NEW YORK

INDEPENDENT SYSTEM OPERATOR

ANNUAL TRANSMISSION PLANNING AND EVALUATION REPORT

(FERC FORM NO. 715)

April 2012

NYISO Contact Person: Steven L. Corey
Email Address: scorey@nyiso.com
New York Independent System Operator
10 Krey Boulevard, Rensselaer, New York 12144

About the New York Independent System Operator

The New York Independent System Operator, Inc. (NYISO), headquartered in Rensselaer, New York, is an independent, nonprofit corporation established to ensure the continued reliable operation of the New York State (NYS) bulk electric system, and to facilitate the wholesale electricity markets throughout the State. NYISO began operation on November 18, 1999, and formally assumed responsibility for operation of the bulk electric system from the New York Power Pool (NYPP) on December 1, 1999. NYISO is regulated by the Federal Energy Regulatory Commission (FERC).

NYISO provides for reliable and efficient operation of the NYS bulk electric system by coordinating operation of the state's bulk power transmission facilities, and by committing and dispatching generation resources throughout the state on a single-system basis, in accordance with prescribed reliability rules. NYISO coordinates transmission service and facilitates the state's wholesale electricity markets through the *NYISO Open Access Transmission Tariff (OATT)*, the *NYISO Market Administration and Control Area Services Tariff*, and various agreements. NYISO also performs studies in support of planning of the NYS electric system, and to evaluate the impact of proposed interconnections of new generation, transmission, and load facilities to the transmission system.

The NYS electric system is part of a continental power system. NYISO is a registered entity of the North American Electric Reliability Corporation (NERC), an organization whose mission is to ensure the reliability of the North American bulk electric system. NYISO is also a member of the Northeast Power Coordinating Council (NPCC), which is one of eight regional entities of the NERC covering the region comprised of New York, New England, Ontario, Quebec, and the Maritimes (New Brunswick, Nova Scotia, and Prince Edward Island). Together, NERC and the regional entities establish reliability standards for the interconnected electric systems, and monitor the compliance of the industry participants, and organizations such as the NYISO, to those standards. In addition, NYISO is also subject to the reliability rules of the New York State Reliability Council (NYSRC), an organization established to address the special reliability needs of NYS.

NYISO conducts transmission operation and planning activities in coordination with the six transmission owners and two transmission operators in NYS, which are:

- Central Hudson Gas & Electric Corporation
- Consolidated Edison Company of New York, Inc.
- Long Island Power Authority
- New York Power Authority
- New York State Electric & Gas Corporation
- Niagara Mohawk, A National Grid Company
- Orange and Rockland Utilities, Inc.
- Rochester Gas and Electric Corporation

New York Independent System Operator 2012

ANNUAL TRANSMISSION PLANNING AND EVALUATION REPORT

(FERC Form No. 715)

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New York Independent System Operator 2012

ANNUAL TRANSMISSION PLANNING AND EVALUATION REPORT

(FERC Form No. 715 Report)

FOREWORD

This is the NYISO Annual Transmission Planning and Evaluation Report (FERC Form No. 715 or FERC 715) for 2012. NYISO is submitting a paperless filing again this year. This report was prepared in accordance with the FERC Form No. 715 instructions and in accordance with the requirements for a paperless filing.

In 2000, NYISO assumed responsibility for filing the annual FERC 715 report on behalf of the transmitting utilities of NYS, a responsibility previously performed by the NYPP. Among other things, NYISO conducts transmission planning activities in coordination with the six transmission owners and two transmission operators in NYS, each of which are "transmitting utilities" as defined by the Federal Energy Regulatory Commission (FERC). These transmission owners and operators are identified in Part 1 of this report.

This report consists of six parts, corresponding to the six parts specified in the FERC 715 instructions. Where appropriate, only references are provided for documents that were provided in a previous FERC 715 report and have not changed, in accordance with the FERC 715 instructions. For Part 3, all the most recent maps and diagrams are provided in PDF files, in accordance with the requirements for a paperless filing.

Parts 2, 3, and 6 have been labeled as Critical Energy Infrastructure Information (CEII), as has been NYISO's practice. NYISO understands that this entire filing will be considered CEII material by FERC and handled accordingly.

Portions of this report will be available from the NYISO public web site at (http://www.nyiso.com/public/markets_operations/services/planning/documents/index.jsp). Access to other portions of the report NYISO considers to be restricted information, i.e., maps, diagrams, and power flow base cases, will be restricted to parties that obtain or have the proper authorization. A form for requesting restricted information contained in this report is provided in Appendix A.

The information contained in this report pertains to NYISO transmission planning and evaluation matters in general, and is valid as of the April 2, 2012 filing date. In the event that this information may be used for a specific purpose, it may be advisable to contact NYISO or the appropriate transmitting utility contact person(s), identified in Part 1 of this report, to ascertain whether this information is appropriate and sufficient for the intended purpose.

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Part 1 Identification and Certification

ORGANIZATION NAMES AND ADDRESSES

New York Independent System Operator
10 Krey Boulevard
Rensselaer, NY 12144

Central Hudson Gas & Electric Corporation
284 South Avenue
Poughkeepsie, NY 12601-4879

Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, NY 10003

Long Island Power Authority
333 Earle Ovington Boulevard
Suite 403
Uniondale, NY 11553

New York Power Authority
123 Main Street
White Plains, NY 10601

New York State Electric & Gas Corporation
18 Link Drive
Binghamton, NY 13904

Niagara Mohawk, A National Grid Company
300 Erie Boulevard West
Syracuse, NY 13202

Orange and Rockland Utilities, Inc.
390 Route 59
Spring Valley, NY 10977

Rochester Gas and Electric Corporation
89 East Avenue
Rochester, NY 14649

New York Independent System Operator 2012

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Part 1 Identification and Certification

CONTACT PERSONS

Organization	Contact Name/Title	Telephone/ Fax Nos.
New York Independent System Operator	Steven L. Corey Manager, Interconnection Projects	518-356-6134 518-356-7524
Central Hudson Gas & Electric Corporation	Richard Wright Senior Engineer Electric Transmission Planning	845-486-5463 845-486-5697
Consolidated Edison Company of New York, Inc.	Francesco Elmi Technical Specialist Transmission Planning	212-460-3991 212-529-1130
Long Island Power Authority	Anie Philip Manager, Transmission Planning National Grid USA Service Co. Acting as agent for Long Island Power Authority	516-545-4674 516-545-3662
New York Power Authority	Arnold Schuff Manager, Transmission Planning	914-681-6395 914-681-6932
New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation	Robert J. King Lead Engineer, System Planning	607-762-4234 607-762-8645
Niagara Mohawk	Carol A. Sedewitz Director of Transmission Planning National Grid USA Service Co. Acting as agent for Niagara Mohawk	781-907-2500 781-522-1061
Orange and Rockland Utilities, Inc.	Roleto Mangonon Transmission Planning Engineer	845-577-3326 845-577-3720

New York Independent System Operator 2012

FERC Form No. 715 Report

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data submitted in this form by NYISO staff, on behalf of the transmitting utilities identified in Part 1, is complete and accurate, and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report."

_____

Steven L. Corey
Manager, Interconnection Projects
New York Independent System Operator

The certifications of the authorized officials of each of the transmitting utilities that provided information to NYISO for this filing are included in this part of the report.

New York Independent System Operator 2012

FERC Form No. 715 Report

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by Central Hudson Gas & Electric Corporation (transmitting utility) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

Richard Wright
Senior Engineer, Electric Transmission Planning
Central Hudson Gas & Electric Corporation

New York Independent System Operator 2012

FERC Form No. 715 Report

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by Consolidated Edison Company of New York, Inc. (transmitting utility) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

Francesco Elmi
Technical Specialist, Transmission Planning
Consolidated Edison Company of New York, Inc.

New York Independent System Operator 2012

FERC Form No. 715 Report

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by the Long Island Power Authority (transmitting utility) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

Anie Philip
Manager, Transmission Planning
National Grid USA Service Co.
Acting as agent for the Long Island Power Authority

New York Independent System Operator 2012

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Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by New York Power Authority (transmitting utility) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

Arnold Schuff
Manager, Transmission Planning
New York Power Authority

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation (transmitting utilities) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

Robert J. King
Lead Engineer, System Planning
New York State Electric & Gas Corporation
and
Rochester Gas and Electric Corporation

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by Niagara Mohawk (transmitting utility) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

Carol A. Sedewitz
Director Transmission Planning
National Grid USA Service Co.
Acting as agent for Niagara Mohawk

New York Independent System Operator 2012

FERC Form No. 715 Report

Part 1 Identification and Certification

CERTIFICATION

I certify that, to the best of my knowledge, the information and data provided by Orange and Rockland Utilities, Inc. (transmitting utility) to NYISO (designated agent) for this filing is accurate and in compliance with the "Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report." I authorize NYISO staff to submit this information and data on our behalf.

_____

John Coffey
Chief Engineer, Transmission and Substation Engineering
Orange and Rockland Utilities, Inc.

Part 2 Power Flow Base Cases
Contains Critical Energy Infrastructure Information – Do Not Release

The following power flow base cases are included in this part of the report:

- Case #1: Winter 2011/2012 Peak Load
- Case #2: Summer 2012 Peak Load
- Case #3: Spring 2017 Light Load
- Case #4: Summer 2017 Peak Load
- Case#4a: Summer 2017 Peak Load based on a 90/10 statewide forecast
- Case #5: Winter 2017/2018 Peak Load
- Case #6: Summer 2022 Peak Load
- Case#6a: Summer 2022 Peak Load based on a 90/10 statewide forecast

NYISO and the New York Transmission Owners/Operators (NYTOs) named in Part 1 participate in the NPCC regional base case development process. NYISO maintains a centralized database of power flow data for the NYS electric power system for use in both planning and operating studies. Through an annual process, the NYTOs provide data to NYISO to update the NYS power flow base cases, and NYISO in turn updates its centralized database and provides data to NPCC to update its regional base cases. NPCC compiles the regional base cases and makes them available to its members and to NERC.

The above base cases were initially based on the 2011 NPCC base cases. However, the NYS and outside area representations in these cases have been reviewed and updated based on information provided to NYISO up through around March 21, 2012.

The first case is the base case that was used for the NYISO Winter 2011/2012 Operating Study. The second case is the base case being used for the NYISO Summer 2012 Operating Study. In general, these cases represent the existing transmission system and system conditions as were expected to occur at the time of the respective seasonal peak load. These cases would be appropriate for use as a starting point for near-term transmission studies.

The last six cases represent the planned transmission system and forecasted system conditions in future years, in this case, 2017 and 2022. In general, the NYS representations in these cases include only those future new or modified generation and transmission facilities that: (1) have met the qualifications to be included in a NYISO Interconnection Facilities Study (IFS); or (2) have been proposed by Transmission Owners. Other proposed new or modified generation and transmission facilities that may be under study are not represented. These cases would be appropriate for use as a starting point for longer-term transmission planning studies. NYISO expects to use these base cases as a starting point for conducting various planning studies and transmission reliability assessments in 2012.

Part 2 Power Flow Base Cases
Contains Critical Energy Infrastructure Information – Do Not Release

Each of these power flow cases contain a detailed representation of the NYS electric power system for the given time period, with appropriate reductions of the representations of the electric systems outside NYS. These cases are valid for the study of the NYS system only. Furthermore, these power flow cases and their associated data are intended for power flow analysis only, and are not intended for use in stability, short-circuit, or other types of analyses.

The NYS system load model utilized in the peak load base cases is representative of a statewide coincident peak load. This value may be lower than the sum of the individual NYTOs' peak loads since these individual peak loads generally do not occur at the same time. The NYS system load model utilized in the spring light load base case represents a load level equal to approximately 45% of the statewide coincident summer peak load level. Again this year, in addition to the traditional summer peak load cases based on a 50/50 statewide peak load forecast, as has been NYISO's standard practice, two additional summer peak load cases based on a 90/10 statewide peak load forecast (referred to as Case#4a and Case#6a above) are also included in this filing. A 50/50 forecast means that, on a probability distribution curve, there is a 50/50 chance of the actual peak load being higher or lower than the forecast value. A 90/10 forecast means that there is a 90% chance that the actual peak load will be below the forecast value, and a 10% chance of it being above the forecast. NYISO developed the 90/10 cases to perform sensitivity analyses for informational purposes, and to support neighboring systems that use 90/10 cases in their studies.

The cases are in the RAWD data format of the Siemens - Power Technologies, Inc. (PTI) Power System Simulator for Engineering (PSS/e) power flow program. All eight cases were created using PSS/e version 32.1.1.

The cases have been solved using the fixed-slope decoupled Newton iterative algorithm (FDNS) with stepping transformer taps, area interchange and phase shifters engaged, switched shunts and DC line taps unlocked, and VAr limits applied immediately. An acceleration factor of 1.0 and a tolerance of 1.0 were employed during the solution process. The zero impedance line threshold was set at 0.0001 pu. The cases were developed on a Windows operating system.

The raw data input files and the corresponding output data files for all eight base cases are provided in machine readable format on a single CD-ROM. The combined size of the input/output data files are approximately 23 MB per case.

In addition to the above power flow base cases, a "data dictionary" is also provided in this filing. The data dictionary contains a listing of bus names and numbers from the Summer 2017 Peak Load case, with corresponding full names for each bus. This data dictionary applies to all eight base cases.

Part 2 Power Flow Base Cases
Contains Critical Energy Infrastructure Information – Do Not Release

The data dictionary also contains the Energy Information Administration (EIA) plant codes for generating plants represented in the cases, as appropriate.

Access to the power flow base cases and data dictionary included in this filing will be restricted to parties that obtain or have the proper authorization to receive them (see Appendix A).

Part 3 Transmitting Utility Maps and Diagrams
Contains Critical Energy Infrastructure Information – Do Not Release

The maps and diagrams provided with this report are as follows:

	Latest Version (Date Originally Filed)
• 2012 NYISO Electric System Map	2012
• NYISO One-Line Diagram of the NYS Bulk Power System	2012
• One-Line Diagrams of Each of the NYTOs' Systems:	
- Central Hudson Gas & Electric Corporation	2012
- Consolidated Edison Company of New York	2012
- Long Island Power Authority	2012
- New York Power Authority	2011
- New York State Electric & Gas Corporation	2011
- Niagara Mohawk, A National Grid Company	2012
- Orange & Rockland Utilities, Inc.	2012
- Rochester Gas & Electric Corporation	2008

The 2012 NYISO Electric System Map depicts high voltage transmission facilities (115 kV and above) and major generation facilities within NYS.

The NYISO one-line diagram (4 pages) depicts the existing NYS bulk power system, which consists principally of relatively large generating units and the high voltage transmission system. Generally these are generating units of 300 MW or larger and transmission facilities of 230 kV and above, although smaller generating units and lower voltage transmission on which faults or disturbances can have a significant effect on the continuity of service of the NYS system, or can have a significant effect on areas outside of the NYS system, also are considered part of the bulk power system. An updated one-line diagram is provided with this report.

The NYTO one-line diagrams depict the respective existing transmission and generation facilities of the NYTOs' systems. In some cases, the NYTO one-line diagrams show more detail of the lower voltage transmission system than is shown in the NYISO diagram. The most recent versions of the NYTO diagrams are provided with this report.

Access to the maps and diagrams included in this filing will be restricted to parties that obtain or have the proper authorization (see Appendix A).

Part 4 Transmission Planning Reliability Criteria

This part includes a listing of any new or revised transmission planning reliability criteria ("criteria") documents provided with this filing and previously filed criteria documents that are still in effect.

NYISO and the NYTOs are subject to the reliability standards established by NERC. Four of the NERC Reliability Standards that are most applicable to transmission planning are listed as document #s 1-4 below. The NERC Reliability Standards are available from the NERC web site at (http://www.nerc.com).

NYISO and the NYTOs also are subject to the NPCC Criteria and the NYSRC Reliability Rules. In addition, the NYTOs each have supplemental transmission planning reliability criteria as well. The applicable NPCC, NYSRC, and NYTOs criteria documents are listed as document #s 5-21 below.

The new, revised, or previously filed criteria documents that pertain to this filing are as follows:

1. Standard TPL-001-0.1 – *System Performance Under Normal (No Contingency) Conditions (Category A);* North American Electric Reliability Corporation, May 13, 2009 (filed 2011).

2. Standard TPL-002-0b – *System Performance Following Loss of a Single Bulk Electric System Element (Category B);* North American Electric Reliability Corporation, November 5, 2009 (filed 2010).

3. Standard TPL-003-0a – *System Performance Following Loss of Two or More Bulk Electric System Elements (Category C);* North American Electric Reliability Corporation, April 23, 2010 (filed 2011).

4. Standard TPL-004-0 – *System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements (Category D);* North American Electric Reliability Corporation, April 1, 2005 (filed 2007).

5. NPCC Regional Reliability Reference Directory #1 *Design and Operation of the Bulk Power System (Directory #1);* Northeast Power Coordinating Council, December 1, 2009 (filed 2010). The NPCC Directories are available from the NPCC web site at (https://www.npcc.org/Standards/Directories/Forms/Public%20List.aspx).

6. NPCC Regional Reliability Reference Directory #12 *Under frequency Load Shedding Program Requirements (Directory #12);* Northeast Power Coordinating Council, March 3, 2010 (filed 2012). **A copy of this document is included in this filing.**

Part 4 Transmission Planning Reliability Criteria

7. *NYSRC Reliability Rules for Planning and Operating the New York State Power System (Version 30);* New York State Reliability Council, November 10, 2011 (filed 2012). **A copy of this revised document is included in this filing.** The NYSRC Reliability Rules are available from the NYSRC web site at (http://www.nysrc.org/NYSRCReliabilityRulesComplianceMonitoring.asp).

8. *Central Hudson Gas & Electric Corporation Transmission Planning Guidelines;* Central Hudson Gas & Electric Corporation, March 16, 2009 (filed 2009).

9. *Central Hudson Gas & Electric Corporation (CHG&E) Application Process for Distributed Generators of Greater than 300 kVA Connected in Parallel with the CHG&E Electrical Delivery System;* Central Hudson Gas & Electric Corporation, April 16, 2002 (filed 2003).

10. *Central Hudson Gas & Electric Corporation (CHG&E) Interconnection Protection Requirements for Distributed Generators of Greater than 300 kVA Connected in Parallel with the CHG&E Electrical Delivery System;* Central Hudson Gas & Electric Corporation, May 5, 2002 (filed 2003).

11. TRANSMISSION PLANNING CRITERIA (EP-7100-10); Consolidated Edison Company of New York, November 22, 2011 (filed 2012). **A copy of this revised document is included in this filing.**

12. Con Edison interconnection documents:

12.a Management of Standard Large Facility Interconnection Projects (EP-7510-2); Consolidated Edison Company of New York, Inc., February 2008 (filed 2010).

12.b. Developer Welcome Kit; Consolidated Edison Company of New York, Inc., February 2008 (filed 2010).

12.c. STANDARD ENGINEERING DESIGN GUIDELINES FOR AREA SUBSTATIONS, TRANSMISSION SUBSTATIONS AND PURS FACILITIES (CE-ES-2002); Consolidated Edison Company of New York, Inc., November 2005 (filed 2010).

13. *Transmission & Distribution Planning Criteria & Guidelines (Revision 3);* Long Island Power Authority, September 20, 2010 (filed 2011).

14. *Long Island Power Authority Interconnection Guide for Independent Power Producers;* (filed 2000, under Part 5).

Part 4 Transmission Planning Reliability Criteria

15. *Design Criteria for Developer Connection to the New York Power Authority Transmission System, Rev. 1;* New York Power Authority, March 3, 2011 (filed 2011).

16. IBERDROLA USA ELECTRIC SYSTEM PLANNING MANUAL – CRITERIA & PROCESSES, NYSEG, RG&E, CMP and MEPCO, July 28, 2011 (filed 2012). **A copy of this document is included in this filing.** *(Supersedes: NYSEG and RG&E Transmission Planning Criteria; New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation, July 2009).*

17. Requirements For Independent Power Producers Of Electricity (BULLETIN 86-01); New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation, March 31, 2005 (filed 2006).

18. *Transmission Planning Guide (TGP28 – Issue 3);* National Grid, November 22, 2010 (filed 2011).

19. NATIONAL GRID ELECTRIC SYSTEM BULLETIN No.756: SUPPLEMENT TO SPECIFICATIONS FOR ELECTRICAL INSTALLATIONS, REQUIREMENTS FOR PARALLEL GENERATION CONNECTED TO A NATIONAL GRID OWNED EPS; NATIONAL GRID, MAY 2007 VERSION 1.1, September 6, 2011 (filed 2012).

20. ORANGE AND ROCKLAND UTILITIES, INC. TRANSMISSION PLANNING GUIDELINES; Orange and Rockland Utilities, Inc., May 2008 (filed 2009).

21. ORU-ENGR-004 - Revision 1: *Management of Standard Large and Small Facility Interconnection Projects,* Orange & Rockland Utilities, Inc., November 30, 2009 (filed 2010).

Part 5 Transmission Planning Assessment Practices

This part includes a listing of any new or revised transmission planning assessment practices ("practices") documents provided with this filing and previously filed practices documents that are still in effect. NYISO and the NYTOs have and use various documents (procedures, guidelines, etc.) that define or strongly relate to practices for assessment of the transmission system for planning purposes.

The new, revised, or previously filed practices documents that pertain to this filing are as follows:

1. NPCC *Guidelines for NPCC Area Transmission Reviews*. This document has been incorporated into NPCC Directory #1 as Appendix B (see Part 4, document #5).

2. *Classification of Bulk Power System Elements (Document A-10)*, Northeast Power Coordinating Council, December 1, 2009 (filed 2010). The NPCC criteria are available from the NPCC web site (https://www.npcc.org/Standards/Criteria/Forms/Public%20List.aspx).

3. *New York ISO Comprehensive System Planning Process* (Attachment Y of the NYISO OATT), June 30, 2010 (filed 2011). This document is available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/documents/tariffs/index.jsp).

4. NYISO *Transmission Expansion and Interconnection Manual;* September 28, 1999 (filed 2000). NYISO adopted *Standard Large Facility Interconnection Procedures* into its OATT in August 2004, causing some portions of this manual to be out-of-date. NYISO has been working on a revision of the Transmission Expansion and Interconnection Manual, but the new manual will not be completed before the due date of this filing. The current manual is available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp).

   Note that the *Transmission Expansion and Interconnection Manual* contains the following three transmission planning guidelines that have not changed since the 2000 FERC 715 filing and remain in effect today:

   a. NYISO Transmission Planning Guideline #1-0, Guideline for System Reliability Impact Studies, September 28, 1999;

   b. NYISO Transmission Planning Guideline #2-0, Guideline for Voltage Analysis and Determination of Voltage-Based Transfer Limits, September 28, 1999;

   c. NYISO Transmission Planning Guideline #3-0, Guideline for Stability Analysis and Determination of Stability-Based Transfer Limits, September 28, 1999.

Part 5 Transmission Planning Assessment Practices

5. NYISO *Comprehensive Reliability Planning Process Manual;* November 20, 2007 (filed 2008). This document is available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp).

6. NYISO *System Reliability Impact Study Criteria and Procedures;* Revised May 23, 2001 (filed 2002). This document is available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/services/planning/documents/index.jsp).

7. NYISO *Guideline for Fault Current Assessment;* January 30, 2003 (filed 2005). This document is available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/services/planning/documents/index.jsp).

8. NYPP *Guideline on Application of High-Speed Autoreclosing;* January 8, 1999 (filed 1999). NYISO formally adopted this former NYPP document as a NYISO document on July 25, 2002.

9. NYISO *Test Procedure for Evaluating Power Factor Requirements for Wind Generation Interconnection Projects (TB 148);* May 15, 2006 (filed 2009). This document is available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/documents/technical_bulletins/index.jsp).

10. NYISO Operations Manuals:

    Operations manuals often describe operating rules and procedures that have a bearing on transmission planning studies in that these rules and procedures should be taken into consideration and modeled to the extent possible in performing analyses intended to simulate the operation and performance of the transmission system. For example, rules and procedures in areas such as **voltage control** and **operation of phase angle regulators** have significant relevance to transmission planning studies. NYISO operations manuals that have such significant relevance are as follows:

    a. NYISO *Transmission and Dispatching Operation Manual*; September 2008 (filed 2009).

    b. NYISO *Emergency Operations Manual*, November 2011 (filed 2012). **A copy of this revised document is included in this filing.**

    These manuals are available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp).

Part 5 Transmission Planning Assessment Practices

11. *Voltage Schedule, Control, and Operation of the Transmission System (EP-7000-7);* Consolidated Edison Company of New York, Inc., November 2011 (filed 2012). **A copy of this revised document is included in this filing.**

12. *Thunderstorm/Storm Procedure;* Consolidated Edison Company of New York, Inc., August 12, 2011 (filed 2012). **A copy of this revised document is included in this filing.**

Part 6 Evaluation of Transmission System Performance
Contains Critical Energy Infrastructure Information – Do Not Release

NYISO conducts studies to evaluate transmission system performance in two general time frames: the operating time frame (nominally out to a year), and the planning time frame (future years). The reports of both types of NYISO studies have been provided in previous FERC 715 filings.

In the operating time frame, NYISO completed two seasonal operating studies since the last FERC 715 filing, the Summer 2011 Operating Study and the Winter 2011-2012 Operating Study. These studies assessed the transfer limits of the New York operating transmission interfaces for conditions expected to occur during the summer 2011 and winter 2011-2012 peak load periods, respectively. **Copies of these study reports are included in this filing** and are available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/market_data/reports_info/index.jsp).

In the planning time frame, NYISO completed a 2010 Comprehensive Area Transmission Review that assessed the reliability of the planned NYS bulk power transmission system in the year 2015. NYISO also completed a 2011 Interim Area Transmission Review of the planned NYS bulk power transmission system in the year 2016. As part of the NPCC reliability compliance and enforcement program, each NPCC Area (in this case, New York) is required to conduct an annual assessment of the reliability of its planned bulk power transmission system with respect to the NPCC Directory #1 (see Part 4), in accordance with the *Guidelines for NPCC Area Transmission Reviews* (Directory #1, Appendix B). Under this program, each Area is required to conduct a Comprehensive Review at least once every five years and either an Interim or Intermediate Review in the intervening years. **Copies of the NYISO 2010 Comprehensive Area Transmission Report and 2011 Interim Area Transmission Review Report are included in this filing** and are available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/services/planning/planning_studies/index.jsp).

Also in the planning time frame, NYISO performs Reliability Needs Assessment (RNA) and develops a Comprehensive Reliability Plan (CRP) on a biennial basis under the NYISO Comprehensive System Planning Process (CSPP). Documents describing the CSPP are listed in Part 5 of this report. Under this process, NYISO first evaluates and identifies the reliability needs of the NYS electric system over a ten-year period, then solicits solutions and develops a plan for addressing any identified reliability needs. NYISO considers generation, transmission, and demand-side solutions together in developing the CRP. Copies of the NYISO 2010 RNA report and 2010 CRP report were included in the 2011 filing. These reports are available from the NYISO web site at (http://www.nyiso.com/public/markets_operations/services/planning/planning_studies/index.jsp).

Appendix A

Form for Requesting NYISO FERC 715 Information

The NYISO 2012 "Annual Transmission Planning and Evaluation Report" (FERC 715 Report) and various documents included or referenced in the report and not considered to be restricted information are available from the NYISO public web site at (http://www.nyiso.com/public/markets_operations/services/planning/planning_resources/index.jsp). However, the Part 2 power flow base cases and Part 3 map and one-line diagrams are restricted information and are not available from the web site.

This form may be used to request restricted information contained in the NYISO 2012 FERC 715 Report. To submit a request: provide all required information, check what information is being requested, check and sign the Non-Disclosure Agreement, and submit a scanned copy of your request via email to:

FERC715Request@nyiso.com

Requested information will normally be provided within 10 business days of receipt of the request. NYISO reserves the right to deny any request for restricted information.

1. Requestor's Information (required)

Requestor's name:	
Requestor's title:	
Requestor's organization name:	
Requestor's organization address:	
Requestor's business telephone number:	
Requestor's business email address:	
Description of the general activities of the requestor's organization and the person(s) that expect to use the requested information:	

2. Intended Use of the Requested information (required)

3. Information Requested

   (To check a box electronically, double click on desired box, select *Properties*, and select "Checked.")

   ☐ Part 2 Power Flow Base Cases

   ☐ Part 3 Map and One-line Diagrams

4. Non-Disclosure Agreement (must be signed by requestor and an authorized officer of the organization)

   ☐ I, the undersigned, agree to limit the copy or distribution of the information received through this request, or any portions thereof, to person(s) within my organization for their own use, and to not provide copies or distribute the information, or any portions thereof, to any other parties (persons or organizations) outside my organization, including any affiliated organizations.

By (Requestor's signature): _____ Date: _____

By (Officer's signature): _____ Date: _____