in conjunction with the PSC and ESPWG, will develop the procedure for ensuring cost recovery for the TO for a regulated project that is subsequently cancelled in accordance with NYISO procedures.

7.3. "Gap" Solutions

If the NYISO determines that neither market-based proposals nor regulated proposals can satisfy the identified reliability needs in a timely manner, the NYISO will have the discretion to seek a "gap" solution.

- 7.3.1. The NYISO Board will make the determination of the need to seek a gap solution, upon the recommendation of NYISO Staff, with input from market participants
- 7.3.2. Upon the NYISO Board's decision to issue a request for a gap solution, the NY TOs will assume the obligation to immediately propose such a solution for consideration by the NYISO and PSC.
- 7.3.3. Such gap proposal shall consider all feasible alternatives

- 7.3.4. To the extent possible, the gap solution should be temporary and provide assurances that market-based proposals will not be economically harmed.
- 7.3.5. A permanent regulated solution, if appropriate, may proceed in parallel with gap measures.

8. Comprehensive Reliability Plan [NEW SECTION]

Following the NYISO’s evaluation of the proposed market-based and regulated responses to the needs identified in the final Reliability Needs Assessment Report, the NYISO will prepare a comprehensive report (the “Comprehensive Reliability Plan”) of its findings and recommendations for transmission upgrades—if any—needed to ensure system reliability.

8.1. Stakeholder Review

At least two stakeholder review stages are anticipated in the Comprehensive Reliability Planning Process. Following review of the NYISO Staff’s Draft Comprehensive Reliability Plan by TPAS and ESPWG, a Final Draft will be prepared which includes input received from stakeholders, including the NYS PSC.

8.2. Committee Approval

The Final Draft of the Comprehensive Reliability Plan will then be forwarded to the OC for a vote. Interested representatives from the Business Issues Committee (“BIC”) are invited to attend the OC meeting at which the Draft Report is under consideration. Following the OC vote, the Draft Report will be transmitted to the Management Committee (“MC”) for a vote.

8.3. Board Action

Following the MC vote, the Comprehensive Reliability Plan resulting from the NYISO Comprehensive Reliability Planning Process, with working group, OC and MC input, will be forwarded to the NYISO Board for action. Upon approval by the Board, the Plan will be finalized by NYISO Staff.

9. Cost Allocation

[TO BE DEVELOPED]

10. References [TO BE REVISED AS NEEDED]

- (1) NPCC Basic Criteria for Design and Operation of Interconnected Power Systems (A-2)
- (2) NYSRC Reliability Rules For Planning and Operating the New York State Power System
- (3) NYISO Open Access Transmission Tariff – Attachment S
- (4) NPCC Guidelines for NPCC Area Transmission Reviews (B-4)
- (5) NPCC Guidelines for Area Review of Resource Adequacy (B-8)
- (6) NYSRC Policy 5
- (7) NYISO Load and Capacity Report

11. Figures [TO BE REVISED AS NEEDED]

Attachment A – Process Flow Chart

Attachment B – Stakeholder Participation

Attachment C – Timeline

Attachment D – Process Inputs Chart

Attachment E – Historic Congestion Matrix **[TO BE INSERTED]**