NYISO
2012 Simultaneous Import Limit Determination

Operations Engineering

11/04/13

Required

- **Four seasonal historic total NYISO Simultaneous Import Limit (SIL) values for the period winter 2011/12 through Fall 2012**

- **Allocation of the total historical SIL values to specific limits with neighboring Balancing Authorities**

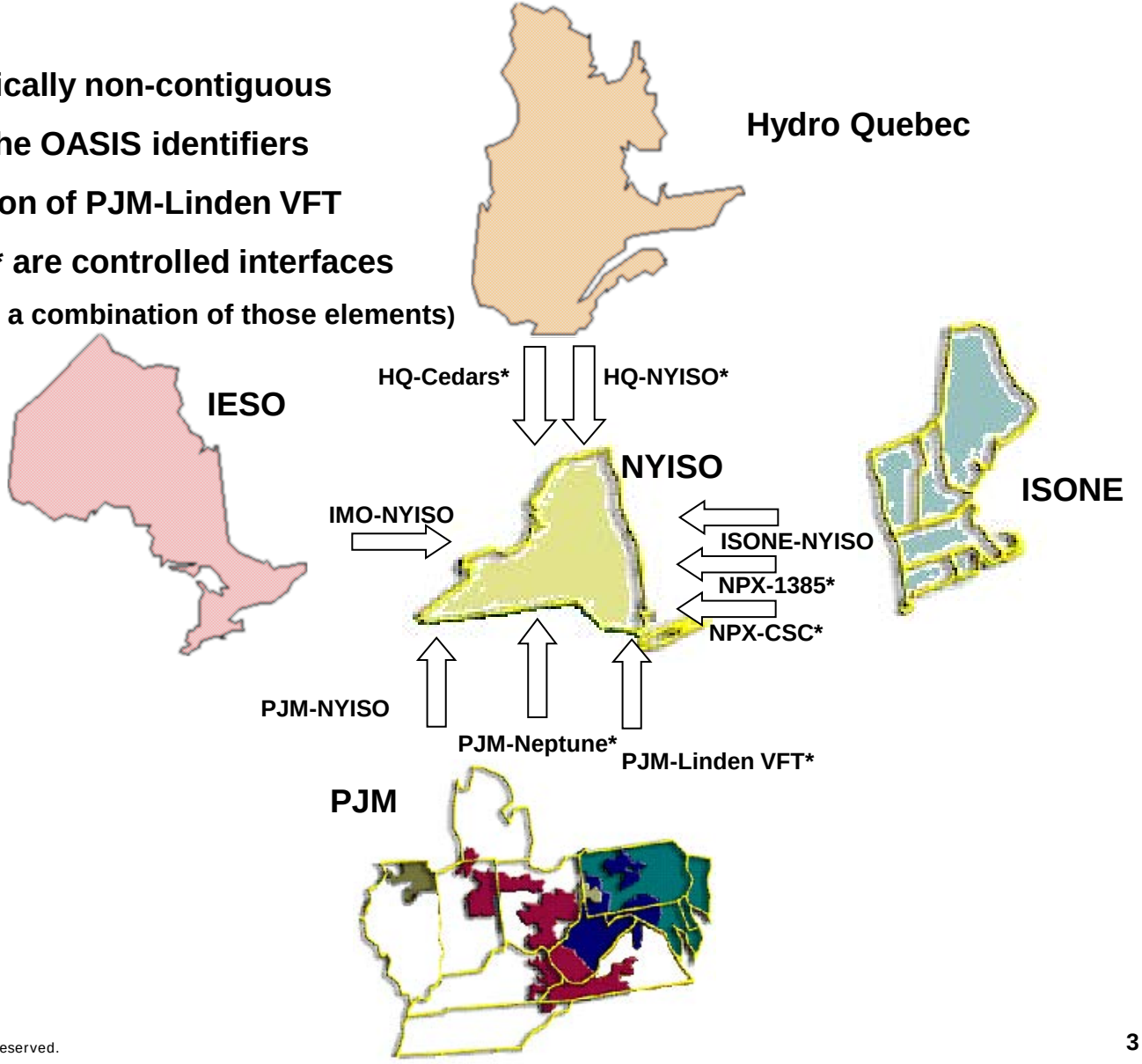
  (PJM, ISONE, IESO, and HQ)

- **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**
- **2012 Report includes addition of PJM-Linden VFT**
- **Interfaces identified with a * are controlled interfaces**

(HVDC, VFT, radial generation or a combination of those elements)



2012 NYISO Simultaneous Import limits

Seasonal Simultaneous Import Limit (SIL)		
2011-12 Season	NYISO Simultaneous Import Limits	NYISO System Peak Loads
Winter	8099 MW	24137 MW
Spring	7360 MW	28470 MW
Summer	7820 MW	32587 MW
Fall	8130 MW	28296 MW

Simultaneous import limits (SIL) values provided are consistent with the TTCs employed in operating the transmission system and posting availability on OASIS during the seasonal peak loads periods of 2011-12

Approach (1 OF 2)

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 posting 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 (2 OF 2)

No Physical Transaction Scheduling in NYISO:

- **The NYISO OATT does not permit firm transmission commitment reservations of tie capability [for companies affiliated with transmission owners in NY]**
  - ***All NYISO transmission scheduling is achieved via financial evaluation of transaction bids placed by MPs in the DAM and HAM markets.***
  - ***Long-term financial scheduling is not available; [all scheduling is conducted in the DAM and 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 (400-500 MW) 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**
  - ***http://mis.nyiso.com/public/P-8list.htm***
- **NYISO website posting of TRM and CBM**
  - ***http://www.nyiso.com/public/webdocs/market_data/power_grid_info/margin_with_external_trm.pdf***
- **NYISO website posting of load**
  - ***http://mis.nyiso.com/public/P-58Clist.htm***

Winter Peak Load

Load 24,137 MW on 01/03/2012 17:50:00

Interface Name	TTC	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	199	0	0	199	199	0
HQ-NYISO*	1200*	0	0	1200	672	528
IMO-NYISO	2000	300	0	1700	1198	502
ISONE-NYISO	1300	200	0	1100	1100	0
NPX-1385	200	0	0	200	0	200
NPX-CSC	340	0	0	340	10	330
PJM-NEPTUNE	660	0	0	660	0	660
PJM-NYISO	2700	300	0	2400	1624	776
PJM-LINDEN VFT	300	0	0	300	225	75
Total	**8899**	**800**	**0**	**8099**	**5028**	**3071**

**HQ-NYISO interface is restricted to 1200 MW sinking into NY. The posted value of 1500 MW accounts for the potential to wheel 300MW from Hydro Quebec through New York.*

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

****As noted on slide 3, PJM-Linden VFT is an additional interface added since the last SIL report was issued.*

Spring Peak Load

Load 28,470 MW on 05/29/2012 12:44:00

Interface Name	TTC	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	80	0	0	80	0	80
HQ-NYISO*	1200*	0	0	1200	1	1199
IMO-NYISO	1900	300	0	1600	0	1600
ISONE-NYISO	1500	200	0	1300	173	1127
NPX-1385	200	0	0	200	13	187
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	0	0	0	0	0	0
PJM-NYISO	2650	300	0	2350	634	1716
PJM-LINDEN VFT	300	0	0	300	200	100
Total	**8160**	**800**	**0**	**7360**	**1021**	**6339**

**HQ-NYISO interface is restricted to 1200 MW sinking into NY. The posted value of 1500 MW accounts for the potential to wheel 300MW from Hydro Quebec through New York.*

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****As noted on slide 3, PJM-Linden VFT is an additional interface added since the last SIL report was issued.*

Summer Peak Load

Load 32,587 MW on 07/17/2012 16:57:00

Interface Name	TTC	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	190	0	0	190	0	190
HQ-NYISO*	1200*	0	0	1200	0	1200
IMO-NYISO	1900	300	0	1600	1366	234
ISONE-NYISO	1500	200	0	1300	1200	100
NPX-1385	200	0	0	200	0	200
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	0	0	0	0	0	0
PJM-NYISO	3000	300	0	2700	2650	50
PJM-LINDEN VFT	300	0	0	300	300	0
Total	**8620**	**800**	**0**	**7820**	**5516**	**2304**

**HQ-NYISO interface is restricted to 1200 MW sinking into NY. The posted value of 1500 MW accounts for the potential to wheel 300MW from Hydro Quebec through New York.*

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****As noted on slide 3, PJM-Linden VFT is an additional interface added since the last SIL report was issued.*

Fall Peak Load

Load 28,296 MW on 09/07/2012 16:17:00

Interface Name	TTC	TRM**	CBM	Adjusted TTC	ATC	Scheduled
HQ-CEDARS	190	0	0	190	190	0
HQ-NYISO*	1200*	0	0	1200	0	1200
IMO-NYISO	1650	300	0	1350	758	592
ISONE-NYISO	1400	200	0	1200	781	419
NPX-1385	200	0	0	200	25	175
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	285	375
PJM-NYISO	3000	300	0	2700	2650	50
PJM-LINDEN VFT	300	0	0	300	300	0
Total	**8930**	**800**	**0**	**8130**	**4989**	**3141**

**HQ-NYISO interface is restricted to 1200 MW sinking into NY. The posted value of 1500 MW accounts for the potential to wheel 300MW from Hydro Quebec through New York.*

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****As noted on slide 3, PJM-Linden VFT is an additional interface added since the last SIL report was issued.*

Seasonal Comparison

Peak Load (MW)	Winter		Spring		Summer		Fall	
	24,137		28,470		32,587		28,296	
Interface Name	**TTC**	**Scheduled**	**TTC**	**Scheduled**	**TTC**	**Scheduled**	**TTC**	**Scheduled**
HQ-CEDARS	199	0	80	80	190	190	190	0
HQ-NYISO	1200	528	1200	1199	1200	1200	1200	1200
IMO-NYISO	2000	502	1900	1600	1900	234	1650	592
ISONE-NYISO	1300	0	1500	1127	1500	100	1400	419
NPX-1385	200	200	200	187	200	200	200	175
NPX-CSC	340	330	330	330	330	330	330	330
PJM-NEPTUNE	660	660	0	0	0	0	660	375
PJM-NYISO	2700	776	2650	1716	3000	50	3000	50
PJM-LINDEN VFT	300	75	300	100	300	0	300	0
Total	**8899**	**3071**	**8160**	**6339**	**8620**	**2304**	**8930**	**3141**

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.

Approach

Commission Determination – Order No. 697 at P 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 must represent more than interface constraints at the balancing authority area border and must reflect all transmission limitations within the study area and limitations within first-tier areas

- 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

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

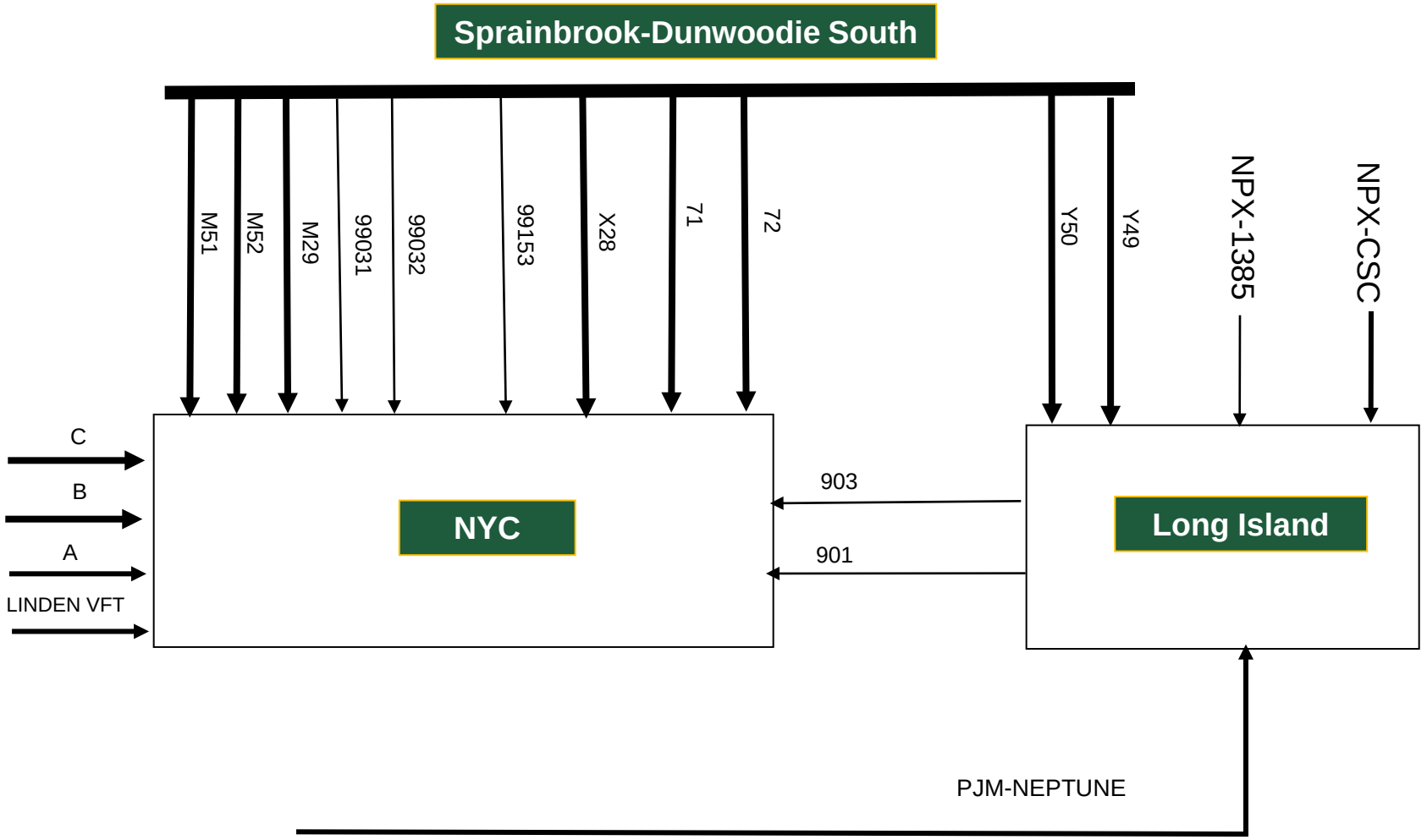
Equivalent SIL for Sub- Markets

- 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

Load 3,550 MW on 01/03/2012 17:50:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	0	200
NPX-CSC	340	0	0	340	10	330
PJM-NEPTUNE	660	0	0	660	0	660
Y50 & Y49 Spr-Dunw S)	1200	N/A	N/A	1200	346	854
Con Ed-LIPA**	-300**	N/A	N/A	-300	-27	-327
Total	**2100**	**0**	**0**	**2100**	**329**	**1717**

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

**** Wheel agreement between LIPA and Con Ed allows for up to 300MW to be wheeled through LIPA to Con Ed**

Spring Peak Load - Long Island

Load 4,150 MW on 05/29/2012 12:44:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	13	187
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	0	0	0	0	0	0
Spr-Dunw S (Y50 & Y49)	1200	N/A	N/A	1200	153	1047
Con Ed-LIPA**	-300**	N/A	N/A	-300	-220	-80
Total	**1430**	**0**	**0**	**1430**	**-54**	**1484**

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

**** Wheel agreement between LIPA and Con Ed allows for up to 300MW to be wheeled through LIPA to Con Ed**

Summer Peak Load - Long Island

Load 5,150 MW on 07/17/2012 16:57:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	0	200
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	0	0	0	0	0	0
Spr-Dunw S (Y50 & Y49)	1200	N/A	N/A	1200	136	1064
Con Ed-LIPA**	-300**	N/A	N/A	-300	-28	-272
Total	**1430**	**0**	**0**	**1430**	**108**	**1322**

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

**** Wheel agreement between LIPA and Con Ed allows for up to 300MW to be wheeled through LIPA to Con Ed**

Fall Peak Load - Long Island

Load 4,660 MW on 09/07/2012 16:17:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
NPX-1385	200	0	0	200	25	175
NPX-CSC	330	0	0	330	0	330
PJM-NEPTUNE	660	0	0	660	288	372
Spr-Dunw S (Y50 & Y49)	1200	N/A	N/A	1200	82	1118
Con Ed-LIPA**	-300**	N/A	N/A	-300	-20	-280
Total	**2090**	**0**	**0**	**2090**	**375**	**1715**

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

**** Wheel agreement between LIPA and Con Ed allows for up to 300MW to be wheeled through LIPA to Con Ed**

Summary- Long Island

Interface Name	Winter Peak		Spring Peak		Summer Peak		Fall Peak	
	TTC	Scheduled	TTC	Scheduled	TTC	Scheduled	TTC	Scheduled
NPX-1385	200	200	200	187	200	200	200	175
NPX-CSC	340	330	330	330	330	330	330	330
PJM-NEPTUNE	660	660	0	0	0	0	660	372
Spr-Dunw S (Y50 & Y49)	1200	854	1200	1047	1200	1064	1200	1118
Con Ed-LIPA	-300	-327	-300	-80	-300	-272	-300	-280
Total	**2100**	**1717**	**1430**	**1484**	**1430**	**1322**	**2090**	**1715**

Winter Peak Load - NYC

Load 7,360 MW on 01/03/2012 17:50:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
A-B-C	1000	0	0	1000	445	555
Linden VFT	300	0	0	300	225	75
Spr- Dunw S	4600	100	0	4500	1909	2591
Total	**5900**	**0**	**0**	**5800**	**2579**	**3221**

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

Spring Peak Load - NYC

Load 9,715 MW on 05/29/2012 12:44:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
A-B-C	1000	0	0	1000	-32	1032
Linden VFT	300	0	0	300	200	100
Spr-Dunw S	4350	100	0	4250	1854	2396
Total	**5650**	**100**	**0**	**5550**	**2022**	**3528**

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

Summer Peak Load - NYC

Load 10,769 MW on 07/17/2012 16:57:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
A-B-C	1000	0	0	1000	-26	1026
Linden VFT	300	0	0	300	300	0
Spr-Dunw S	4350	100	0	4250	2020	2230
Total	**5650**	**0**	**0**	**5550**	**2294**	**3256**

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

Fall Peak Load - NYC

Load 10,000 MW on 09/07/2012 16:17:00

Interface Name	TTC	TRM*	CBM	Adjusted TTC	ATC	Scheduled
A-B-C	1000	0	0	1000	-48	1048
Linden VFT	300	0	0	300	300	0
Spr-Dunw S	4350	100	0	4250	1263	2987
Total	**5650**	**100**	**0**	**5550**	**1515**	**4035**

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

Summary- NYC

Interface Name	Winter Peak		Spring Peak		Summer Peak		Fall Peak	
	TTC	Scheduled	TTC	Scheduled	TTC	Scheduled	TTC	Scheduled
A-B-C	1000	555	1000	1032	1000	1026	1000	1048
Linden VFT	300	75	300	100	300	0	300	0
Spr-Dunw S	4600	2591	4350	2396	4350	2230	4350	2987
Total	**5900**	**3221**	**5650**	**3528**	**5650**	**3256**	**5650**	**4035**

Comparison with 2009 SIL report

Winter				
Peak Load (MW)	2009		2012	
	24,674		24,137	
Interface Name	2009		2012	
	TTC	Scheduled	TTC	Scheduled
HQ-CEDARS	199	0	199	0
HQ-NYISO	1200	54	1200*	528
IMO-NYISO	2050	432	2000	502
ISONE-NYISO	1250	0	1300	0
NPX-1385	0	0	200	200
NPX-CSC	340	330	340	330
PJM-NEPTUNE	660	660	660	660
PJM-NYISO	3000	1206	2700	776
PJM-LINDEN VFT	N/A	N/A	300	75
Total	**8699**	**2682**	**8899**	**3071**

Comparison with 2009 SIL report

Spring				
Peak Load (MW)	2009		2012	
	23,528		28,470	
Interface Name	2009		2012	
	TTC	Scheduled	TTC	Scheduled
HQ-CEDARS	69	0	80	80
HQ-NYISO	1200	684	1200*	1199
IMO-NYISO	2050	287	1900	1600
ISONE-NYISO	1250	1197	1500	1127
NPX-1385	100	77	200	187
NPX-CSC	340	330	330	330
PJM-NEPTUNE	660	660	0	0
PJM-NYISO	3000	0	2650	1716
PJM-LINDEN VFT	N/A	N/A	300	100
Total	8660	3235	**8160**	**6339**

Comparison with 2009 SIL report

Summer		
Peak Load (MW)	**2009**	**2012**
	30,844	32,587

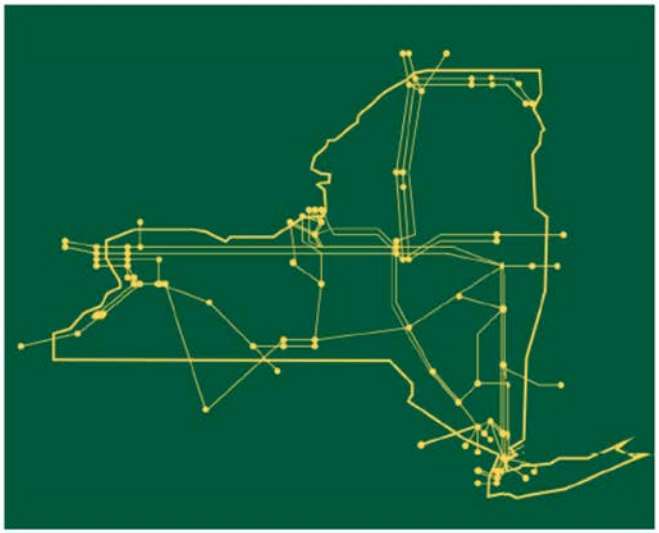
Interface Name	**2009**		**2012**	
	TTC	**Scheduled**	**TTC**	**Scheduled**
HQ-CEDARS	166	165	190	190
HQ-NYISO	1200	1190	1200	1200
IMO-NYISO	2050	0	1900	234
ISONE-NYISO	1250	380	1500	100
NPX-1385	100	100	200	200
NPX-CSC	340	330	330	330
PJM-NEPTUNE	660	660	0	0
PJM-NYISO	3000	855	3000	50
PJM-LINDEN VFT	N/A	N/A	300	0
Total	8766	3680	**8620**	**2304**

Comparison with 2009 SIL report

Fall		
Peak Load (MW)	**2009**	**2012**
	23,563	28,296

Interface Name	**2009**		**2012**	
	TTC	**Scheduled**	**TTC**	**Scheduled**
HQ-CEDARS	166	165	190	0
HQ-NYISO	1200	1184	1200*	1200
IMO-NYISO	2050	891	1650	592
ISONE-NYISO	1250	0	1400	419
NPX-1385	0	0	200	175
NPX-CSC	340	330	330	330
PJM-NEPTUNE	660	660	660	375
PJM-NYISO	3000	945	3000	50
PJM-LINDEN VFT	N/A	N/A	300	0
Total	**8666**	**4175**	**8930**	**3141**

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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