

December 13, 2019

#### **By Electronic Delivery**

Hon. Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, DC 20426

# Re: New York Independent System Operator, Inc.'s Informational Filing Regarding the Simultaneous Import Limitation Study, Docket No. AD10-2.

Dear Secretary Bose:

In accordance with Commission Order No. 697<sup>1</sup> and Commission staff direction, the New York Independent System Operator, Inc. ("NYISO") respectfully submits, for informational purposes, the attached presentation titled "2018 Simultaneous Import Limit Determination." The data in this presentation was compiled by the NYISO in order to assist the New York Transmission Owners in fulfilling their obligations associated with Commission Order No. 697. This presentation details the NYISO seasonal Simultaneous Import Limits for 2018, along with the methodology used in developing these limit levels. A draft of this presentation was provided to the New York Transmission Owners to support their filing obligations.

The NYISO respectfully requests that the Commission accept this informational report. If you have any questions please do not hesitate to contact the undersigned.

Respectfully submitted,

<u>/s/ James H. Sweeney</u> James H. Sweeney, Senior Attorney New York Independent System Operator, Inc. 10 Krey Blvd. Rensselaer, New York 12144 (518) 356-6000

<sup>&</sup>lt;sup>1</sup> Market-Based Rates for Wholesale Sales of Electric Energy, Capacity And Ancillary Services By Public Utilities, Final Rule, Order No. 697, 119 FERC ¶ 61,295 (June 21, 2007).

Honorable Kimberly D. Bose December 13, 2019 Page 2

cc: Anna Cochrane James Danly Jignasa Gadani Jette Gebhart Debra Irwin Kurt Longo John C. Miller David Morenoff Daniel Nowak Larry Parkinson Douglas Roe Ryan Stertz Frank Swigonski Gary Will

#### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 13<sup>th</sup> day of December 2019.

/s/ Mohsana Akter

Mohsana Akter New York Independent System Operator, Inc. 10 Krey Blvd. Rensselaer, NY 12144 (518) 356-7560

# 2018 Simultaneous Import Limit Determination

**Robert Golen** MANAGER, OPERATIONS ENGINEERING

System Operations Advisory Subcommittee

December 5<sup>th</sup>, 2019, NYISO



# Study Approach and Data Sources



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# **Data Utilized for SIL Study**

- Four seasonal historical total NYISO Simultaneous Import Limit (SIL) values for the period of Winter 2017-2018 through Fall 2018
- Allocation of the total historical SIL values to specific limits with neighboring Balancing Authorities (PJM, ISONE, IESO, and HQ)
- Adjustments for firm transmission commitments held by affiliated companies that represent transfer capability not available to unaffiliated companies



# **Posted OASIS Interfaces**

- Neighboring BAs are electrically non-contiguous
- Interface names listed are the OASIS identifiers
- Interfaces identified with an \* are controlled interfaces



# **2018 NYISO Simultaneous Import Limits,**

# **Adjusted Total Transfer Capability (TTC) for**

# **Controllable Ties Included**

2017-2018 Season	NYISO Simultaneous Import Limits	NYISO System Peak Loads
Winter	7,914 MW	25,237 MW
Spring	7,395 MW	24,545 MW
Summer	6,665 MW	31,980 MW
Fall	7,315 MW	31,553 MW

Simultaneous import limit (SIL) values provided are consistent with the TTCs employed in operating the transmission system and the posted availability on OASIS during the seasonal peak load periods of 2017-2018.

# 2018 NYISO Simultaneous Import Limits,

# Adjusted TTC for Controllable Ties Set to Zero\*

2017-2018 Season	NYISO Simultaneous Import Limits	NYISO System Peak Loads
Winter	5,949 MW	25,237 MW
Spring	5,430 MW	24,545 MW
Summer	4,700 MW	31,980 MW
Fall	5,350 MW	31,553 MW

\*FERC Order 816 at P. 177 provides that "where the seller is unaware of the terms and conditions for third-party capacity rights on controllable merchant lines, the seller must make a conservative assumption and subtract from the Total Simultaneous Transfer Capability and Historical Peak Load values the full capacity of the controllable merchant line as a long-term firm transmission reservation." This chart provides the NYISO's Simultaneous Import Limits after subtracting the full capacity of four controllable lines from the Adjusted TTC, as required by FERC Order 816. Detailed data supporting this chart appears in slides 13, 15, 17, and 19.



# Approach

In accordance with FERC Order 697:

- NYISO accounts for simultaneity in determining the SIL
- The TTC values employed are those used in operating the transmission system and the posted availability on OASIS
- The TTC values were studied in a manner which includes the TTC/ATC methodologies identified in the NYISO OATT
- The TTC values employed represent more than interface constraints at the balancing authority area border and reflect all transmission limitations within the study area and limitations within first-tier areas



# Approach

No Physical Transaction Scheduling in NYISO:

- The NYISO OATT does not permit firm transmission commitment reservations of tie capability
  - All NYISO transmission scheduling is achieved via financial evaluation of transaction bids placed by MPs in the DAM/HAM markets.
  - Long-term financial scheduling is not available; all scheduling is conducted in the DAM/HAM evaluations
- Thus, no TTC adjustments for applicable firm transmission commitments held by affiliated companies, representing transfer capability not available to first-tier supply, are required



# **Required Evidence w/r/t TTCs**

The TTC values employed:

- Account for simultaneity through the application of significant Transmission Reliability Margins (TRMs) applied to first-tier areas where transfers to NYISO would result in loop flow through other first-tier entities.
- Account for all external transmission limitations existing in first-tier areas as demonstrated by historical record of adjustments to TTC values day-ahead and hour-ahead based on operating restrictions within first-tier areas
- Account for all Transmission Reliability Margins as defined in the NYISO OATT
- Are used in operating the transmission system and posting availability on OASIS



# **Data Sources**

- NYISO website posting of TTC and ATC: <u>http://mis.nyiso.com/public/P-8list.htm</u>
- NYISO website posting of TRM and CBM: <u>https://www.nyiso.com/documents/20142/2268529/margin\_with\_external\_tr</u> <u>m.pdf/aac12007-c39e-fff3-3e75-ccb584453a35</u>
- NYISO website posting of load: <u>http://mis.nyiso.com/public/P-58Clist.htm</u>



# Study Results: NYCA



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## **Winter Peak Load**

#### **Adjusted TTC for Controllable Ties Included**

## Load 25,237 MW on 01/05/2018 17:49:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	199	0	0	199	199	0
HQ-NYISO***	800	0	0	800	0	800
IMO-NYISO	1750	300	0	1450	236	1214
ISONE-NYISO	1400	200	0	1200	1200	0
NPX-1385	0	0	0	0	0	0
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	0	660
PJM-NYISO	2600	300	0	2300	2013	287
PJM-LINDEN VFT	315	0	0	315	315	0
PJM-HTP	660	0	0	660	660	0
TOTAL	8714	800	0	7914	4623	3291

\*Data throughout this report reflects actual operating data from the identified time interval

 $\ast \ast \mathsf{Controllable}$  ties have a TRM of zero since they can be continuously and precisely controlled



## **Winter Peak Load**

#### Adjusted TTC for Controllable Ties set to Zero^

#### Load 25,237 MW on 01/05/2018 17:49:00\*

Interface Name	ттс	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	199	0	0	199	199	0
HQ-NYISO	800	0	0	800	0	800
IMO-NYISO	1750	300	0	1450	236	1214
ISONE-NYISO	1400	200	0	1200	1200	0
NPX-1385	0	0	0	0	0	0
NPX-CSC <sup>^</sup>	330	0	0	0	0	330
PJM-NEPTUNE <sup>^</sup>	660	0	0	0	0	660
PJM-NYISO	2600	300	0	2300	2013	287
PJM-LINDEN VFT^	315	0	0	0	0	0
PJM-HTP^	660	0	0	0	0	0
TOTAL	8714	800	0	5949	3648	3291

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC, PJM-NEPTUNE, PJM-LINDEN VFT, and PJM-HTP because the

Advanced Reservations process is controlled by ISO-NE or PJM.

 $^{\star}\textsc{Data}$  throughout this report reflects actual operating data from the identified time interval

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled



# **Spring Peak Load**

#### **Adjusted TTC for Controllable Ties Included**

## Load 24,545 MW on 05/29/2018 17:24:00\*

Interface Name	ттс	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	70	0	0	70	70	0
HQ-NYISO***	1310	0	0	1310	520	790
IMO-NYISO	1300	300	0	1000	742	258
ISONE-NYISO	1400	200	0	1200	150	1050
NPX-1385	200	0	0	200	0	200
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	131	529
PJM-NYISO	1950	300	0	1650	1650	0
PJM-LINDEN VFT	315	0	0	315	315	0
PJM-HTP	660	0	0	660	660	0
TOTAL	8195	800	0	7395	4238	3157

\*Data throughout this report reflects actual operating data from the identified time interval

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled



# **Spring Peak Load**

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 24,545 MW on 05/29/2018 17:24:00\*

Interface Name	ттс	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	70	0	0	70	70	0
HQ-NYISO***	1310	0	0	1310	520	790
IMO-NYISO	1300	300	0	1000	742	258
ISONE-NYISO	1400	200	0	1200	150	1050
NPX-1385	200	0	0	200	0	200
NPX-CSC <sup>^</sup>	330	0	0	0	0	330
PJM-NEPTUNE <sup>^</sup>	660	0	0	0	0	529
PJM-NYISO	1950	300	0	1650	1650	0
PJM-LINDEN VFT^	315	0	0	0	0	0
PJM-HTP^	660	0	0	0	0	0
TOTAL	8195	800	0	5430	3132	3157

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC, PJM-NEPTUNE, PJM-LINDEN VFT, and PJM-HTP because the

Advanced Reservations process is controlled by ISO-NE or PJM.

\*Data throughout this report reflects actual operating data from the identified time interval

 ${}^{**} \mbox{Controllable ties have a TRM of zero since they can be continuously and precisely controlled}$ 



# **Summer Peak Load**

#### **Adjusted TTC for Controllable Ties Included**

## Load 31,980 MW on 08/29/2018 16:28:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	190	0	0	190	60	130
HQ-NYISO***	1310	0	0	1310	0	1310
IMO-NYISO	600	300	0	300	0	300
ISONE-NYISO	1400	200	0	1200	1200	0
NPX-1385	200	0	0	200	200	0
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	0	660
PJM-NYISO	1800	300	0	1500	0	1500
PJM-LINDEN VFT	315	0	0	315	315	0
PJM-HTP	660	0	0	660	260	400
TOTAL	7465	800	0	6665	2035	4630

\*Data throughout this report reflects actual operating data from the identified time interval

 $\ast \ast \mathsf{Controllable}$  ties have a TRM of zero since they can be continuously and precisely controlled



# **Summer Peak Load**

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 31,980 MW on 08/29/2018 16:28:00\*

Interface Name	ттс	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	190	0	0	190	60	130
HQ-NYISO***	1310	0	0	1310	0	1310
IMO-NYISO	600	300	0	300	0	300
ISONE-NYISO	1400	200	0	1200	1200	0
NPX-1385	200	0	0	200	200	0
NPX-CSC <sup>^</sup>	330	0	0	0	0	330
PJM-NEPTUNE <sup>^</sup>	660	0	0	0	0	660
PJM-NYISO	1800	300	0	1500	0	1500
PJM-LINDEN VFT^	315	0	0	0	0	0
PJM-HTP^	660	0	0	0	0	400
TOTAL	7465	800	0	4700	1460	4630

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC, PJM-NEPTUNE, PJM-LINDEN VFT, and PJM-HTP because the

Advanced Reservations process is controlled by ISO-NE or PJM.

\*Data throughout this report reflects actual operating data from the identified time interval

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled



# **Fall Peak Load**

#### **Adjusted TTC for Controllable Ties Included**

## Load 31,553 MW on 09/05/2018 16:52:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	190	0	0	190	0	190
HQ-NYISO***	1310	0	0	1310	0	1310
IMO-NYISO	1250	300	0	950	911	39
ISONE-NYISO	1400	200	0	1200	1200	0
NPX-1385	200	0	0	200	200	0
NPX-CSC	330	0	0	330	65	265
PJM-NEPTUNE	660	0	0	660	0	660
PJM-NYISO	1800	300	0	1500	945	555
PJM-LINDEN VFT	315	0	0	315	0	315
PJM-HTP	660	0	0	660	460	200
TOTAL	8115	800	0	7315	3781	3534

\*Data throughout this report reflects actual operating data from the identified time interval

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled



## **Fall Peak Load**

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 31,553 MW on 09/05/2018 16:52:00\*

Interface Name	ттс	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	190	0	0	190	0	190
HQ-NYISO***	1310	0	0	1310	0	1310
IMO-NYISO	1250	300	0	950	911	39
ISONE-NYISO	1400	200	0	1200	1200	0
NPX-1385	200	0	0	200	200	0
NPX-CSC <sup>^</sup>	330	0	0	0	0	265
PJM-NEPTUNE <sup>^</sup>	660	0	0	0	0	660
PJM-NYISO	1800	300	0	1500	945	555
PJM-LINDEN VFT^	315	0	0	0	0	315
PJM-HTP^	660	0	0	0	0	200
TOTAL	8115	800	0	5350	3256	3534

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC, PJM-NEPTUNE, PJM-LINDEN VFT, and PJM-HTP because the

Advanced Reservations process is controlled by ISO-NE or PJM.

\*Data throughout this report reflects actual operating data from the identified time interval

 $\ast \ast \mathsf{Controllable}$  ties have a TRM of zero since they can be continuously and precisely controlled



# **Seasonal Comparison**

Deels Leed (AMA)	Winter		Spring		Summer		Fall	
Peak Load (MW)	25,:	25,237 24,545 31,980		980	0 31,553			
Interface Name	пс	Scheduled	πс	Scheduled	πс	Scheduled	ПС	Scheduled
HQ-CEDARS	199	0	70	0	190	130	190	190
HQ-NYISO	800	800	1310	790	1310	1310	1310	1310
IMO-NYISO	1750	1214	1300	258	600	300	1250	39
ISONE-NYISO	1400	0	1400	1050	1400	0	1400	0
NPX-1385	0	0	200	200	200	0	200	0
NPX-CSC	300	330	330	330	330	330	330	265
PJM-NEPTUNE	660	660	660	529	660	660	660	660
PJM-NYISO	2600	287	1950	0	1800	1500	1800	555
PJM-LINDEN VFT	315	0	315	0	315	0	315	315
PJM-HTP	660	0	660	0	660	400	660	200
TOTAL	8714	3291	8195	3157	7465	4630	8115	3534
* Data pulled from	slides 12, 14, 16, an	nd 18.						NEW YORK

INDEPENDENT

OPERATOR

# NYISO Tariffs OATT 2 – Common Service Provisions

## • 2.2.1 Initial Allocation of Available Transfer Capability

• Firm Transmission Service under this Tariff is obtained when the Transmission Customer agrees to pay the Congestion associated with its service.



# NYISO Tariffs – OATT Attachment C 9.1 Overview

- The ISO shall calculate and post ATC values for its Internal and External Interfaces and for Scheduled Lines.
- The ISO's Interfaces represent a defined set of transmission facilities that separate Locational Based Marginal Pricing (LBMP) Load Zones within the New York Control Area and that separate the New York Control Area from adjacent Control Areas.
- External Interfaces may be represented by one or more Proxy Generator Buses for scheduling and dispatching purposes. Each Proxy Generator Bus may be associated with distinct, posted ATC values.
- Scheduled Lines represent a transmission facility or set of transmission facilities that provide a separate scheduling path interconnecting the ISO to an adjacent Control Area. Each Scheduled Line is associated with a distinct Proxy Generator bus for which the ISO separately posts ATC.



# **Controllable Ties (Scheduled Lines)**

- The NYISO's Market Information System ("MIS") allows Market Participants that hold long-term firm Advance Reservations over scheduled lines to schedule transactions, while at the same time allowing third-parties to schedule transactions over scheduled lines using capacity that has been released.
- Market Participants desiring to submit bids in the NYISO's markets to schedule External Transactions over scheduled lines are required to have: (a) an Advance Reservation on the relevant external OASIS; (b) a valid NERC E-Tag that specifically identifies the Advance Reservation that is supporting the proposed External Transaction; and (c) a bid submitted to the NYISO's MIS by 4:50 a.m. (instead of 5:00 a.m.) of the day prior to the Dispatch Day in question.
  - Similar requirements apply to bids seeking to schedule Real-Time External Transactions, which must be submitted at least eighty five minutes prior (instead of seventy five minutes prior) to the relevant dispatch hour.



# **Controllable Ties (Scheduled Lines)**

- The NYISO's MIS confirms the Advance Reservation during the ten-minute window between 4:50 a.m. and 5:00 a.m. (or between 85 minutes and 75 minutes prior to the relevant dispatch hour in real-time.
  - The NYISO's MIS does not track (or have visibility to) Advance Reservations outside this confirmation process.
- On slides 13, 15, 17, and 19, the NYISO provides zero Adjusted TTC values and zero ATC values for controllable ties pursuant to Paragraph 177 of FERC Order 816.



# Approach –

# <u>Commission Determination\*</u>, Order No. 697 pt. 364

- Southern's suggestion that the Commission allow the use of simultaneous TTC values is consistent with the SIL study provided that these TTCs are the values that are used in operating the transmission system and posting availability on OASIS.
- The simultaneous TTCs<sup>[368]</sup> must represent more than interface constraints at the balancing authority area border and must reflect all transmission limitations within first-tier areas.

[368] The simultaneous TTCs include seller's balancing authority area and aggregated first-tier areas.

\* https://www.ferc.gov/whats-new/comm-meet/2007/062107/E-1.pdf



# Approach –

# **<u>Commission Determination\*</u>**, Order No. 697 pt. 364

- The source (first-tier remote resources) can only deliver power to load in the seller's balancing authority area if adequate transmission is available out of its first-tier area, adequate transmission is available at the seller's balancing authority area interface, and transmission is internally available.
- Thus, the TTC must be appropriately adjusted for all applicable (as discussed below) firm transmission commitments held by affiliated companies that represent transfer capability not available to first-tier supply.
- Sellers submitting simultaneous TTC values must provide evidence that these values account for simultaneity, account for all internal transmission limitations, account for all external transmission limitations existing in first-tier areas, account for all transmission reliability margins, and are used in operating the transmission system and posting availability on OASIS.



# **Study Results: Sub-Markets**



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# **Sub-Markets**

- The NYISO tariffs address sub-markets (NYC and Long Island) in the area of capacity markets only.
- The NYISO energy markets do not address sub-markets and TTCs and ATCs are neither calculated, monitored, nor posted for capacity market defined areas NYC and Long Island.



# **Equivalent SIL for Sub-Markets**

- An approximation of the transfer capability into the capacity sub-markets of Con Ed and Long Island can be calculated by summing the tie capability of the into those areas and assuming that the contract wheel of 300 MW through LIPA into Con Ed.
- The net scheduled interchange into the Con Ed and Long Island resulting from the statewide security constrained commitment and dispatch is calculated and can be regarded as the equivalent scheduled transfer into the areas.
- The difference between the approximated transfer capability into the capacity sub-markets and the net scheduled interchange within those areas can be regarded as a ATC.



# **Sub-Market Interconnections**



## Winter Peak Load – Long Island

#### **Adjusted TTC for Controllable Ties Included**

## Load 3,472 MW on 01/05/2018 17:34:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	0	0	0	0	0	0
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	0	660
SPR-DUNW S	4600	100	0	4500	1039	3461
CONED-LIPA***	-300	0	0	-300	-5	-295
TOTAL	5290	100	0	5190	1034	4156

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.



## Winter Peak Load – Long Island

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 3,472 MW on 01/05/2018 17:34:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	0	0	0	0	0	0
NPX-CSC^	330	0	0	330	0	330
PJM-NEPTUNE^	660	0	0	660	0	660
SPR-DUNW S	4600	100	0	4500	1039	3461
CONED-LIPA***	-300	0	0	-300	-5	-295
TOTAL	5290	100	0	5190	1034	4156

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC and PJM-NEPTUNE because the Advanced Reservations process is controlled by ISO-NE or PJM.

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

# **Spring Peak Load – Long Island**

#### **Adjusted TTC for Controllable Ties Included**

## Load 3,562 MW on 05/26/2018 17:09:00\*

Interface Name	πс	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	155	45
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	330	330
SPR-DUNW S	4600	100	0	4500	1257	3243
CONED-LIPA***	-300	0	0	-300	-190	-110
TOTAL	5490	100	0	5390	1552	3838

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.



# **Spring Peak Load – Long Island**

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 3,562 MW on 05/26/2018 17:09:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	155	45
NPX-CSC <sup>^</sup>	330	0	0	330	0	330
PJM-NEPTUNE^	660	0	0	660	330	330
SPR-DUNW S	4600	100	0	4500	1257	3243
CONED-LIPA***	-300	0	0	-300	-190	-110
TOTAL	5490	100	0	5390	1552	3838

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC and PJM-NEPTUNE because the Advanced Reservations process is controlled by ISO-NE or PJM.

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.



# Summer Peak Load – Long Island

#### **Adjusted TTC for Controllable Ties Included**

## Load 5,434 MW on 08/29/2018 16:24:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	200	0
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	0	660
SPR-DUNW S	4350	100	0	4250	1139	3111
CONED-LIPA***	-300	N/A	N/A	-300	1	-301
TOTAL	5240	100	0	5140	1340	3800

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.



# **Summer Peak Load – Long Island**

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 5,434 MW on 08/29/2018 16:24:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	200	0
NPX-CSC <sup>^</sup>	330	0	0	330	0	330
PJM-NEPTUNE^	660	0	0	660	0	660
SPR-DUNW S	4350	100	0	4250	1139	3111
CONED-LIPA***	-300	N/A	N/A	-300	1	-301
TOTAL	5240	100	0	5140	1340	3800

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC and PJM-NEPTUNE because the Advanced Reservations process is controlled by ISO-NE or PJM.

 $\star$  Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

# Fall Peak Load – Long Island

#### **Adjusted TTC for Controllable Ties Included**

## Load 5,264 MW on 09/06/2018 17:15:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	125	75
NPX-CSC	330	0	0	330	115	215
PJM-NEPTUNE	660	0	0	660	0	660
SPR-DUNW S	4350	100	0	4250	858	3392
CONED-LIPA***	-300	N/A	N/A	-300	4	-304
TOTAL	5240	100	0	5140	1102	4038

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.



# Fall Peak Load – Long Island

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 5,264 MW on 09/06/2018 17:15:00\*

Interface Name	ттс	TRM**	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	125	75
NPX-CSC <sup>^</sup>	330	0	0	330	115	215
PJM-NEPTUNE^	660	0	0	660	0	660
SPR-DUNW S	4350	100	0	4250	858	3392
CONED-LIPA***	-300	N/A	N/A	-300	4	-304
TOTAL	5240	100	0	5140	1102	4038

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for NPX-CSC and PJM-NEPTUNE because the Advanced Reservations process is controlled by ISO-NE or PJM.

 $\star$  Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.



# Summary – Long Island\*

Peak Load (MW)	Winter		Spring		Summer		Fall	
Peak Loau (IMW)	3,472		3,562		5,434		5,264	
Interface Name	TTC	Scheduled	TTC	Scheduled	TTC	Scheduled	TTC	Scheduled
NPX-1385	0	0	200	45	200	0	200	75
NPX-CSC	330	330	330	330	330	330	330	215
PJM-NEPTUNE	660	660	660	330	660	660	660	660
SPR-DUNW S	4600	3461	4600	3243	4350	3111	4350	3392
CONED-LIPA	-300	-295	-300	-110	-300	-301	-300	-304
TOTAL	5290	4156	5490	3838	5240	3800	5240	4038

\*Data pulled from slides 31, 33, 35, and 37.



# Winter Peak Load – NYC

#### **Adjusted TTC for Controllable Ties Included**

### Load 7,888 MW on 01/05/2018 17:29:00\*

Interface Name	ΠС	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	400	0	0	400	-290	690
PJM-LINDEN VFT	315	0	0	315	315	0
РЈМ-НТР	660	0	0	660	660	0
SPR-DUNW S	4600	100	0	4500	1039	3461
TOTAL	5975	100	0	5875	1724	4151

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\*A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT.



# Winter Peak Load – NYC

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 7,888 MW on 01/05/2018 17:29:00\*

Interface Name	ΠC	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	400	0	0	400	-290	690
PJM-LINDEN VFT^	315	0	0	315	315	0
PJM-HTP^	660	0	0	660	660	0
SPR-DUNW S	4600	100	0	4500	1039	3461
TOTAL	5975	100	0	5875	1724	4151

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for PJM-LINDEN VFT and PJM-HTP because the Advanced Reservations process is controlled by PJM.

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT.



# **Spring Peak Load – NYC**

#### **Adjusted TTC for Controllable Ties Included**

## Load 8,260 MW on 05/29/2018 17:19:00\*

Interface Name	ПС	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	100	0	0	100	0	100
PJM-LINDEN VFT	315	0	0	315	315	0
PJM-HTP	660	0	0	660	660	0
SPR-DUNW S	4600	100	0	4500	741	3759
TOTAL	5675	100	0	5575	1716	3859

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT. The

TTC is derated to 100 during this period, as the B and C lines are out of service.



# **Spring Peak Load – NYC**

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 8,260 MW on 05/29/2018 17:19:00\*

Interface Name	TTC	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	100	0	0	100	0	100
PJM-LINDEN VFT^	315	0	0	315	315	0
PJM-HTP^	660	0	0	660	660	0
SPR-DUNW S	4600	100	0	4500	741	3759
TOTAL	5675	100	0	5575	1716	3859

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for PJM-LINDEN VFT and PJM-HTP because the Advanced Reservations process is controlled by PJM.

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT. The TTC is derated to 100 during this period, as the B and C lines are out of service.



# Summer Peak Load – NYC

#### **Adjusted TTC for Controllable Ties Included**

#### Load 10,917 MW on 08/29/2018 16:19:00\*

Interface Name	ПС	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	100	0	0	100	91	9
PJM-LINDEN VFT	315	0	0	315	315	0
PJM-HTP	660	0	0	660	260	400
SPR-DUNW S	4350	100	0	4250	1139	3111
TOTAL	5425	100	0	5325	1805	3520

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT. The

TTC is derated to 100 during this period, as the B and C lines are out of service.



# Summer Peak Load – NYC

#### Adjusted TTC for Controllable Ties set to Zero^

#### Load 10,917 MW on 08/29/2018 16:19:00\*

Interface Name	ТС	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	100	0	0	100	91	9
PJM-LINDEN VFT^	315	0	0	315	315	0
PJM-HTP^	660	0	0	660	260	400
SPR-DUNW S	4350	100	0	4250	1139	3111
TOTAL	5425	100	0	5325	1805	3520

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for PJM-LINDEN VFT and PJM-HTP because the Advanced Reservations process is controlled by PJM.

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT. The TTC is derated to 100 during this period, as the B and C lines are out of service.



# Fall Peak Load – NYC

#### **Adjusted TTC for Controllable Ties Included**

### Load 11,109 MW on 09/06/2018 17:15:00\*

Interface Name	ΠС	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	100	0	0	100	-145	245
PJM-LINDEN VFT	315	0	0	315	315	0
PJM-HTP	660	0	0	660	195	465
SPR-DUNW S	4350	100	0	4250	858	3392
TOTAL	5425	100	0	5325	1223	4102

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT. The

TTC is derated to 100 during this period, as the B and C lines are out of service.



# Fall Peak Load – NYC

#### Adjusted TTC for Controllable Ties set to Zero^

## Load 11,109 MW on 09/06/2018 17:15:00\*

Interface Name	TTC	TRM**	СВМ	Adjusted TTC	ATC	Scheduled
A-B-C***	100	0	0	100	-145	245
PJM-LINDEN VFT^	315	0	0	315	315	0
PJM-HTP^	660	0	0	660	195	465
SPR-DUNW S	4350	100	0	4250	858	3392
TOTAL	5425	100	0	5325	1223	4102

^ See slide 6 for reference. Adjusted TTC and ATC are set to zero for PJM-LINDEN VFT and PJM-HTP because the Advanced Reservations process is controlled by PJM.

\* Data throughout this report reflects actual operating data from the identified time interval.

\*\*Controllable ties have a TRM of zero since they can be continuously and precisely controlled.

\*\*\* A-B-C lines have a TTC of 400 based on the NYISO-PJM Joint operating Agreement, Attachment CC to the NYISO OATT. The TTC is derated to 100 during this period, as the B and C lines are out of service.



# **Summary - NYC**

Peak Load	Winter		Spring		Summer		Fall	
(MW)	7,	888	8,260		10,917		11,109	
Interface Name	ΠC	Scheduled	πс	Scheduled	ττс	Scheduled	ттс	Scheduled
A-B-C	400	690	100	100	100	9	100	245
PJM-LINDEN VFT	315	0	315	0	315	0	315	0
PJM-HTP	660	0	660	0	660	400	660	465
SPR-DUNW S	4600	3461	4600	3759	4350	3111	4350	3392
TOTAL	5975	4151	5675	3859	5425	3520	5425	4102

 $\rightarrow$ 

\*Data pulled from slides 40, 42, 44, and 46.

# **Comparison with 2015 SIL Report**



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# **Comparison with 2015 SIL Report – Winter**

Deals Lood (MMM)	Wint	ter 2015	Winter 2018		
	24	4,893	25,237		
Interface Name	ттс	Scheduled	ΠC	Scheduled	
HQ-CEDARS	199	0	199	0	
HQ-NYISO	1310	110	800	800	
IMO-NYISO	1900	1402	1750	1214	
ISONE-NYISO	1400	0	1400	0	
NPX-1385	200	105	0	0	
NPX-CSC	0	0	330	330	
PJM-NEPTUNE	660	425	660	660	
PJM-NYISO	2450	1526	2600	287	
PJM-LINDEN VFT	315	290	315	0	
PJM-HTP	660	260	660	0	
TOTAL	8899	3071	8714	3291	



# **Comparison with 2015 SIL Report – Spring**

Doold Lood (MIM)	Spri	ng 2015	Spring 2018		
	2	4,418	24,545		
Interface Name	ттс	Scheduled	πс	Scheduled	
HQ-CEDARS	95	0	70	0	
HQ-NYISO	1310	1182	1310	790	
IMO-NYISO	1500	1200	1300	258	
ISONE-NYISO	1150	182	1400	1050	
NPX-1385	200	200	200	200	
NPX-CSC	330	0	330	330	
PJM-NEPTUNE	660	660	660	529	
PJM-NYISO	2200	723	1950	0	
PJM-LINDEN VFT	315	0	315	0	
PJM-HTP	660	0	660	0	
TOTAL	8420	4147	8195	3157	



# **Comparison with 2015 SIL Report – Summer**

Dealt Lead (MMA)	Sumr	mer 2015	Summer 2018		
	3	1,266	31,980		
Interface Name	ттс	Scheduled	ттс	Scheduled	
HQ-CEDARS	190	130	190	130	
HQ-NYISO	1310	1310	1310	1310	
IMO-NYISO	1900	464	600	300	
ISONE-NYISO	1400	360	1400	0	
NPX-1385	200	45	200	0	
NPX-CSC	330	330	330	330	
PJM-NEPTUNE	660	660	660	660	
PJM-NYISO	2300	387	1800	1500	
PJM-LINDEN VFT	315	0	315	0	
PJM-HTP	660	0	660	400	
TOTAL	9265	3686	7465	4630	



# **Comparison with 2015 SIL Report – Fall**

Doold Lood (M/M/)	Fa	II 2015	Fall 2018		
Peak Luau (IVIW)	3	1,179	31,553		
Interface Name	ттс	Scheduled	πс	Scheduled	
HQ-CEDARS	130	80	190	190	
HQ-NYISO	1310	1266	1310	1310	
IMO-NYISO	1900	835	1250	39	
ISONE-NYISO	1400	0	1400	0	
NPX-1385	200	105	200	0	
NPX-CSC	330	330	330	265	
PJM-NEPTUNE	660	660	660	660	
PJM-NYISO	2300	816	1800	555	
PJM-LINDEN VFT	315	0	315	315	
PJM-HTP	660	60	660	200	
TOTAL	9205	4152	8115	3534	



# The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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