



**NEW YORK  
INDEPENDENT SYSTEM OPERATOR**

**ANNUAL  
TRANSMISSION PLANNING  
AND  
EVALUATION REPORT**

***(FERC FORM NO. 715)***

**APRIL 2007**

NYISO Contact Person: Steven L. Corey  
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## ***About the New York Independent System Operator***

The New York Independent System Operator (NYISO), headquartered in Guilderland, 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. The NYISO began operation on November 18, 1999, and formally assumed responsibility for operation of the bulk electric system from the New York Power Pool on December 1, 1999.

The 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. The 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. The 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 member of the North American Electric Reliability Corporation (NERC), an organization whose mission is to improve the reliability and security of the bulk power system in North America. NYISO is also a member of the Northeast Power Coordinating Council (NPCC), which is one of eight regional reliability councils 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 councils 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, the 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 New York State.

The NYISO conducts transmission operation and planning activities in coordination with the six transmission owners and three transmission operators in New York State, which are:

Central Hudson Gas & Electric Corporation  
Consolidated Edison Company of New York, Inc.  
KeySpan Electric Services, LLC  
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  
3890 Carman Road, Schenectady, New York 12303***

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**ANNUAL TRANSMISSION PLANNING AND EVALUATION REPORT**

**(FERC Form No. 715 Report)**

**FOREWORD**

This is the New York Independent System Operator (NYISO) Annual Transmission Planning and Evaluation Report (FERC Form No. 715 or FERC 715) for 2007. The NYISO is submitting a Paperless filing again this year. This report was prepared in accordance with the “Instructions for Completing Form 715 Annual Transmission Planning and Evaluation Report,” and in accordance with the requirements for a Paperless filing.

In 2000, the NYISO assumed responsibility for filing the annual FERC 715 report on behalf of the transmitting utilities of New York State, a responsibility previously performed by the New York Power Pool (NYPP). Among other things, the NYISO conducts transmission planning activities in coordination with the six transmission owners and three transmission operators in New York State, 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 the NYISO’s practice. NYISO understands that this entire filing will be considered CEII material by the FERC and handled accordingly.

Portions of this report will be available from the NYISO public website ([www.nyiso.com](http://www.nyiso.com)). 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.

Copies of information contained in this report will be provided upon request and receipt of payment of any applicable fees, subject to authorization where applicable. Information regarding request procedures, fees, and authorization is provided in Appendix A. A request form follows 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 1 filing date. In the event that this information may be used for a specific purpose, it may be advisable to contact the 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  
3890 Carman Road  
Schenectady, NY 12303

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

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

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

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

KeySpan Electric Services, LLC  
175 East Old Country Road  
Hicksville, NY 11801

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

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

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

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

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**Part 1 Identification and Certification**

CONTACT PERSONS

<u>Organization</u>	<u>Contact Name/Title</u>	<u>Telephone/ Fax Nos.</u>
New York Independent System Operator	Steven L. Corey Manager, Transmission Planning	518-356-6134 518-356-7524
Central Hudson Gas & Electric Corporation	Richard Wright Senior Engineer Transmission Planning & Design	845-486-5463 845-486-5697
Consolidated Edison Company of New York, Inc.	Daniel F. Taft Manager, Transmission Planning	212-460-2137 212-529-1130
KeySpan Electric Services, LLC representing Long Island Power Authority	Janos T. Hajagos Supervisor, Area Planning	516-545-4831 516-545-4207
New York Power Authority	A. Ralph Rufrano Manager, Transmission Planning	914-681-6265 914-681-6932
New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation	Kevin S. DePugh Lead Engineer System Planning	607-762-7188 607-762-8645
Niagara Mohawk, A National Grid Company	Carol A. Sedewitz Director Transmission Planning	508-389-3108 508-389-4405
Orange and Rockland Utilities, Inc.	Roleto Mangonon Transmission Planning Engineer	845-577-3326 845-577-3720

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**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.”

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Steven L. Corey  
Manager, Transmission Planning  
New York Independent System Operator

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



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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 Central Hudson Gas & Electric Corporation (transmitting utility) to the 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.

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

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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 Consolidated Edison Company of New York, Inc. (transmitting utility) to the 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.

---

Daniel F. Taft  
Manager, Transmission Planning  
Consolidated Edison Company of New York, Inc.

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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 KeySpan Electric Services, LLC, on behalf of the Long Island Power Authority (transmitting utility) to the 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.

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Janos T. Hajagos  
Supervisor, Area Planning  
KeySpan Electric Services, LLC  
representing  
Long Island Power Authority

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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 the 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.

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A. Ralph Rufrano  
Manager, Transmission Planning  
New York Power Authority

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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 State Electric & Gas Corporation and Rochester Gas and Electric Corporation (transmitting utilities) to the 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.

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Kevin S. DePugh  
Lead Engineer, System Planning  
New York State Electric & Gas Corporation  
and  
Rochester Gas and Electric Corporation

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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 Niagara Mohawk, A National Grid Company (transmitting utility) to the 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  
Niagara Mohawk, A National Grid Company

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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 Orange and Rockland Utilities, Inc. (transmitting utility) to the 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.

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Peter T. McGoldrick  
Manager, Transmission & Substation Engineering  
Orange and Rockland Utilities, Inc.

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**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 2005/2006 Peak Load
- Case #2: Summer 2007 Peak Load
- Case #3: Spring 2012 Light Load
- Case #4: Summer 2012 Peak Load
- Case #5: Winter 2012/2013 Peak Load
- Case #6: Summer 2017 Peak Load

The NYISO and the New York Transmission Owners/Operators (NYTOs) named in Part 1 participate in the NPCC regional base case development process. The NYISO maintains a centralized database of power flow data for the New York electric power system for use in both planning and operating studies. Through an annual process, the NYTOs provide data to the NYISO to update the New York power flow base cases, and the 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 2006 NPCC base cases. However, the New York and outside area representations in these cases have since been reviewed and updated based on information provided to the NYISO up through around March 21, 2007.

The first case is the base case that was used for the NYISO Winter 2005/2006 Operating Study. The second case is the base case being used for the NYISO Summer 2007 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 four cases represent the planned transmission system and forecasted system conditions in future years, in this case, 2012 and 2017. In general, the New York representations in these cases include only those future new or modified generation and transmission facilities that: (1) have undergone a System Reliability Impact Study by the NYISO and have either received the appropriate regulatory approvals, or are in the regulatory approval process; or (2) are 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. The NYISO expects to use these base cases as a starting point for conducting various planning studies and transmission reliability assessments in 2007.

These six cases contain a detailed representation of the New York electric power system for the



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**Part 2 Power Flow Base Cases**

**Contains Critical Energy Infrastructure Information – Do Not Release**

given time period, with appropriate reductions of the representations of the electric systems outside New York. These cases are valid for the study of the New York 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 New York 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 New York 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.

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 (version 29). 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 six base cases are provided in machine readable format on a single CD-ROM. The combined size of the input/output data files are approximately 20 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 2012 Peak Load case, with corresponding full names for each bus. This data-dictionary applies to all six base cases.

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 (see Appendix A, Release of Form 715 Information to the Public).

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**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)
1993 New York Power Pool Map	1994
NYISO One-Line Diagram of the New York Bulk Power System	2007
One-Line Diagrams of Each of the NYTOs' Systems:	
- Central Hudson Gas & Electric Corporation . . . . .	2006
- Consolidated Edison Company of New York . . . . .	2005
- Long Island Power Authority . . . . .	2005
- New York Power Authority . . . . .	2007
- New York State Electric & Gas Corporation (115 kV) . . .	2002
- Niagara Mohawk, A National Grid Company . . . . .	2007
- Orange & Rockland Utilities, Inc. . . . .	2007
- Rochester Gas & Electric Corporation . . . . .	2002

The 1993 NYPP Map depicts existing and proposed transmission facilities (115 kV and above) and major generation facilities within New York State. The map has been reprinted under the NYISO name, but otherwise has not changed.

The NYISO one-line diagram (4 pages) depicts the existing New York 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 New York system, or can have a significant effect on areas outside of the New York system, are also 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, Release of Form 715 Information to the Public).

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**Part 4 Transmission Planning Reliability Criteria**

For this part, the pertinent documents that were provided in a previous FERC 715 filing, and the date of the most recent filing of each, are as follows:

1. *Basic Criteria for Design and Operation of Interconnected Power Systems (NPCC Basic Criteria)*; Northeast Power Coordinating Council, May 6, 2004 (filed 2005). This document is available from the NPCC website ([www.npcc.org/CriteriaGuidesProcedures](http://www.npcc.org/CriteriaGuidesProcedures)).
2. *NYSRC Reliability Rules for Planning and Operating the New York State Power System, (NYSRC Reliability Rules) – Version 15*; New York State Reliability Council, December 10, 2005 (filed 2006). The NYSRC Reliability Rules are available from the NYSRC website ([www.nysrc.org](http://www.nysrc.org), under *Documents*). Note that the NYSRC Reliability Rules were formally adopted by the New York Public Service Commission on February 9, 2006.
3. *Central Hudson Gas & Electric Corporation Transmission Planning Criteria*; Central Hudson Gas & Electric Corporation, August 1, 1988 (filed 1994).
4. *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).
5. *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).
6. *Consolidated Edison Company of New York Load Pocket Design Criteria*; Consolidated Edison Company of New York, April 1, 1994 (filed 1994).
7. *MANUAL OF GENERAL REQUIREMENTS FOR CONNECTION TO CON EDISON'S ELECTRIC TRANSMISSION SYSTEM (SPECIFICATION EO-2097 B REVISION 1)*; Consolidated Edison Company of New York, Inc., December 1995 (filed 2001).
8. *Transmission & Distribution Planning Criteria & Guidelines*; Long Island Power Authority, May 21, 2004 (filed 2005).
9. *Long Island Power Authority Interconnection Guide for Independent Power Producers*; (filed 2000, under Part 5).

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**Part 4 Transmission Planning Reliability Criteria**

10. *New York Power Authority Electric Power System Connection Requirements, Revised March 2003* (filed 2003).
11. 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).
12. TRANSMISSION PLANNING GUIDE; National Grid, January 19, 2004 (filed 2004).
13. SUPPLEMENT TO SPECIFICATIONS FOR ELECTRIC INSTALLATIONS - PARALLEL GENERATION REQUIREMENTS OVER 300 KVA OR WHERE INTERCONNECTED OVER 15 KV (ELECTRIC SYSTEM BULLETIN #756B); Niagara Mohawk, A National Grid Company, August 2001 (filed 2004).
14. ORANGE AND ROCKLAND UTILITIES, INC. TRANSMISSION PLANNING GUIDELINES; Orange and Rockland Utilities, Inc., December 2, 1991 (filed 2003).
15. OPERATING, METERING, AND EQUIPMENT PROTECTION REQUIREMENTS FOR PARALLEL OPERATION OF LARGE-SIZE GENERATING FACILITIES GREATER THAN 25,000 KILOWATTS AND MEDIUM SIZE FACILITIES (5000-25000 KW) CONNECTED TO THE TRANSMISSION SYSTEM; Orange and Rockland Utilities, Inc., November 16, 1998 (filed 2001).

The NYISO and NYTOs are subject to the reliability standards established by the North American Electric Reliability Corporation (NERC). The latest approved NERC Reliability Standards are available from the NERC website ([www.nerc.com/~filez/standards/Reliability\\_Standards](http://www.nerc.com/~filez/standards/Reliability_Standards)). The following four NERC Reliability Standards are most applicable to transmission planning and copies are provided with this report:

- Standard TPL-001-0 – System Performance Under Normal (No Contingency) Conditions (Category A); April 1, 2005.
- Standard TPL-002-0 – System Performance Following Loss of a Single Bulk Electric System Element (Category B); April 1, 2005.
- Standard TPL-003-0 – System Performance Following Loss of Two or More Bulk Electric System Elements (Category C); April 1, 2005.
- Standard TPL-004-0 – System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements (Category D); April 1, 2005.

As members of the Northeast Power Coordinating Council (NPCC), the NYISO and the NYTOs also

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**Part 4 Transmission Planning Reliability Criteria**

are subject to the NPCC Basic Criteria (document #1 above). This document has not changed since it was last filed, and, therefore, is only referenced in this report.

The NYISO and the NYTOs also are subject to the NYSRC Reliability Rules (document #2 above). A revision of the NYSRC Reliability Rules (Version 18, dated January 5, 2007) is included with this report.

In addition to the NERC Reliability Standards, the NPCC Basic Criteria, and the NYSRC Reliability Rules, the NYTOs have supplemental transmission planning reliability criteria. A revision of the National Grid *Transmission Planning Guide (Revision 3.0)*, dated May 29, 2006, is included with this report. This revision supersedes the previously filed version (document #12 above). Also, a revision of the Niagara Mohawk, A National Grid Company *SUPPLEMENT TO SPECIFICATIONS FOR ELECTRIC INSTALLATIONS - PARALLEL GENERATION REQUIREMENTS OVER 300 KVA OR WHERE INTERCONNECTED OVER 15 KV (ELECTRIC SYSTEM BULLETIN #756B)*, dated April 2004, is included with this report. This revision supersedes the previously filed version (document #13 above). The other previously filed NYTO criteria documents listed above have not changed, and, therefore, are only referenced in this report. No new NYTO criteria documents were submitted for this filing.

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**Part 4 Transmission Planning Reliability Criteria**

**NERC RELIABILITY STANDARDS**

**Standard TPL-001-0 – System Performance Under  
Normal Conditions**

**(April 1, 2005)**

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**Part 4 Transmission Planning Reliability Criteria**

## **NERC RELIABILITY STANDARDS**

**Standard TPL-002-0 – System Performance Following Loss  
of a Single Bulk Electric System Element**

**(April 1, 2005)**

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**Part 4 Transmission Planning Reliability Criteria**

## **NERC RELIABILITY STANDARDS**

**Standard TPL-003-0 – System Performance Following Loss  
of Two or More Bulk Electric System Elements**

**(April 1, 2005)**



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**Part 4 Transmission Planning Reliability Criteria**

## **NERC RELIABILITY STANDARDS**

**Standard TPL-004-0 – System Performance Following  
Extreme Events Resulting in the Loss of Two or More  
Bulk Electric System Elements**

**(April 1, 2005)**

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**Part 4 Transmission Planning Reliability Criteria**

**NEW YORK STATE RELIABILITY COUNCIL**

**RELIABILITY RULES - Version 18**

**(January 5, 2007)**

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**Part 4 Transmission Planning Reliability Criteria**

**NATIONAL GRID**  
**TRANSMISSION PLANNING GUIDE**  
**(Revision 3.0, 05/29/2006)**

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**Part 4 Transmission Planning Reliability Criteria**

**NIAGARA MOHAWK, A NATIONAL GRID COMPANY**

**SUPPLEMENT TO SPECIFICATIONS FOR  
ELECTRICAL INSTALLATIONS -  
PARALLEL GENERATION REQUIREMENTS  
OVER 300 kVA OR WHERE  
INTERCONNECTED OVER 15 kV  
(ELECTRIC SYSTEM BULLETIN #756B)**

**April 2004**

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**Part 5 Transmission Planning Assessment Practices**

For this part, the pertinent documents that were provided in a previous FERC 715 filing, and the date of the most recent filing of each, are as follows:

1. NPCC *Guidelines for NPCC Area Transmission Reviews*; September 7, 2005 (filed 2006).

**Status:** This document has not changed since it was last filed, and, therefore, is only referenced in this report. NPCC guidelines, including this one, are available from the NPCC website ([www.npcc.org](http://www.npcc.org), under *Documents/Guides*).

2. NYISO *Comprehensive Planning Process for Reliability Needs*; October 19, 2004 (filed 2005).

**Status:** This document has not changed since it was last filed, and, therefore, is only referenced in this report. It is available from the NYISO web site ([www.nyiso.com](http://www.nyiso.com), under *Public/Documents/Tariffs/OATT*).

3. NYISO *Transmission Expansion and Interconnection Manual*; September 28, 1999 (filed 2000).

**Status:** This document has not changed since it was last filed, and, therefore, is only referenced in this report. The NYISO adopted new Standard Large Facility Interconnection Procedures into its Open Access Transmission Tariff in August 2004, rendering portions of the Transmission Expansion and Interconnection Manual out of date. NYISO has been working on a new Interconnection Manual to supercede the interconnection portions of the Transmission Expansion and Interconnection Manual, but the new manual won't be completed before the due date of this filing. This manual is available from the NYISO website ([www.nyiso.com](http://www.nyiso.com), under *Public/Documents/Manuals/ Planning*).

Note that the Transmission Expansion and Interconnection Manual contains three transmission planning guidelines as follows:

- 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.

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**Part 5 Transmission Planning Assessment Practices**

These guidelines have not changed since the 2000 FERC 715 filing.

4. NYISO *System Reliability Impact Study Criteria and Procedures*; Revised May 23, 2001 (filed 2002).

**Status:** This document has not changed since it was last filed, and, therefore, is only referenced in this report. This document is available from the NYISO website ([www.nyiso.com](http://www.nyiso.com), under *Public/Services/Planning/Interconnection Studies & Process*).

5. NYISO *Guideline for Fault Current Assessment*; January 30, 2003 (filed 2005).

**Status:** This document has not changed since it was last filed, and, therefore, is only referenced in this report.

6. NYPP *Guideline on Application of High-Speed Autoreclosing*; January 8, 1999 (filed 1999).

**Status:** On July 25, 2002, the NYISO formally adopted this former NYPP document as a NYISO document. The document has not changed since it was last filed, and, therefore, is only referenced in this report.

7. NYPP Methods and Procedures 6-8, *Procedures for Developing and Approving Operating Limits*; November 1, 1993 (filed 1994).

**Status:** This document is no longer in use.

8. 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. The NYISO operations manuals that have such significant relevance are as follows:

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**Part 5 Transmission Planning Assessment Practices**

- a. NYISO *Transmission and Dispatching Operations Manual*; September 1, 1999 (referenced in the 2000 filing);

**Status:** This manual has not changed since the last filing.

- b. NYISO *Emergency Operations Manual*, December 16, 2004 (referenced in the 2005 filing);

**Status:** A revision of this manual was approved on July 29, 2005.

These operations manuals are available from the NYISO website ([www.nyiso.com](http://www.nyiso.com), under *Public/Documents/Manuals/Operations*).

9. The following New York transmission owner/ operator (NYTO) documents:

- a. *Transmission Planning Assessment Practices*; Central Hudson Gas & Electric Corporation, February 16, 1994 (filed 1994).

- b. *Voltage Schedule, Control, and Operation of the Transmission System*; Consolidated Edison Company of New York, Inc., March, 1996 (filed 1998).

- c. *Thunderstorm Watch Procedure*; Consolidated Edison Company of New York, Inc., May 12, 1997 (filed 1998).

**Status:** A revision of the Con Edison *Voltage Schedule, Control, and Operation of the Transmission System* dated May, 2003, is provided with this report. The other NYTO documents have not changed since they were last filed, and, therefore, are only referenced in this report.

*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

**Part 5 Transmission Planning Assessment Practices**

**CON EDISON**

**VOLTAGE SCHEDULE, CONTROL, AND OPERATION  
OF THE TRANSMISSION SYSTEM**

**May 2003**



*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

**Part 6 Evaluation of Transmission System Performance**

**Contains Critical Energy Infrastructure Information – Do Not Release**

The 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 NYISO studies of both types have been provided in previous FERC 715 filings.

In the operating time frame, NYISO completed one seasonal operating study since the last FERC 715 filing, the NYISO Summer 2006 Operating Study. This study assessed the transfer limits of the New York operating transmission interfaces for conditions expected to occur during the summer 2006 peak load period. A copy of the study report is included with this report. These, and other operating study reports, are available from the NYISO web site ([www.nyiso.com](http://www.nyiso.com), under *Public/Documents/Studies & Reports/ Operating Studies*).

In the planning time frame, NYISO completed the 2005 Comprehensive Area Transmission Review, which was an assessment of the reliability of the planned New York State bulk power transmission system in the year 2010. 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 Basic Criteria** (see Part 4), in accordance with the **Guidelines for NPCC Area Transmission Reviews** (see Part 5). The report entitled, *New York Independent System Operator 2005 Comprehensive Area Transmission Review of the New York State Bulk Power Transmission System (Study Year 2010)*, dated May 26, 2006, is included in this report. The report is also available from the NYISO web site ([www.nyiso.com](http://www.nyiso.com), under *Public/Services/Planning/Reliability Assessments*).

Also in the planning time frame, NYISO completed its first Comprehensive Reliability Plan under its Comprehensive Reliability Planning Process (CRPP). Under this process, NYISO first evaluates and identifies the reliability needs of the New York State electric system over a ten-year period, then develops a plan for addressing any identified reliability needs. NYISO considers generation, transmission, and demand-side solutions together in developing its Comprehensive Reliability Plan. A document describing the CRPP was included with the NYISO's 2005 Form 715 report, and a copy of the NYISO's 2005 Reliability Needs Assessment was included with the NYISO's 2006 Form 715 report. Now, a copy of the report entitled, *New York Independent System Operator – The Comprehensive Reliability Plan 2005: A Long-term Reliability Assessment of New York's Power System*, dated August 22, 2006, is included with this report. The report is also available from the NYISO web site ([www.nyiso.com](http://www.nyiso.com), under *Public/Services/Planning/Reliability Assessments*).

NYISO recently completed the 2007 Reliability Needs Assessment, the second such assessment performed under the CRPP. A copy of the 2007 Reliability Needs Assessment Report, dated March 16, 2007, is included with this report. The report is also available from the NYISO web site.

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*FERC Form No. 715 Report*

**Part 6 Evaluation of Transmission System Performance**

**Contains Critical Energy Infrastructure Information – Do Not Release**

**NYISO OPERATING STUDY SUMMER 2006**

**(APRIL 2006)**

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*FERC Form No. 715 Report*

**Part 6 Evaluation of Transmission System Performance**

**Contains Critical Energy Infrastructure Information – Do Not Release**

**NEW YORK INDEPENDENT SYSTEM OPERATOR**

**2005 COMPREHENSIVE AREA TRANSMISSION  
REVIEW**

**(May 26, 2006)**

*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

**Part 6 Evaluation of Transmission System Performance**

**Contains Critical Energy Infrastructure Information – Do Not Release**

**NEW YORK INDEPENDENT SYSTEM OPERATOR  
THE COMPREHENSIVE RELIABILITY PLAN 2005**

**(August 22, 2006)**

*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

**Part 6 Evaluation of Transmission System Performance**

**Contains Critical Energy Infrastructure Information – Do Not Release**

**NEW YORK INDEPENDENT SYSTEM OPERATOR**

**2007 RELIABILITY NEEDS ASSESSMENT**

**(MARCH 16, 2007)**

*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

**APPENDIX A**

**RELEASE OF FORM 715 INFORMATION**

**TO THE PUBLIC**

*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

*APPENDIX A*

**Release of Form 715 Information to the Public**

Those portions of the New York Independent System Operator (NYISO) 2007 “Annual Transmission Planning and Evaluation Report” (FERC Form No. 715) that are not considered to be restricted information are available from the NYISO public web site ([www.nyiso.com](http://www.nyiso.com)). The portions of the NYISO FERC 715 report that are considered to be restricted information (i.e. maps, diagrams, and power flow base cases) will be provided upon request, receipt of the applicable fee(s), and authorization approval (see *Authorization Procedure* on next page). Previously filed criteria and practices documents referenced in the NYISO 2007 FERC 715 Report also will be provided upon request and receipt of the applicable fee(s). Requested information will be provided in the same form as was submitted to FERC.

**Description**

The NYISO 2007 FERC Form No. 715 Report consists of the following items:

- **Item 1: FERC 715 Report and Filed Documents** - includes the report text and filed documents in electronic form. Does not include power flow base cases, the NYISO Map, or one-line diagrams.
- **Item 2: Part 2 Power Flow Base Cases** - includes six (6) power flow base cases, a data dictionary, and EIA codes for generation plants. The six base cases are:
  - Case #1: Winter 2005/2006 Peak Load
  - Case #2: Summer 2007 Peak Load
  - Case #3: Spring 2012 Light Load
  - Case #4: Summer 2012 Peak Load
  - Case #5: Winter 2012/13 Peak Load
  - Case #6: Summer 2017 Peak Load
- **Item 3: Part 3 Map and One-line Diagrams** – includes the 1993 NYISO Map, a diagram of the New York Bulk Power System (four pages), and diagrams provided by the New York transmission owners/ operators for the FERC 715 filing. The map and each of the diagrams are in PDF files.
- **Item 4: Referenced Previously Filed Documents** – previously filed criteria and practices documents included by reference only in the NYISO 2007 FERC 715 Report. Some of these documents are in electronic form and available from the NYISO web site, and some are in hard copy only.

**Fee Schedule**

Item No.	Description	Fee
1	FERC 715 Report and Filed Documents in Electronic Form	available without fee
2	FERC 715 Power Flow Base Cases*	\$100 per set
3	Part 3 Map and One-line Diagrams in PDF files*	available without fee
4	Referenced Previously Filed Documents	\$20 copy fee per document

\* Access restricted to authorized parties.

*New York Independent System Operator 2007*

*FERC Form No. 715 Report*

*APPENDIX A cont.*

**Authorization Procedure**

Parties requesting copies of restricted information (map, one-line diagrams, or power flow cases) must submit a written application to the NYISO for authorization to receive this information. The application may be in the form of a letter, and must include: full identification of the person(s) and the organization requesting the information, a description of the general activities of the organization and the person(s) that expect to use the requested information, and a detailed description of the intended use of the requested information. The application also must include the following statement, ***“I, the undersigned, agree to limit the copy or distribution of the information received, 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.”*** A copy of the organization’s Code of Conduct or similar policy may be helpful. The application must be signed by the person requesting the information and by an authorized officer of the organization.

Upon receipt of an application to receive restricted information, the NYISO will review and evaluate the application and consider whether or not to grant authorization to the applicant. The NYISO will provide a written response to the applicant within 30 days following receipt of the application.

The NYISO will consider each application on a case-by-case basis, and reserves the right to deny an application or request for restricted information.

**Request Procedure**

To request copies of restricted information contained in the NYISO 2007 FERC Form No. 715 Report, submit your request, an application for authorization to receive restricted information, and payment of the applicable fee to:

Contact Person: Steven L. Corey  
Manager, Interconnection Projects  
Telephone: (518) 356-6134  
Fax: (518) 356-7524

Address: New York Independent System Operator  
10 Krey Blvd.  
Rensselaer, New York 12144

Checks should be made out to ***New York Independent System Operator, Inc.*** The following information must be provided with your request:

1. Your name, organization name, address, e-mail address and telephone number.
2. The items (1, 2, or 3) being requested, and the desired number of each item.
3. Application for authorization to receive restricted information.

Subject to approval of authorization to receive restricted information, the requested information will be sent via first class U.S. Mail or UPS, normally within 30 days following receipt by the NYISO contact person of a written request and payment of the applicable fee(s).



***New York Independent System Operator***  
***Request Form for FERC 715 Information***

This form may be used to request information included in the New York Independent System Operator (NYISO) 2007 “Annual Transmission Planning and Evaluation Report” (FERC Form No. 715). Authorization is required to obtain certain FERC 715 information. Please provide the information below and submit your request, application for authorization to receive restricted information (when applicable), and payment of any applicable fee(s) (by check payable to: ***New York Independent System Operator, Inc.***) to:

Steven L. Corey  
 New York Independent System Operator  
 10 Krey Blvd.  
 Rensselaer, New York 12144

Phone No. (518) 356-6134  
 Fax No. (518) 356-7524

Note that NYISO FERC 715 information that is in electronic form, and not considered to be restricted information, is available from the NYISO website ([http://www.nyiso.com/public/services/planning/nyiso\\_ferc.jsp](http://www.nyiso.com/public/services/planning/nyiso_ferc.jsp)).

Request for the NYISO 2007 FERC Form No. 715 Report, or information referenced in the FERC 715 report.

- 1. Requestor's Name: \_\_\_\_\_
- 2. Organization: \_\_\_\_\_
- 3. Address: \_\_\_\_\_  
 \_\_\_\_\_
- 4. E-Mail Address: \_\_\_\_\_
- 5. Telephone No. \_\_\_\_\_

6. Application for authorization to receive restricted information if required (see Appendix A, Release of Form 715 Information to the Public).

7. Information Requested:

Item No.	Description	Fee Per Copy	Fee
1*	Part 2 Power Flow Base Cases	\$100 per set =	
2*	Part 3 Map and One-line Diagrams in PDF files*	0	
3	Referenced Previously Filed Criteria or Practices Documents [List specific document(s) requested.]	\$20 per document =	
Total Fee =			

\* Access restricted to parties that have authorization to receive this information.