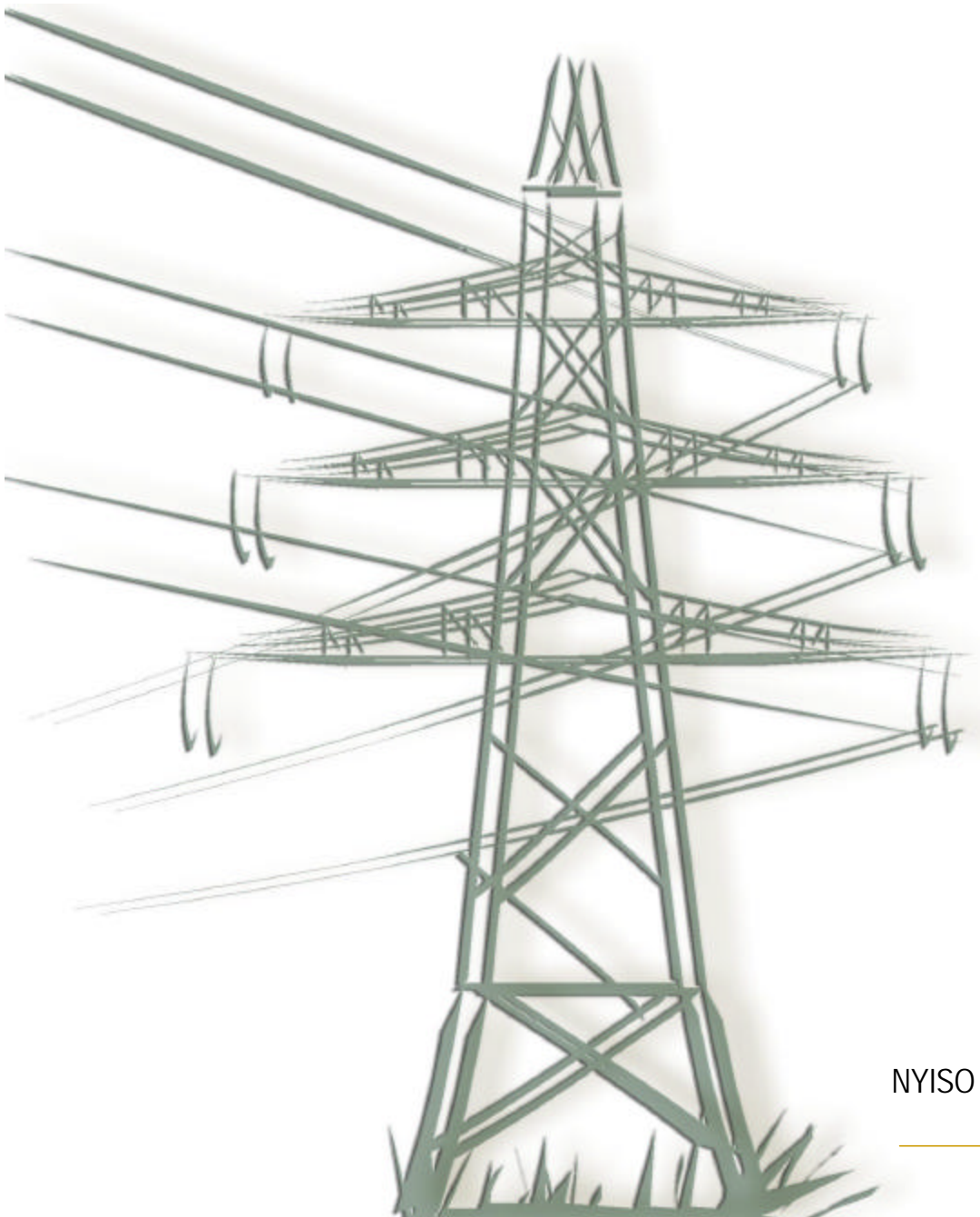




# 2004 TRANSMISSION PERFORMANCE REPORT



August 2005  
*prepared by*  
NYISO Operations Engineering



## Introduction

This report summarizes NYISO transmission utilization during 2004 and compares this with transmission use in 2001, 2002 and 2003. Data is presented in a general format using histograms, cumulative distribution plots, and box plots. Included are graphical depictions of power flows on:

- NYISO interfaces and OASIS Transmission paths, including all operating interfaces and selected planning interfaces.
- Selected individual transmission lines
- Energy schedules with external pools.

There are also sections on power transfer margins, On-Peak vs. Off-Peak flow, and simultaneously constraining interfaces. The power transfer margins show the difference between the active real time power transfer limit and the actual power flow on the interface.

The analysis of simultaneously constraining interfaces tallies the number of hours two or more interfaces were within 100 MW of their respective operating limits. These analyses are included only for NY operating interfaces.

The analysis is based on NY historical real time data sampled in 5-minute (nominal) intervals. The power flow values in each of the charts are hourly averages of the scan data. The data is presented in three graphical formats; histograms (frequency bar charts), flow duration curves, and box plots (showing monthly average flows through time).

Since 2002, the analysis of has been performed; the data is presented in two graphical formats, histograms (frequency bar charts) and flow duration curves.

The flow data on Open Access Same Time Information System (OASIS) transmission paths are presented in this report for informational purposes only.

## Discussion

### *EXTERNAL:*

Schedule and actual power flows between NYISO and external systems vary significantly.

### *New York Import/Export:*

In last 4 years, New York Export is in the range of -700 MW to 4700 MW, and the monthly averages were less than zero. The 2004 duration curve during On-Peak hours was higher than during Off-Peak hours in both magnitude and duration.

*The maximum NY import* was 4631 MW in October 2004, lower than in July 2003, 4688 MW and higher than 3997 MW in December 2002, and 3351 MW in December 2001. The imports over 4000 MW were higher than in last 3 years. In 2001-2004, the maximum monthly average import was occurred in October 2004, about 2600 MW.

*NY exported* about 2% of the time in 2004 and 2001, and about 1% of the time in 2002 and 2003; During On-Peak hours was about 3% of the time, 2% in 2003 and 2002; During Off-Peak hours about 1% in 2002-2004. The maximum export was 1408 MW in January 2004; compare to 1572 MW in June 2001, 1103 MW in August 2002, and 875 MW in February 2003.

#### *PJM - New York:*

In 2004, Schedule and Actual PJM - New York duration curves were lower than in 2003. During the last 3 years, the On-Peak duration curves were lower than the Off-Peak. In 2001-2004, the monthly averages were greater than zero, in the range of 400 MW to 2600 MW.

#### *PJM-NY Schedule:*

*The NY scheduled import* from PJM was about 84% of the time in 2004, lower in last 3 years; 96% in 2003, 87% in 2002, and 88% in 2001. During On-Peak hours about 76% in 2004, 93% in 2003, 77% in 2002 and during Off-Peak hours was 97% of the time, the same as in 2003, 2002. The maximum scheduled import was about the same as last 3 years; were 2768 MW in 2004, 2779 MW in 2001, 2692 MW in 2002, and 2788 MW in 2003.

*The maximum scheduled NY export to PJM* was higher than last 3 years, about 2953 MW in July 2004; 1197 MW in July 2003, 2454 MW in June 2002, and 2415 MW June 2001.

#### *PJM-NY Actual:*

*The actually NY imports from PJM* lower than last year, and higher than 2001 and 2002; about 98% of the time in 2004, 99% in 2003, 92% in 2002, and 95% in 2001; during the On-Peak about 96% of the time, and 99% during the Off-Peak hours. The maximum actual imports from PJM were about the same as last 2002 and 2003, and higher than in 2001; were 3180 MW in 2004, 3208 MW in 2003, 3192 MW in 2002, and 2880 MW in 2001.

*The maximum NY actual exports to PJM* occurred between the summers in the last 4 years, during the On-Peak hours. The maximum actually export to PJM was 1649 MW in May 2004, 752 MW in August 2003, 1921 MW in June 2002, and 1817 MW in June 2001; higher than in last summer, and lower than in summer 2002 and 2001.

*The PJM East - Capital Mid Hudson, PJM West – Frontier, and PJM West - Central* duration curves for 2004 were lower than 2003.

*PJM East* exported 100% of the time to New York City, and about 55% of the time to Capital Mid Hudson. *PJM West* exported 98% to Central, and 85% to Frontier.

The maximum *PJM East* imported from Capital Mid Hudson was 1302 MW during the On-Peak hours in August 2003, lower than in last 3 years. In May 2004, *PJM West* imported 665 MW from Frontier, and 347 MW from Central, were the highest imports in last 3 years.



*Ontario - New York:*

The Ontario- New York schedule and actual duration curves for 2004 were higher than last 3 years, and the Off-Peak hours curves were higher than the On-Peak.

*Ontario-NY Schedule:*

*Scheduled NY import from IMO (IESO)* was higher than last 3 years; maximum import was 2390 MW in July 2004, 2002 MW in May 2003, 2058 MW in April 2002, and 1572 MW in May 2001. In summer 2004, the average monthly import was up to about 1300 MW in July; compared to 700 MW in 2003, 600 MW in 2002 and 300 MW in 2002.

*Scheduled NY exports to IMO (IESO)* about 12% of time in 2004, 14% in 2001, and 25% in 2002 and 2003, lower than in last 3 years. During the On-Peak hours about 15% of the time, 16% in the Off-Peak hours, compare to 40% and 16% in 2003, 35% and 15% in 2002. In January 2004, NY scheduled export reached to 1850 MW, occurred during the On-Peak hours, compare to 2002 MW in May 2003, 2058 MW in April 2002, and 1572 MW in May 2001; was higher than in 2001, lower than in 2002 and 2003.

*Ontario-NY Actual:*

*Actual NY import from IMO(IESO)* in 2004 was higher than in last 3 years in both magnitude and duration, about 67% of the time; 52% during the On-Peak hours about, and 8% during the Off-Peak hours; compare to 24% and 77% in 2003, 22% and 82% in 2002. The maximum actual import was 1724MW, occurred during the Off-Peak hours; higher than last 3 years, 1643 MW in July 2003, 1660 MW December 2002, and 1491 MW in May 2001. The average monthly imports were increase from March to August, reached up to about 600 MW, higher than in last 3 years.

*Actual NY export to IMO(IESO)* was maximum in October 2004, 1667 MW; lower than in the last 3 years, 1862 MW in February 2003, and 1938 MW in July 2002 and 1929 MW in July 2001, occurred during the On-Peak hours.

*Ontario East - Adirondack, and Ontario South - Frontier* flow duration curves were higher than last 3 years. *Ontario East* exported 57% of the time to *Adirondack*, and *Ontario South* exported 70% of the time to *Frontier*.

*New England - New York:*

In the last 4 years, the Schedule and Actual NE - New York was very similar in histograms, flow duration curves, and box plots. In 2004, the monthly average, and the maximum Schedule and Actual import/ export were lower than in last year.

*New England - New York Schedule:*

*NY scheduled import from NE* was lower than 2002 and 2003, higher than 2001; was about 35% of the time in 2004, 42% in 2003, 48% in 2002, and 15% in 2001. During the On-Peak hours was about 45% of time and about 20% during the Off-Peak hours. The maximum



NY scheduled imports was 1210 MW in 2004, much higher than in 2001, lower than in 2003 and about the same in 2002; 1523MW in 2003, 1257 MW in 2002, and 721 MW in 2001.

*The maximum NY scheduled export was 1046 MW in 2004, lower than in the last 3 years, 1505MW in 2003, 1100 MW in 2002, 1925MW in 2001.*

*New England - New York Actual:*

*NY actual import from NE was 33% of the time. NY actual imported over 900 MW was .95%, less than 1%. In 2004, the maximum NY actual import was 1142 MW, occurred in both during the On-Peak and Off-Peak hours, compare to 1547MW in 2003, 1276 MW in 2002 and 695 MW in 2001.*

*NY actual exports to NE in 2004 was lower than in 2002 and 2003, higher than in 2001; about 67% of time, 45% during the On-Peak and about 20% of the time during the Off-Peak; compare to 52% and 28% of the time in 2003. The maximum export was 1138 MW; compare to 1486 MW in March 2003, 1095 MW in September 2002, and 1795 MW in January 2001.*

*The NE/Vermont North- Adirondack (PV-20 Grand Isle-Plattsburgh) box plots were lower in magnitude during August to December 2004.*

*The New England/NU – Long Island (1385 Northport- Norwalk Harbor) flow drop down to 423MW in September 2004.*

*Capital Mid Hudson imported about 55% of the time from New England/NU South (398 Long Mountain- Pleasant Valley), and about 50% of the time from New England/Vt/NE/NU South.*

*TE - New York:*

The schedule and actual TE - New York flows during 2001-2004 looked similar in histograms, flow duration curves, and box plots. Percent of the time import and export were about equal in 2004, about 70% during the On-Peak and 30% during the Off-Peak hours. The maximum schedule and actual NY import and export were about the same in last 4 years, maximum import was 1500 MW, maximum export was 1000 MW, occurred in both during the On-Peak and Off-Peak hours.

NY has the percent of the time and maximum monthly average scheduled imports from TE lower than in last 3 years, about 1500 MW occurred during the On-Peak and Off-Peak hours in the summer 2004.

The maximum monthly average export to TE was higher than in last 3 years, about 500 MW occurred in May 2004, 400 MW in 2003, 2002 and 300MW in 2001.

## INTERNAL

Average transmission utilization on most internal NYISO operating interfaces in 2004 was similar to levels observed in last 3 years.

The Central East, Total East, Moses South duration curves in 2004 were similar to levels observed in last year.

*Central East:* Central East flow over 2700 MW occurred only one time in 2004, reached to 2747 MW during the On-Peak hour in August, lower than in the last 3 years; 2875 MW in 2001, 2880 MW in 2002 and 2865 MW in 2003.

*The Central –Capital/Mid Hudson* flow over 4650 MW occurred only one time, 4659 MW during the On-Peak hour in July. The minimum flow dropped down to 439 MW during the On-Peak hour on July 2004, lower than in 2001-2003.

*Total East:* In 2004, Total East flow was lower than in the last 3 years, the flows over 5850 occurred only one time, reached to 5887 MW during the On-Peak hours, on October. In the 2001-2003, the maximum flows were above 6000MW.

*Moses South (Adirondack-Central Transmission):* The flow duration curve was higher than in last year in both magnitude and duration. From August the average monthly flows were decrease in each month, from about 1100 MW in August to 500MW in December.

*The Dysinger East, West Central* flows duration curves were higher to levels observed in last 3 years in duration, and the maximum flows were very close in last 3 years.

*The Dysinger East* flows were above 2700 MW occurred during the On-Peak and Off-Peak hours. The minimum flow was 428 MW occurred during the Off-Peak hour.

*The West Central* curves for the On-Peak and Off-Peak hours were similar, maximum flow was about 2200 MW occurred both during the On-Peak and Off-Peak hours, and minimum flow was -34 MW occurred during the On-Peak hours.

*UPNY-Con Edison, and Sprain Brook- Dunwoodie South* flows were lower than in last year in magnitude, duration and average monthly.

*The UPNY-Con Edison* flows within the range of 4000 MW to 4800 MW occurred only 5 times, the maximum flow reached to 4447 MW in September during the On-Peak hours; compared with the highest flow was 4943 MW occurred during the On-Peak hours in August 2003. The maximum average monthly was about 2600 MW in July, lower than last 3 years, above 3000MW.

*Sprain Brook- Dunwoodie South:* The maximum flow reached to 3836 MW occurred during the On-Peak hour in July 2004, and the minimum flow dropped down to 974 MW during the Off-Peak hour. In 2002-2004, the average monthly flows were within the range of 2000 MW to 3000 MW.

*Lipa Import, and Con Edison - Lipa:* The duration curves were higher than in last 3 years. In 2004, Lipa imported almost of the time, the maximum import occurred in July, was about 1100 MW, about the same as in last 3 years, and exports occurred only in October, less than 5 times, the maximum export was 300 MW during the Off-Peak hour.

*Westchester – Long Island (Y49+Y50):* The duration curve and the minimum average monthly were higher than in last 3 years. The curves for the On-Peak and Off-Peak hours were similar. In October 2004, the flow was down to –189 MW, and the average monthly about 750 MW, very low to compare to the flows in the other months of the year.

*New York City - Long Island (901+903):* Since summer 2002, the average monthly flows were within the range of -150 MW to -250 MW.

*New York City exported* to Long Island was less than 2 % of the time in 2004, lower than in 2001, 2002 and higher than in 2003, the maximum export occurred in October, was about 80 MW, about the same as in last 3 years.

*New York City imported* from Long Island reached to 398 MW during the On-Peak hour in April 2004, higher than last 4 years.

*Homer City – Watercure:* The duration curve was lower than in last year in both magnitude and duration. The maximum and the minimum flows were very similar in last 3 years.

*Branchburg – Ramapo:* The duration curve was similar in last 3 years. The maximum and the minimum flows lower than in last 3 years, the interface flow dropped down to -169 MW during the On-Peak hour in August, compare to –384 MW in 2003, and –700 MW in 2002, 2001.

*West NY Generation Export:* The duration curve was higher than in last year, exported about 99% of the time, the average monthly flows were within the range of 1100 MW to 1800 MW. The maximum import was 544 MW in October, the same in 2002, lower than in 2001 and 2003; about 1100 MW in 2001, 544 MW in 2002, and 750 MW in 2003. The maximum exports were 2700MW in 2004, 2400MW in 2003, 2600MW in 2002 and 2001.

*Con Ed/PSEG PAR (JK/ABC) Imbalance:* The plots are similar to last 3 years, and the curves for the On-Peak hours were lower than Off-Peak. The maximum Con Ed to PSEG was 1424 MW during the Off-Peak hour in May, much higher than last 3 years, about 900 MW in 2001, 1100 MW in 2002, and 1000 MW in 2003. The minimum was 1017 MW in August, higher than last 3 years, about 900 MW in 2001-2003 during the On-Peak hour.

## MARGIN TO LIMIT

*The margin to Total East Limit and to Central East Limit* plots are similar to last 3 years.

*Total East Limit* reached to 5376 MW in March 2004, during the On-Peak hour, compare to 5614 MW in 2003, 4674 MW in 2002 and 4357 MW in 2001. The above limit of 4400 MW was less than 1%.

*The maximum Central East Stability Limit* was 2216 MW, about the same as in last 3 years, 1999 MW in 2003, 2058 MW in 2002 and 2112 MW in 2001, and above limit of 1900 MW was less than half of percent.

*The margin to West Central East Limit and to Dysinger East Limit* duration curves were lower than in last 3 years.



The margin to West Central East Limit reached to 2231 MW, about the same as in 2001-2003, the above limit of 2100 MW was lower than last 3 years, .14% in 2004, and about 1.5 % in 2001-2003.

The maximum margin to Dysinger Limit was 2333 MW, lower than last 3 years, and above limit of 2100 MW was .02%.

The margin to Moses South Limit was 2795 MW, about the same as in 2001-2003. In last 3 years, the margins to Moses South were not less than zero, but dropped down to -72 MW in October 2004.

The margin to TE-NY Limit plots were lower than in 2001-2003, the maximum was 1625 MW, very close to last 3 years, and the minimum limits were and -1122 MW, compare to -870 MW in 2003, and about -250 MW in 2001-2002.

The margin to Ontario-NY Limit duration curve was lower than in 2001-2003. In 2003 and 2004, the maximum limit was 2400 MW, about 2550 MW in 2001, and 2441 MW in 2002. The maximum margin Limit to NY- Ontario was 2400 MW, the same as in last 4 years.

The margin to PJM-NY and to NY- PJM Limit was 3500 MW, about the same in maximum limits in last 4 years. The margin to PJM-NY Limit above 3450 MW was .31% in 2004, compare to .16% in 2003, 1.03% in 2002 and .92% in 2001.

The margin to NE-NY Limit was 1600 MW, about the same in maximum limits in 2001-2004. The margin to NY- NE Limit was below 2200 MW in 2001, 2003, and 2004. The margin to NY- NE Limit just one time reached to 2206 MW, in June 2004.

The table below compares minimum flows that occurred 75% of the time (above the lower quartile) and the percent of time the respective flows were within 200 MW of their active limits.

Year	Central East		Total East	
	Flow >75% of the time	% Of the time within 200 MW of limit	Flow >75% of the time	% Of the time within 200 MW of limit
2004	1508MW	3%	3347MW	0%
2003	1483MW	2%	3359MW	<1%
2002	1540MW	12%	3486MW	<1%
2001	1827MW	18%	3795MW	<1%

## Presentation of Results

The three graphical formats, histograms, flow duration curves, and box plots, present the data in different ways to show statistical distribution and comparisons of flows from year to year. The following describes each of the graphical formats. An explanation of the transfer margin calculation is also included.

### *Histograms*

These show the statistical distribution of flows over the observed operating range for the year. The data is presented for the current year (2004). The values along the ordinate are midpoints of a preselected range. For example, two consecutive midpoints of 300 and 600 represent all the flows with values of 300 MW  $\pm$ 150 and 600 MW  $\pm$ 150. The length of the bars represents the frequency, or the number of times a flow is within the range around the midpoint.

In the case of unrestricted operation on a facility there would be a random distribution of flows leading to a statistically normal distribution. In practical cases the distribution is skewed in one direction or there may be certain ranges that have "spikes". The flows may skew towards a certain level for several reasons: an economic optimum may exist for a while that inclines the flow to a certain value, an interface or facility may be operating at or near its limit or a nearby facility may be limited and consequently limits the facility in question.

An example of spikes in the histogram is a transmission line out of service. The line may have a normal distribution of flows from 200 to 600 MW and a large spike at zero representing the time the facility was out of service. Unfortunately the raw data does not distinguish between O/S conditions or actual zero flow, although the latter is fairly uncommon for most facilities.

### *Flow Duration Curves*

In a continuous monotonically decreasing curve, this shows the percentage of time a facility or interface was operating at or above a certain value in its observed operating range. The graphs include the current year, 2004, and the previous three years (2001, 2002 and 2003). Overlaying the curves for each year gives a visual comparison on how the utilization of the particular facility is changing.

### *Box Plots*

Box and whisker plots give a through time graphic view of statistical distributions of data at each discrete time or time period. The plots in this report include four years of data, the current year (2004) and the previous three years (2001-2003). The time axis (abscissa) represents each month during the four-year analysis period. The boxes and whiskers represent all the flows observed during a month.

The green horizontal line on the plots in this report connects the monthly average (MW flow) values. The "box" represents the inter-quartile range, in which 50% of the data values lie.



The bar in the middle of the box is the (statistical) median. The median cuts the box into two parts; each contains 25% of the data values. The long green vertical lines extending from the boxes, whiskers, represent the higher and lower 25% (quartiles) of the data values. These whiskers extend to the absolute minimum and maximum value observed in the respective time period (1 month in this case). The tick marks on the whiskers are placed at distance not exceeding 1.5 times the length of the box (inter-quartile range), from each edge of the box. This highlights extreme minimums and maximums that may have occurred and separates the extremes from the rest of the data values.

### *Transfer Margins*

A supplementary section is included showing transfer margins on NYPP operating interfaces. The transfer margin is the MW transfer capability remaining from the instantaneous flow to the active transfer limit. These values are calculated by taking the active directional transfer limit and subtracting the real time flow at each (5 minute) scan.

$$\text{Transfer Margin} = \text{Transfer Limit}_{\text{directional}} - \text{ABS (Actual Flow)}$$

The transfer margin is generally a positive number. A negative number would represent flow exceeding the transfer limit. The plotted values are the hourly averages of the calculated differences. The transfer margins are presented in the same format as the flows and schedules (i.e., histograms, duration curves, and box plots).

It is important to keep in mind that the bars on the histograms represent the frequency of occurrence in a range around the midpoint. Using the Total East margin as an example, the histogram 2004 has midpoints at 600 MW and 1000 MW. The bar at 1000 MW means that Total East was operating within 400 MW of its active limit 2.15% of the time during 2004. The bar at 2200 means that Total East was operating within 400 MW of its active limit 18.71% of the time, at levels potentially up to 2400 MW limit 43.35% during 2004. Except in the case of unusually high overloads on an interface (i.e., spikes, contingencies), the margins are generally zero or greater.

The Central East pre-contingency transfer margin is calculated by taking the minimum margin, or difference, of the three pre-contingency voltage collapse limits and their respectively calculated pre-contingency flows.

### *Interfaces Simultaneously Constraining Transfers*

The table in Appendix D summarizes the combinations of interfaces as they were simultaneously constraining during 2001, 2002, 2003 and 2004. Interfaces were considered constraining if the actual flow was within 100 MW of the respective interface's limit. This limit was the active transfer limit in the real-time system at the time of the sampling.

The results are summarized as hourly values derived from 5-minute real time samples. In the four year time period sampled, there were 87 unique combinations of NY operating interfaces that were constraining at various times. These combinations range from two to five

interfaces at a time. Some of the combinations are recurring over each of the years, others occurred in only one year. Several combinations occurred only once.

For the circumstances analyzed, two or more interfaces were constraining from 9% to 14% of the time in a given year between 2001 and 2004. The Central East/Central East net PC appeared 2% to 11% of the time. Most of the rest of the simultaneous constraints occurred 5% of the time or less. This indicates the total percentage is an accumulation of many combinations, that may occur for a variety of reasons, rather than a few that may occur for some common phenomenon. Central East and Total East are closely related. If this combination is removed, the percentages are still significant. During the 2002-2004, the Central East/Total East combination was not constraining, the annual totals with and without the Total East/Central East combination are the same 11% in 2004, 17% in 2003, and 9% in 2002. The annual totals with and without the Total East/Central East combination are summarized in the table below.

Year	All Combinations		Central East/Total East Excluded	
	Hours	Percent of Year	Hours	Percent of Year
2001	1252	14.0%	1243	14.0%
2002	819	9.0%	819	9.0%
2003	1462	17.0%	1462	17.0%
2004	991	11.0%	991	11.0%

Further restrictions are also likely by virtue of individual line constraints. The analysis presented here only used interface flow related data. Interfaces or Transmission Paths (to use the new terminology) are often implicitly limited by a single element for some contingency (e.g., the loss of one Leeds-Pleasant Valley 345 kV circuit on the parallel Leeds-Pleasant Valley 345 kV circuit). This contingency implicitly limits both Central East and UPNY-Con Ed. This is not reflected as an explicit interface limit and outside the context of this analysis. The overall trend from 2001 to 2004 is decreased simultaneous interface limits.



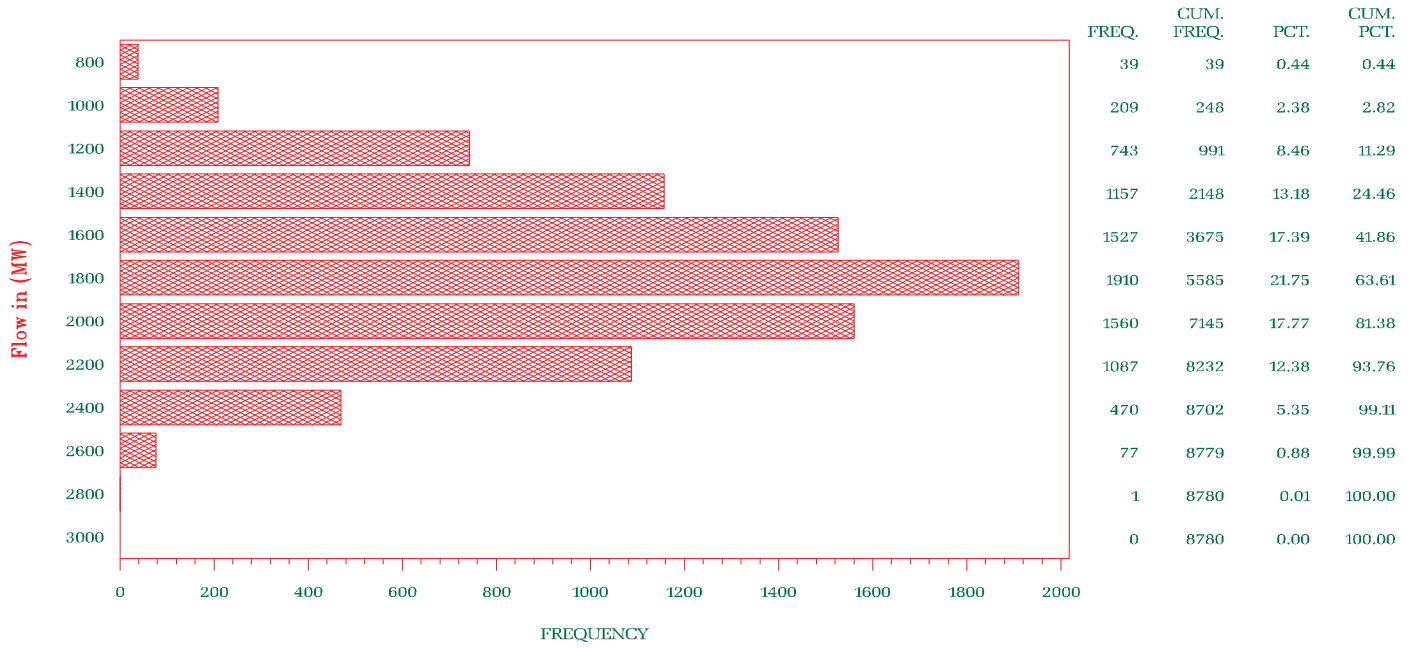
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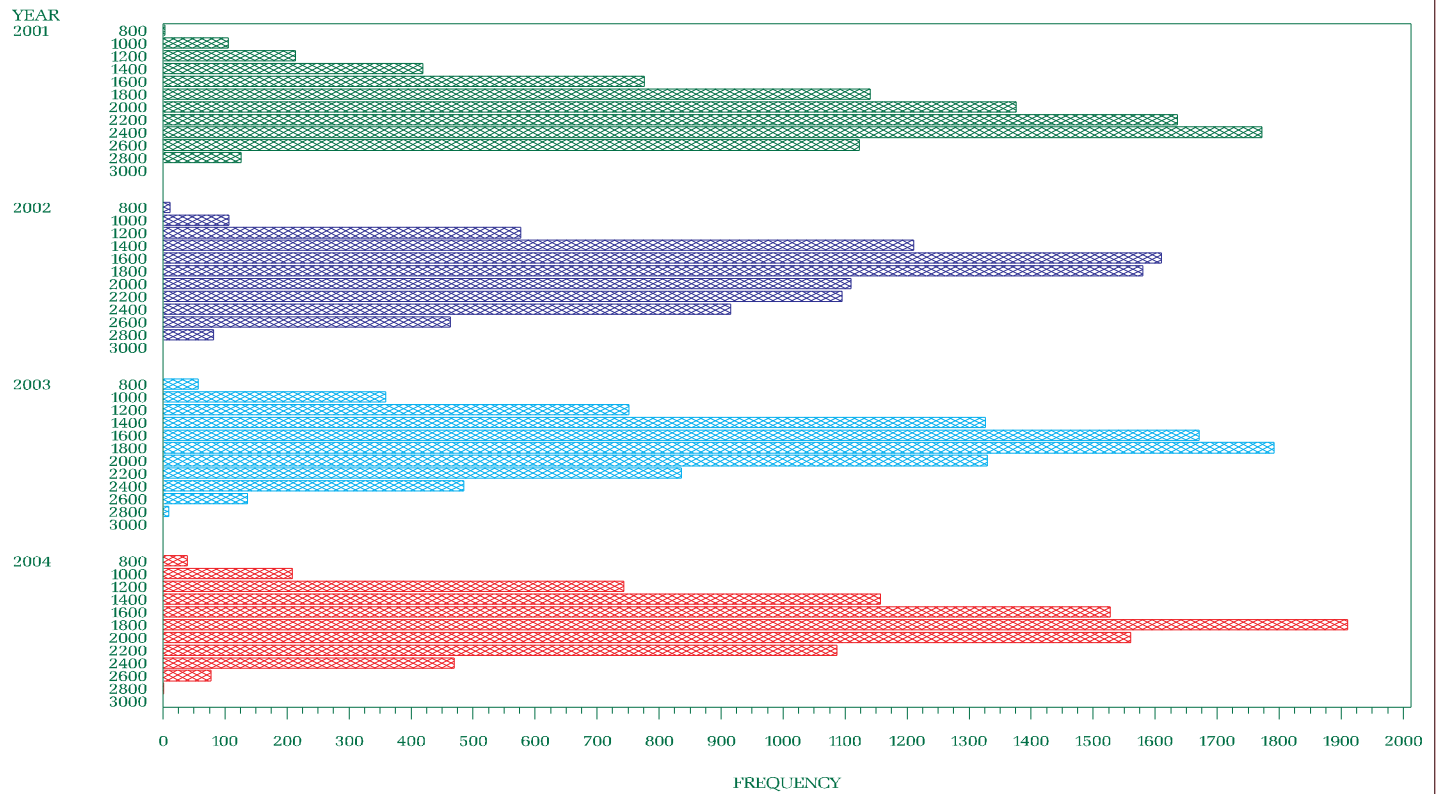
NYISO Frequency Interface Flow For January – December 2004

CENTRAL EAST

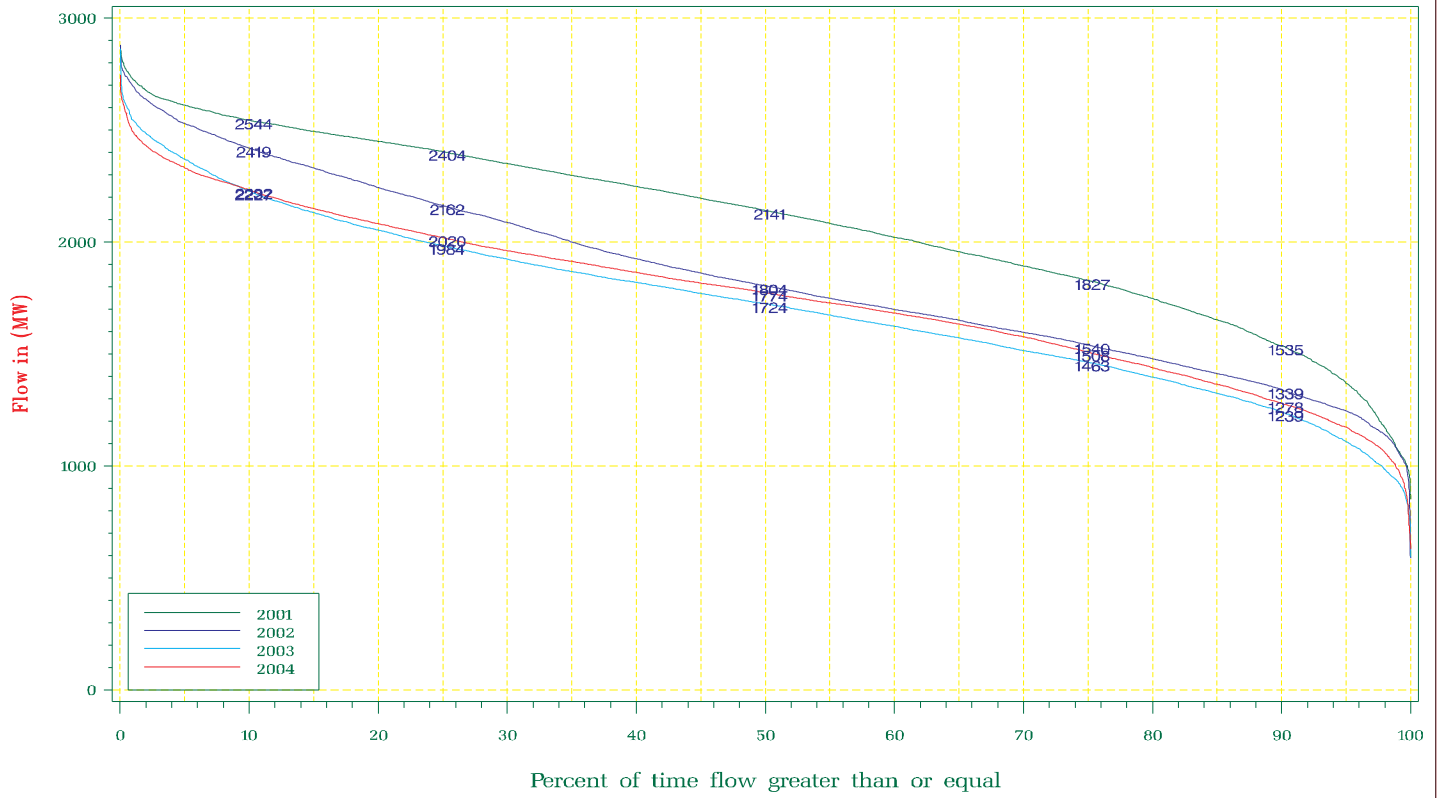


NYISO Frequency Interface Flow For January 2001 – December 2004

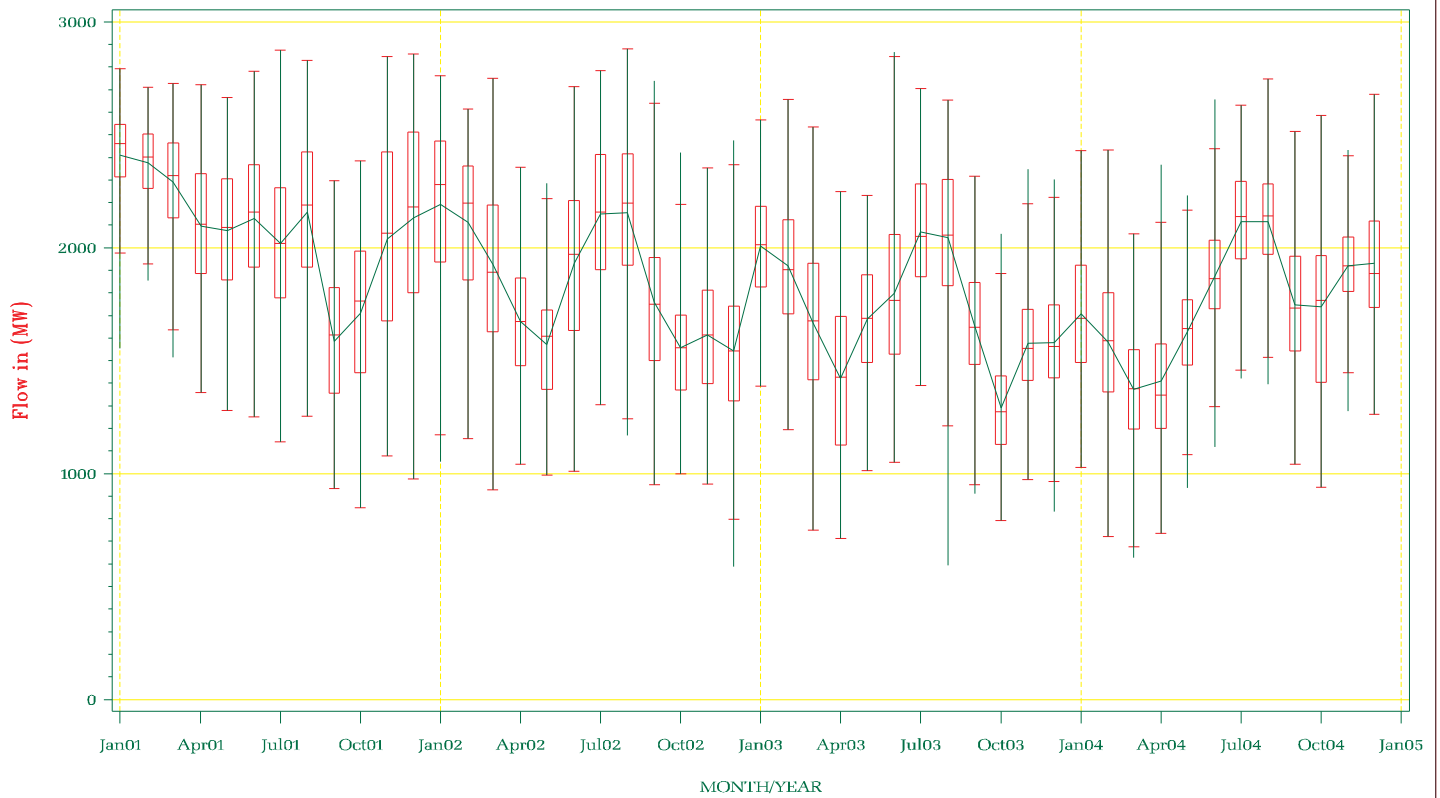
CENTRAL EAST



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**CENTRAL EAST**



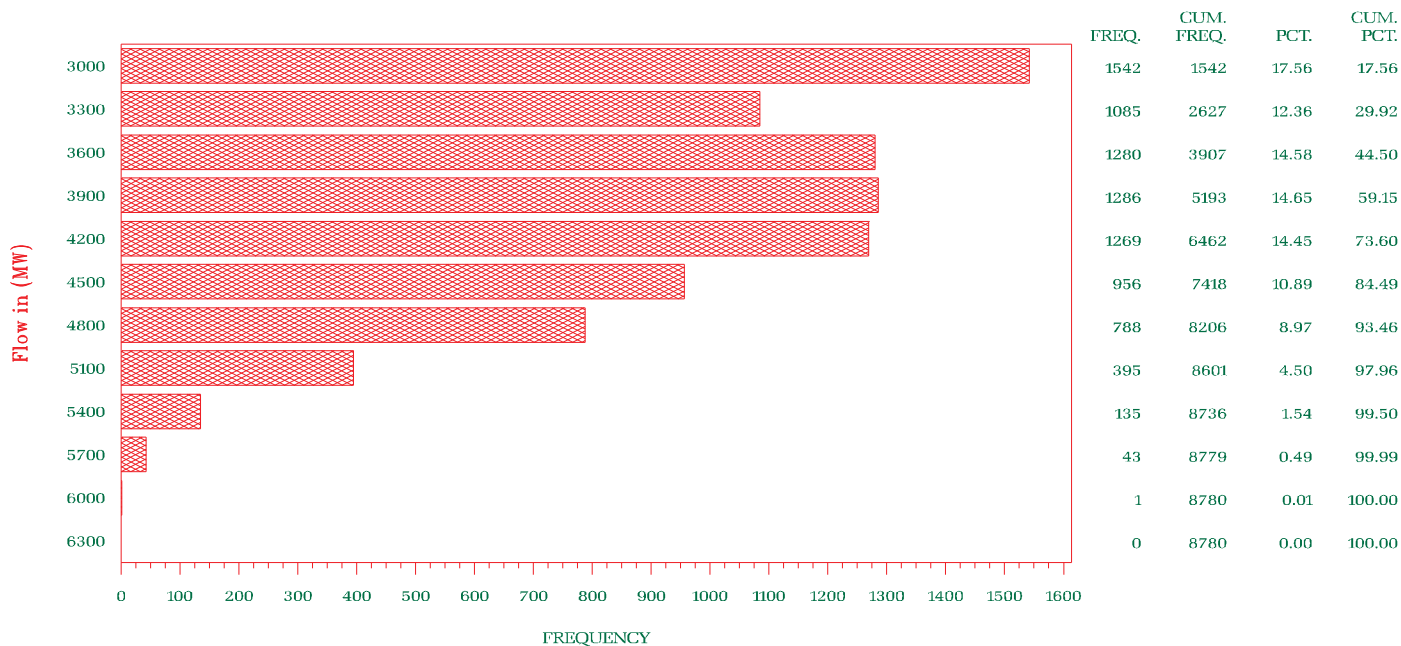
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**CENTRAL EAST**





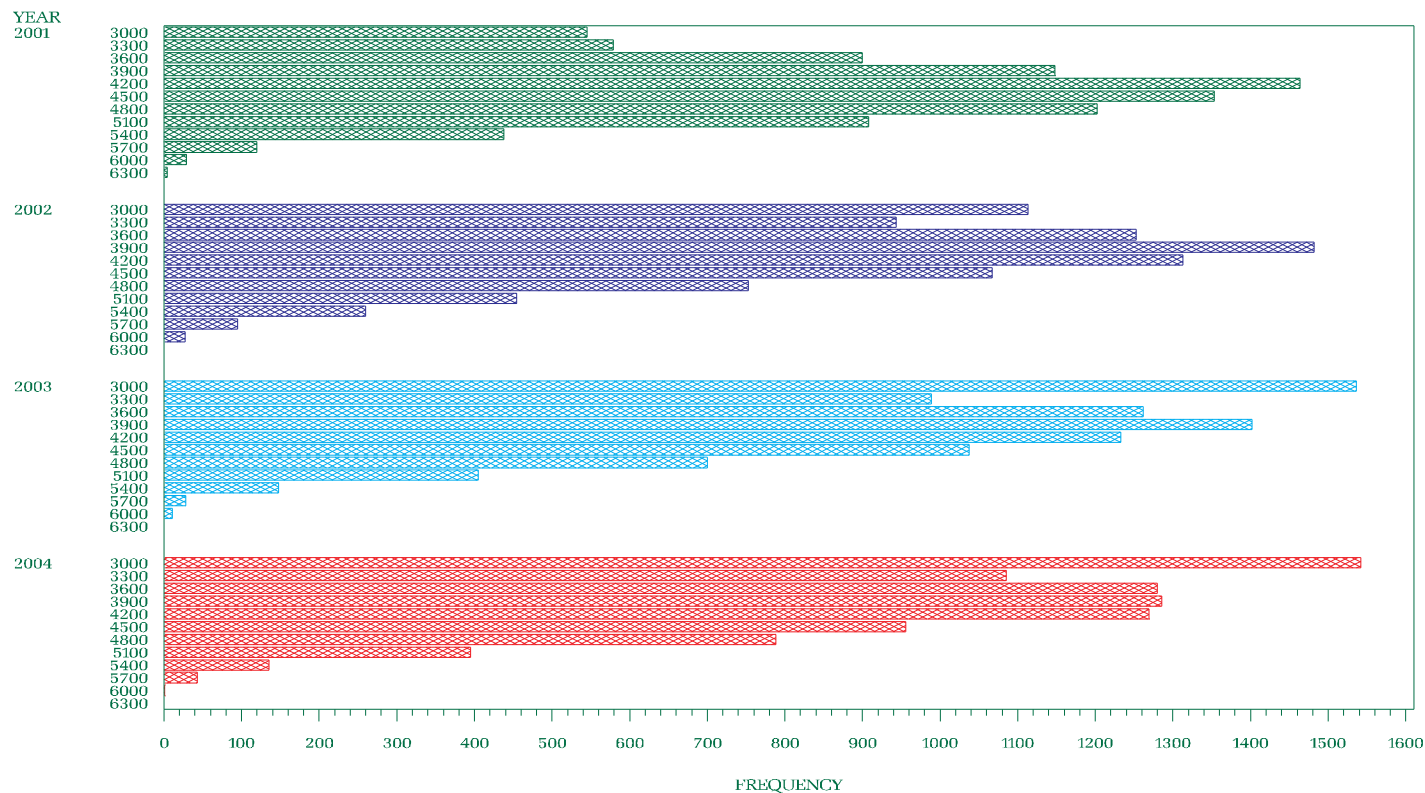
NYISO Frequency Interface Flow For January – December 2004

TOTAL EAST



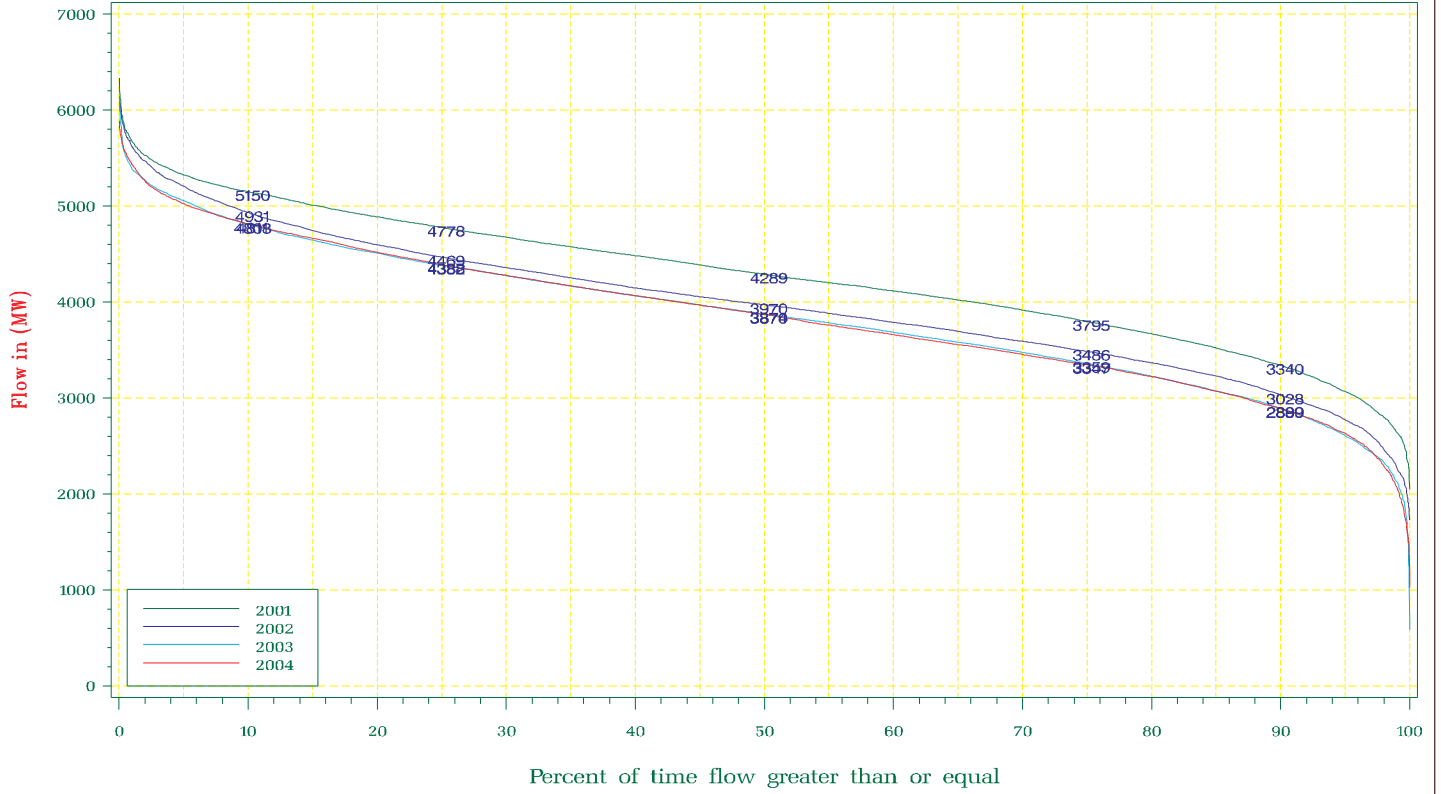
NYISO Frequency Interface Flow For January 2001 – December 2004

TOTAL EAST



NYISO Percent of time Interface Flow For January 2001 – December 2004

TOTAL EAST



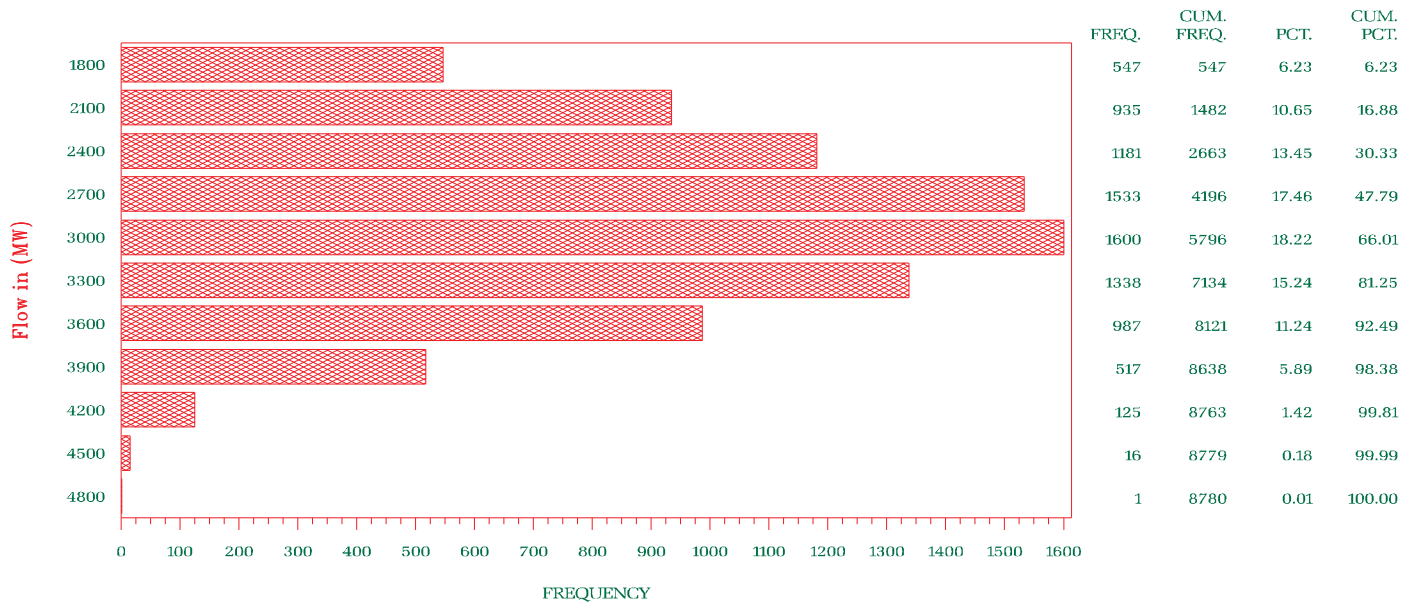
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

TOTAL EAST



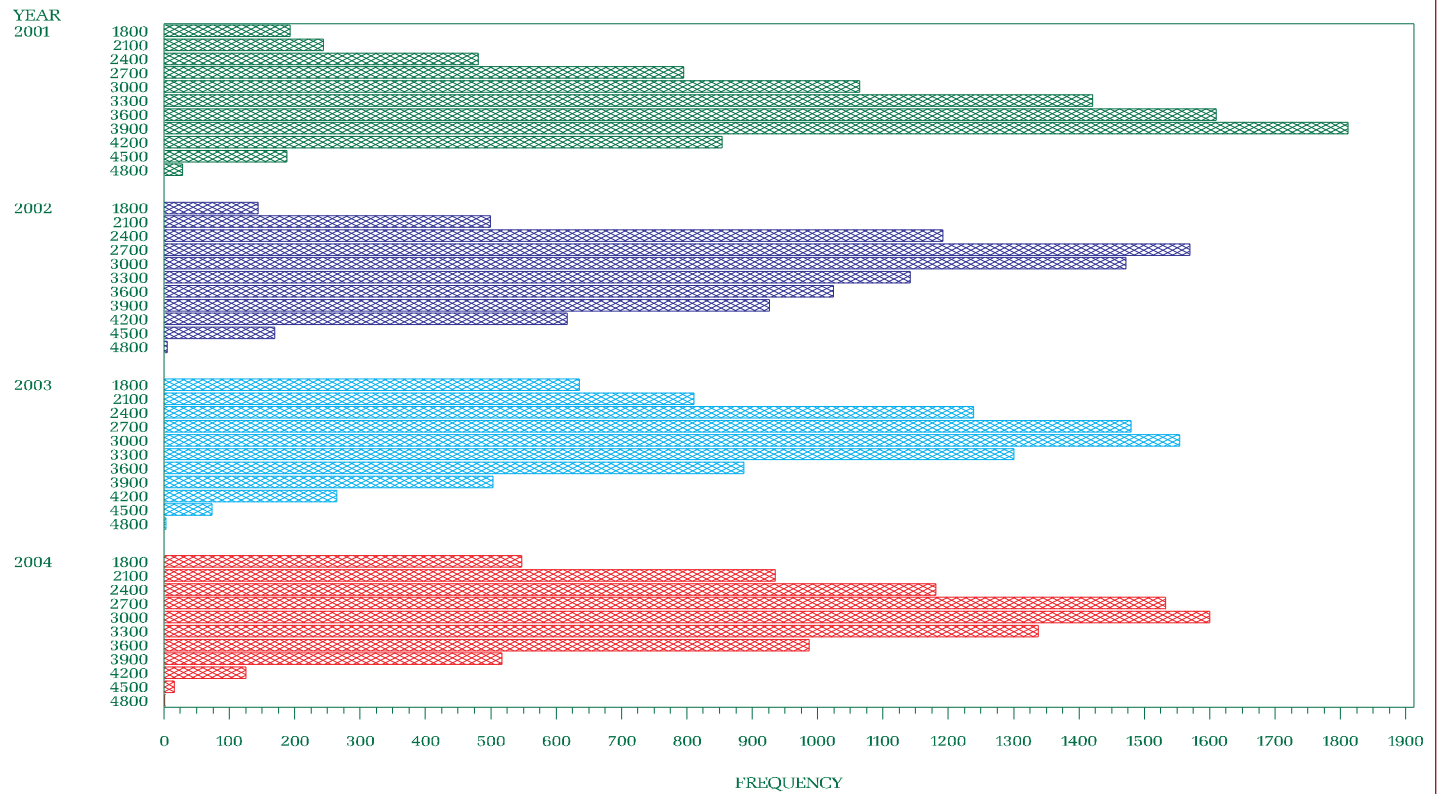
NYISO Frequency Interface Flow For January – December 2004

Central – Capital/Mid Hudson



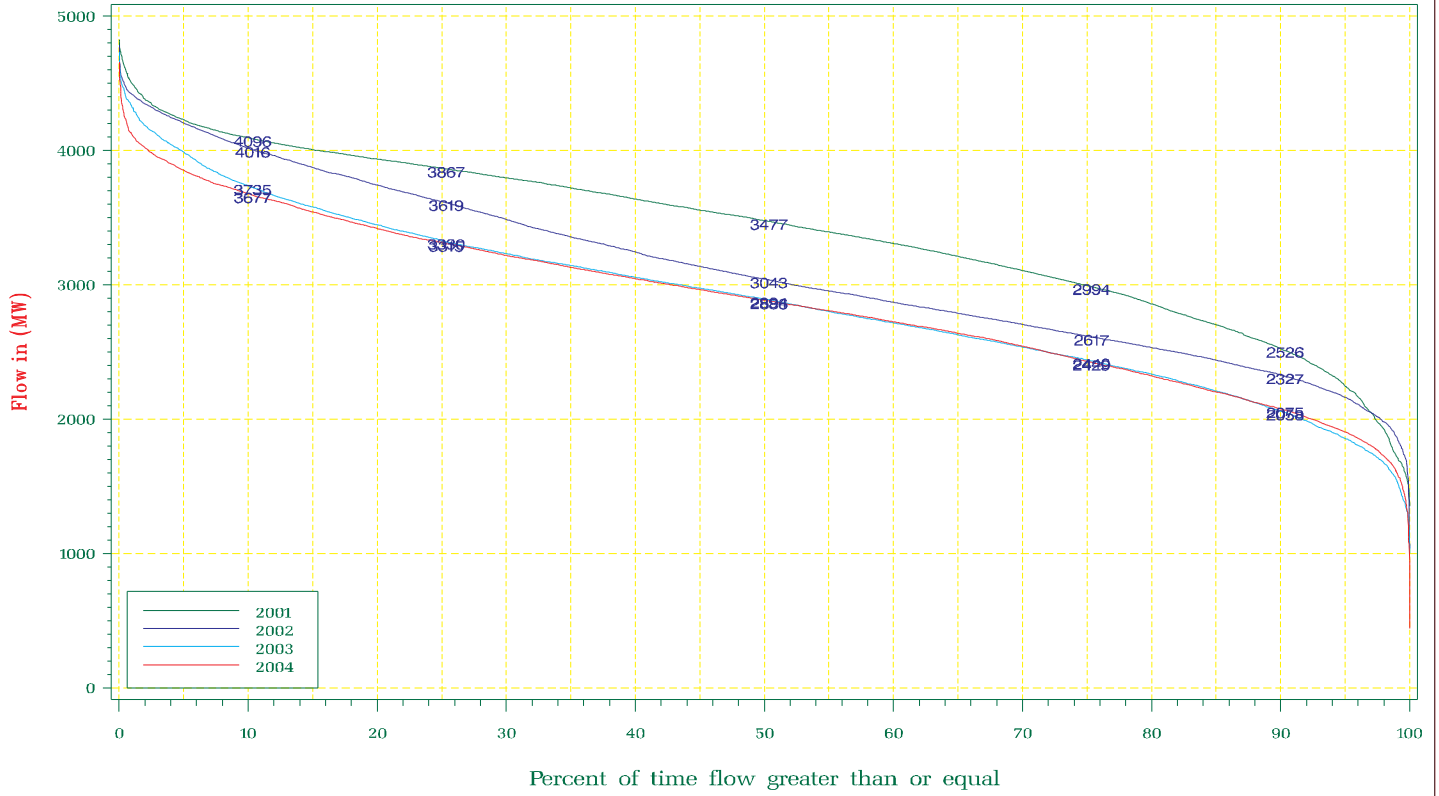
NYISO Frequency Interface Flow For January 2001 – December 2004

Central – Capital/Mid Hudson



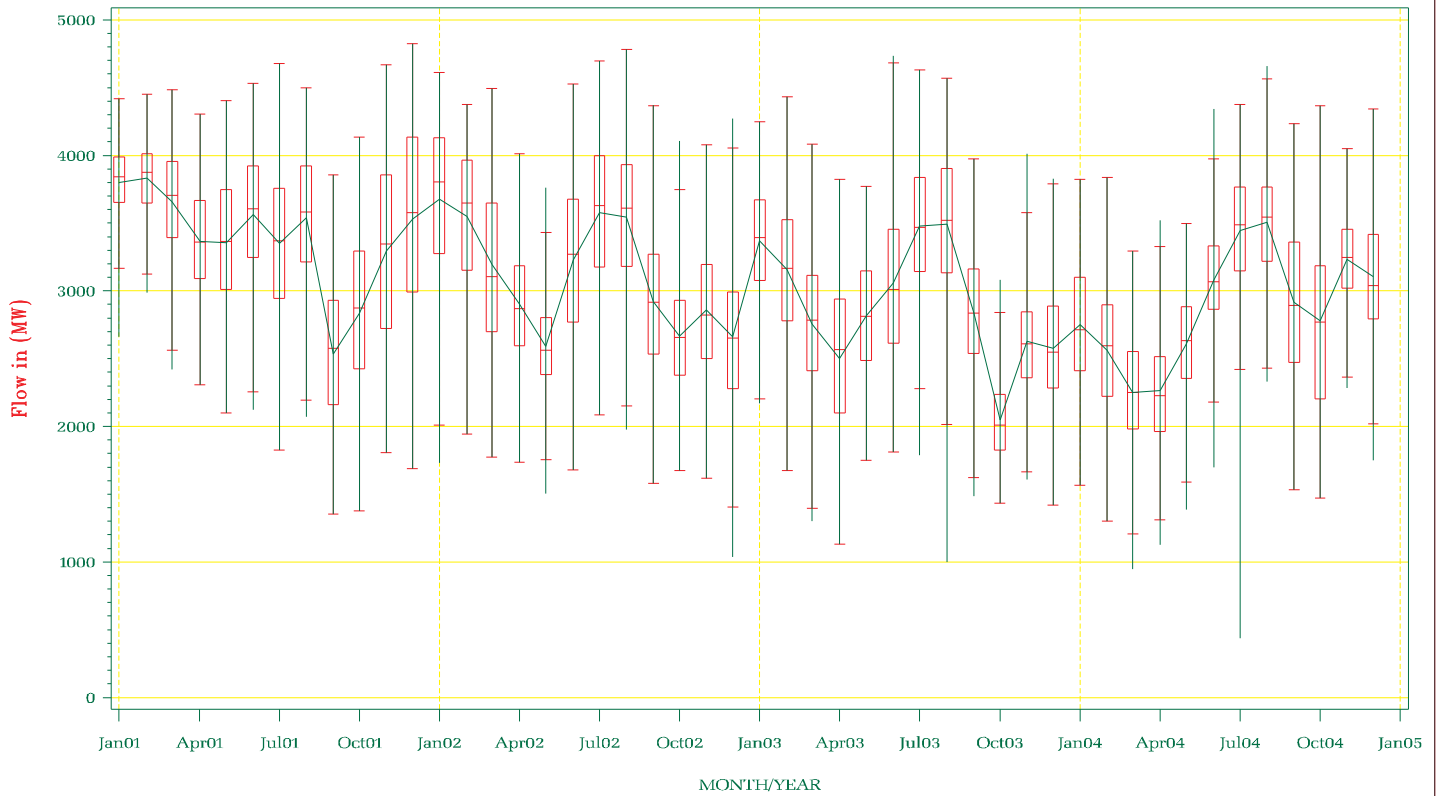
NYISO Percent of time Interface Flow For January 2001 – December 2004

Central – Capital/Mid Hudson



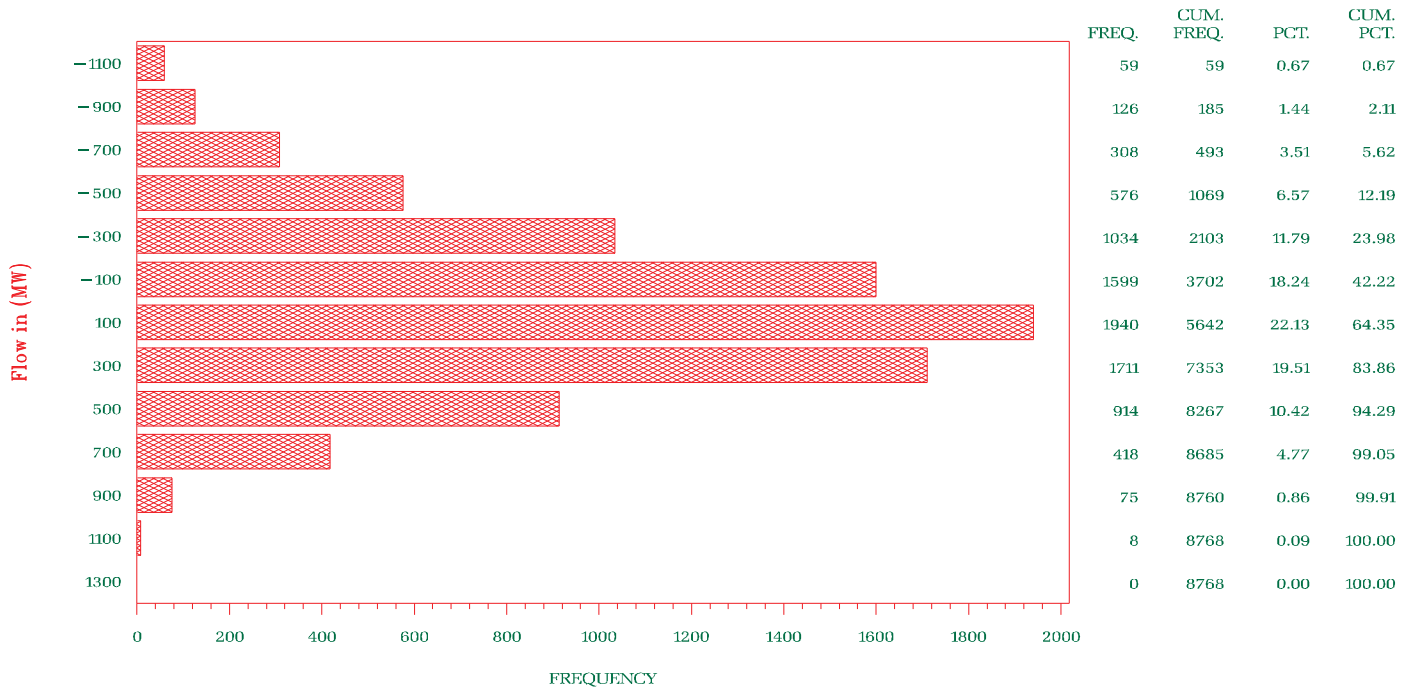
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Central – Capital/Mid Hudson



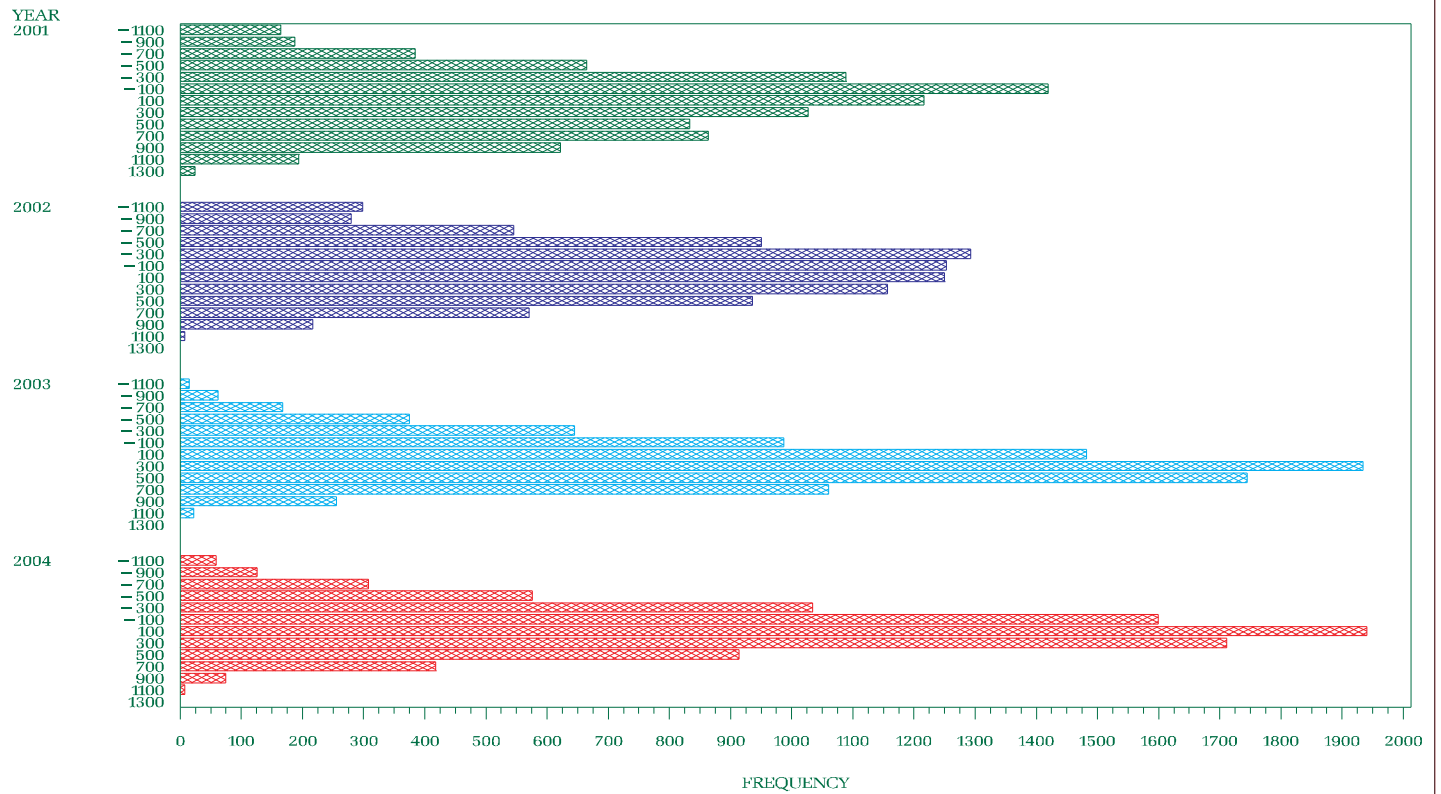
NYISO Frequency Interface Flow For January – December 2004

PJM East – Capital/Mid Hudson



NYISO Frequency Interface Flow For January 2001 – December 2004

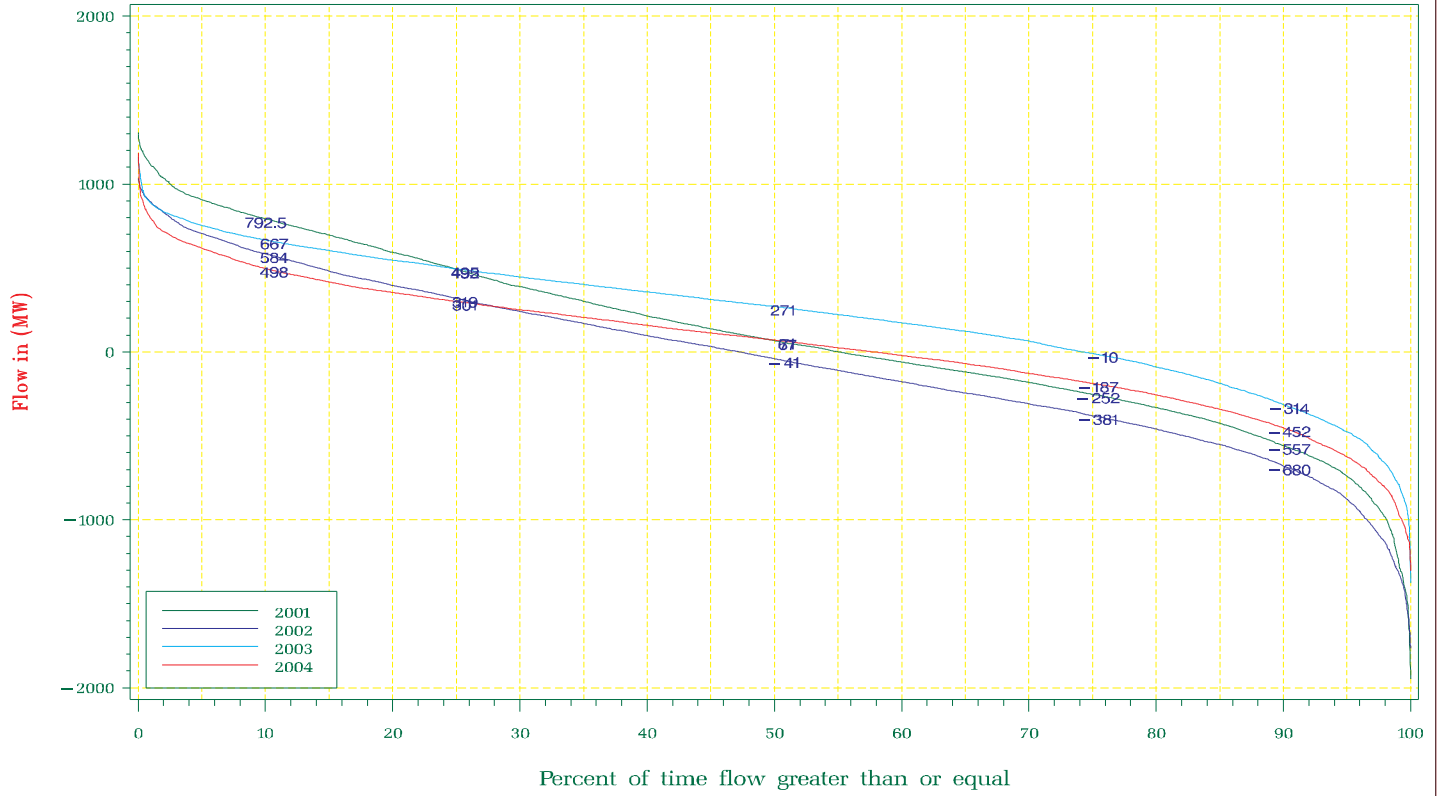
PJM East – Capital/Mid Hudson





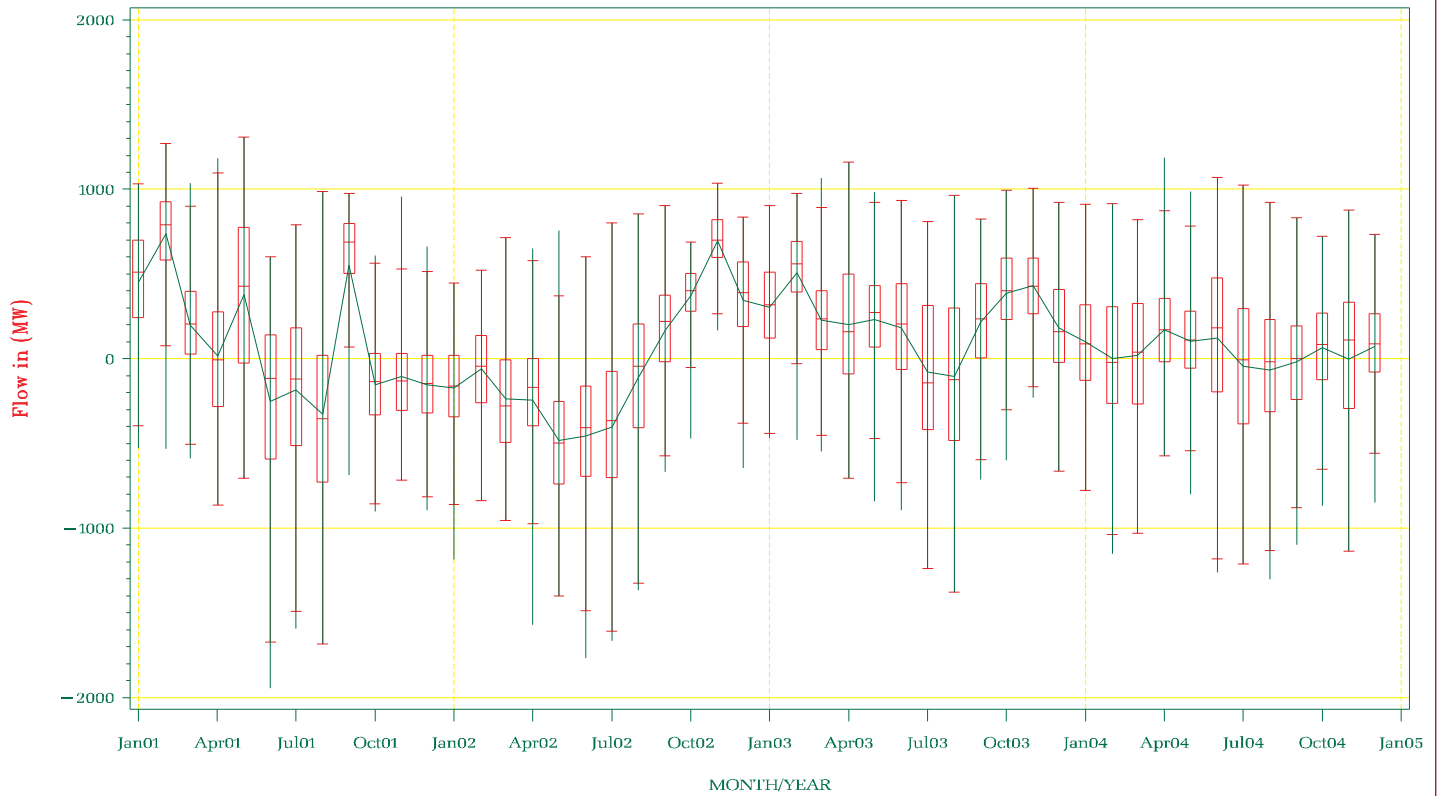
NYISO Percent of time Interface Flow For January 2001 – December 2004

PJM East – Capital/Mid Hudson



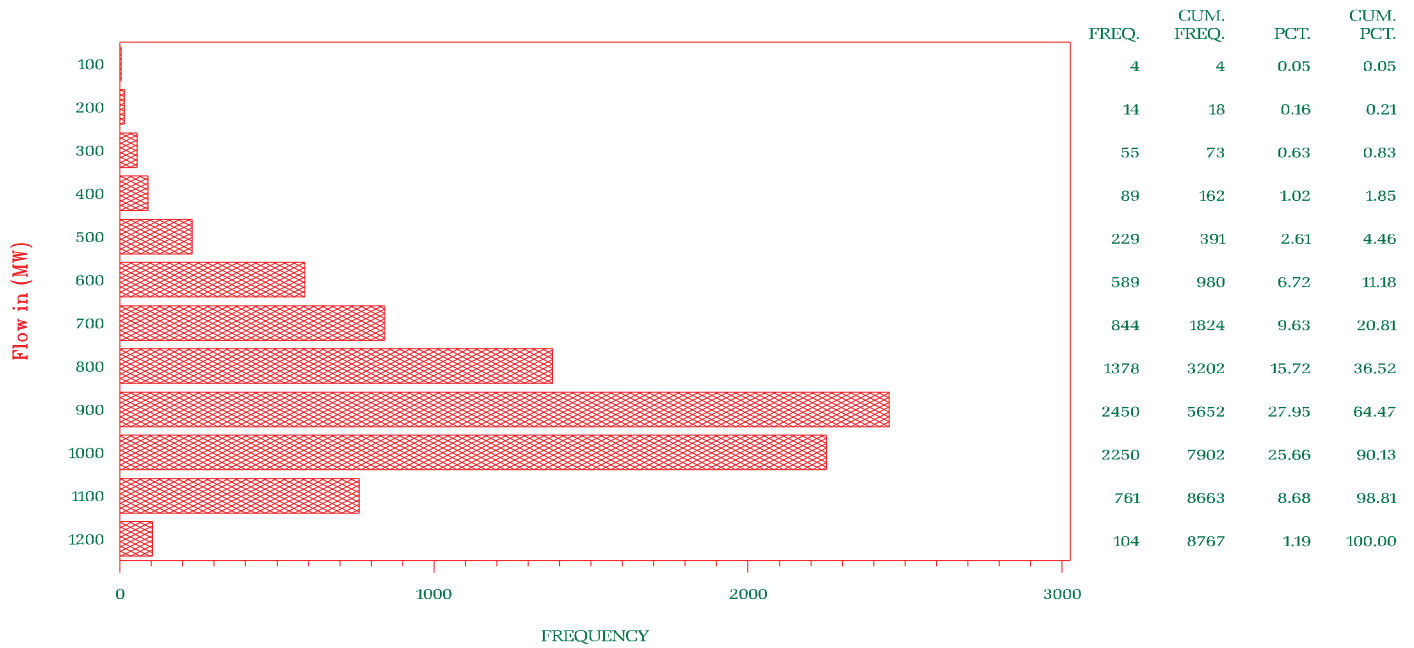
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

PJM East – Capital/Mid Hudson



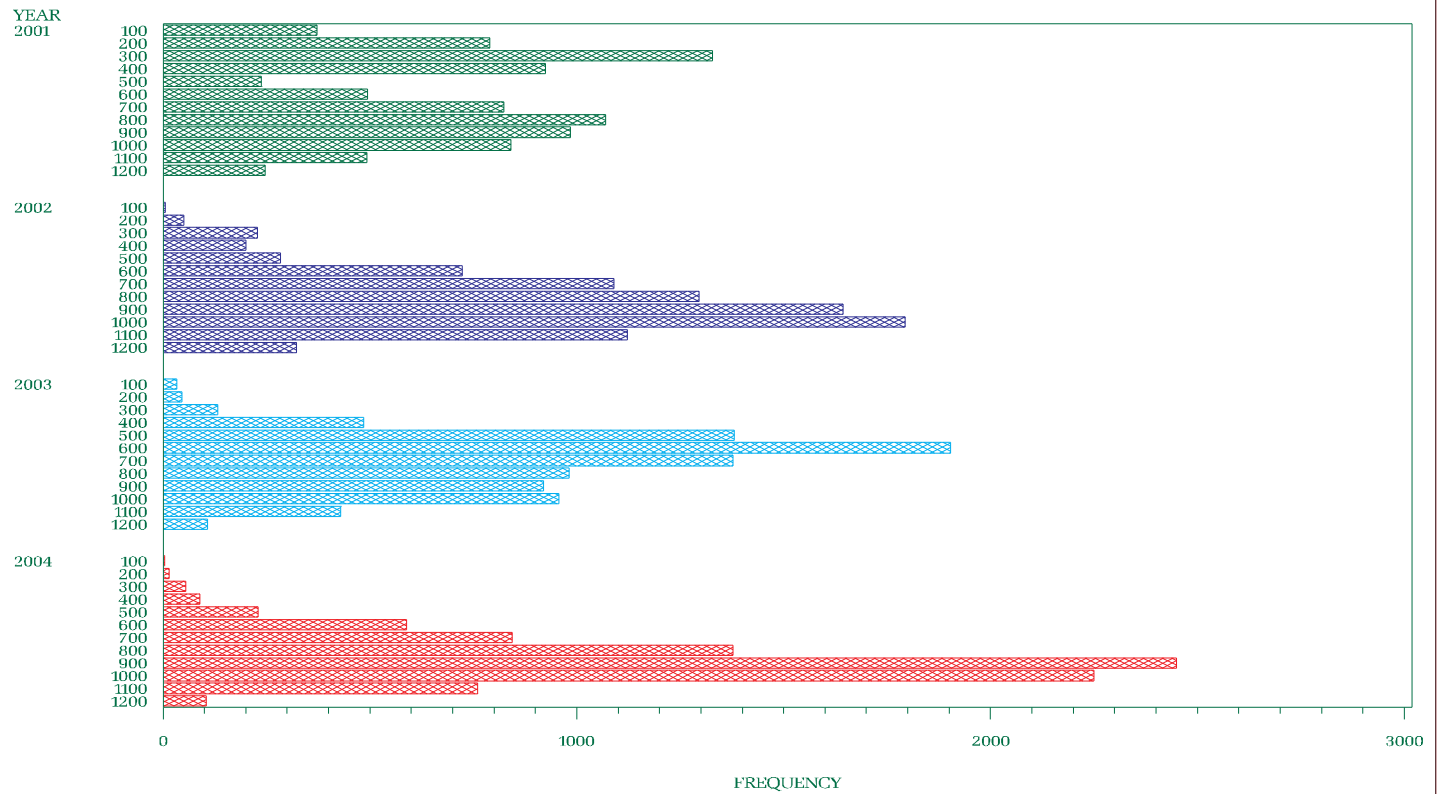
NYISO Frequency Interface Flow For January – December 2004

PJM East – New York City



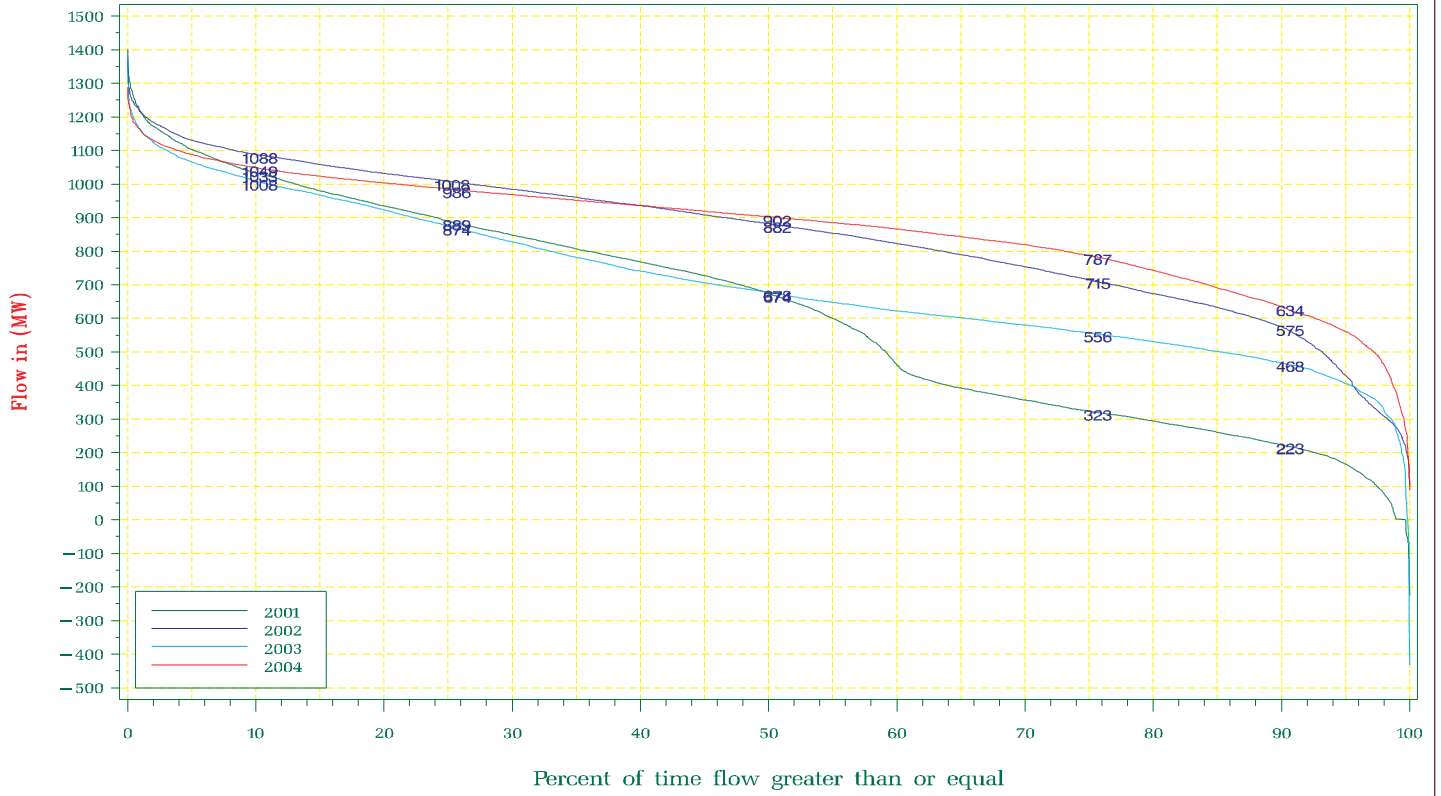
NYISO Frequency Interface Flow For January 2001 – December 2004

PJM East – New York City



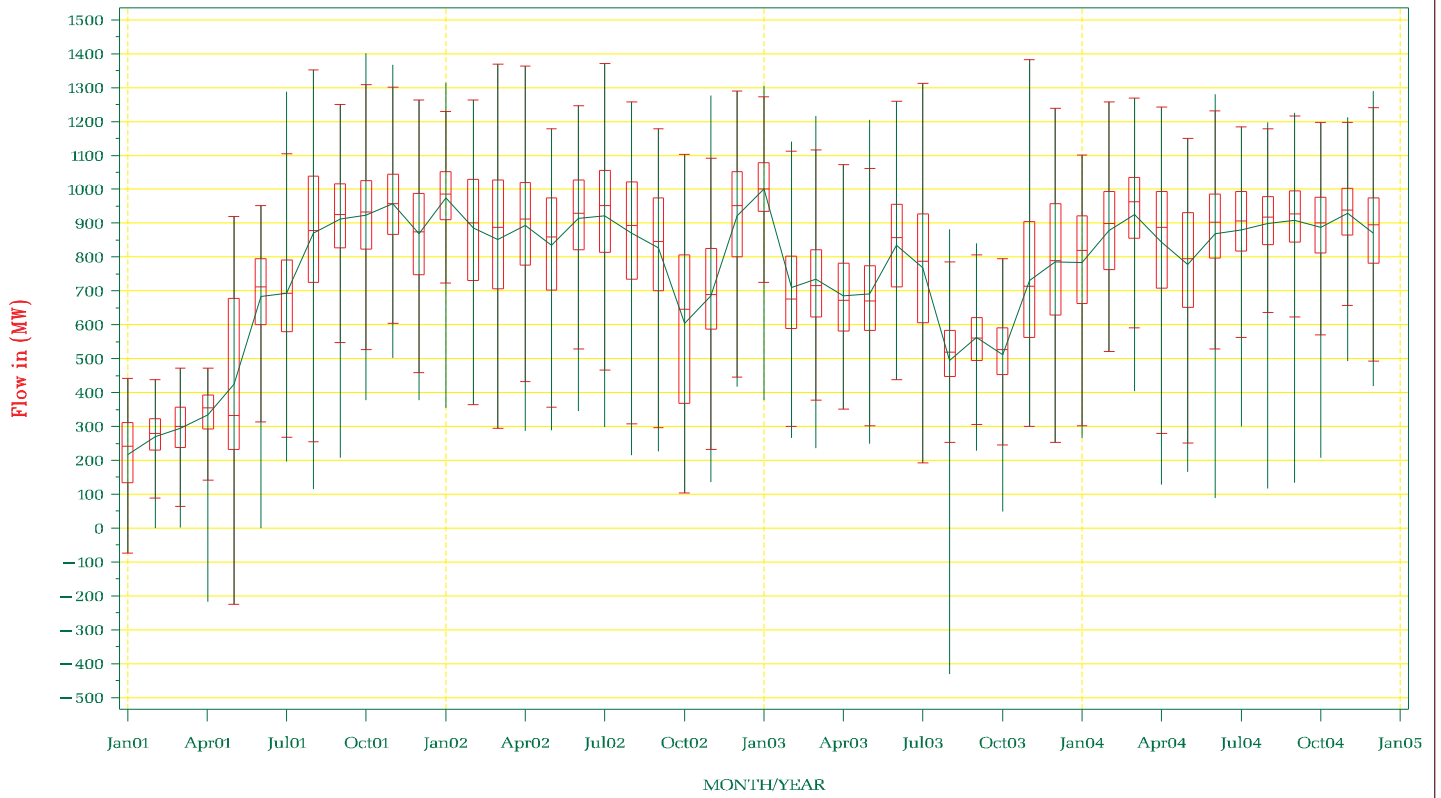
NYISO Percent of time Interface Flow For January 2001 – December 2004

PJM East – New York City



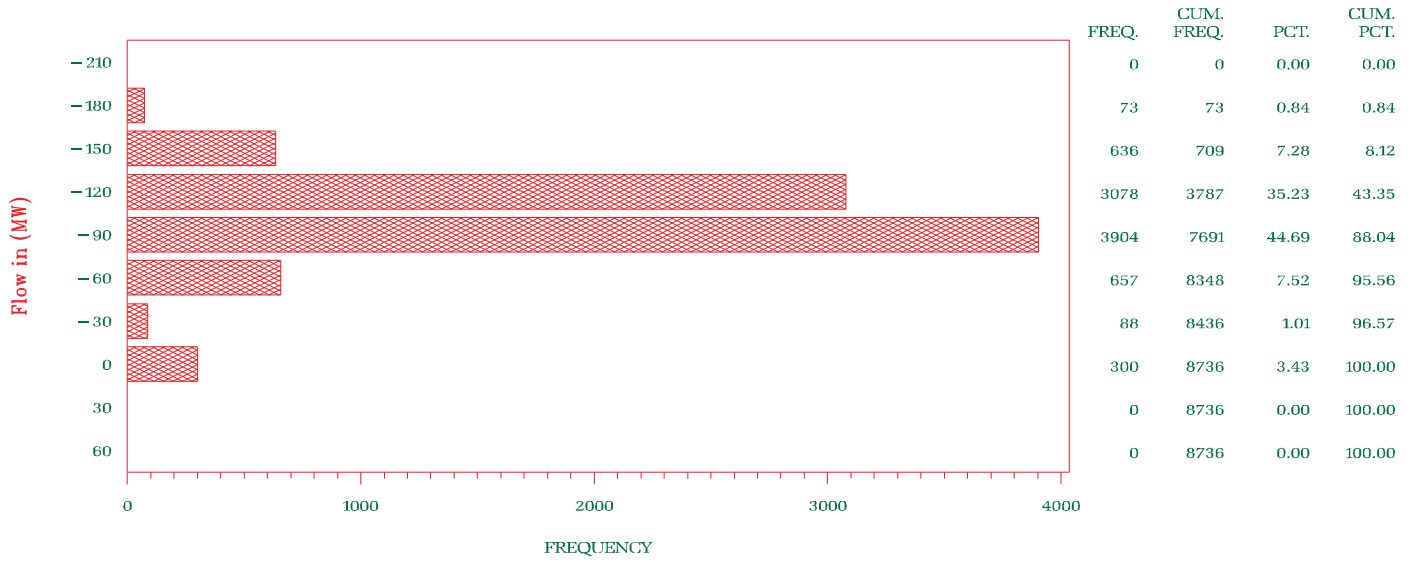
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

PJM East – New York City



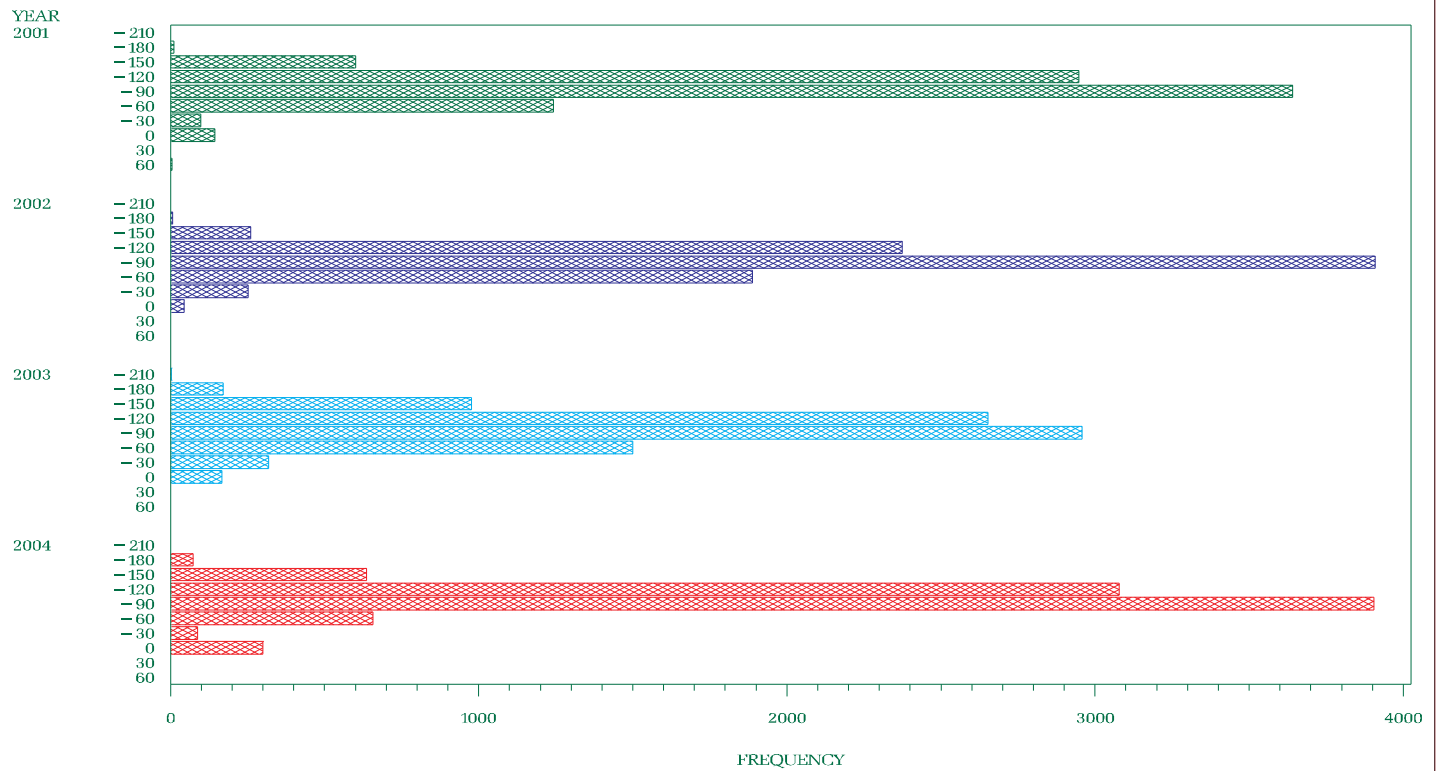
NYISO Frequency Interface Flow For January – December 2004

NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh



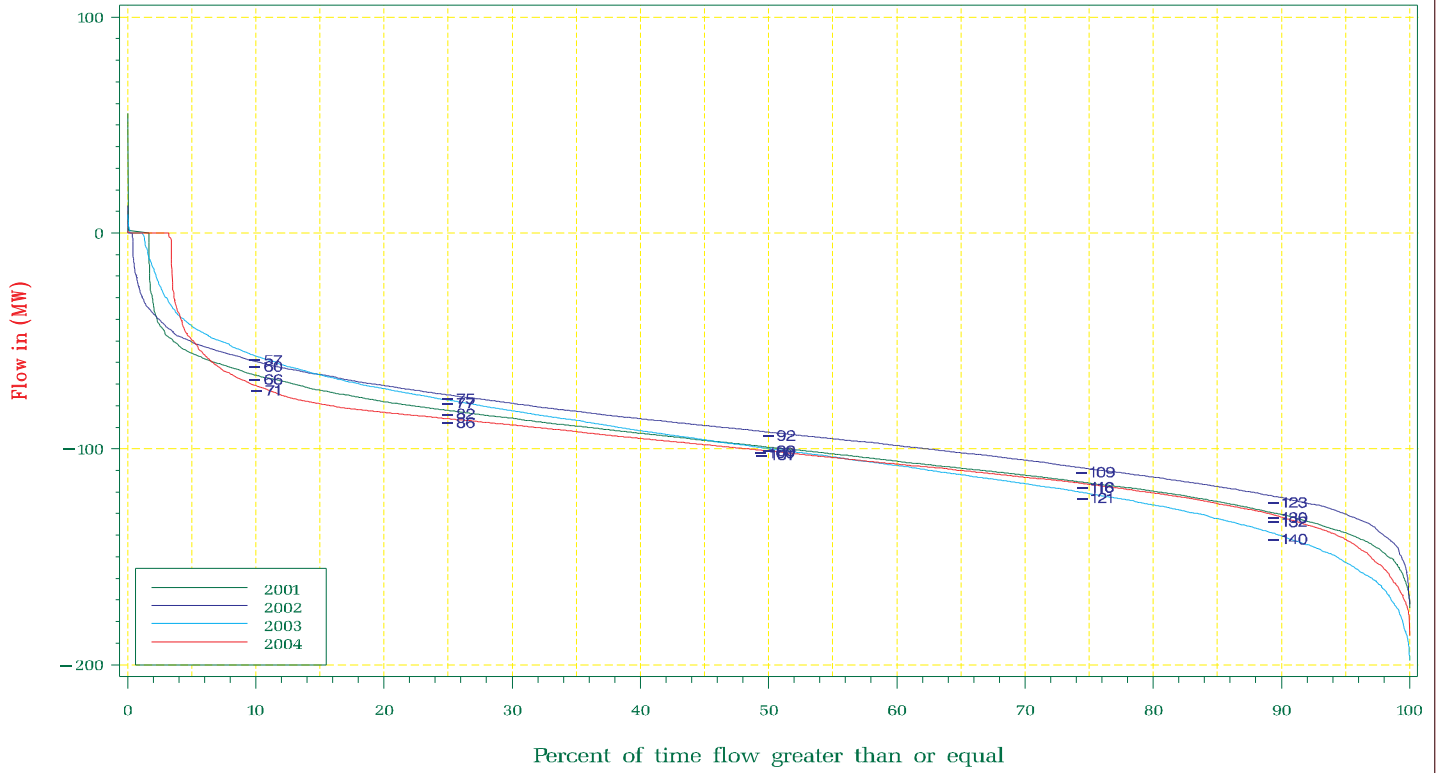
NYISO Frequency Interface Flow For January 2001 – December 2004

NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh



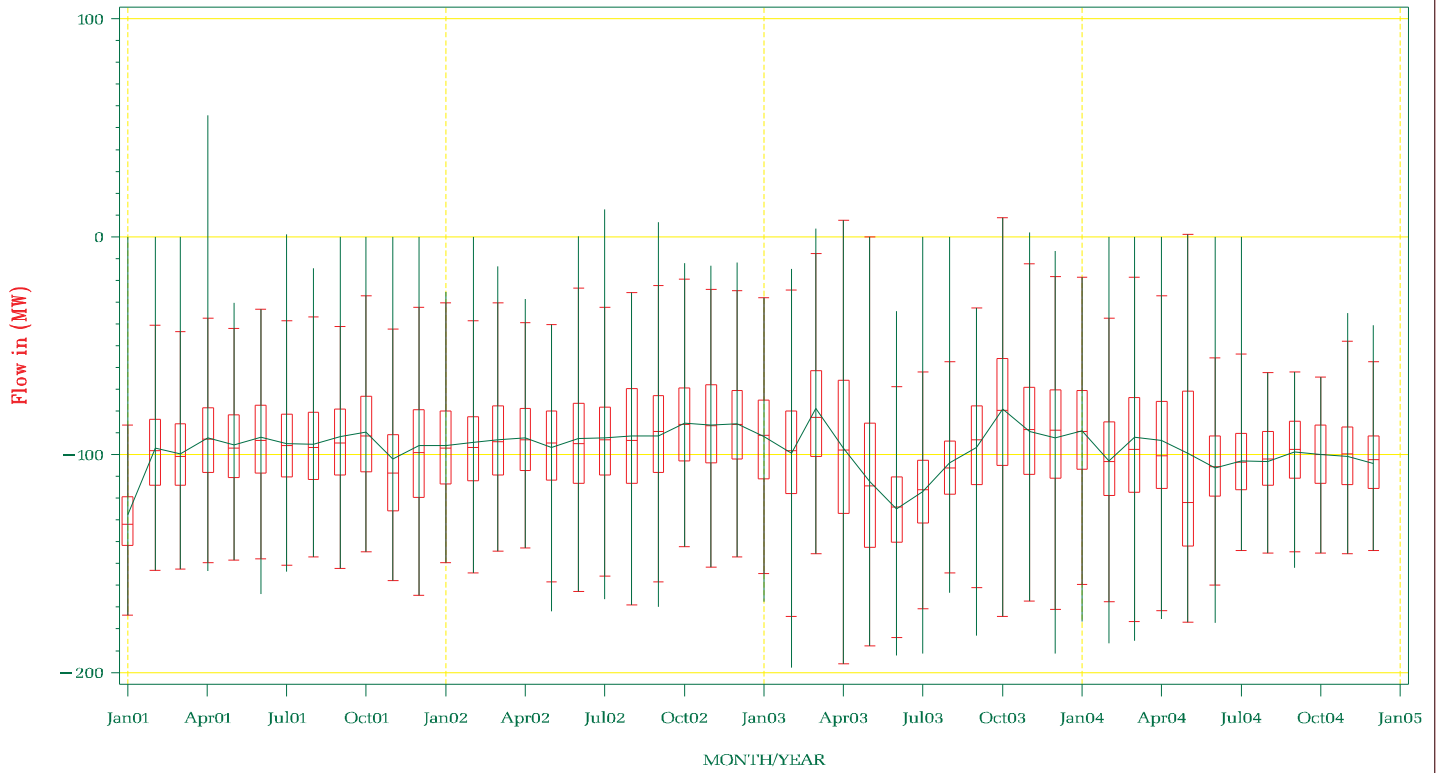
NYISO Percent of time Interface Flow For January 2001 – December 2004

NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

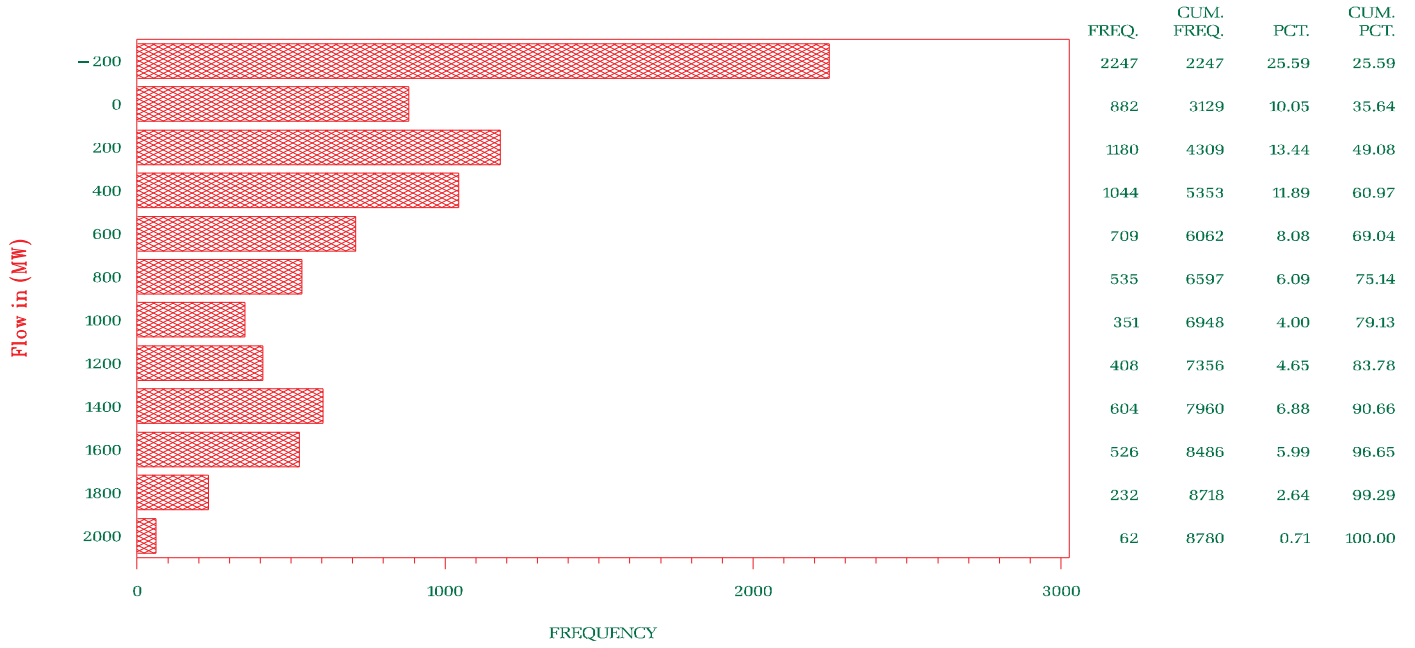
NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh





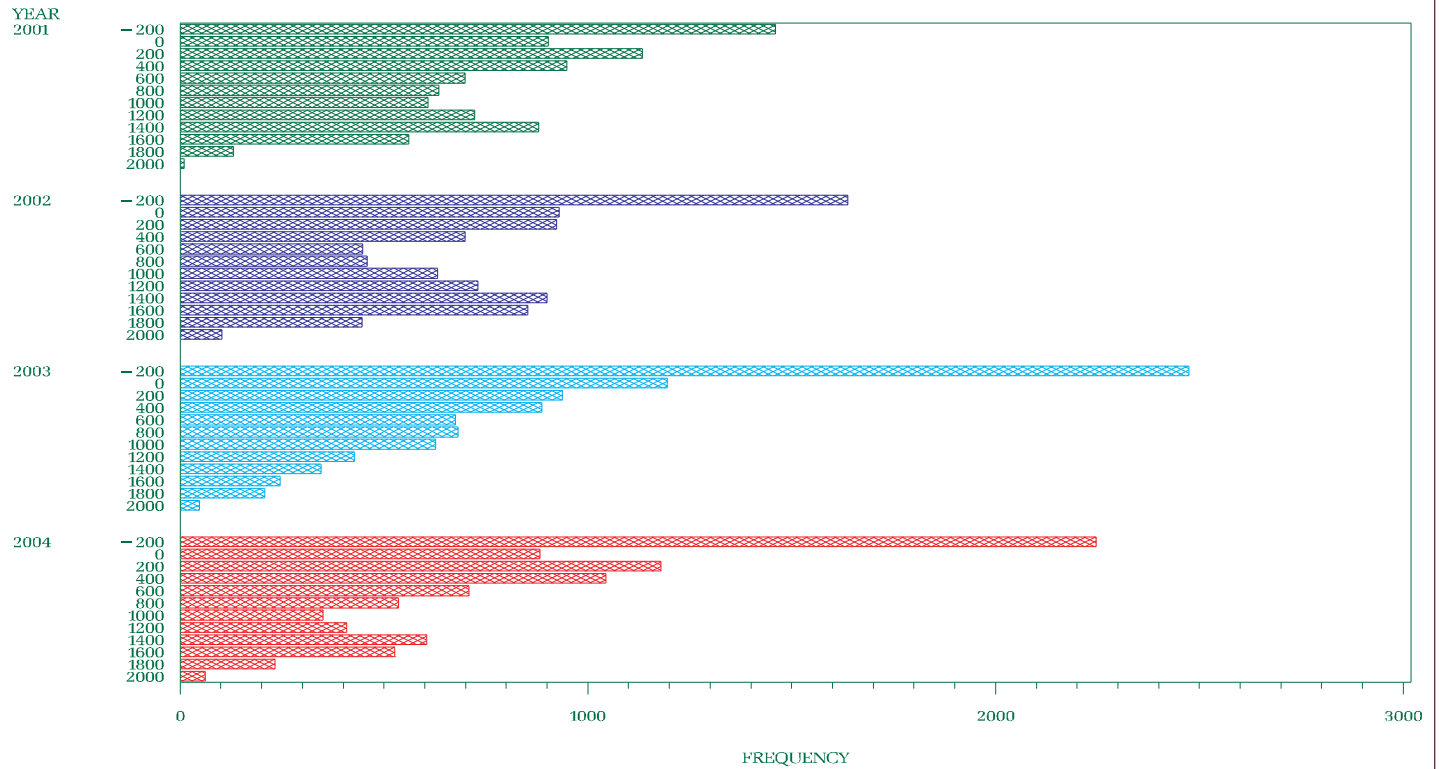
NYISO Frequency Interface Flow For January – December 2004

MOSES SOUTH  
Adirondack – Central



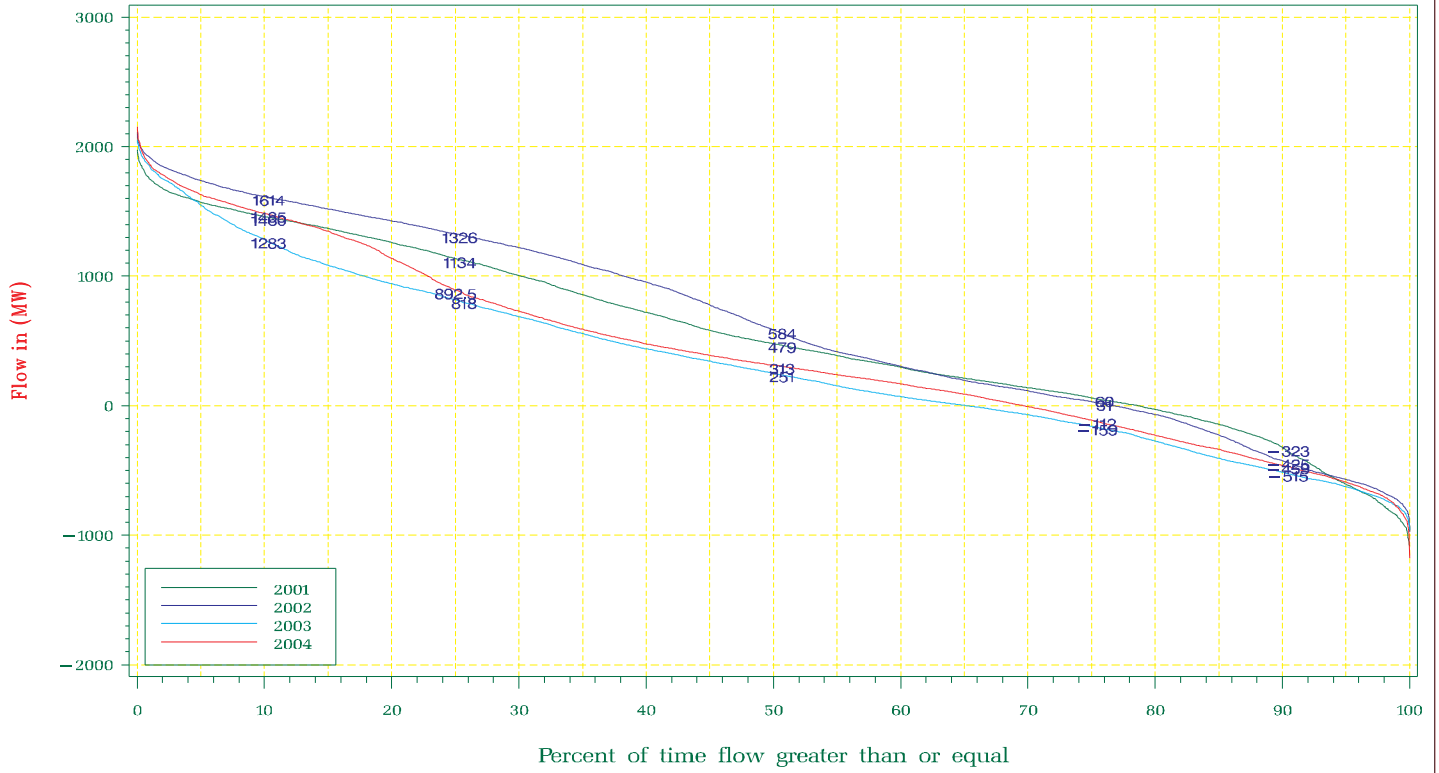
NYISO Frequency Interface Flow For January 2001 – December 2004

MOSES SOUTH  
Adirondack – Central



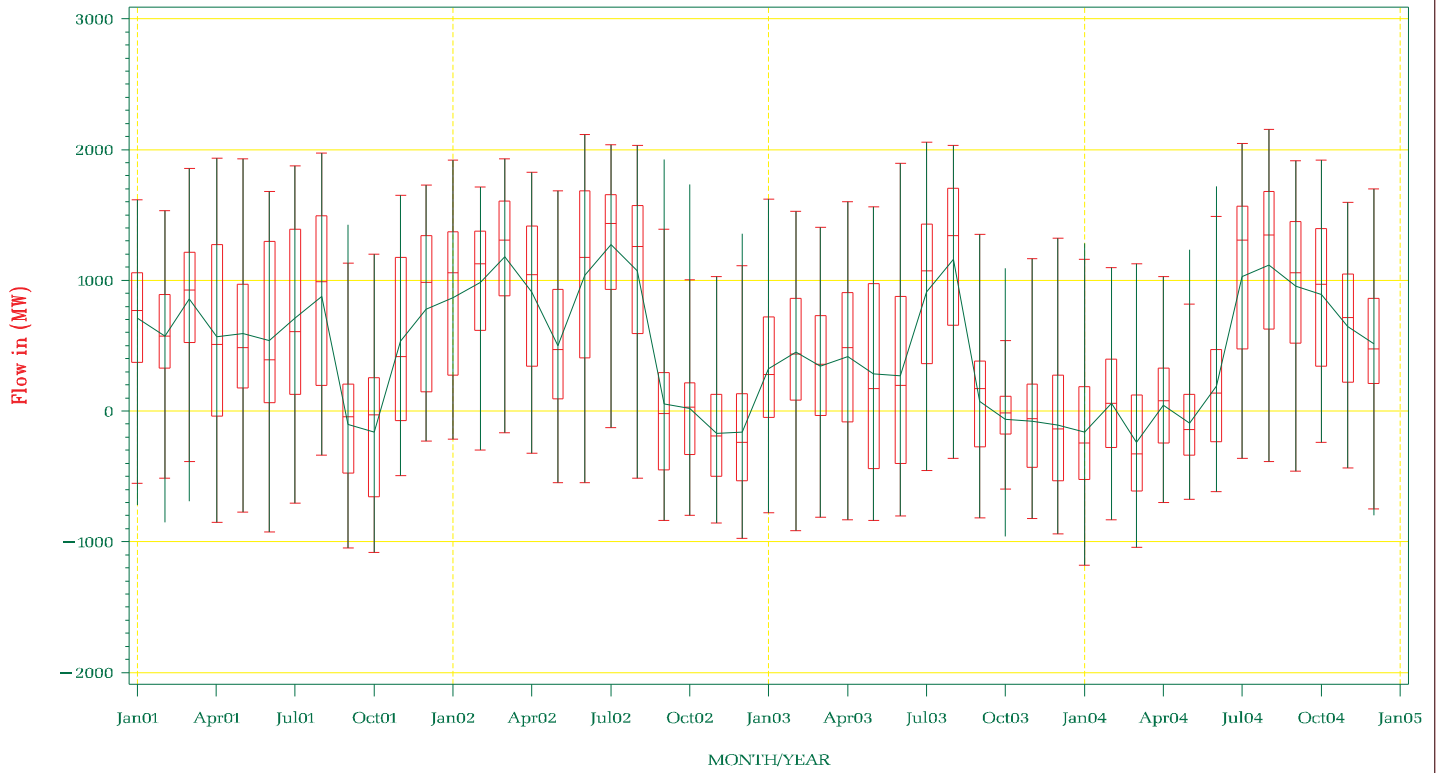
NYISO Percent of time Interface Flow For January 2001 – December 2004

**MOSES SOUTH**  
Adirondack – Central



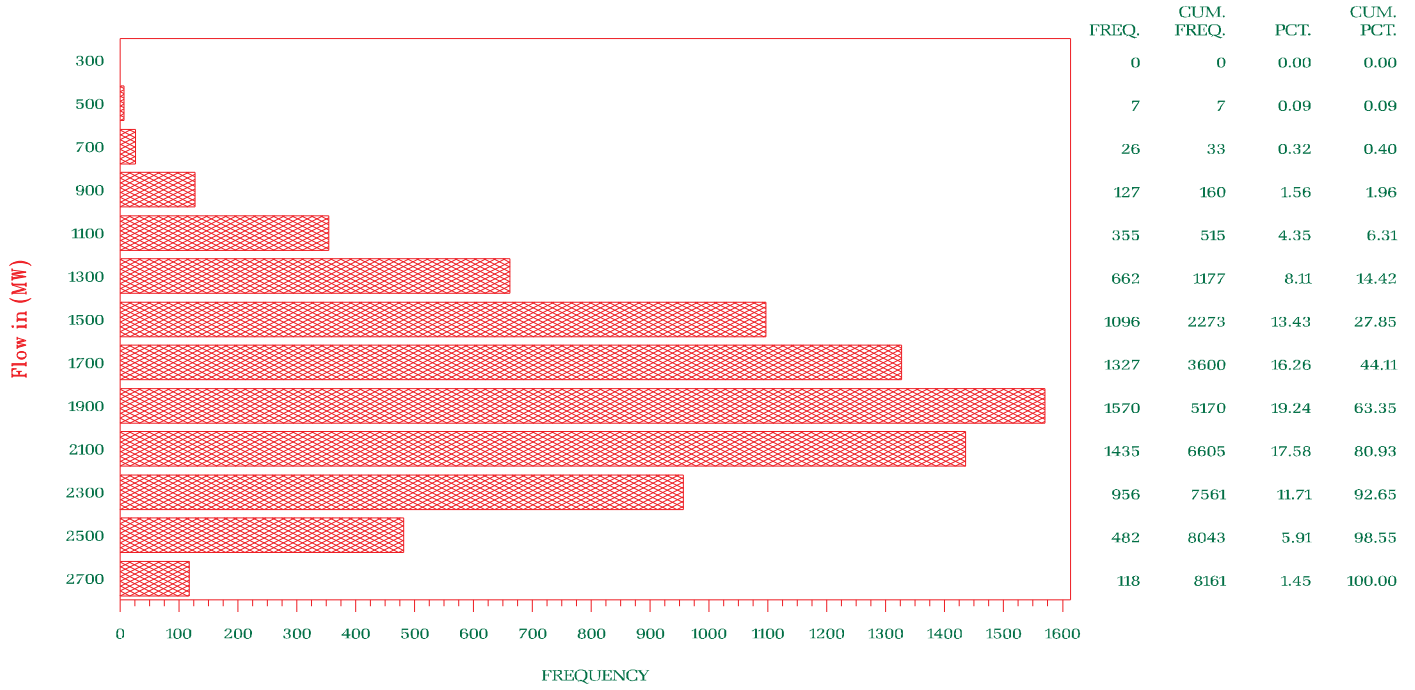
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

**MOSES SOUTH**  
Adirondack – Central



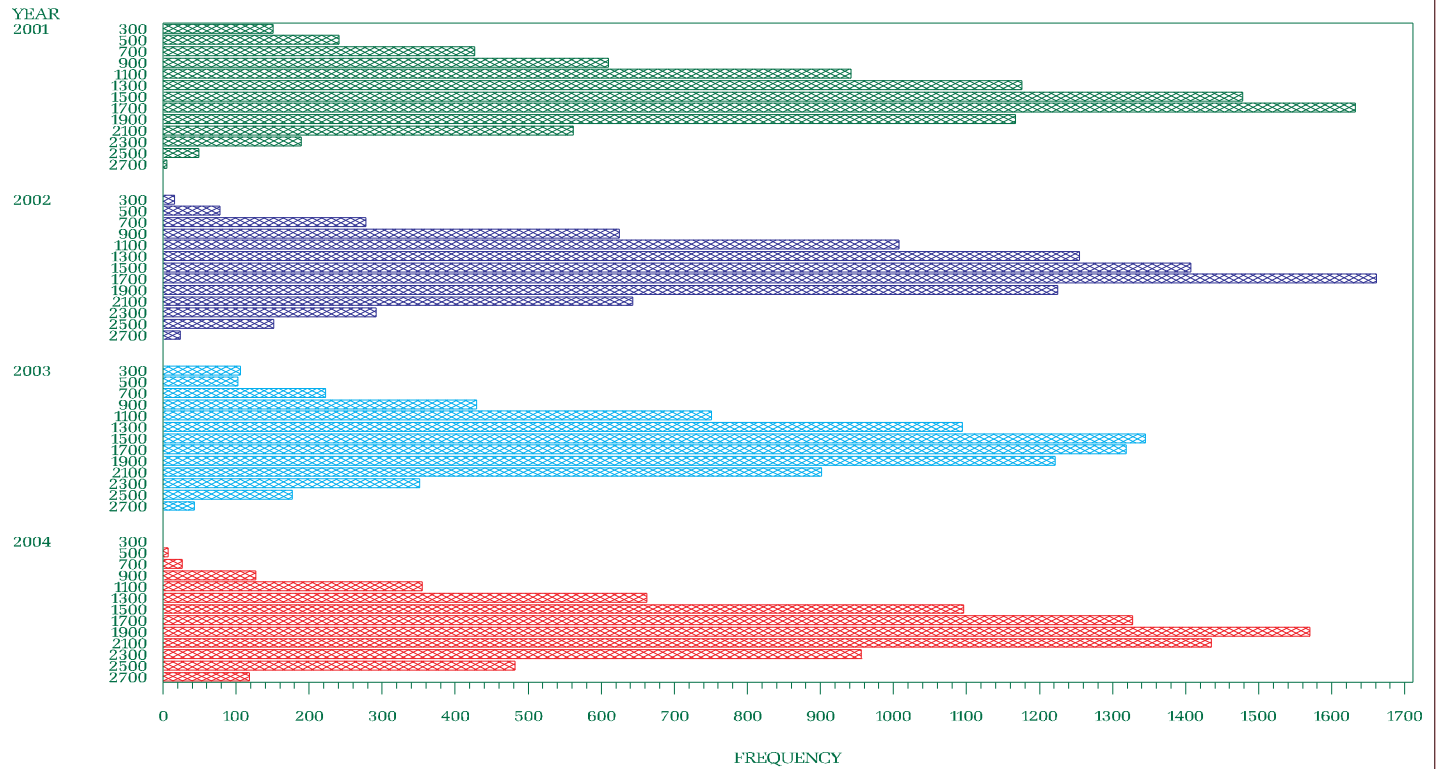
NYISO Frequency Interface Flow For January – December 2004

**DYSINGER EAST**  
Frontier – Genesee



NYISO Frequency Interface Flow For January 2001 – December 2004

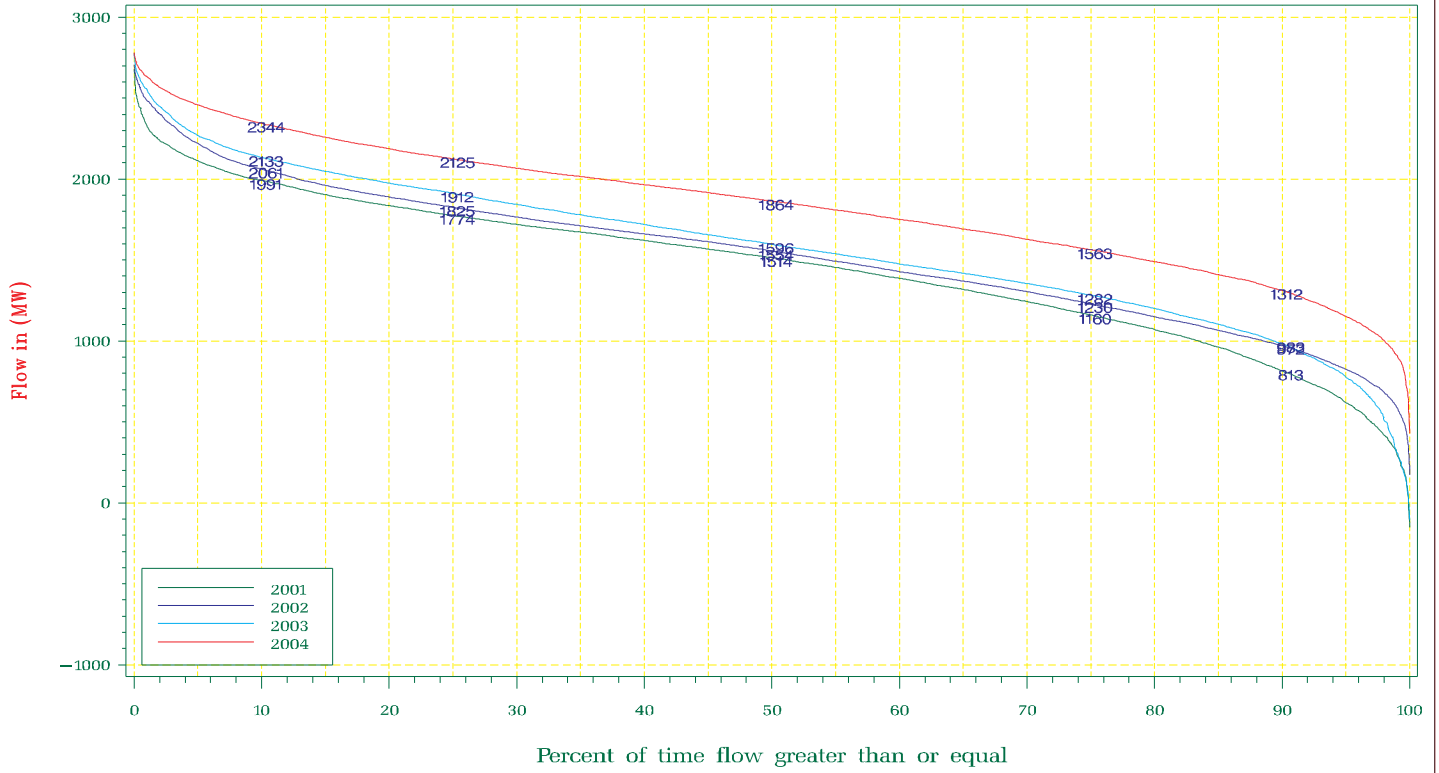
**DYSINGER EAST**  
Frontier – Genesee



NYISO Percent of time Interface Flow For January 2001 – December 2004

**DYSINGER EAST**

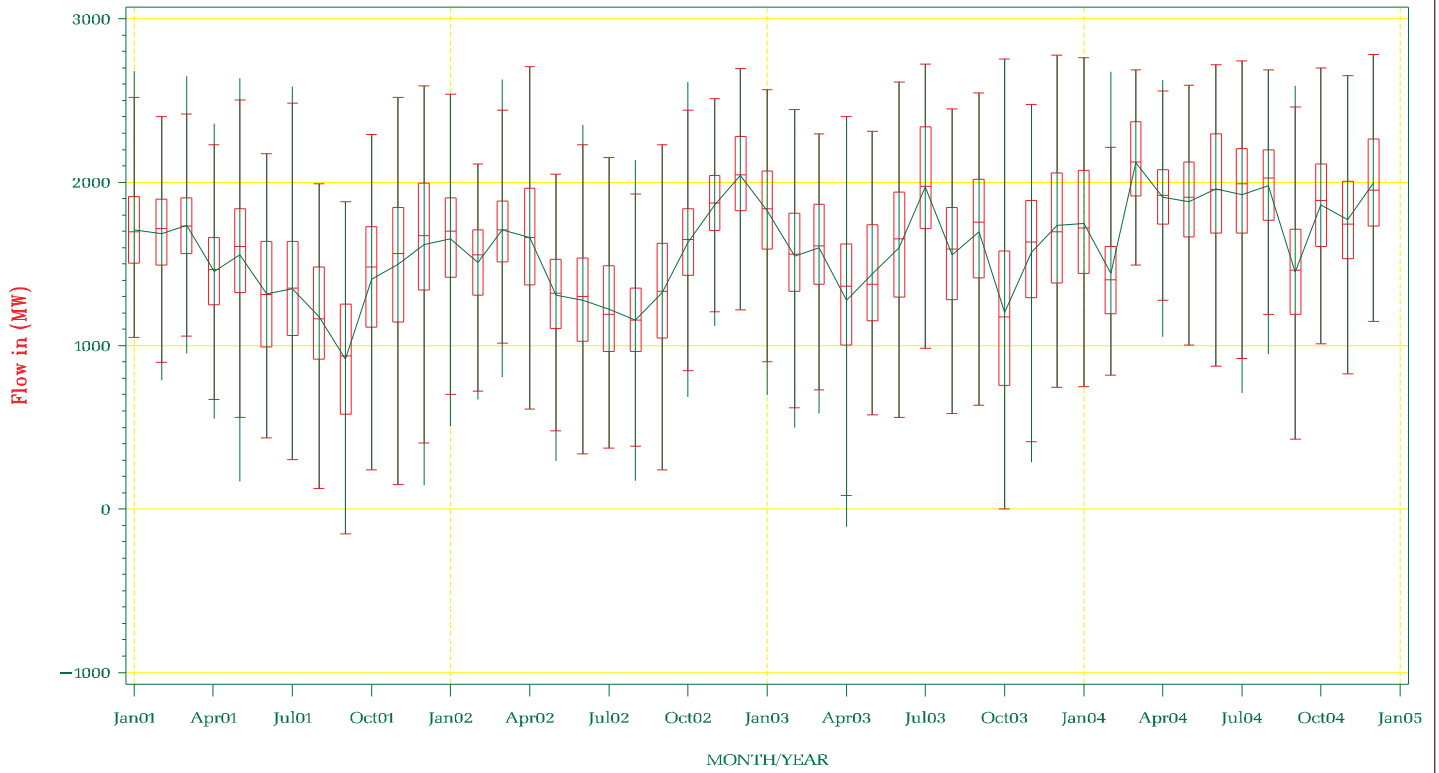
Frontier – Genesee



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

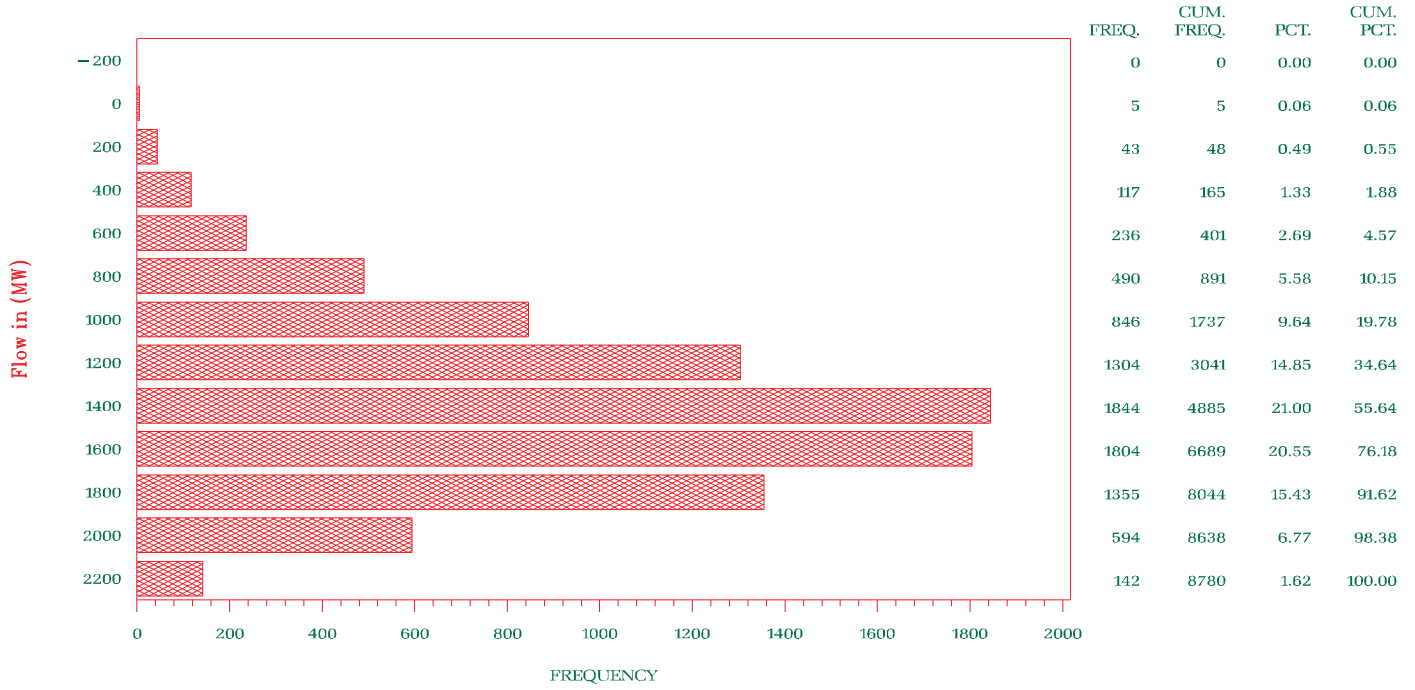
**DYSINGER EAST**

Frontier – Genesee



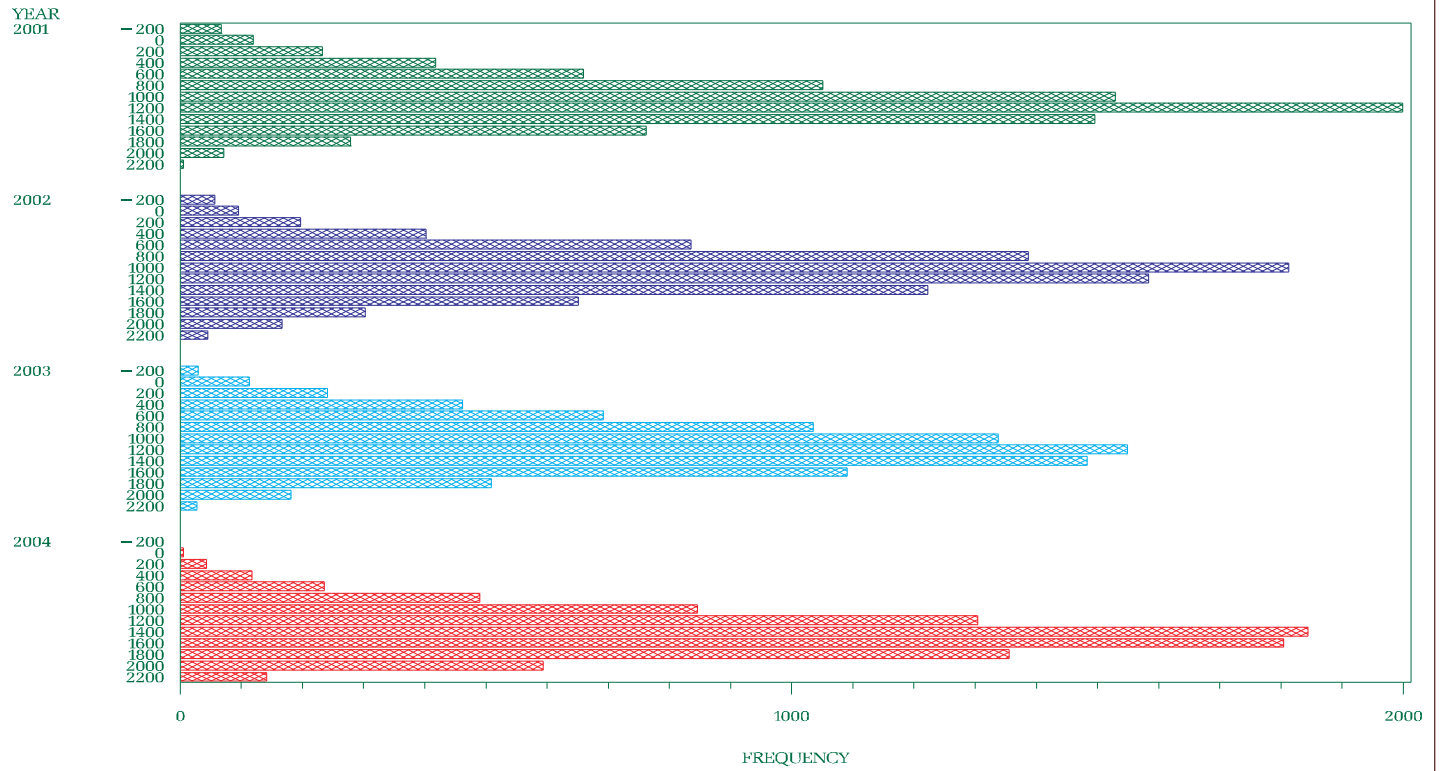
NYISO Frequency Interface Flow For January – December 2004

WEST CENTRAL  
Genesee – Central



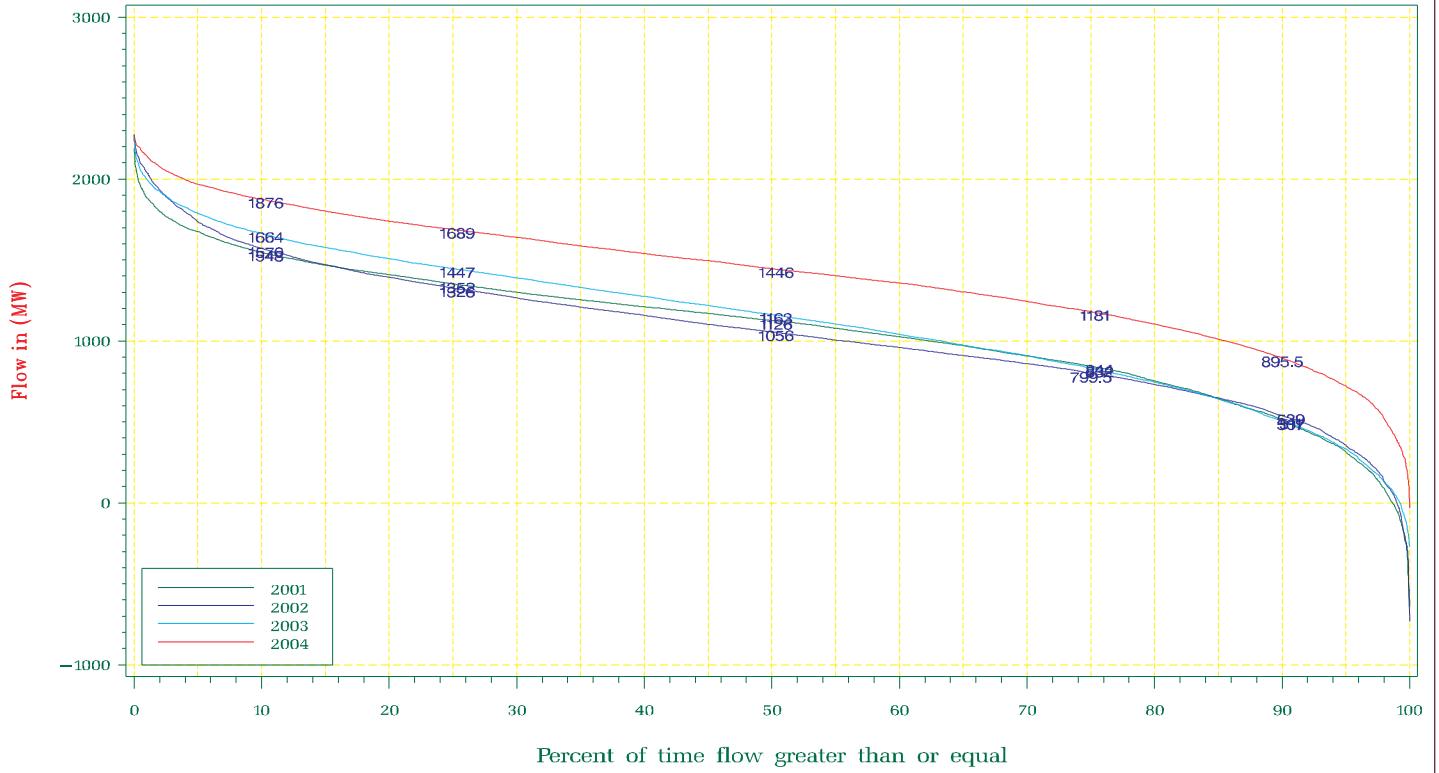
NYISO Frequency Interface Flow For January 2001 – December 2004

WEST CENTRAL  
Genesee – Central



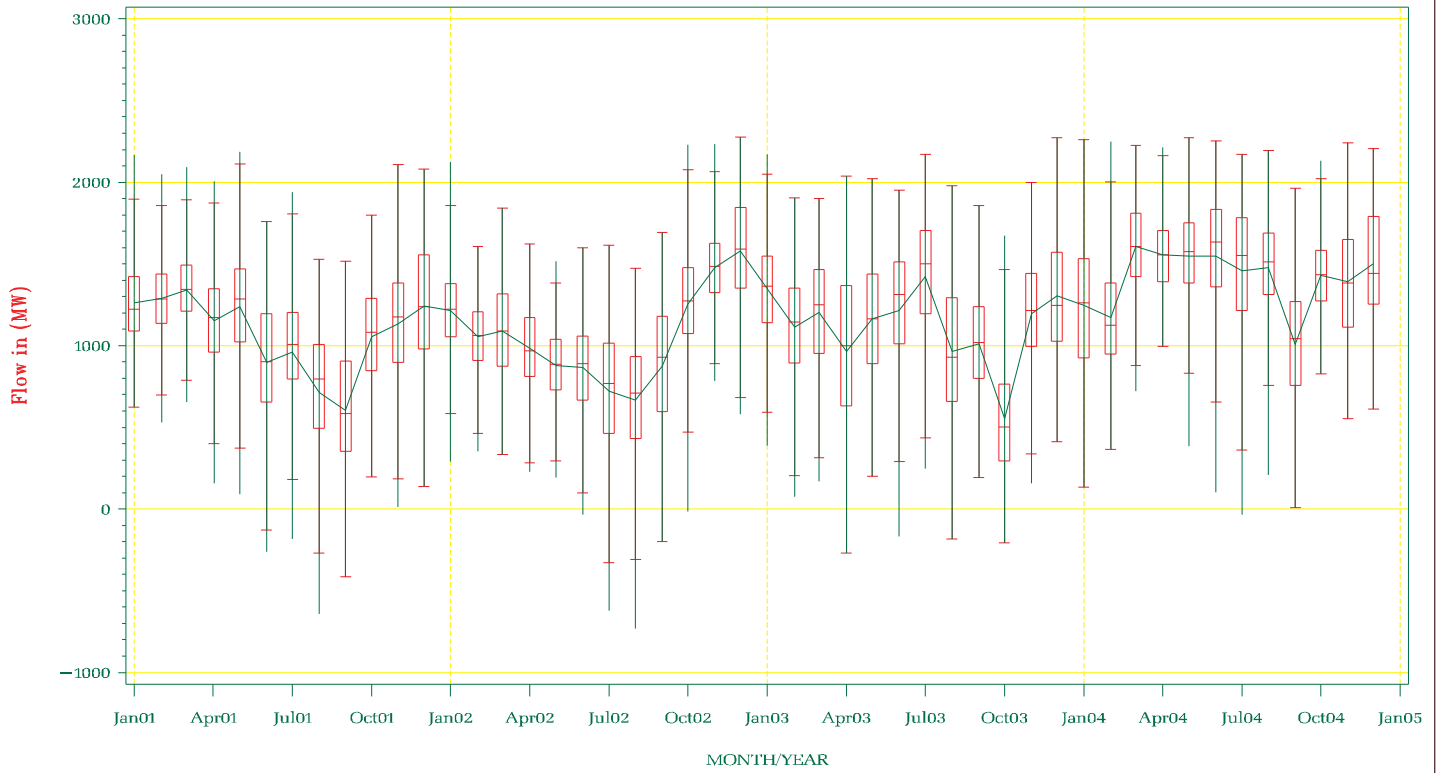
NYISO Percent of time Interface Flow For January 2001 – December 2004

**WEST CENTRAL**  
Genesee – Central



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

**WEST CENTRAL**  
Genesee – Central



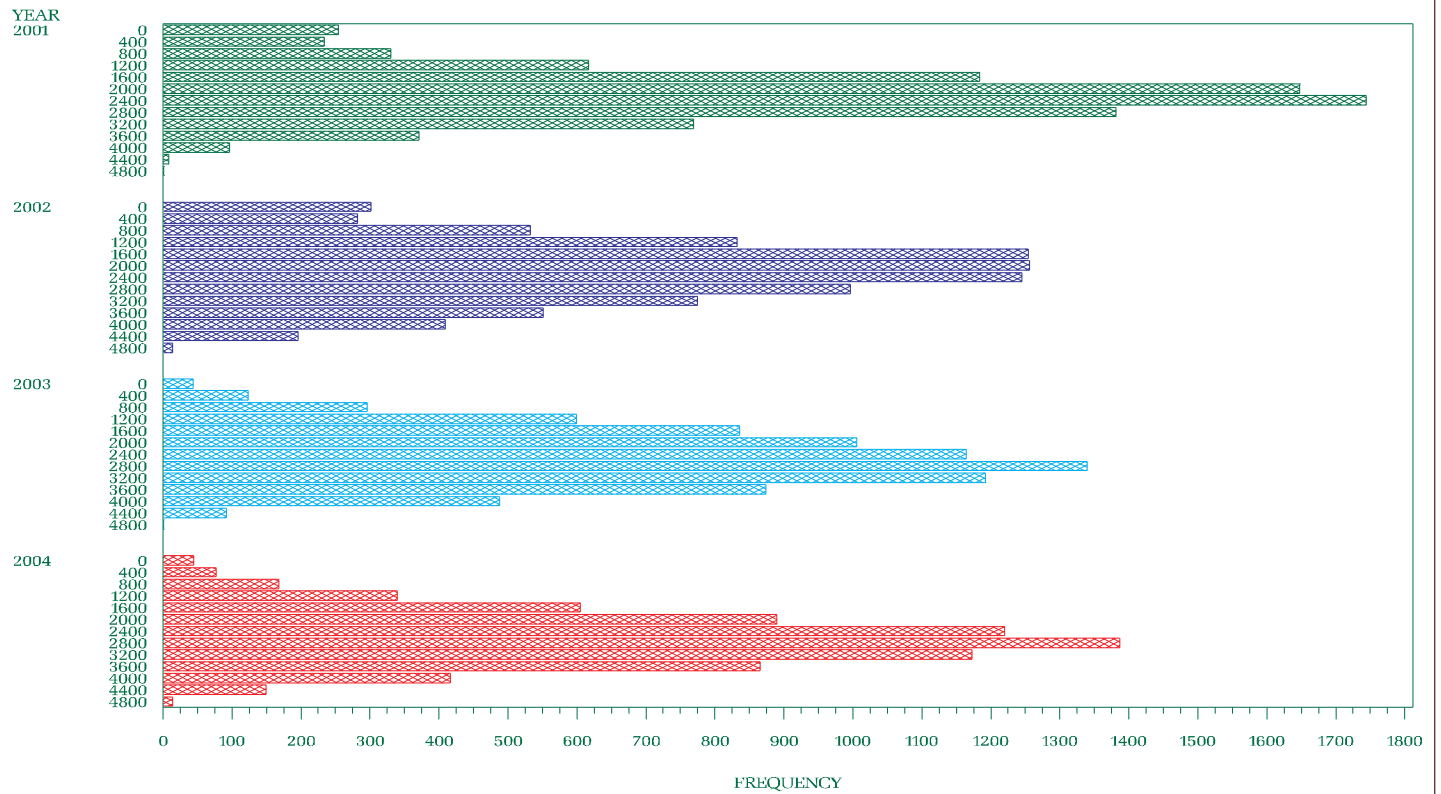
NYISO Frequency Interface Flow For January – December 2004

WEST CENTRAL (CLOSED)



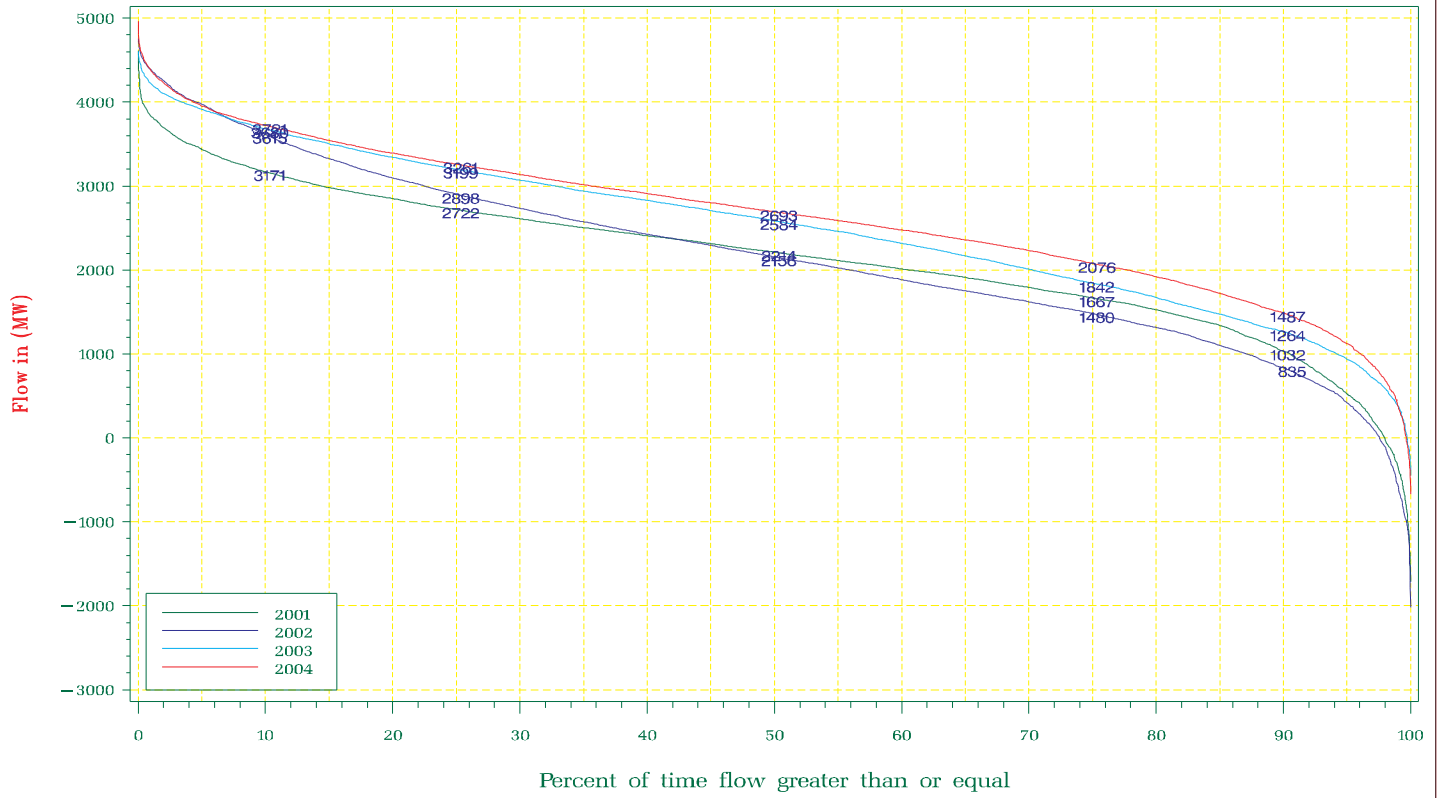
NYISO Frequency Interface Flow For January 2001 – December 2004

WEST CENTRAL (CLOSED)



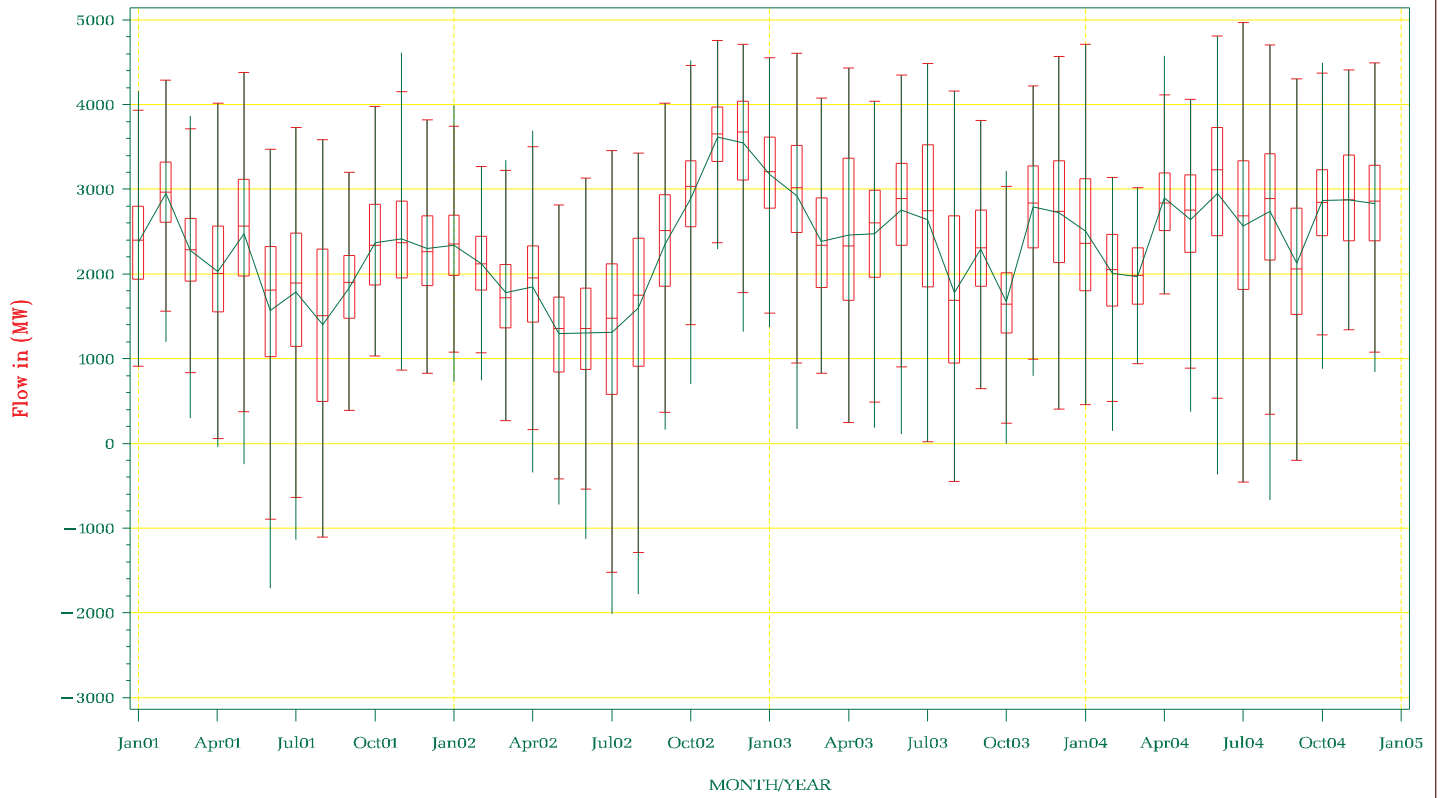
NYISO Percent of time Interface Flow For January 2001 – December 2004

WEST CENTRAL (CLOSED)



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

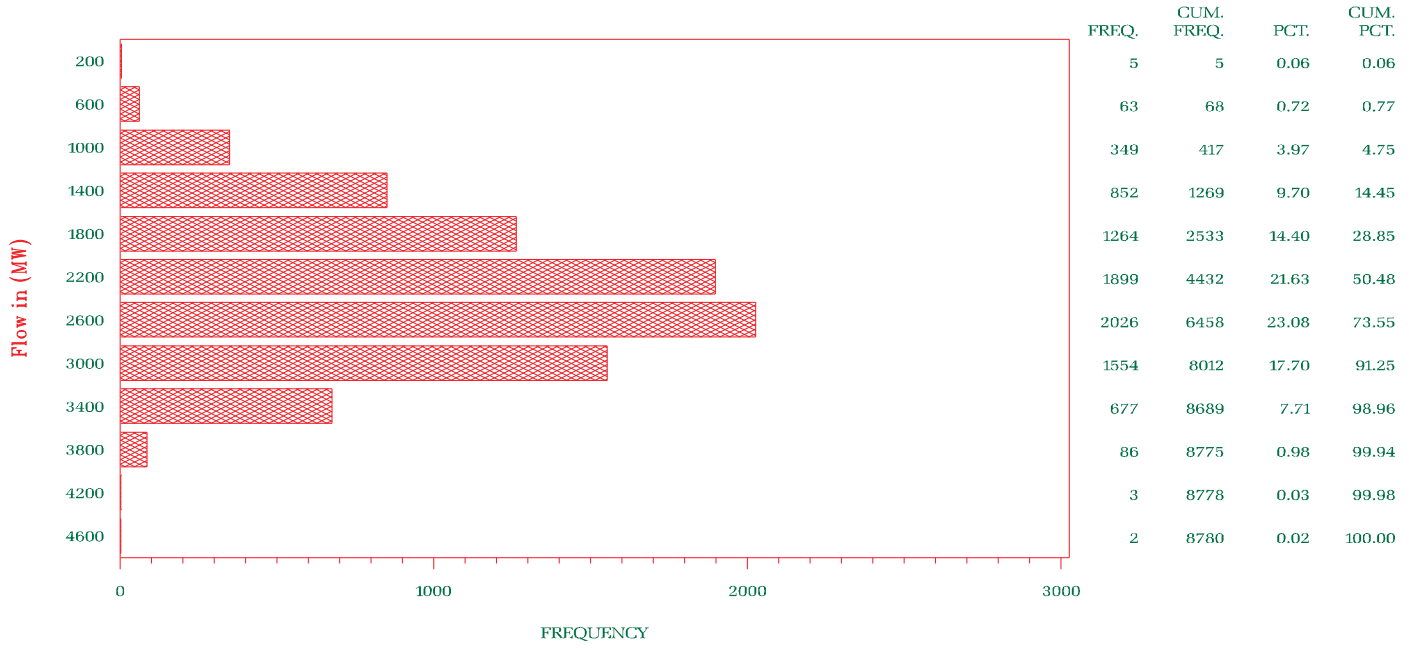
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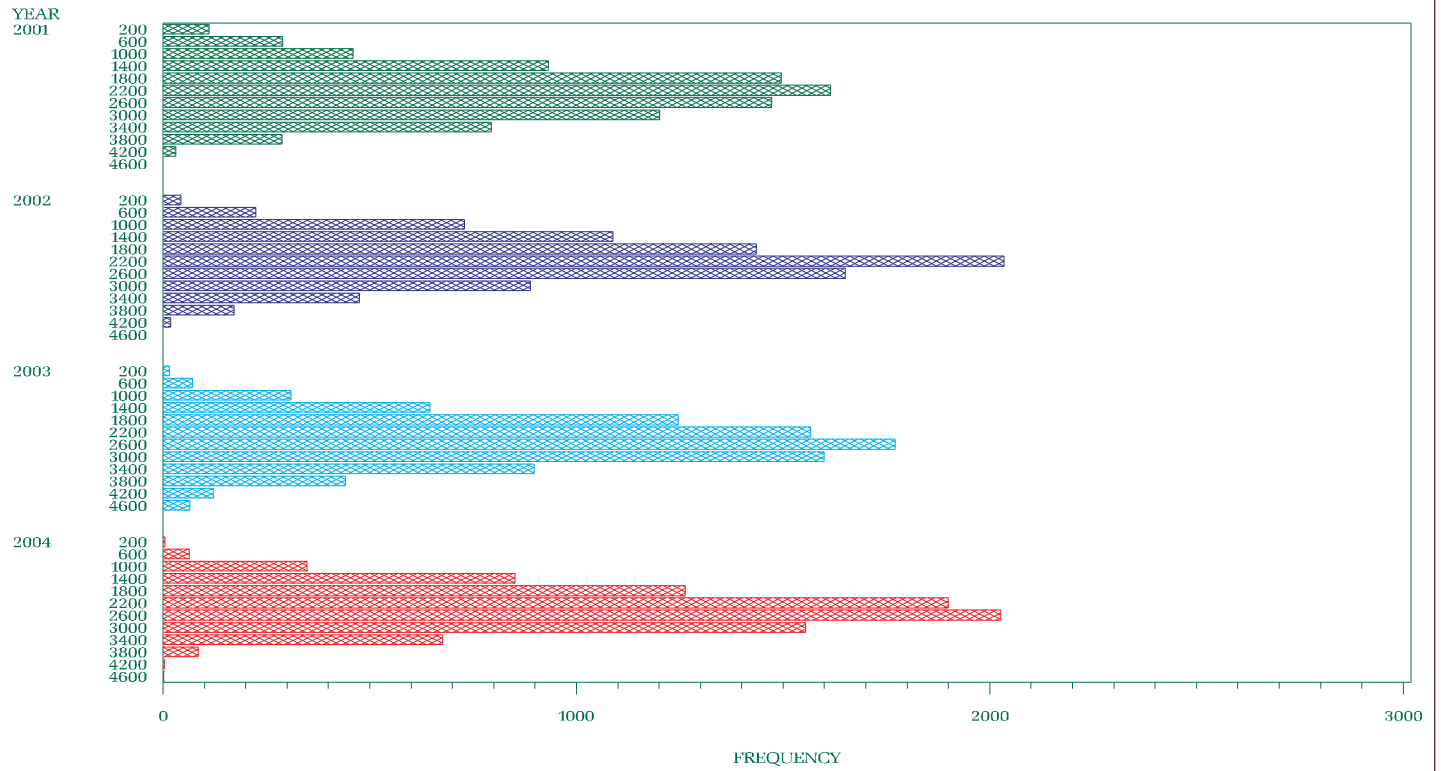
NYISO Frequency Interface Flow For January – December 2004

UPNY – CONED  
Capital/Mid Hudson – Westchester



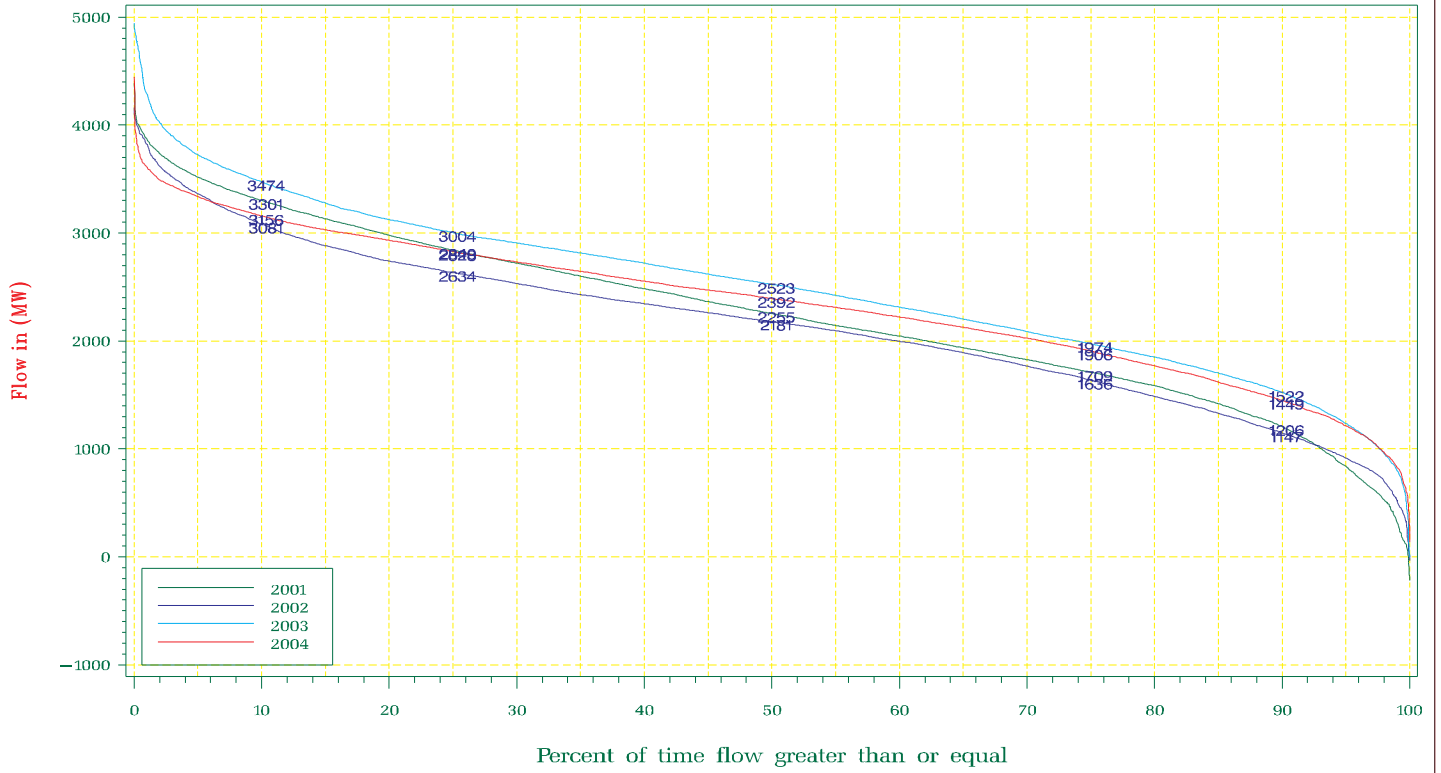
NYISO Frequency Interface Flow For January 2001 – December 2004

UPNY – CONED  
Capital/Mid Hudson – Westchester



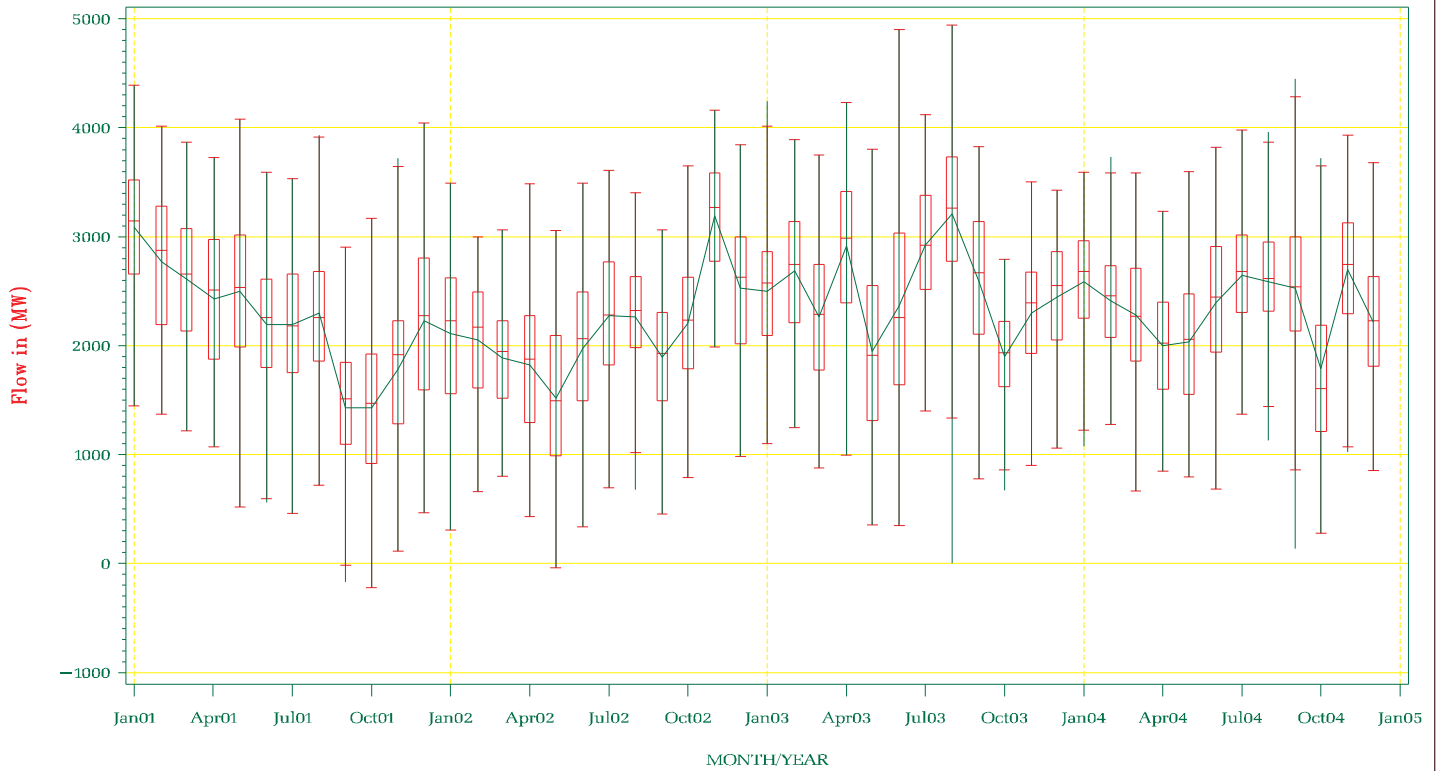
NYISO Percent of time Interface Flow For January 2001 – December 2004

UPNY – CONED  
Capital/Mid Hudson – Westchester



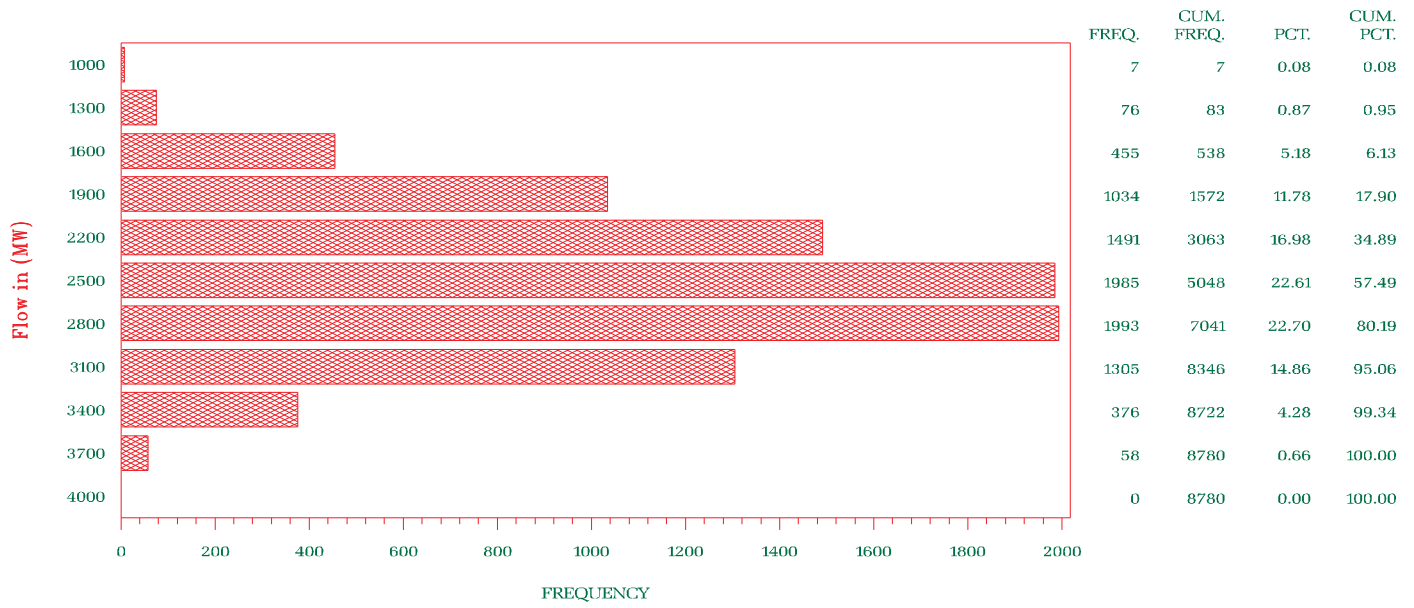
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

UPNY – CONED  
Capital/Mid Hudson – Westchester



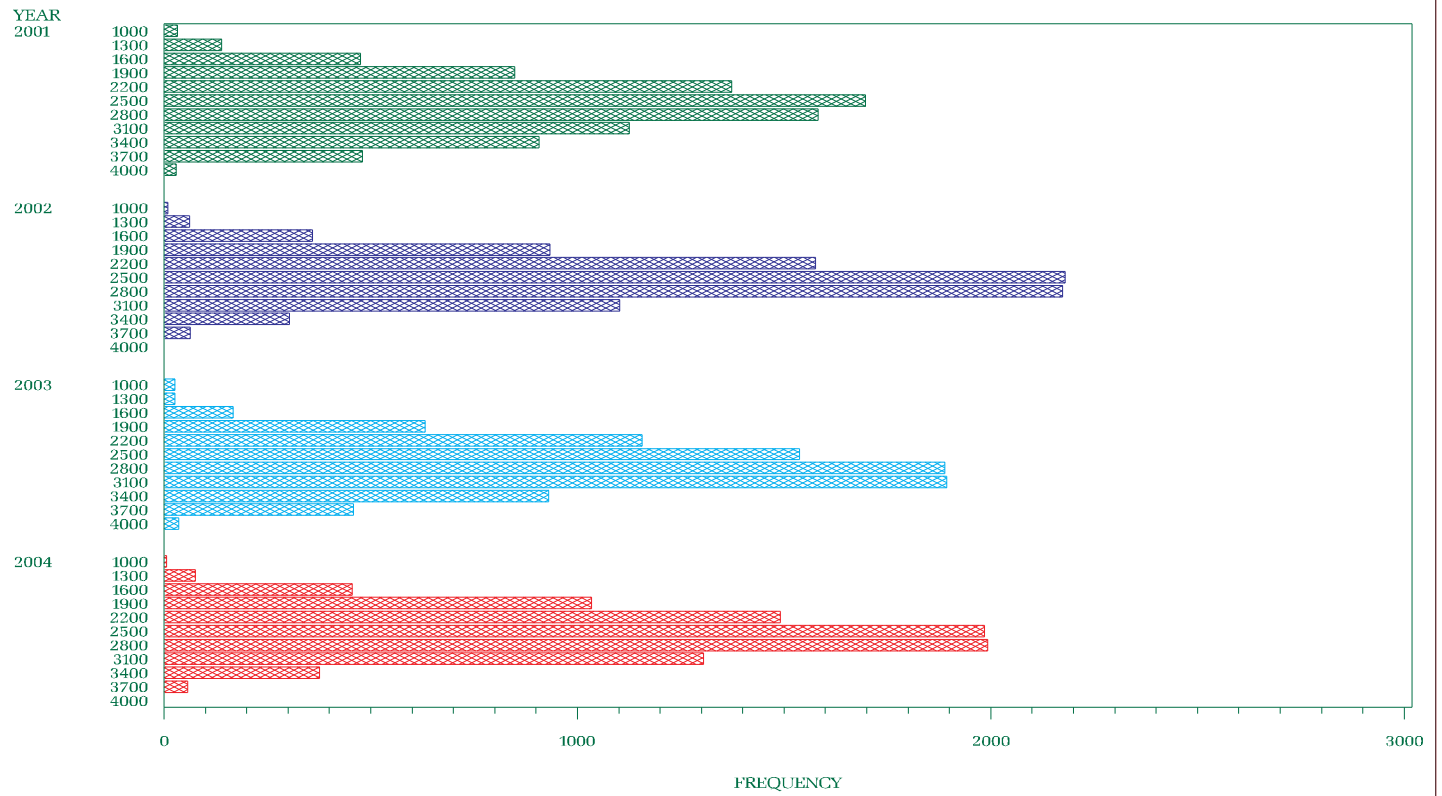
NYISO Frequency Interface Flow For January – December 2004

SPRAINBROOK – DUNWOODIE SOUTH

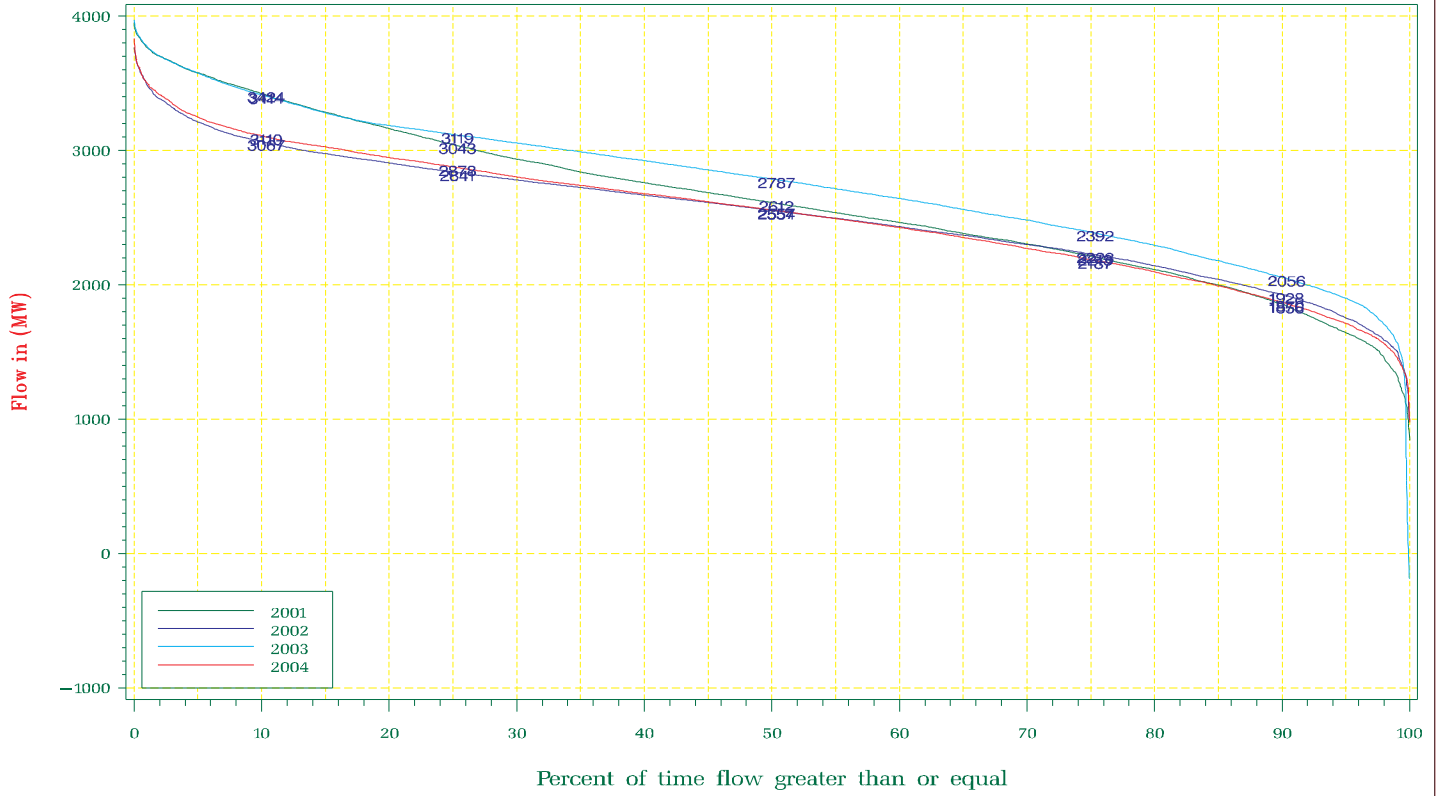


NYISO Frequency Interface Flow For January 2001 – December 2004

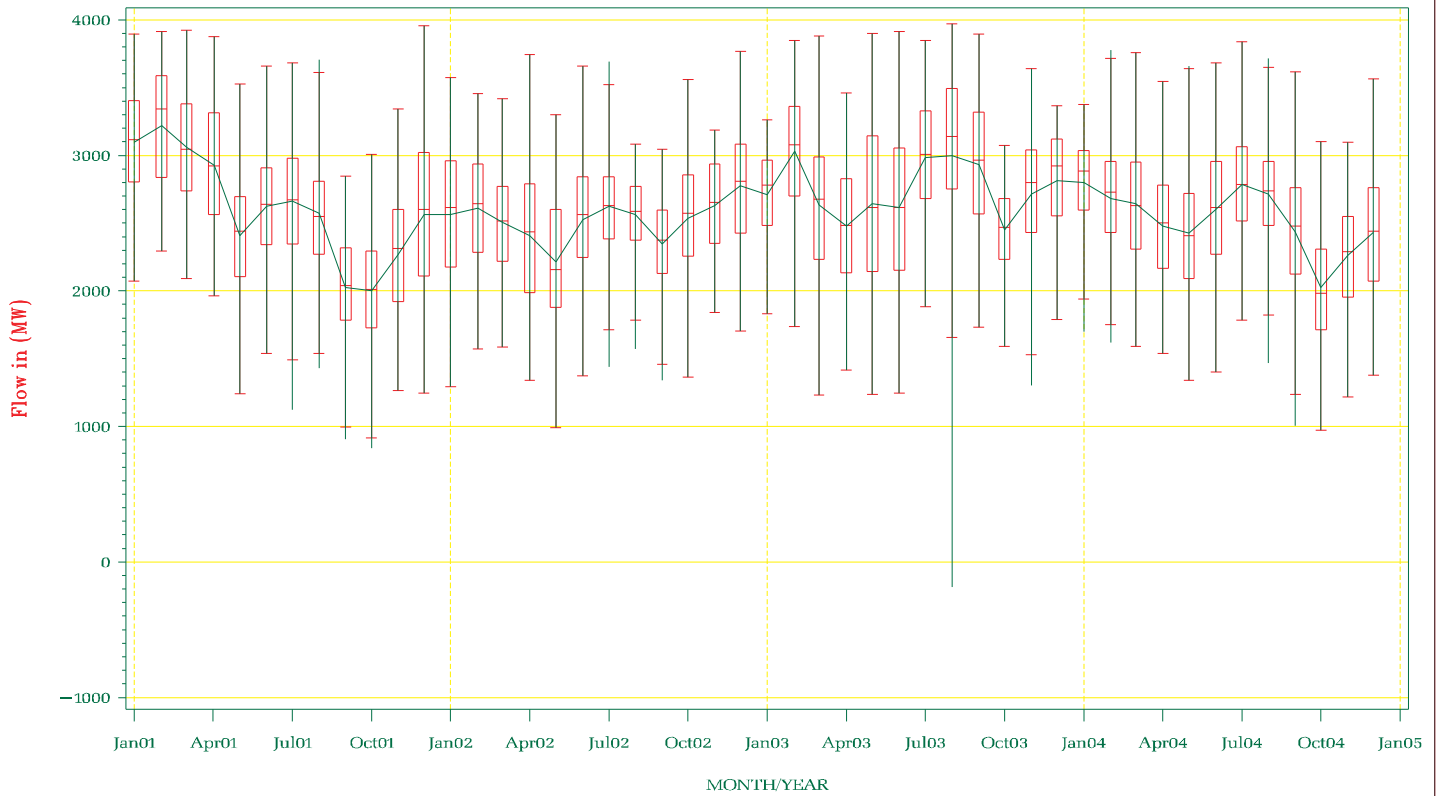
SPRAINBROOK – DUNWOODIE SOUTH



**SPRAINBROOK – DUNWOODIE SOUTH**

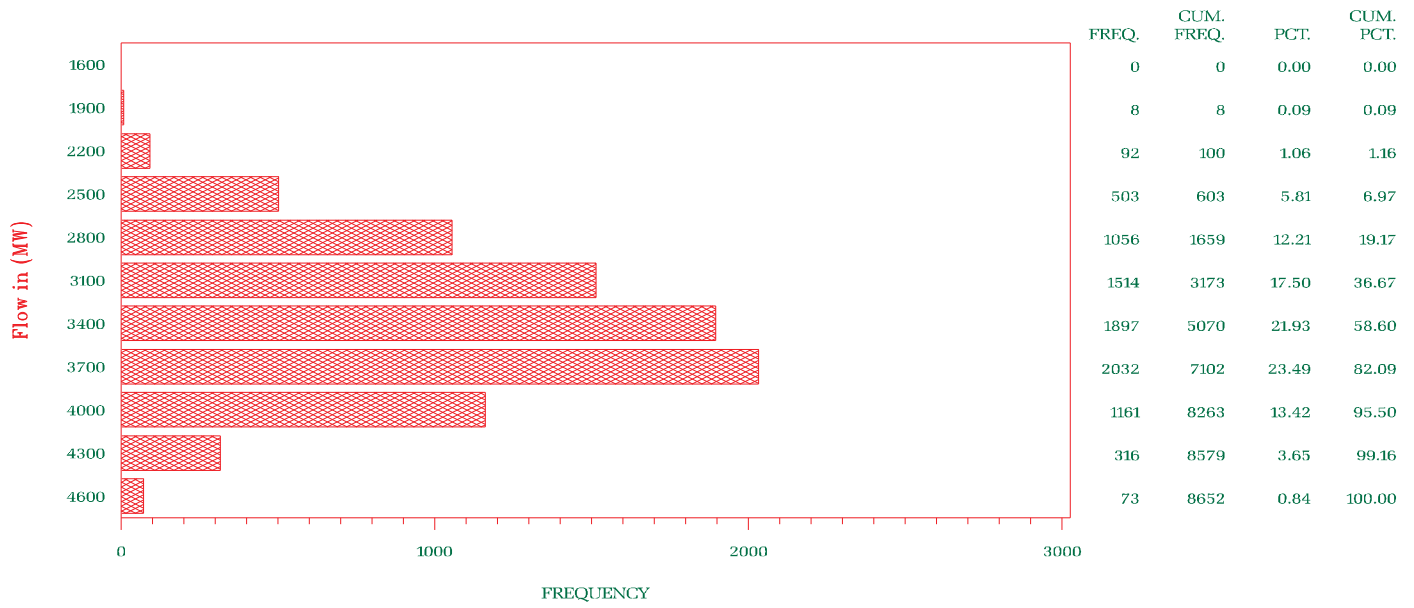


**SPRAINBROOK – DUNWOODIE SOUTH**



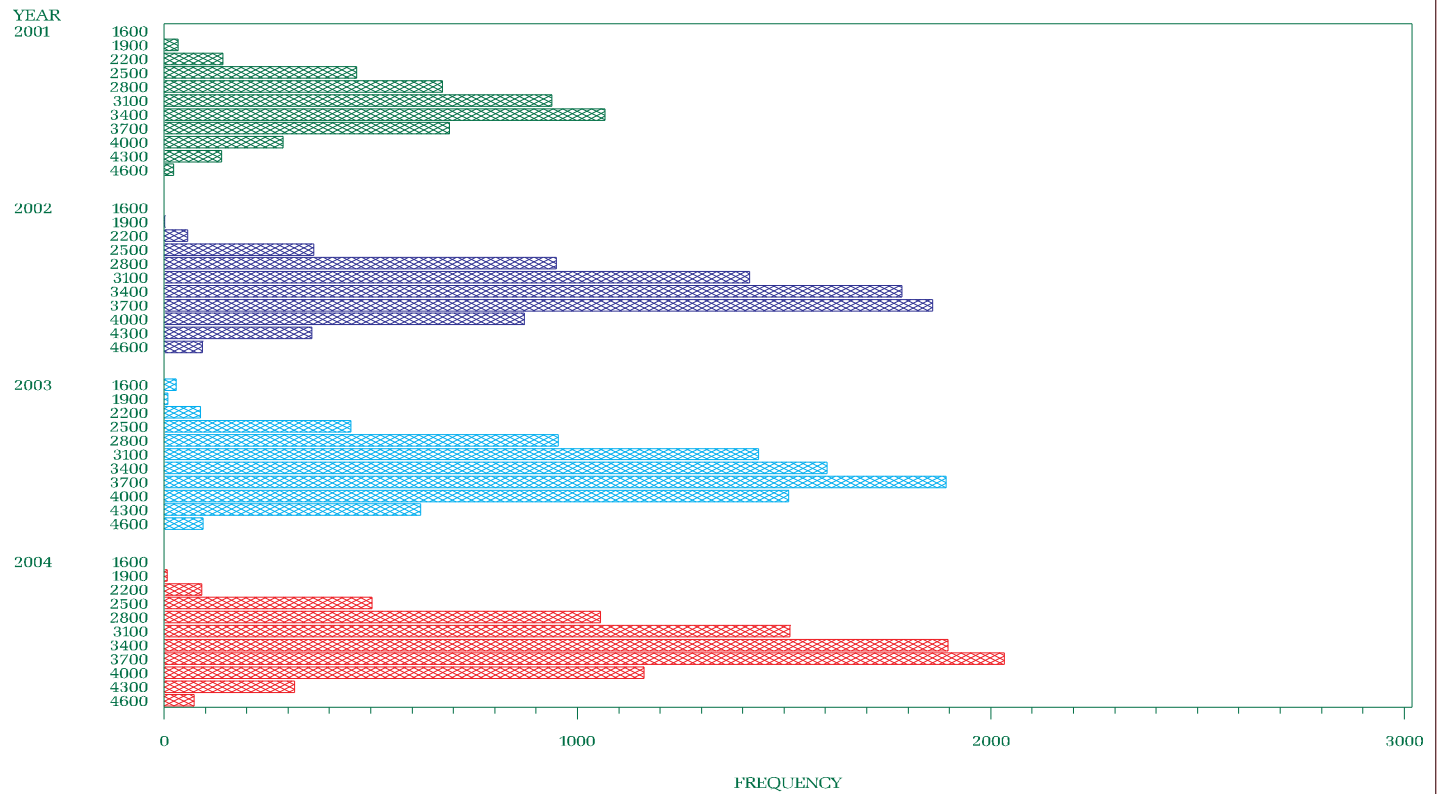
NYISO Frequency Interface Flow For January – December 2004

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



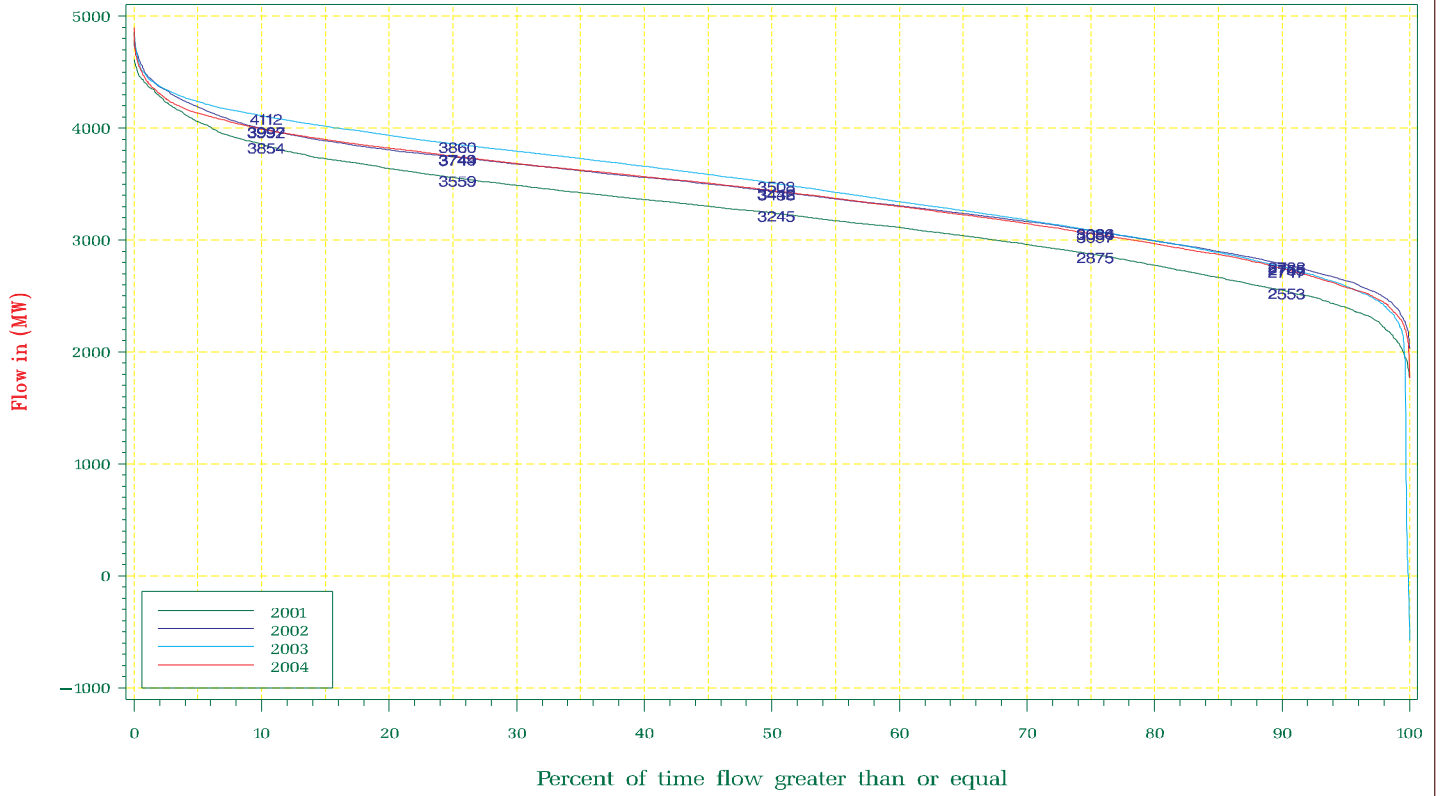
NYISO Frequency Interface Flow For January 2001 – December 2004

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



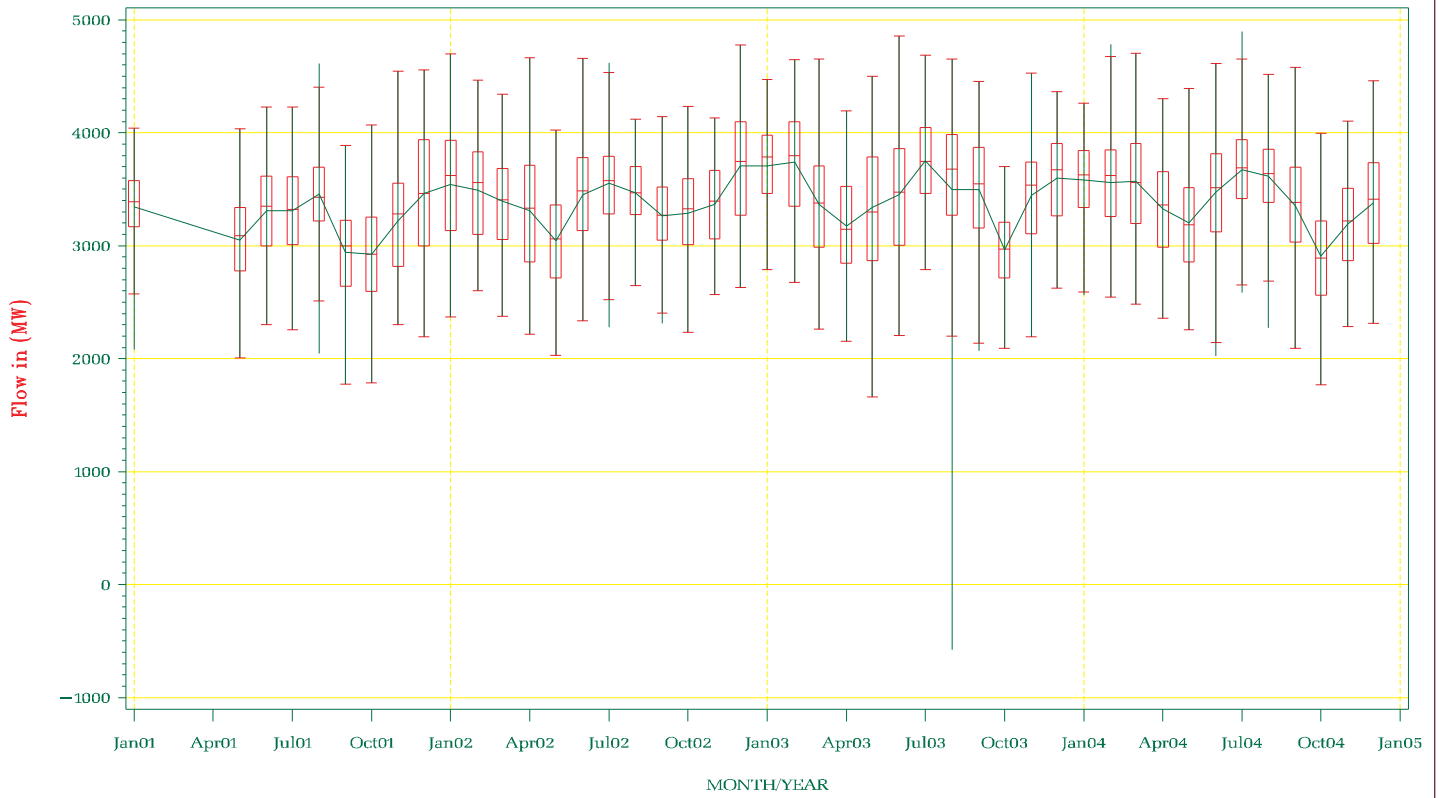
NYISO Percent of time Interface Flow For January 2001 – December 2004

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



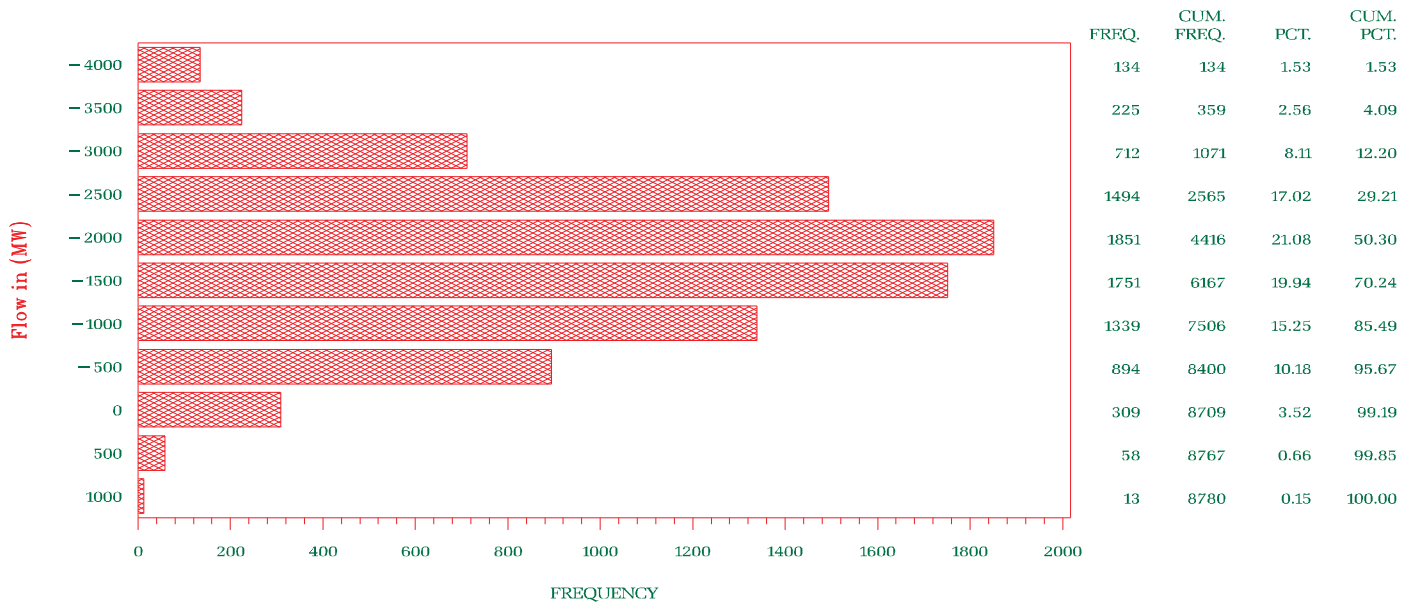
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



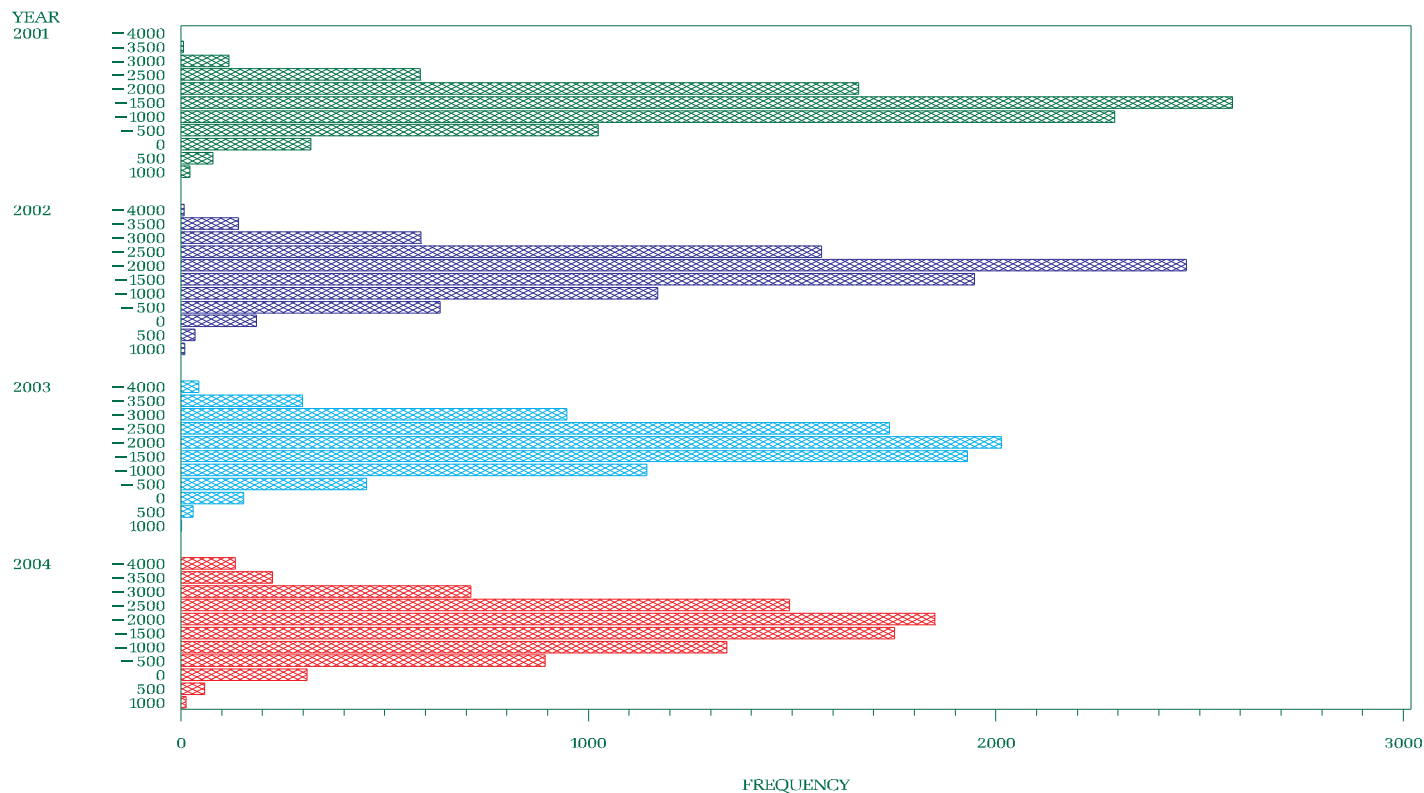
NYISO Frequency Interface Flow For January – December 2004

NY EXPORT

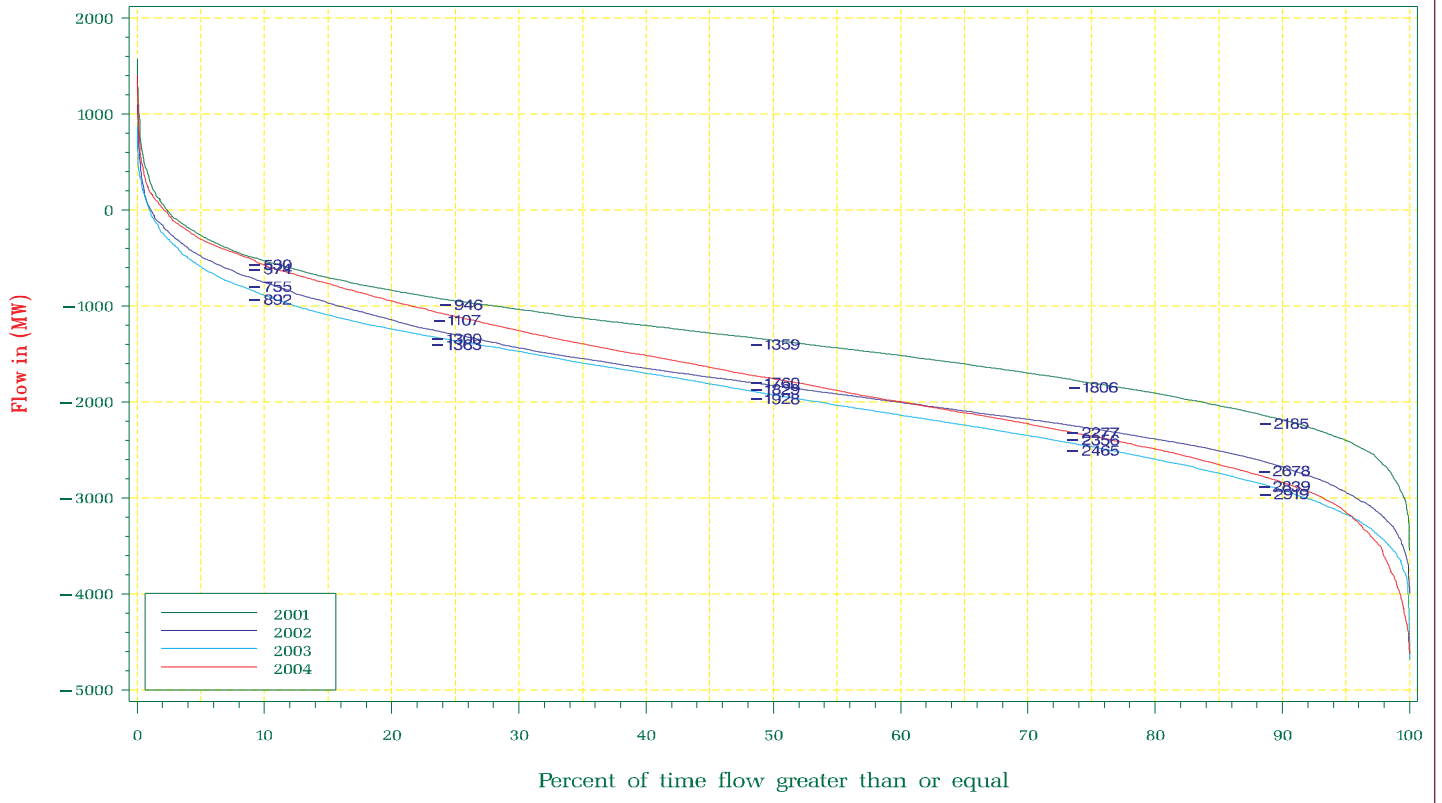


NYISO Frequency Interface Flow For January 2001 – December 2004

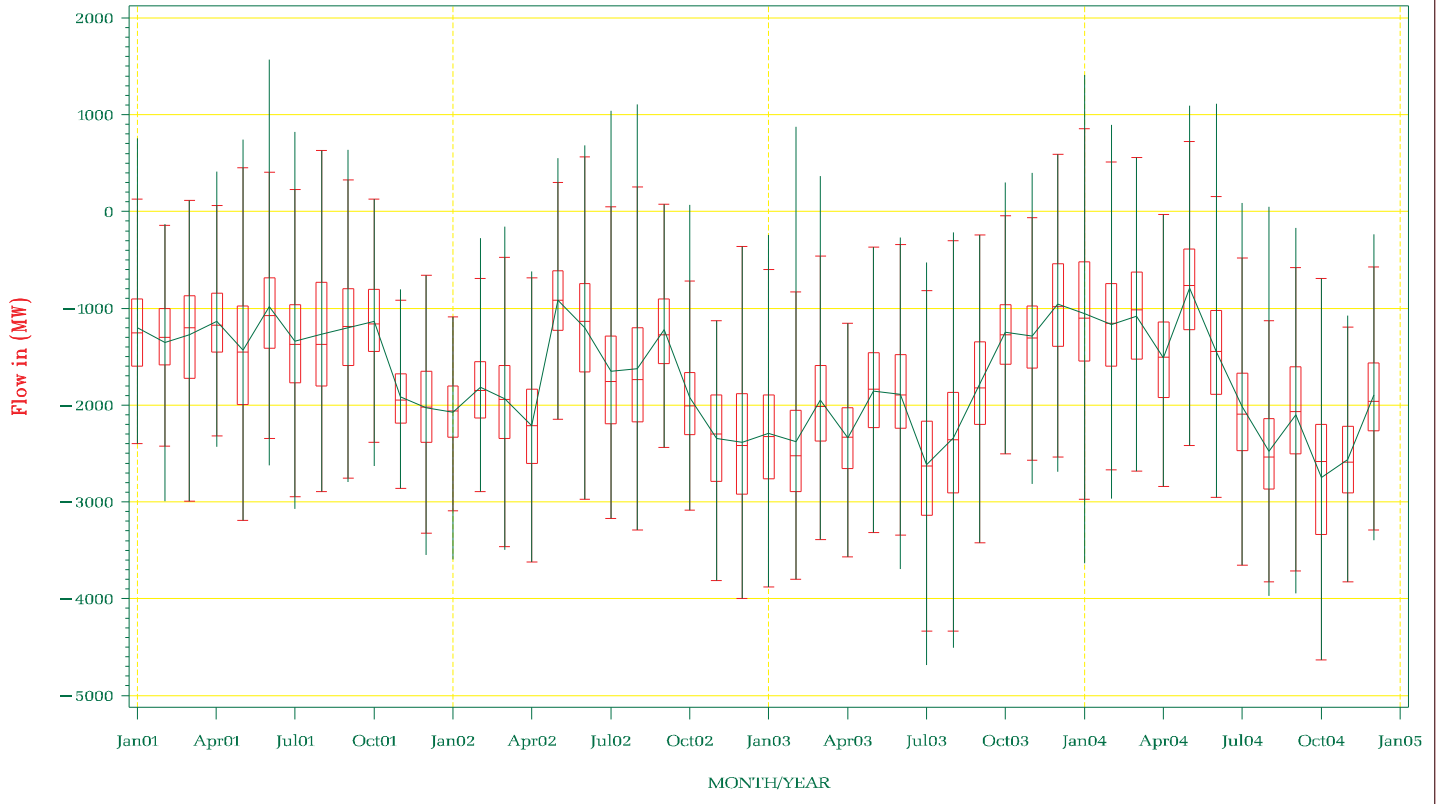
NY EXPORT



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**NY EXPORT**



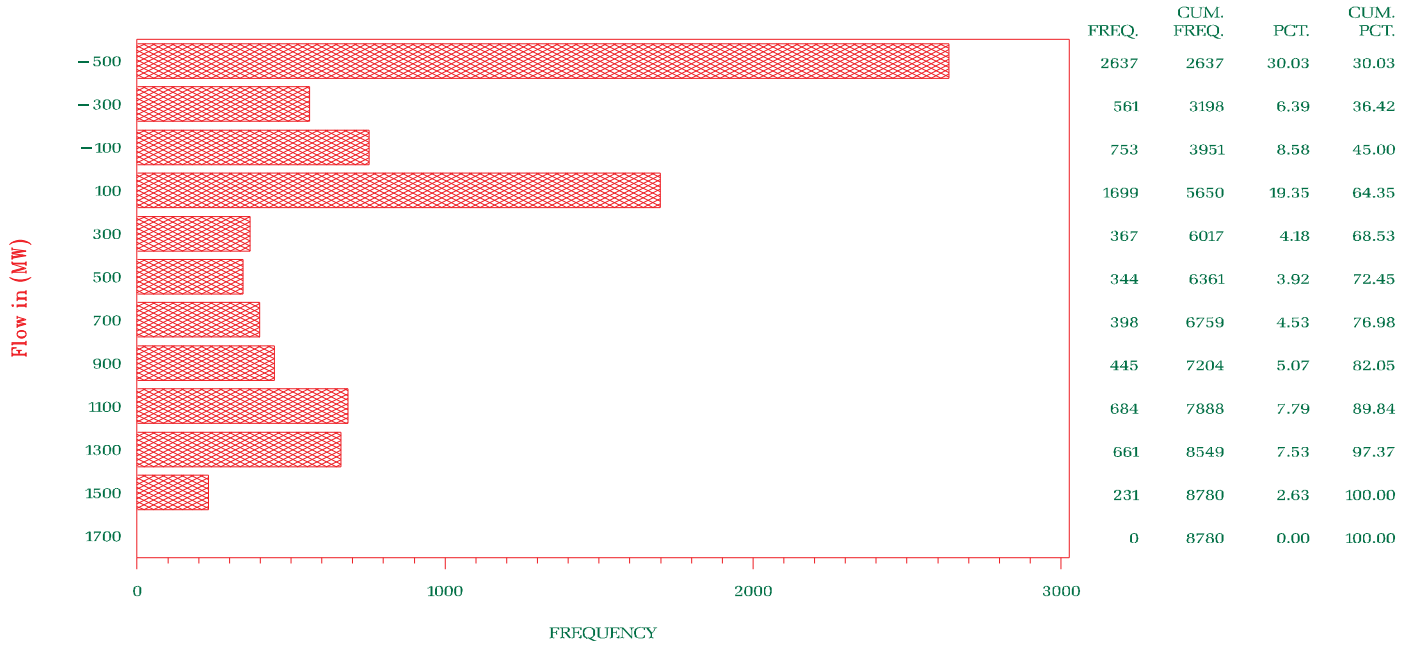
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**NY EXPORT**





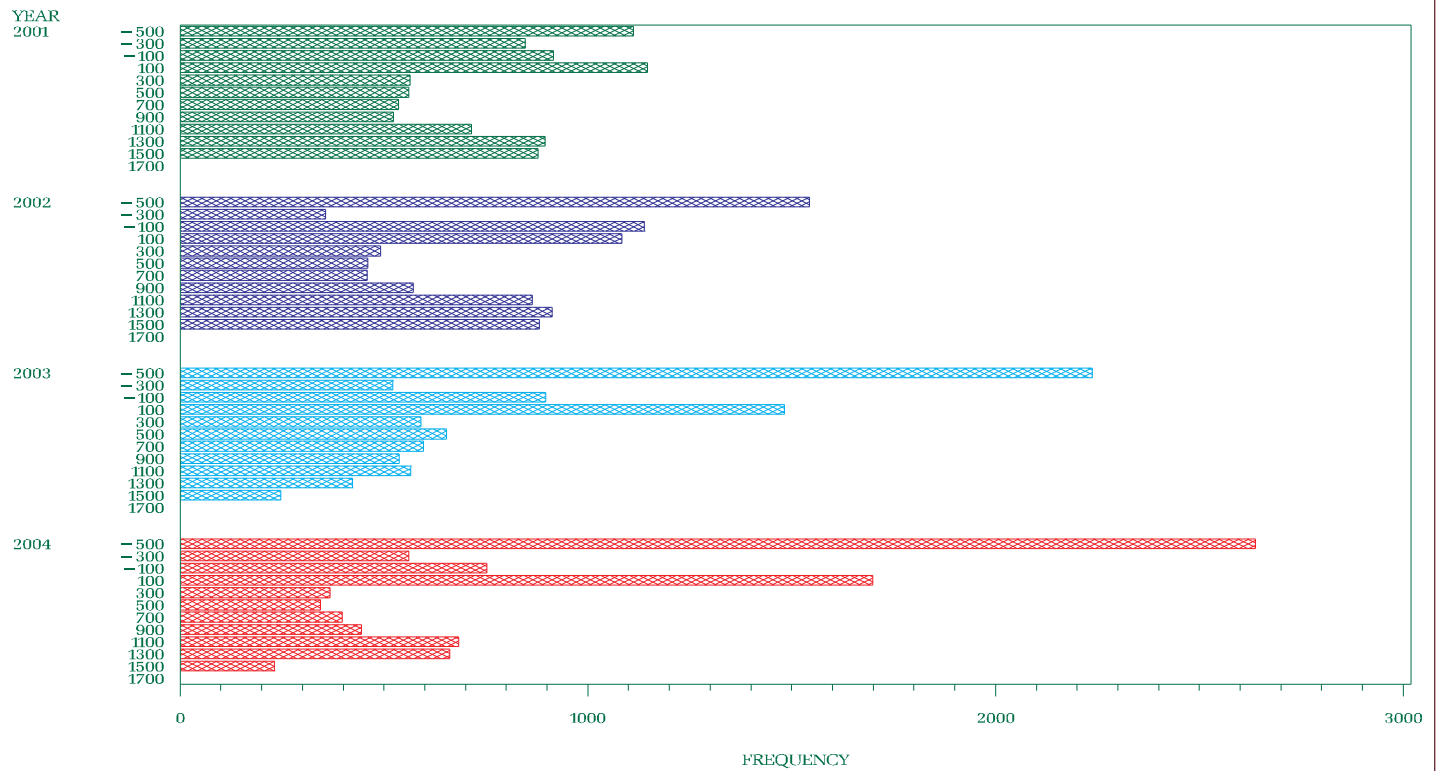
NYISO Frequency Interface Flow For January – December 2004

TE – NY SCHEDULE  
Chateauguay – Massena



NYISO Frequency Interface Flow For January 2001 – December 2004

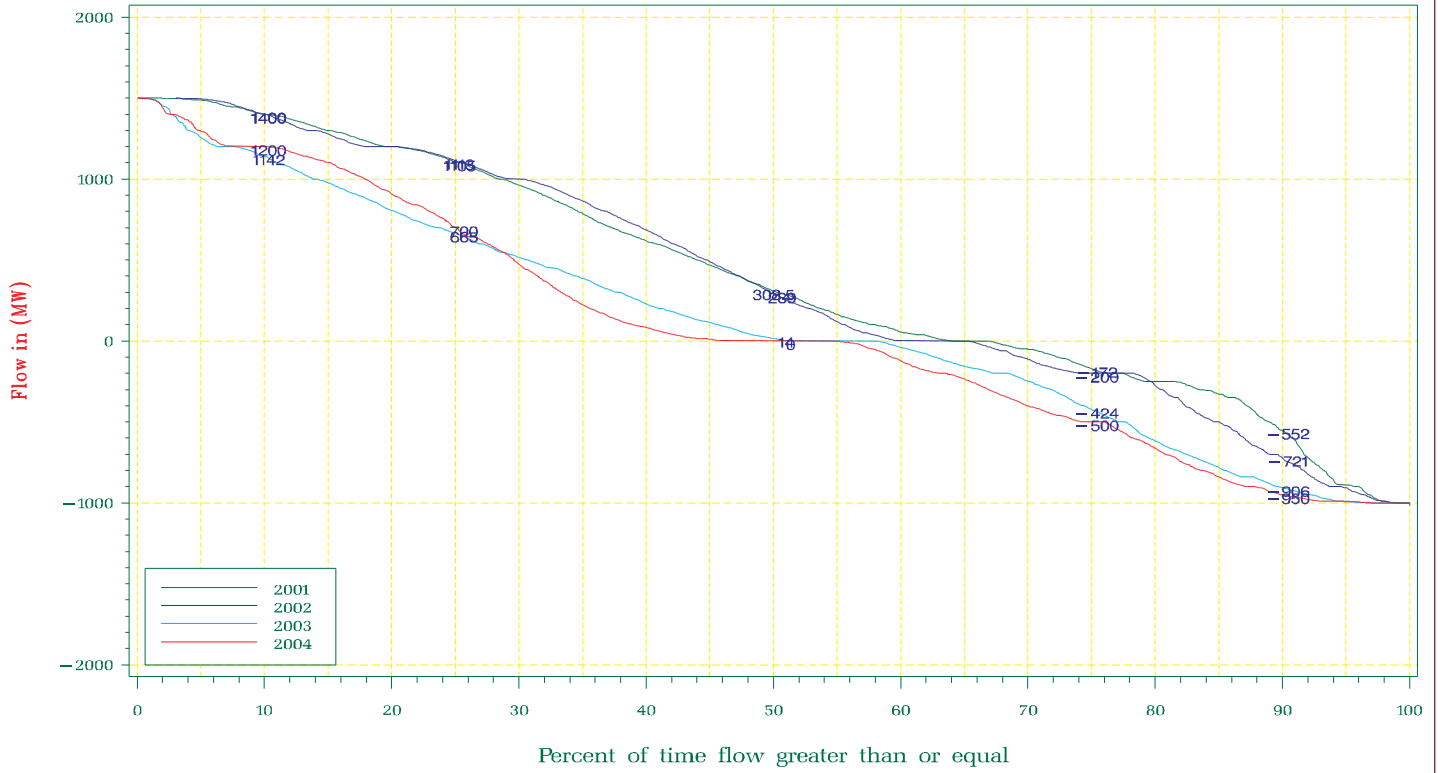
TE – NY SCHEDULE  
Chateauguay – Massena



NYISO Percent of time Interface Flow For January 2001 – December 2004

TE – NY SCHEDULE

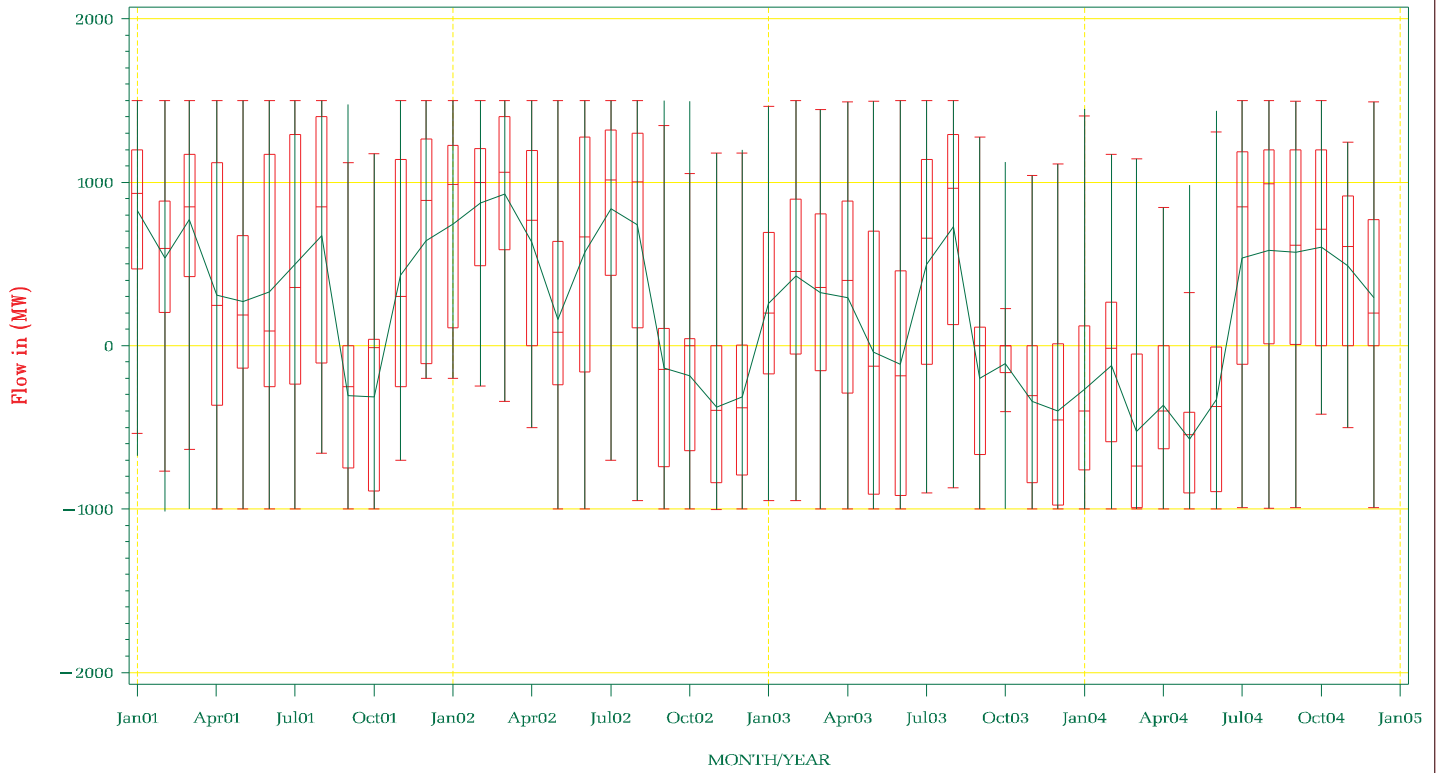
Chateaugay – Massena



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

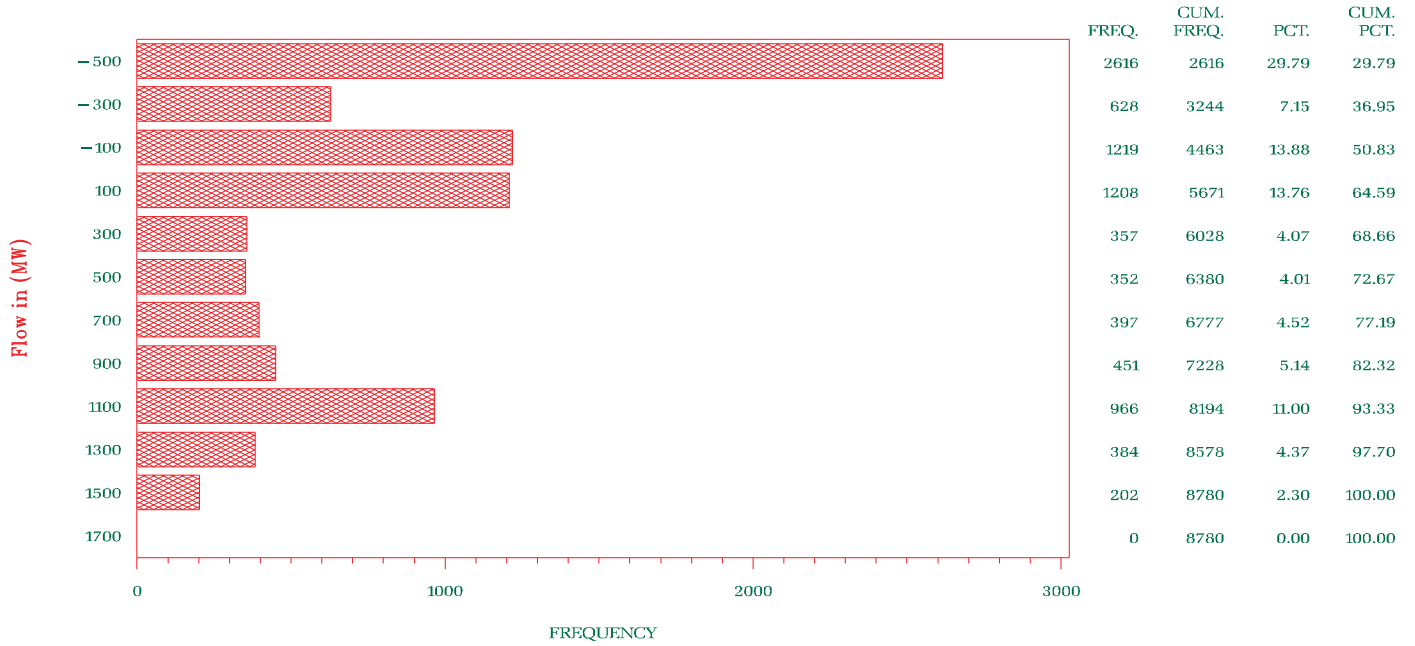
TE – NY SCHEDULE

Chateaugay – Massena



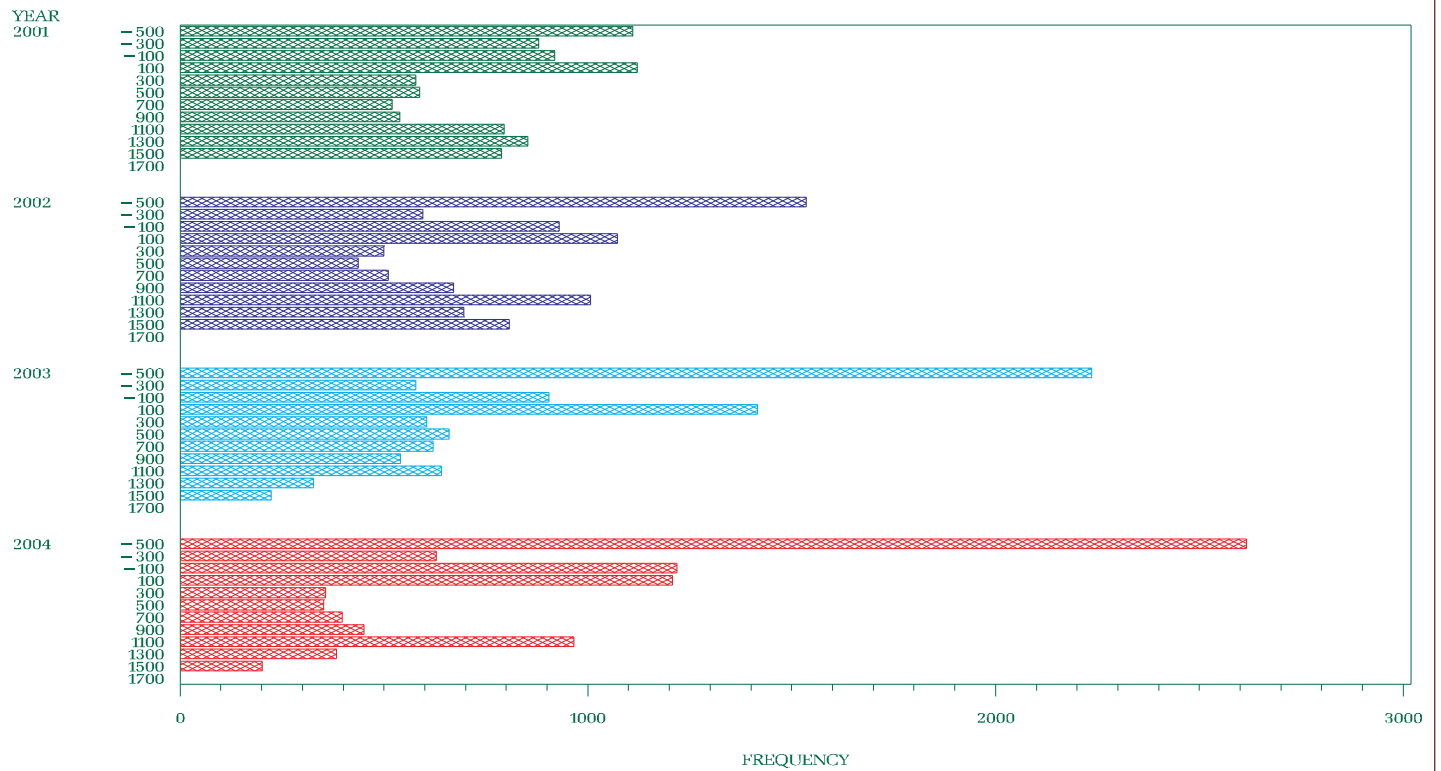
NYISO Frequency Interface Flow For January – December 2004

TE – NY  
Chateauguay – Massena



NYISO Frequency Interface Flow For January 2001 – December 2004

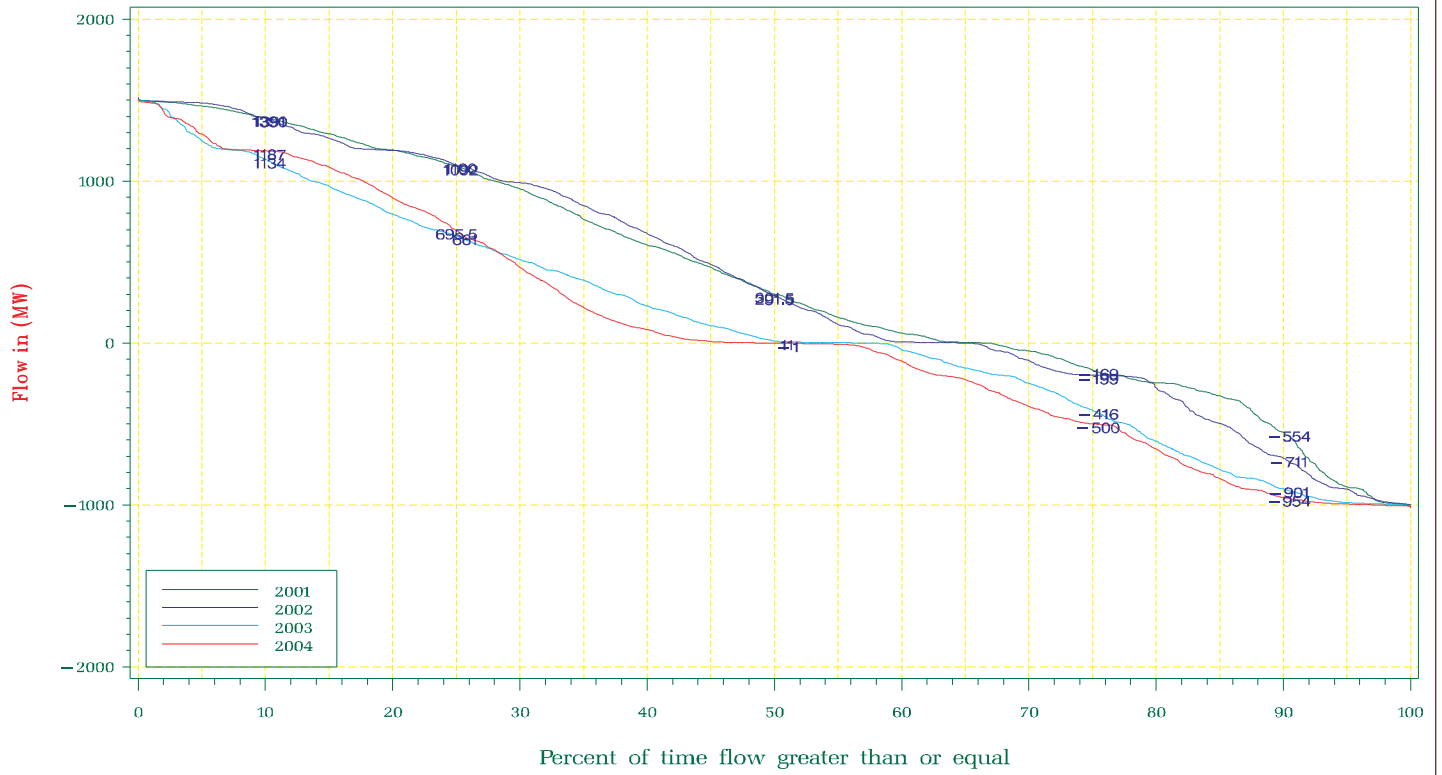
TE – NY  
Chateauguay – Massena



NYISO Percent of time Interface Flow For January 2001 – December 2004

TE – NY

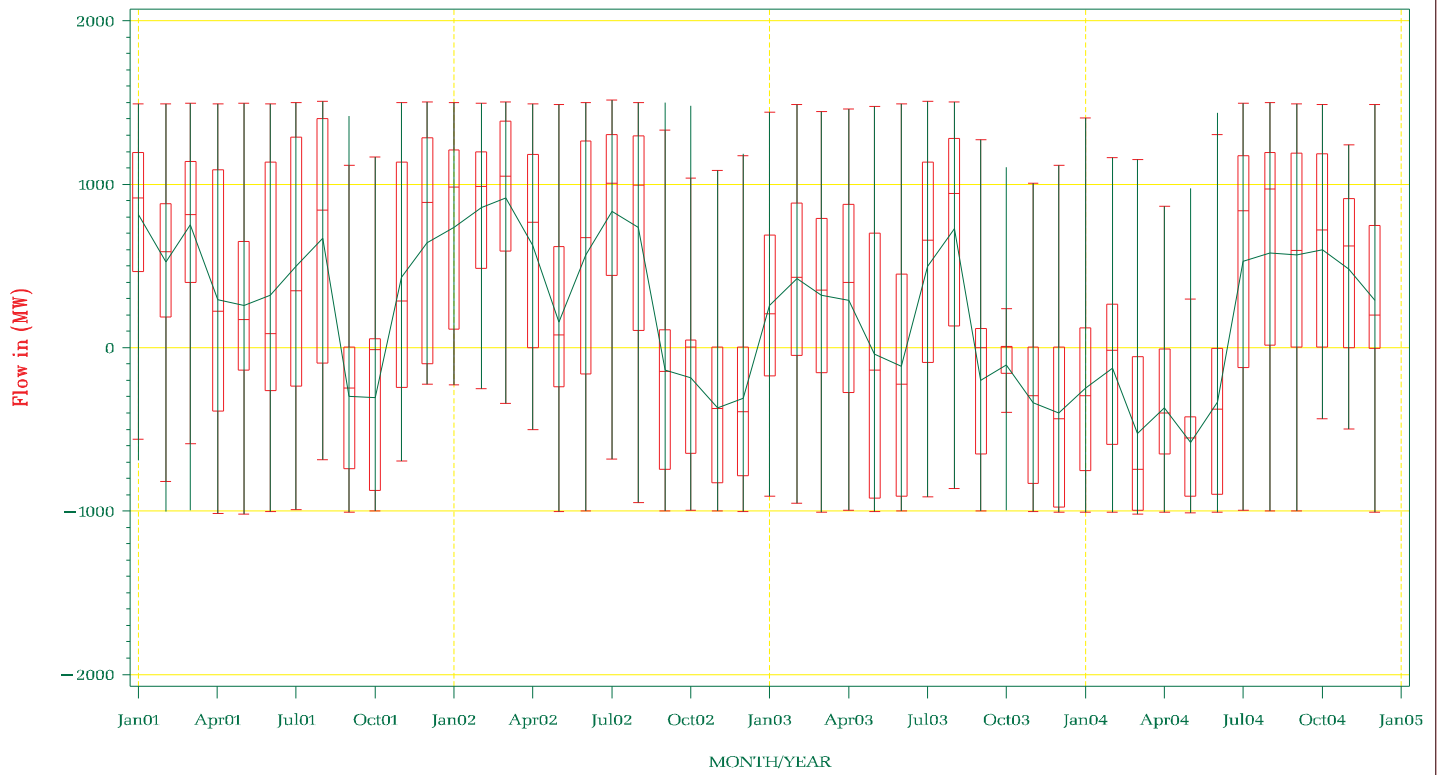
Chateauguy – Massena



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

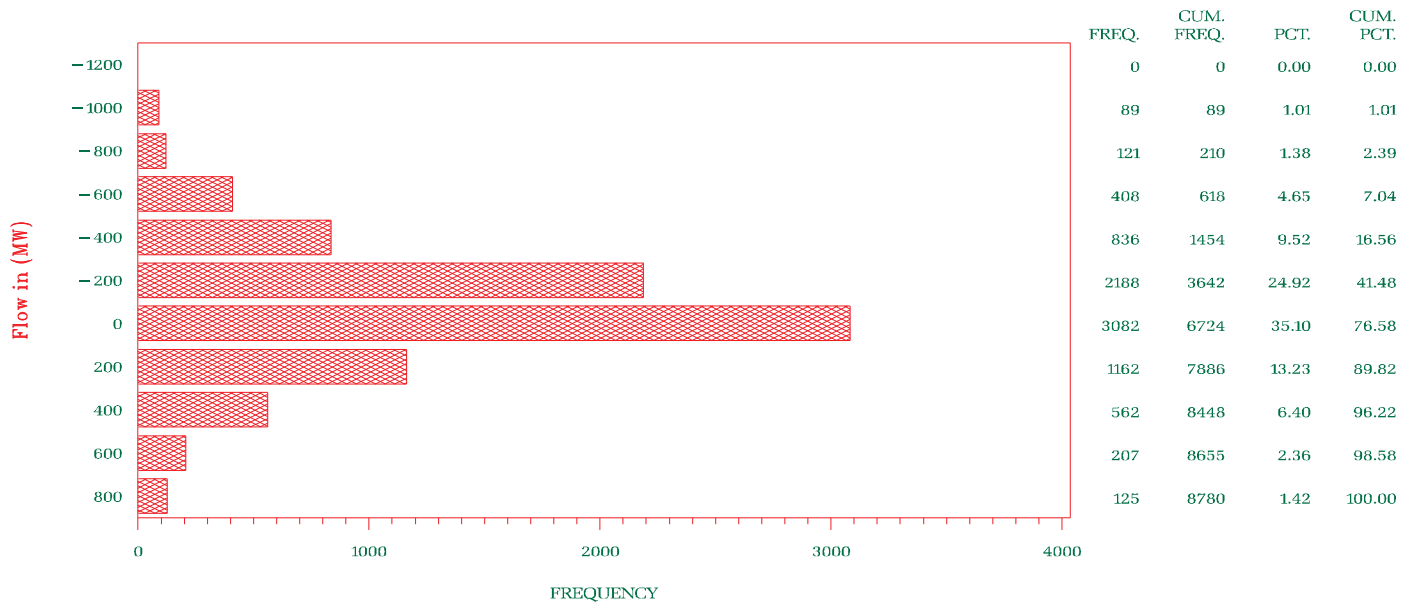
TE – NY

Chateauguy – Massena



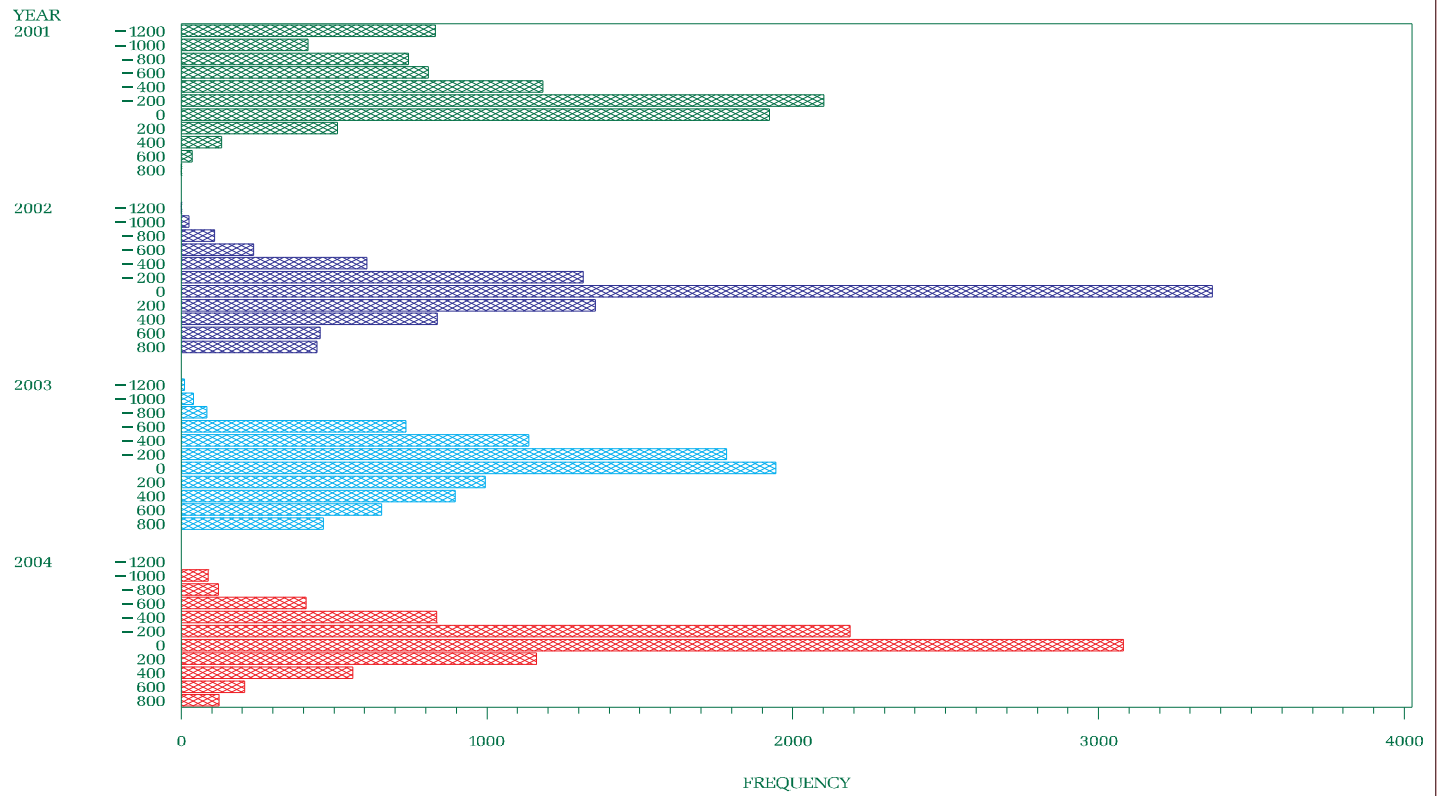
NYISO Frequency Interface Flow For January – December 2004

New England – NY SCHEDULE



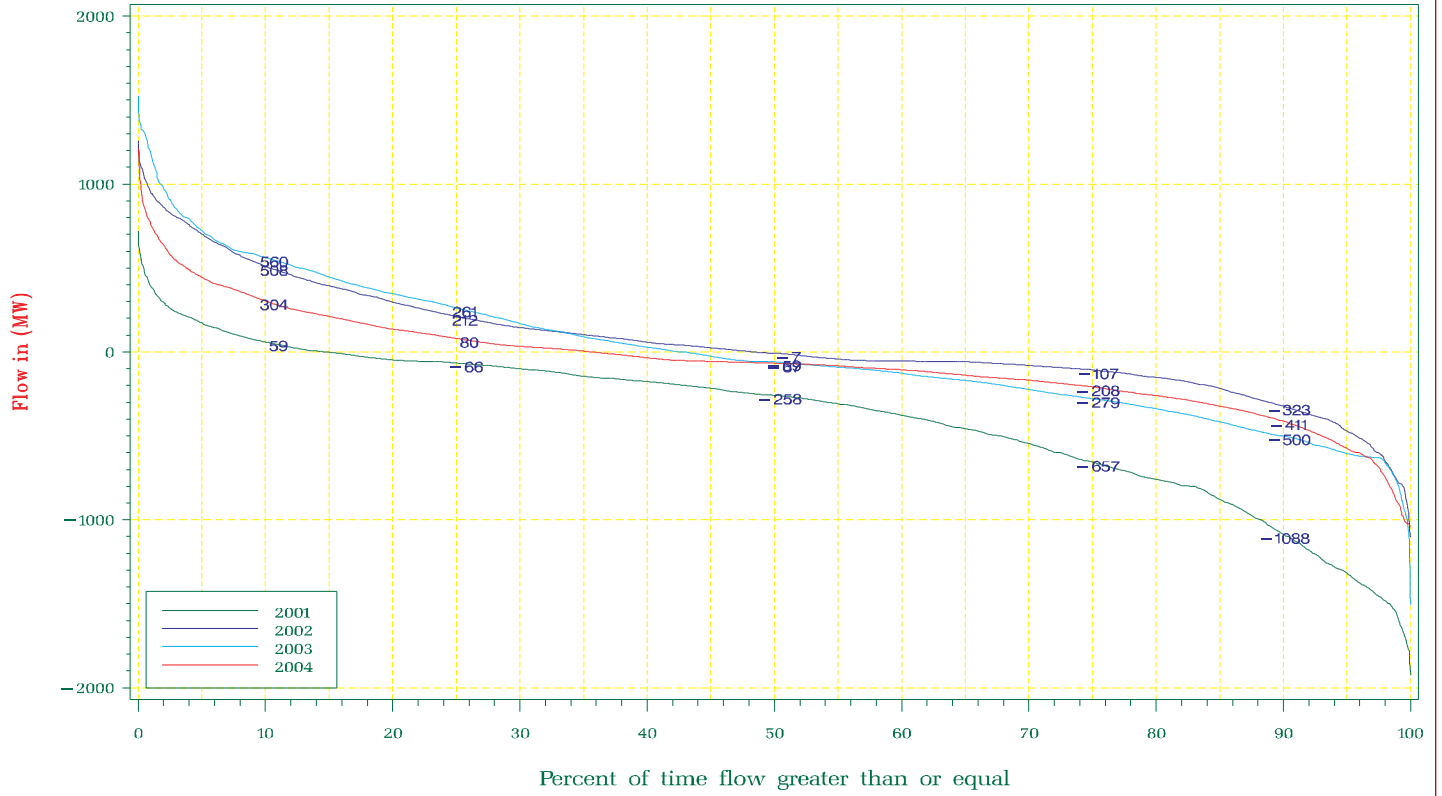
NYISO Frequency Interface Flow For January 2001 – December 2004

New England – NY SCHEDULE



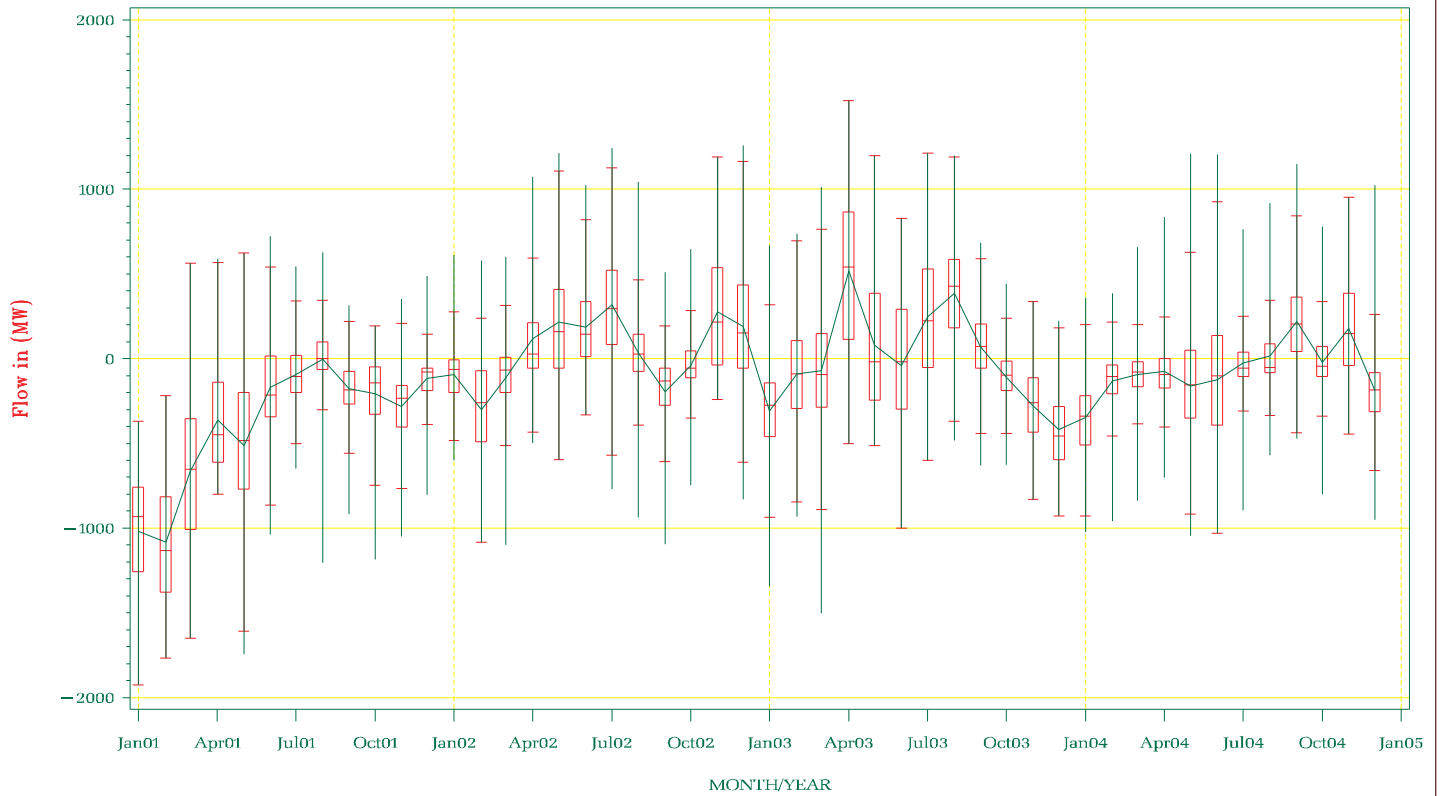
NYISO Percent of time Interface Flow For January 2001 – December 2004

New England – NY SCHEDULE



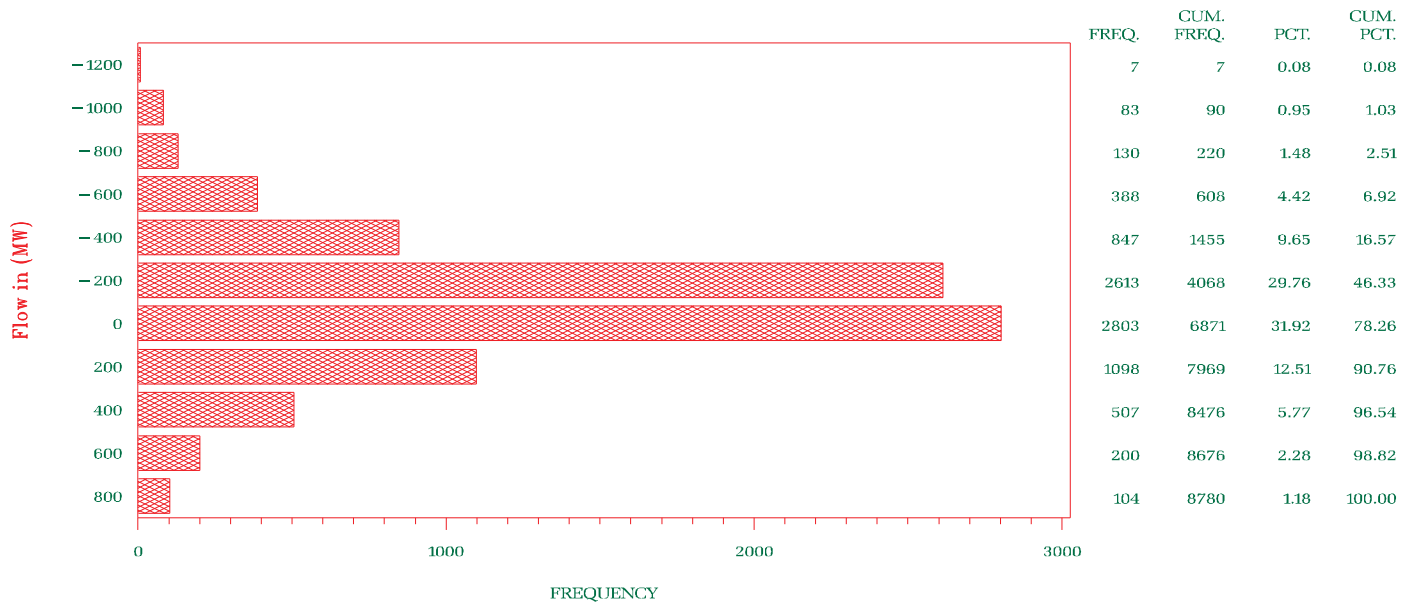
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

New England – NY SCHEDULE



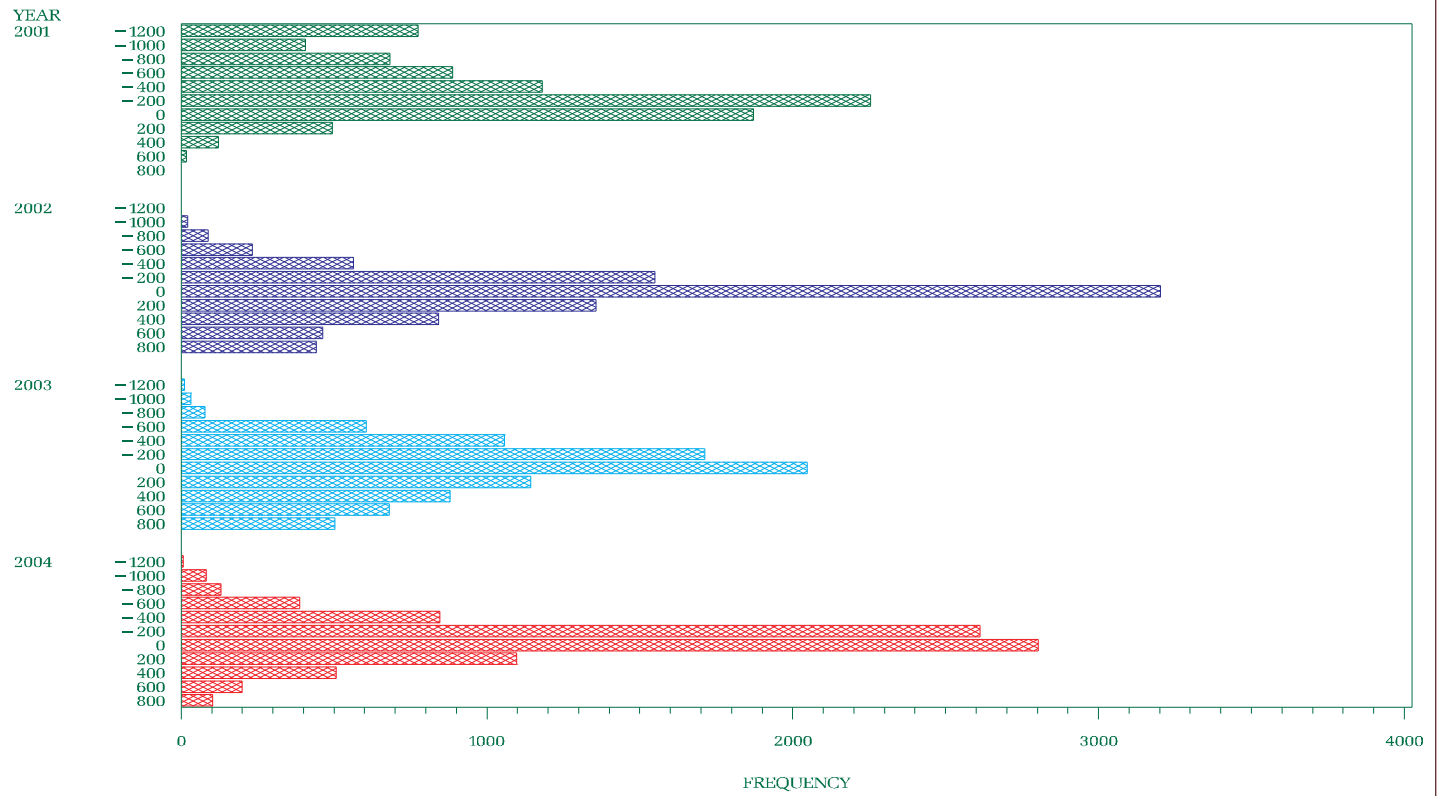
NYISO Frequency Interface Flow For January – December 2004

New England – NY

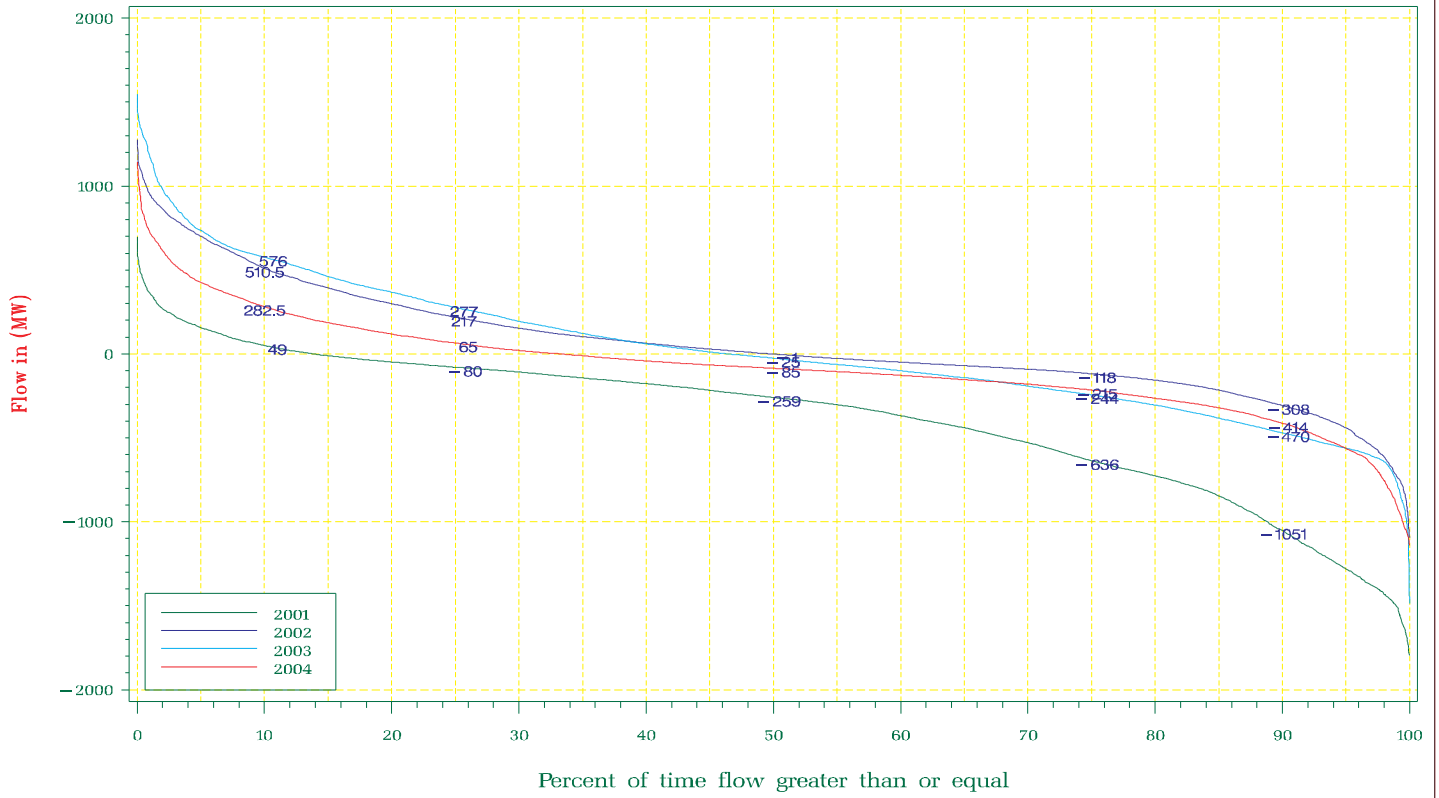


NYISO Frequency Interface Flow For January 2001 – December 2004

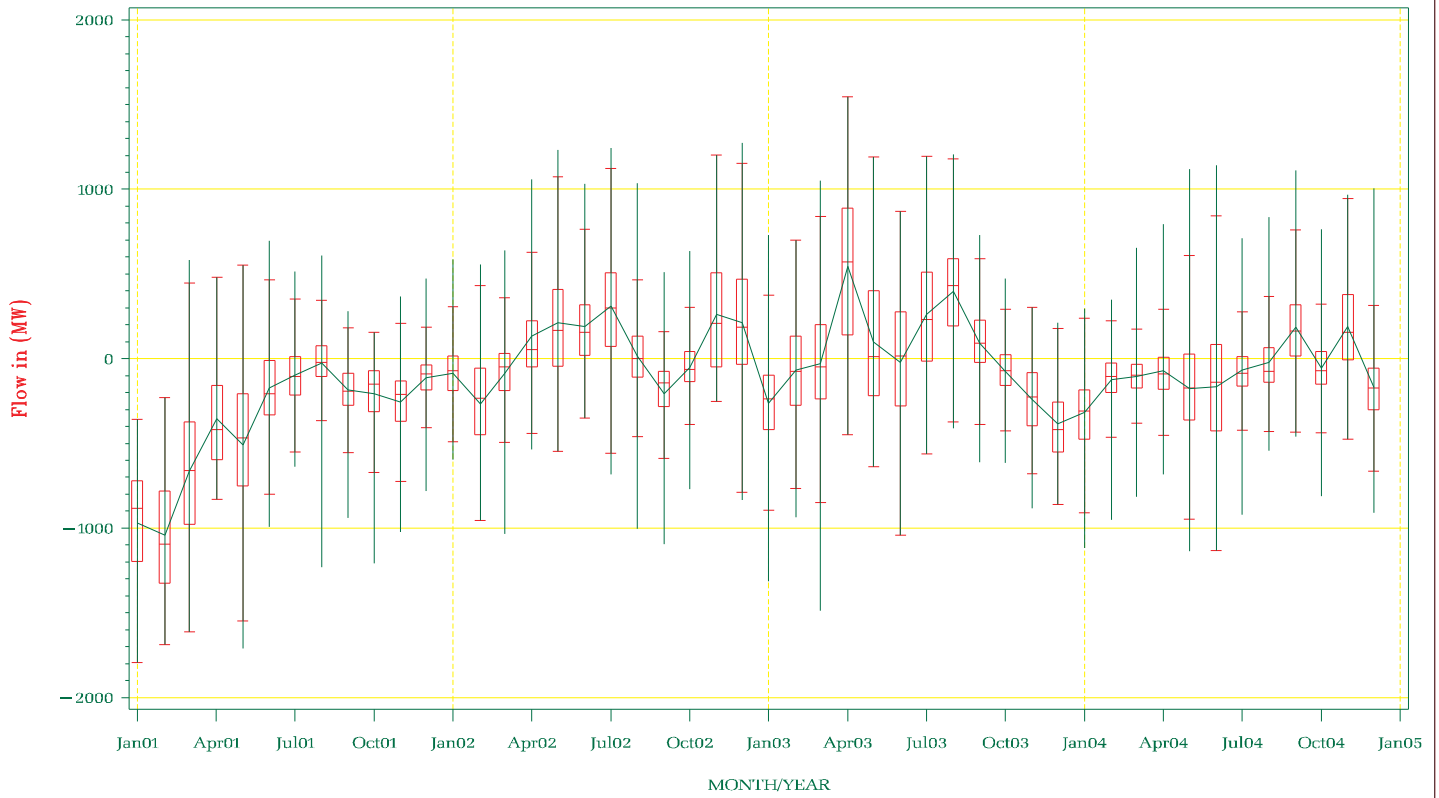
New England – NY



NYISO Percent of time Interface Flow For January 2001 – December 2004  
 New England – NY



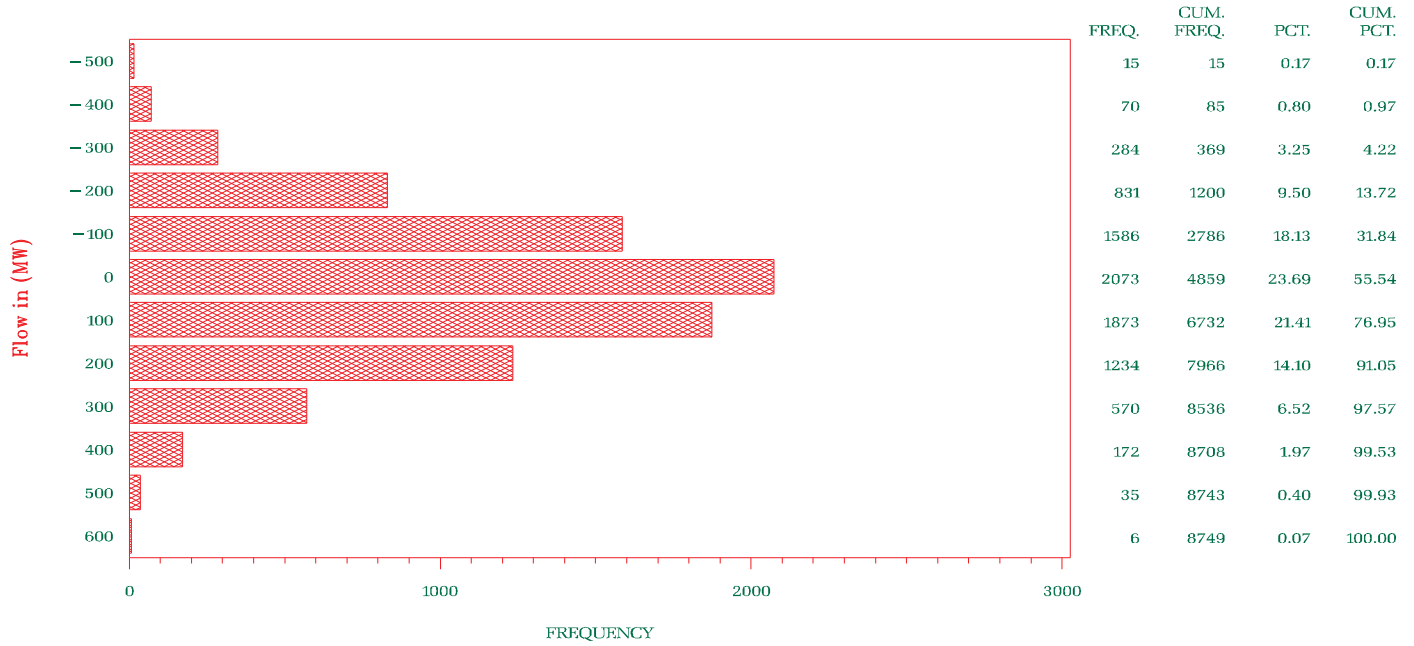
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
 New England – NY





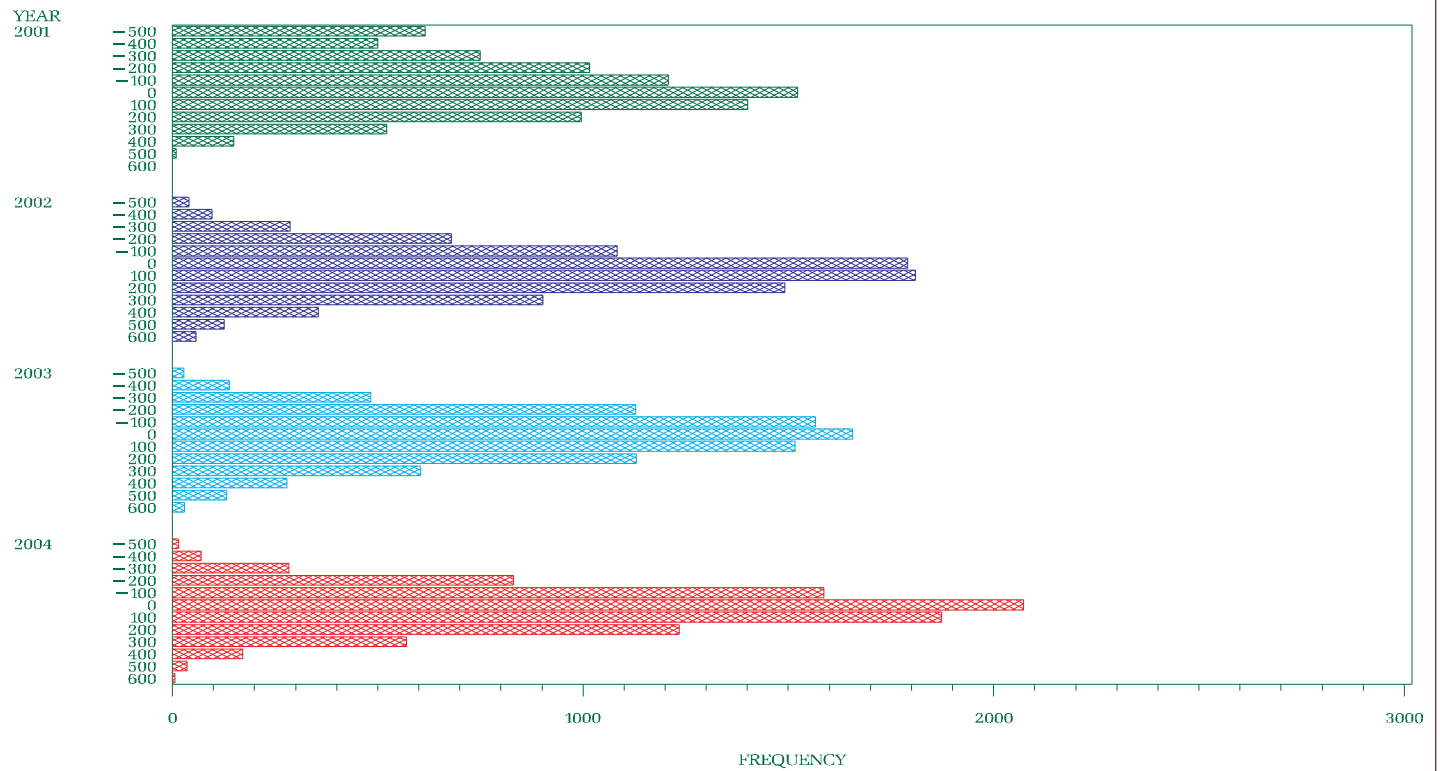
NYISO Frequency Interface Flow For January – December 2004

New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley



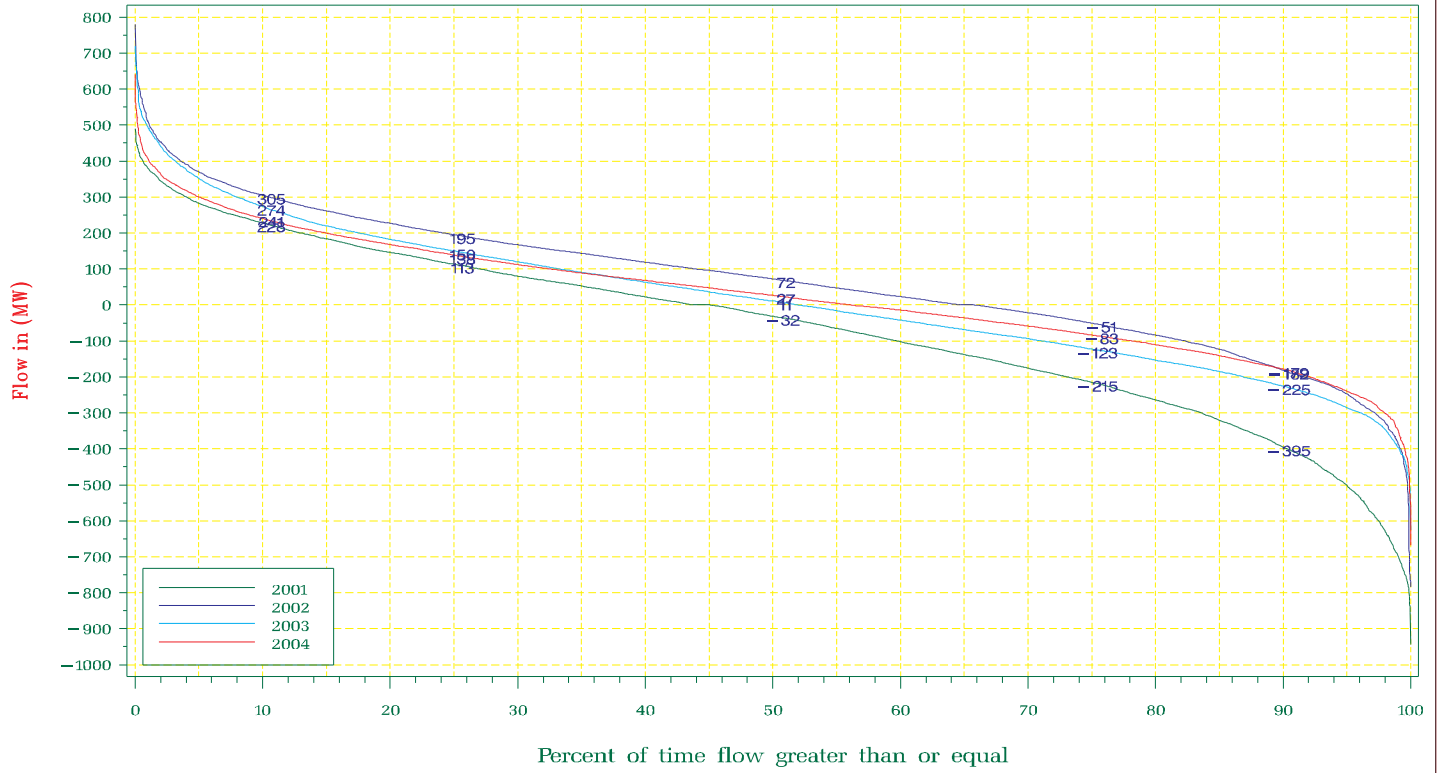
NYISO Frequency Interface Flow For January 2001 – December 2004

New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley



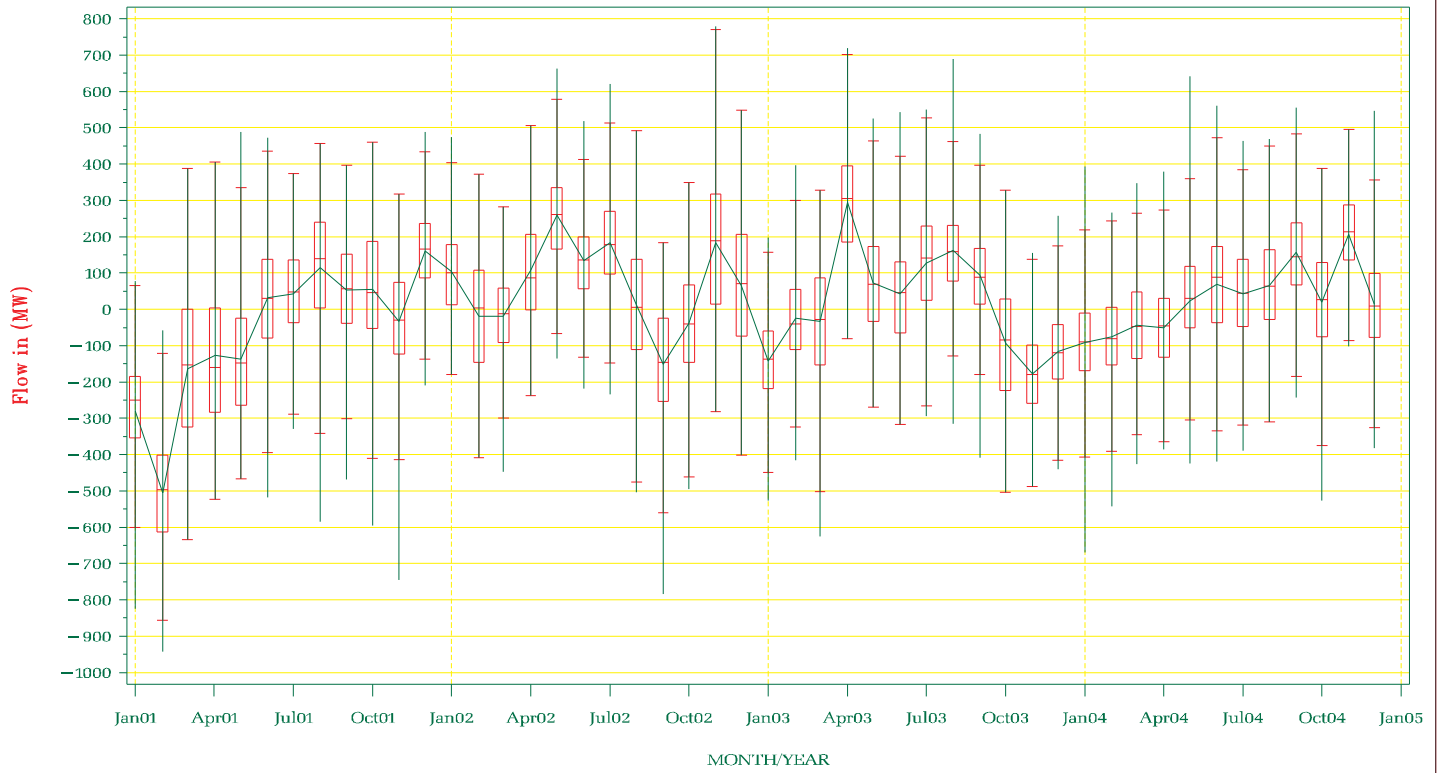
NYISO Percent of time Interface Flow For January 2001 – December 2004

New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley



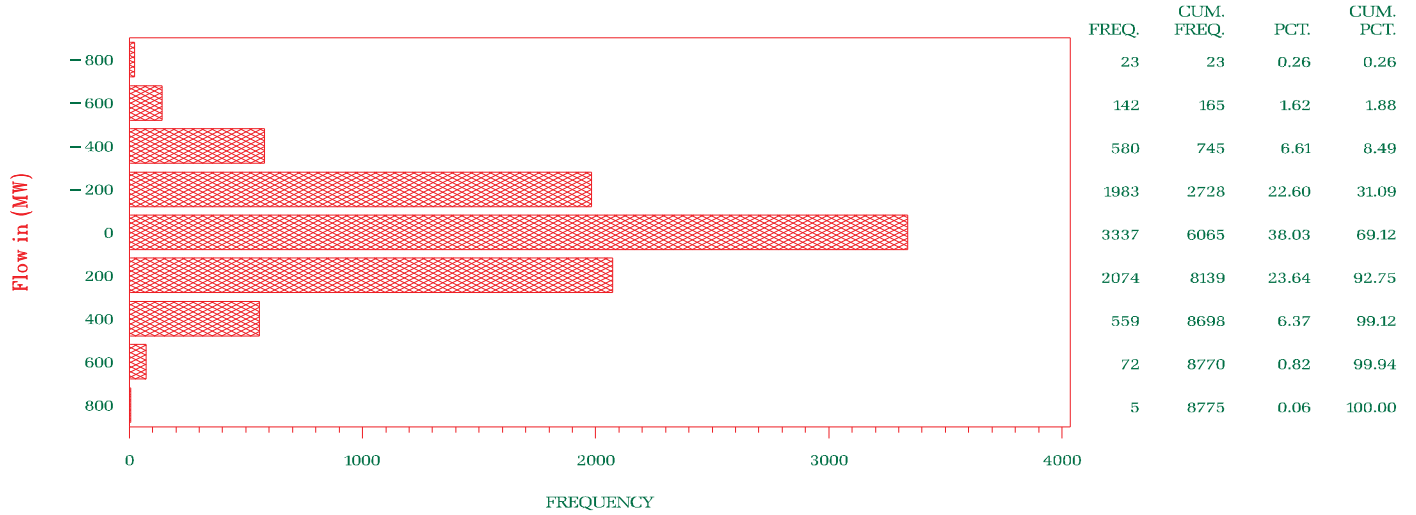
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley



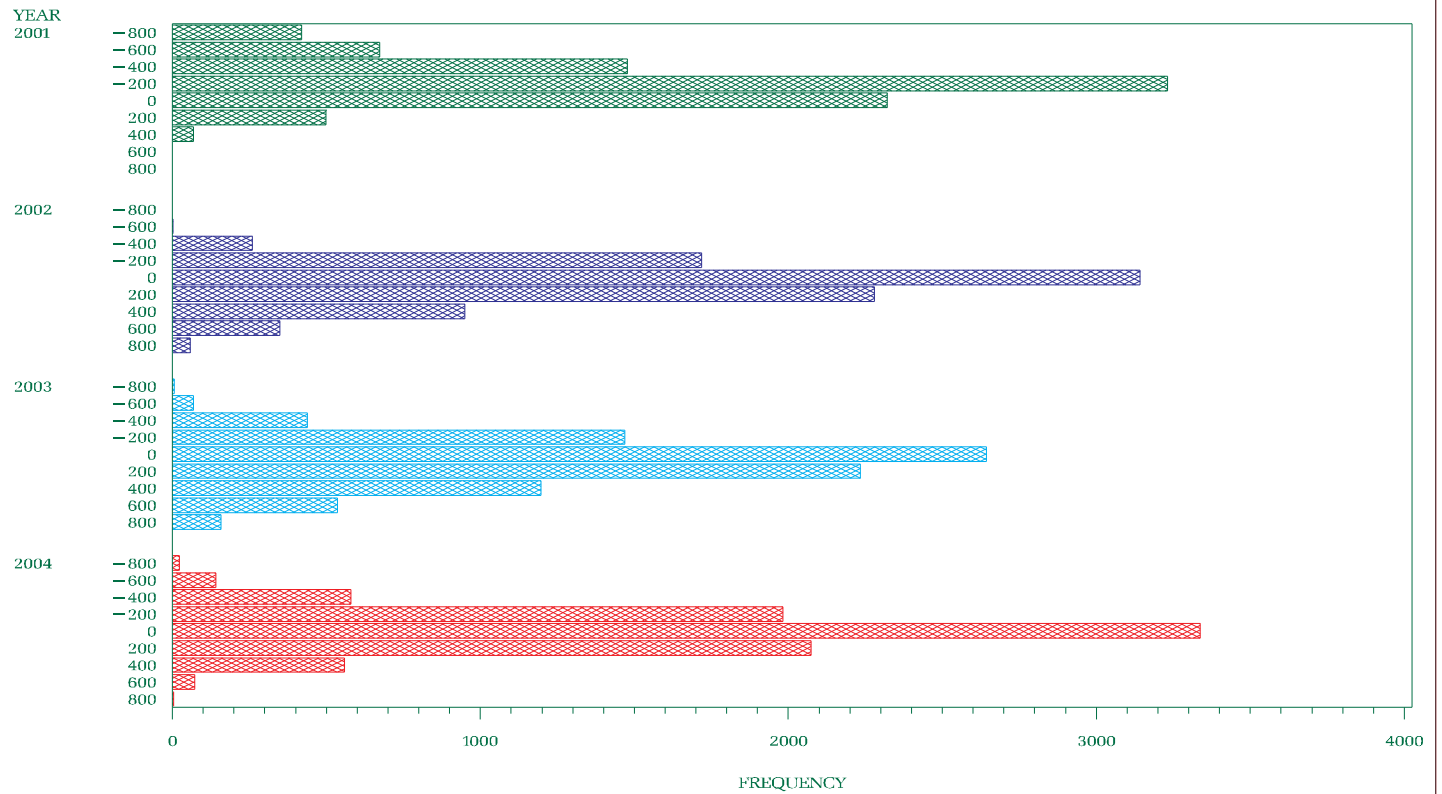
NYISO Frequency Interface Flow For January – December 2004

New England/Vt/NE/NU South – Capital/Mid Hudson



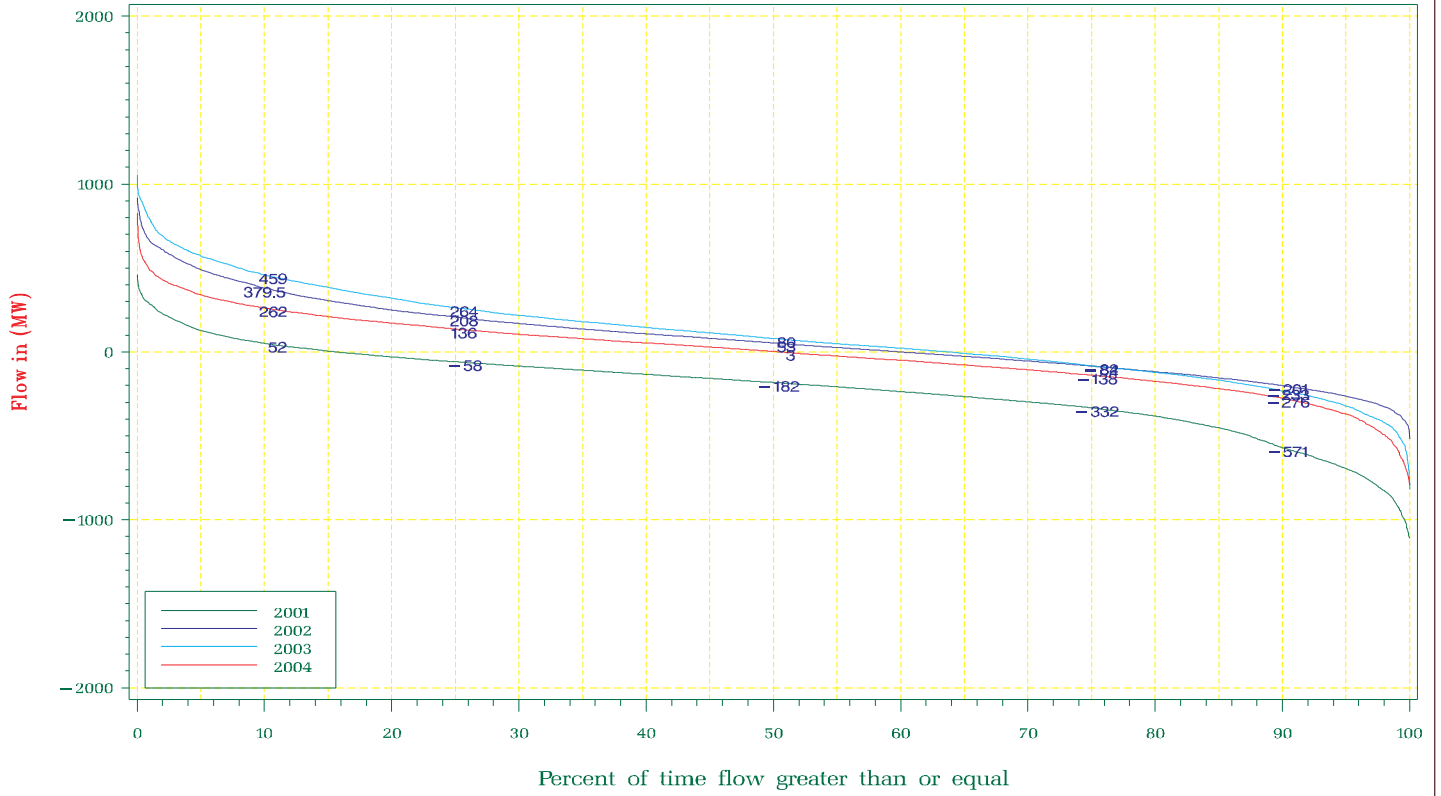
NYISO Frequency Interface Flow For January 2001 – December 2004

New England/Vt/NE/NU South – Capital/Mid Hudson



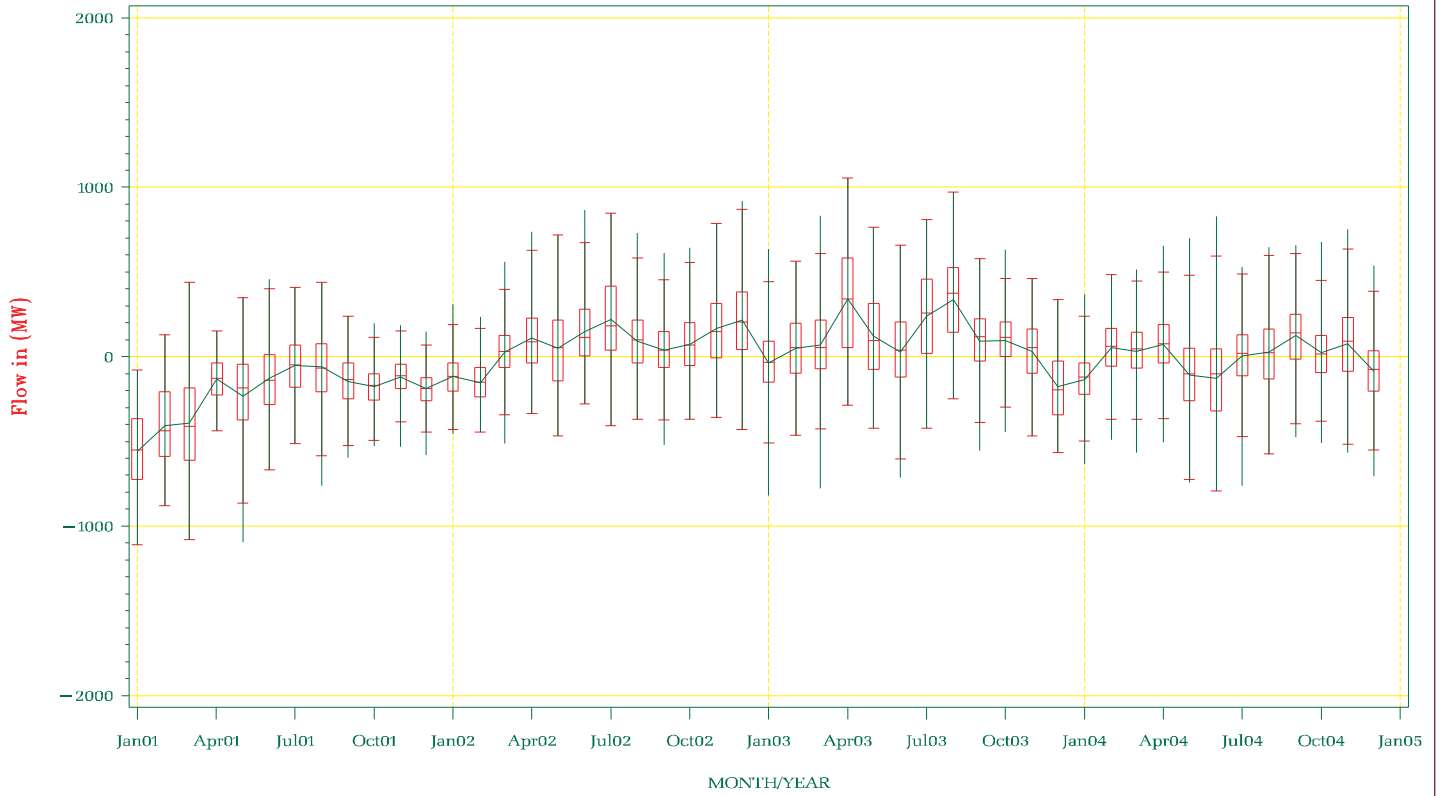
NYISO Percent of time Interface Flow For January 2001 – December 2004

New England/Vt/NE/NU South – Capital/Mid Hudson



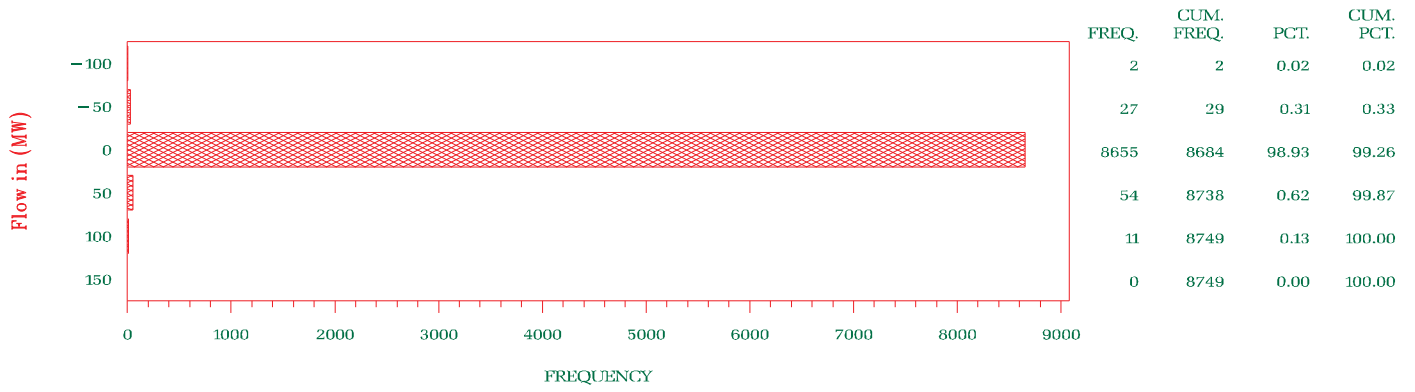
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

New England/Vt/NE/NU South – Capital/Mid Hudson



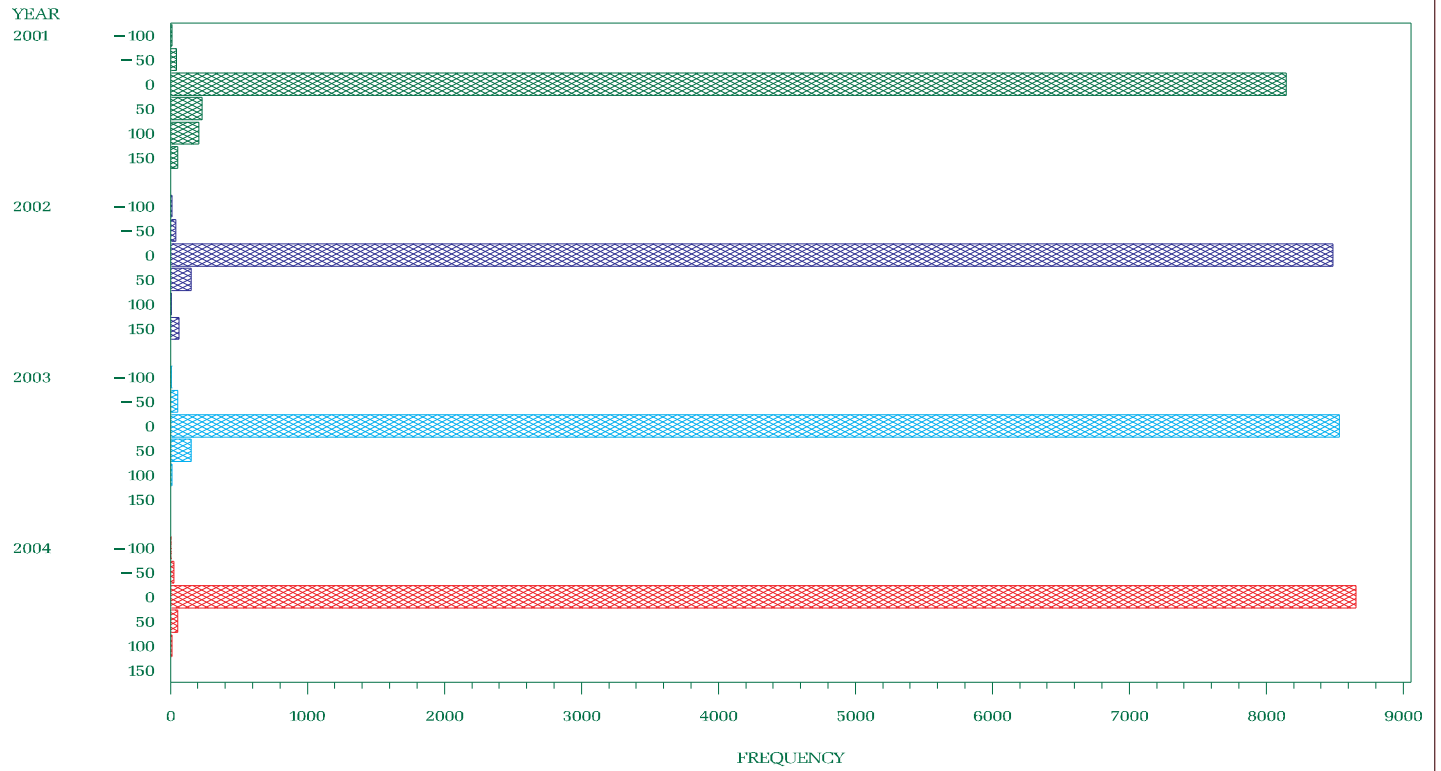
NYISO Frequency Interface Flow For January – December 2004

New England/NU – Long Island  
1385 Northport – Norwalk Harbor



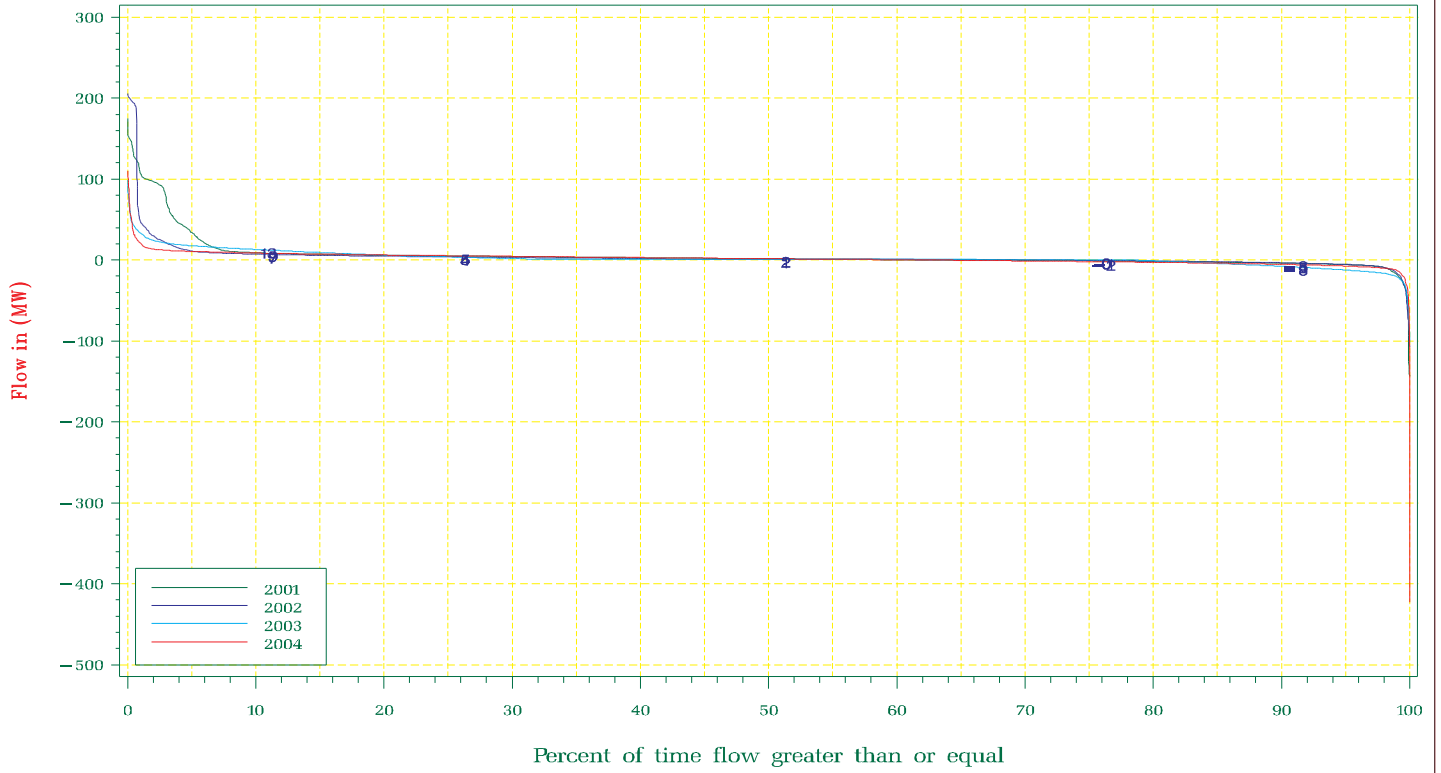
NYISO Frequency Interface Flow For January 2001 – December 2004

New England/NU – Long Island  
1385 Northport – Norwalk Harbor



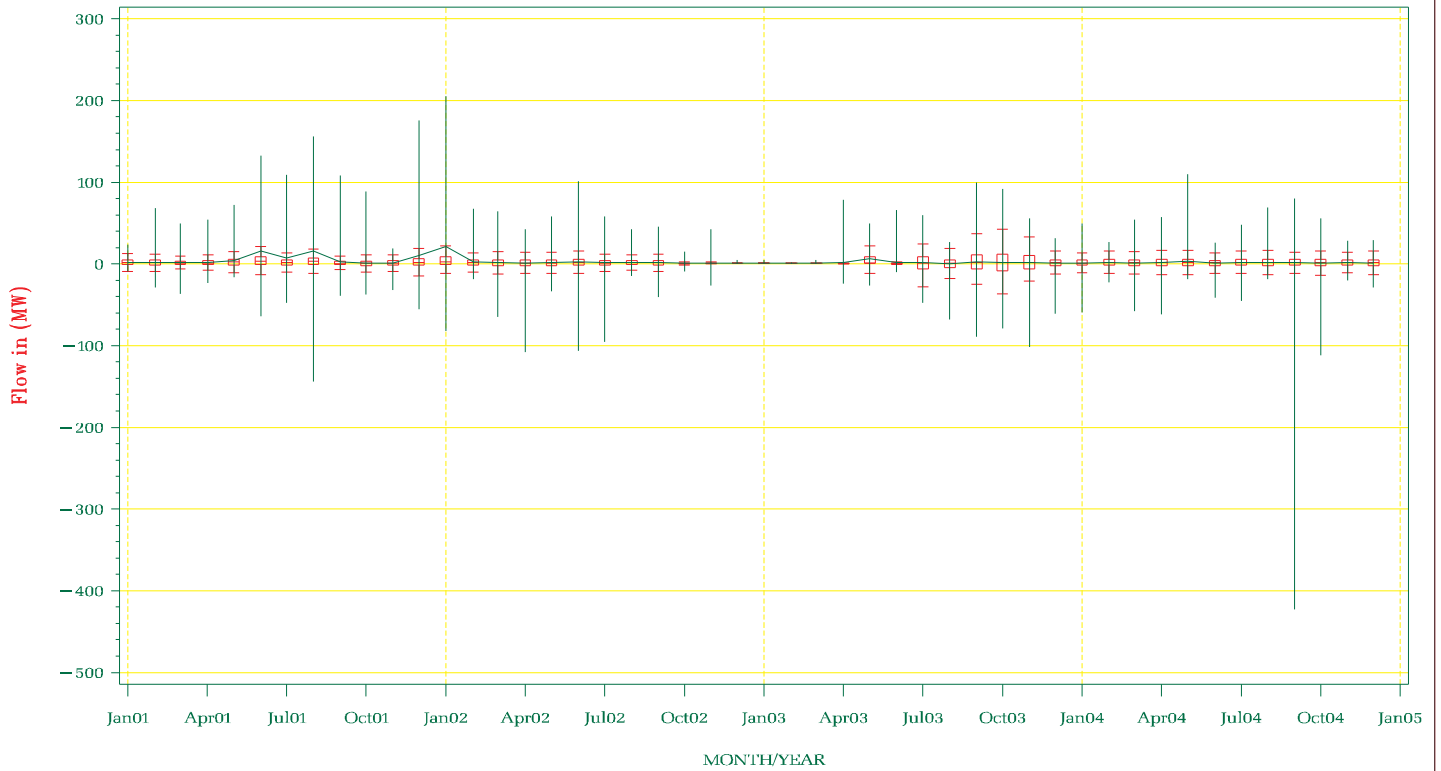
NYISO Percent of time Interface Flow For January 2001 – December 2004

New England/NU – Long Island  
1385 Northport – Norwalk Harbor



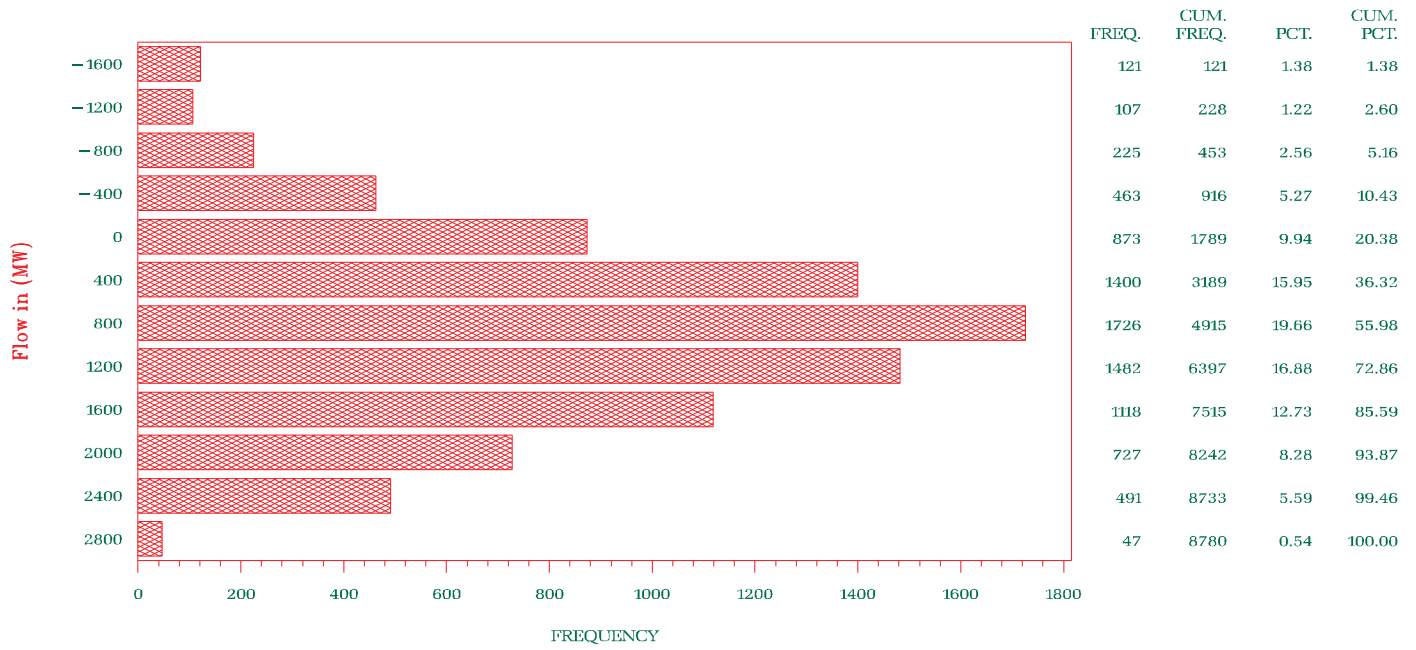
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

New England/NU – Long Island  
1385 Northport – Norwalk Harbor



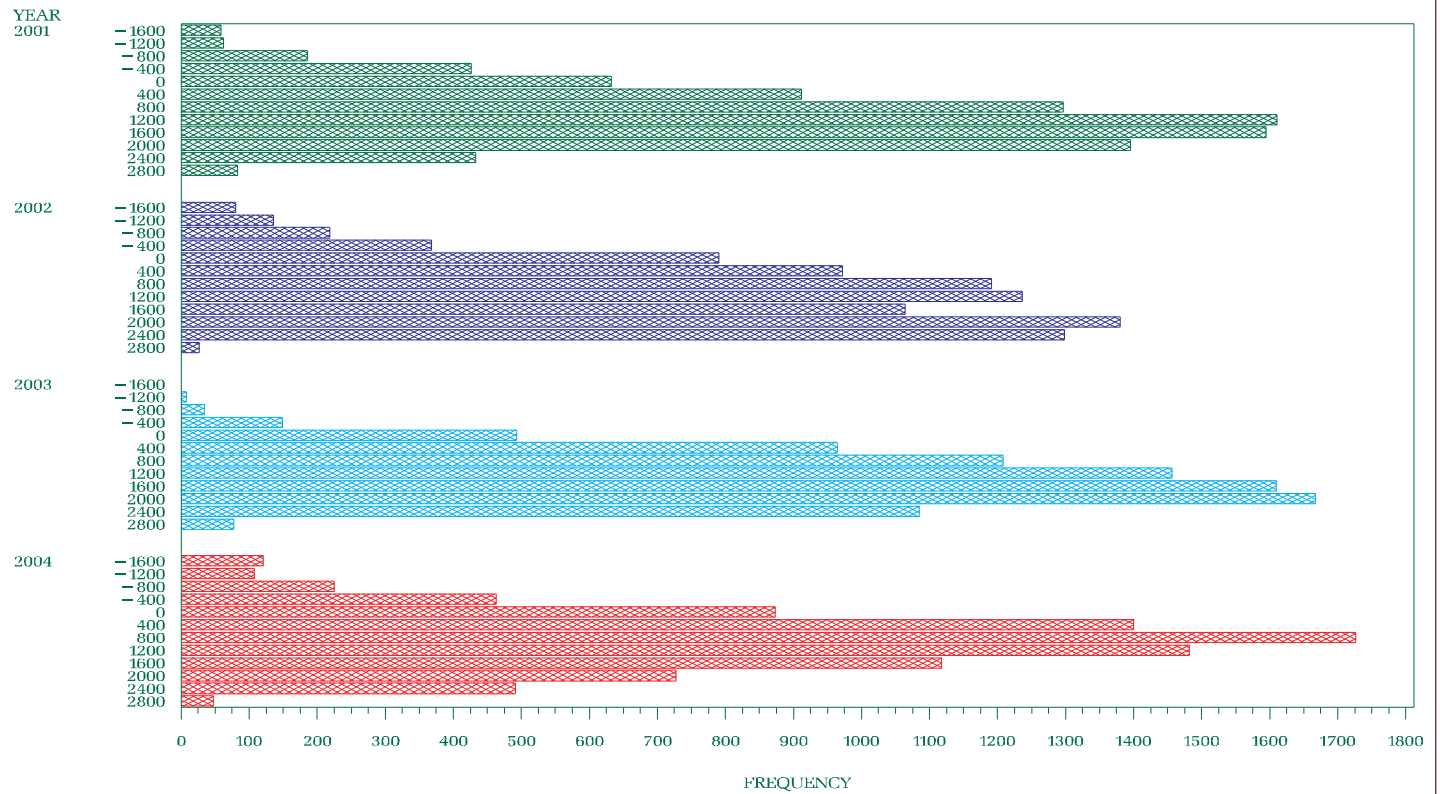
NYISO Frequency Interface Flow For January – December 2004

PJM – NY SCHEDULE



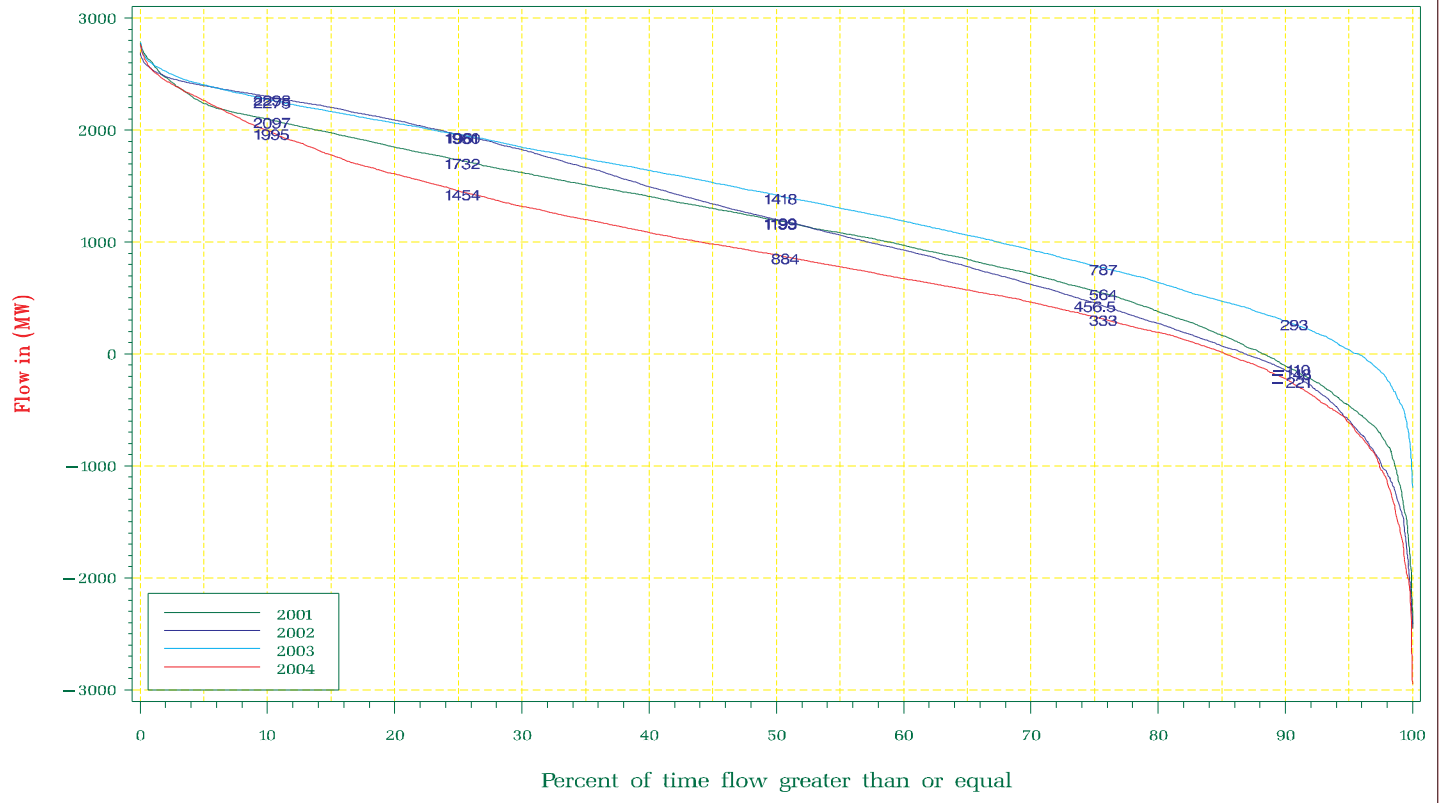
NYISO Frequency Interface Flow For January 2001 – December 2004

PJM – NY SCHEDULE



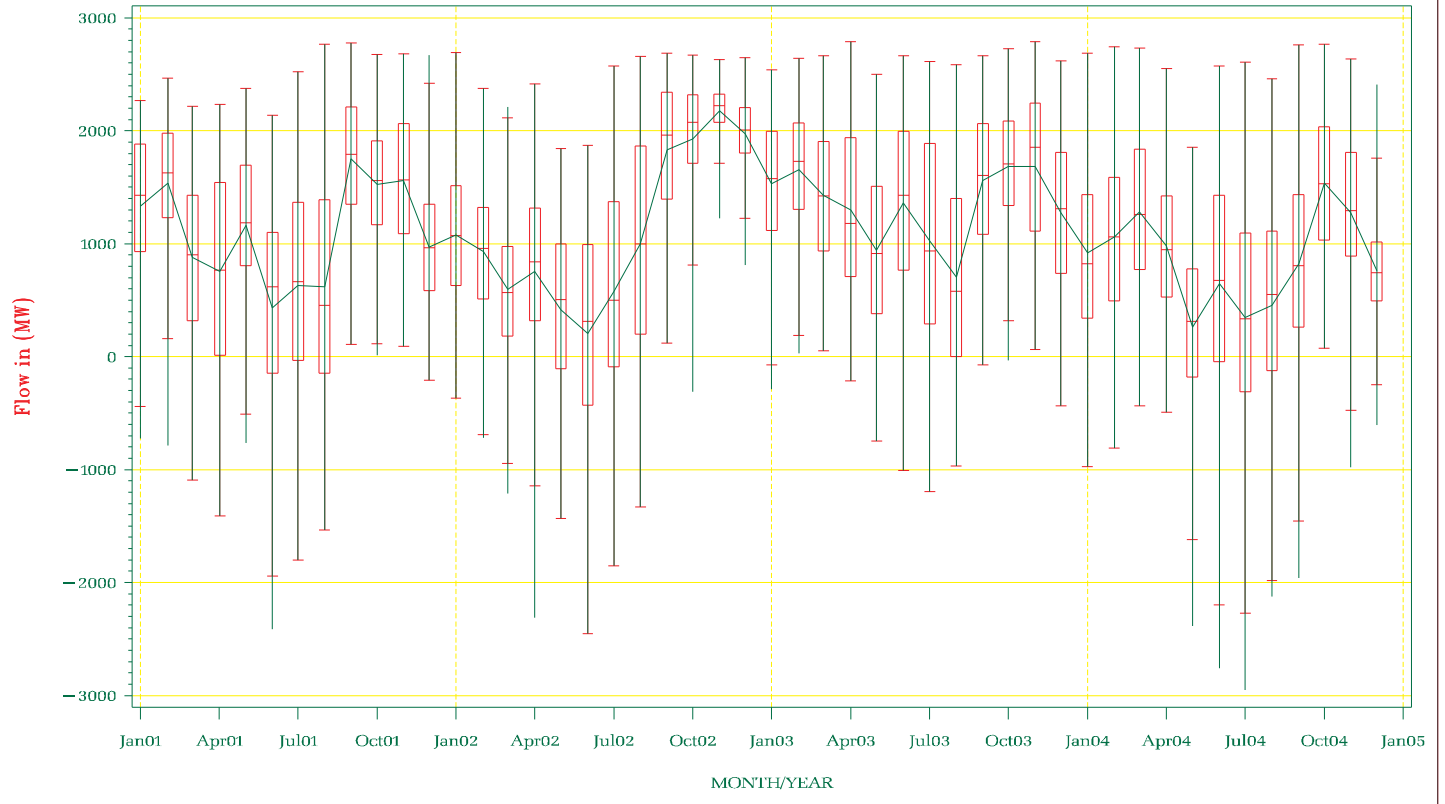
NYISO Percent of time Interface Flow For January 2001 – December 2004

PJM-NY SCHEDULE



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

PJM-NY SCHEDULE





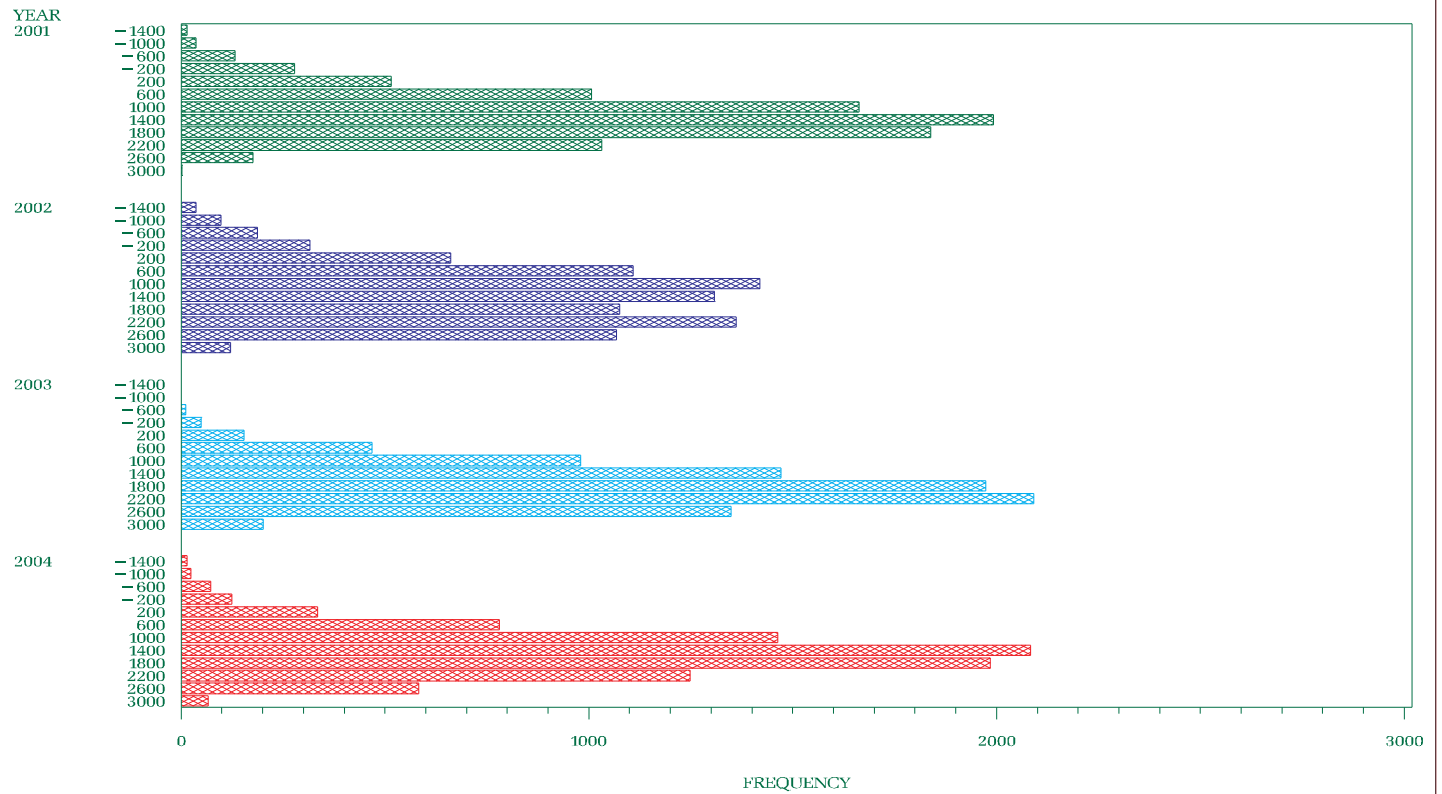
NYISO Frequency Interface Flow For January – December 2004

PJM – NY

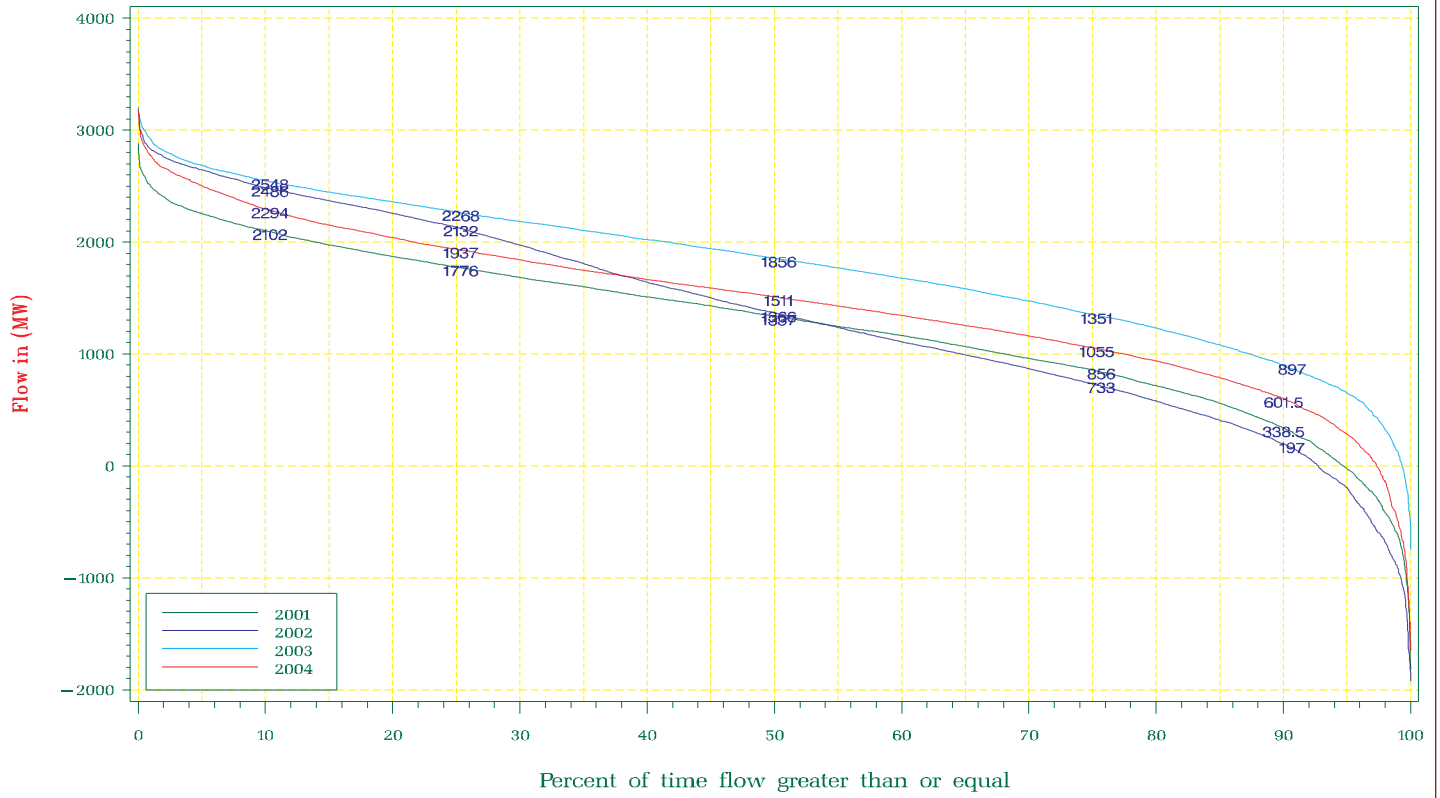


NYISO Frequency Interface Flow For January 2001 – December 2004

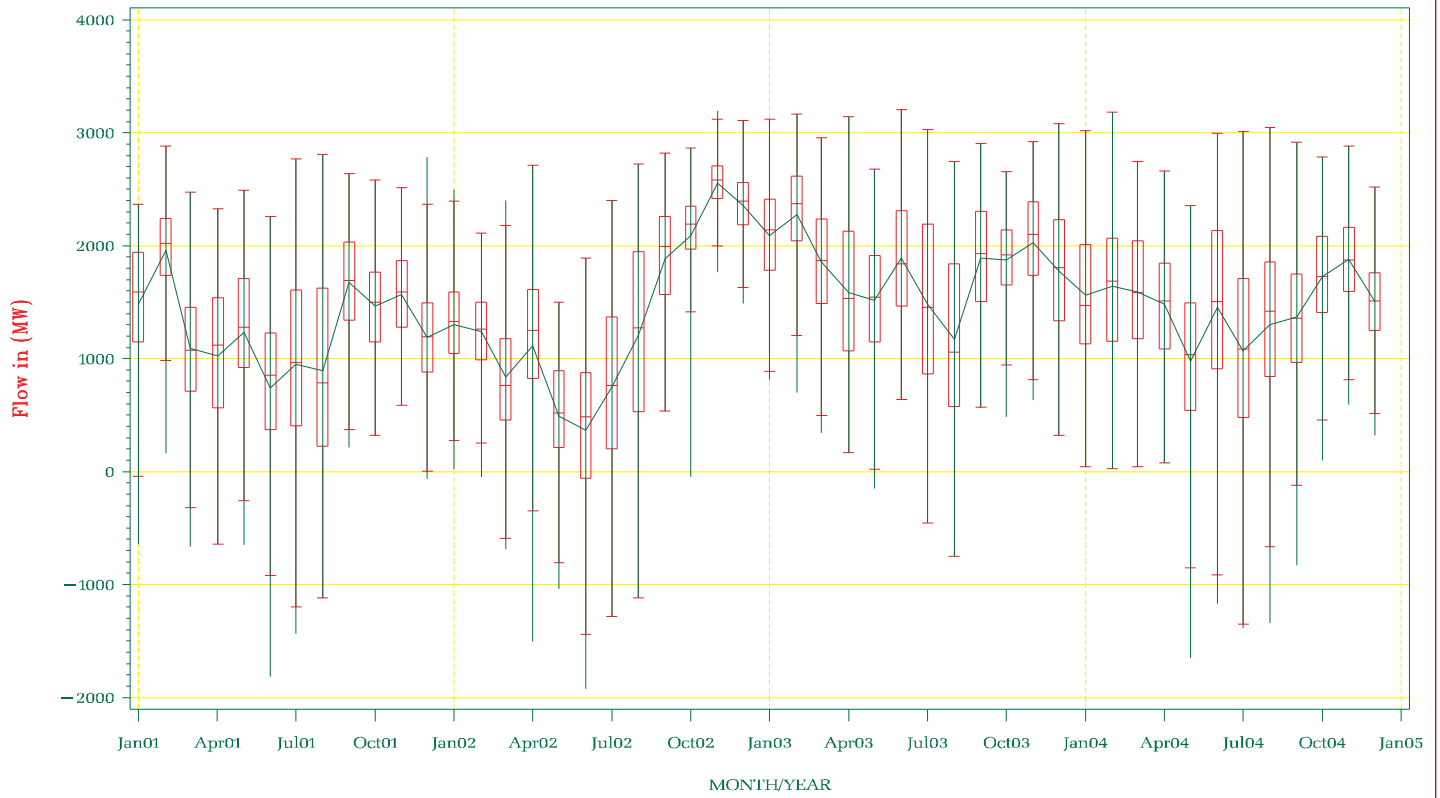
PJM – NY



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**PJM – NY**

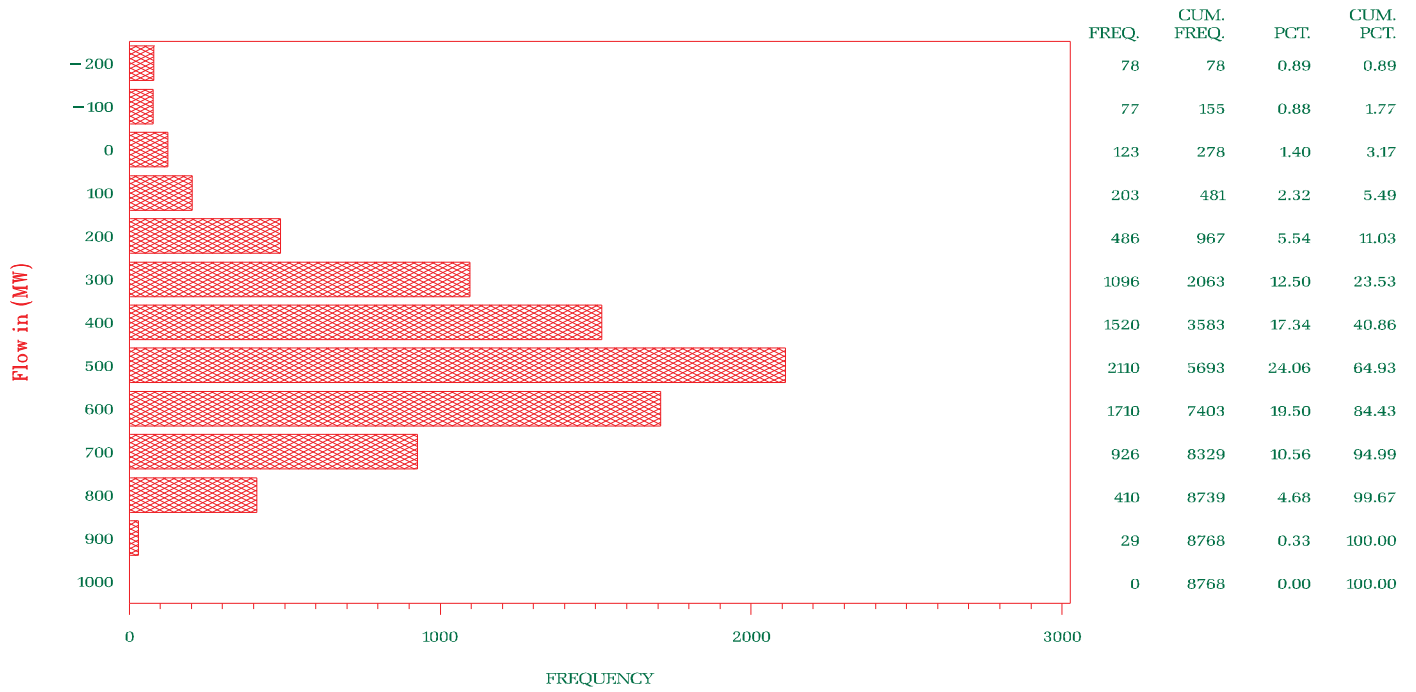


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**PJM – NY**



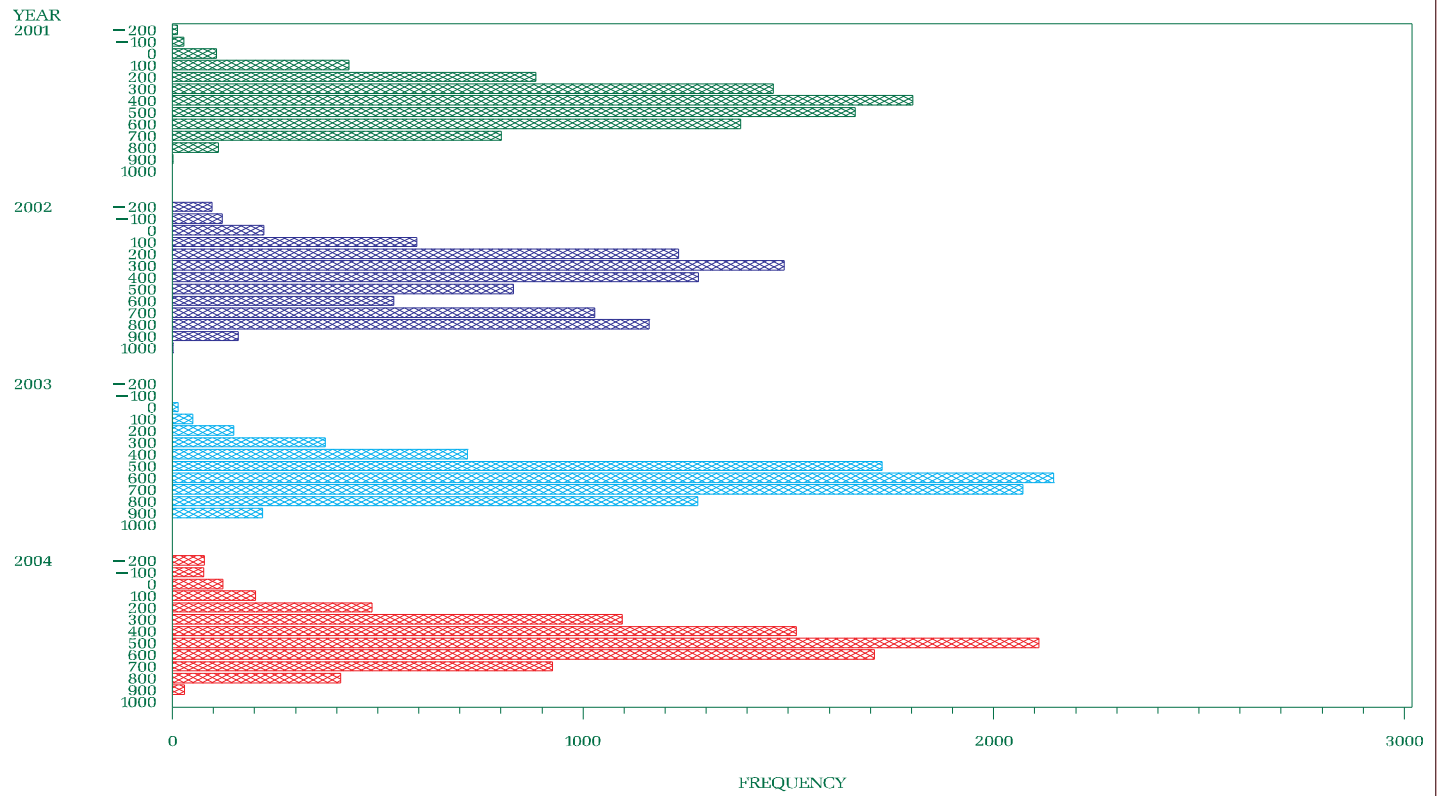
NYISO Frequency Interface Flow For January – December 2004

PJM West – Central

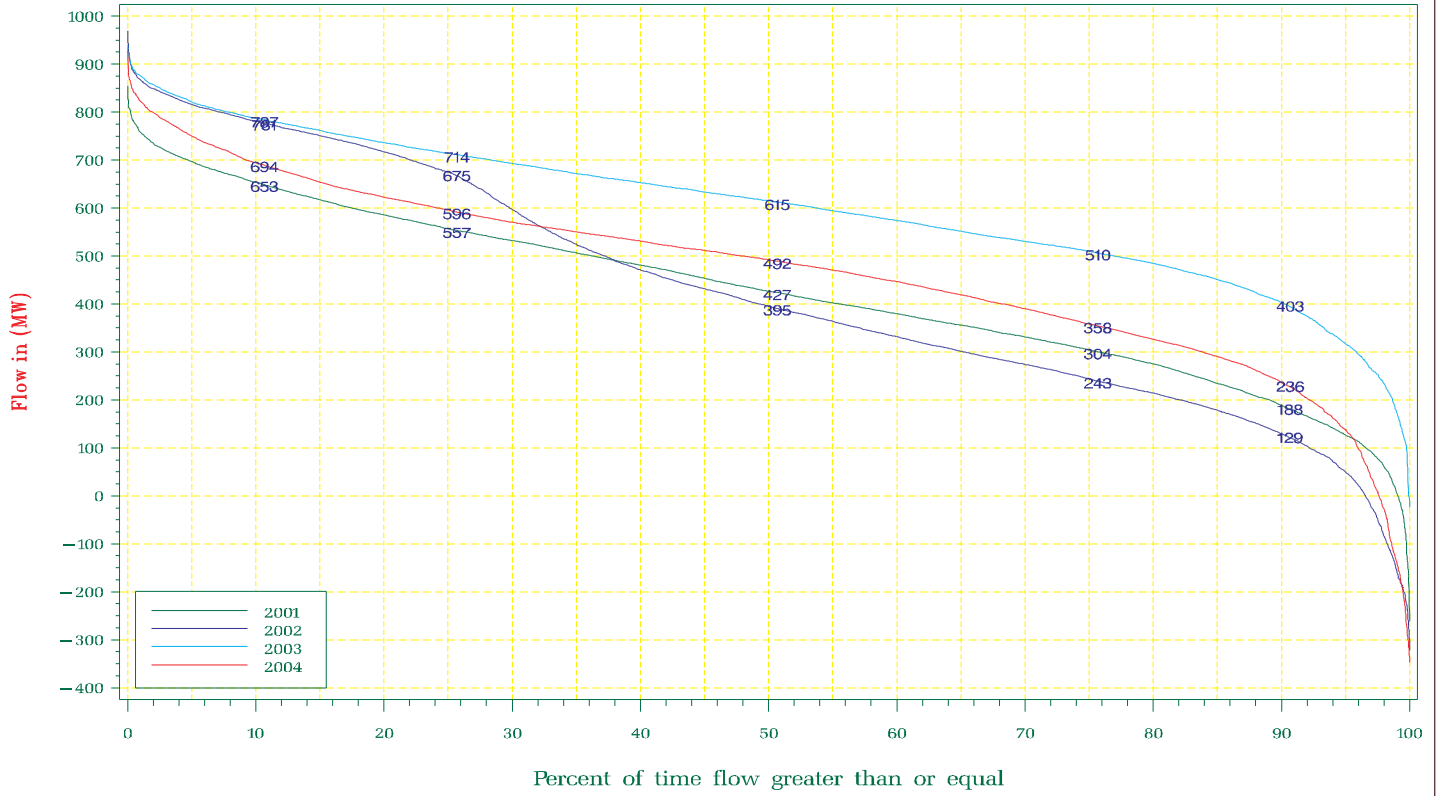


NYISO Frequency Interface Flow For January 2001 – December 2004

PJM West – Central



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**PJM West – Central**

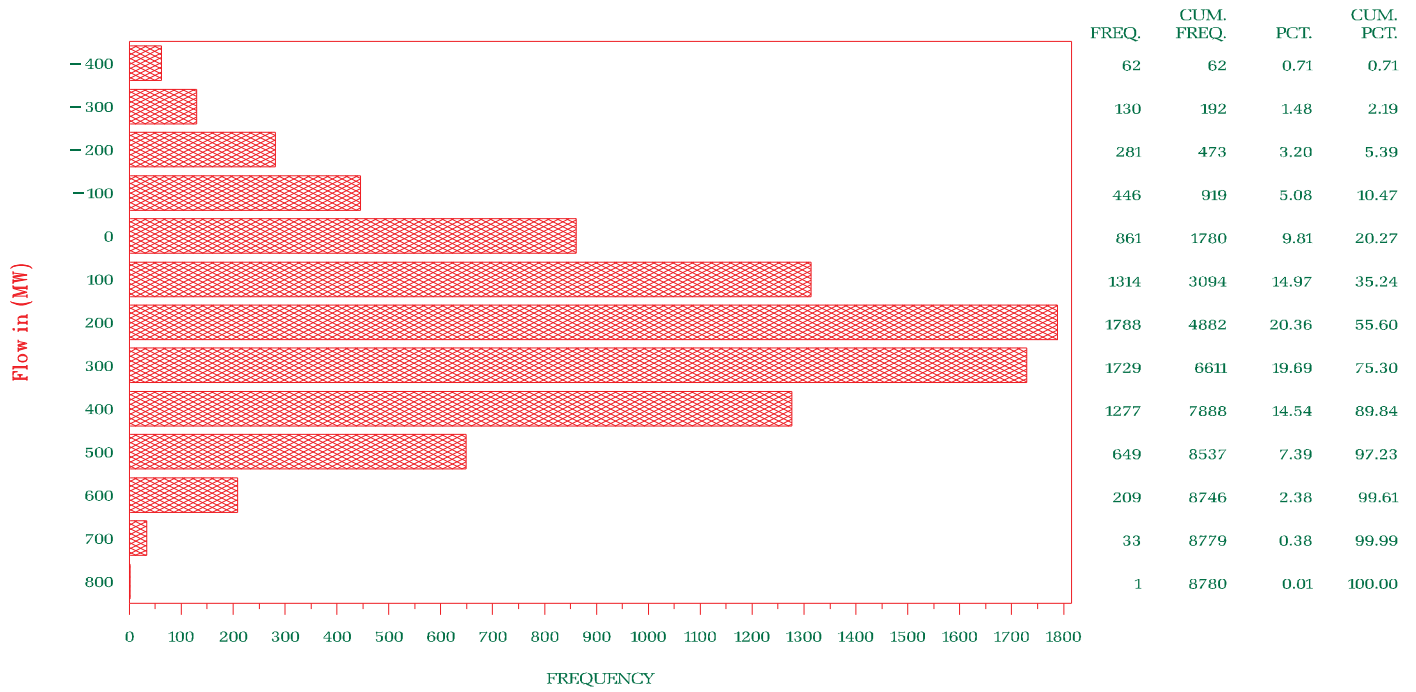


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**PJM West – Central**



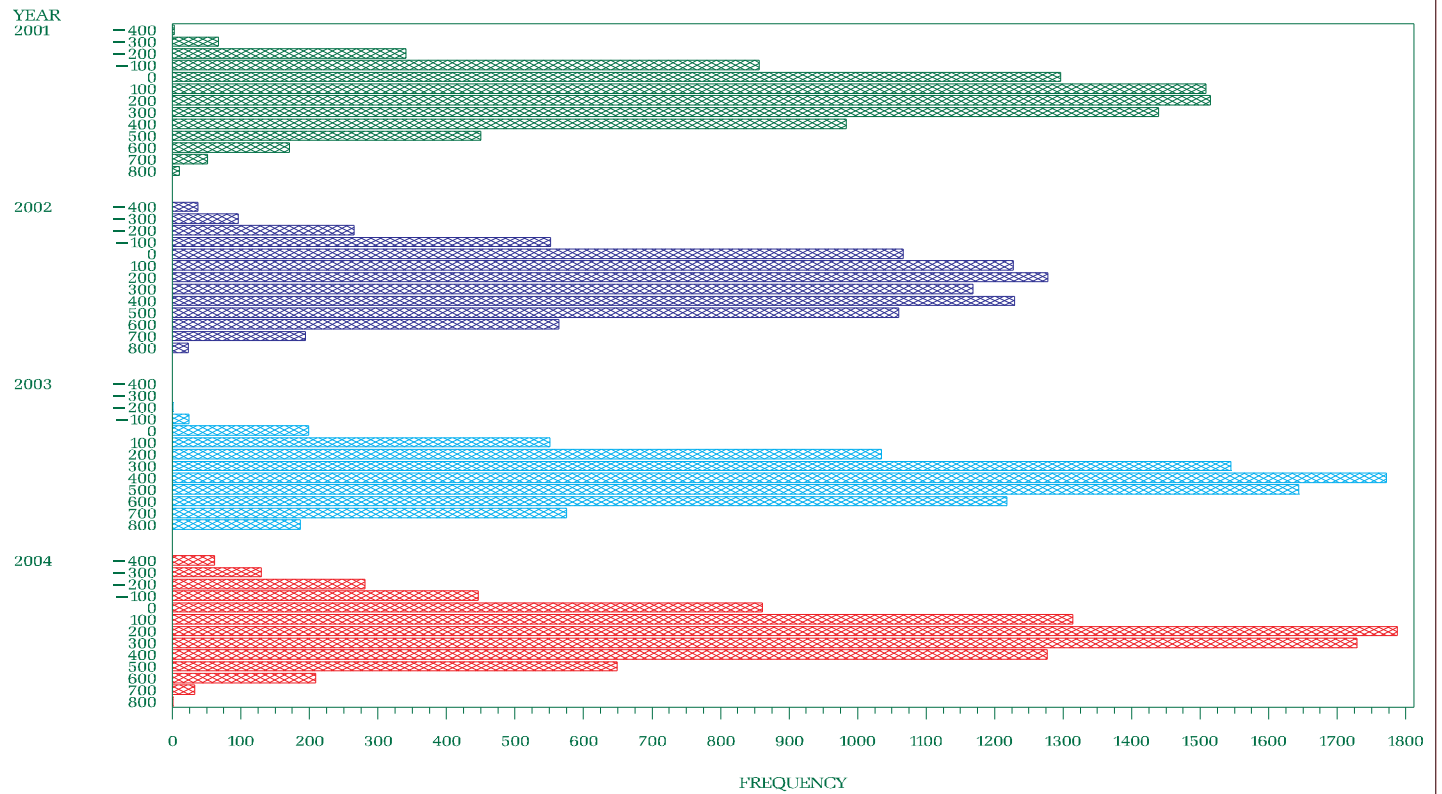
NYISO Frequency Interface Flow For January – December 2004

PJM West – Frontier

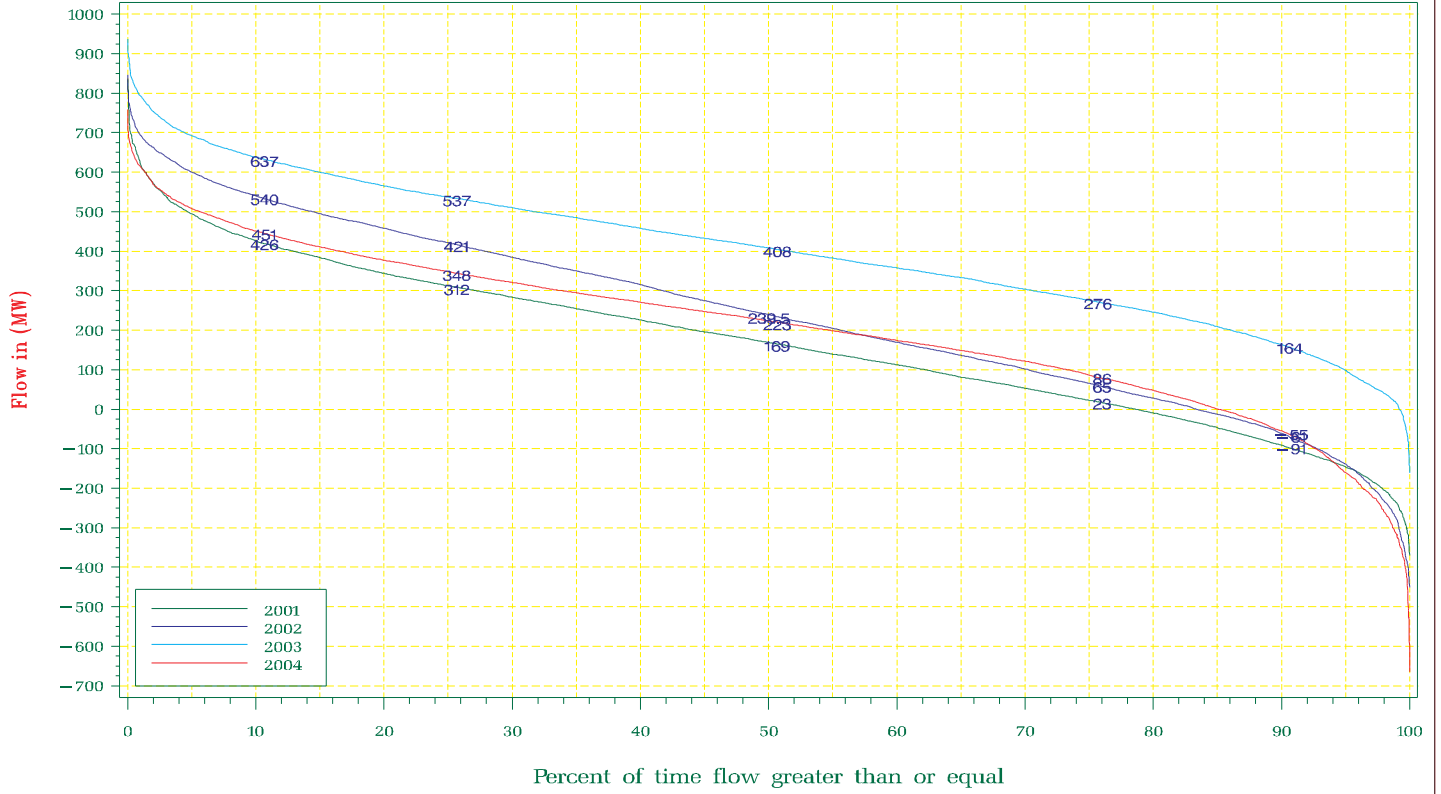


NYISO Frequency Interface Flow For January 2001 – December 2004

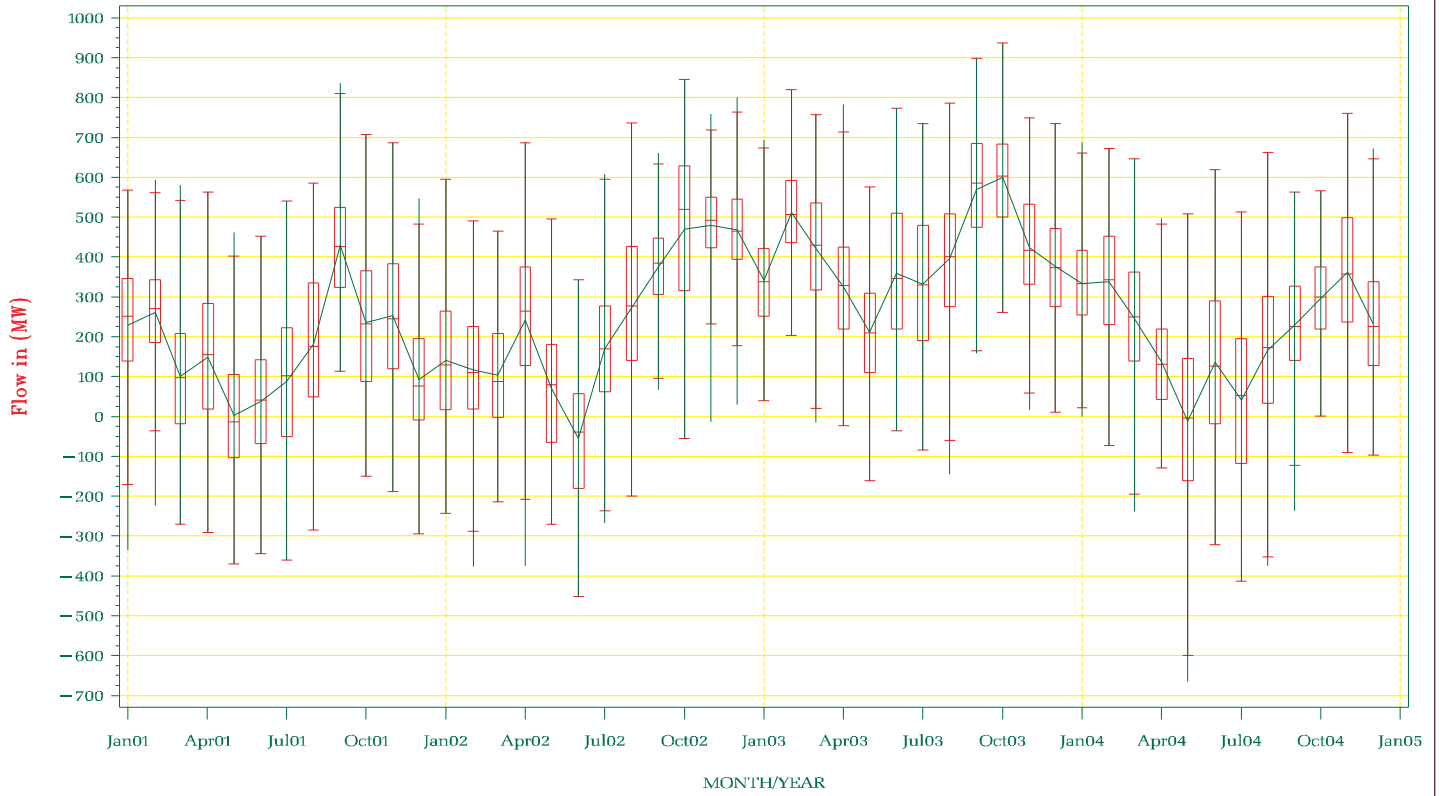
PJM West – Frontier



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**PJM West – Frontier**

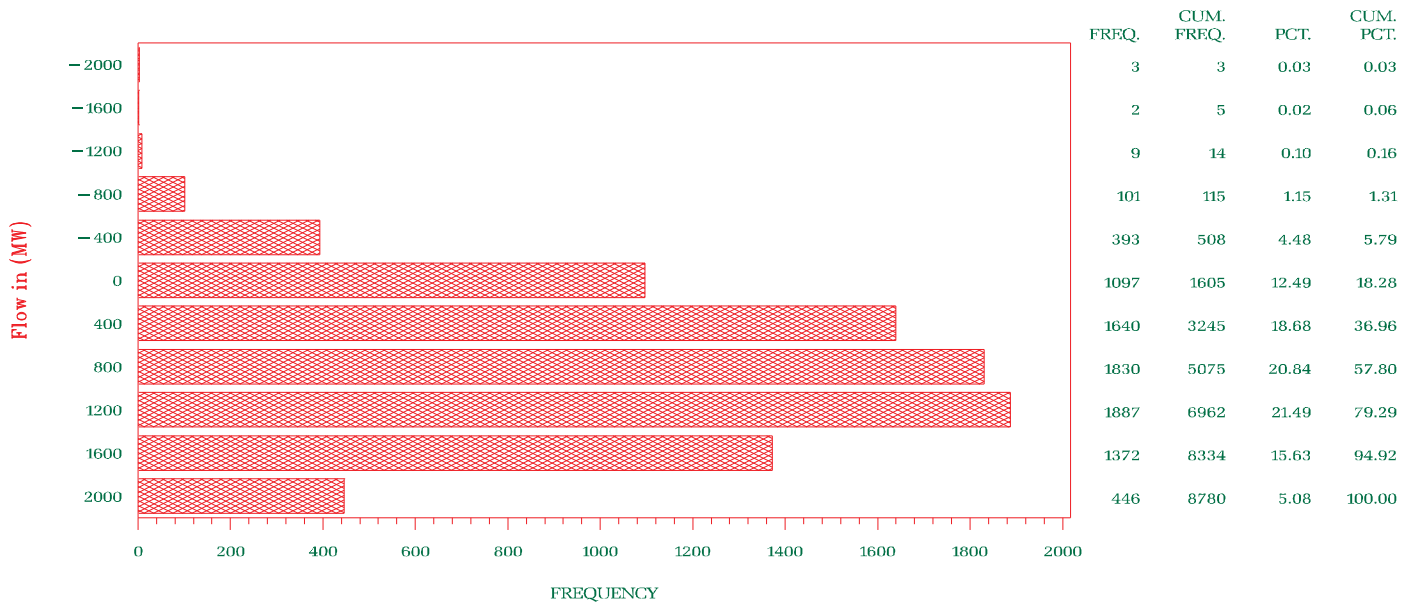


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**PJM West – Frontier**



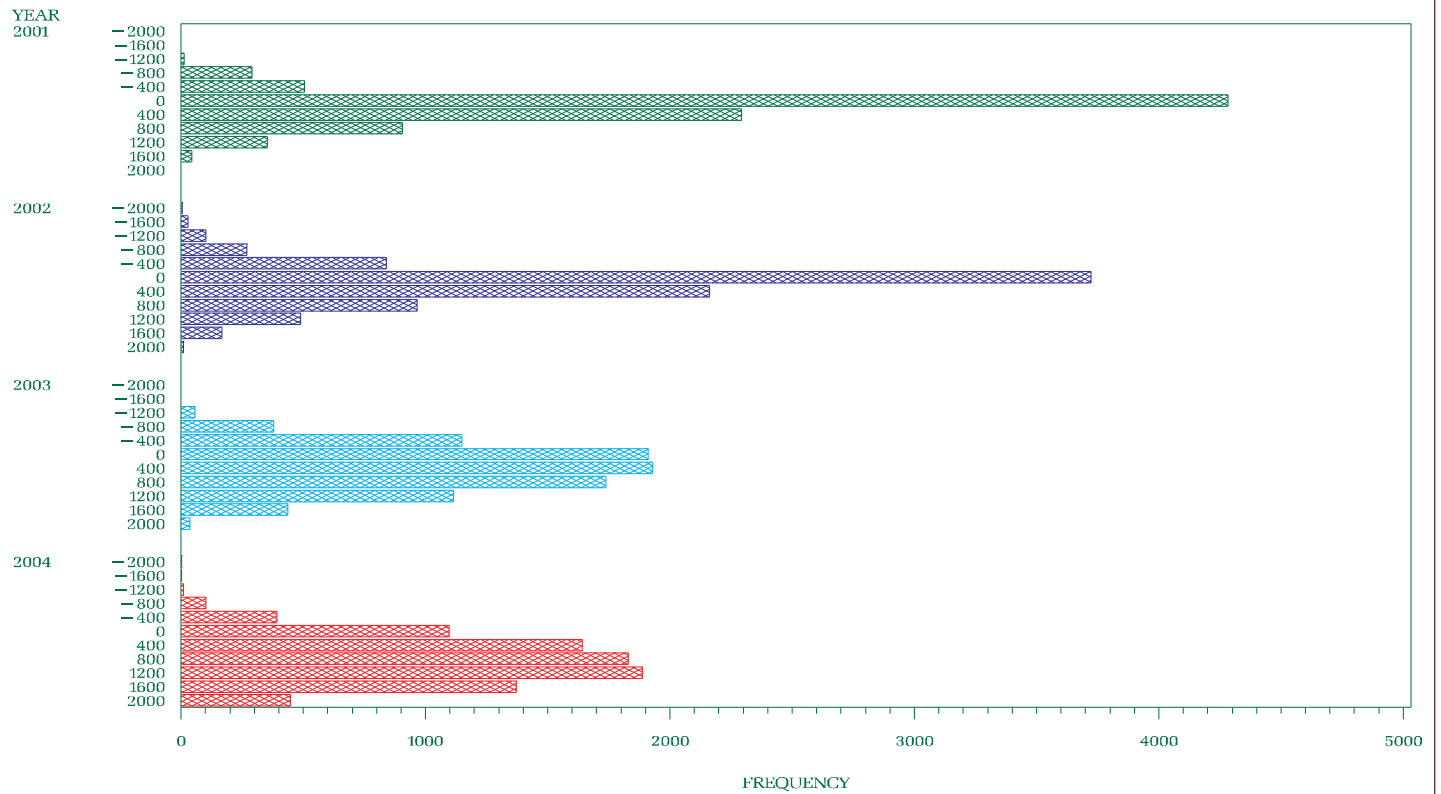
NYISO Frequency Interface Flow For January – December 2004

ONTARIO – NY SCHEDULE



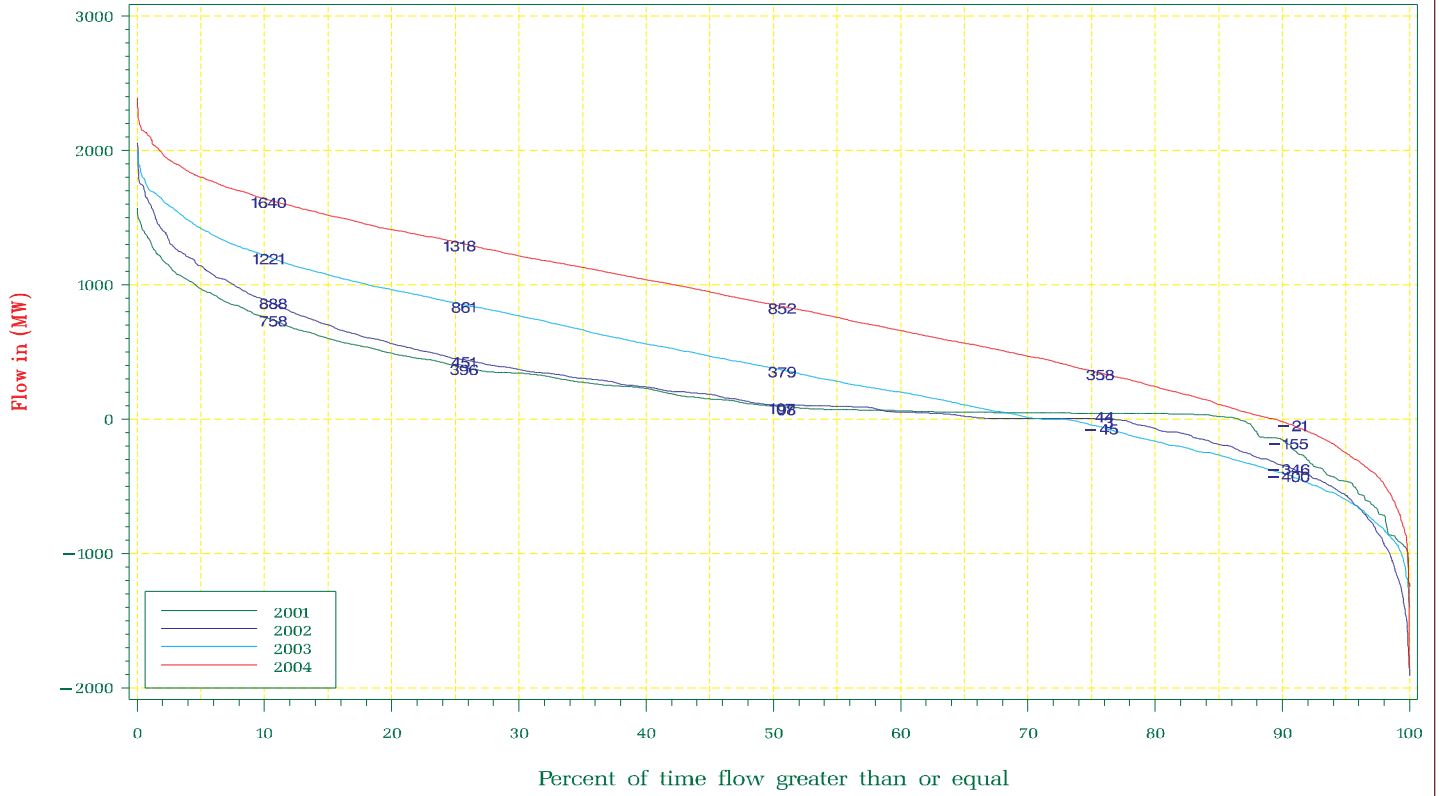
NYISO Frequency Interface Flow For January 2001 – December 2004

ONTARIO – NY SCHEDULE



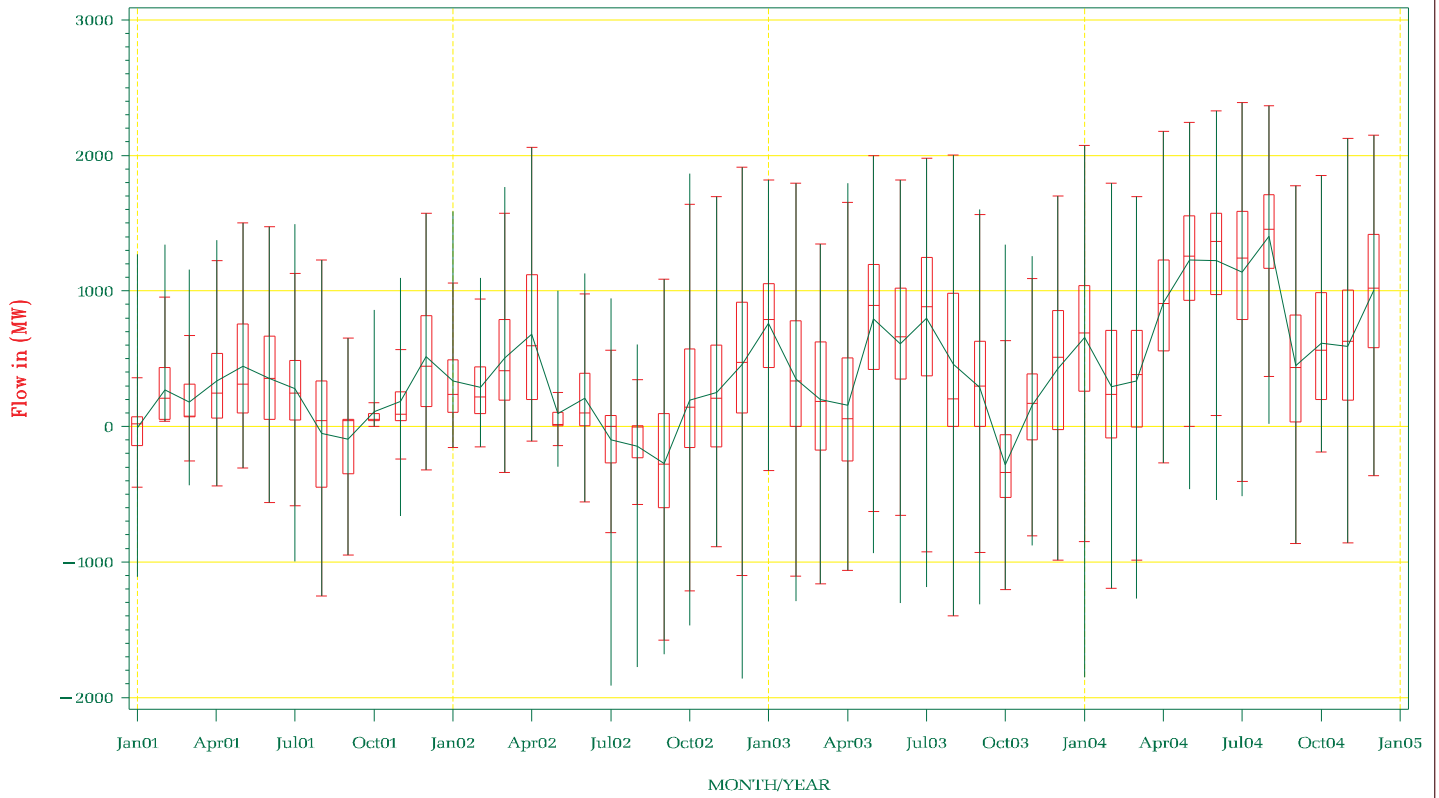
NYISO Percent of time Interface Flow For January 2001 – December 2004

ONTARIO–NY SCHEDULE



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

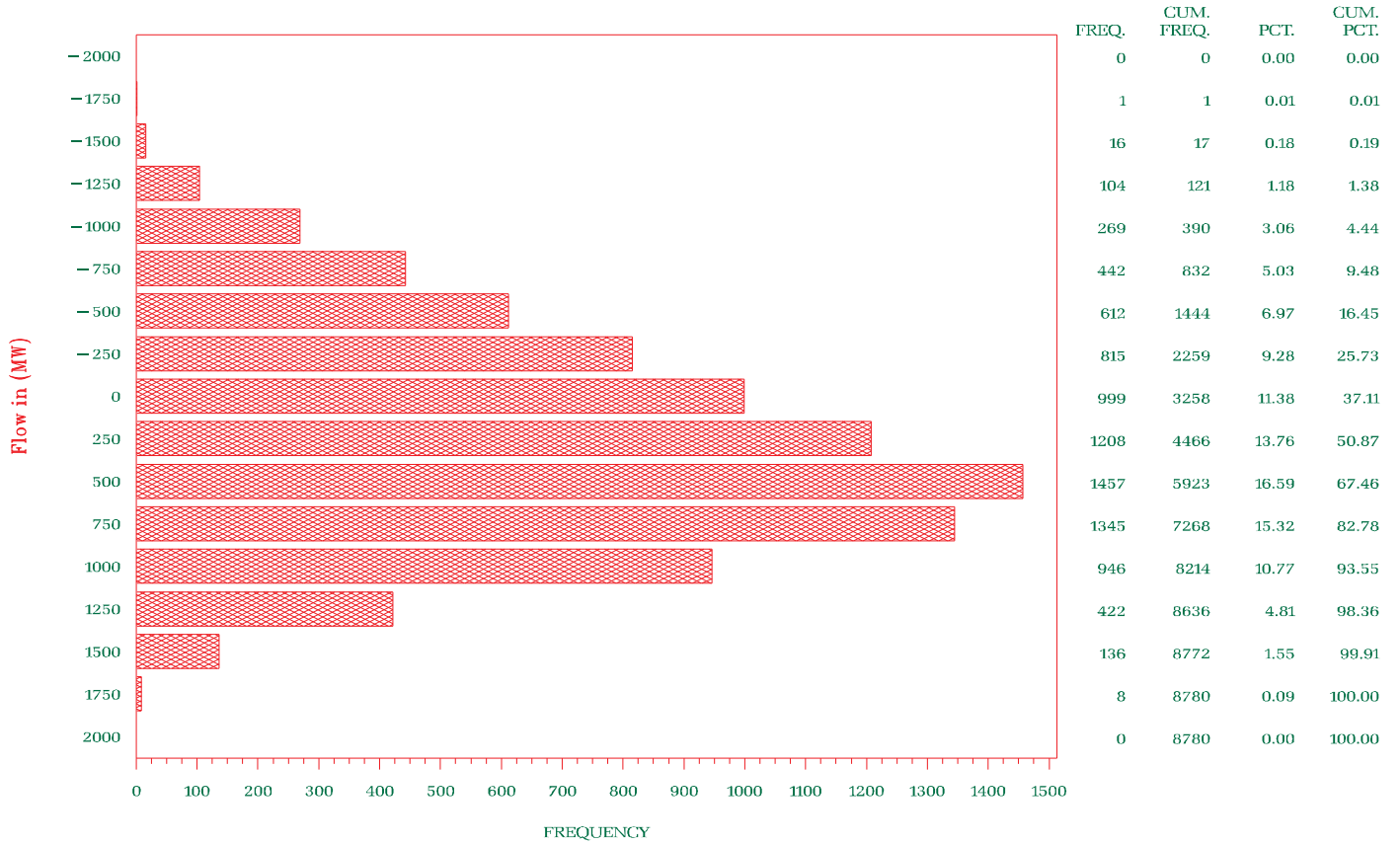
ONTARIO–NY SCHEDULE





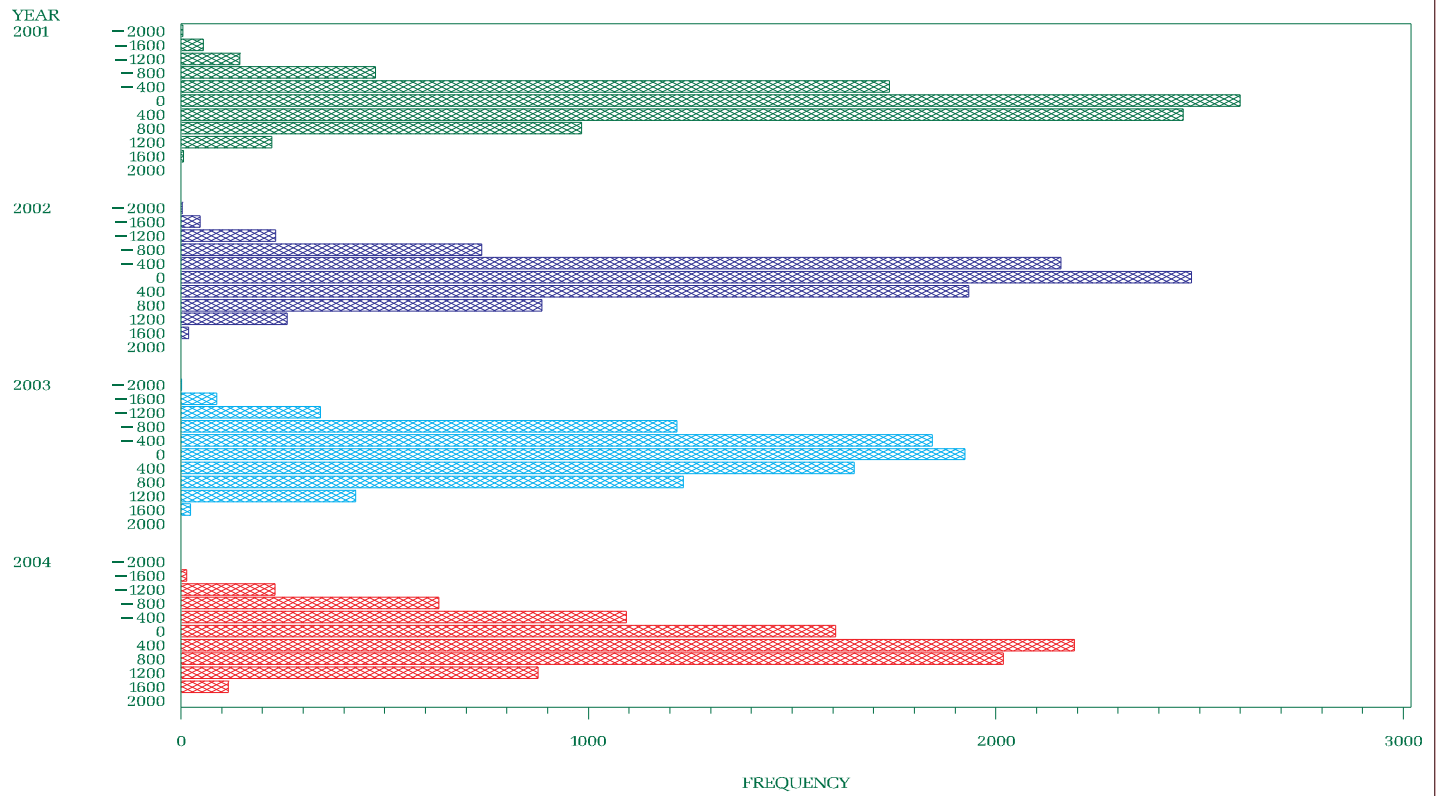
NYISO Frequency Interface Flow For January – December 2004

ONTARIO – NY

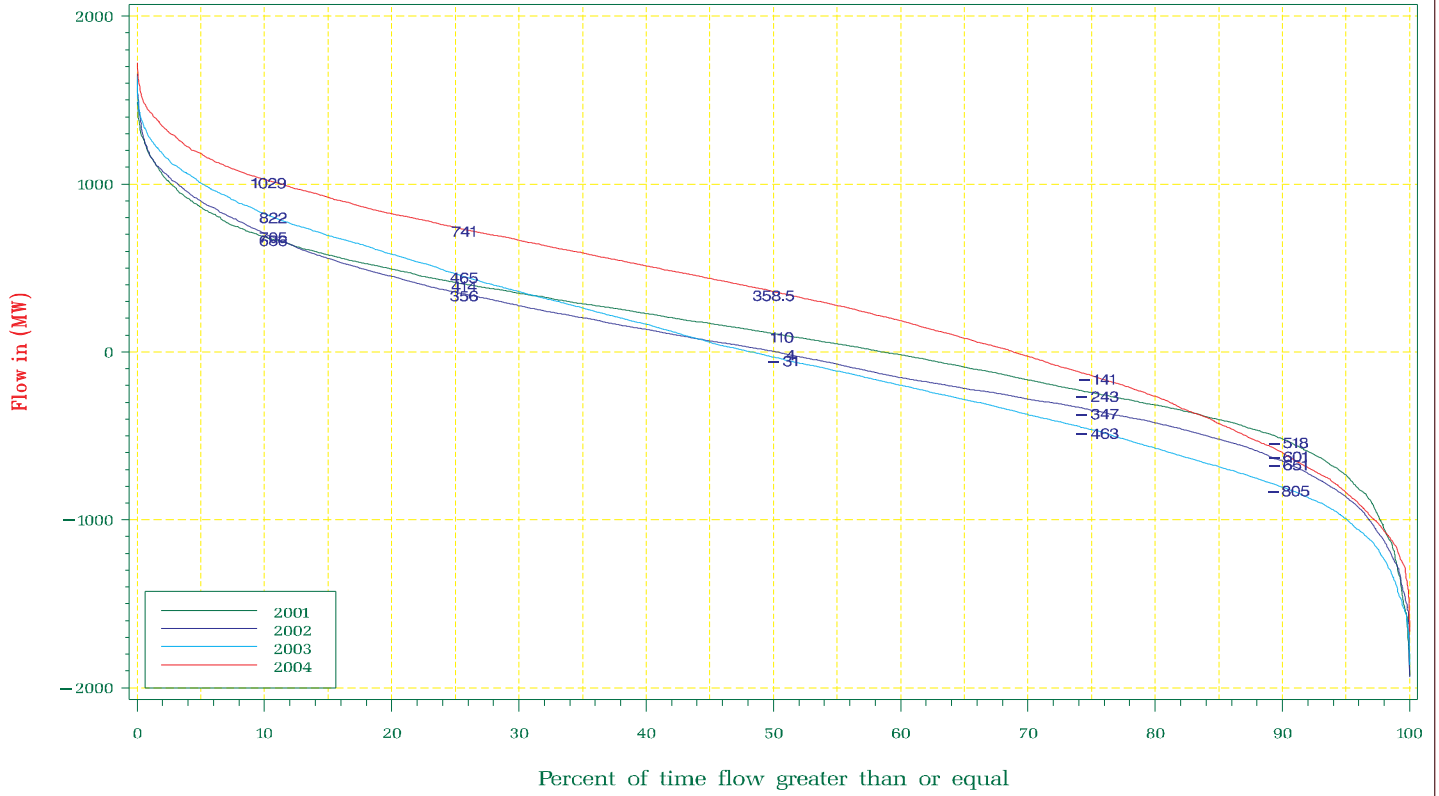


NYISO Frequency Interface Flow For January 2001 – December 2004

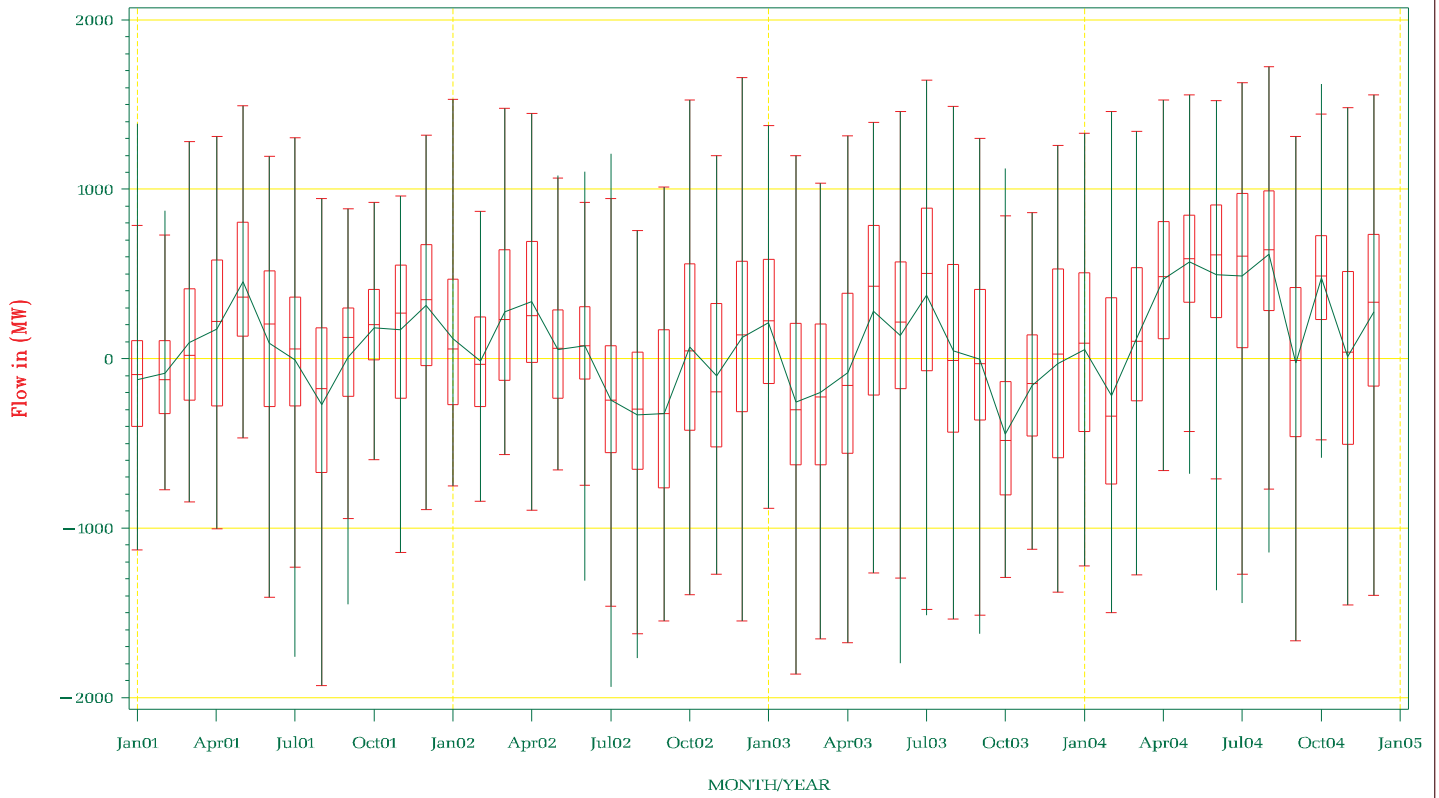
ONTARIO – NY



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**ONTARIO – NY**

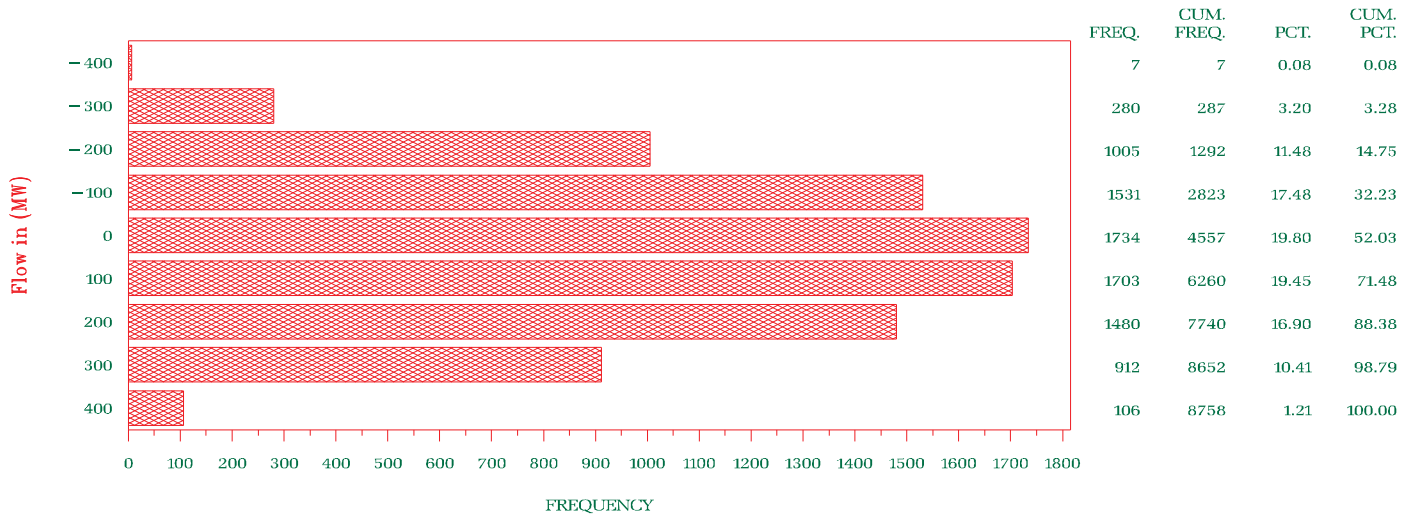


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**ONTARIO – NY**



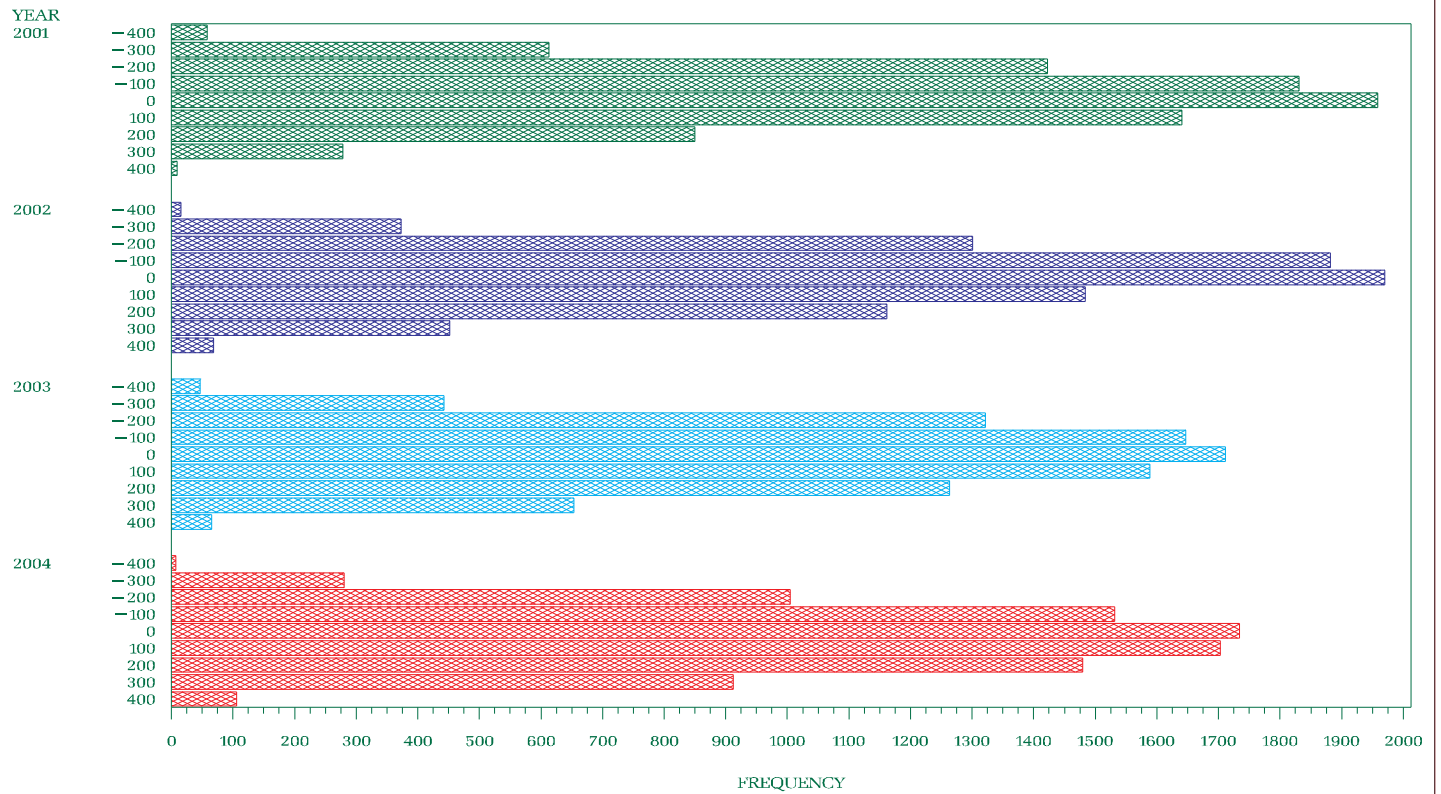
NYISO Frequency Interface Flow For January – December 2004

Ontario East – Adirondack



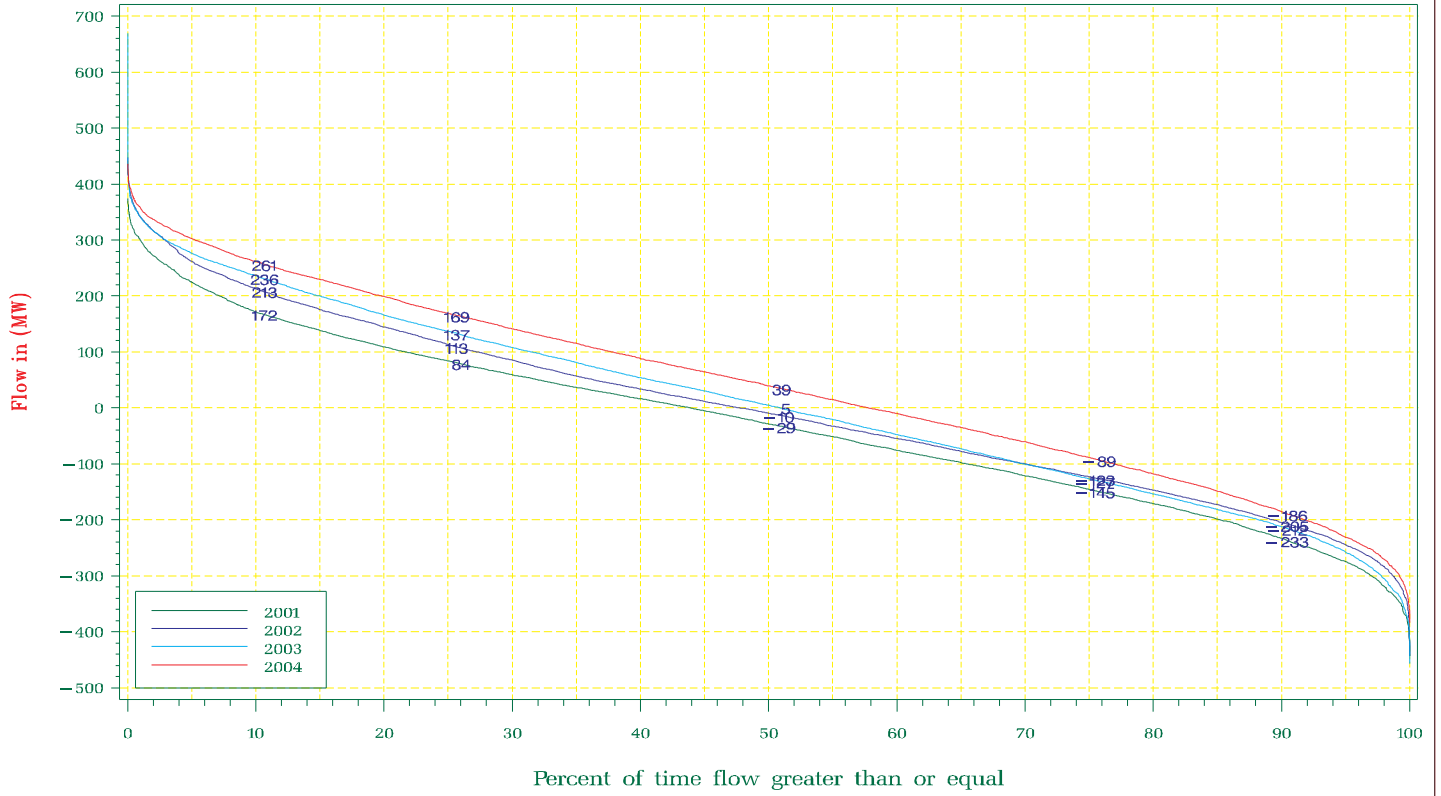
NYISO Frequency Interface Flow For January 2001 – December 2004

Ontario East – Adirondack



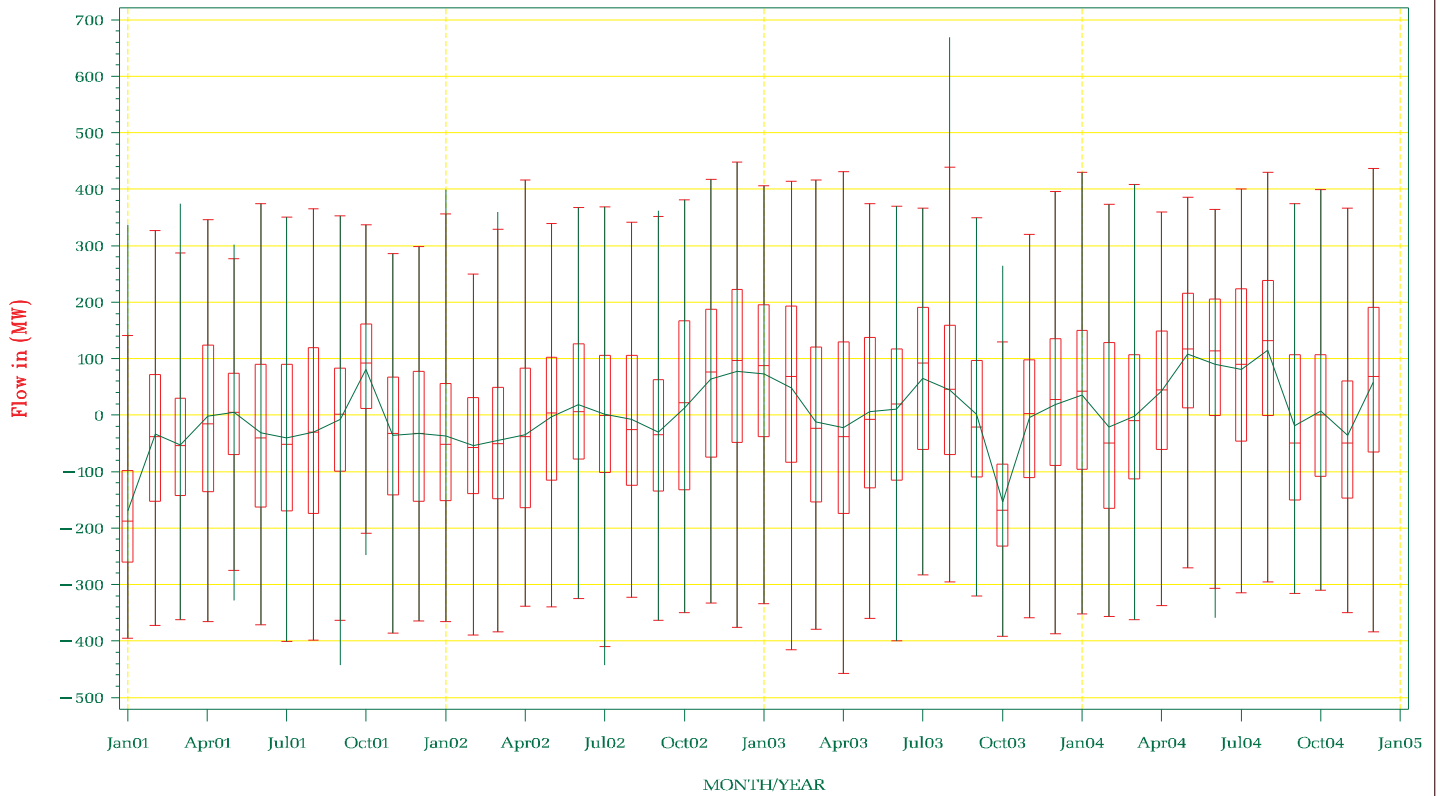
NYISO Percent of time Interface Flow For January 2001 – December 2004

Ontario East – Adirondack



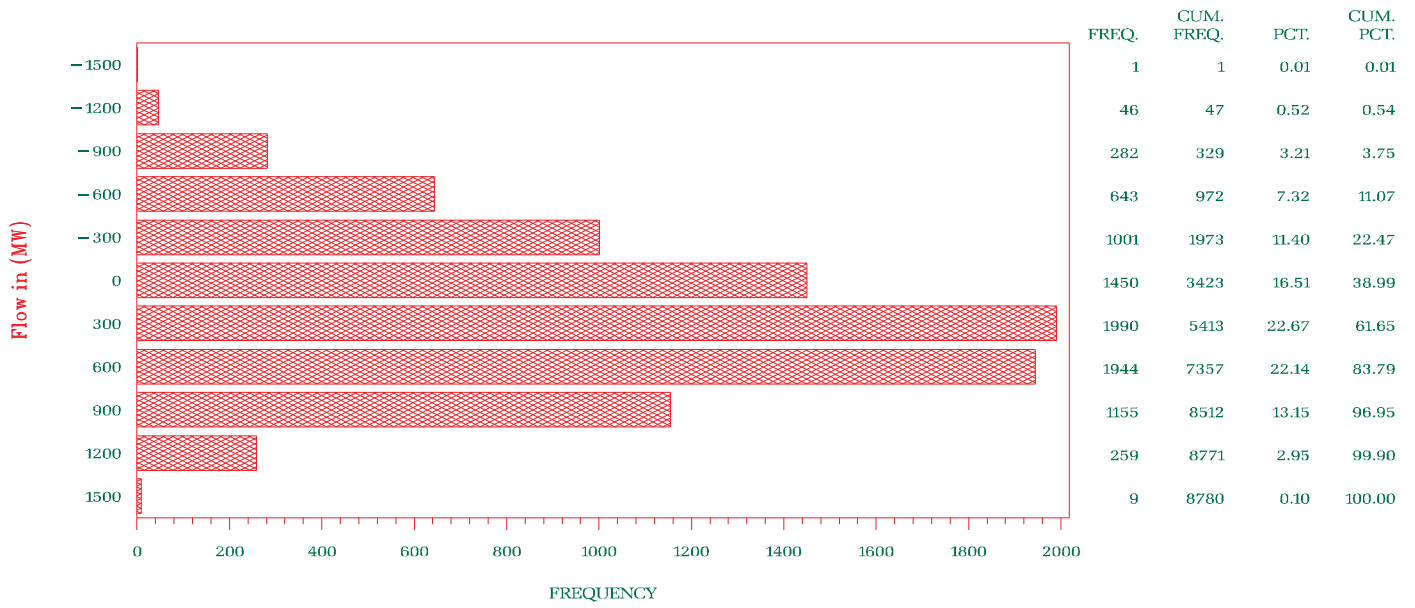
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Ontario East – Adirondack



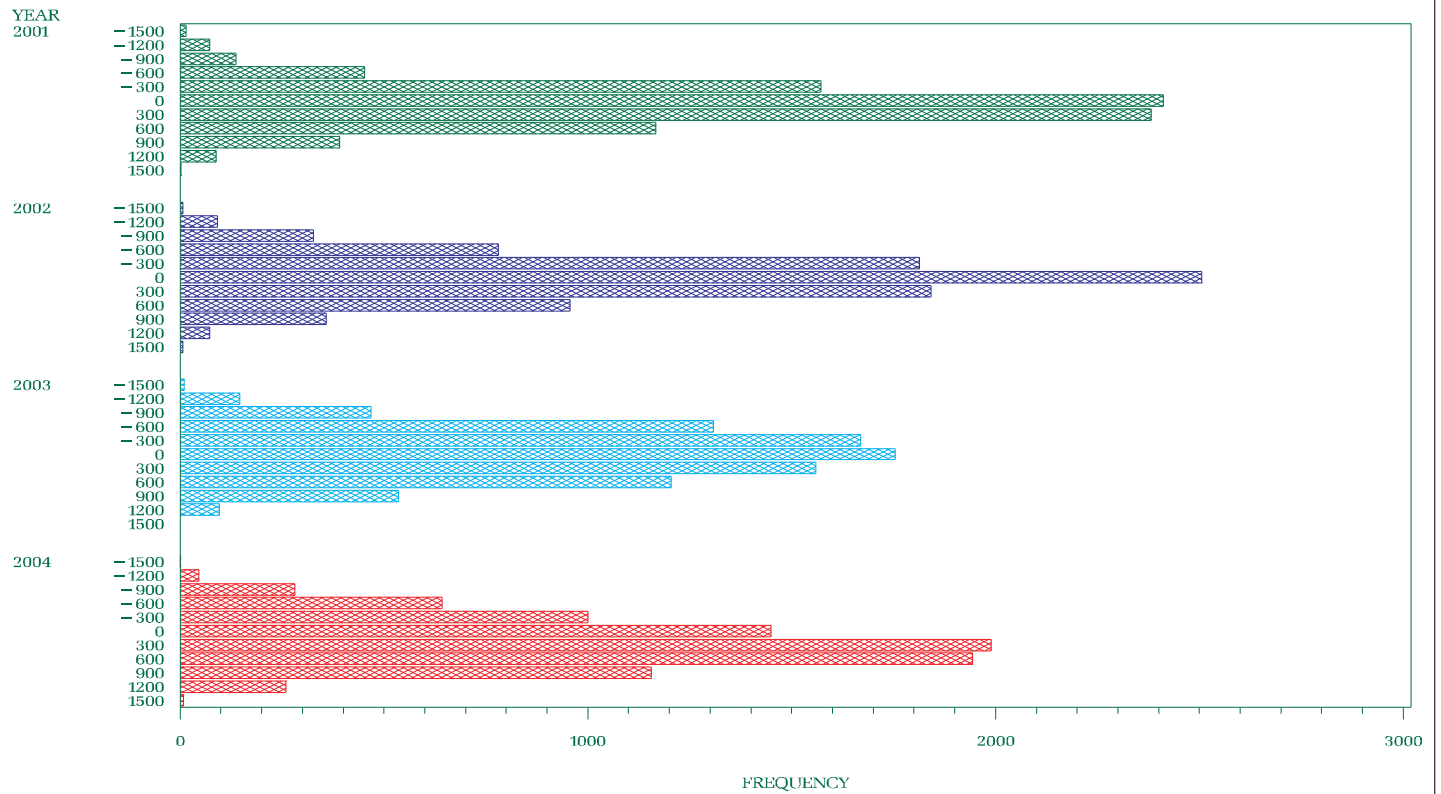
NYISO Frequency Interface Flow For January – December 2004

Ontario South – Frontier



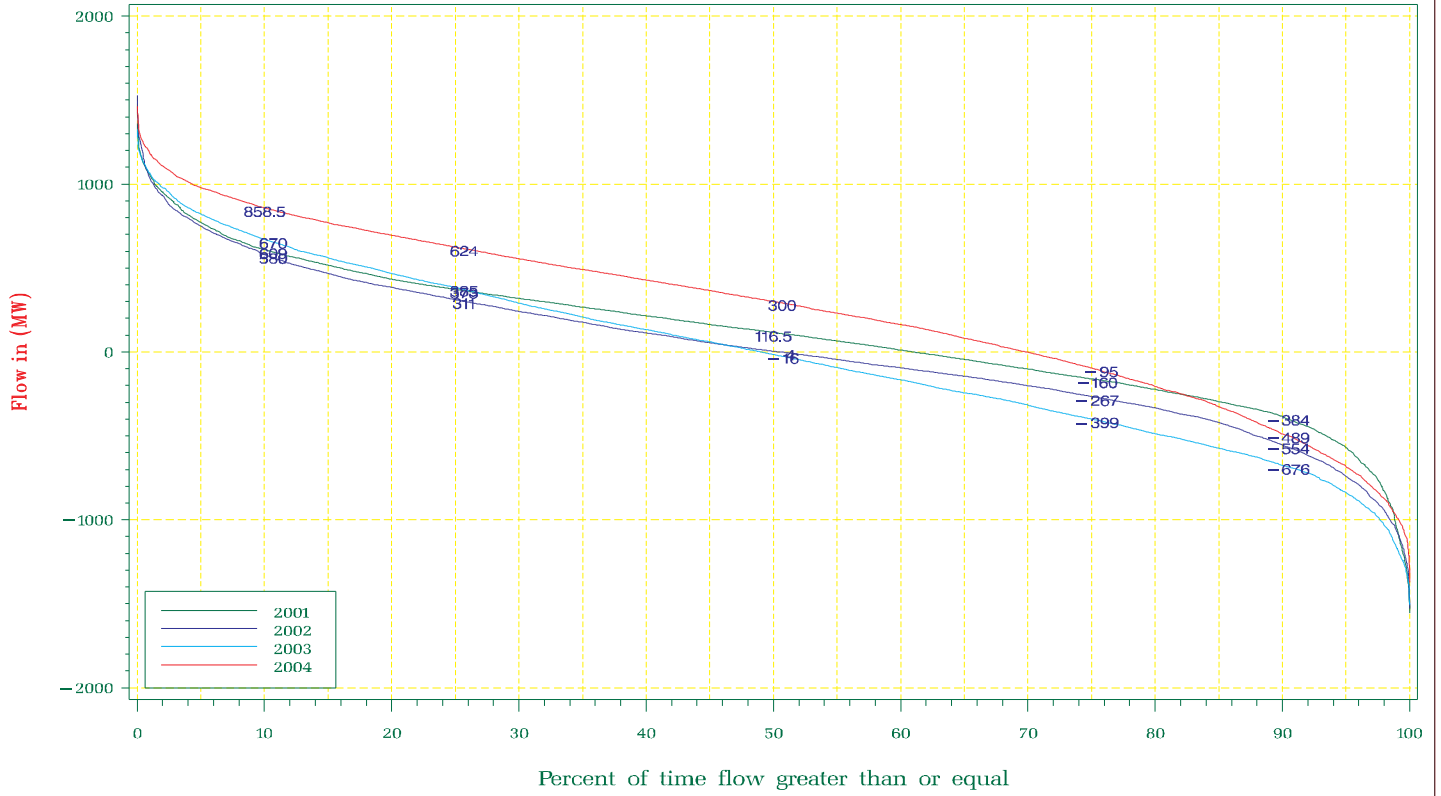
NYISO Frequency Interface Flow For January 2001 – December 2004

Ontario South – Frontier



NYISO Percent of time Interface Flow For January 2001 – December 2004

Ontario South – Frontier



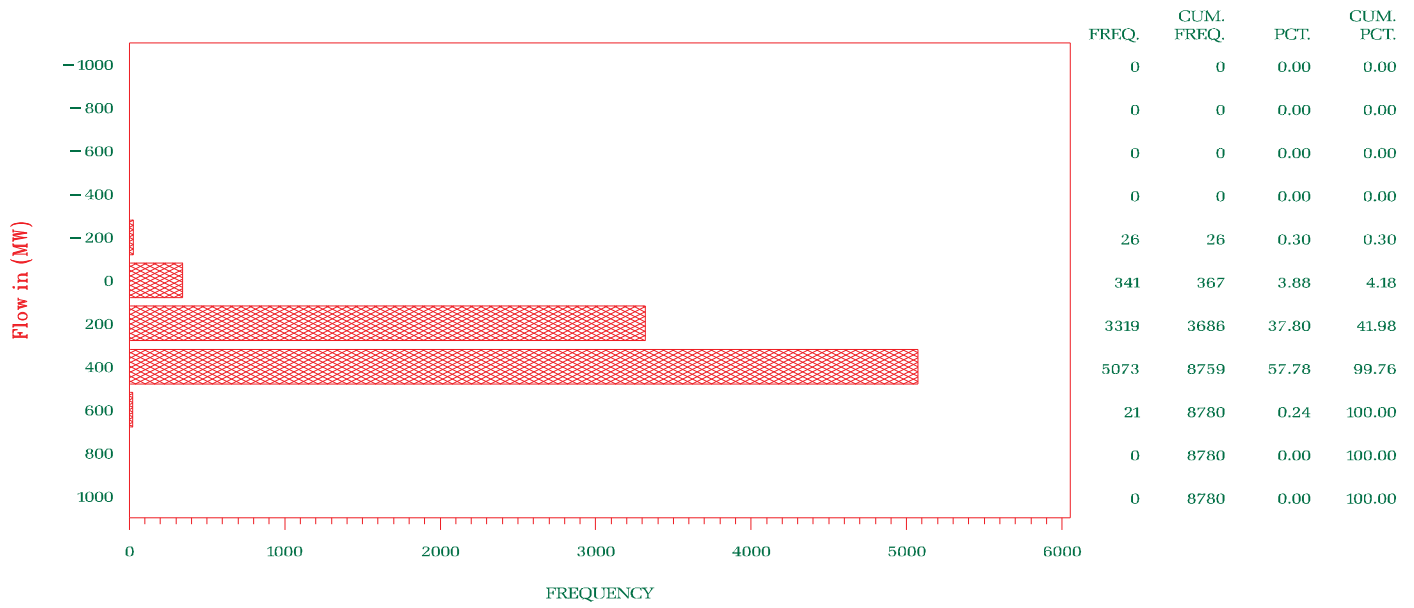
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Ontario South – Frontier



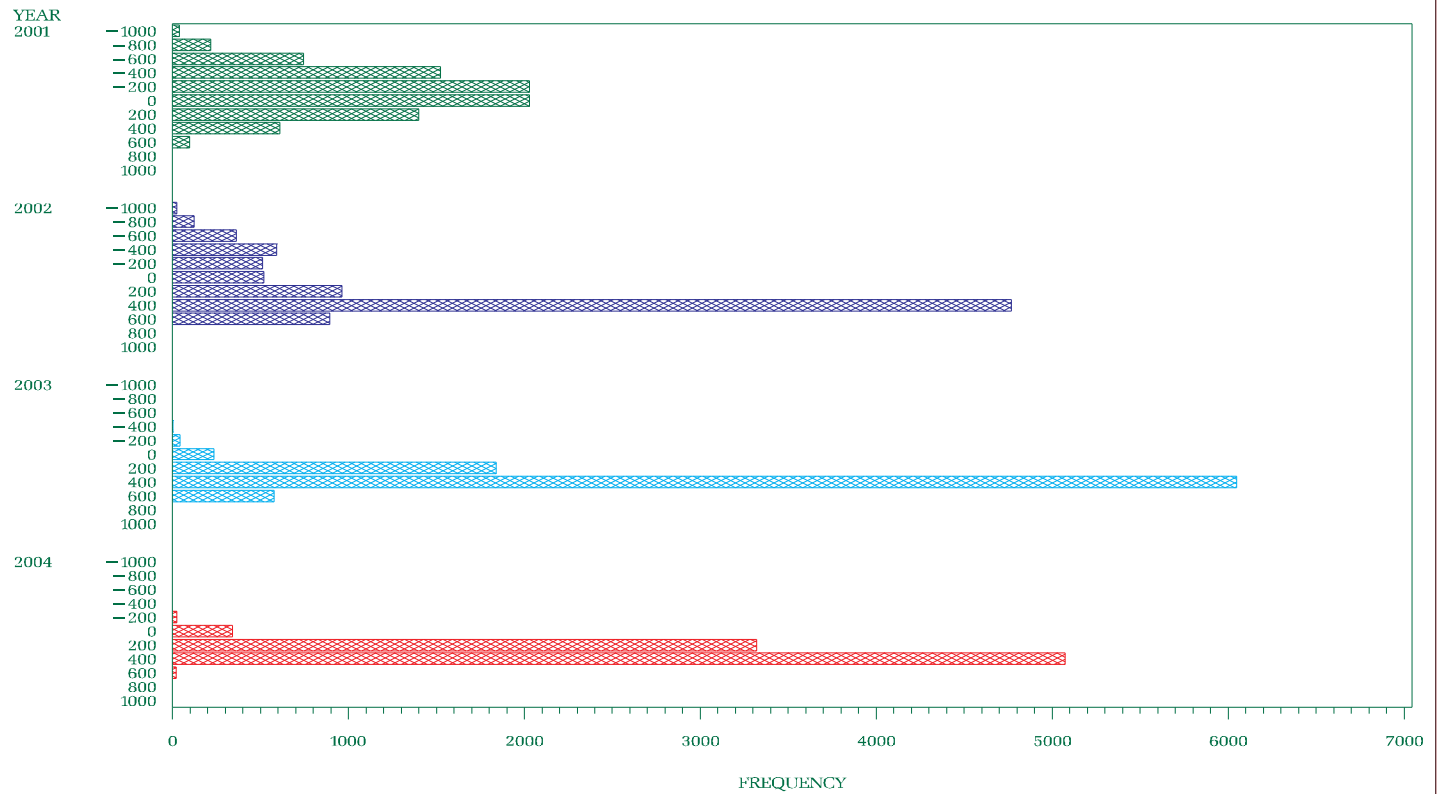
NYISO Frequency Interface Flow For January – December 2004

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



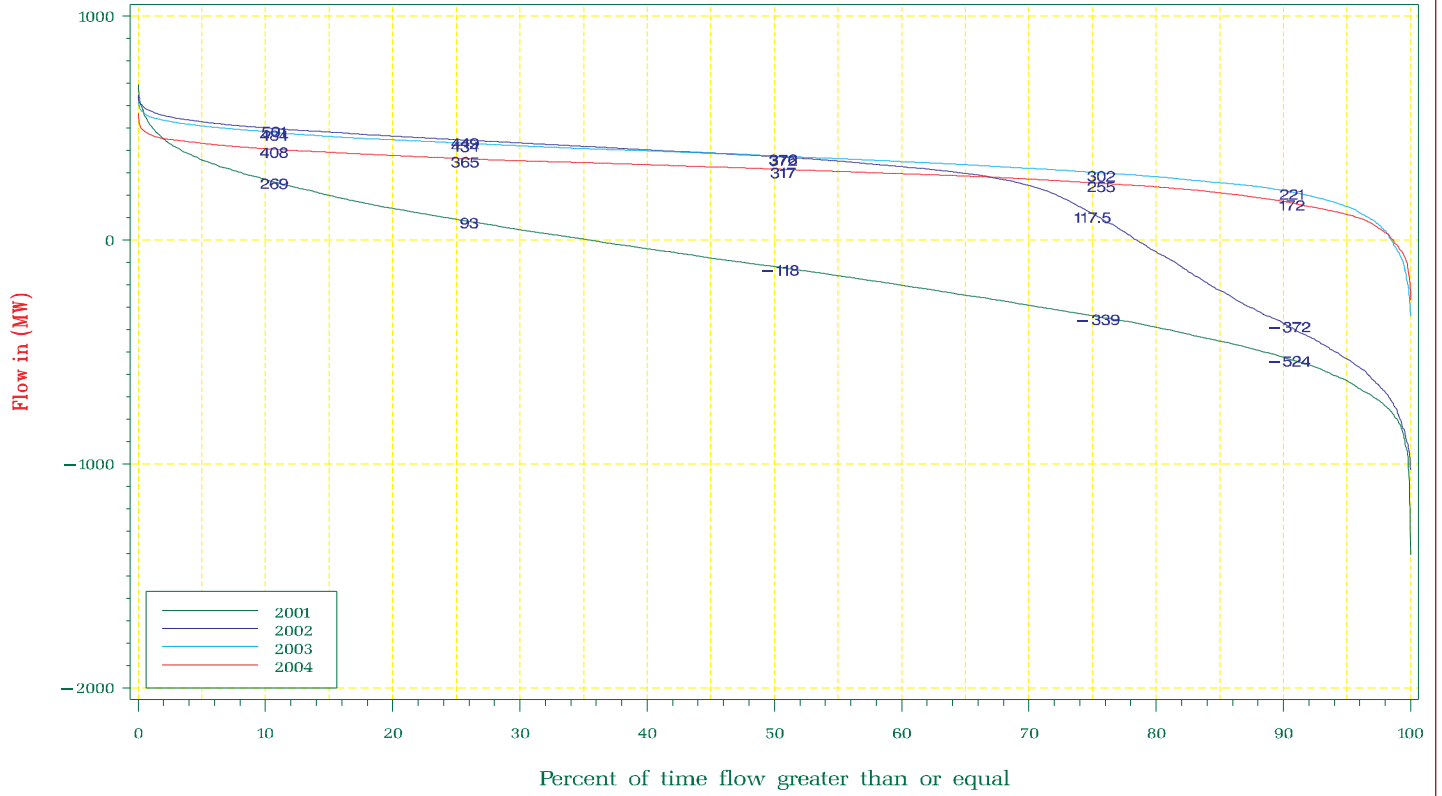
NYISO Frequency Interface Flow For January 2001 – December 2004

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



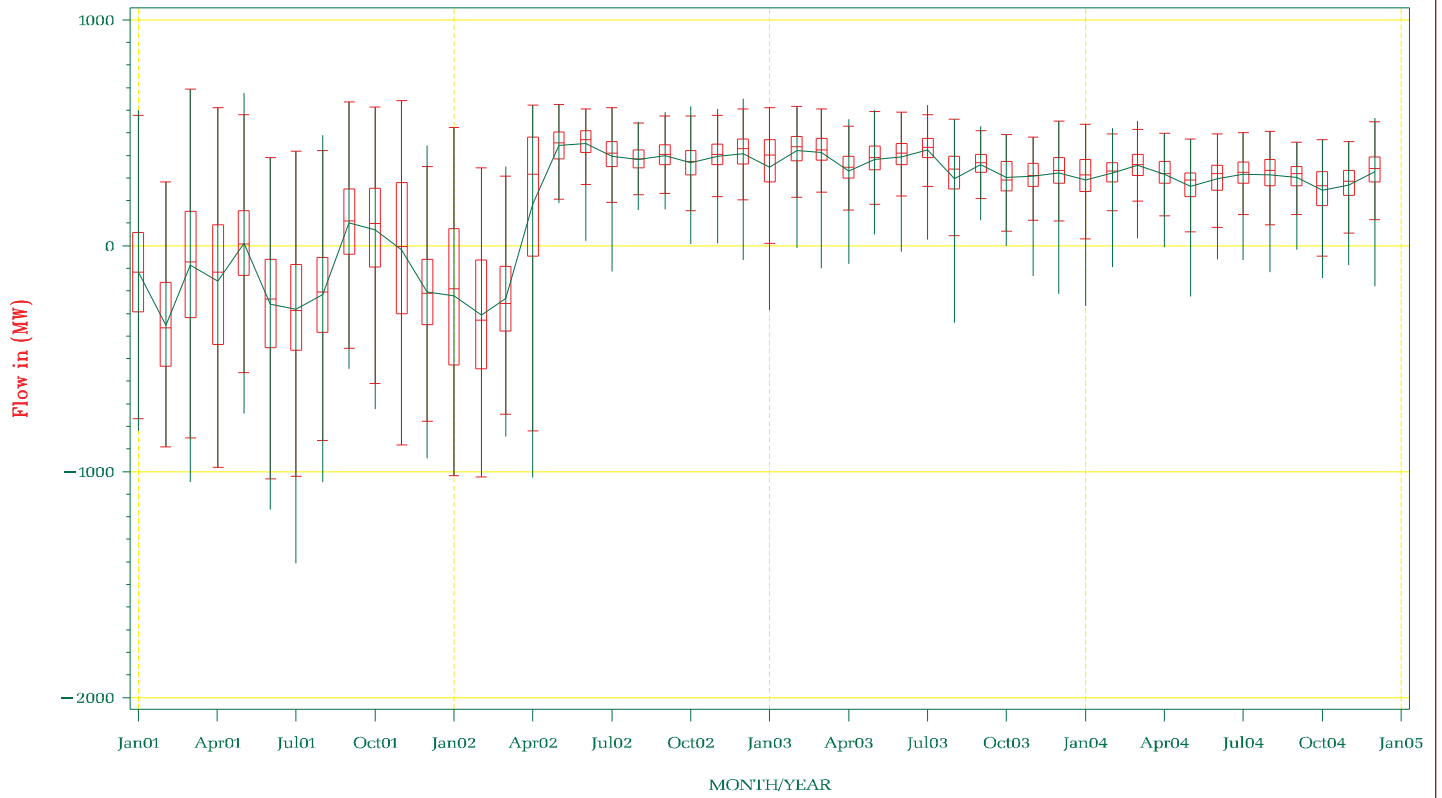
NYISO Percent of time Interface Flow For January 2001 – December 2004

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

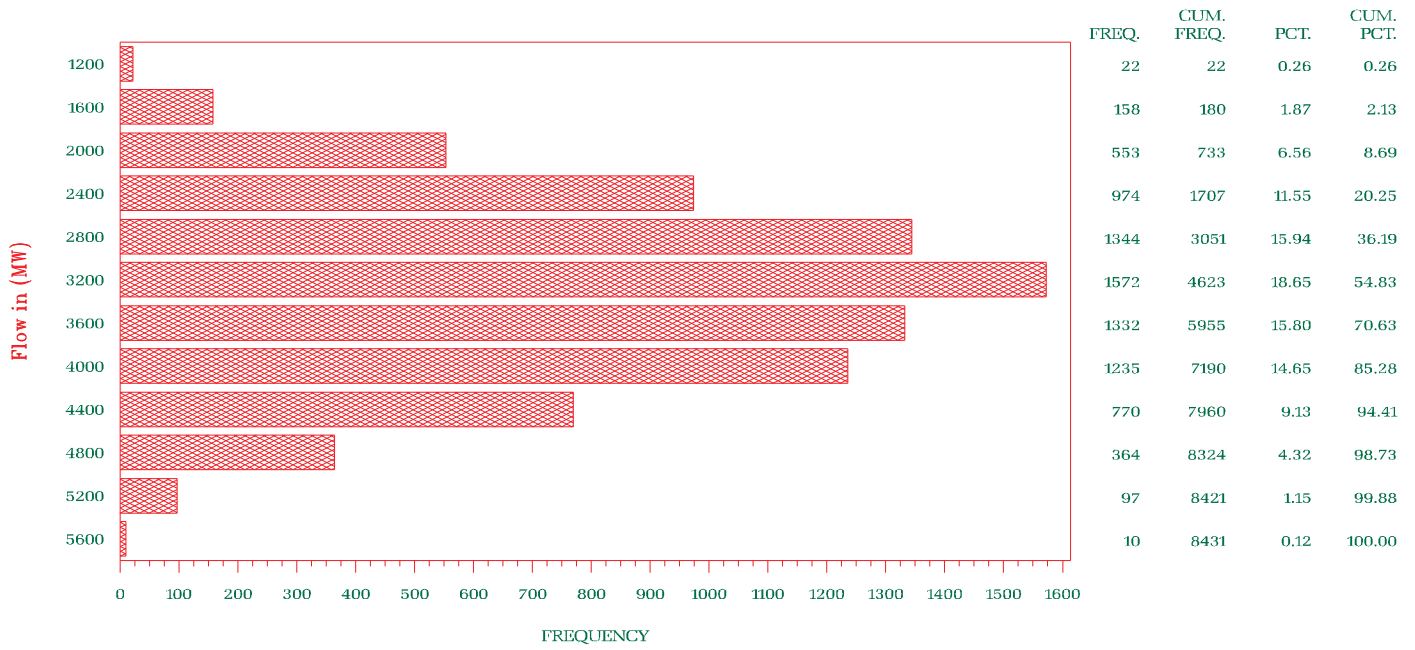
NY – ONTARIO COUNTER CLOCKWISE CIRCULATION





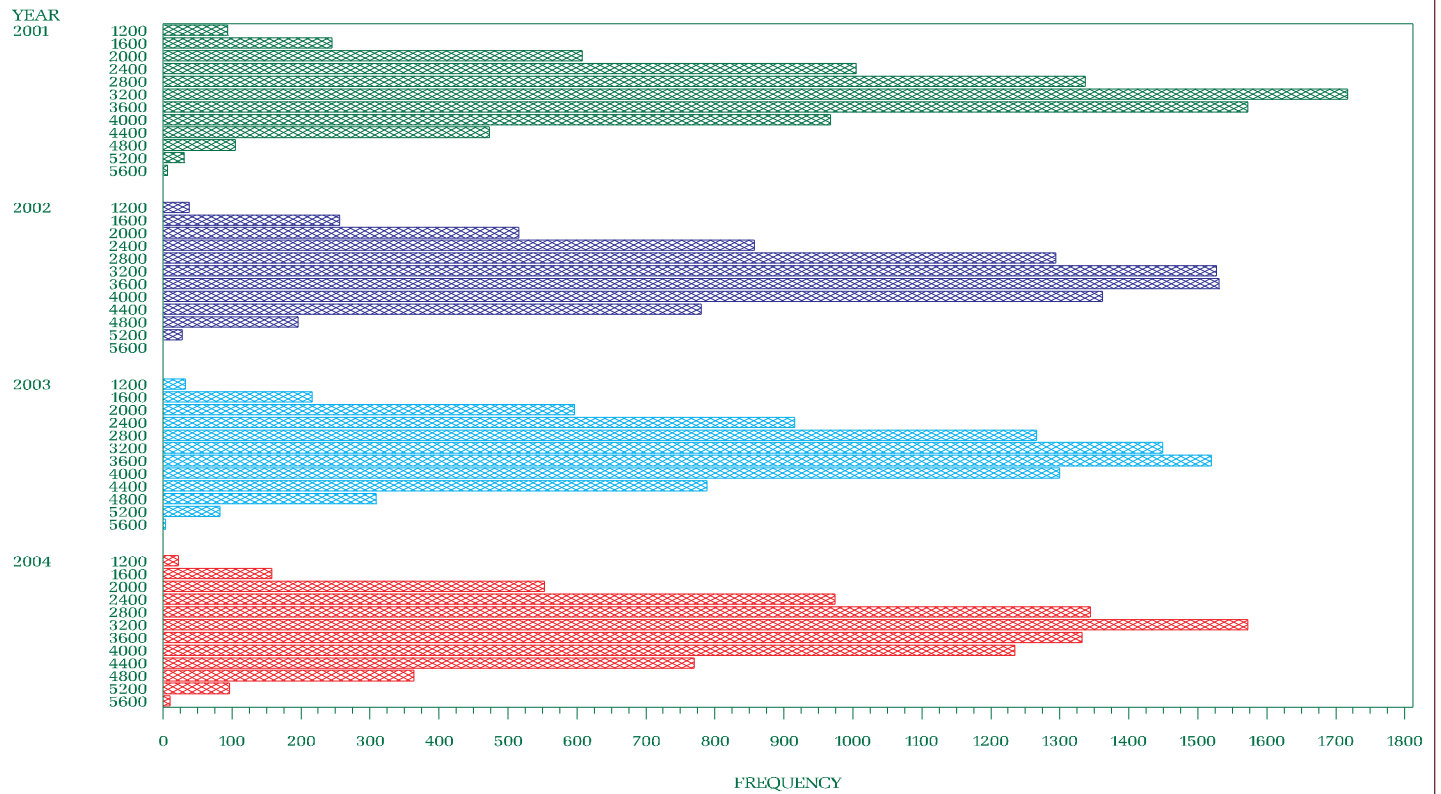
NYISO Frequency Interface Flow For January – December 2004

UPNY – SENY (OPEN)



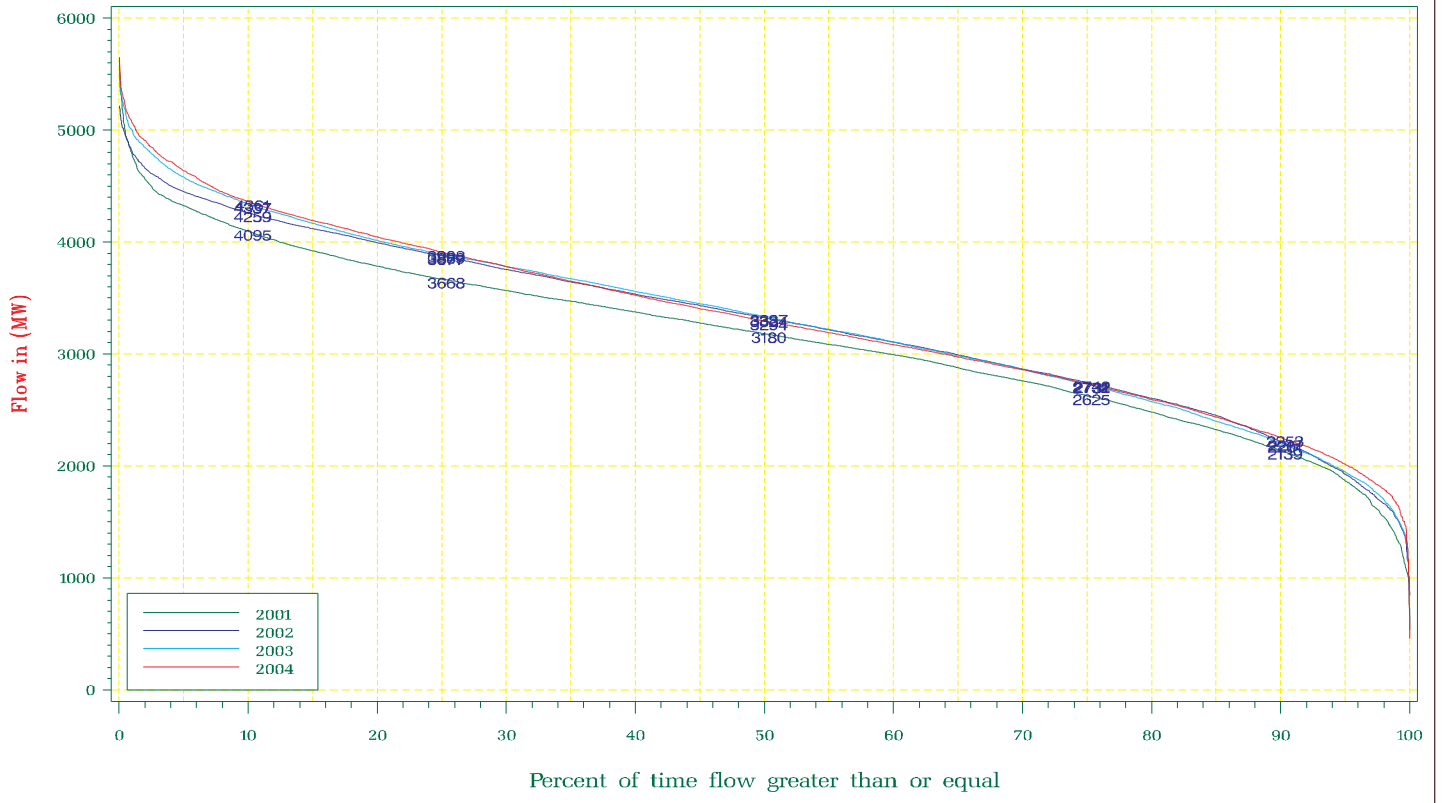
NYISO Frequency Interface Flow For January 2001 – December 2004

UPNY – SENY (OPEN)



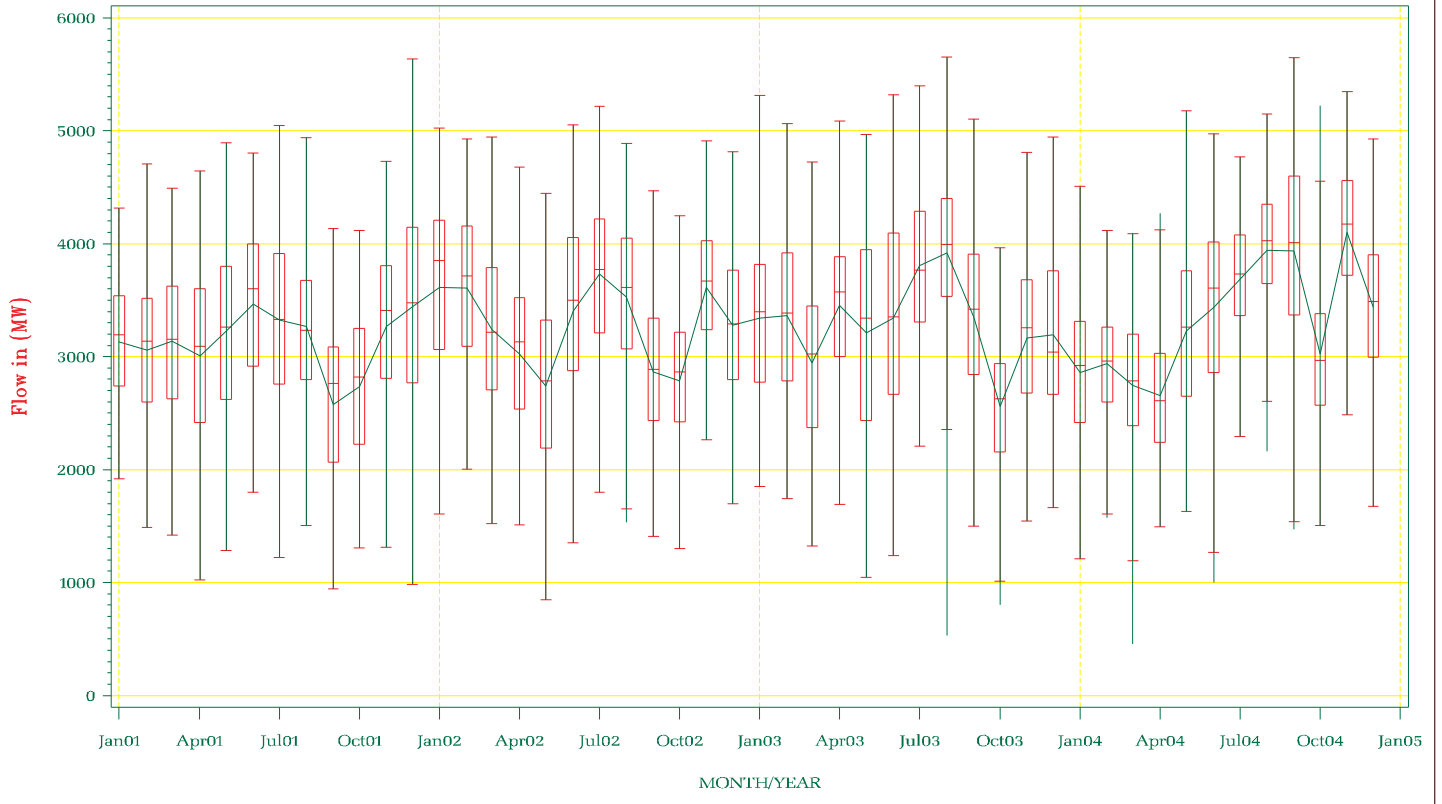
NYISO Percent of time Interface Flow For January 2001 – December 2004

UPNY – SENY (OPEN)



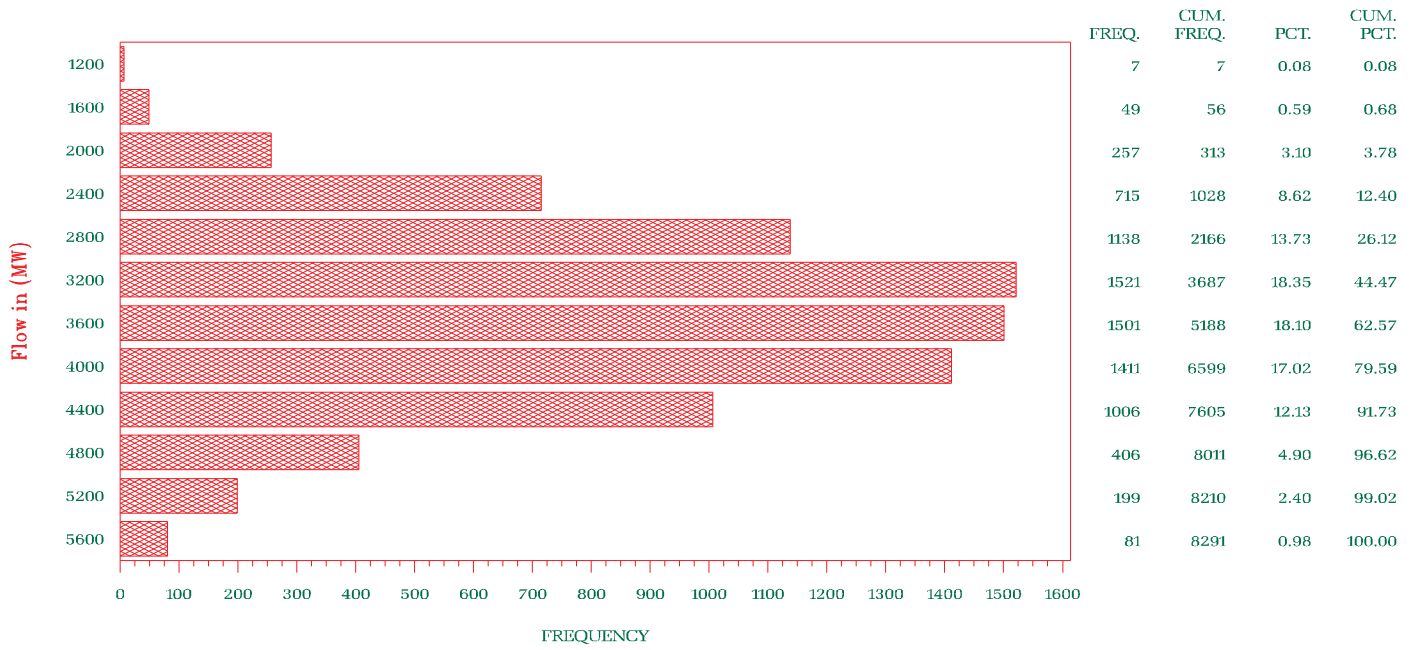
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

UPNY – SENY (OPEN)



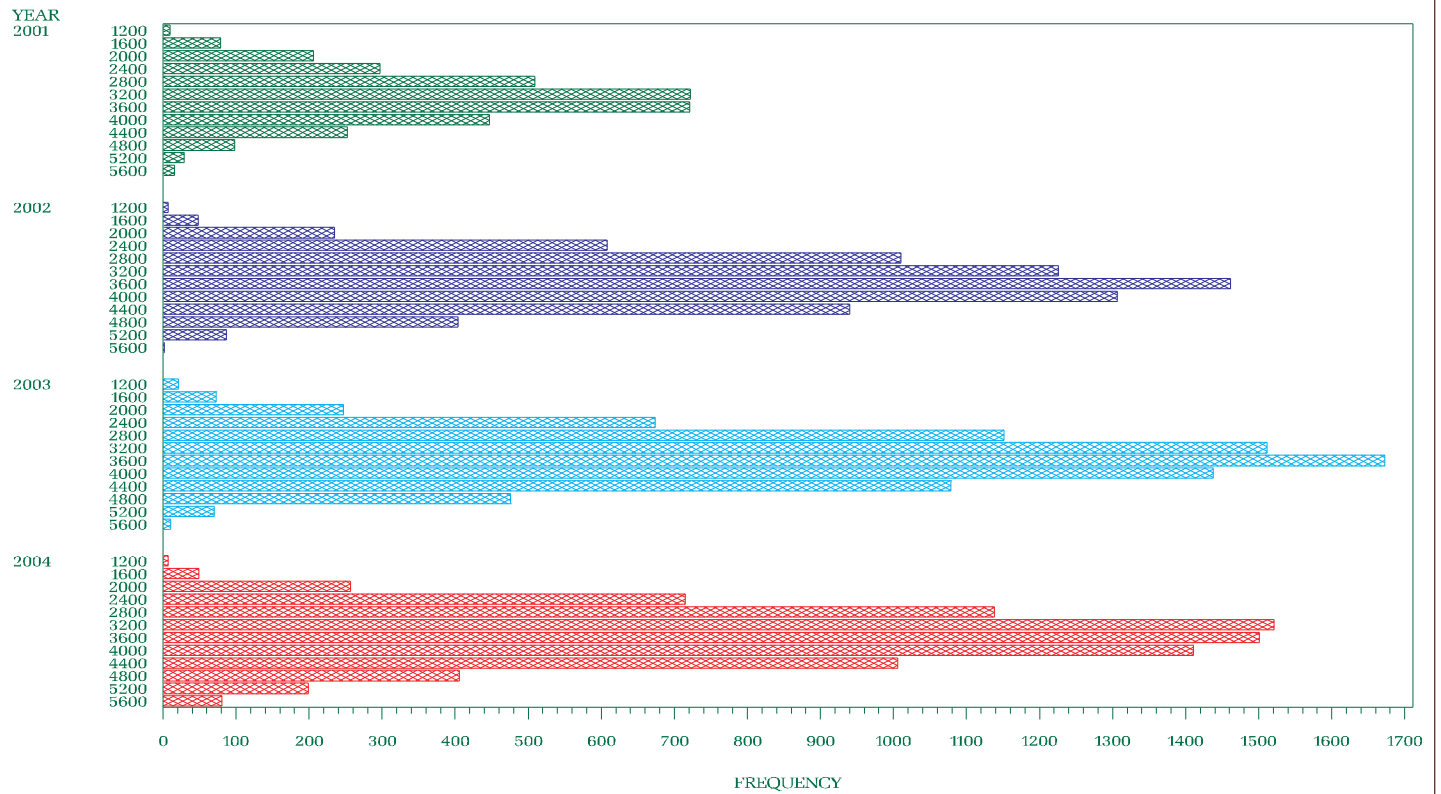
NYISO Frequency Interface Flow For January – December 2004

UPNY – SENY (CLOSED)



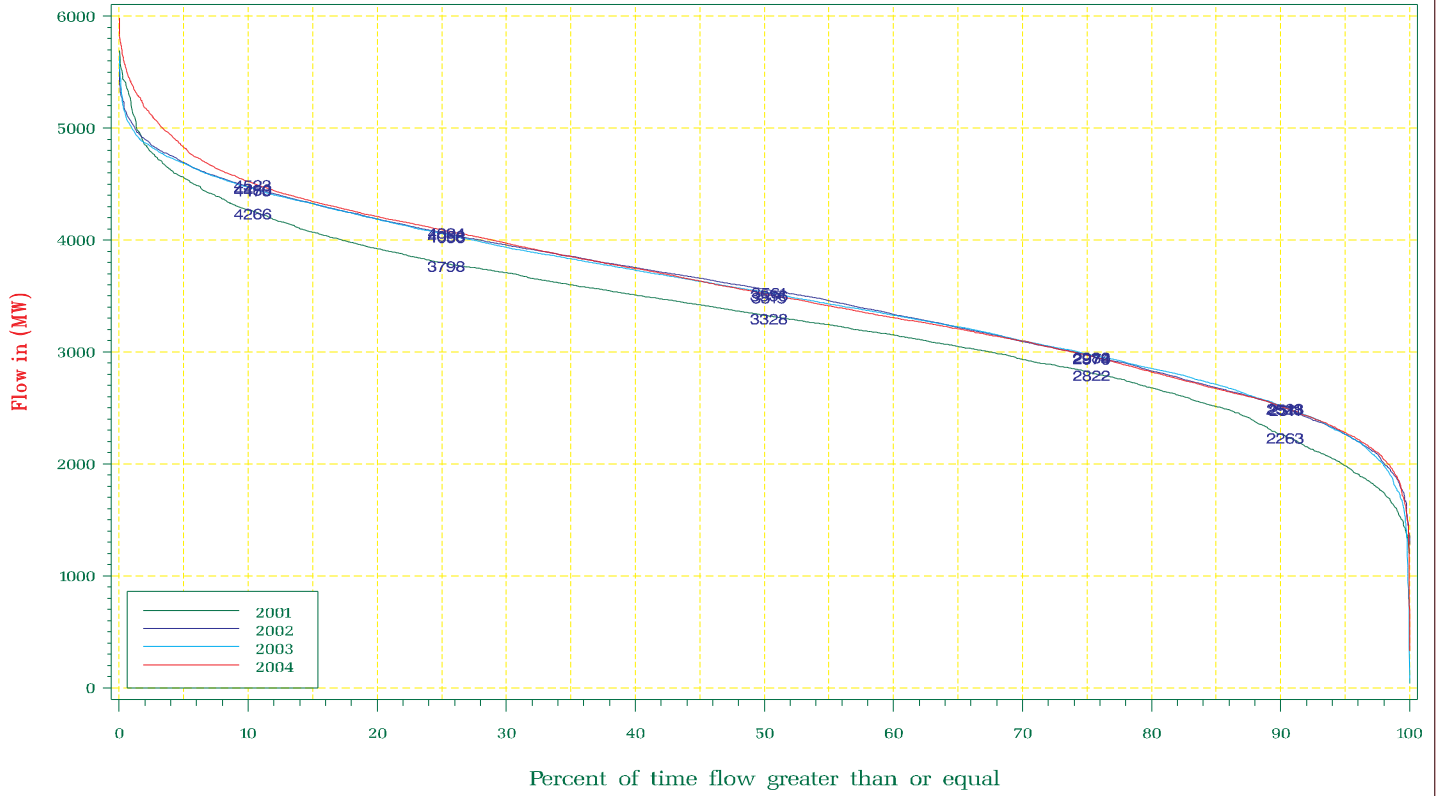
NYISO Frequency Interface Flow For January 2001 – December 2004

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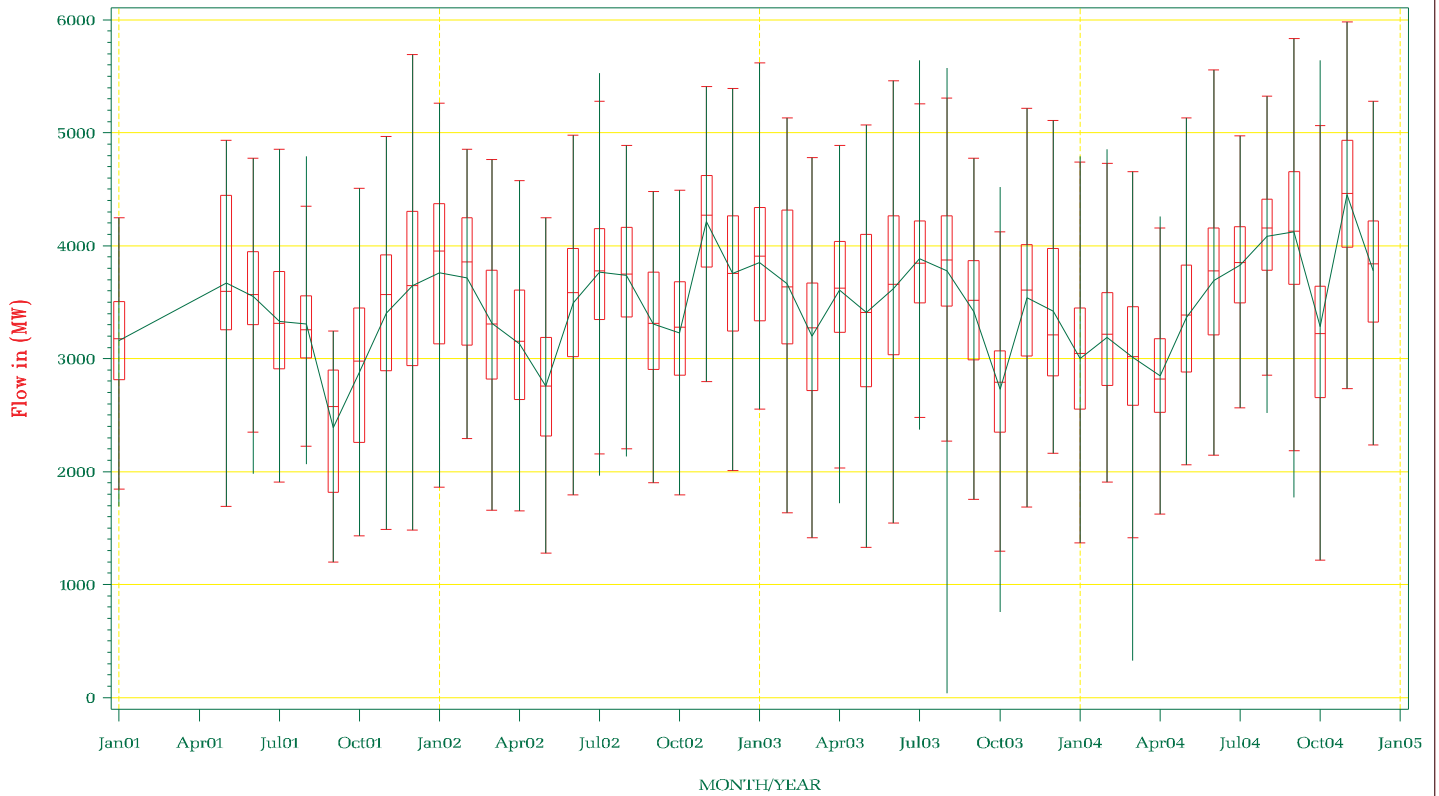
NYISO Percent of time Interface Flow For January 2001 – December 2004

UPNY – SENY (CLOSED)



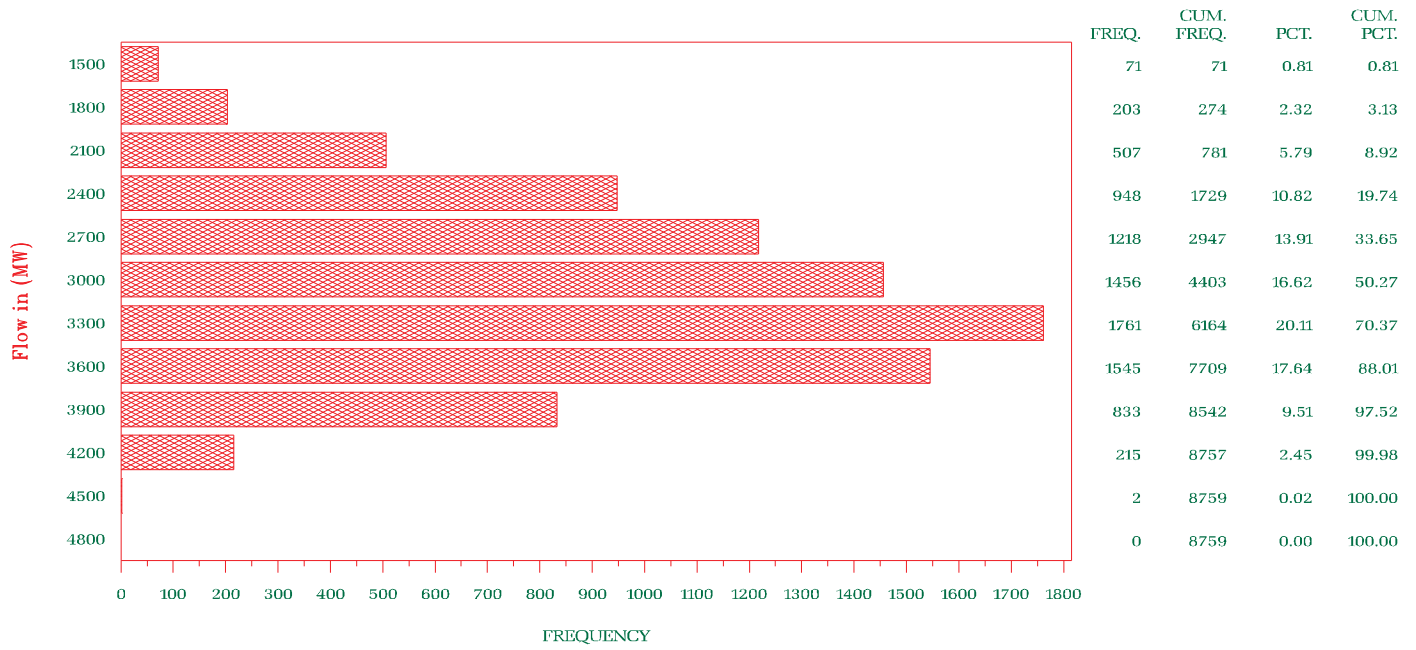
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

UPNY – SENY (CLOSED)



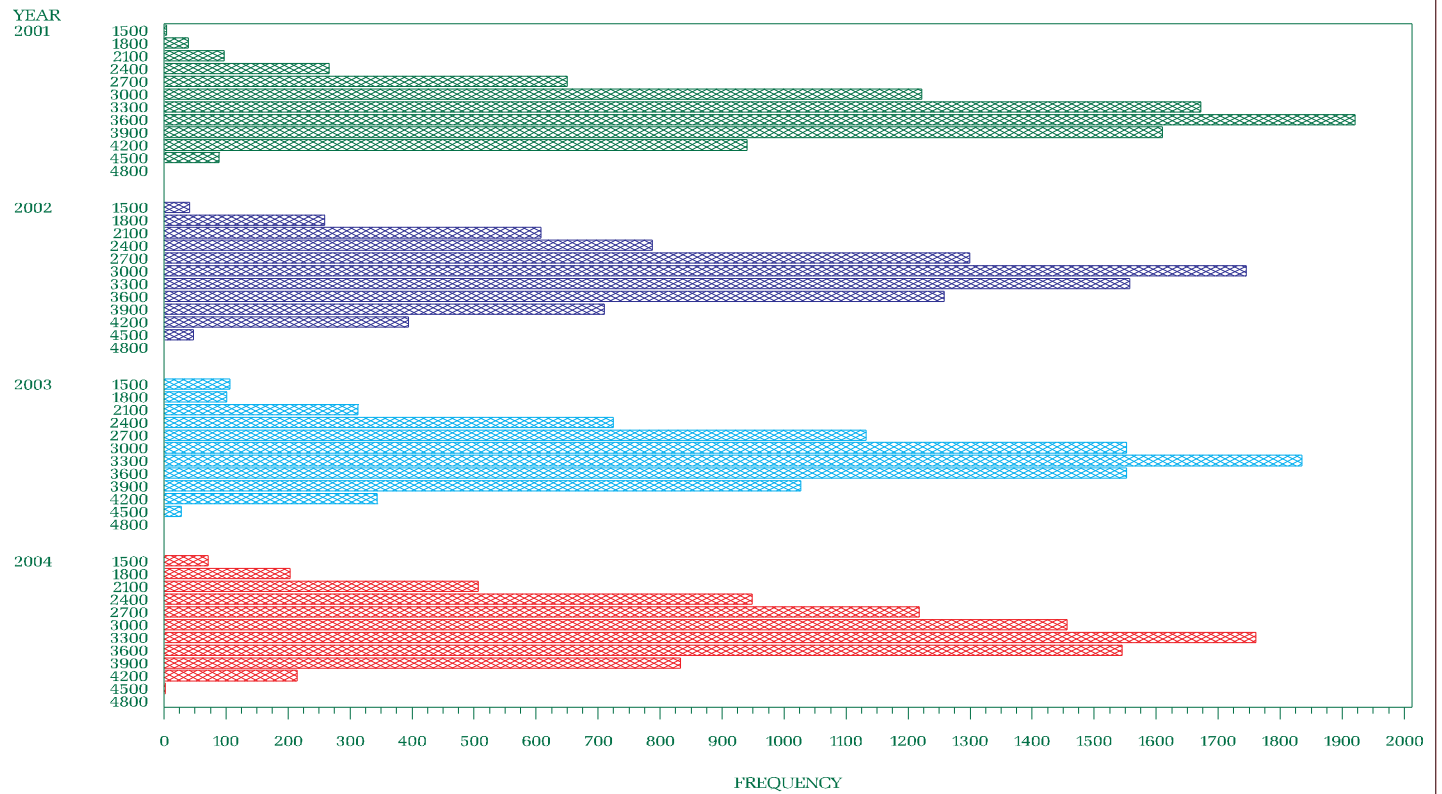
NYISO Frequency Interface Flow For January – December 2004

Volney – East (OPEN)



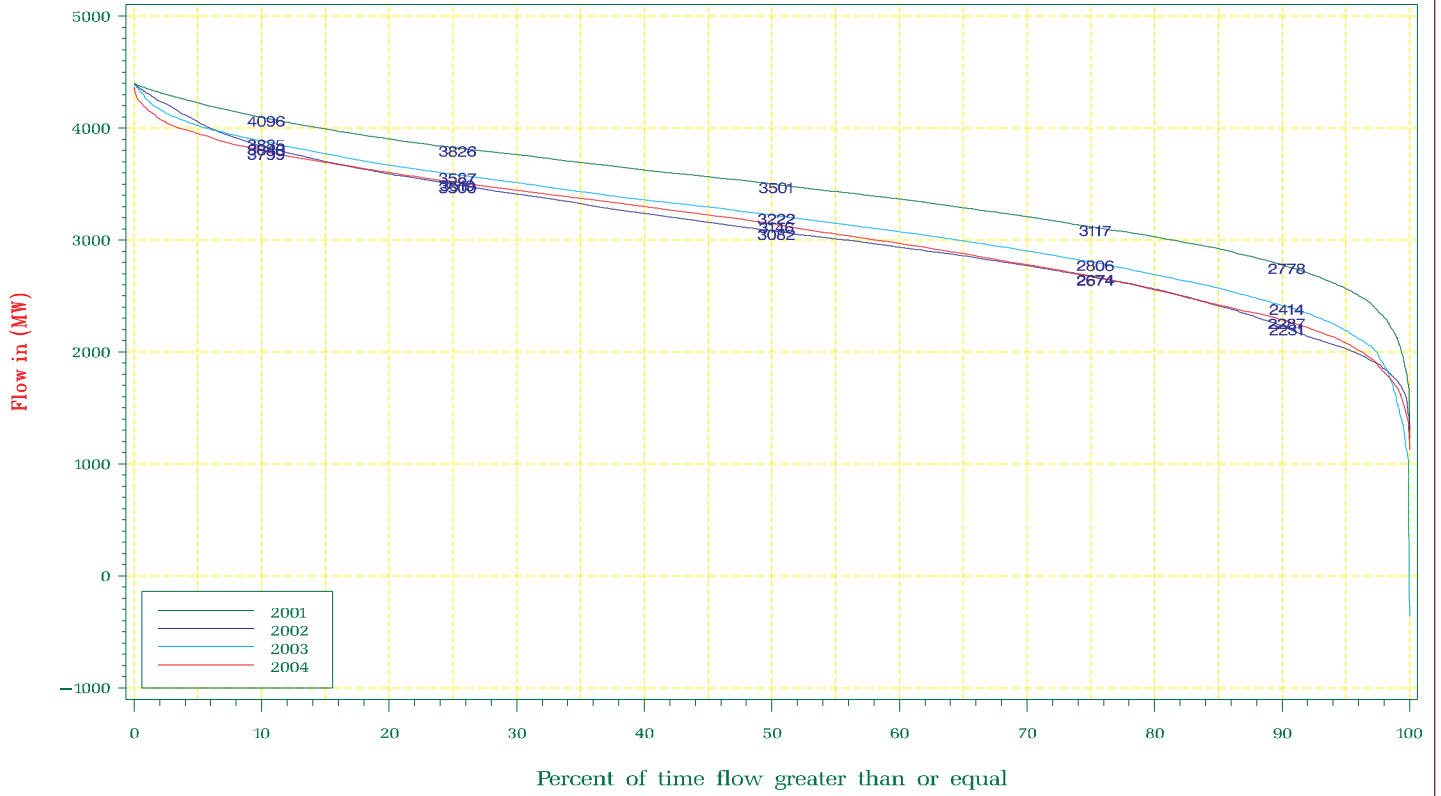
NYISO Frequency Interface Flow For January 2001 – December 2004

Volney – East (OPEN)



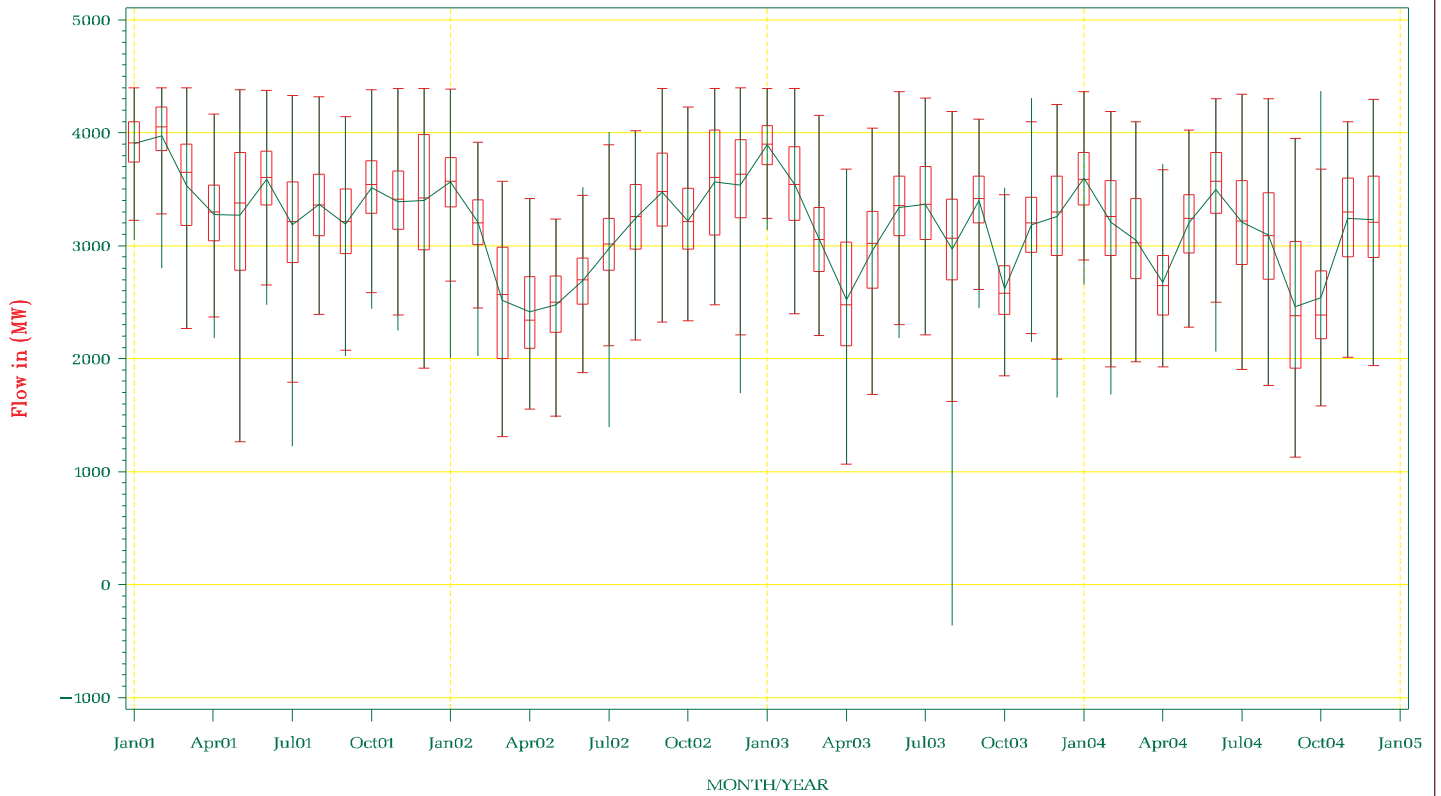
NYISO Percent of time Interface Flow For January 2001 – December 2004

Volney – East (OPEN)



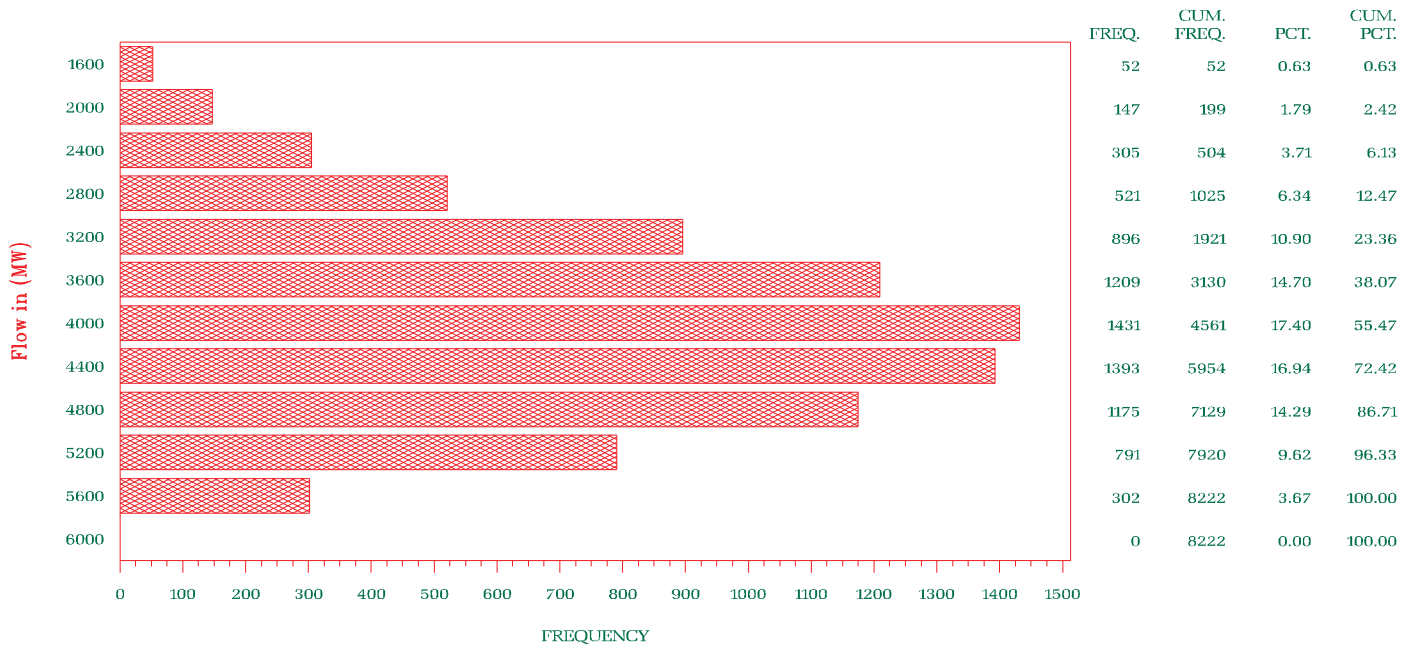
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Volney – East (OPEN)



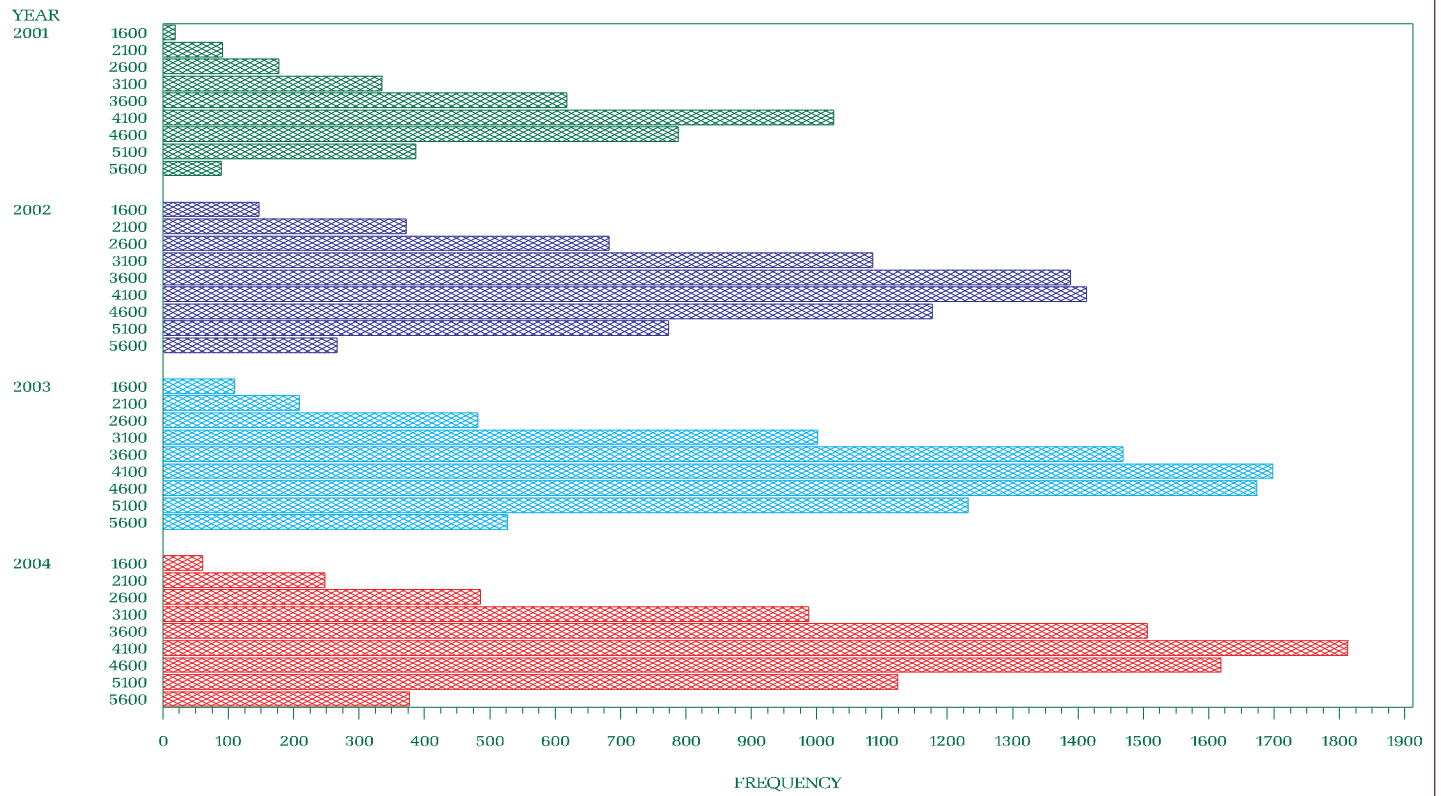
NYISO Frequency Interface Flow For January – December 2004

Volney – East (CLOSED)



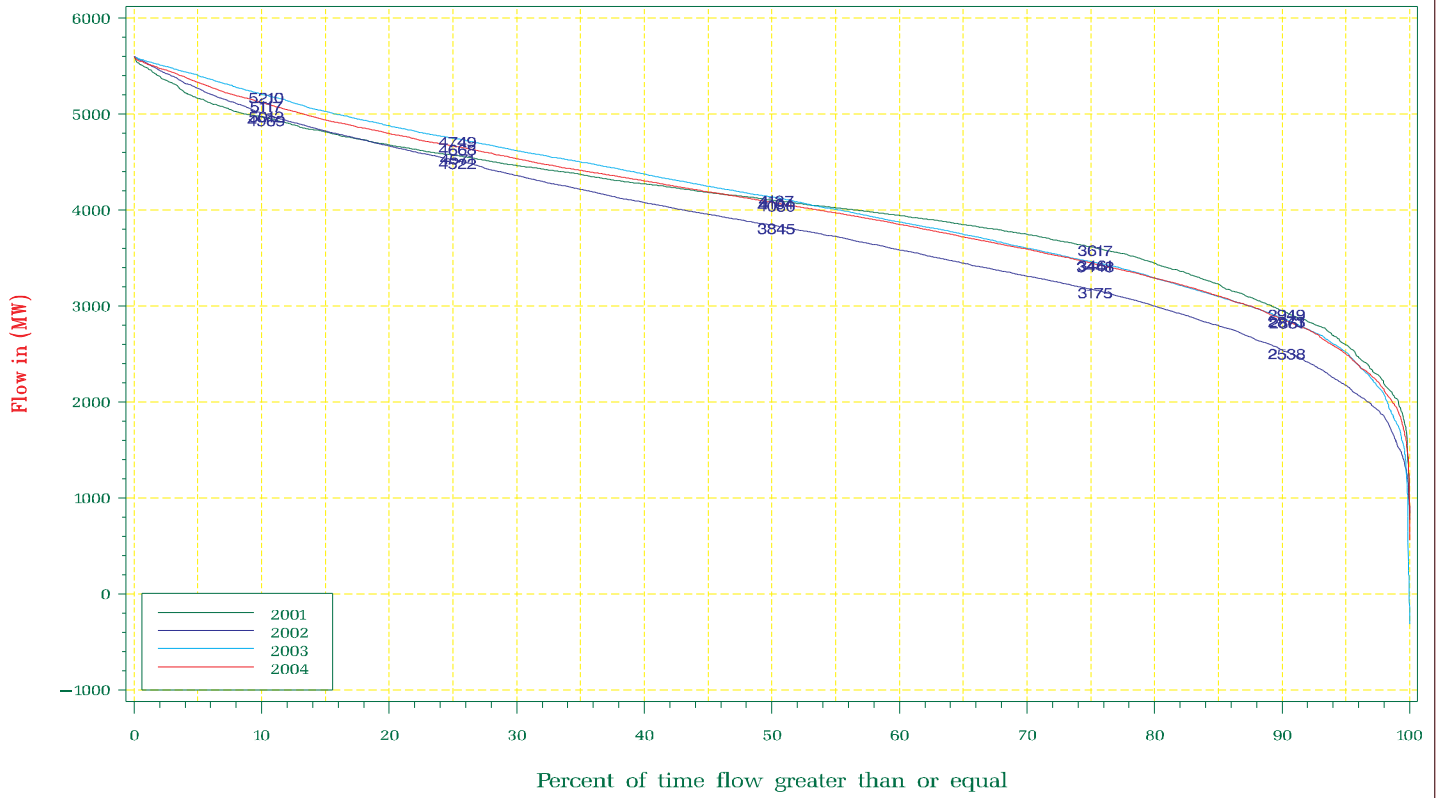
NYISO Frequency Interface Flow For January 2001 – December 2004

Volney – East (CLOSED)



NYISO Percent of time Interface Flow For January 2001 – December 2004

Volney – East (CLOSED)



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

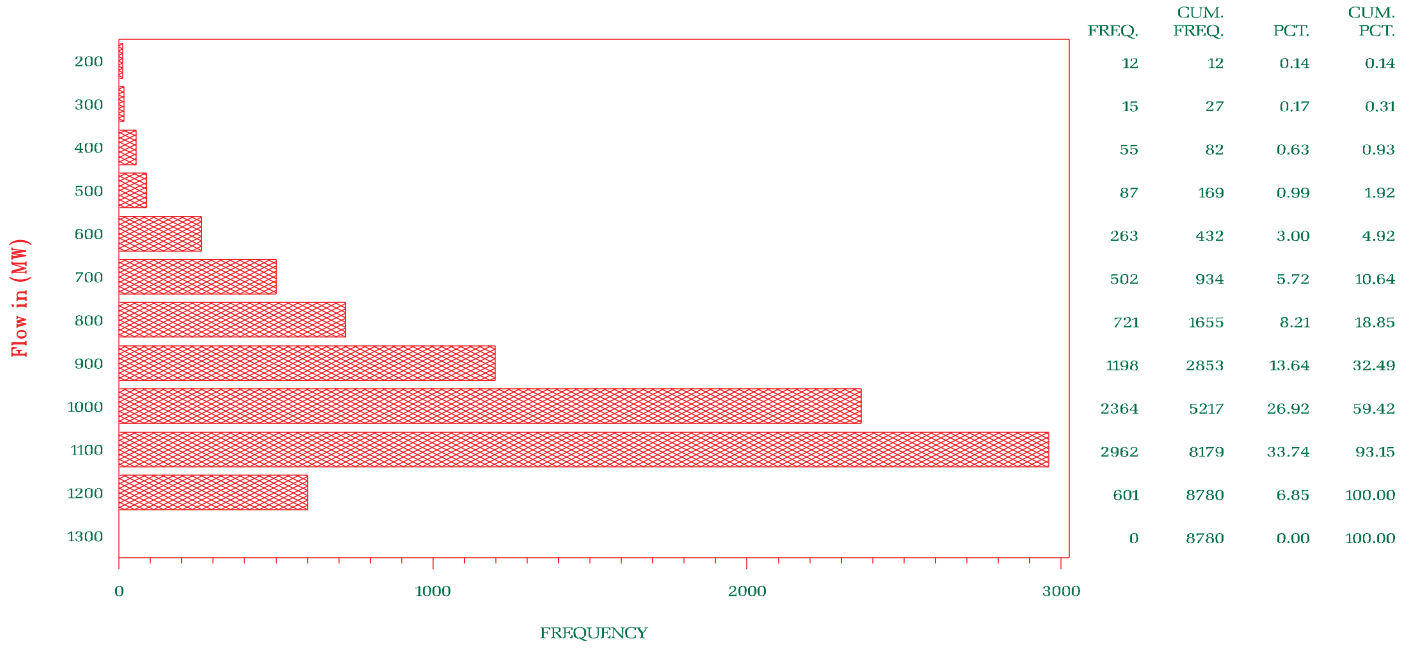
Volney – East (CLOSED)





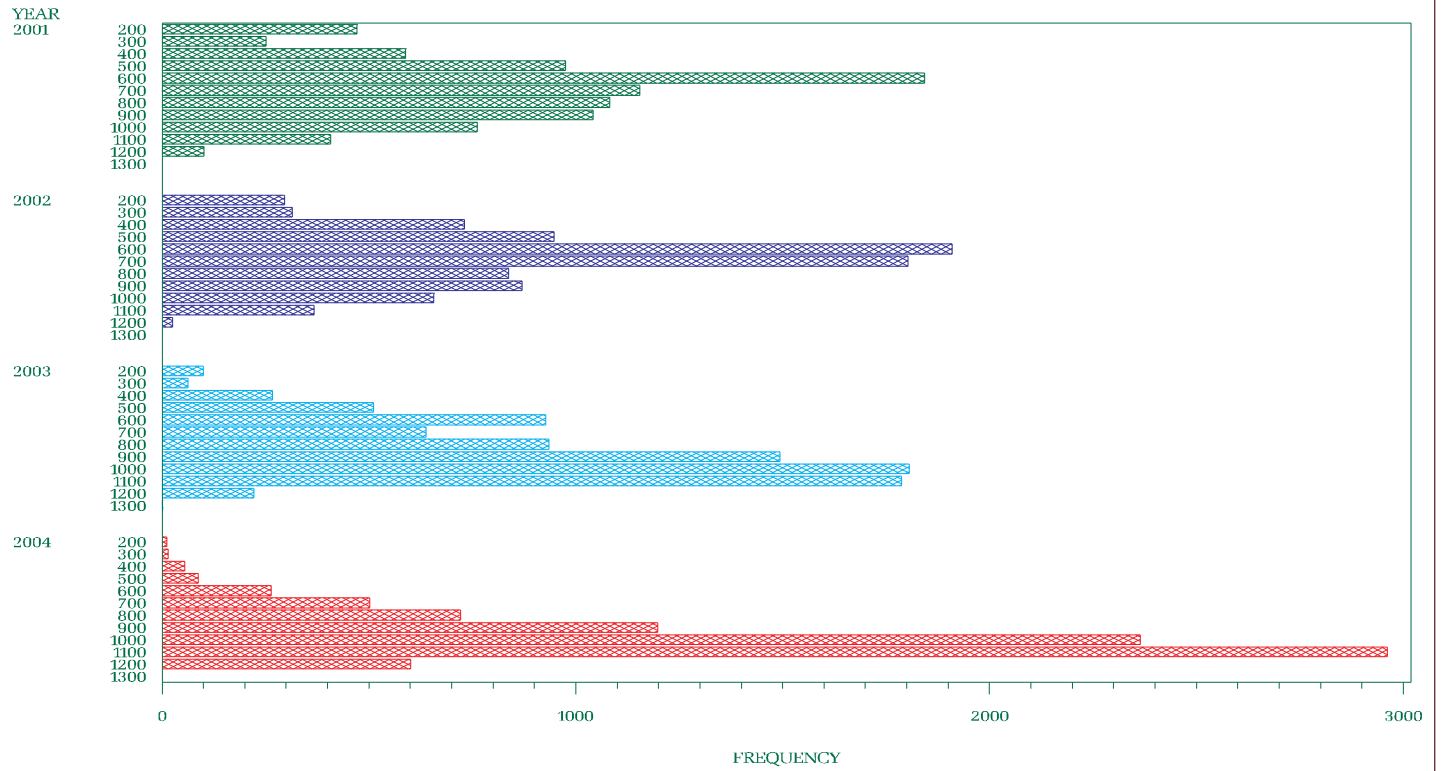
NYISO Frequency Interface Flow For January – December 2004

Westchester – Long Island  
Y49 + Y50



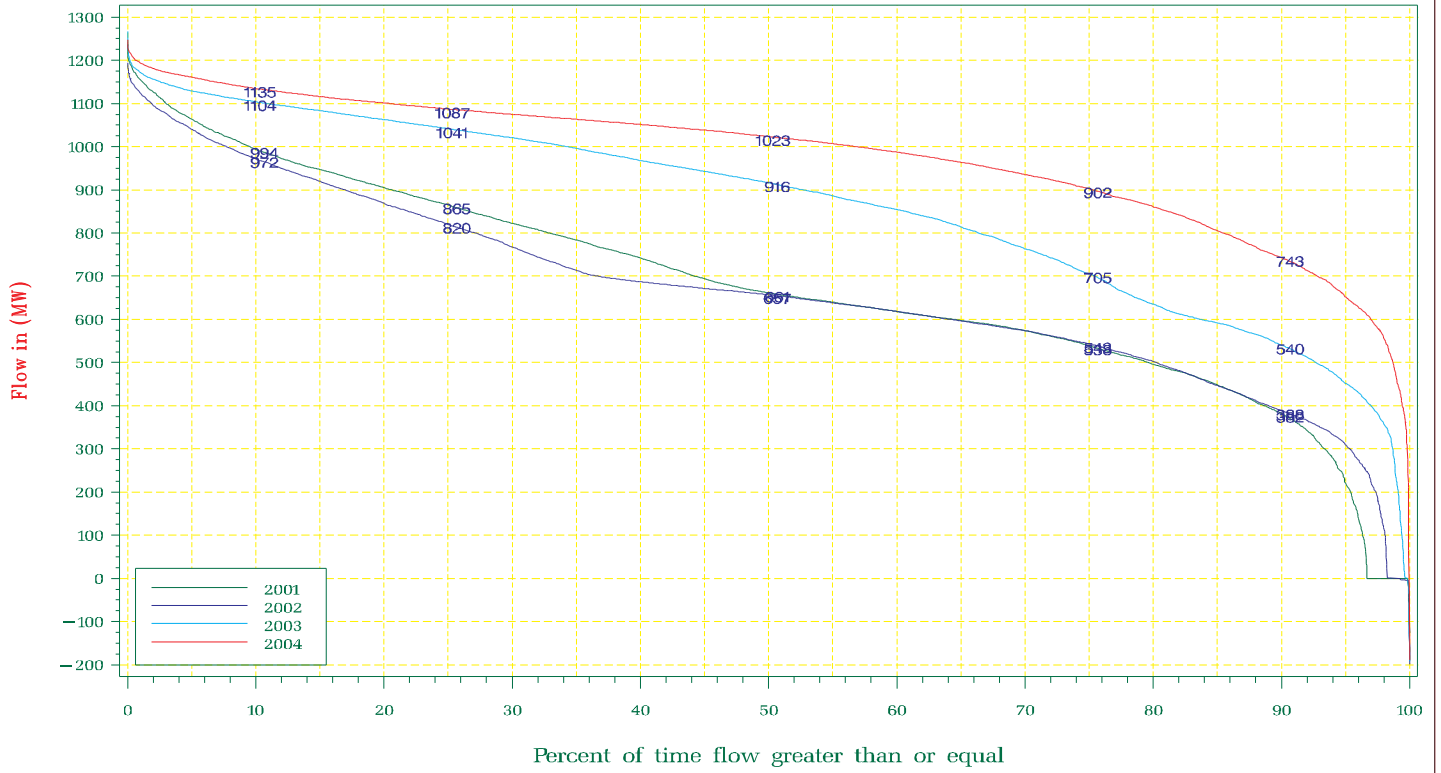
NYISO Frequency Interface Flow For January 2001 – December 2004

Westchester – Long Island  
Y49 + Y50



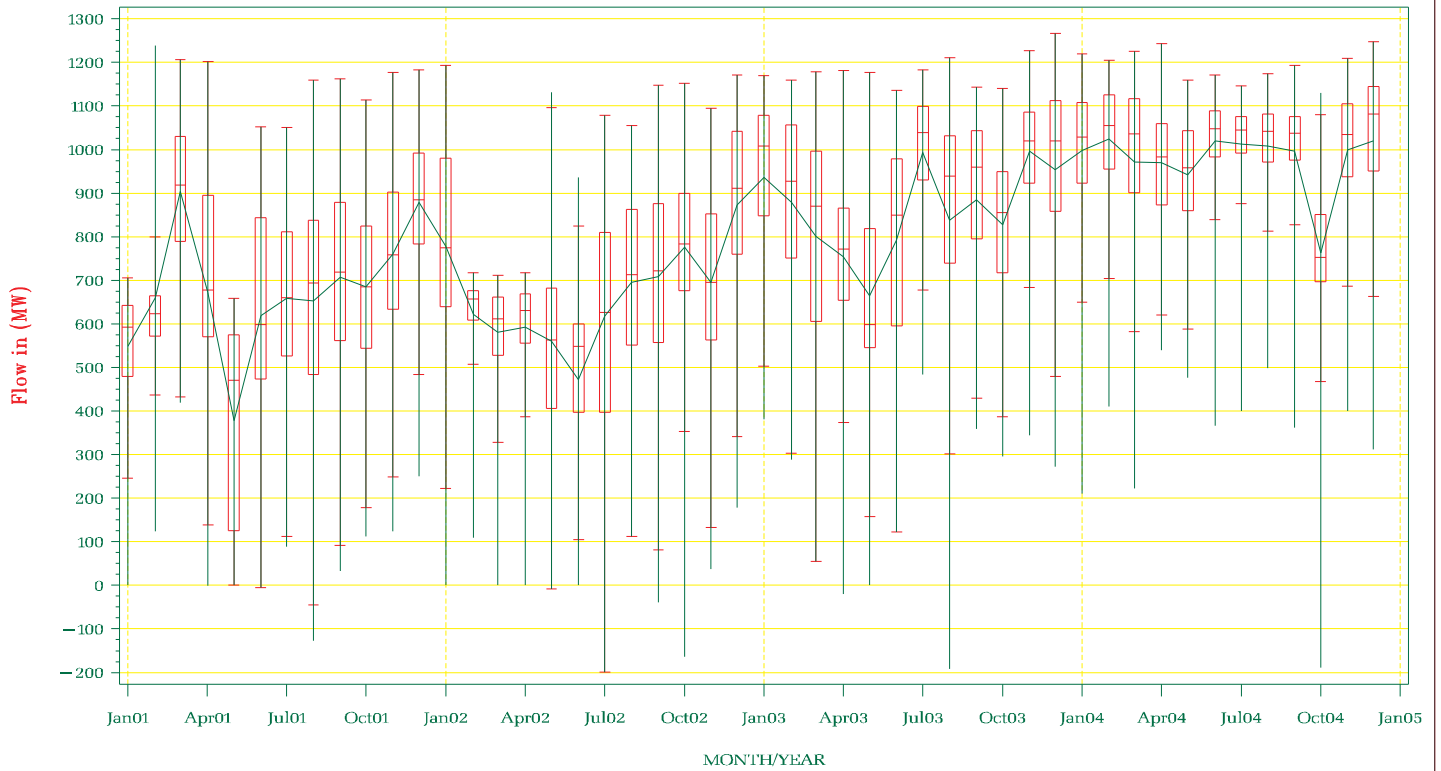
NYISO Percent of time Interface Flow For January 2001 – December 2004

Westchester – Long Island  
Y49 + Y50



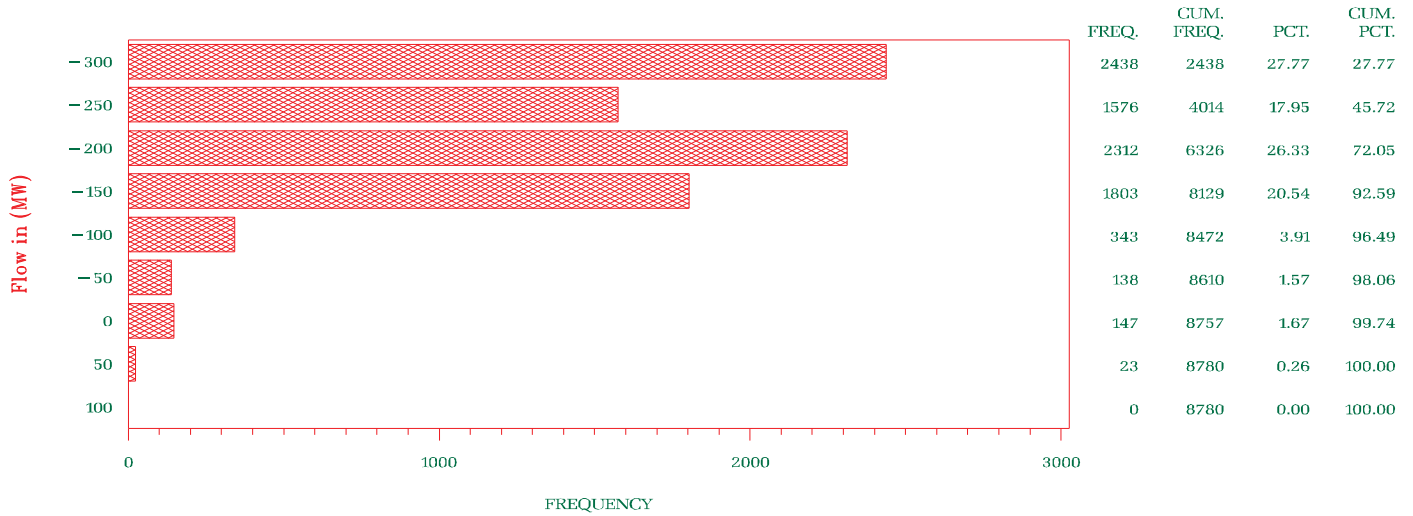
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Westchester – Long Island  
Y49 + Y50



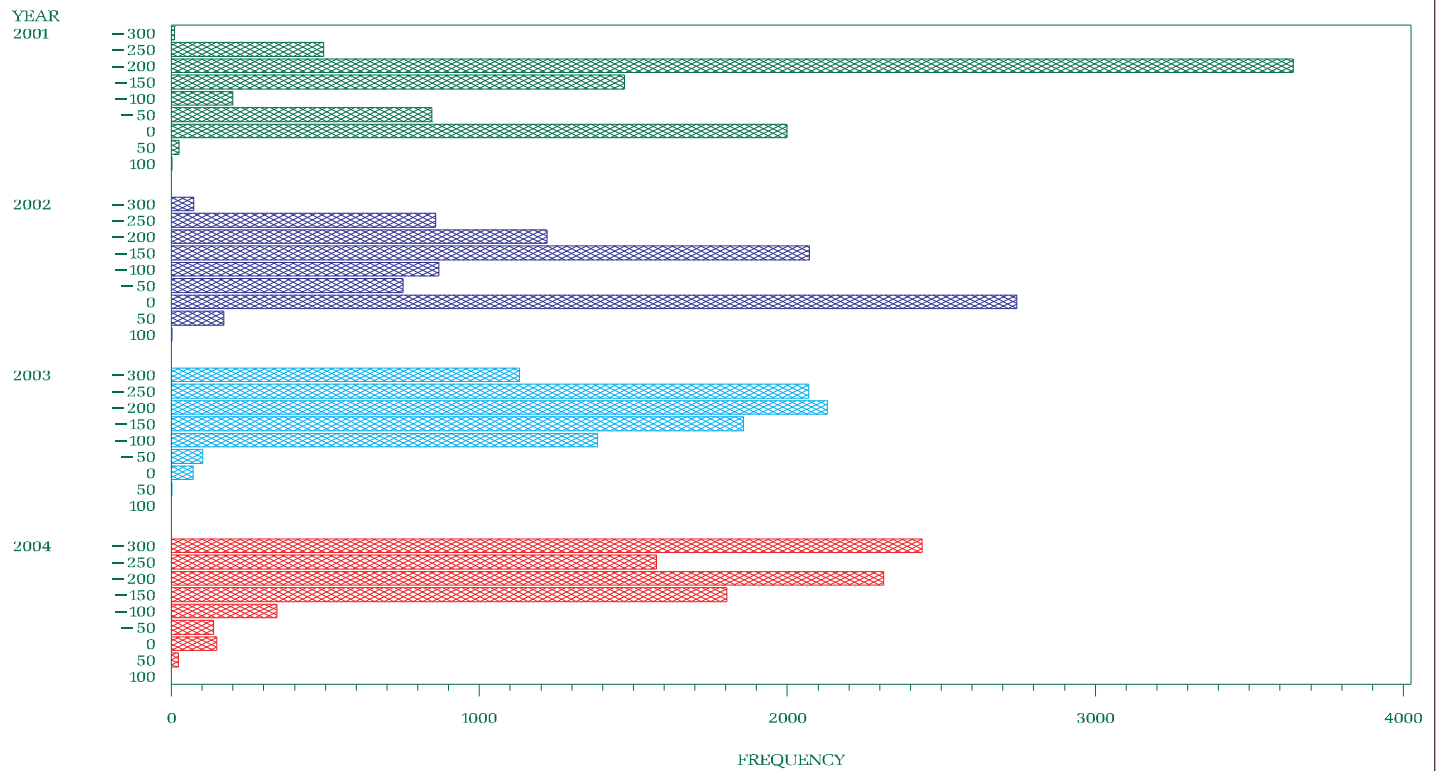
NYISO Frequency Interface Flow For January – December 2004

New York City – Long Island  
901+903



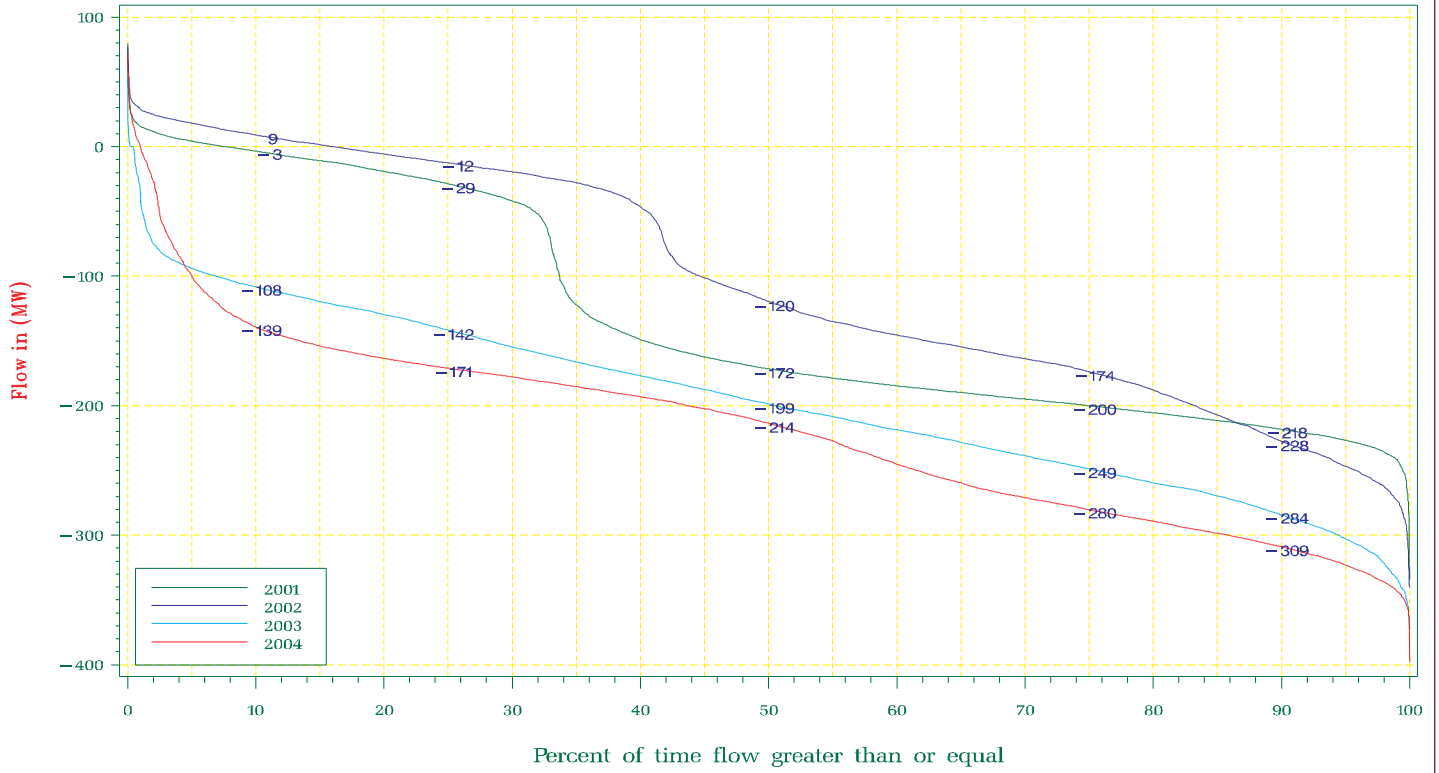
NYISO Frequency Interface Flow For January 2001 – December 2004

New York City – Long Island  
901+903



NYISO Percent of time Interface Flow For January 2001 – December 2004

New York City – Long Island  
901+903



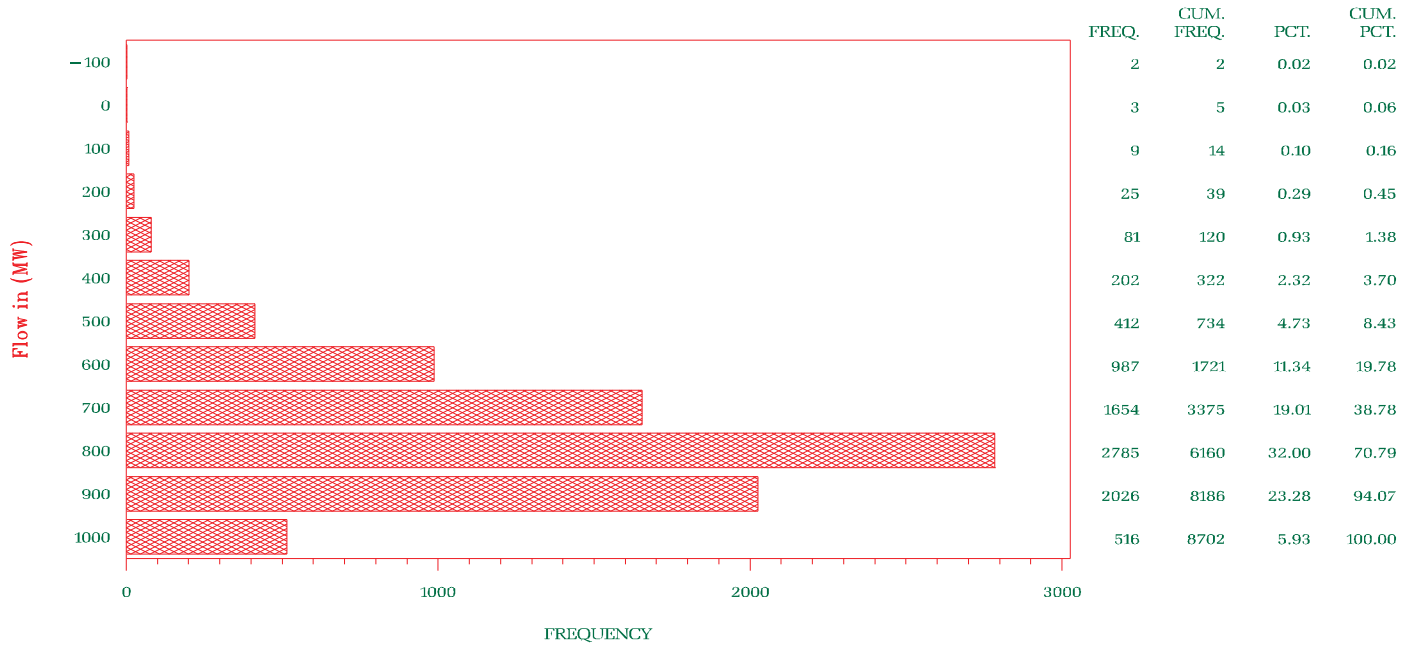
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

New York City – Long Island  
901+903



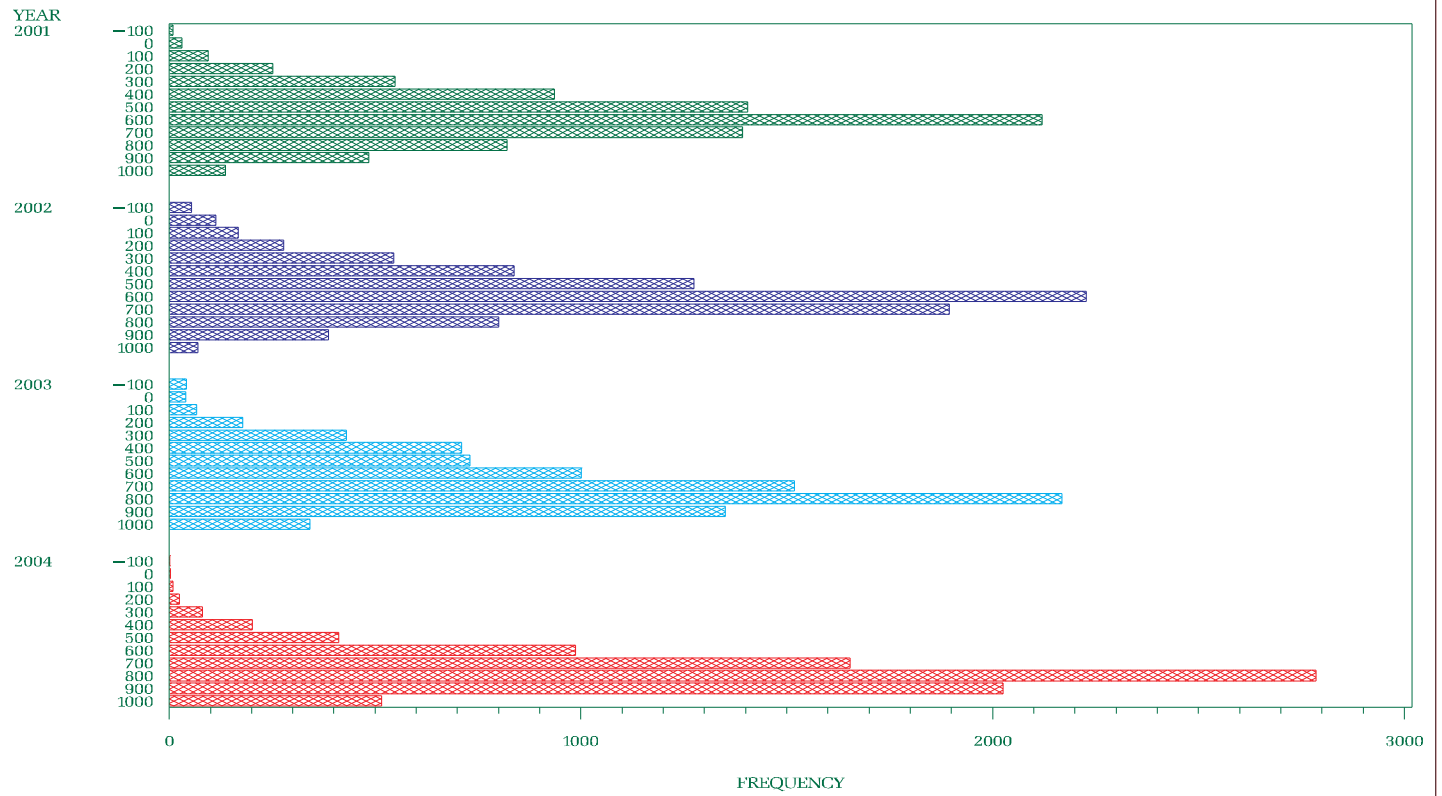
NYISO Frequency Interface Flow For January – December 2004

LIPA Import



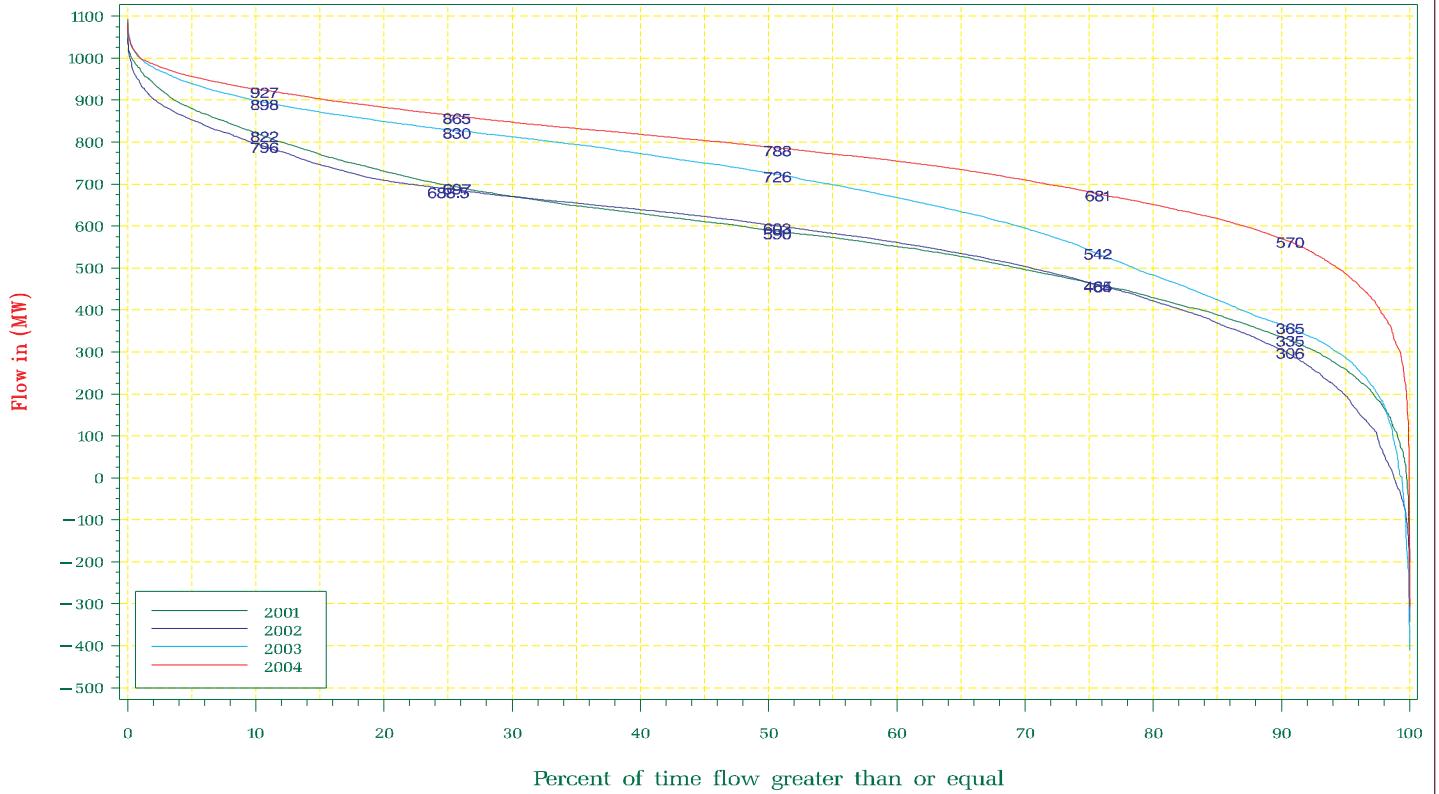
NYISO Frequency Interface Flow For January 2001 – December 2004

LIPA Import



NYISO Percent of time Interface Flow For January 2001 – December 2004

LIPA Import



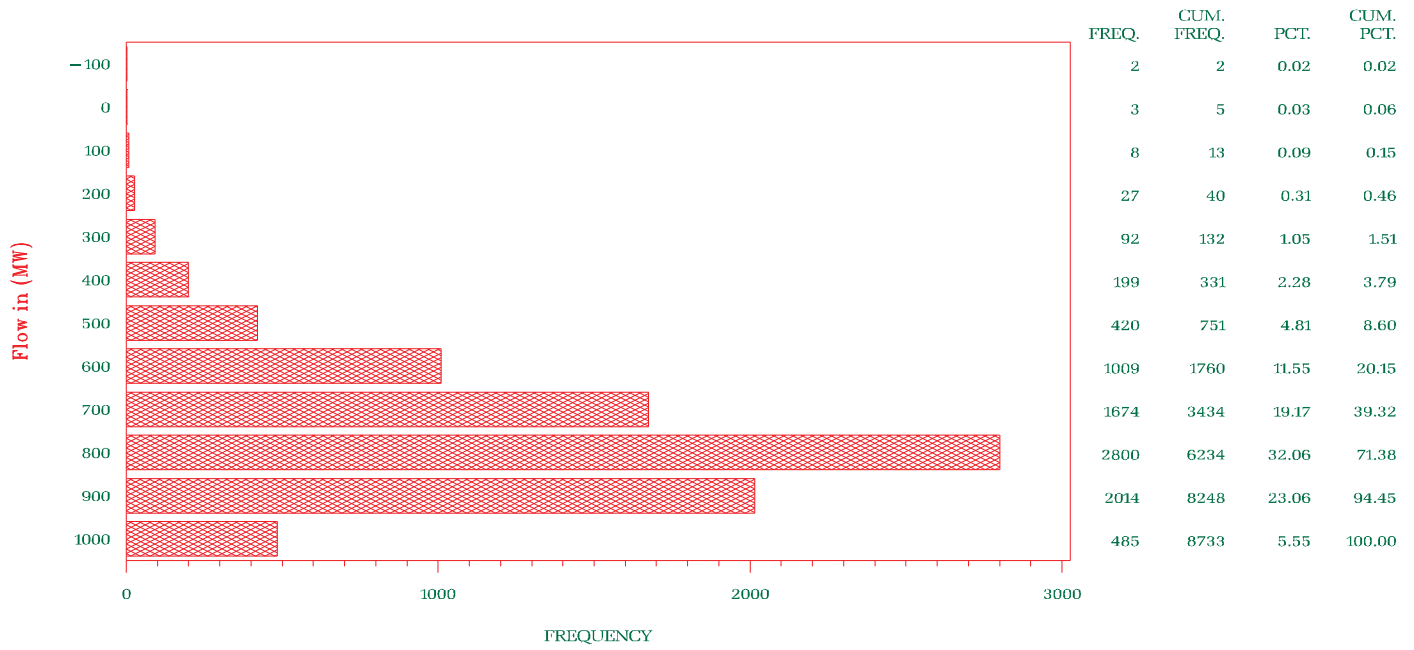
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

LIPA Import



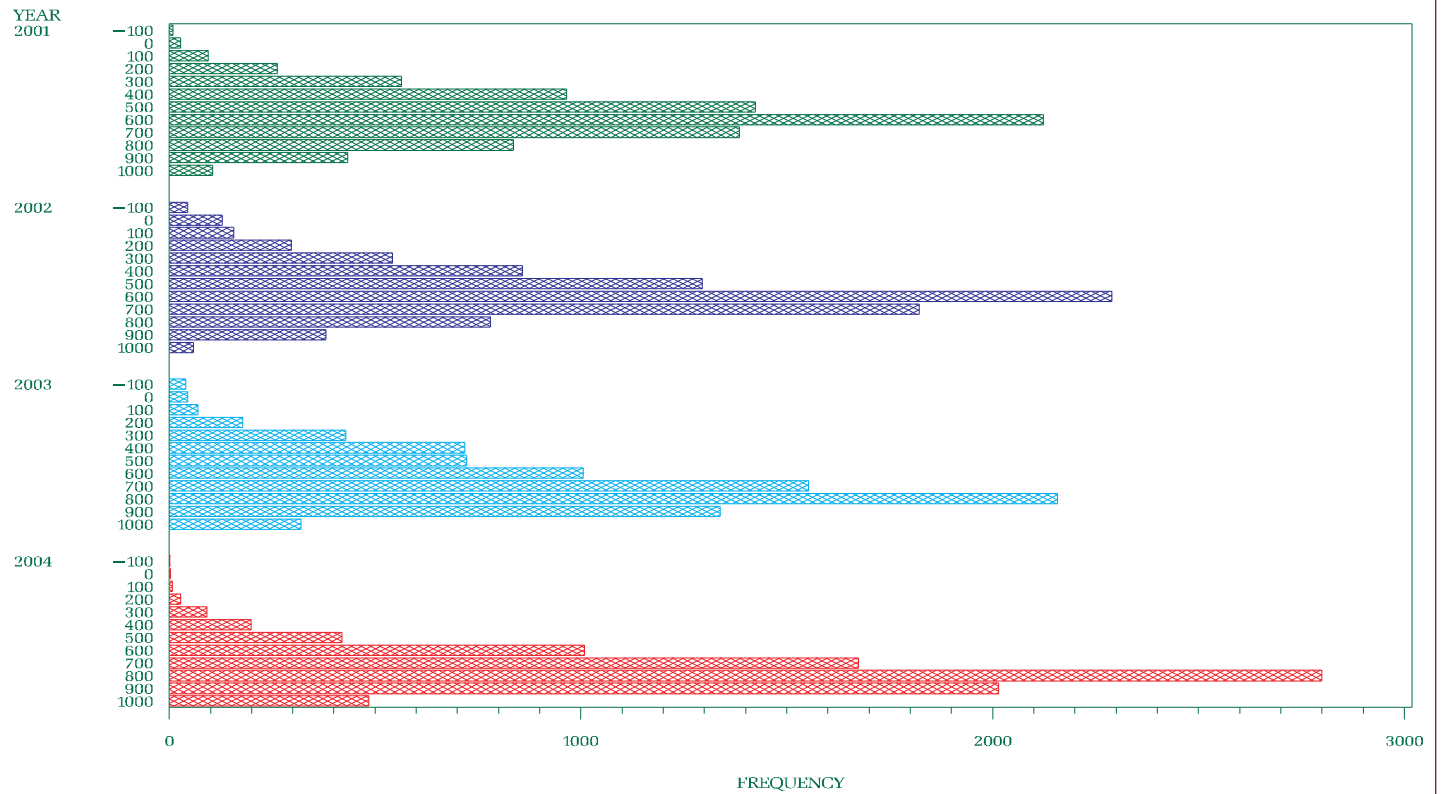
NYISO Frequency Interface Flow For January – December 2004

Con Ed – LIPA

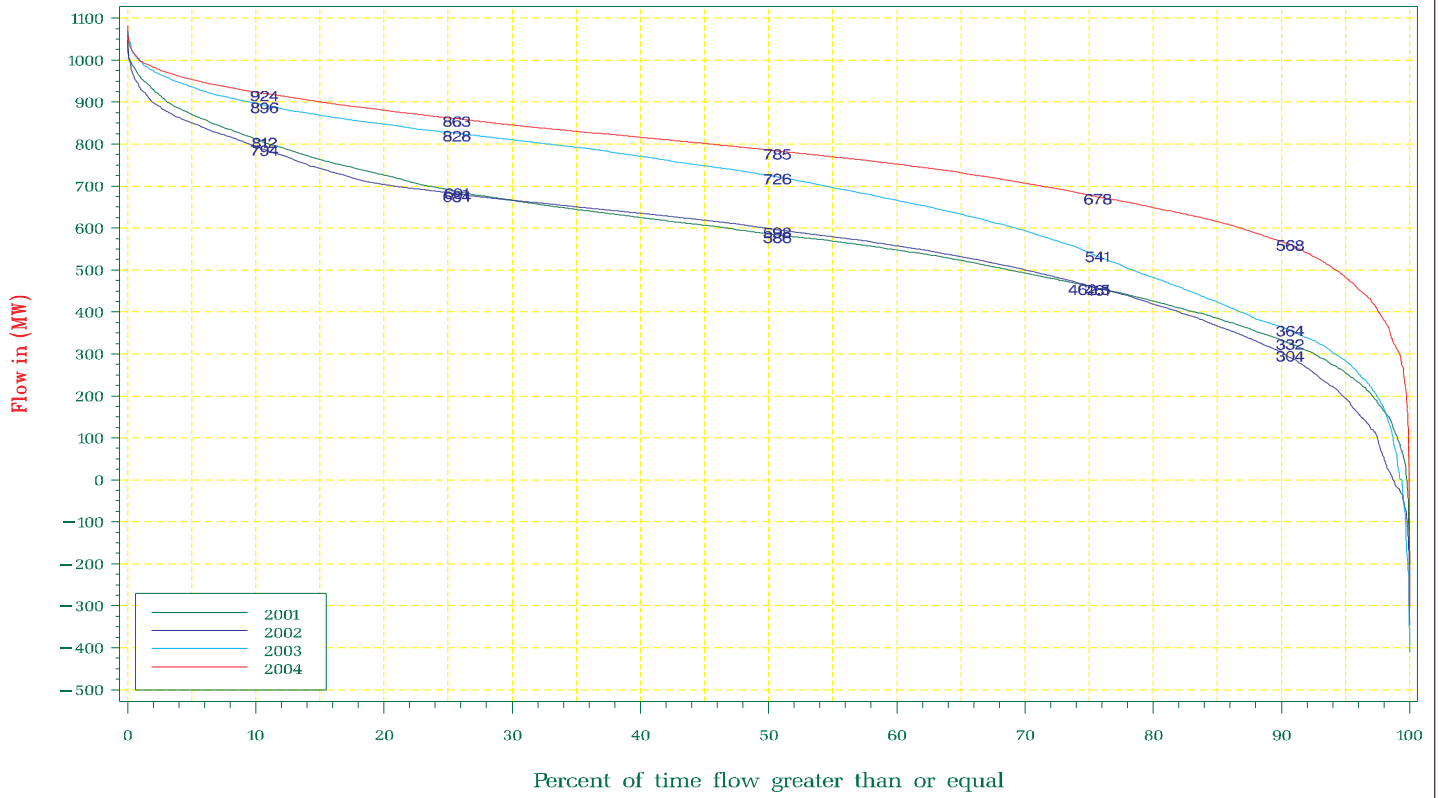


NYISO Frequency Interface Flow For January 2001 – December 2004

Con Ed – LIPA



NYISO Percent of time Interface Flow For January 2001 – December 2004  
 Con Ed – LIPA



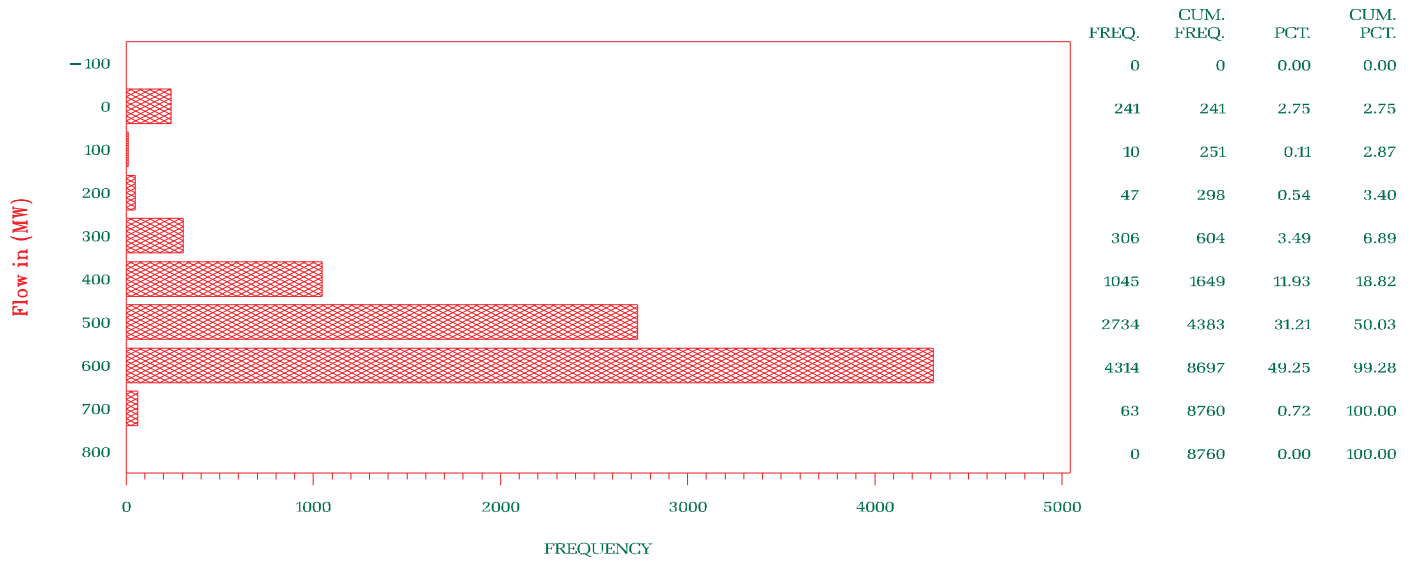
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
 Con Ed – LIPA





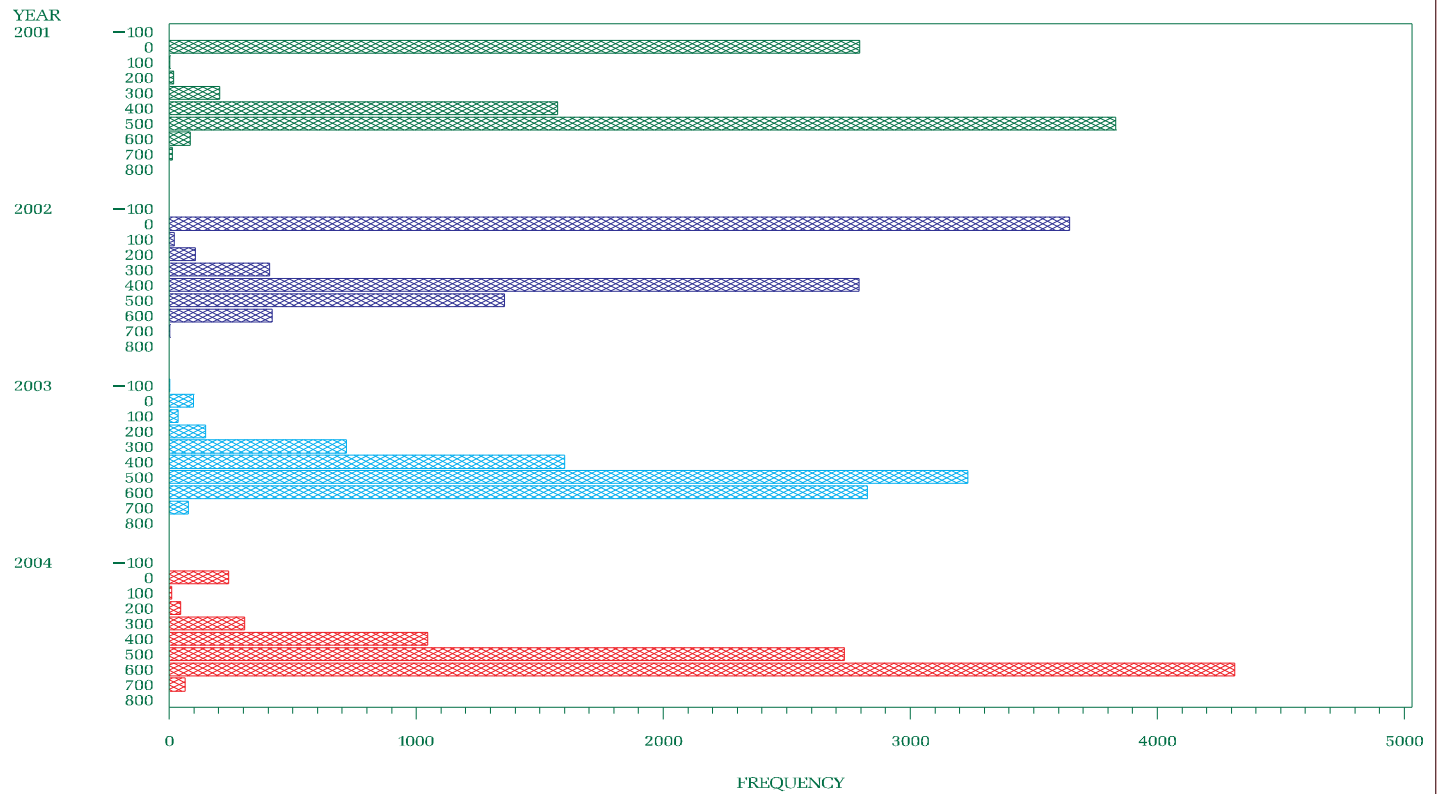
NYISO Frequency Interface Flow For January – December 2004

Y50:Dunwoodie – Shore Rd.



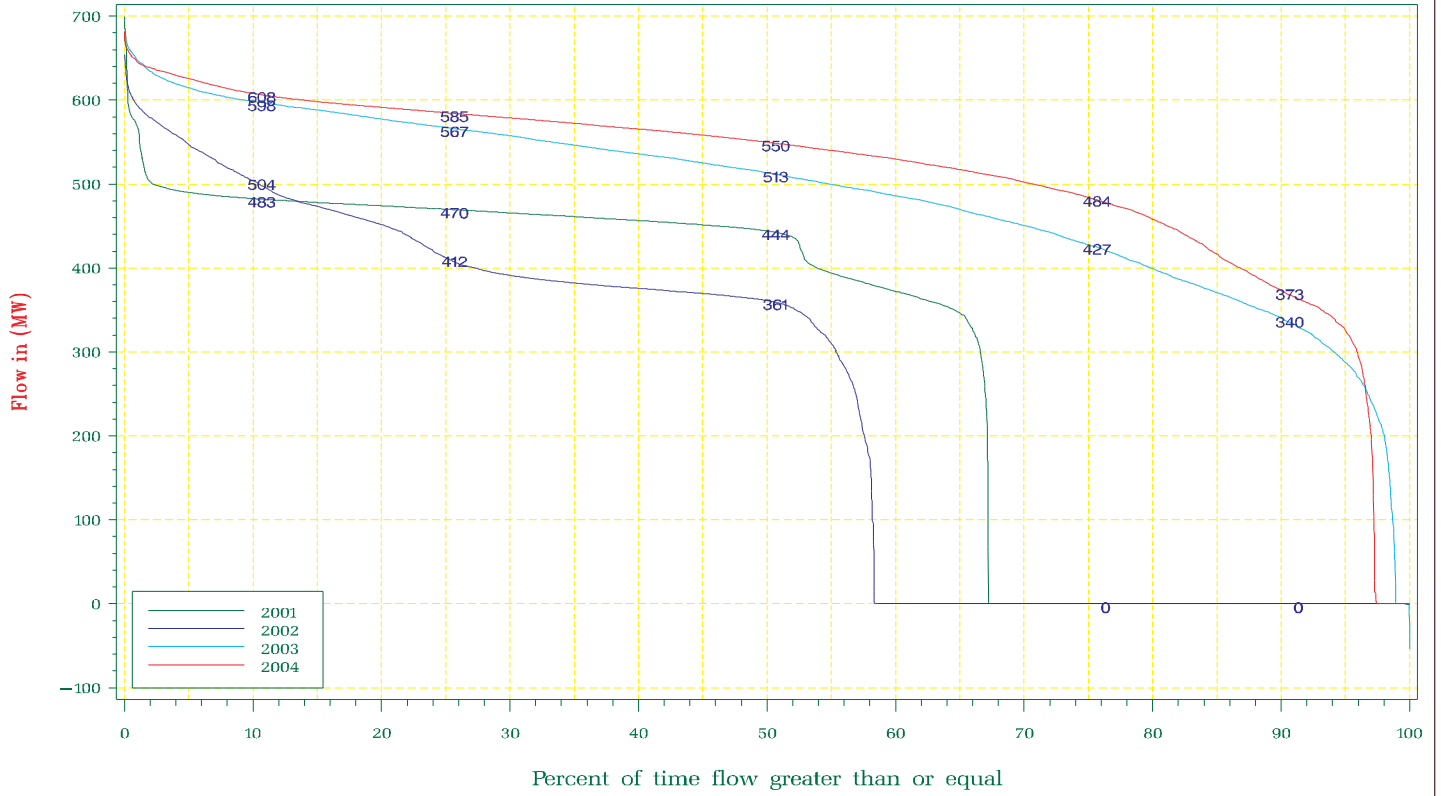
NYISO Frequency Interface Flow For January 2001 – December 2004

Y50:Dunwoodie – Shore Rd.



NYISO Percent of time Interface Flow For January 2001 – December 2004

Y50:Dunwoodie – Shore Rd.



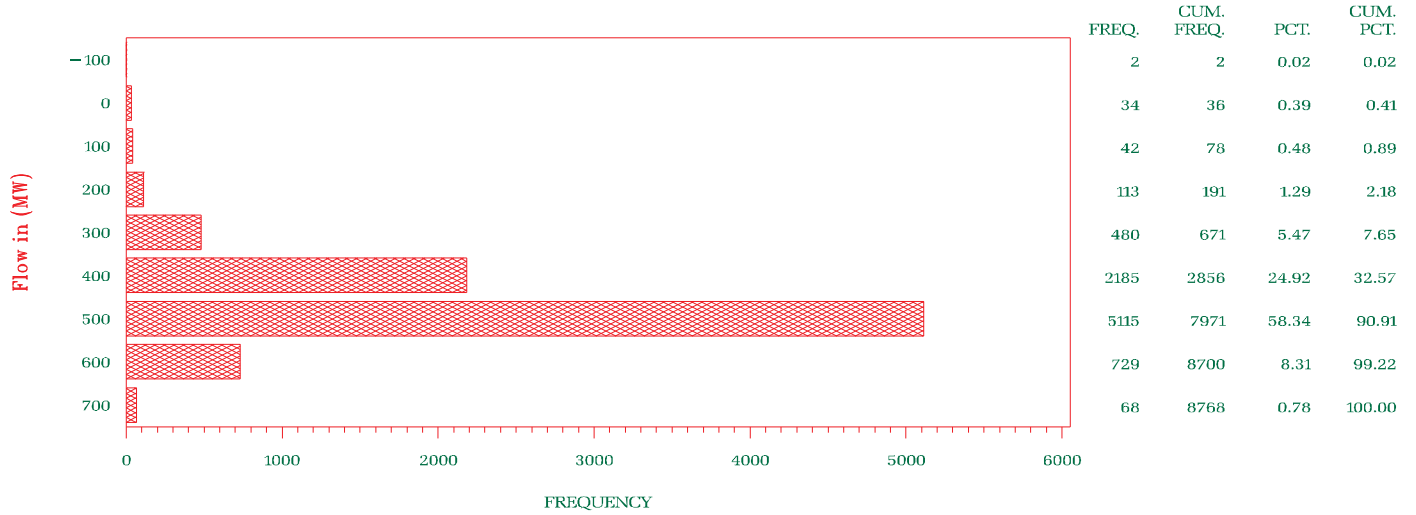
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Y50:Dunwoodie – Shore Rd.



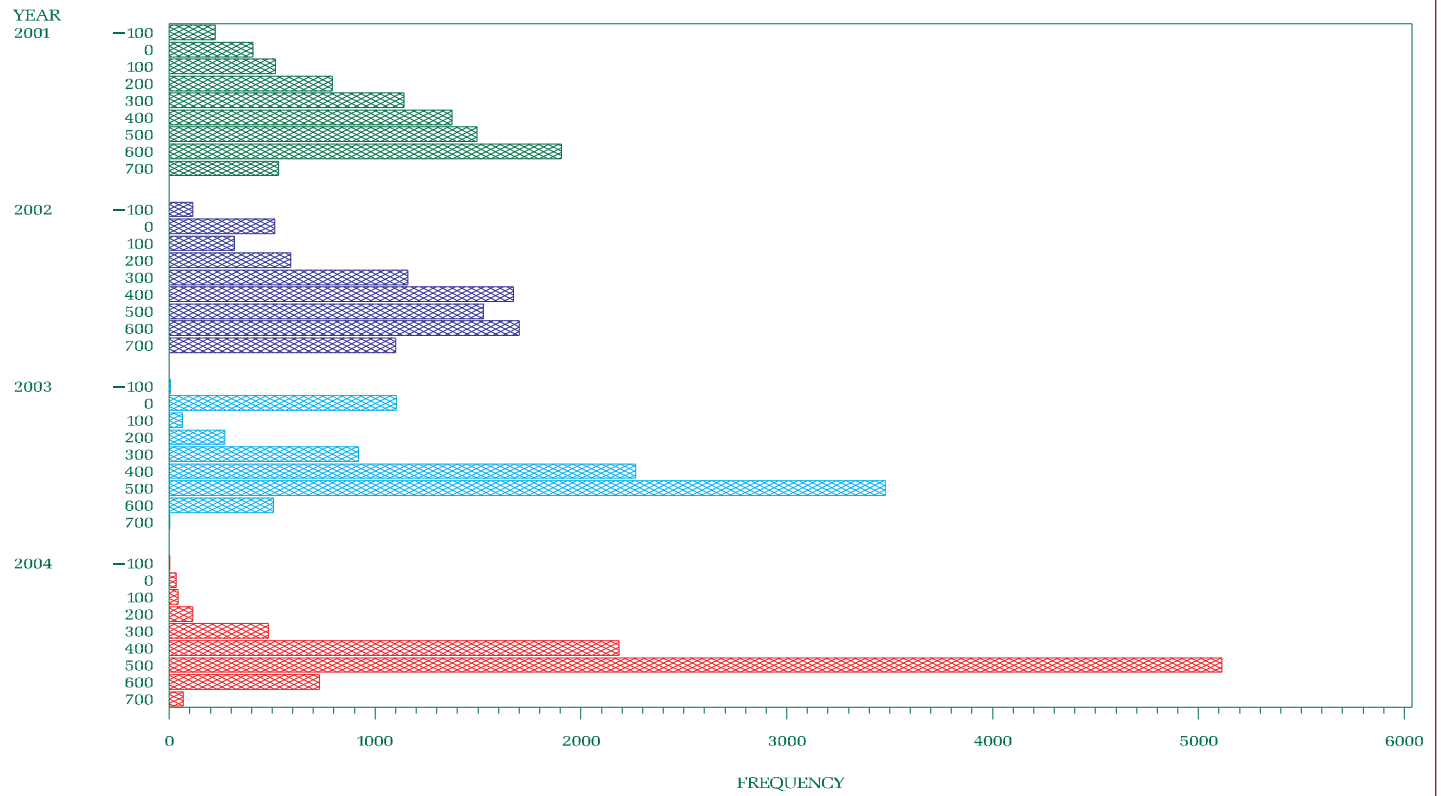
NYISO Frequency Interface Flow For January – December 2004

Y49:Sprainbrook – E.Garden City



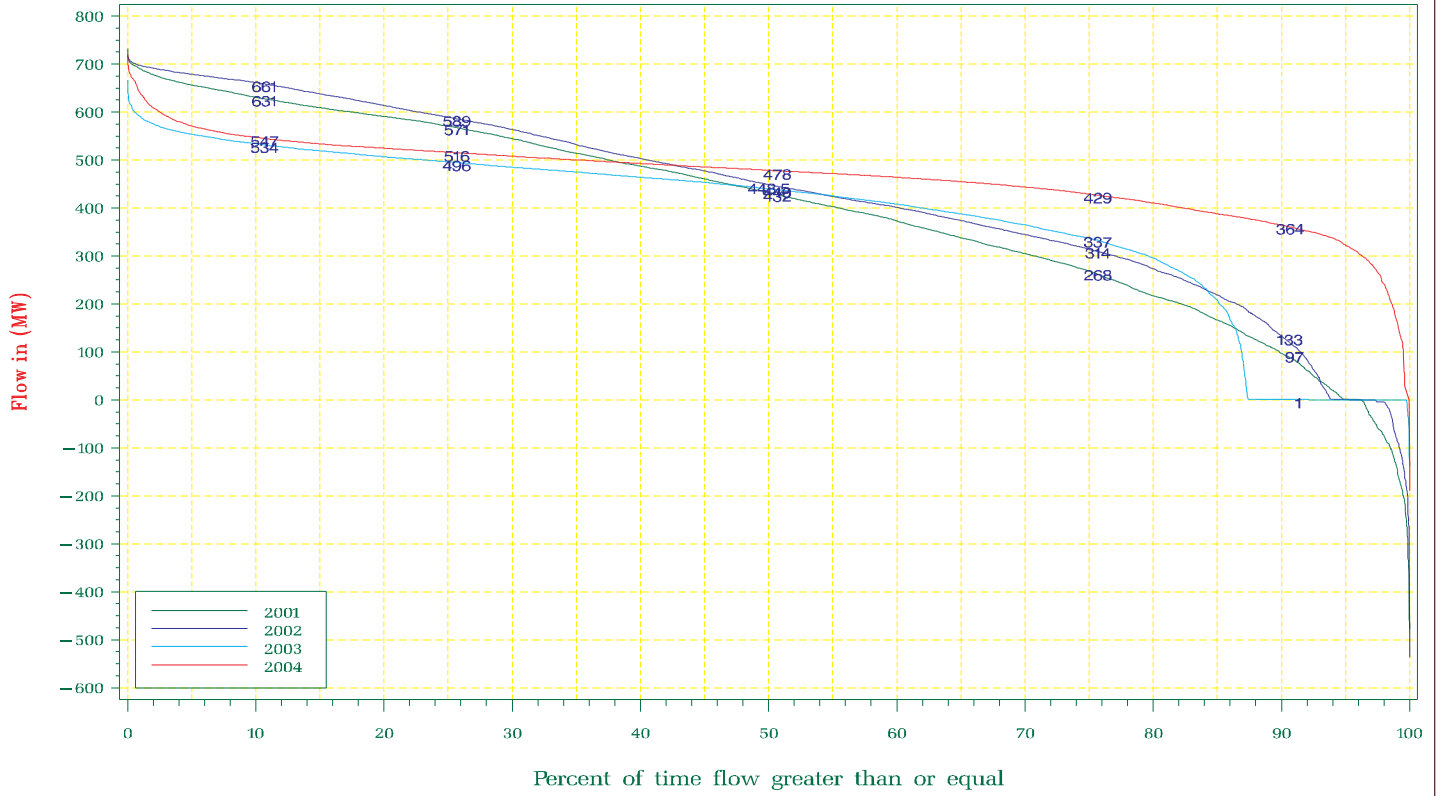
NYISO Frequency Interface Flow For January 2001 – December 2004

Y49:Sprainbrook – E.Garden City



NYISO Percent of time Interface Flow For January 2001 – December 2004

Y49:Sprainbrook – E.Garden City



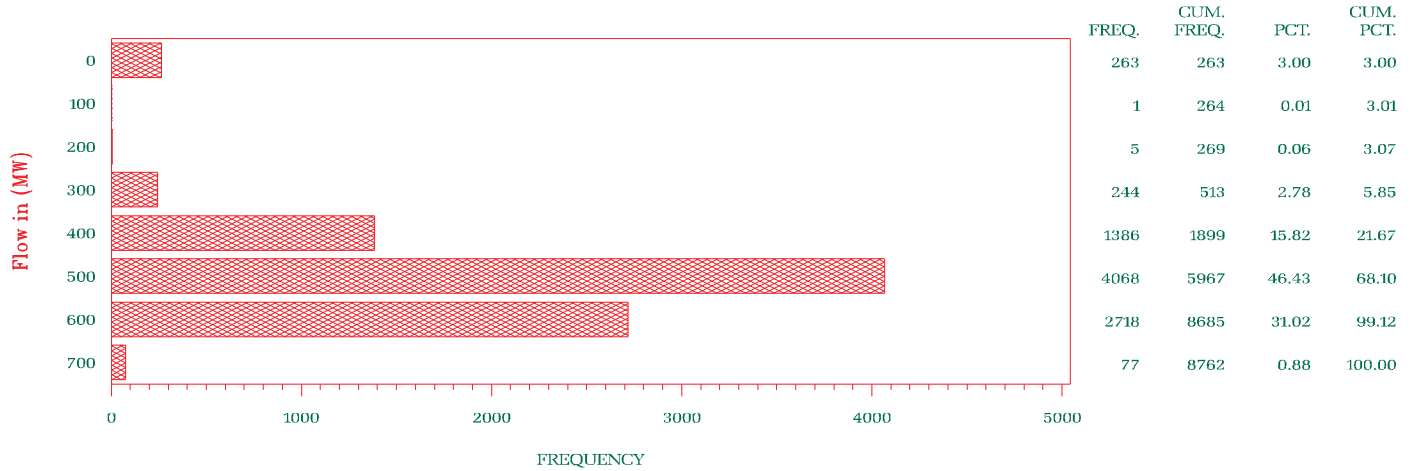
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Y49:Sprainbrook – E.Garden City



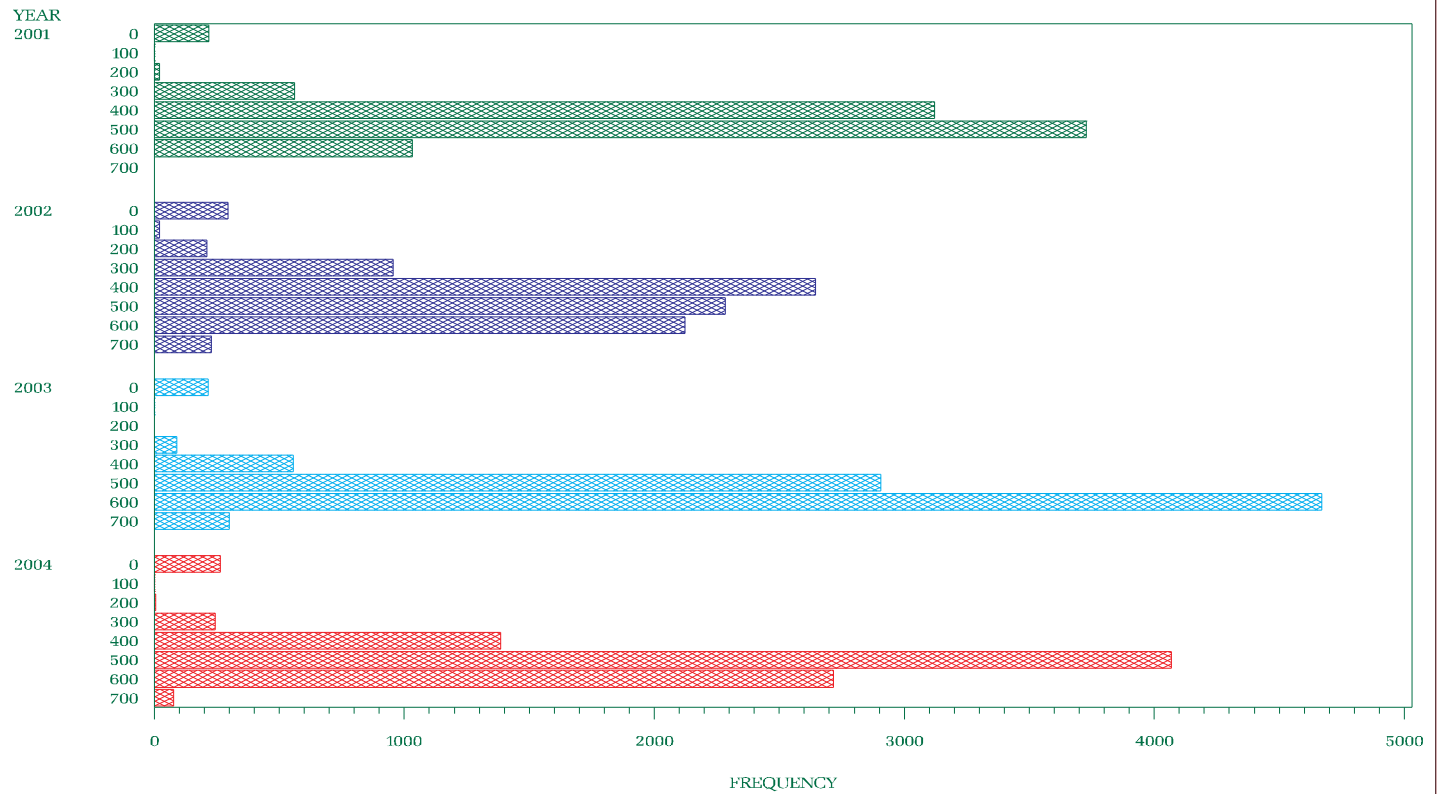
NYISO Frequency Interface Flow For January – December 2004

HOMER CITY – WATERCURE



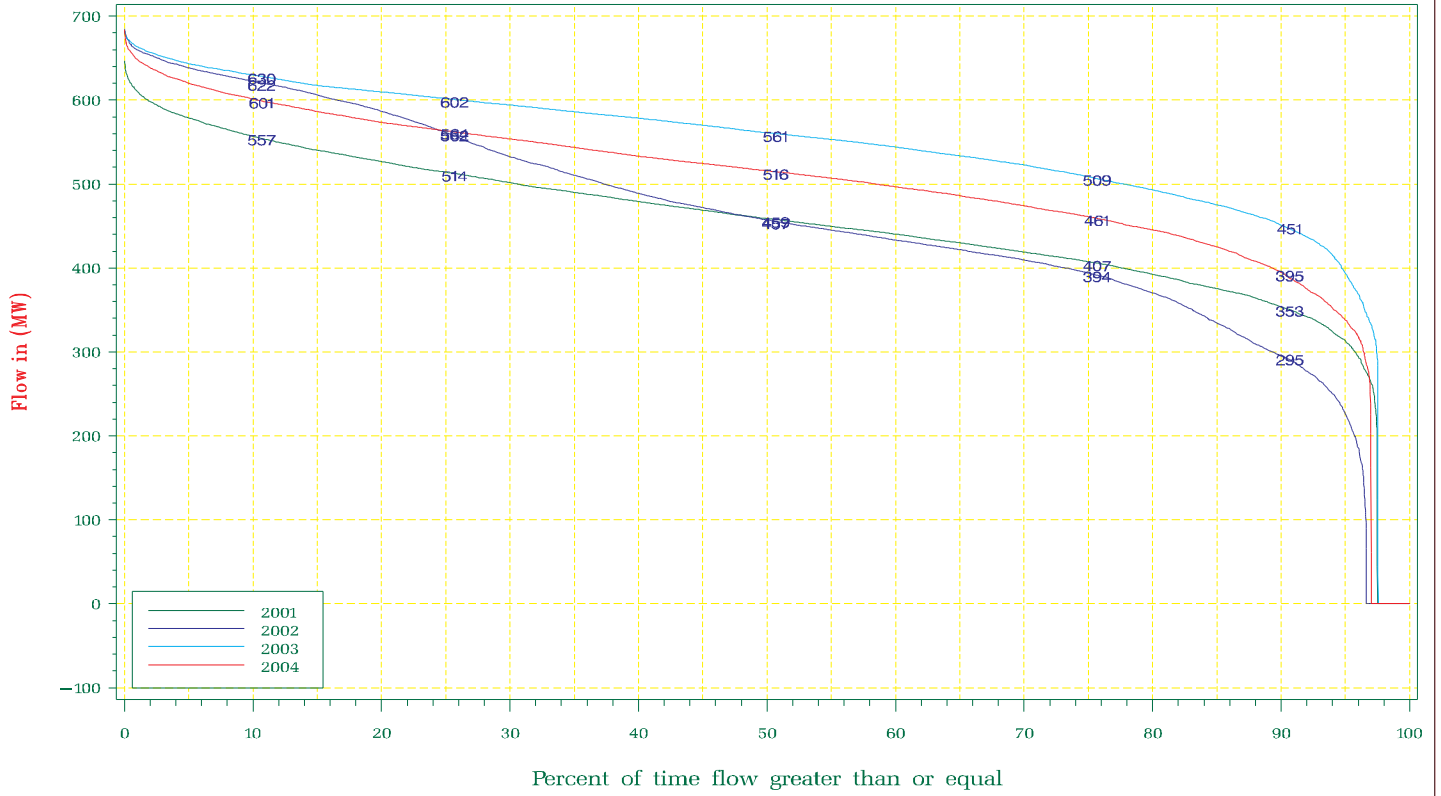
NYISO Frequency Interface Flow For January 2001 – December 2004

HOMER CITY – WATERCURE



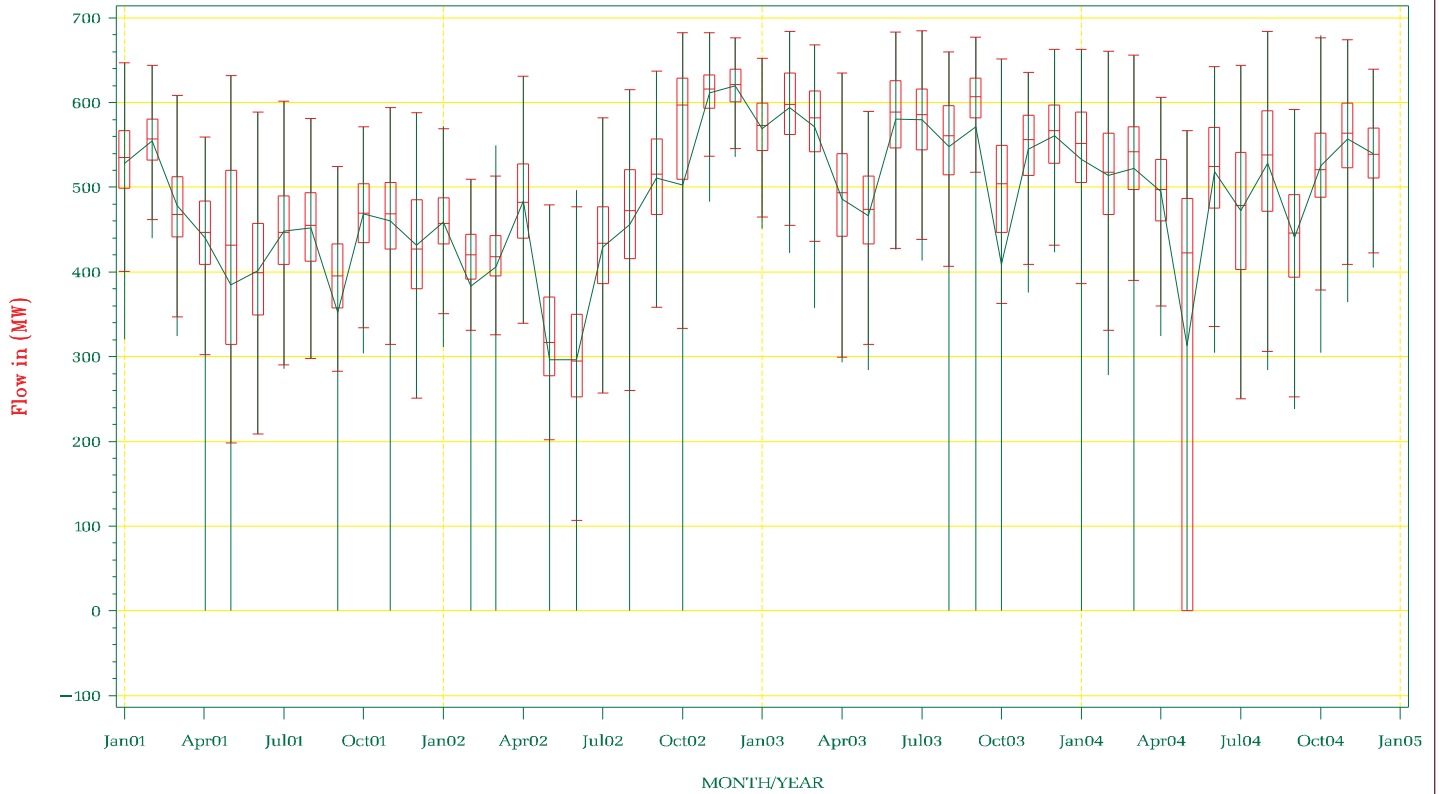
NYISO Percent of time Interface Flow For January 2001 – December 2004

HOMER CITY – WATERCURE



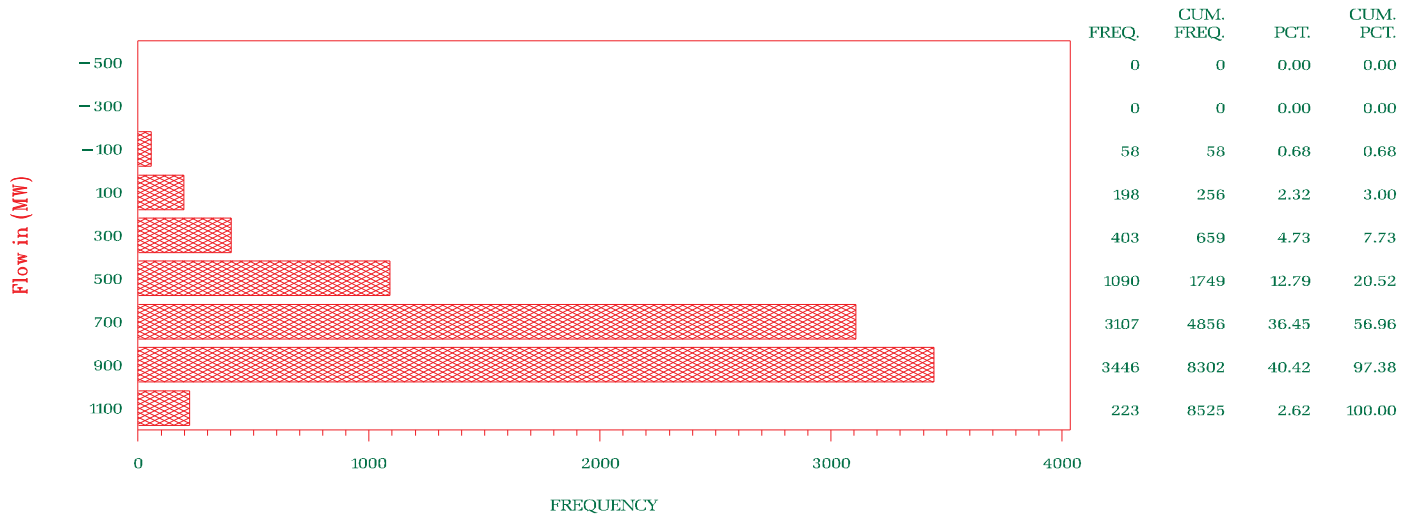
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

HOMER CITY – WATERCURE



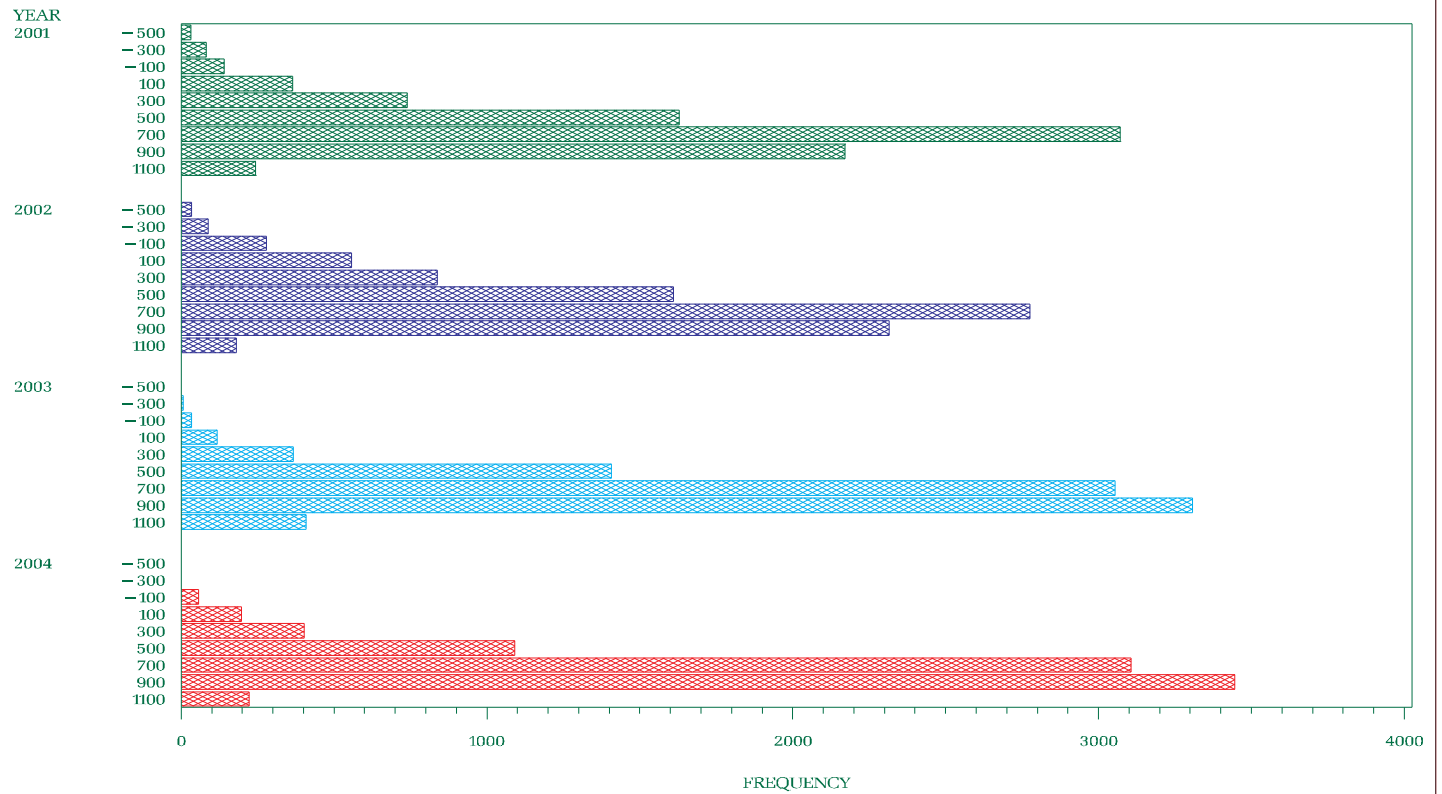
NYISO Frequency Interface Flow For January – December 2004

5018:BRANCHBURG – RAMAPO



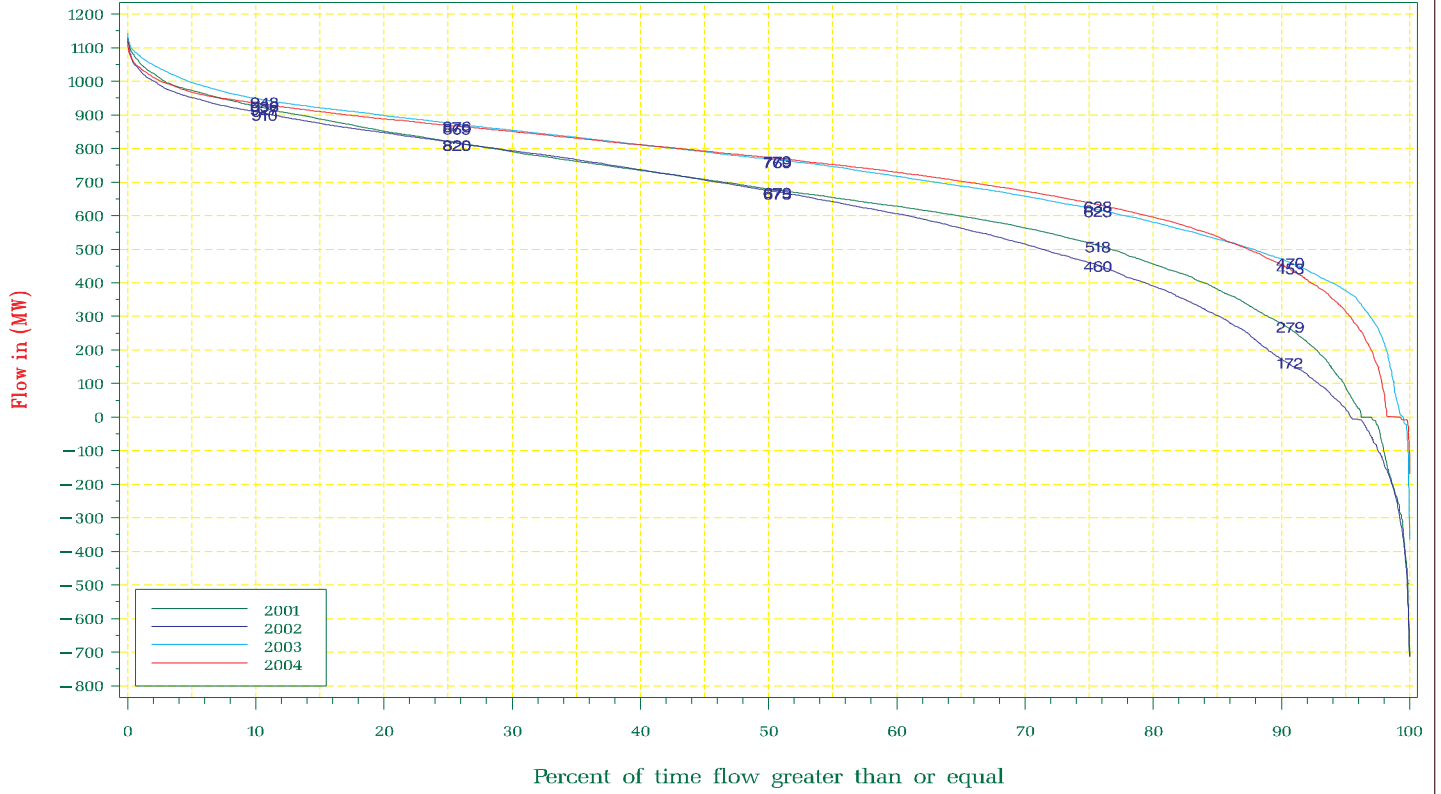
NYISO Frequency Interface Flow For January 2001 – December 2004

5018:BRANCHBURG – RAMAPO



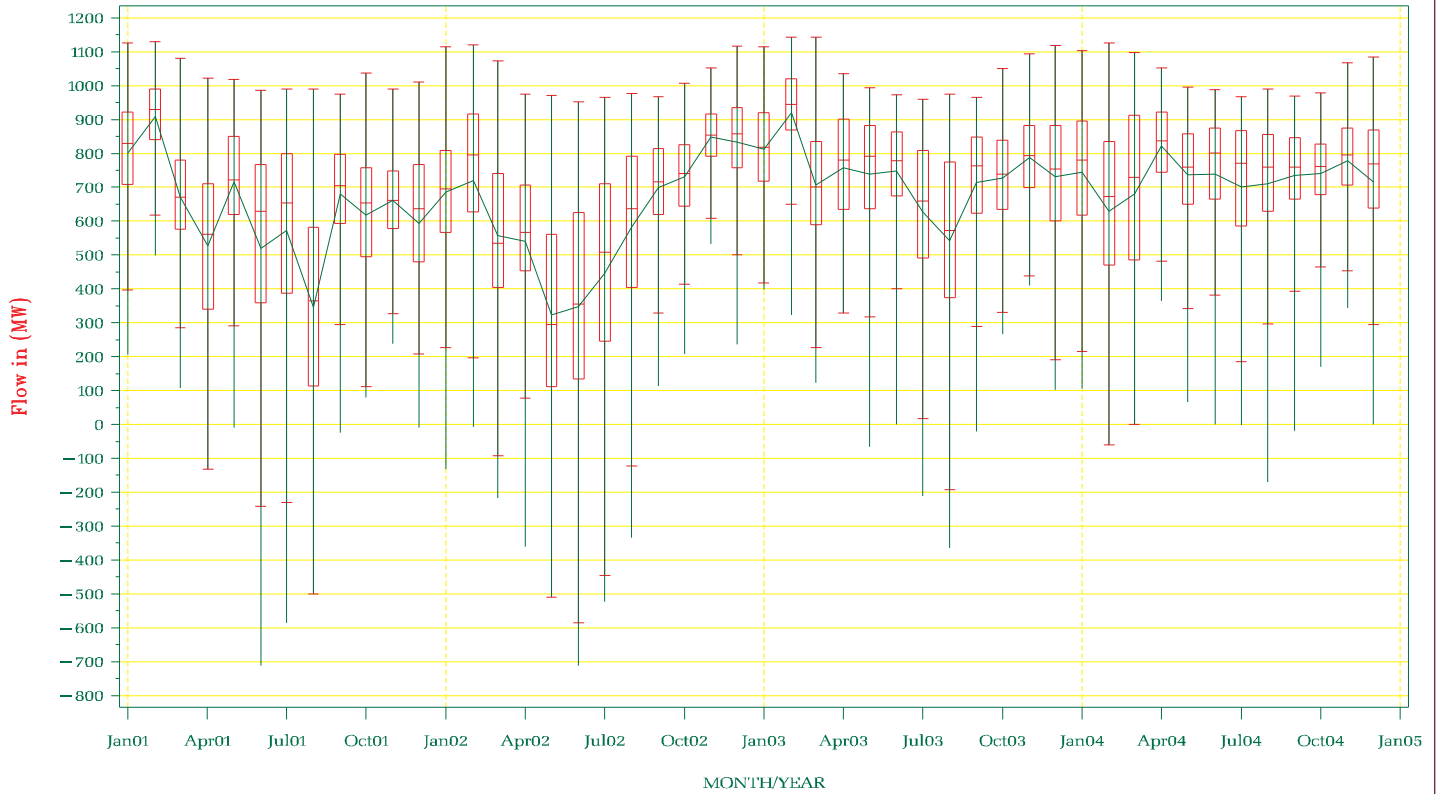
NYISO Percent of time Interface Flow For January 2001 – December 2004

5018:BRANCHBURG – RAMAPO



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

5018:BRANCHBURG – RAMAPO

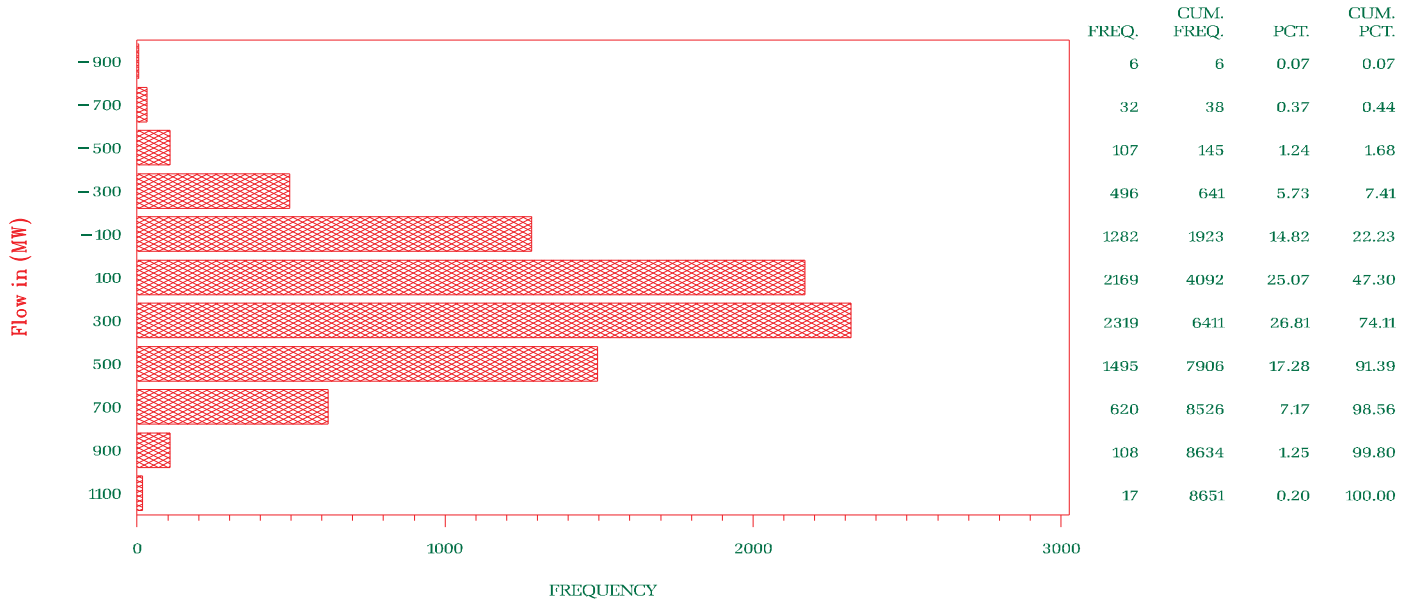




NYISO Frequency Interface Flow For January – December 2004

Con Ed/PSEG PAR (JK/ABC) Imbalance

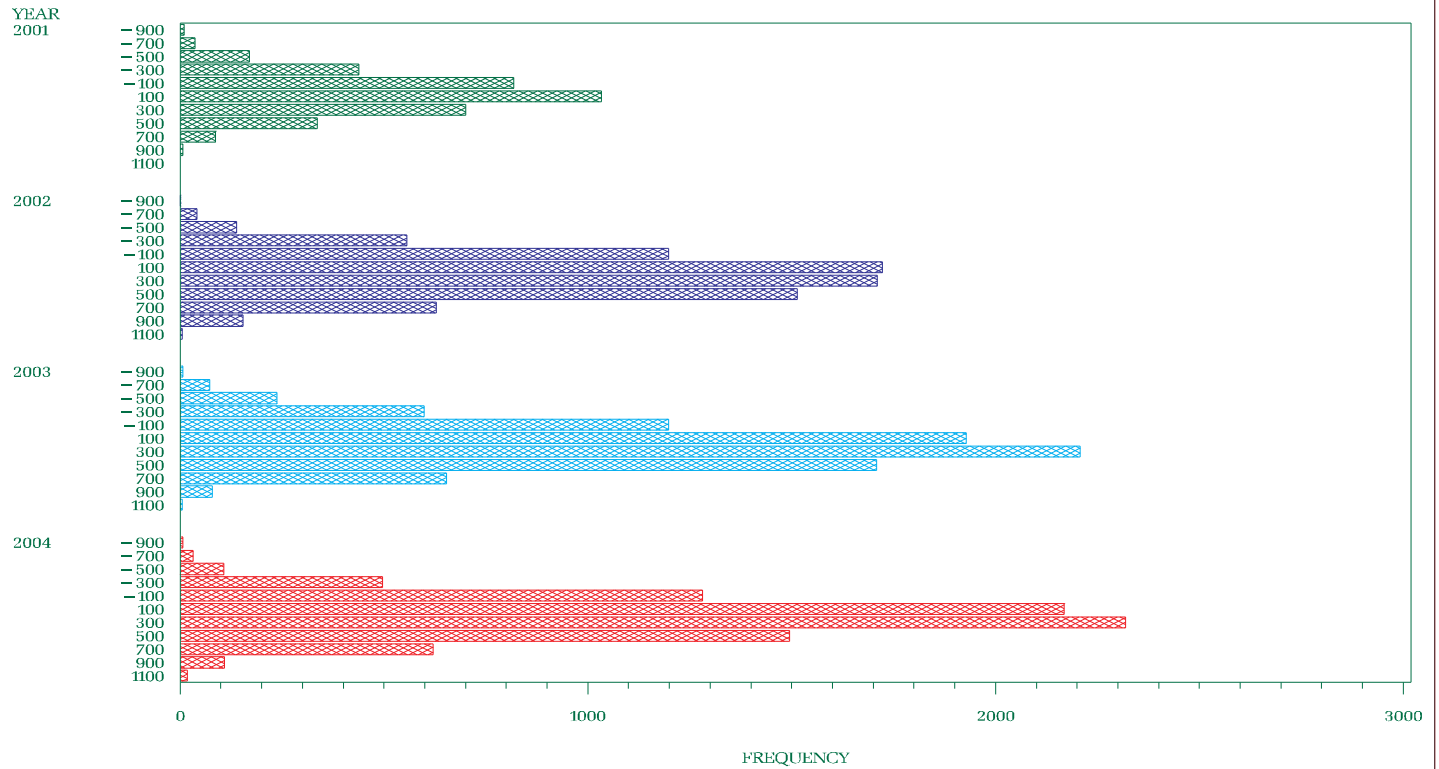
+ is toward PSEG



NYISO Frequency Interface Flow For January 2001 – December 2004

Con Ed/PSEG PAR (JK/ABC) Imbalance

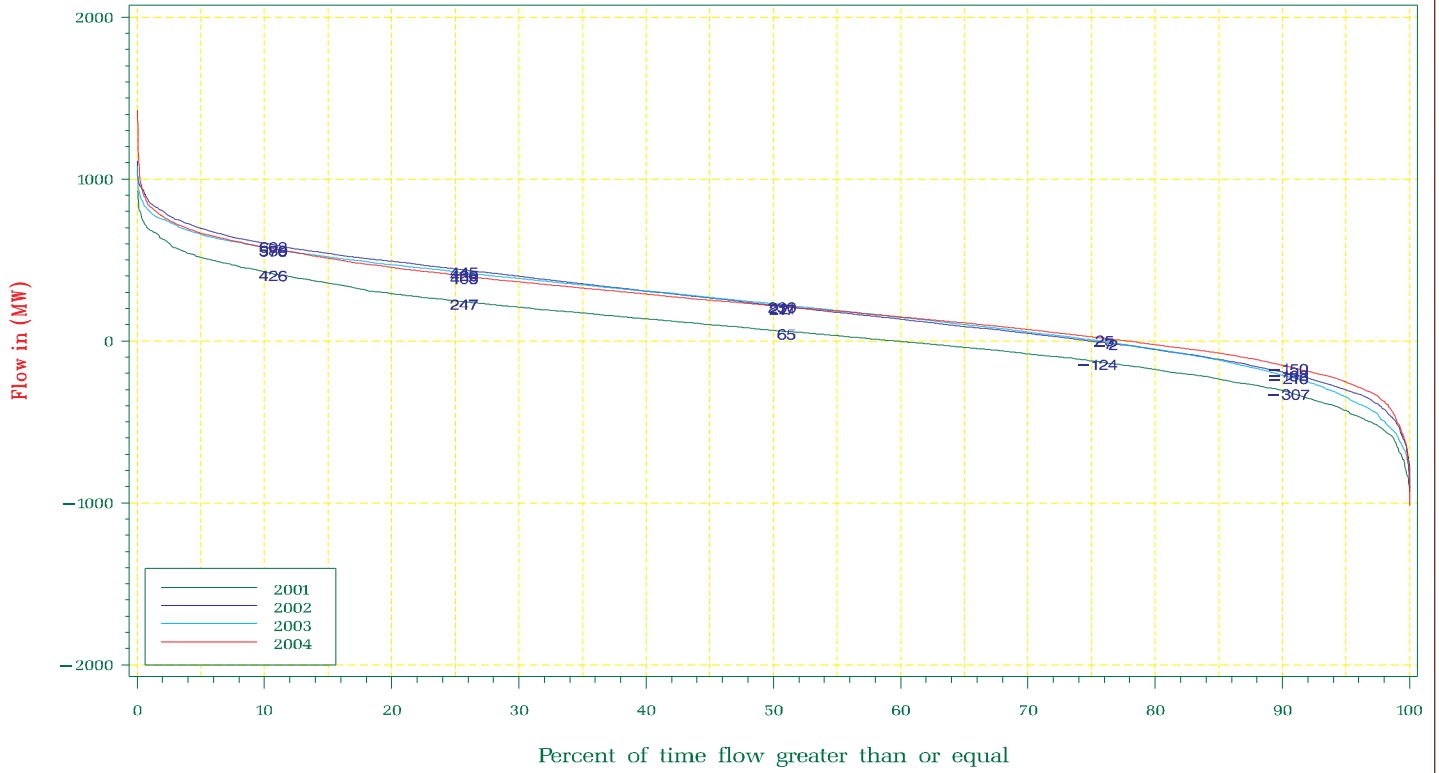
+ is toward PSEG



NYISO Percent of time Interface Flow For January 2001 – December 2004

Con Ed/PSEG PAR (JK/ABC) Imbalance

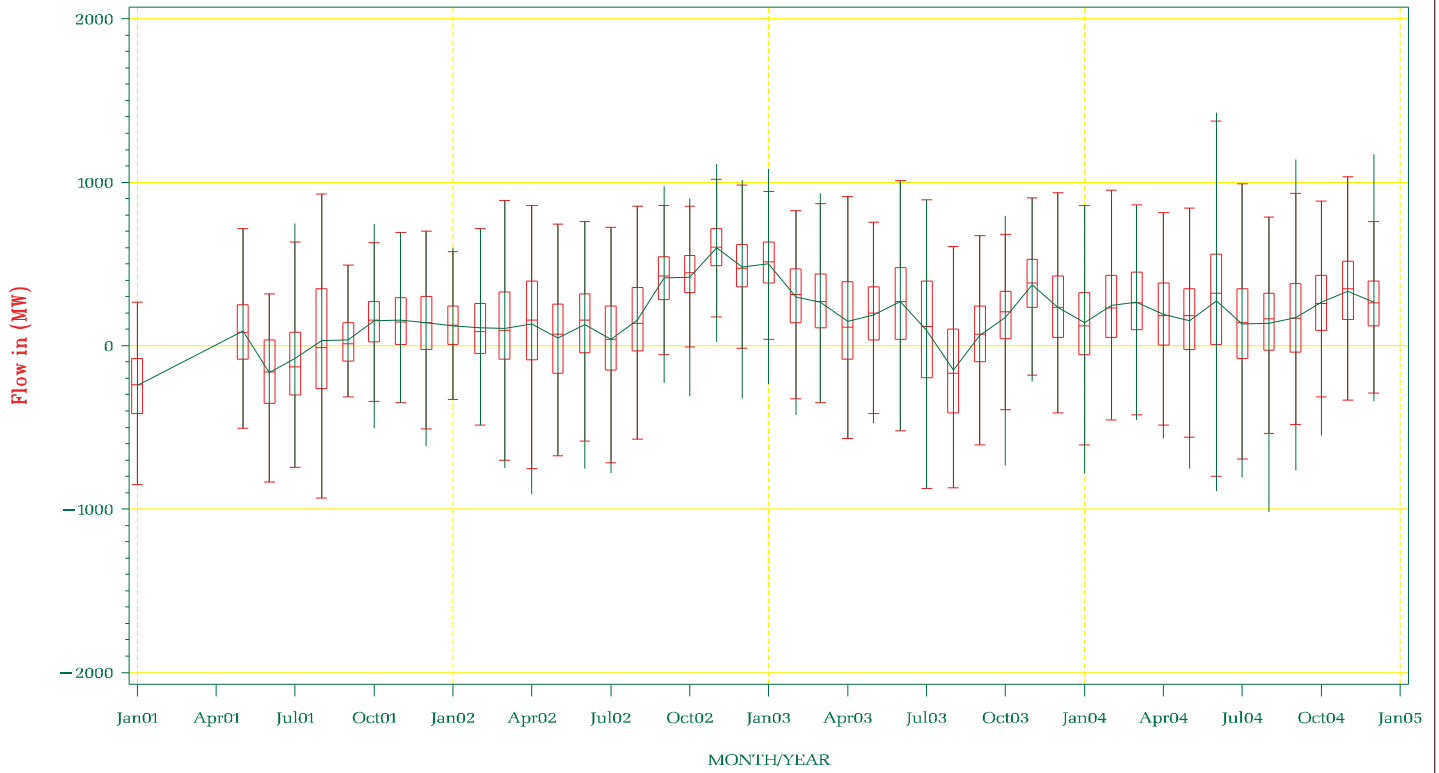
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NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

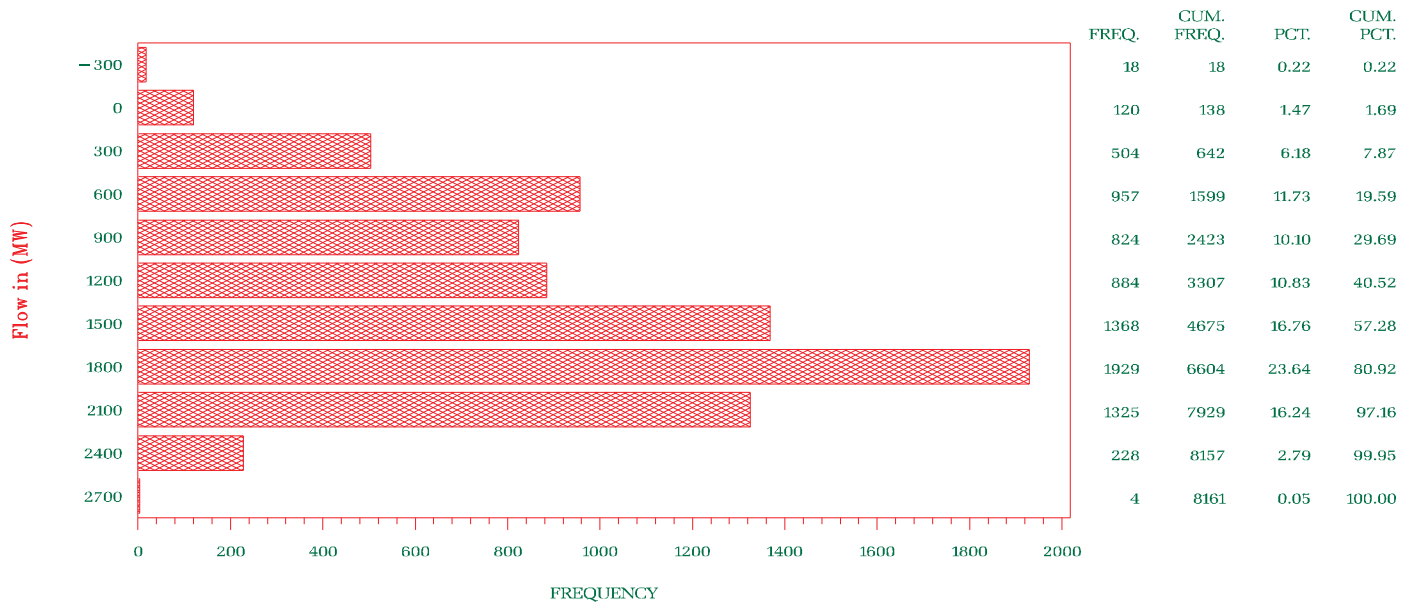
Con Ed/PSEG PAR (JK/ABC) Imbalance

+ is toward PSEG



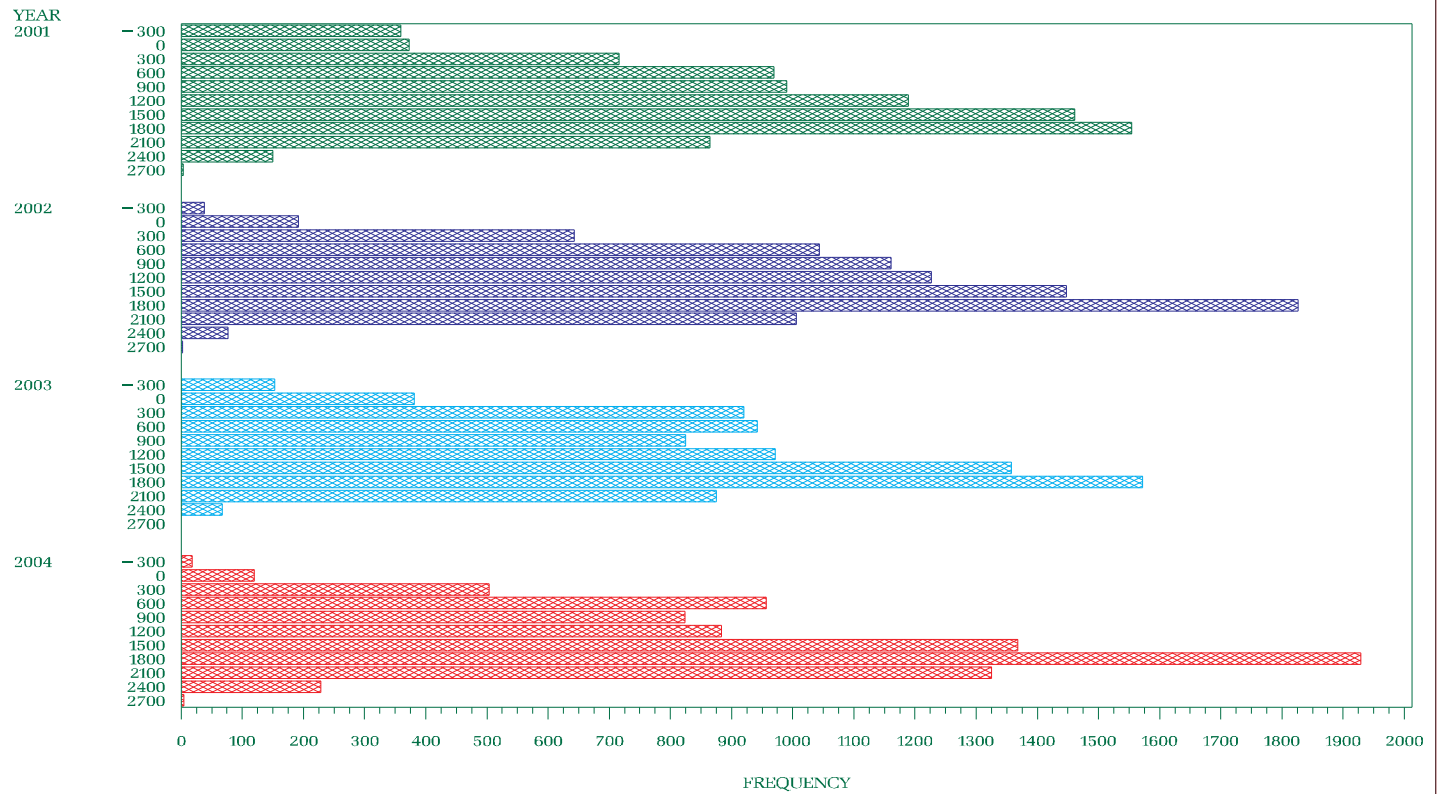
NYISO Frequency Interface Flow For January – December 2004

West NY Gen Export

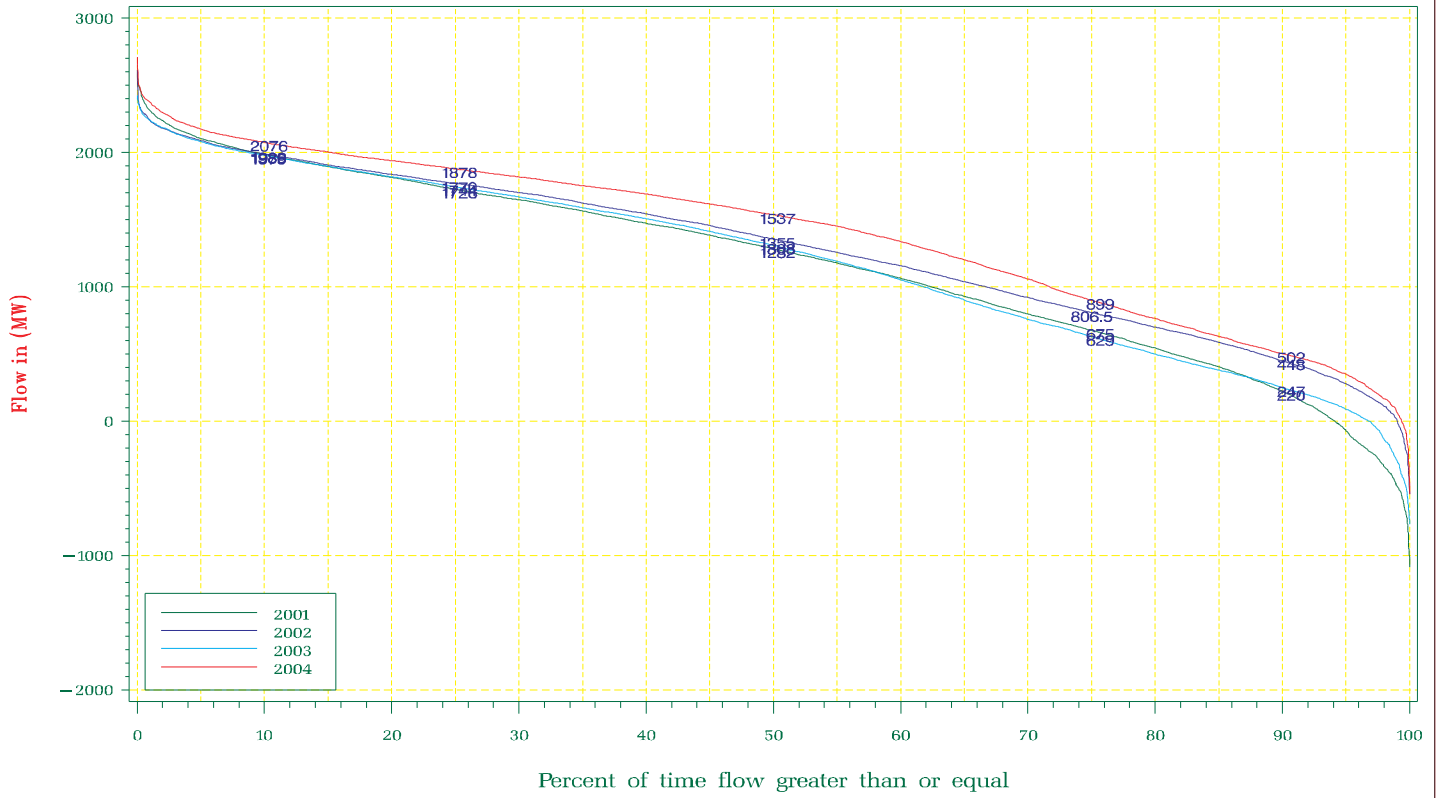


NYISO Frequency Interface Flow For January 2001 – December 2004

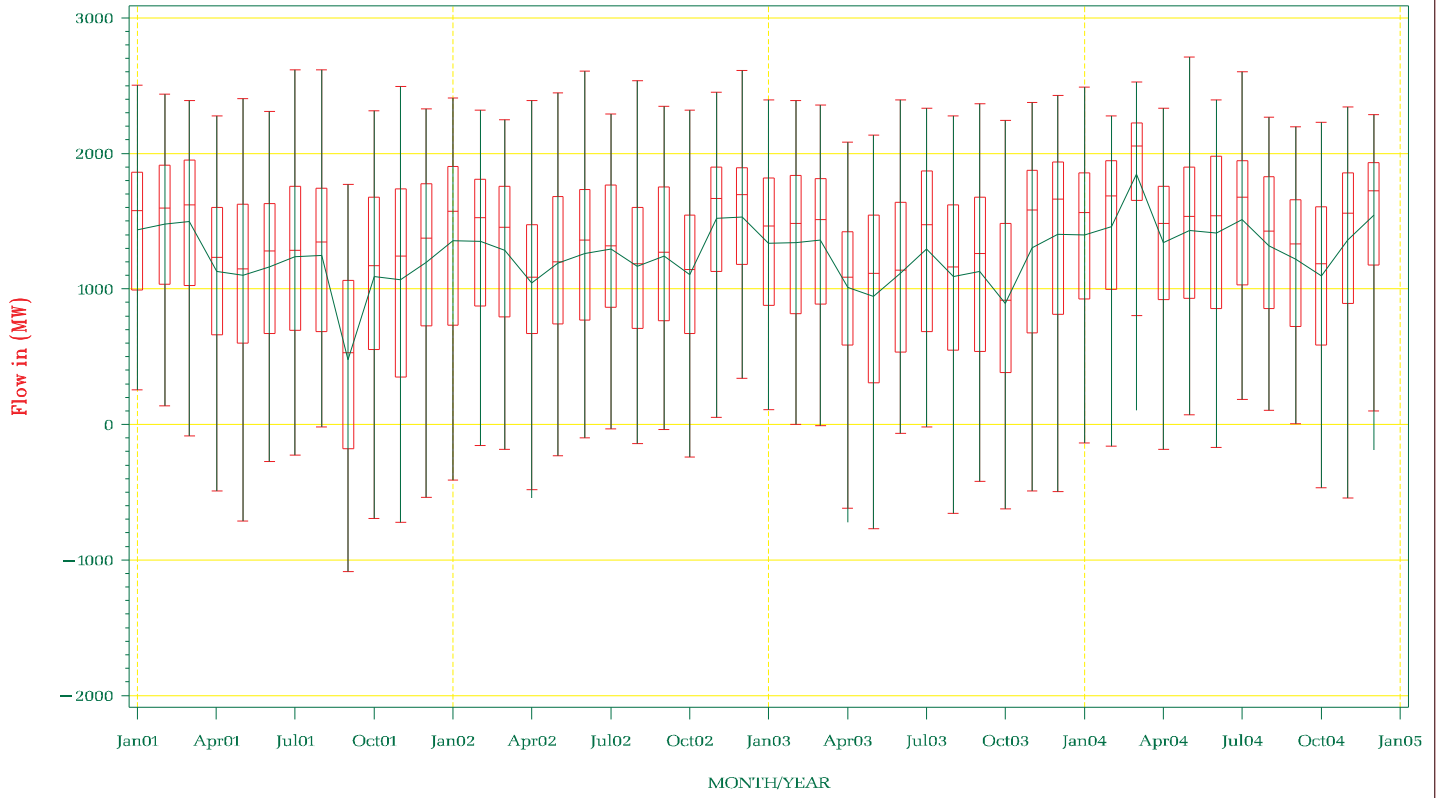
West NY Gen Export



NYISO Percent of time Interface Flow For January 2001 – December 2004  
West NY Gen Export



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
West NY Gen Export



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## Appendix B – Margins to Limits

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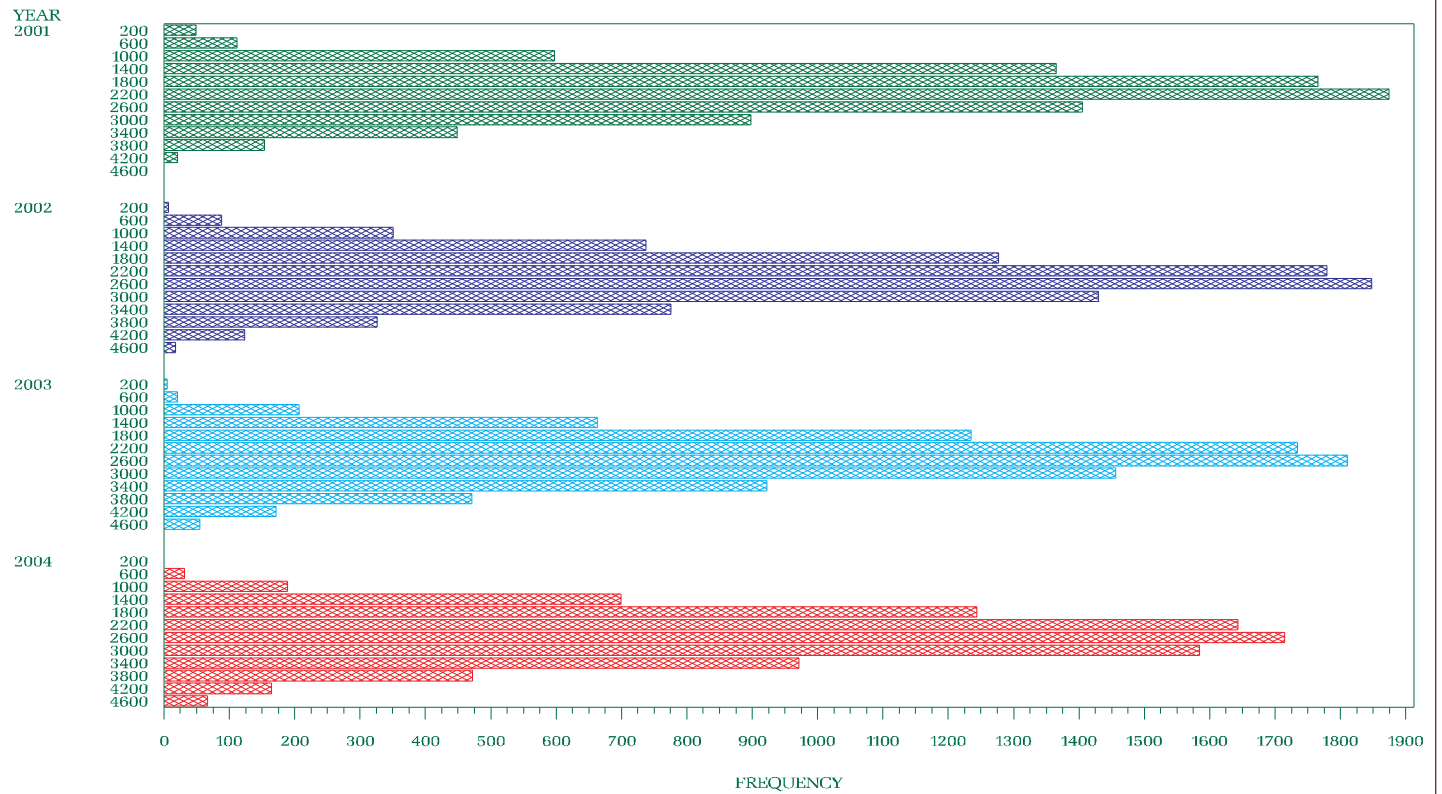
NYISO Frequency Interface Flow For January – December 2004

Margin to Total East Limit



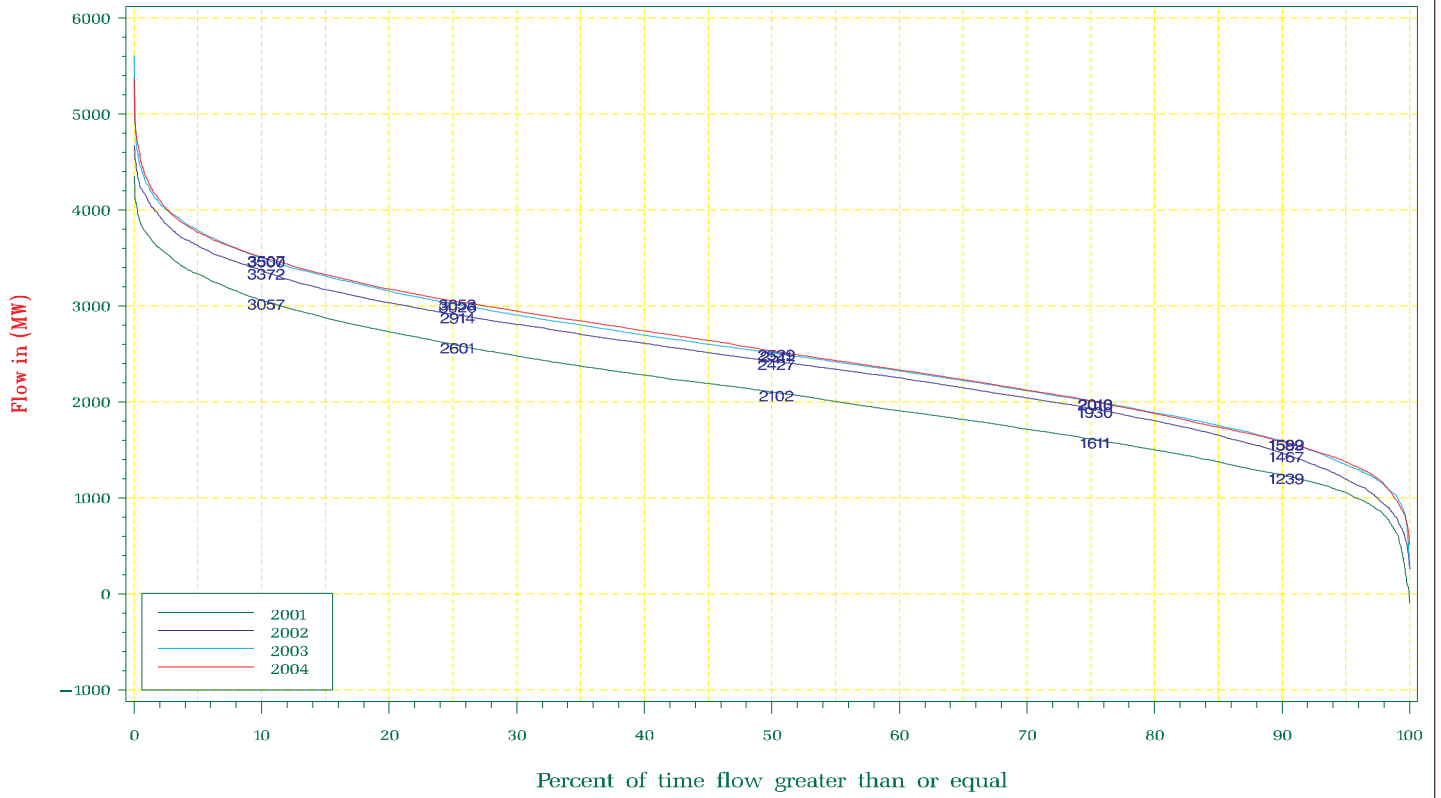
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Margin to Total East Limit



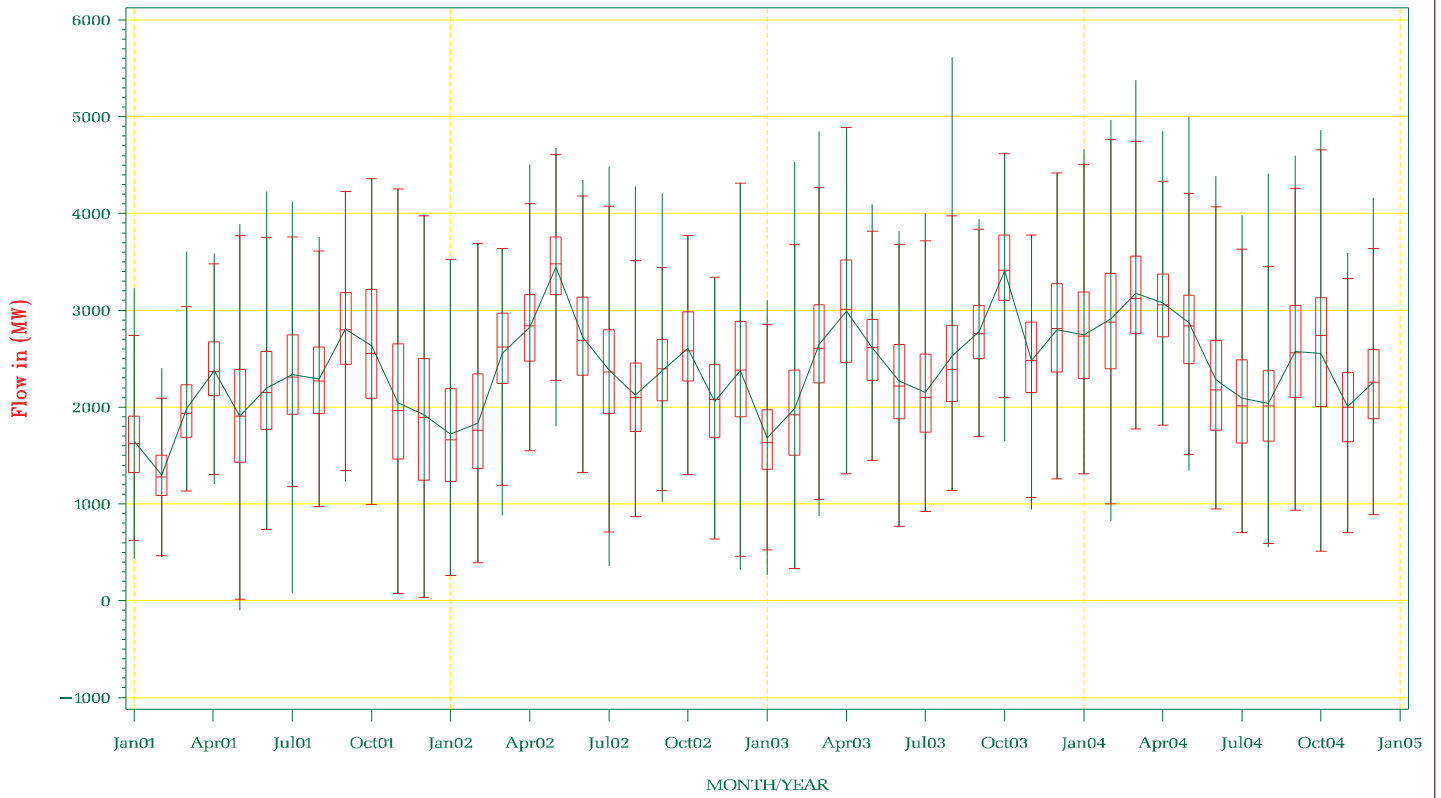
NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to Total East Limit



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

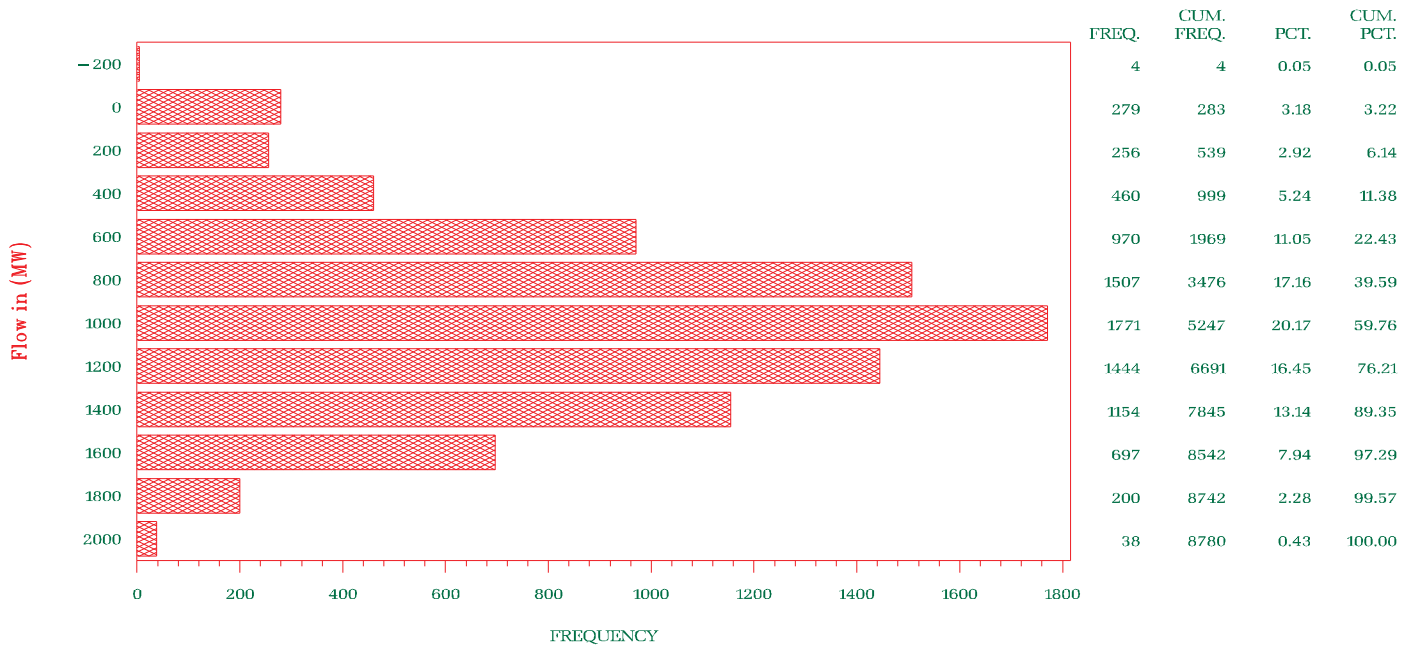
Margin to Total East Limit





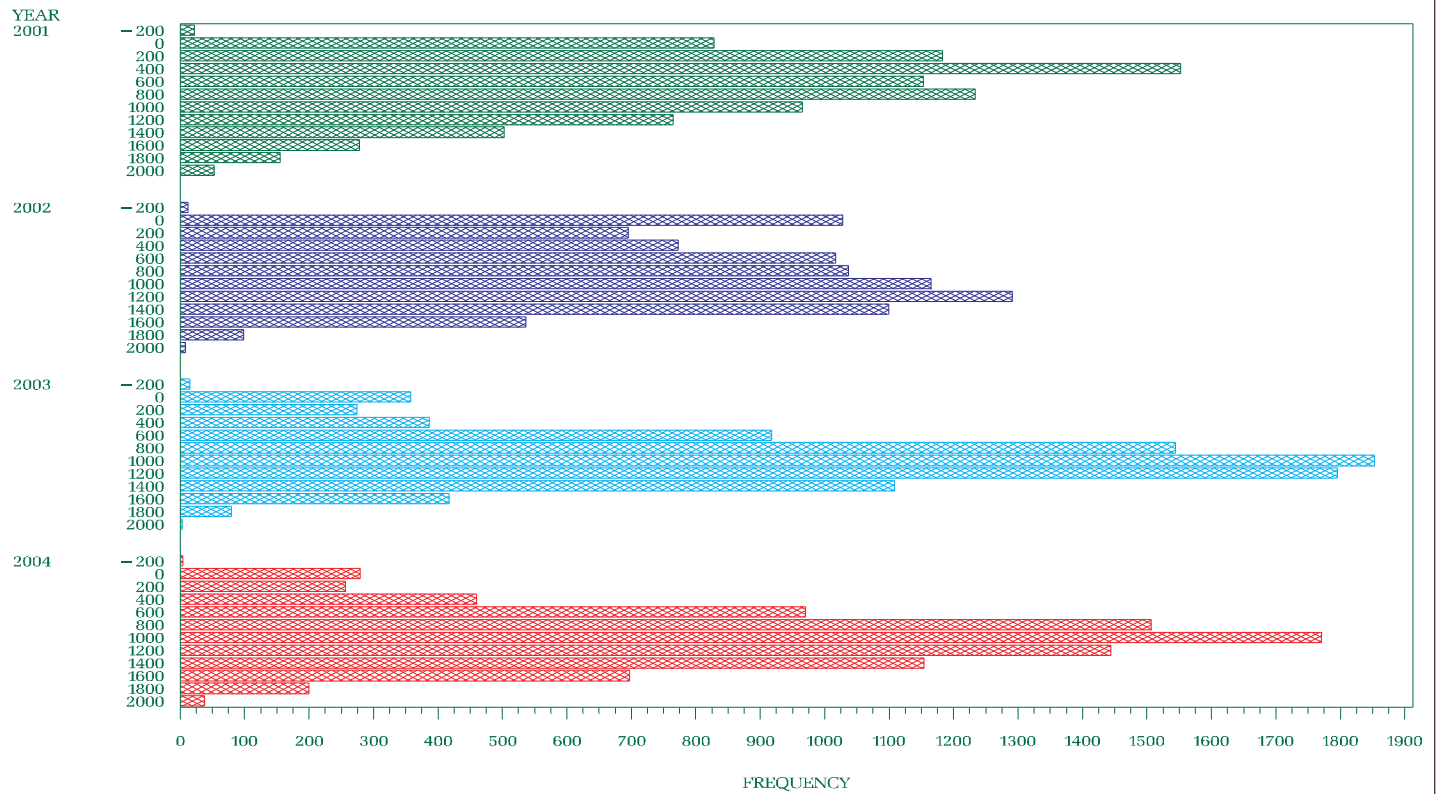
NYISO Frequency Interface Flow For January – December 2004

Margin to Central East Stability Limit



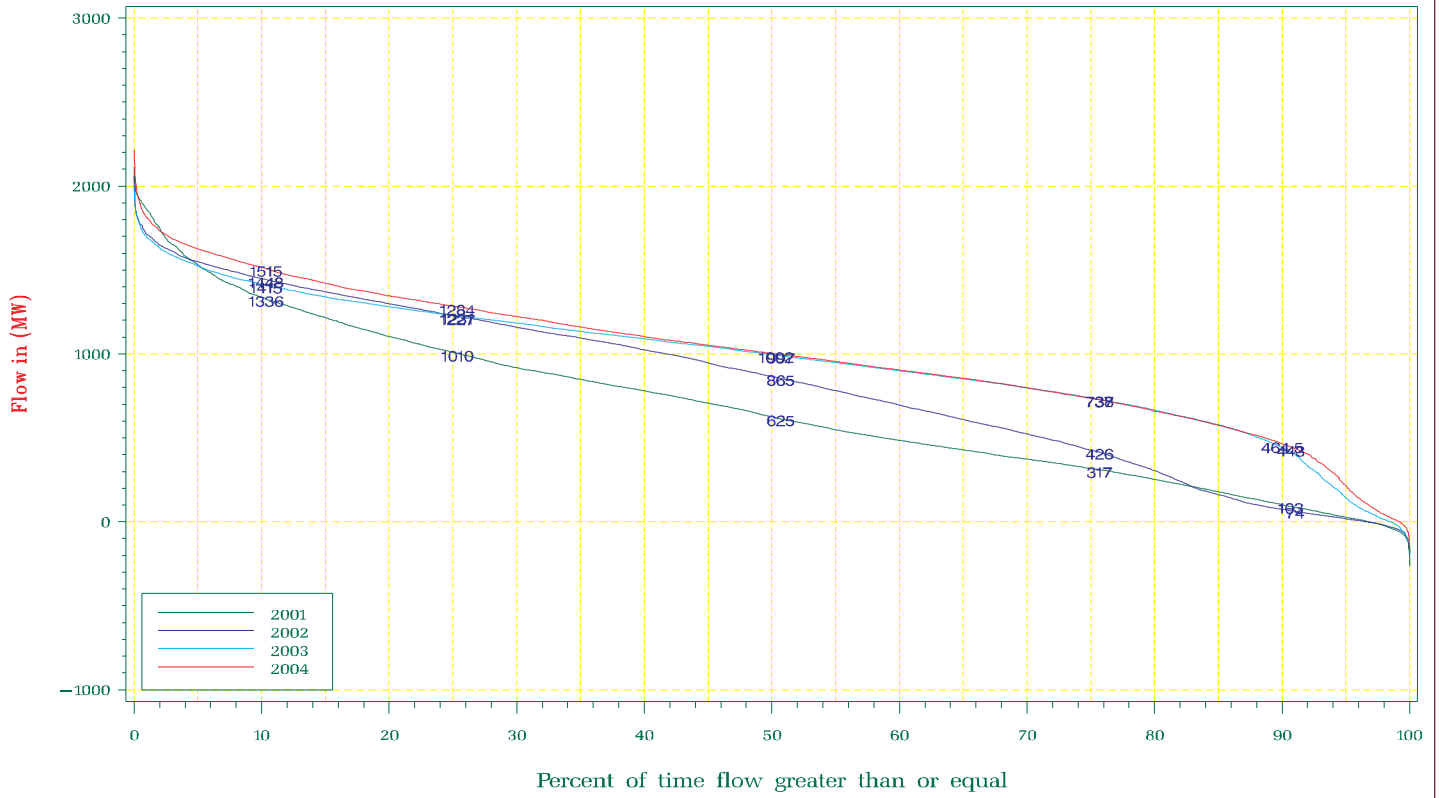
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to Central East Stability Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to Central East Stability Limit



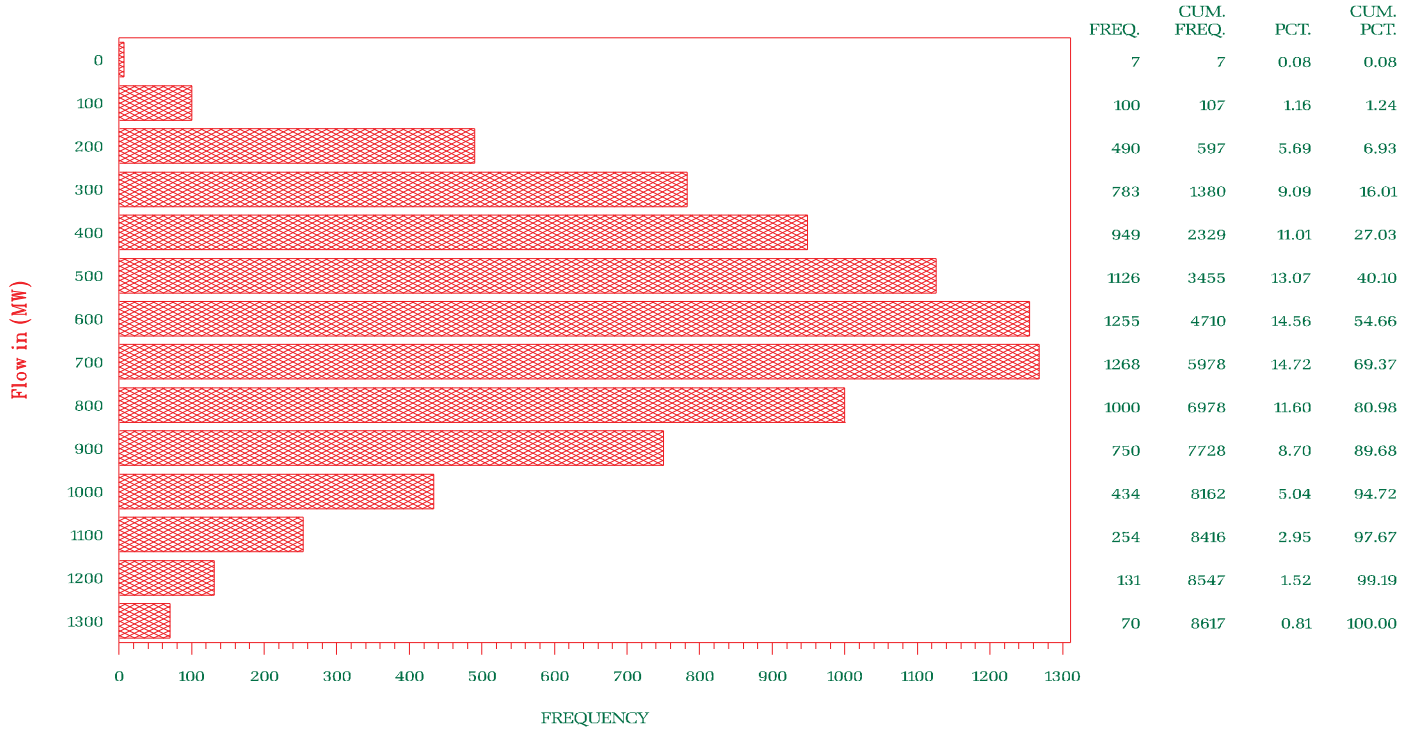
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Margin to Central East Stability Limit



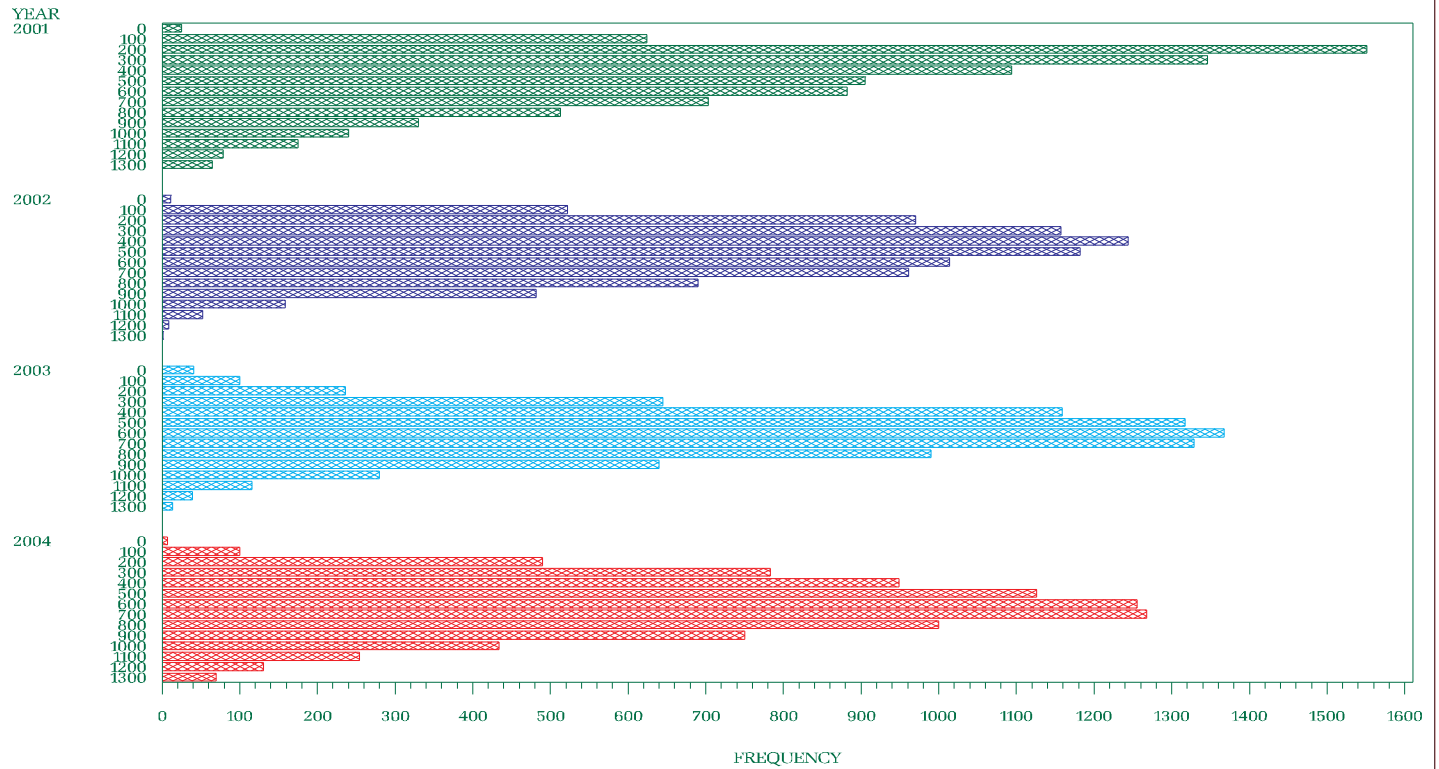
NYISO Frequency Interface Flow For January – December 2004

Pre-Contingency Margin to Central East Limit  
Minimum of 3 Most Limiting Voltage Collapse Limits



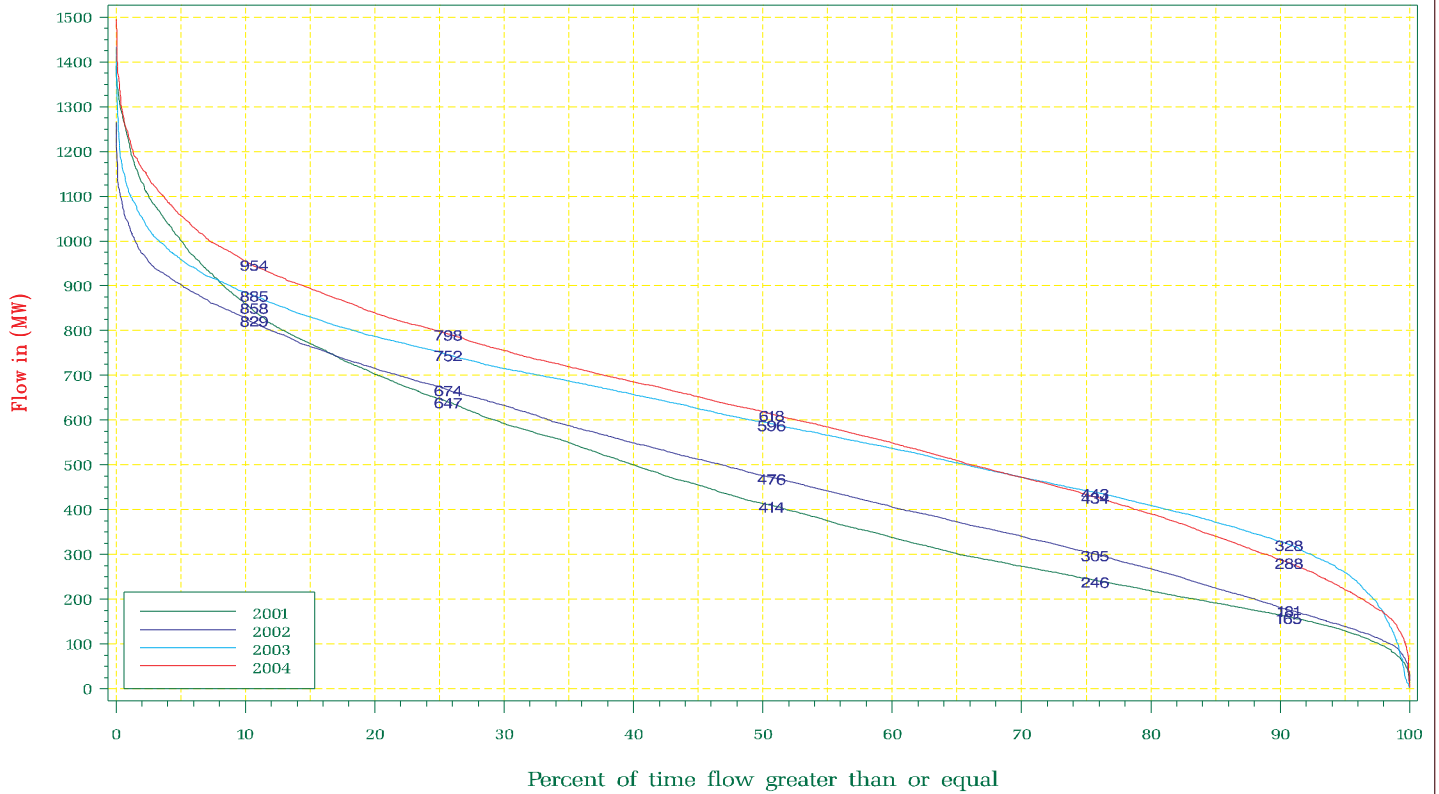
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Pre-Contingency Margin to Central East Limit  
Minimum of 3 Most Limiting Voltage Collapse Limits



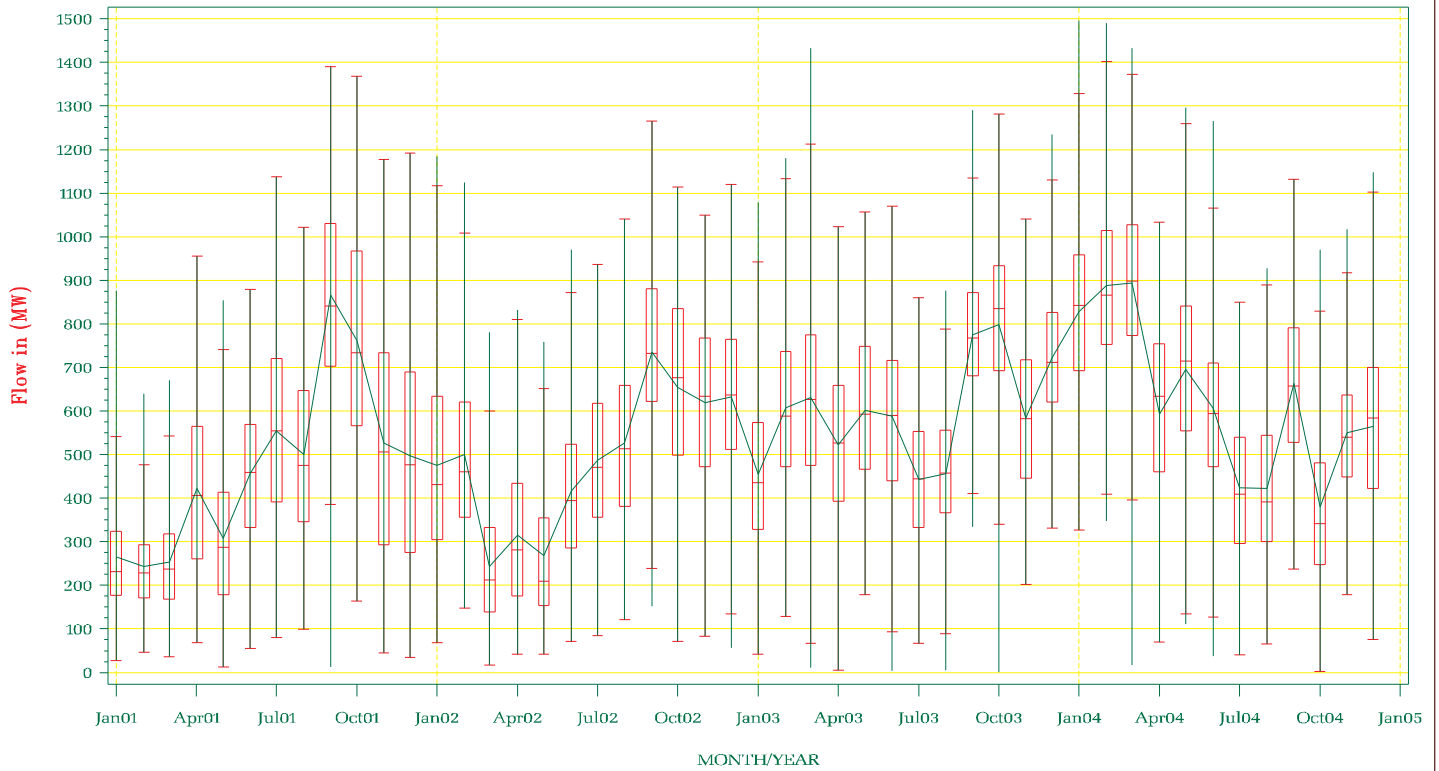
NYISO Percent of time Interface Flow For January 2001 – December 2004

Pre-Contingency Margin to Central East Limit  
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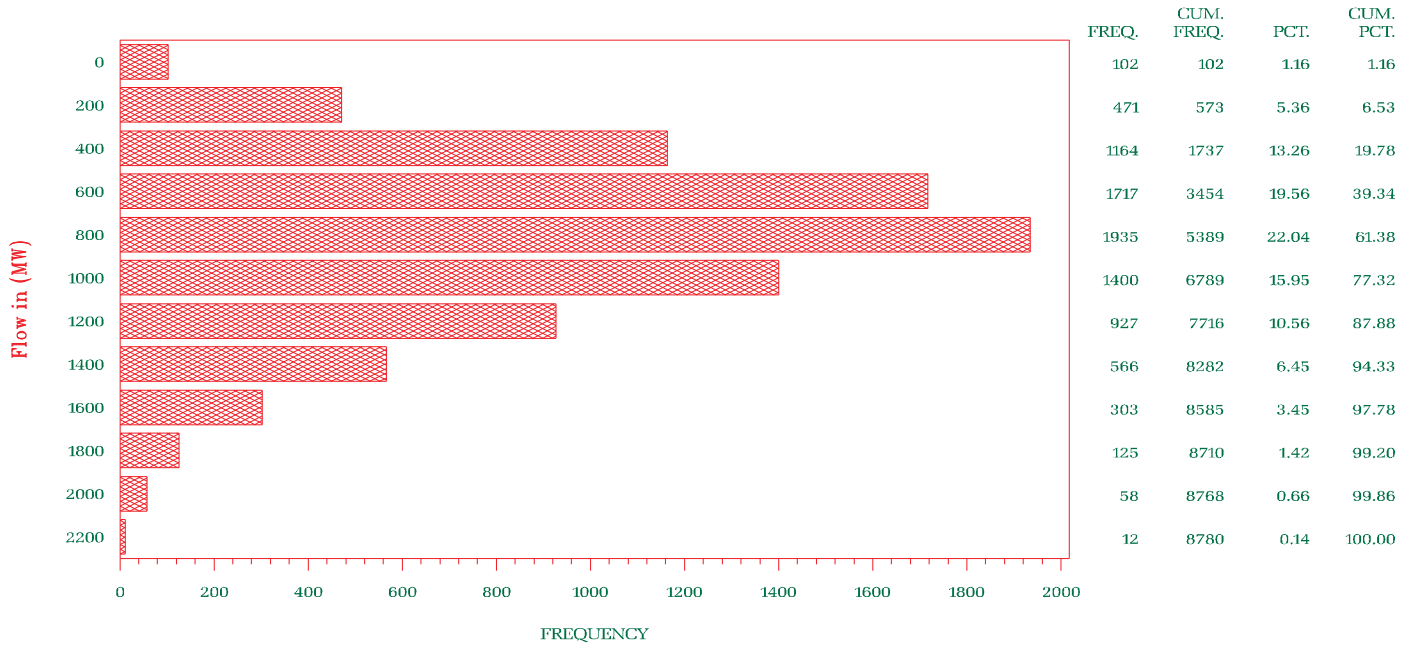
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Pre-Contingency Margin to Central East Limit  
Minimum of 3 Most Limiting Voltage Collapse Limits



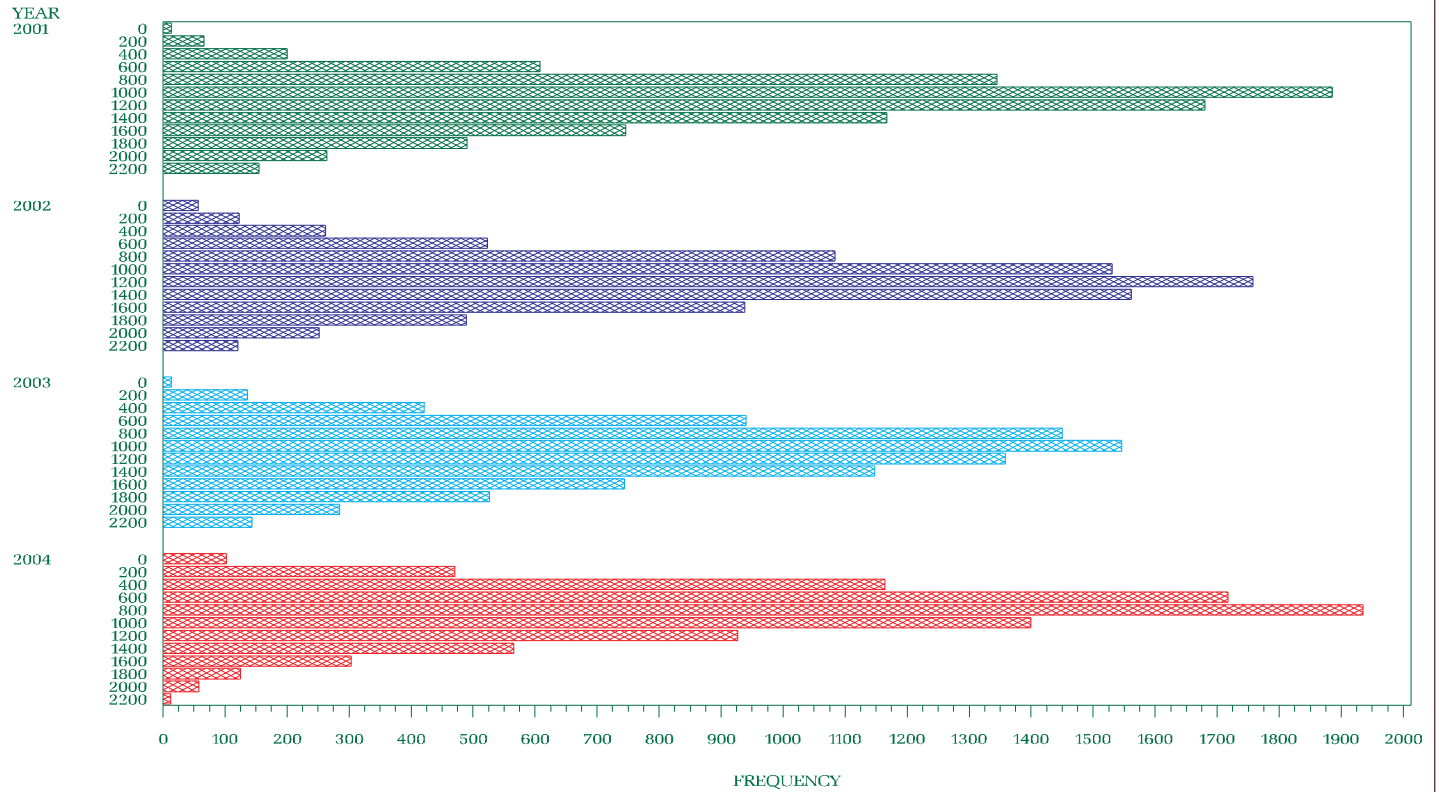
NYISO Frequency Interface Flow For January – December 2004

Margin to West Central Limit



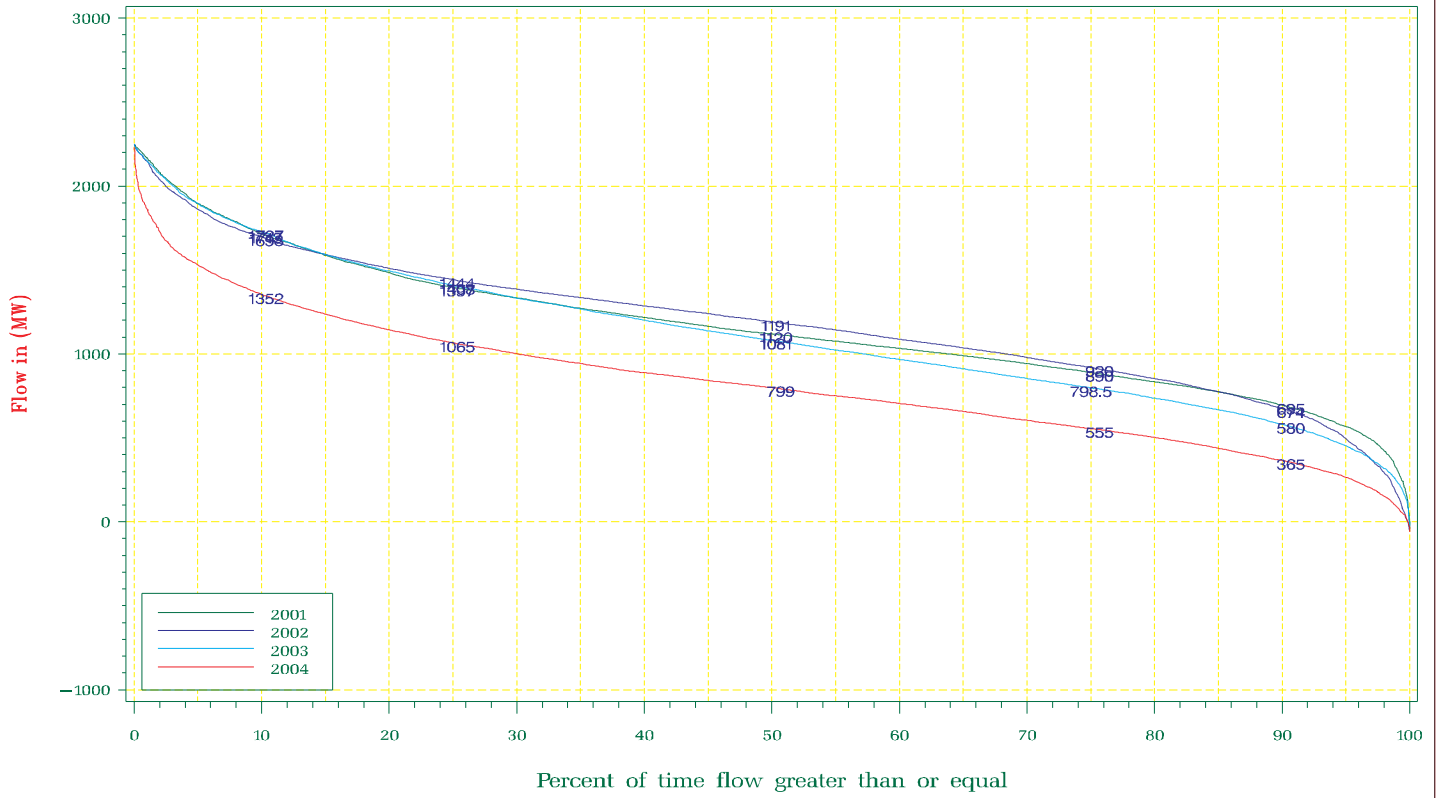
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Margin to West Central Limit



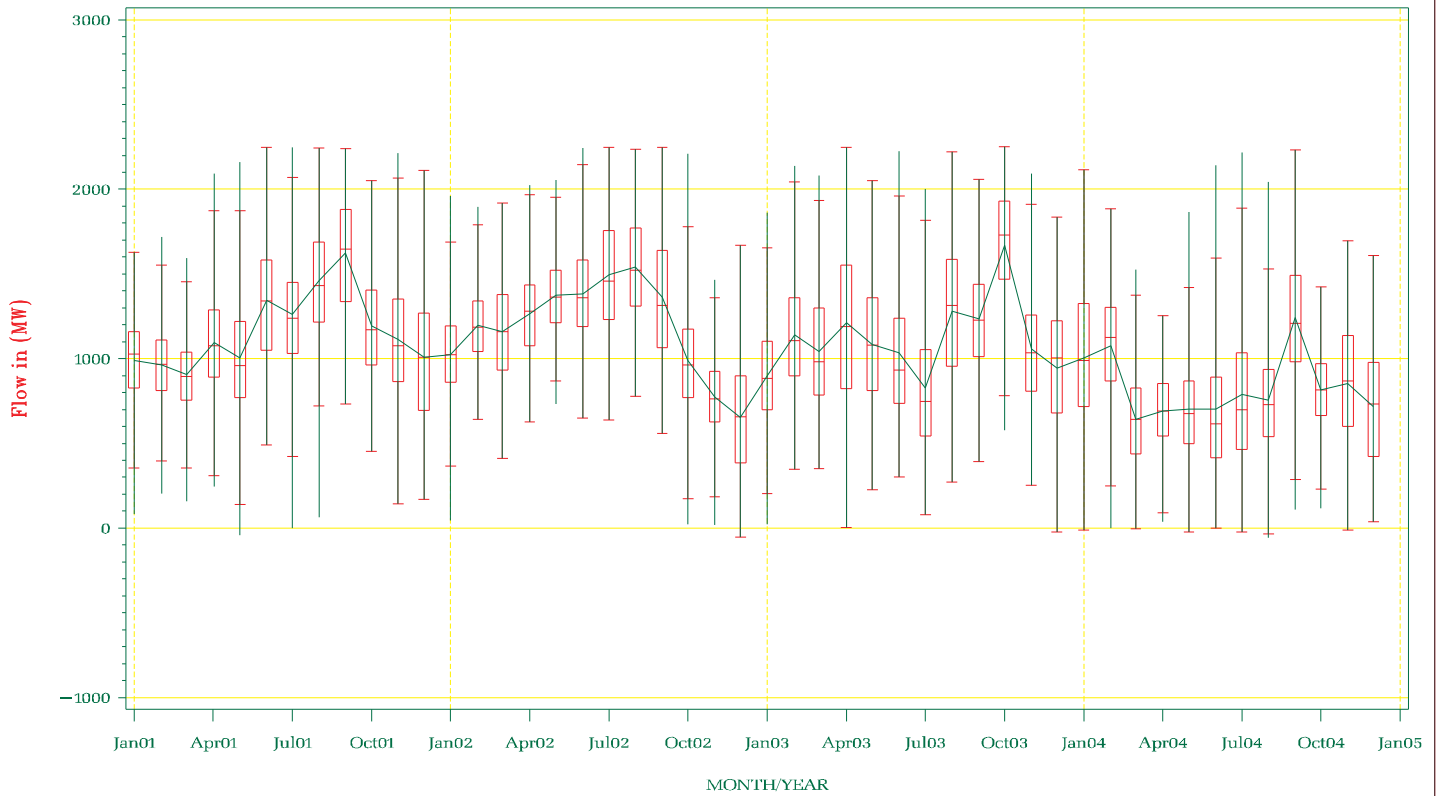
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Margin to West Central Limit



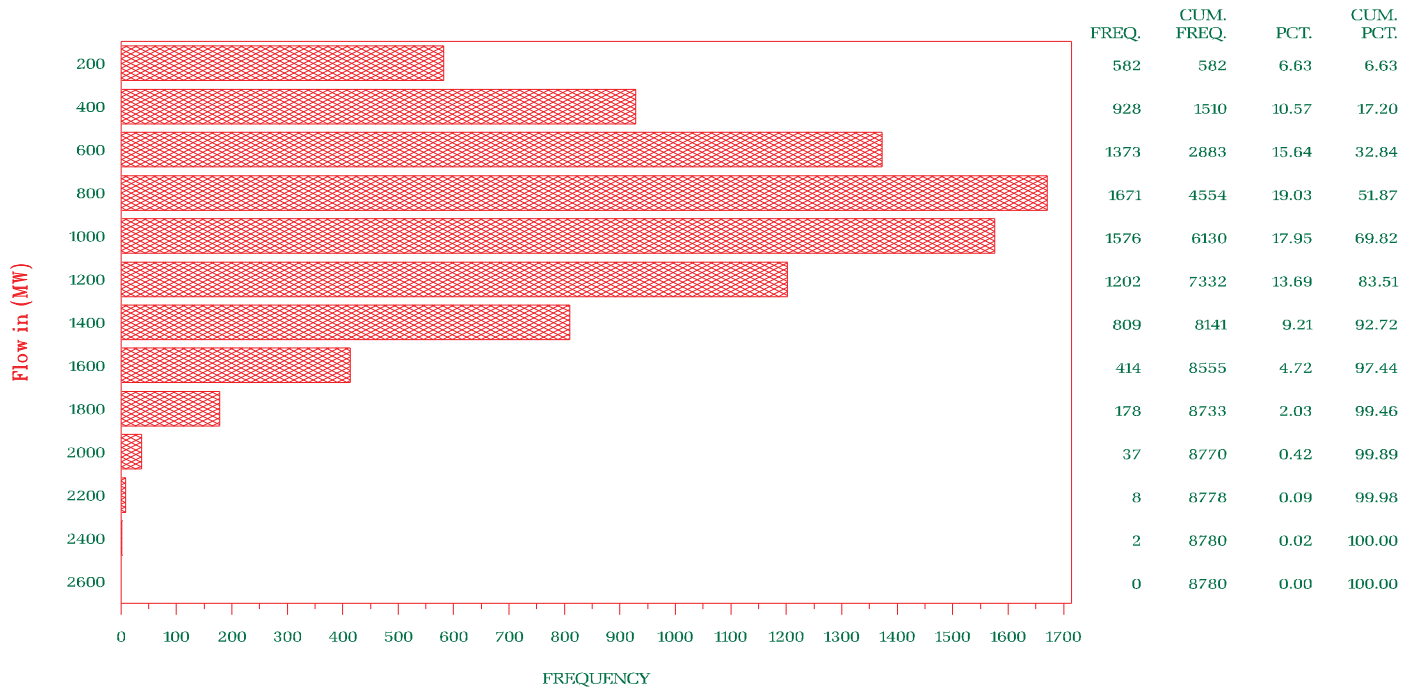
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Margin to West Central Limit



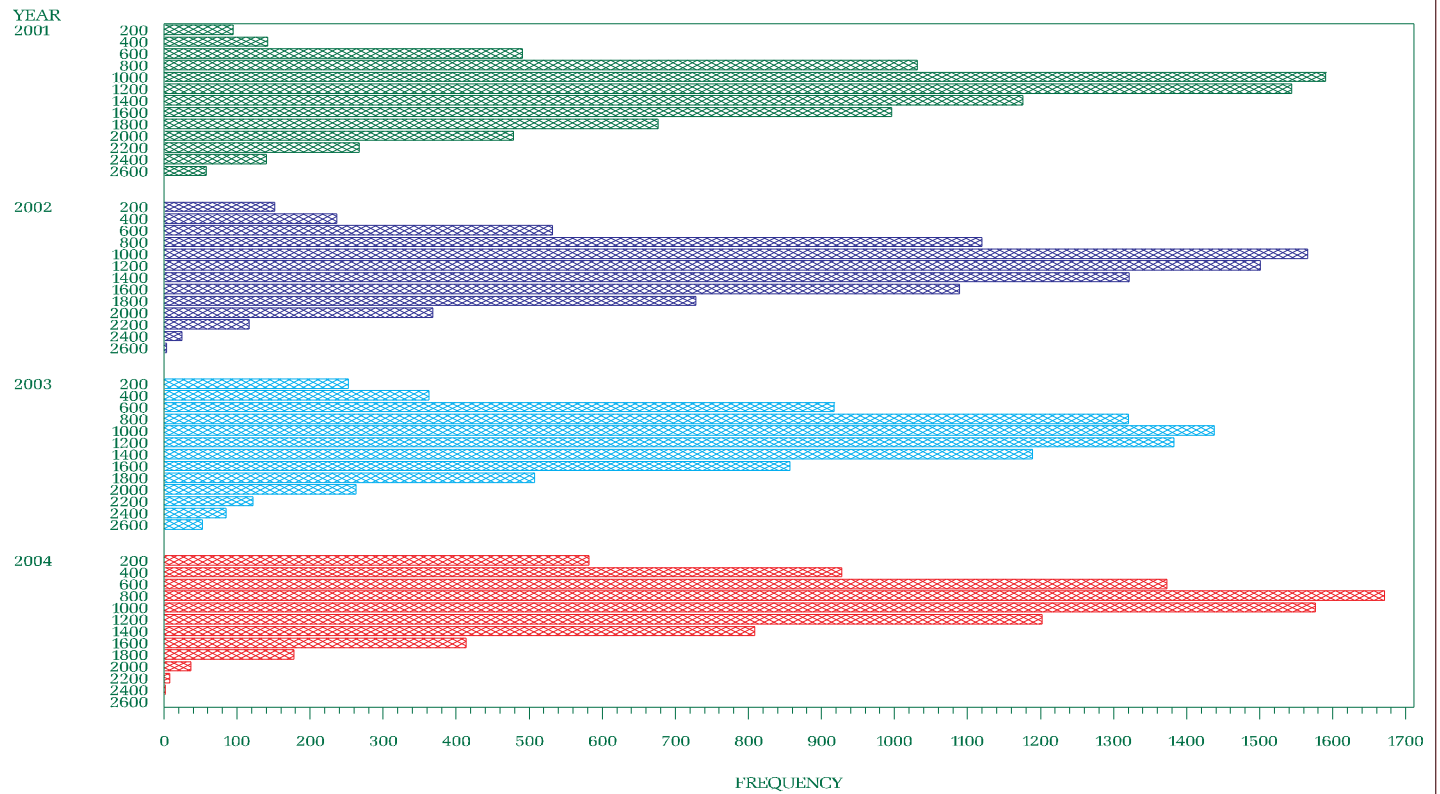
NYISO Frequency Interface Flow For January – December 2004

Margin to Dysinger East Limit



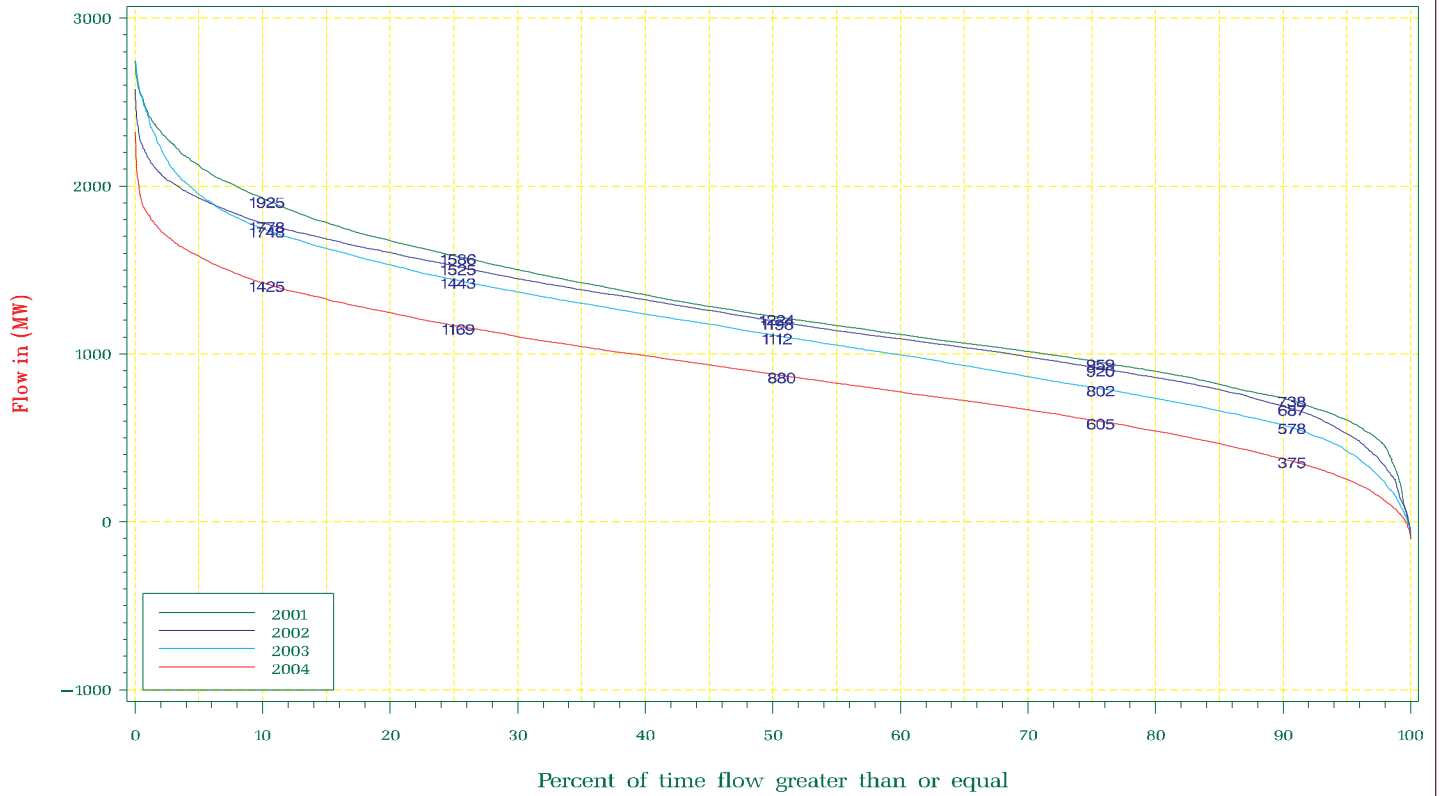
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Margin to Dysinger East Limit



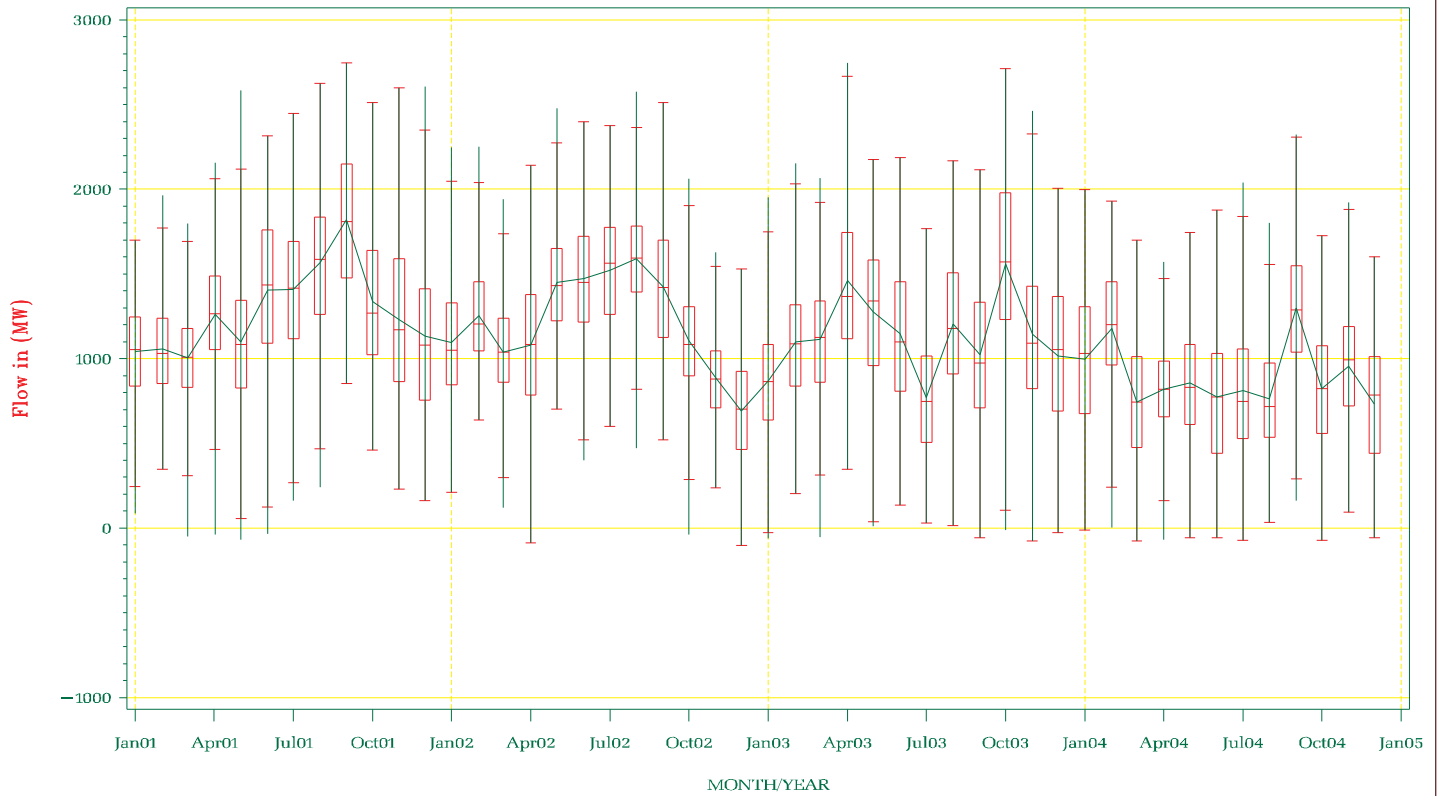
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Margin to Dysinger East Limit



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

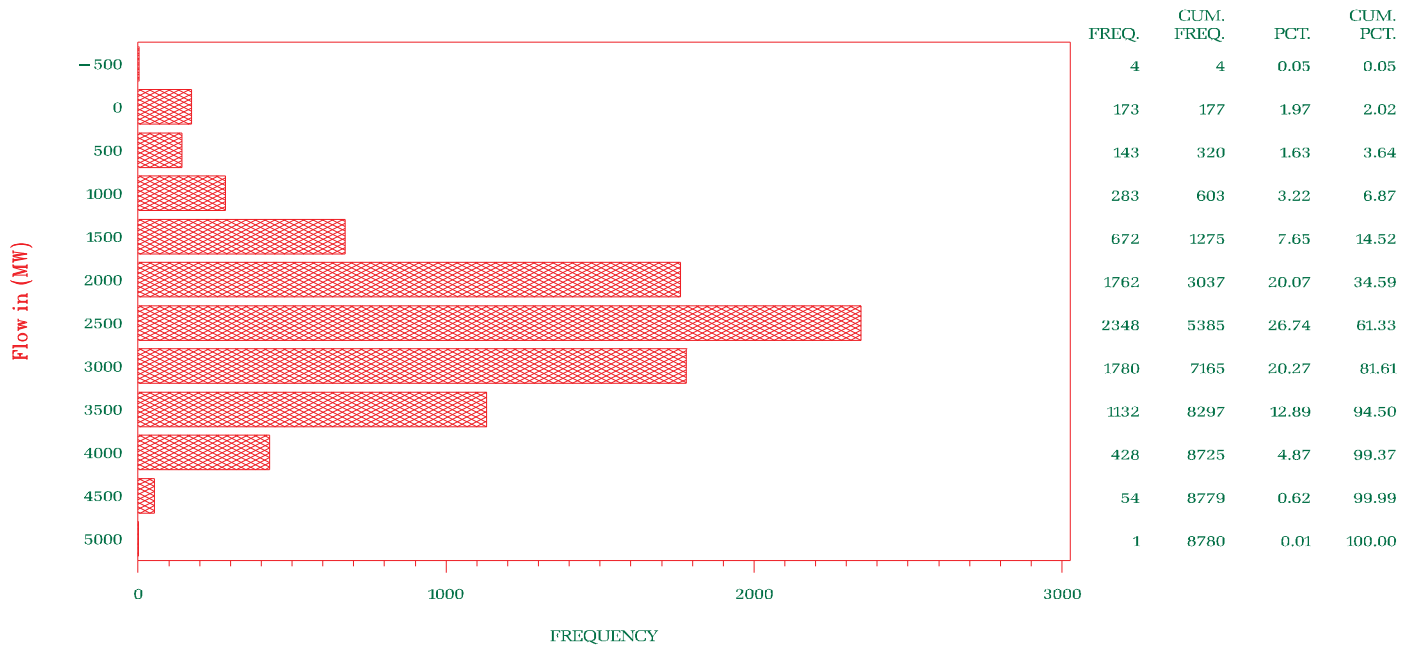
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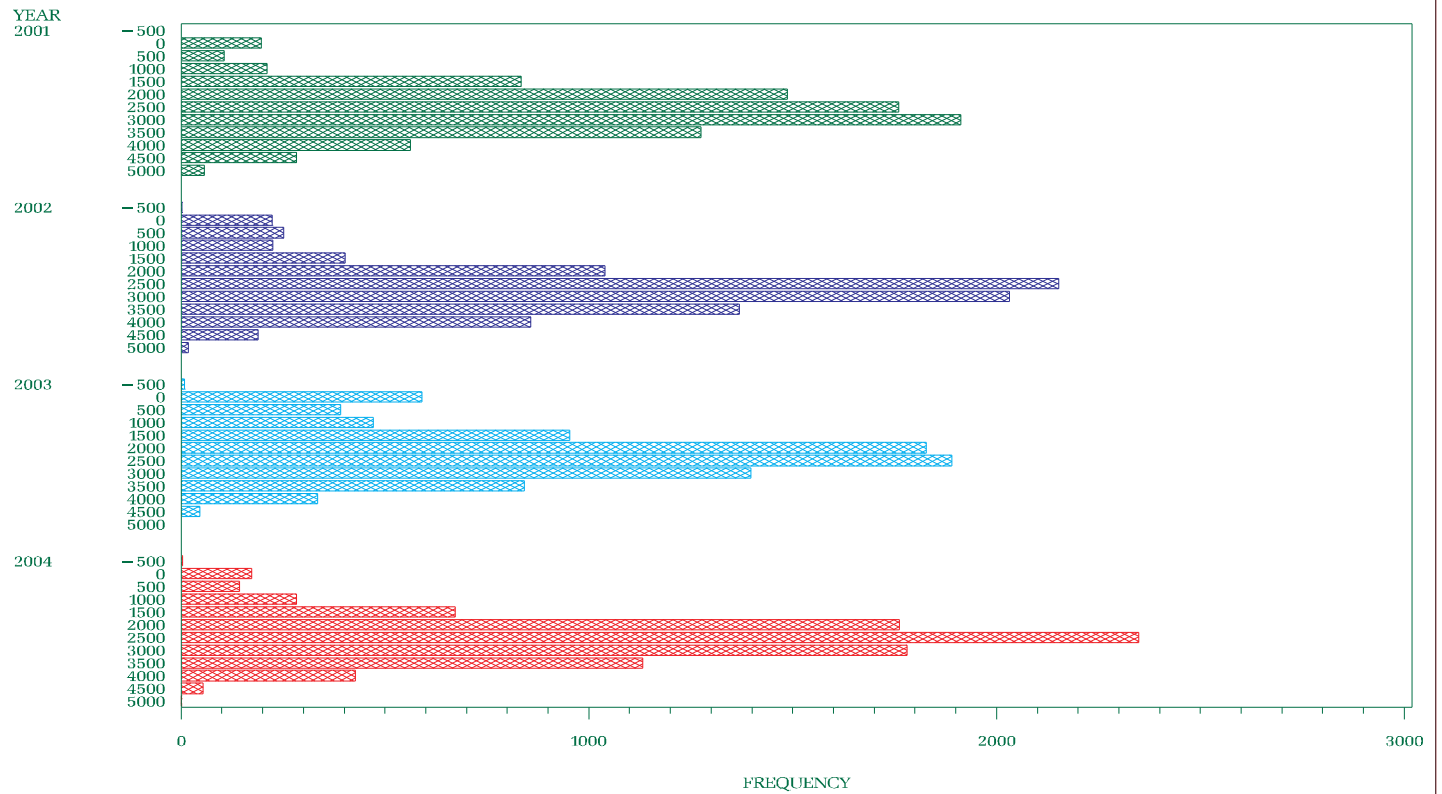
NYISO Frequency Interface Flow For January – December 2004

Margin to UPNY Con Ed Limit



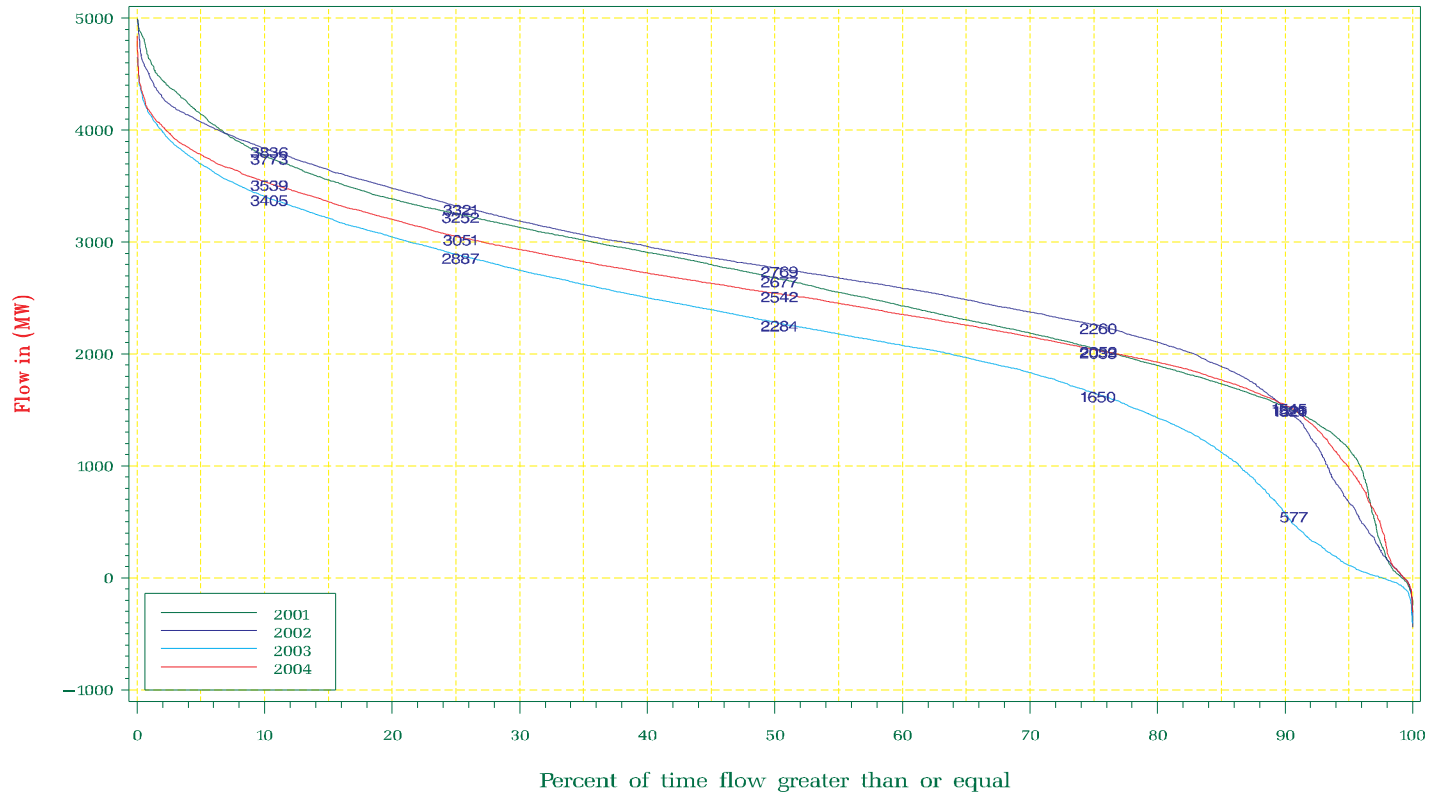
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to UPNY Con Ed Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to UPNY Con Ed Limit



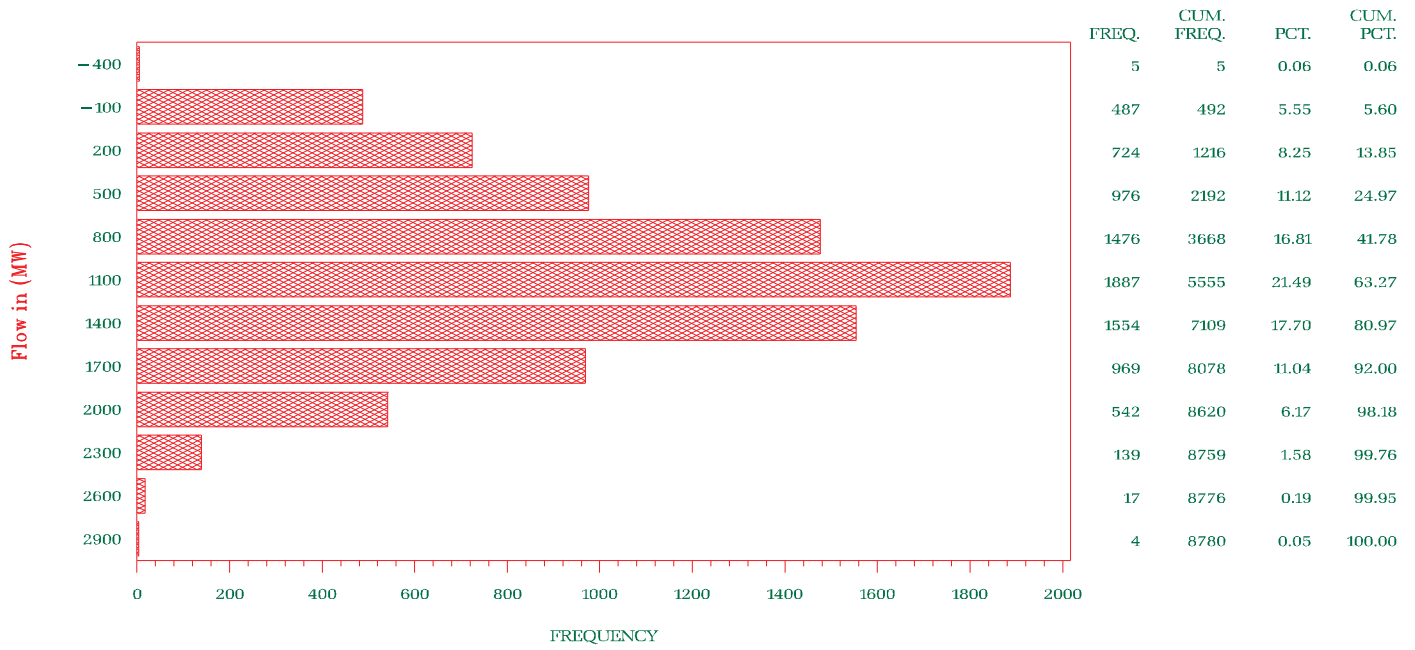
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Margin to UPNY Con Ed Limit



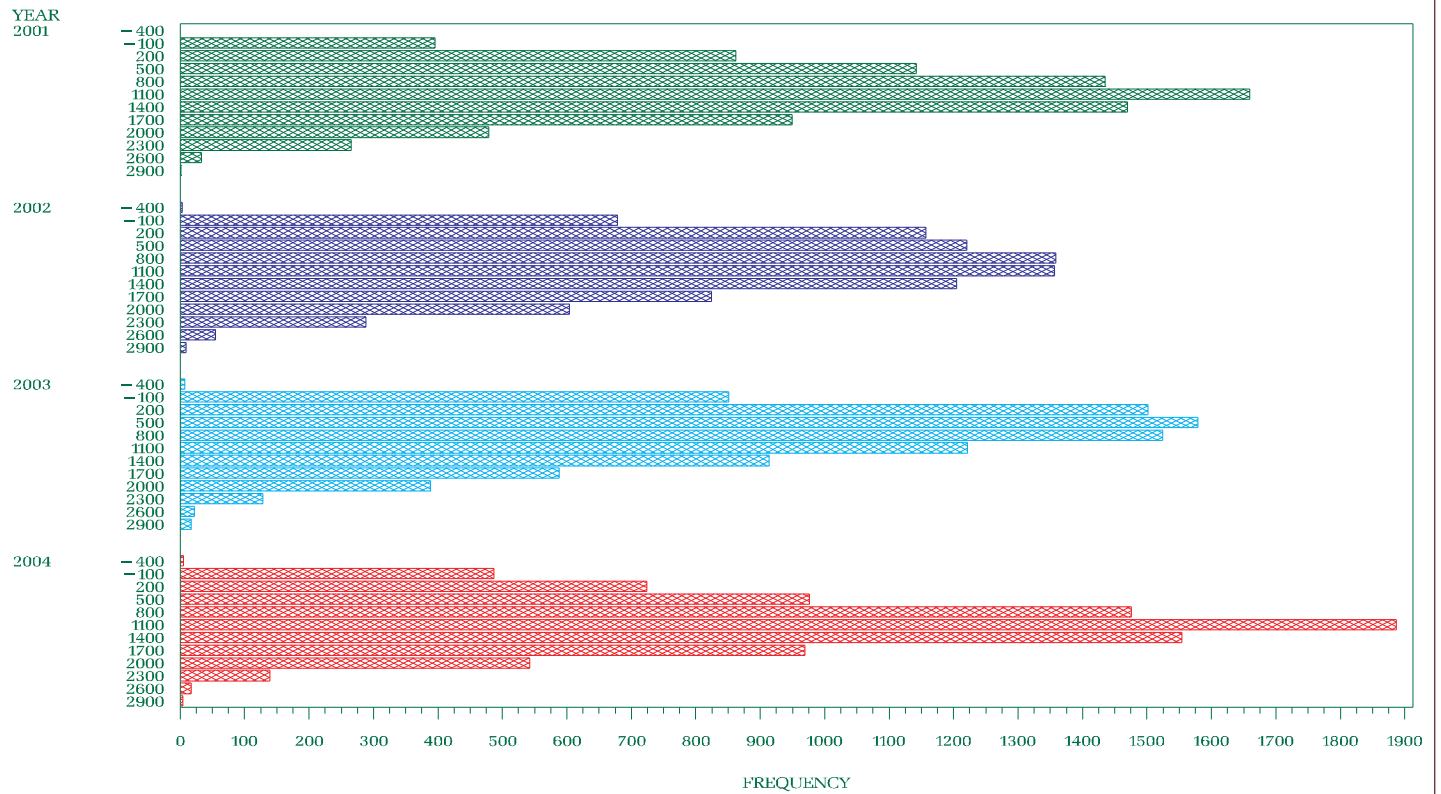
NYISO Frequency Interface Flow For January – December 2004

Margin to Sprainbrook/Dunwoodie Limit



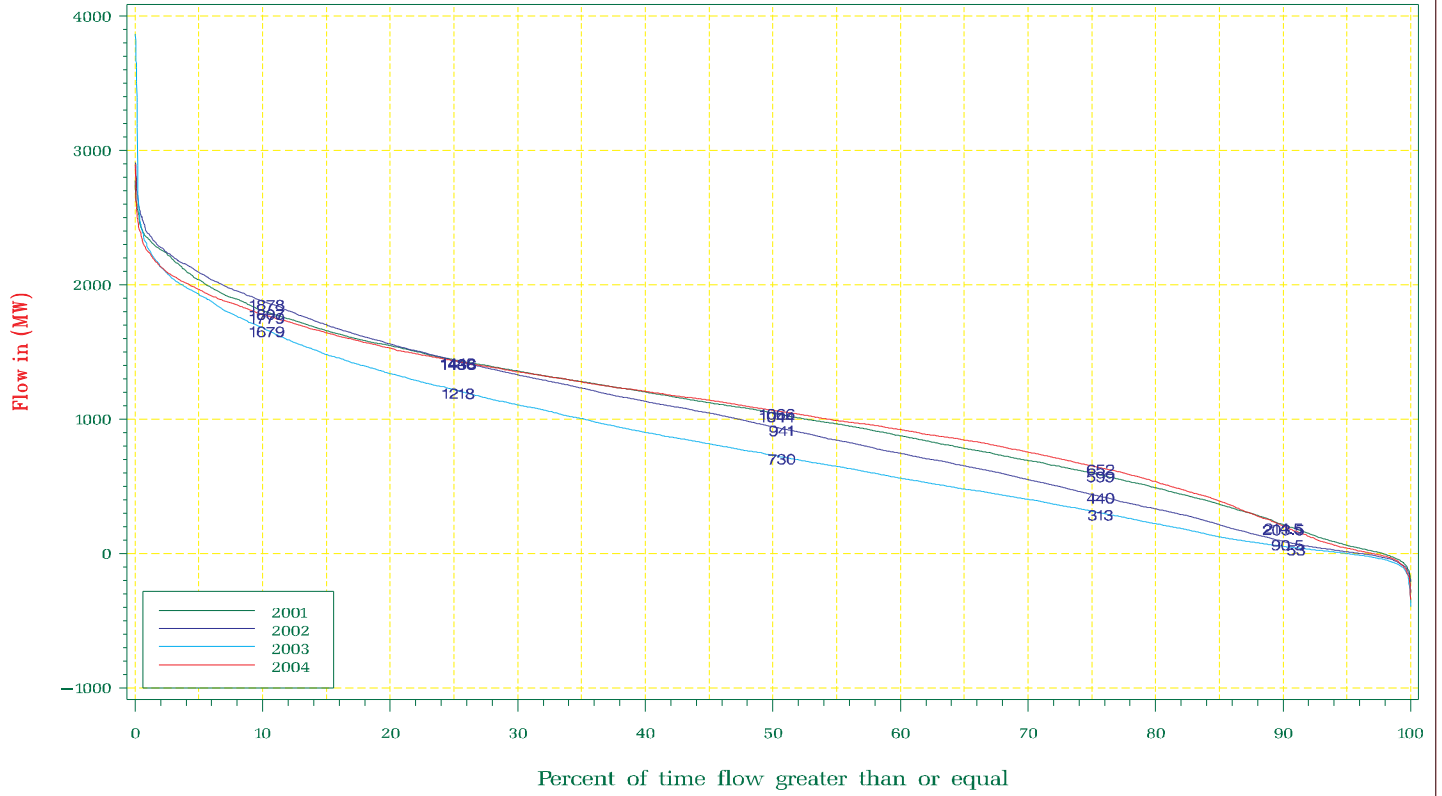
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to Sprainbrook/Dunwoodie Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to Sprainbrook/Dunwoodie Limit



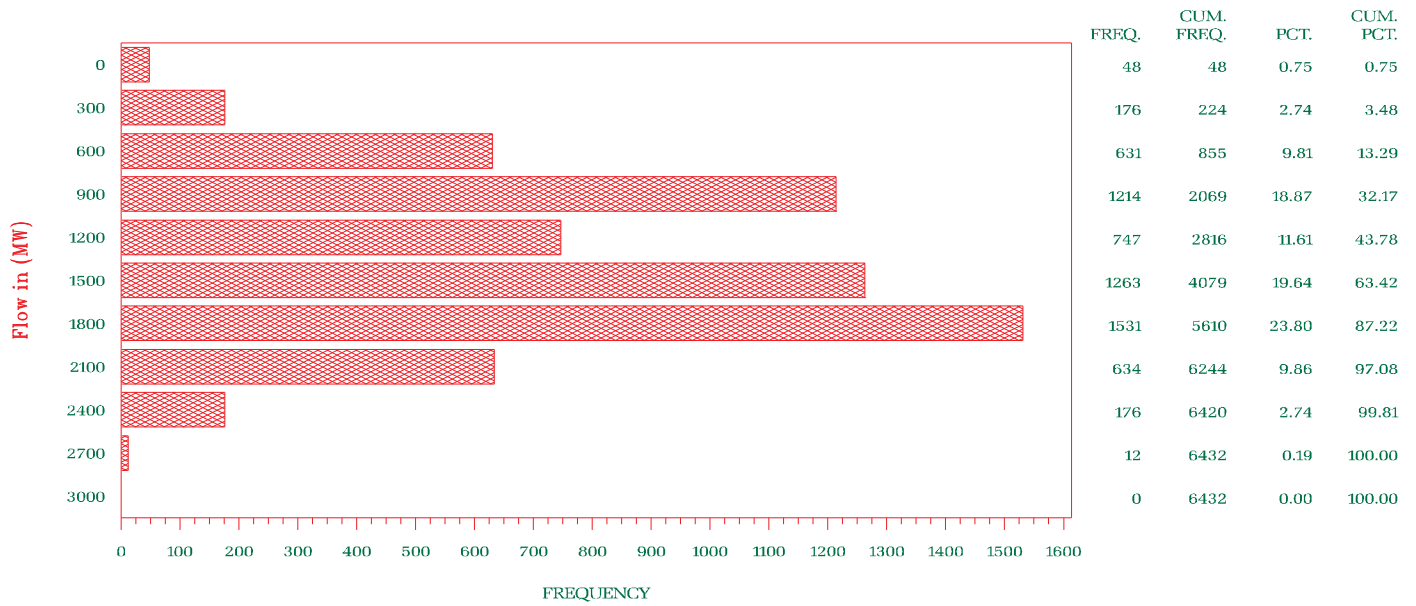
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Margin to Sprainbrook/Dunwoodie Limit



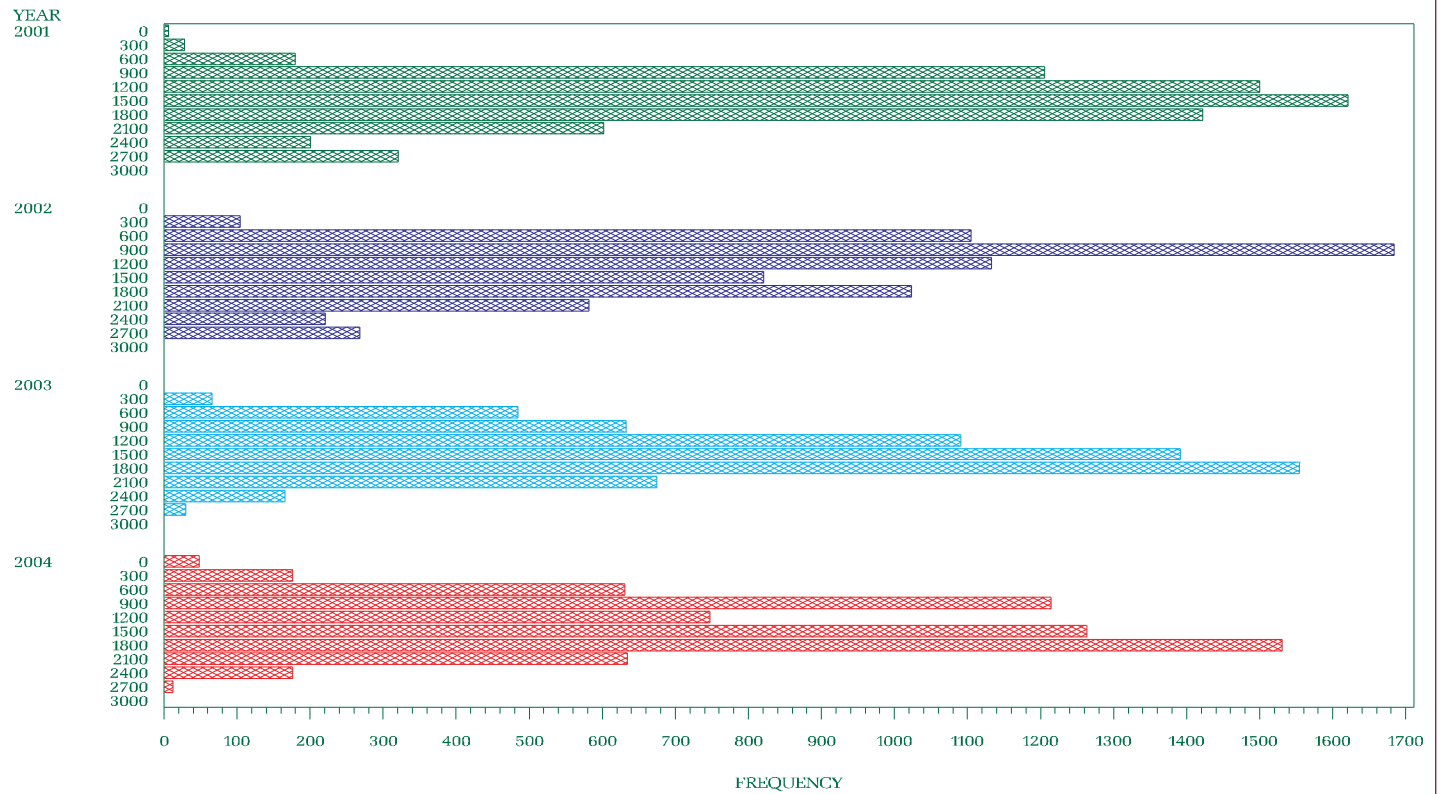
NYISO Frequency Interface Flow For January – December 2004

Margin to Moses South Limit



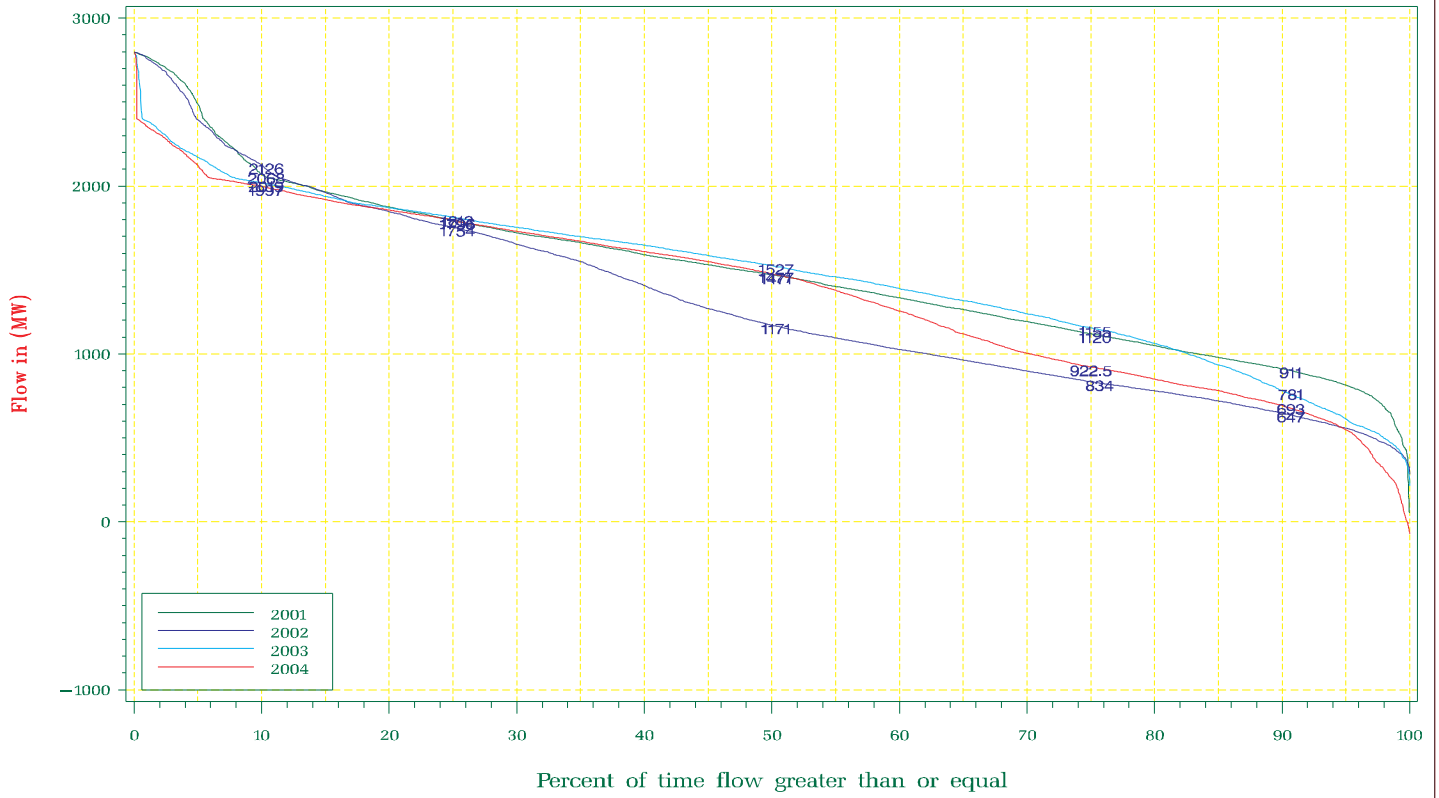
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Margin to Moses South Limit



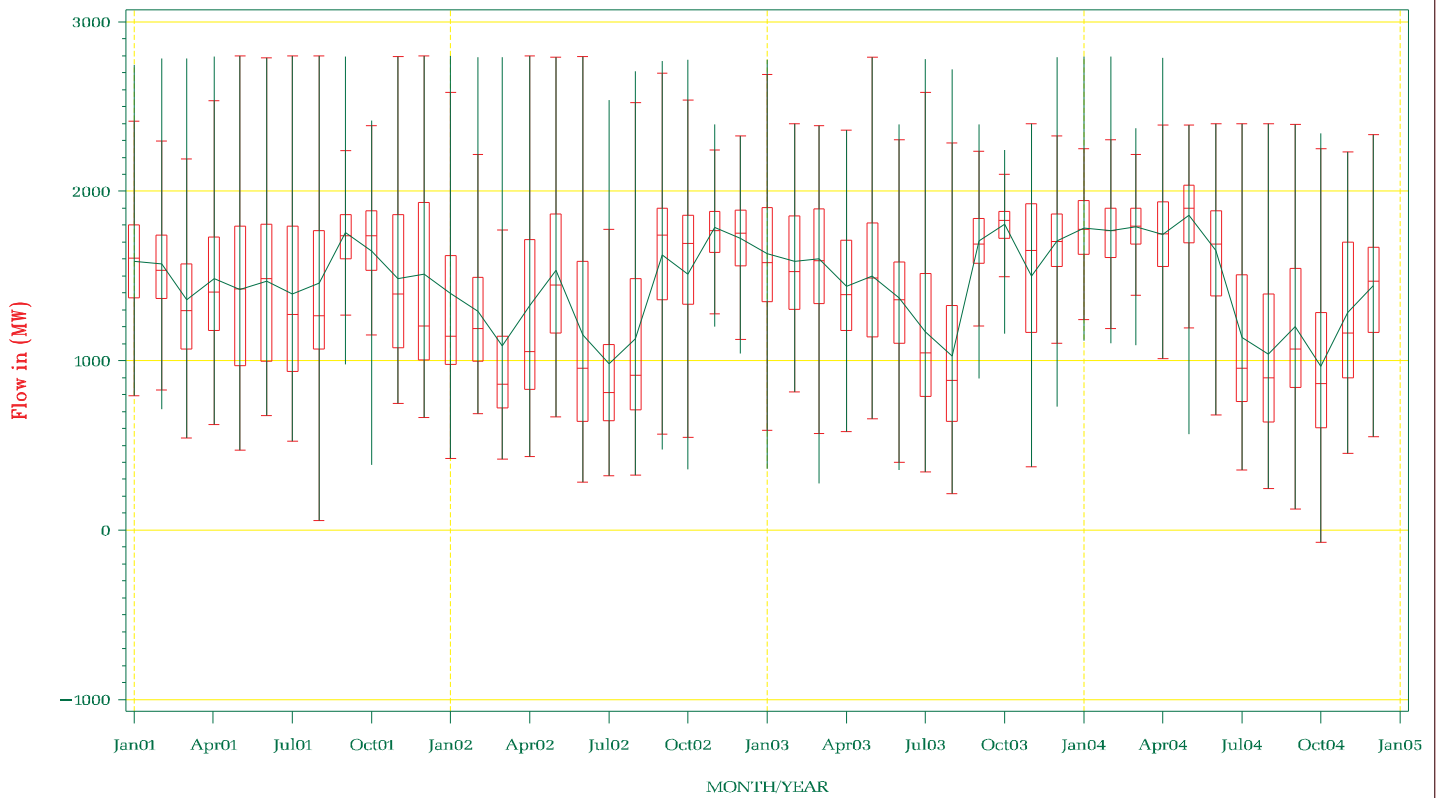
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Margin to Moses South Limit



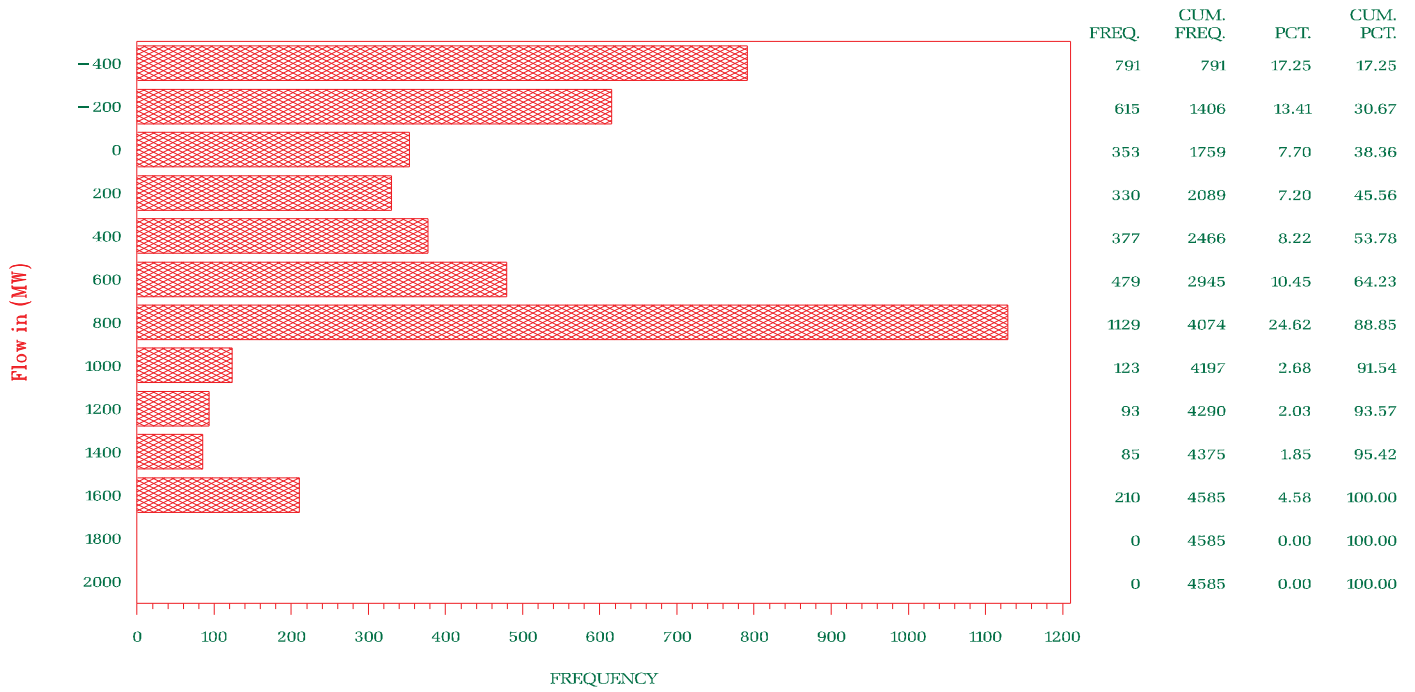
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Margin to Moses South Limit



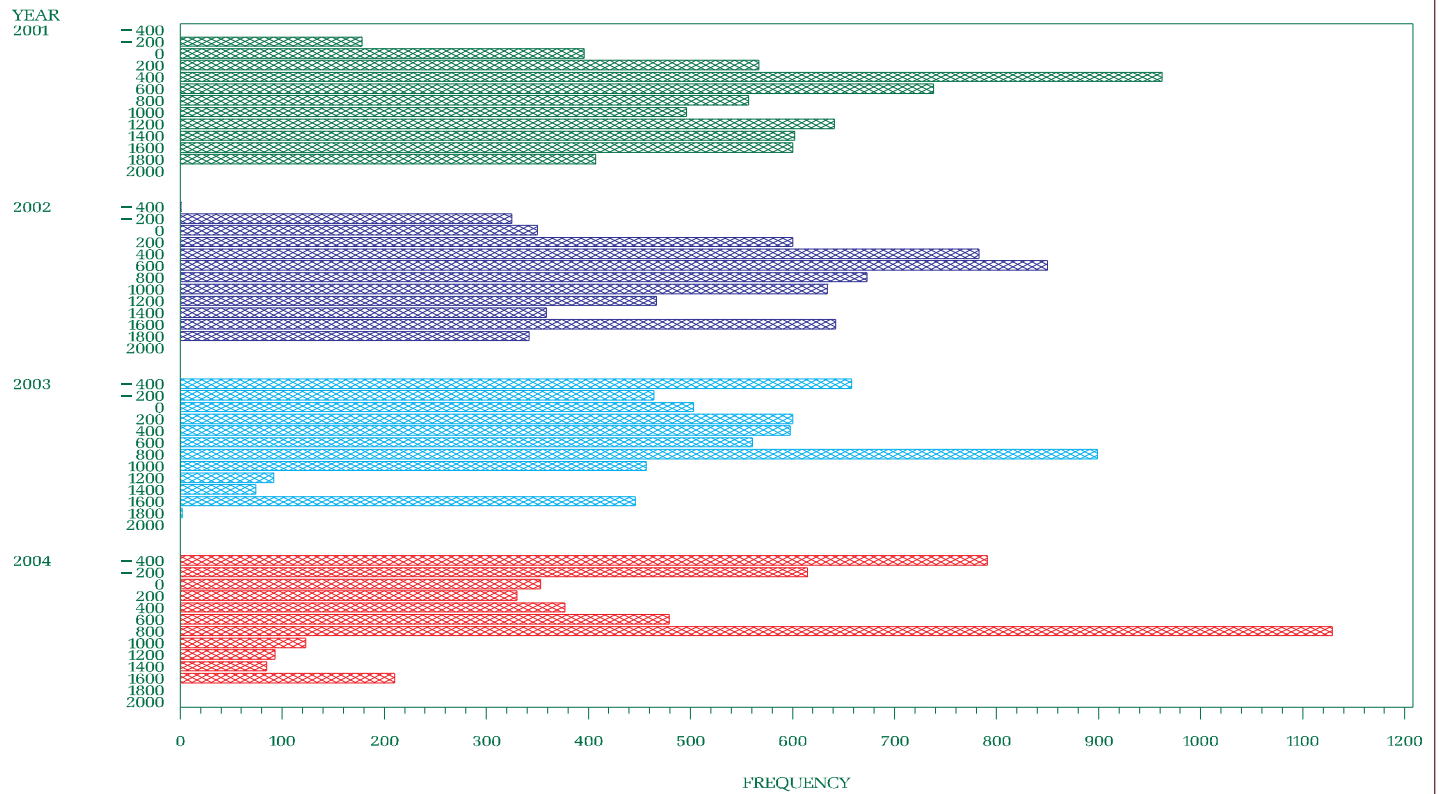
NYISO Frequency Interface Flow For January – December 2004

Margin to TE–NY Limit



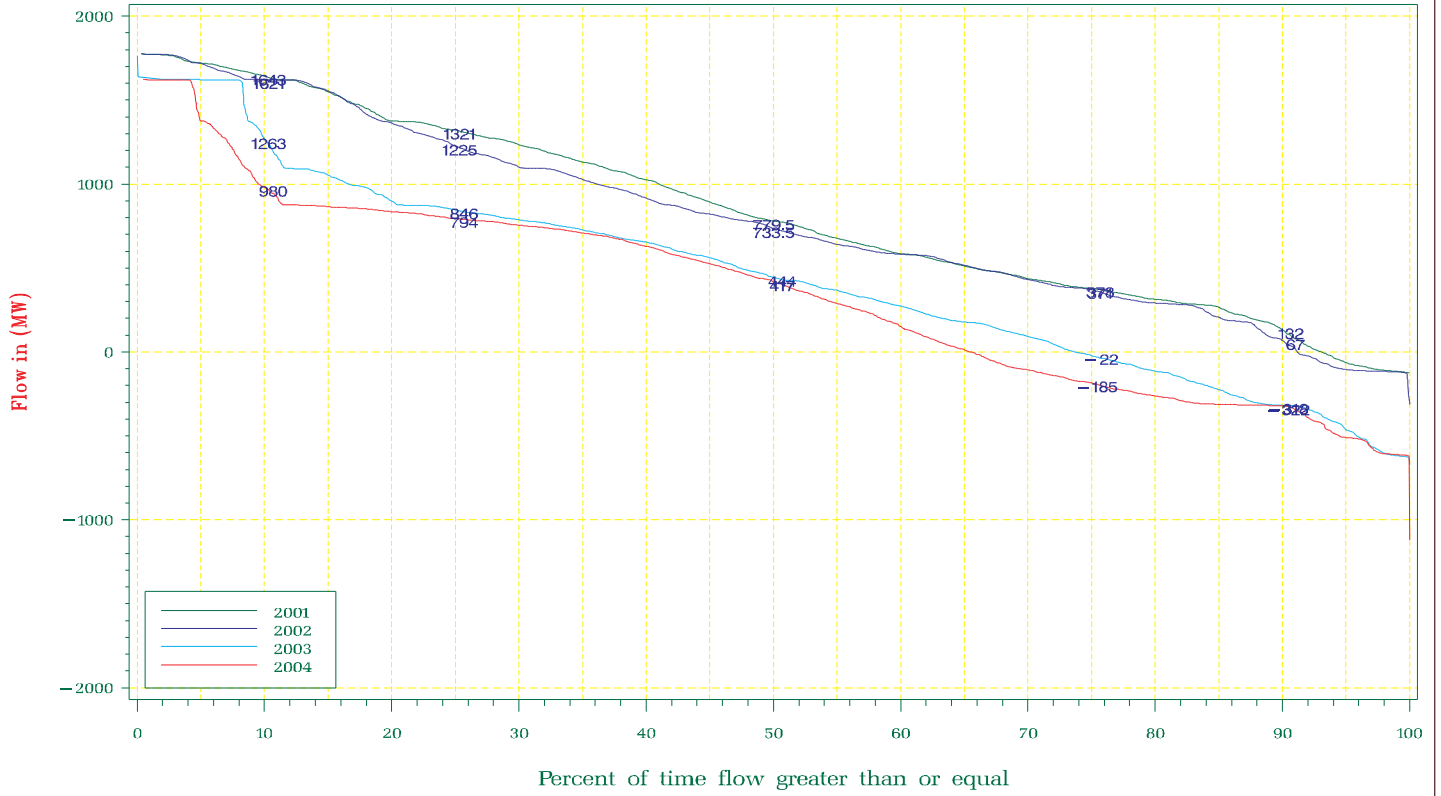
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Margin to TE–NY Limit



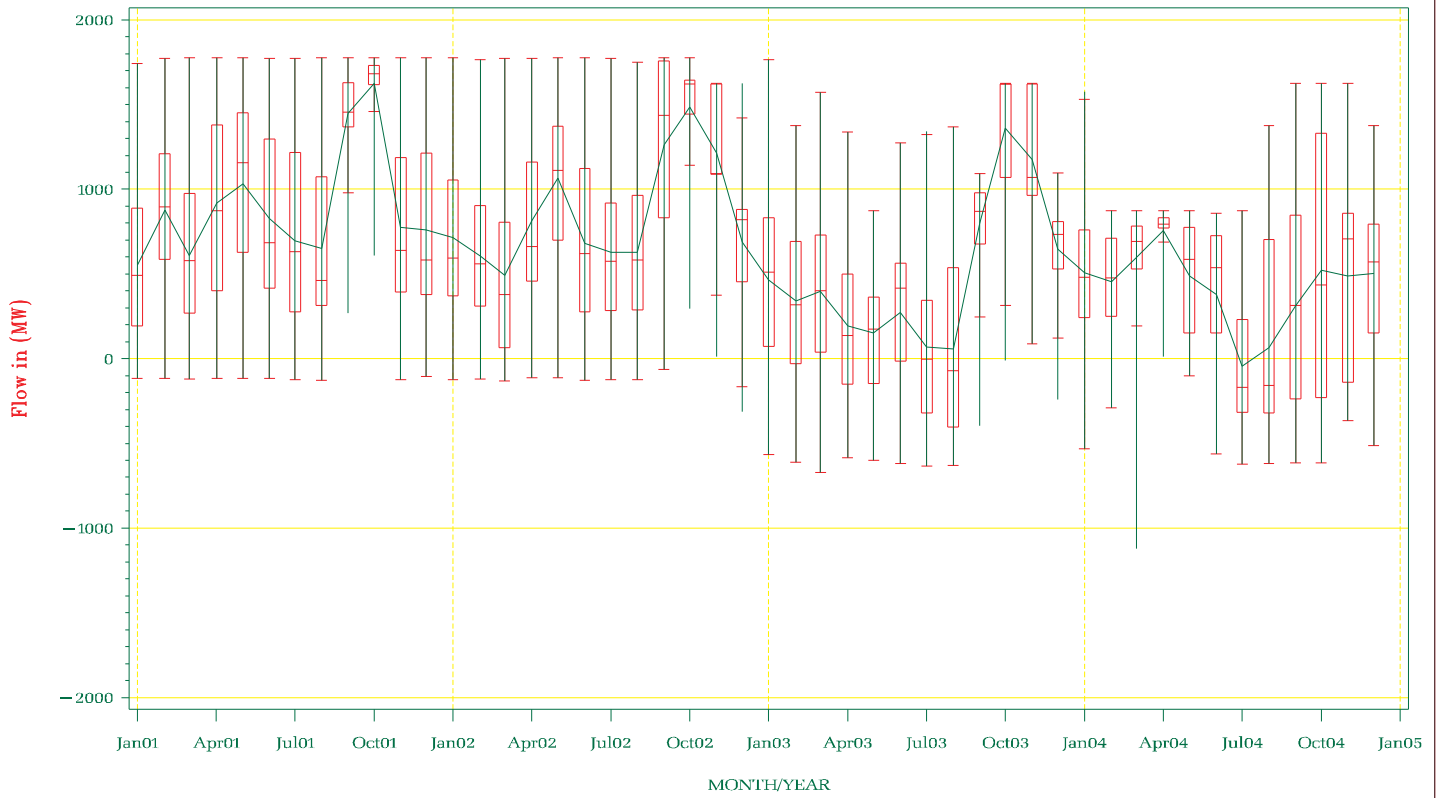
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Margin to TE–NY Limit



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

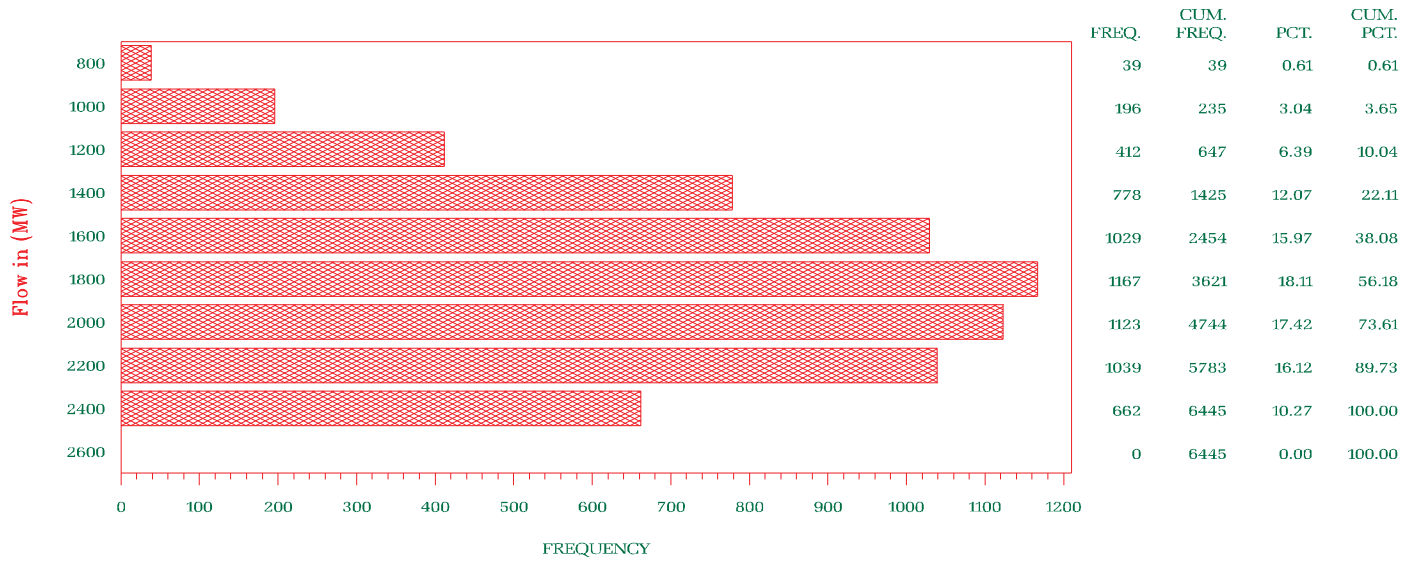
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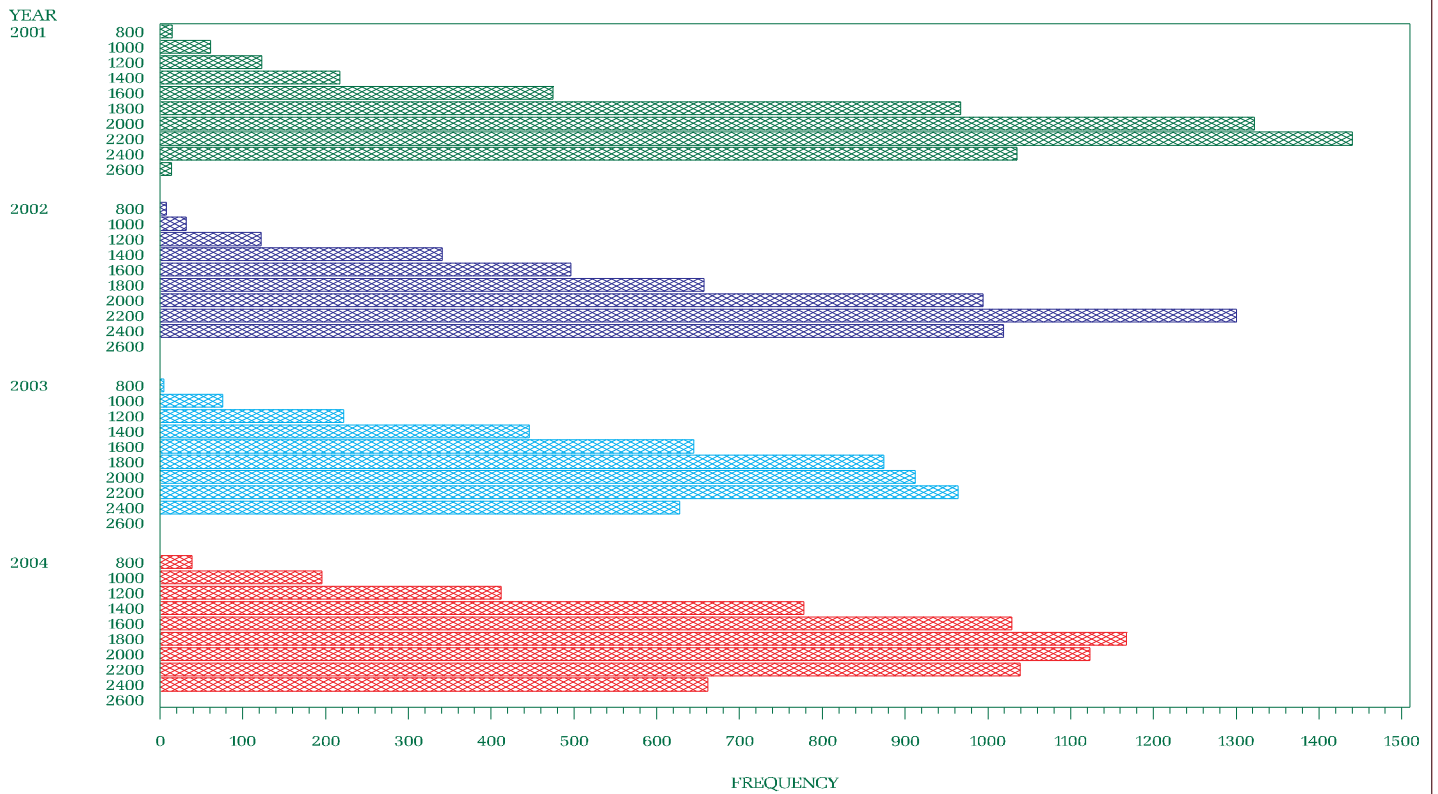
NYISO Frequency Interface Flow For January – December 2004

Margin to ONTARIO – NY Limit



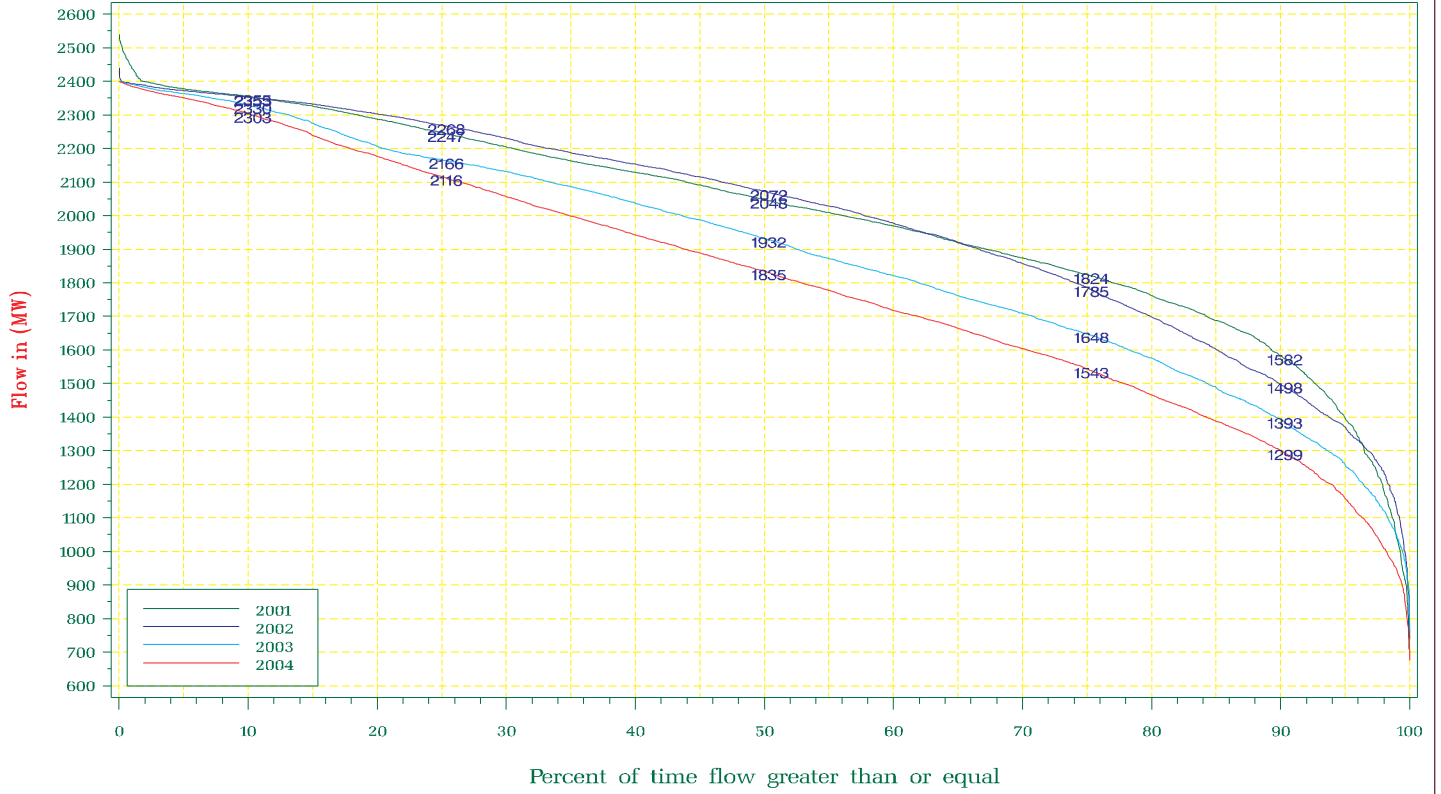
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to Ontario – NY Limit



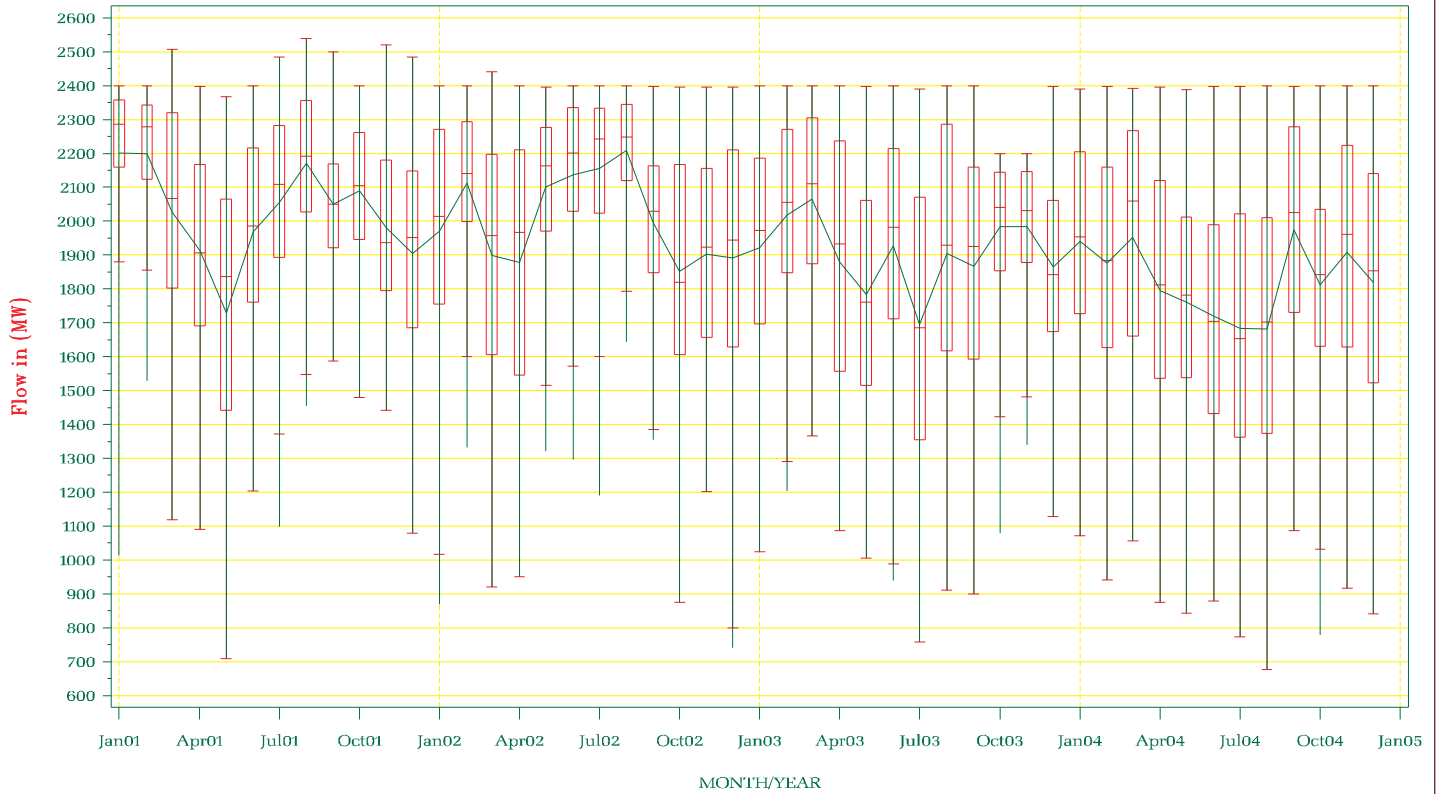
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Margin to Ontario – NY Limit



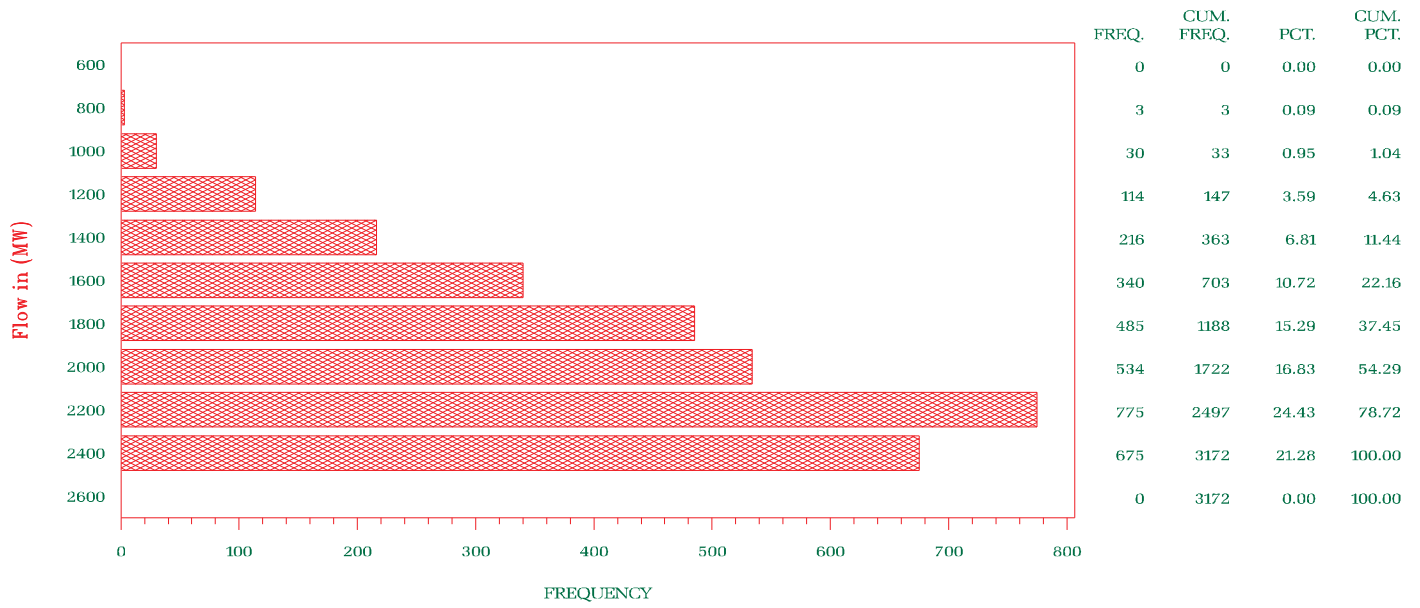
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Margin to Ontario – NY Limit



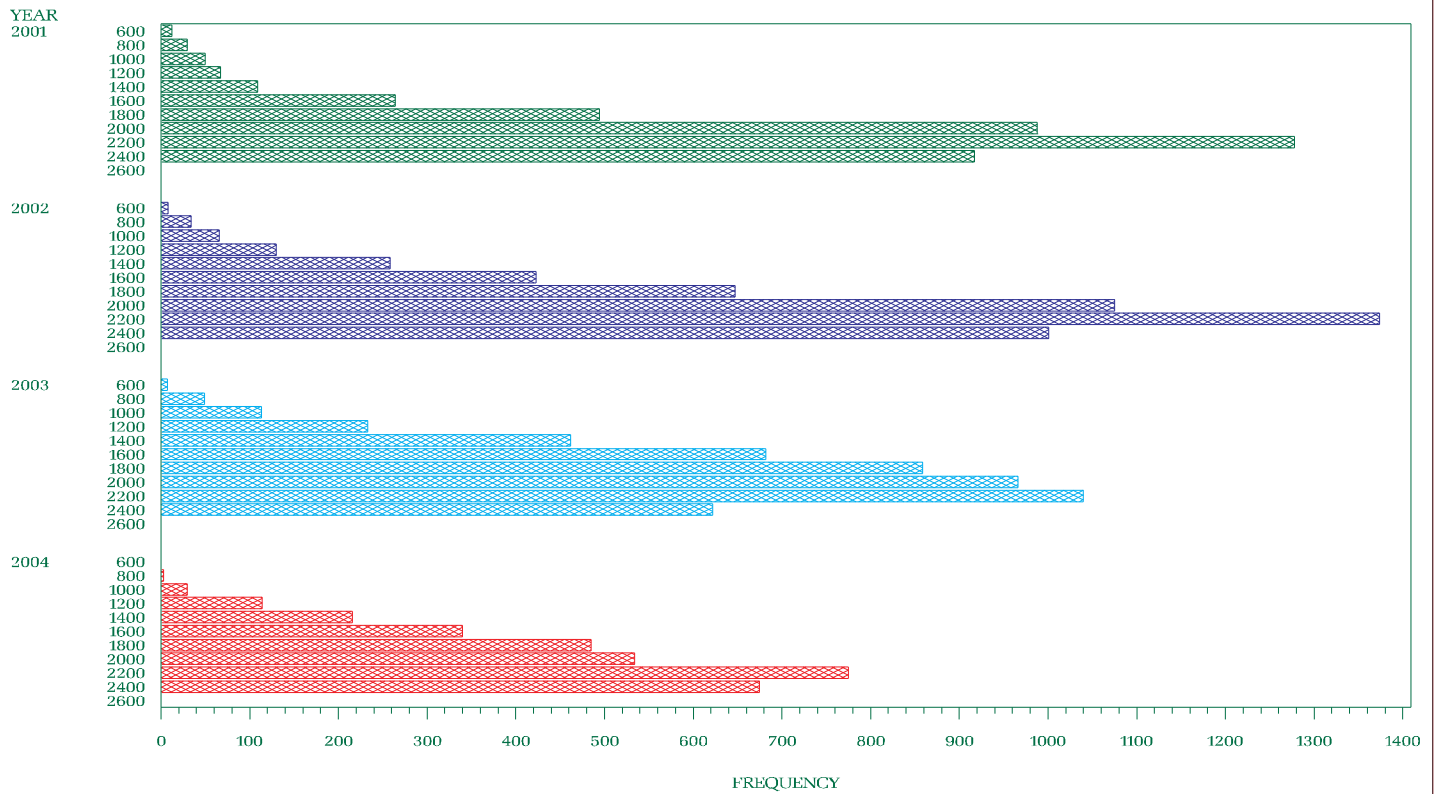
NYISO Frequency Interface Flow For January – December 2004

Margin to NY – ONTARIO Limit



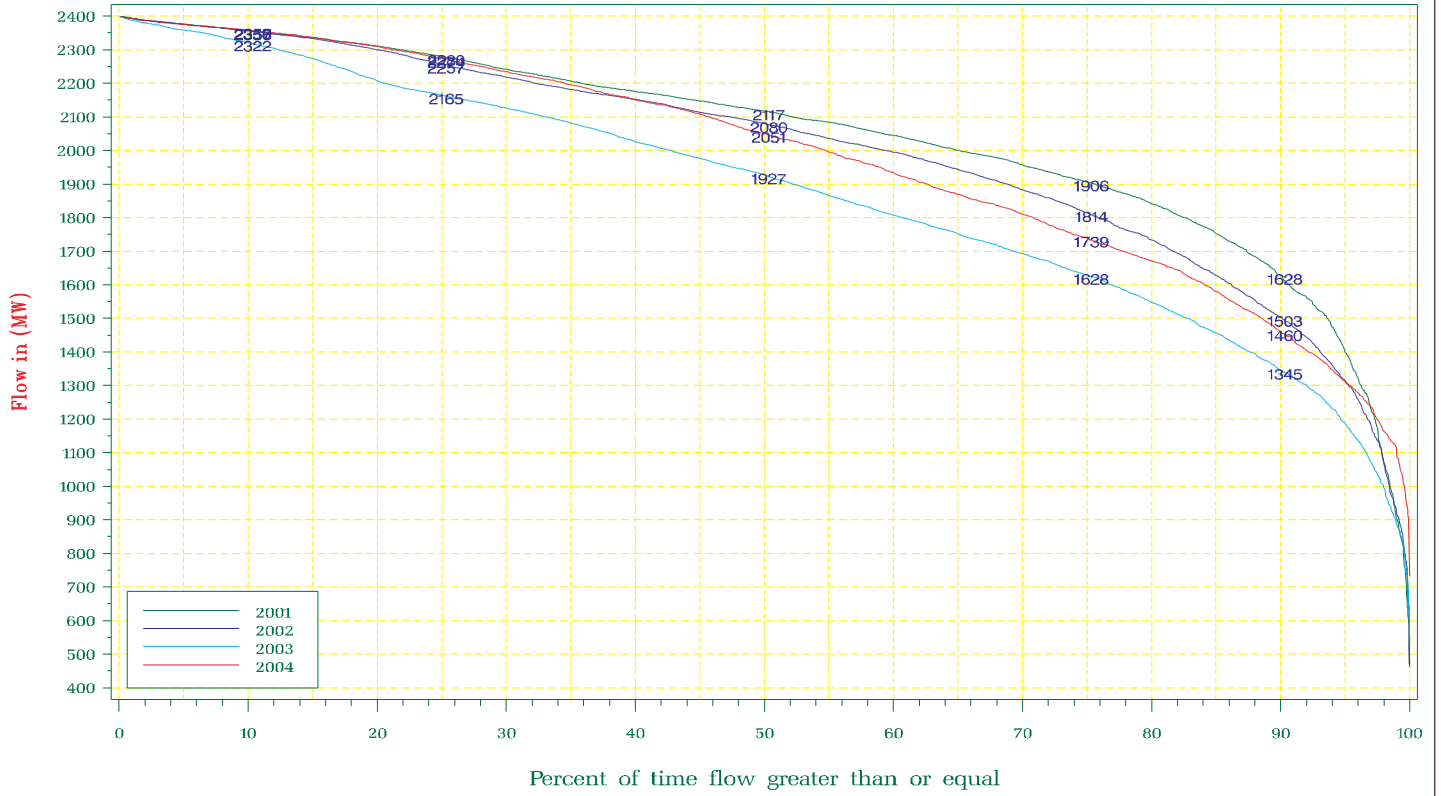
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to NY – Ontario Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to NY–Ontario Limit



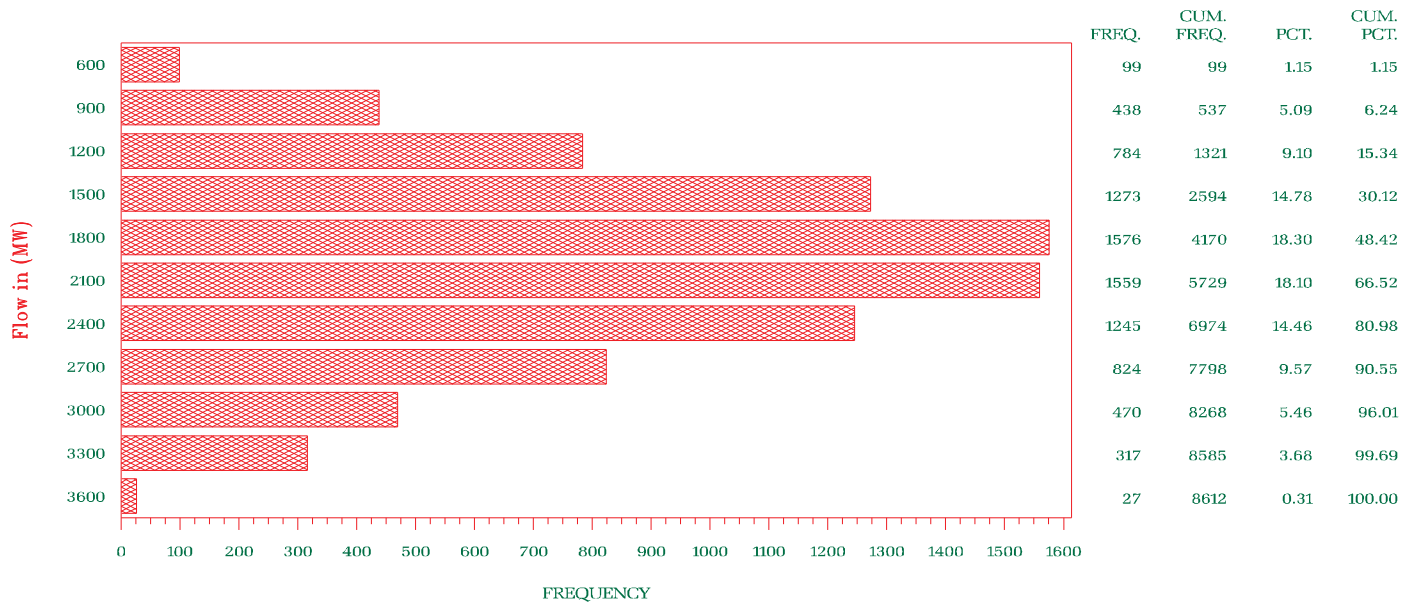
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Margin to NY–Ontario Limit



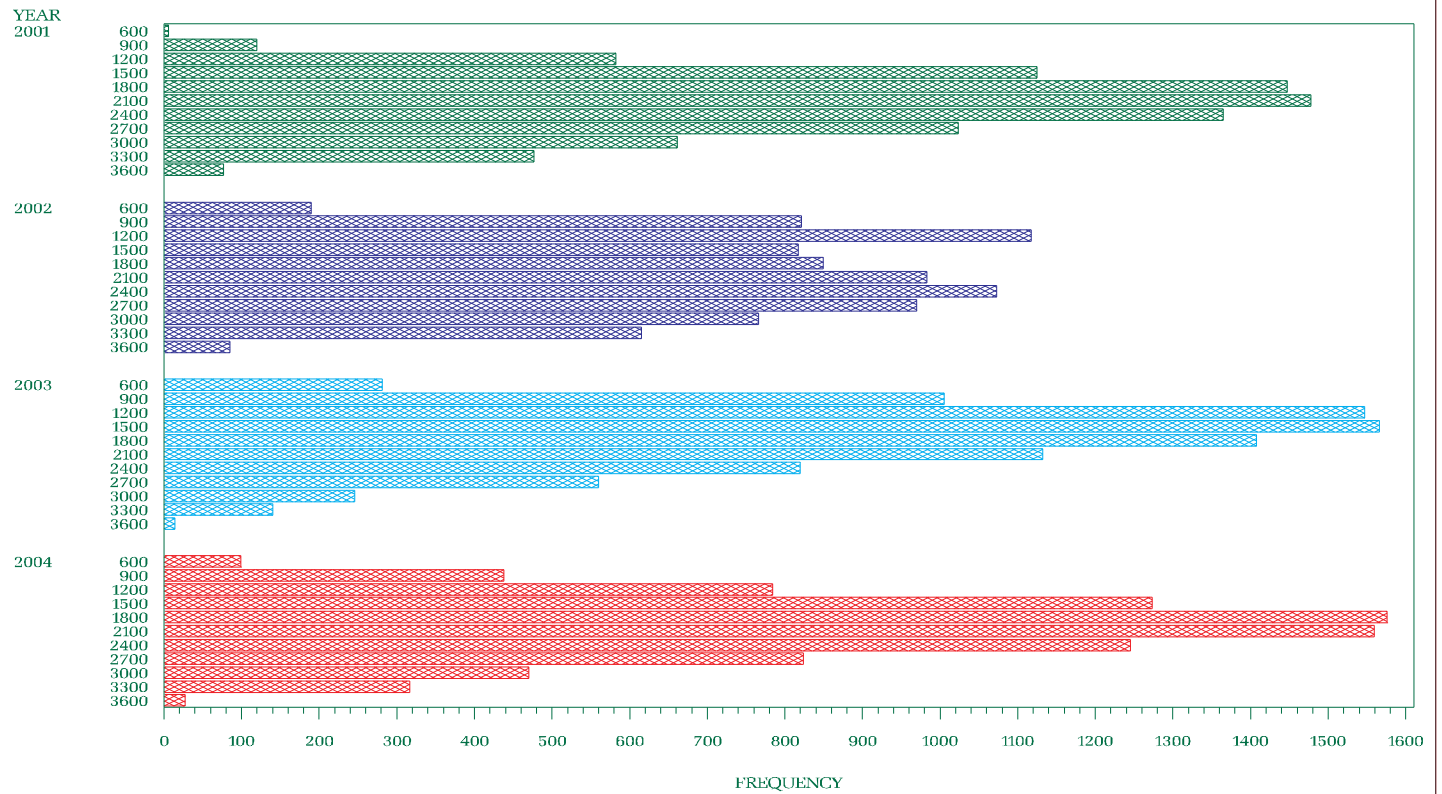
NYISO Frequency Interface Flow For January – December 2004

Margin to PJM – NY Limit



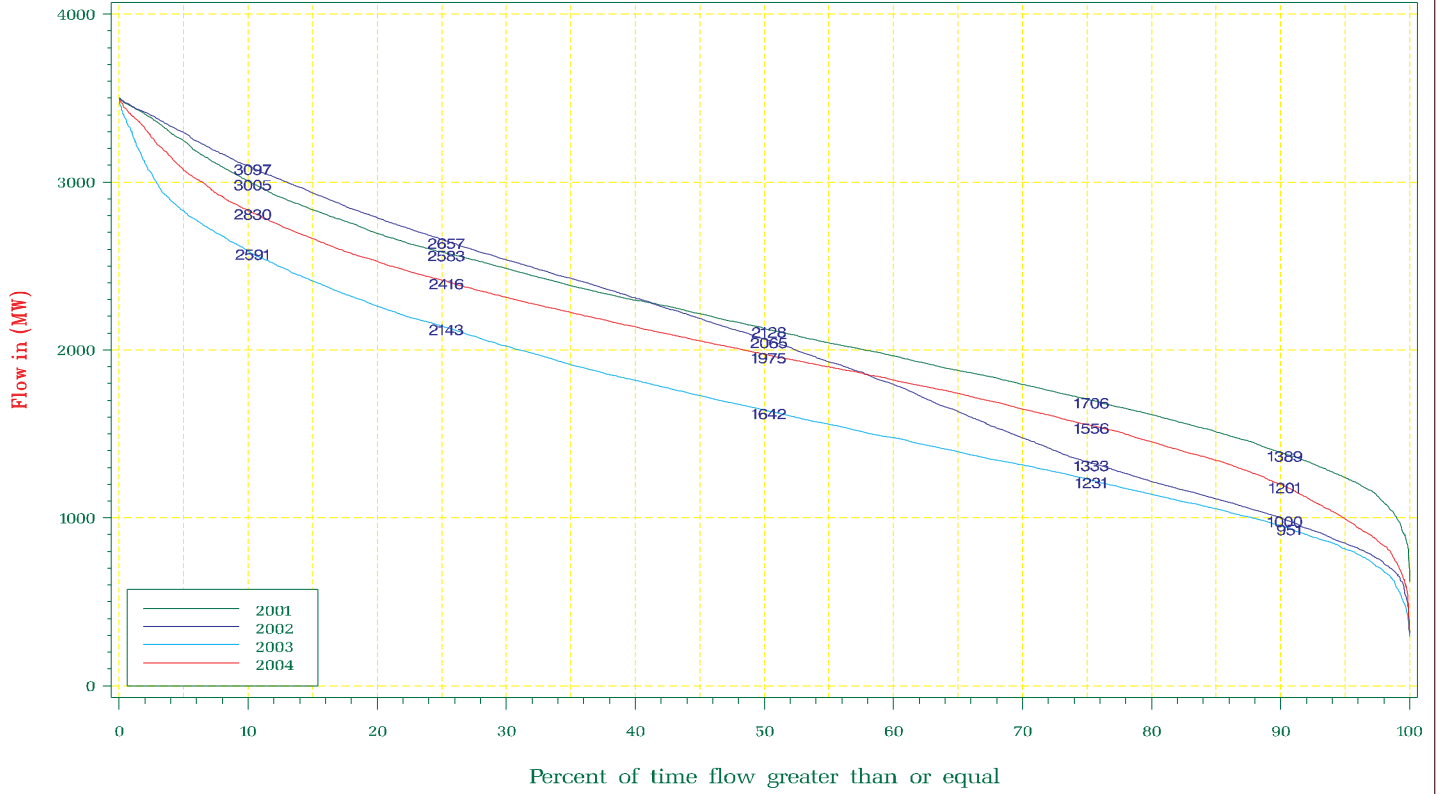
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to PJM – NY Limit



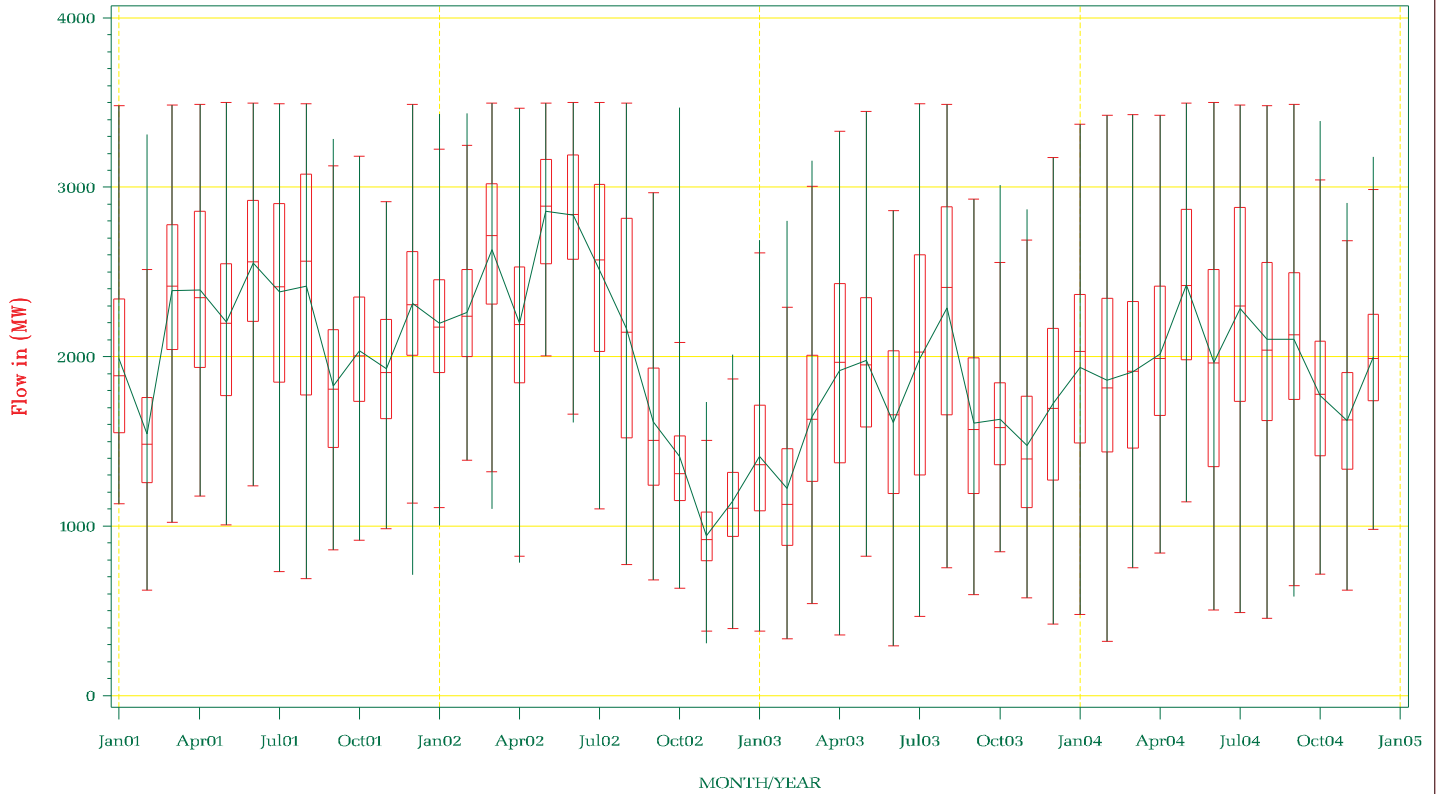
NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to PJM – NY Limit



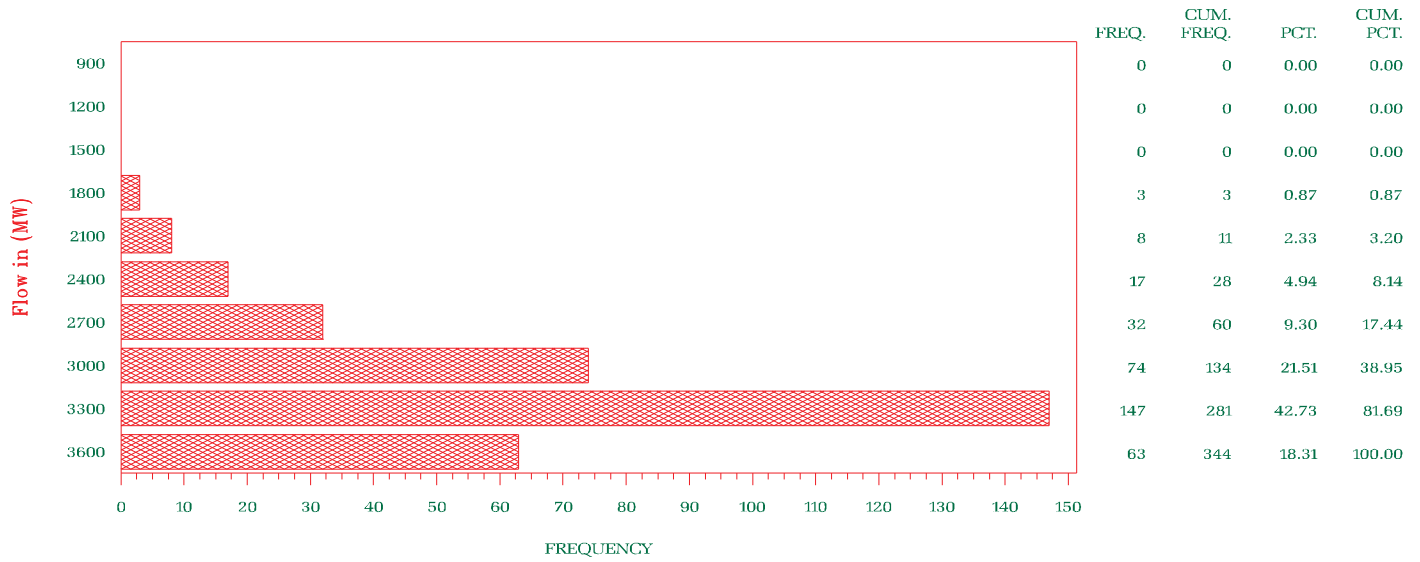
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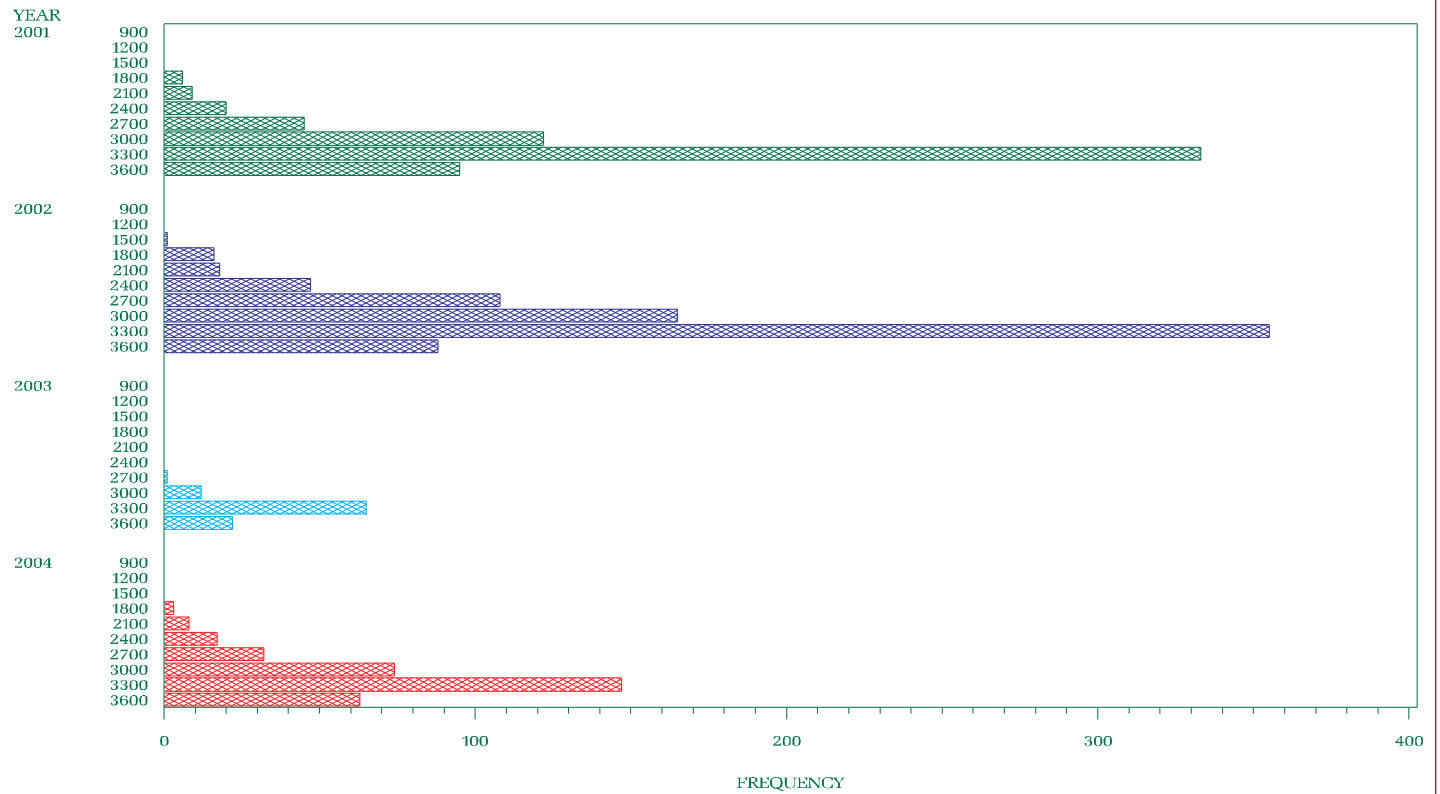
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Margin to NY – PJM Limit



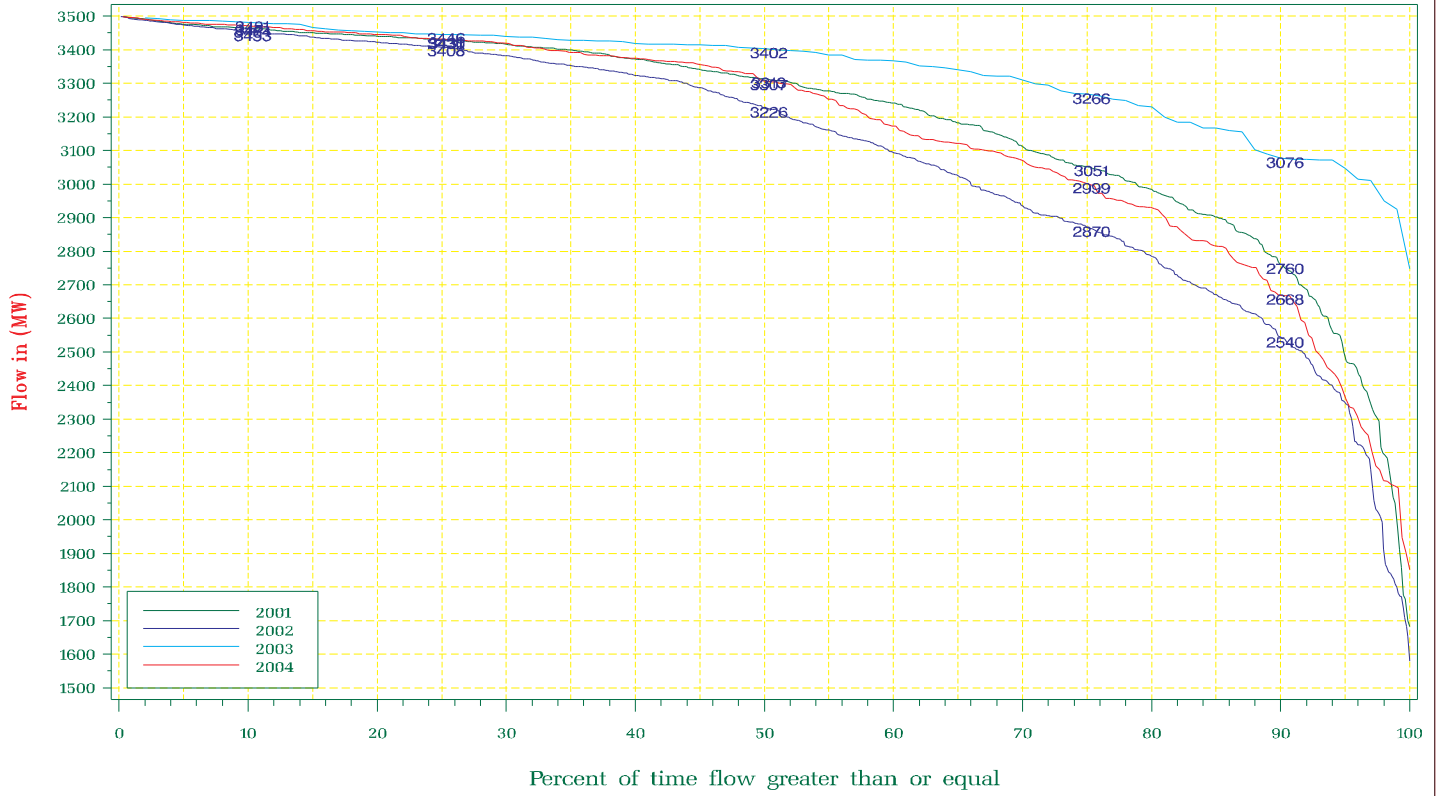
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Margin to NY – PJM Limit



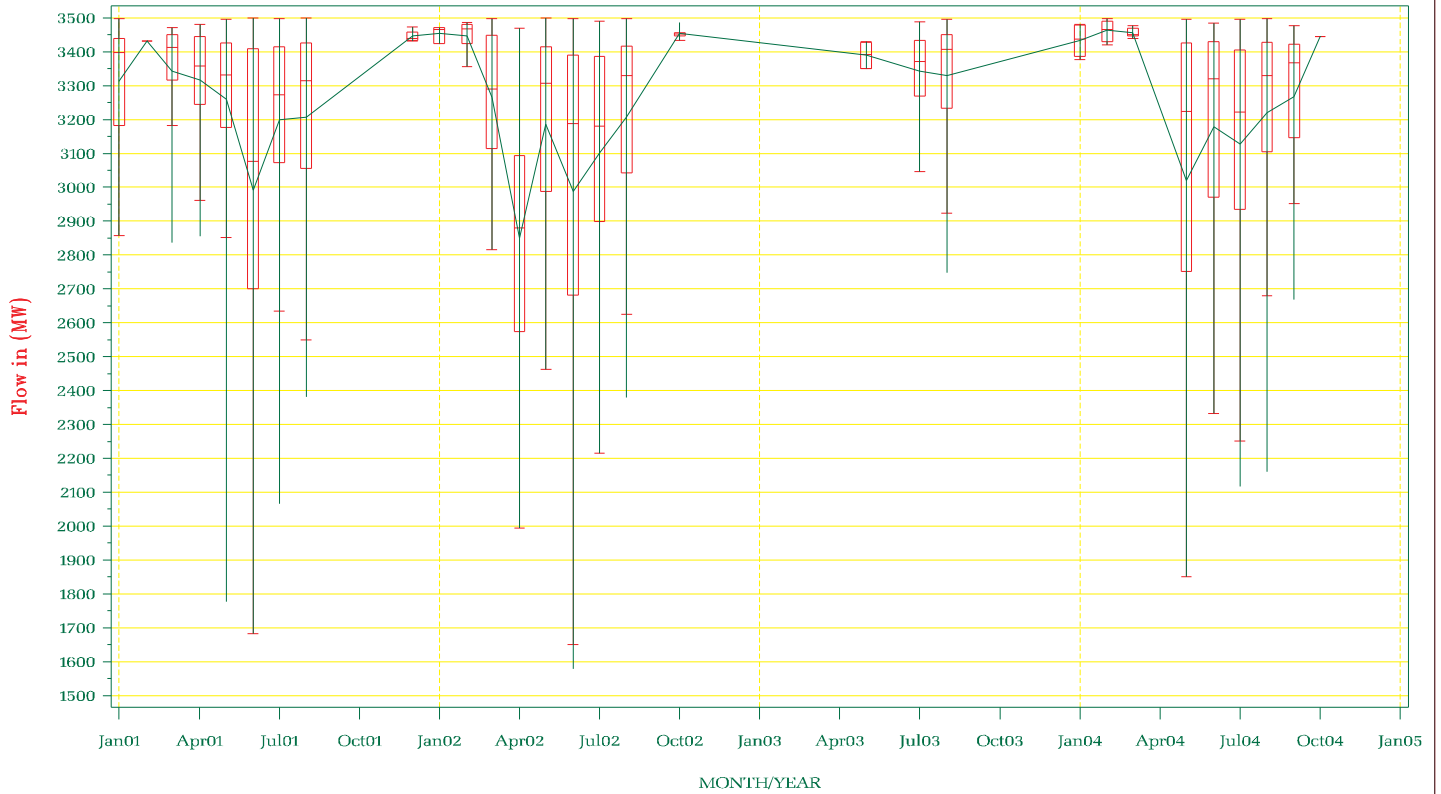
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Margin to NY-PJM Limit



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

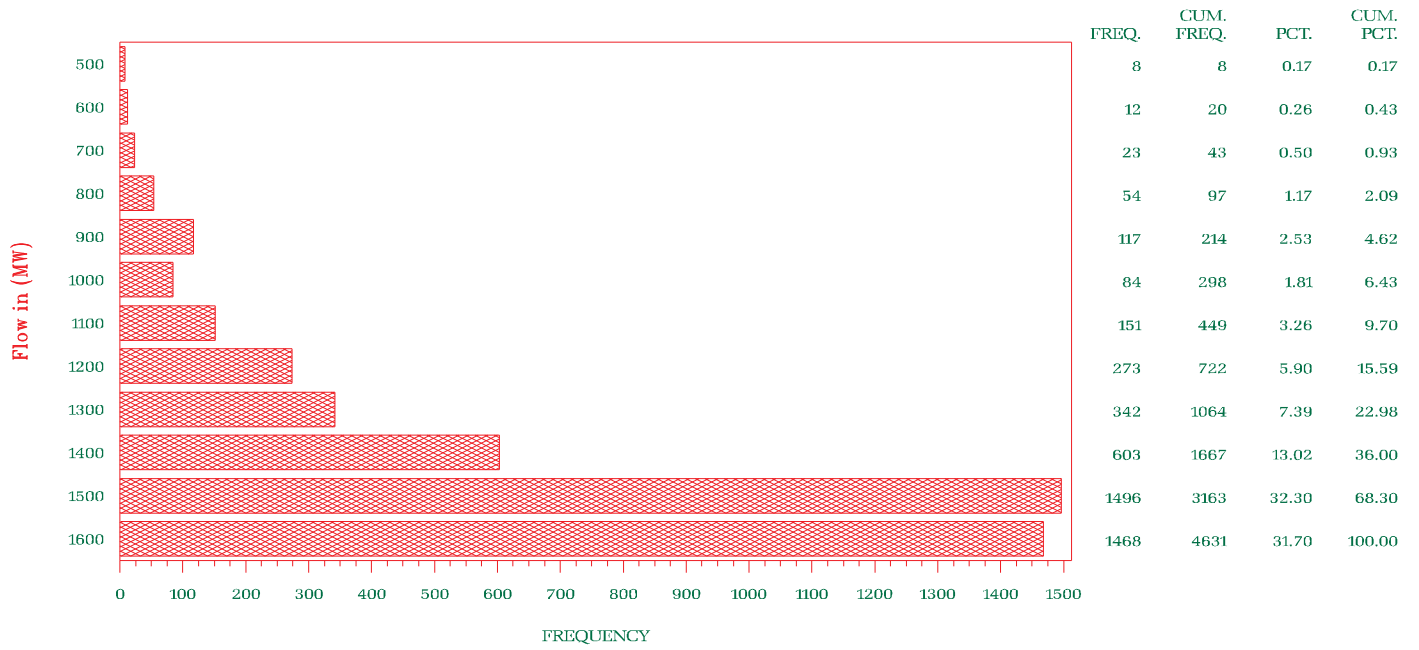
Margin to NY-PJM Limit





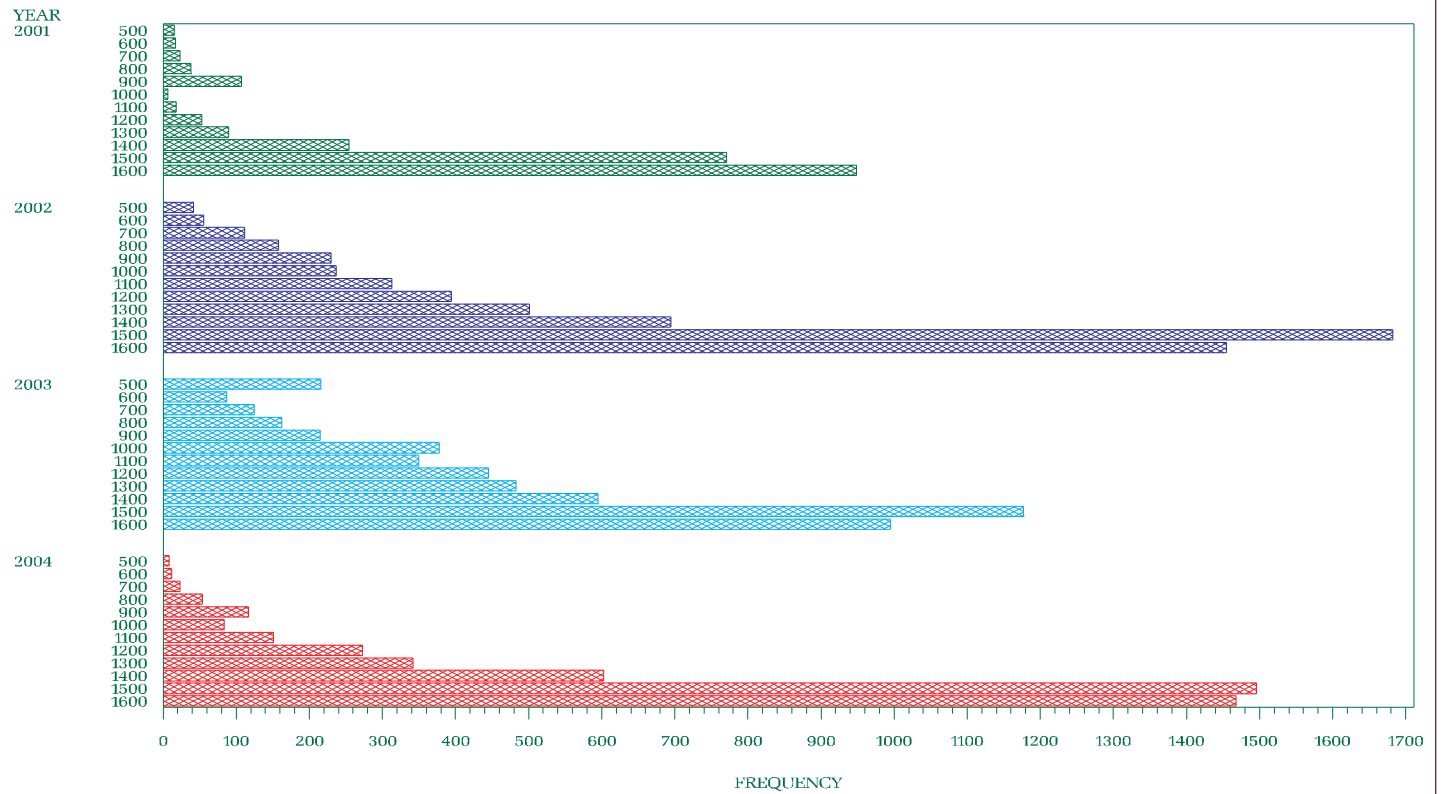
NYISO Frequency Interface Flow For January – December 2004

Margin to New England – NY Limit



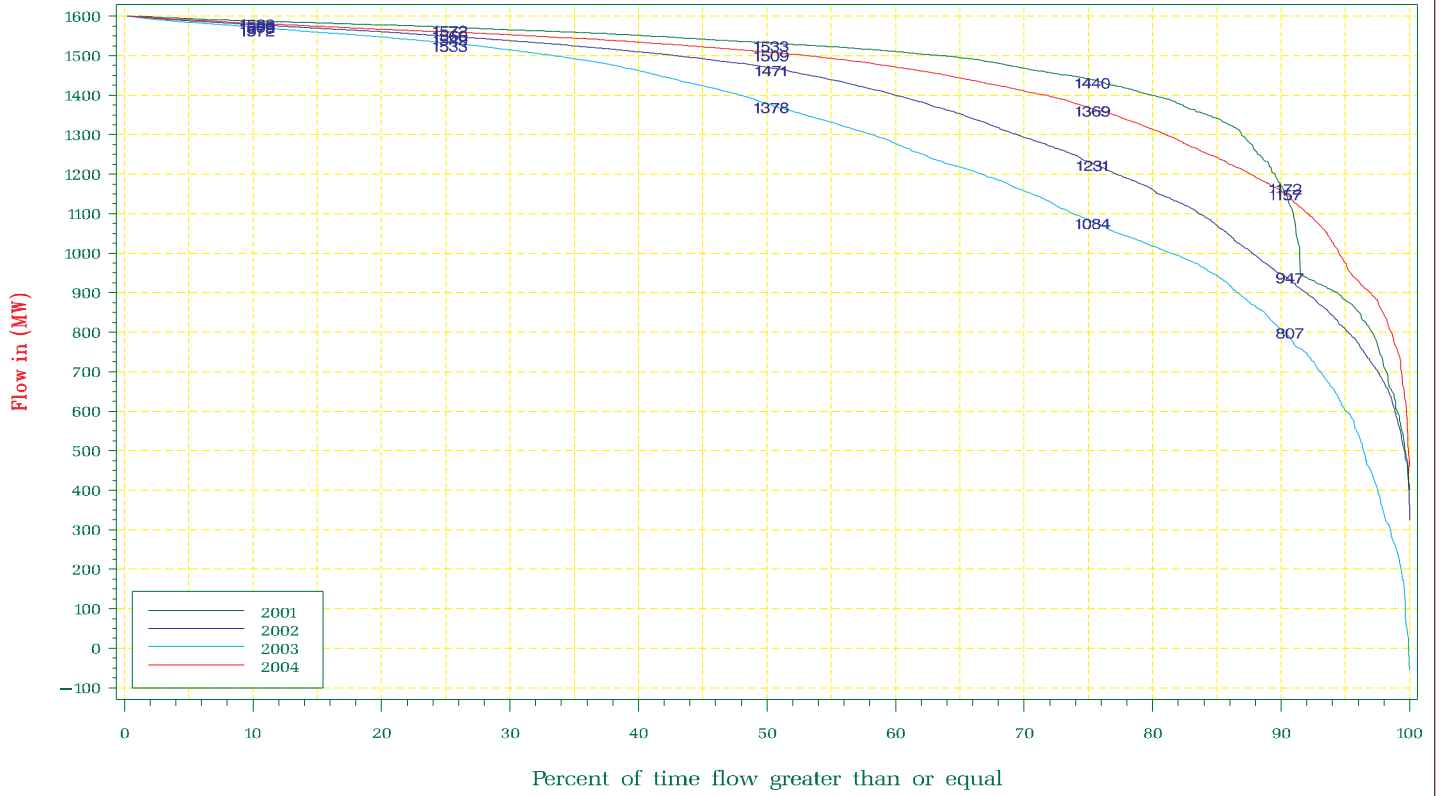
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Margin to New England – NY Limit



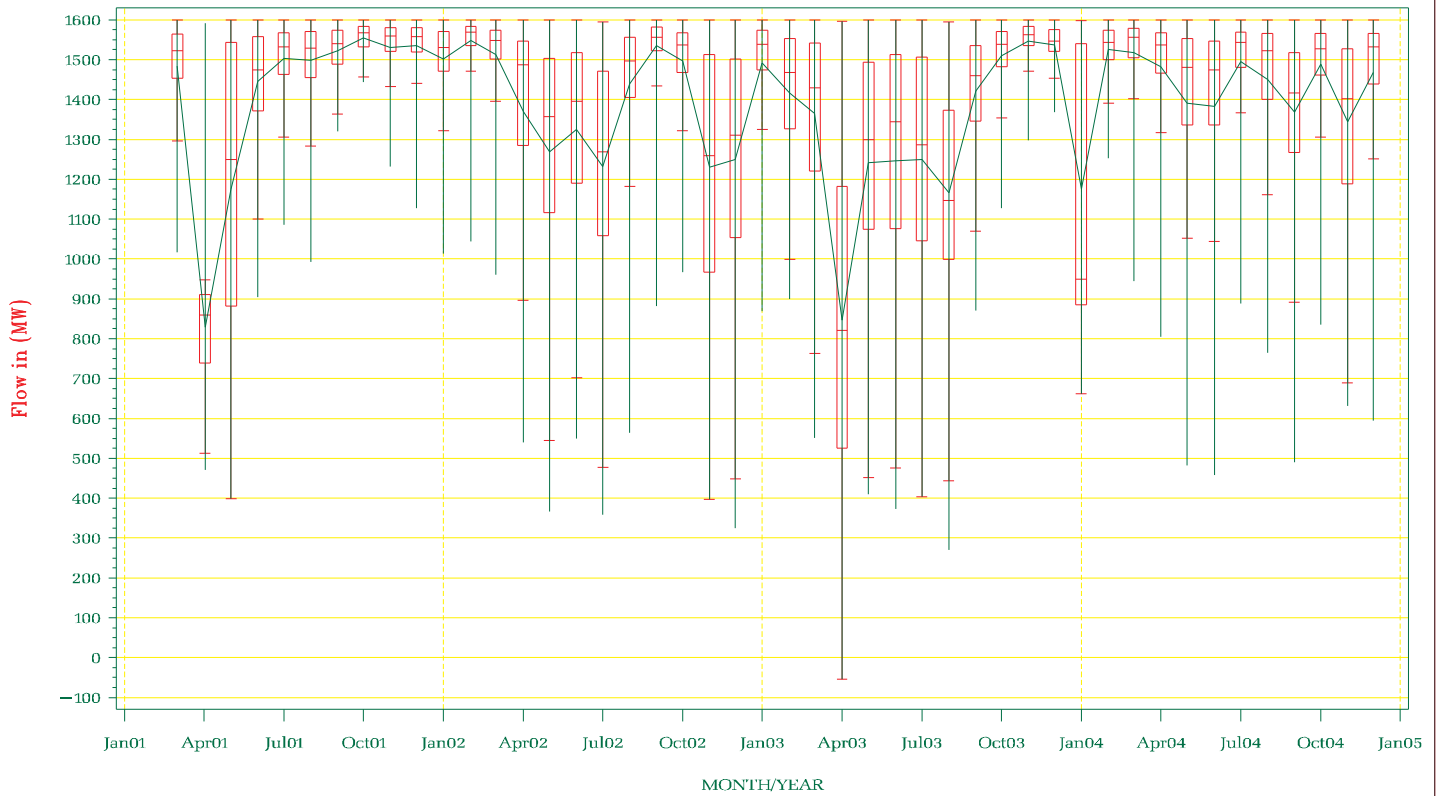
NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to New England – NY Limit



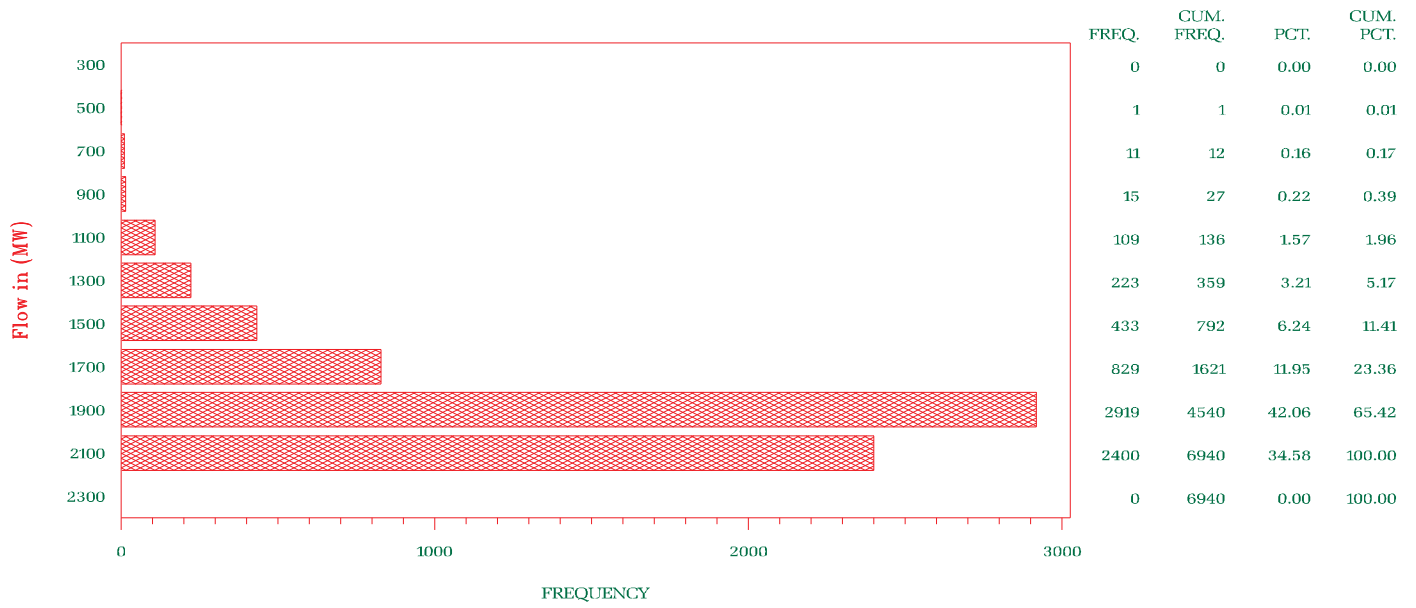
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Margin to New England – NY Limit



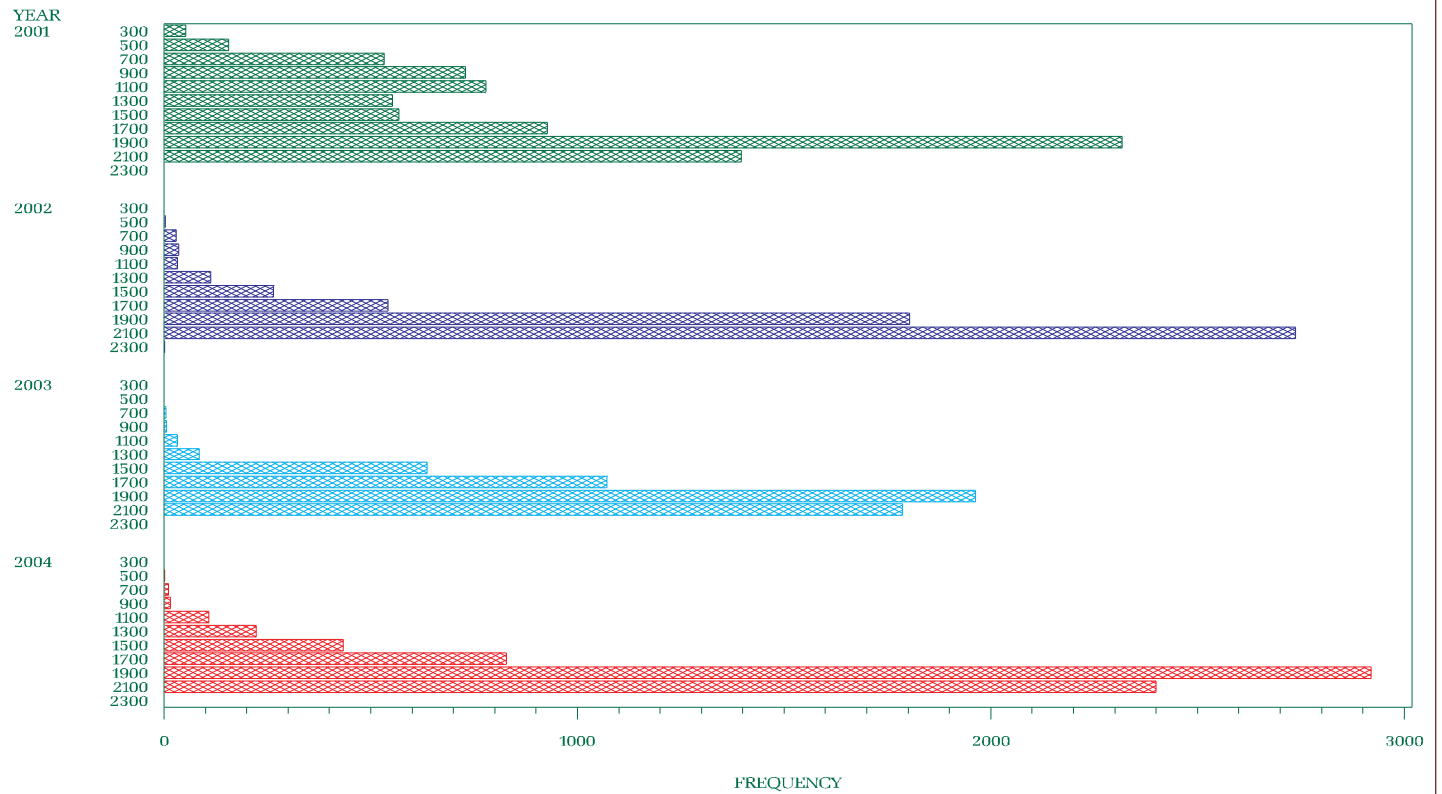
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Margin to NY–New England Limit



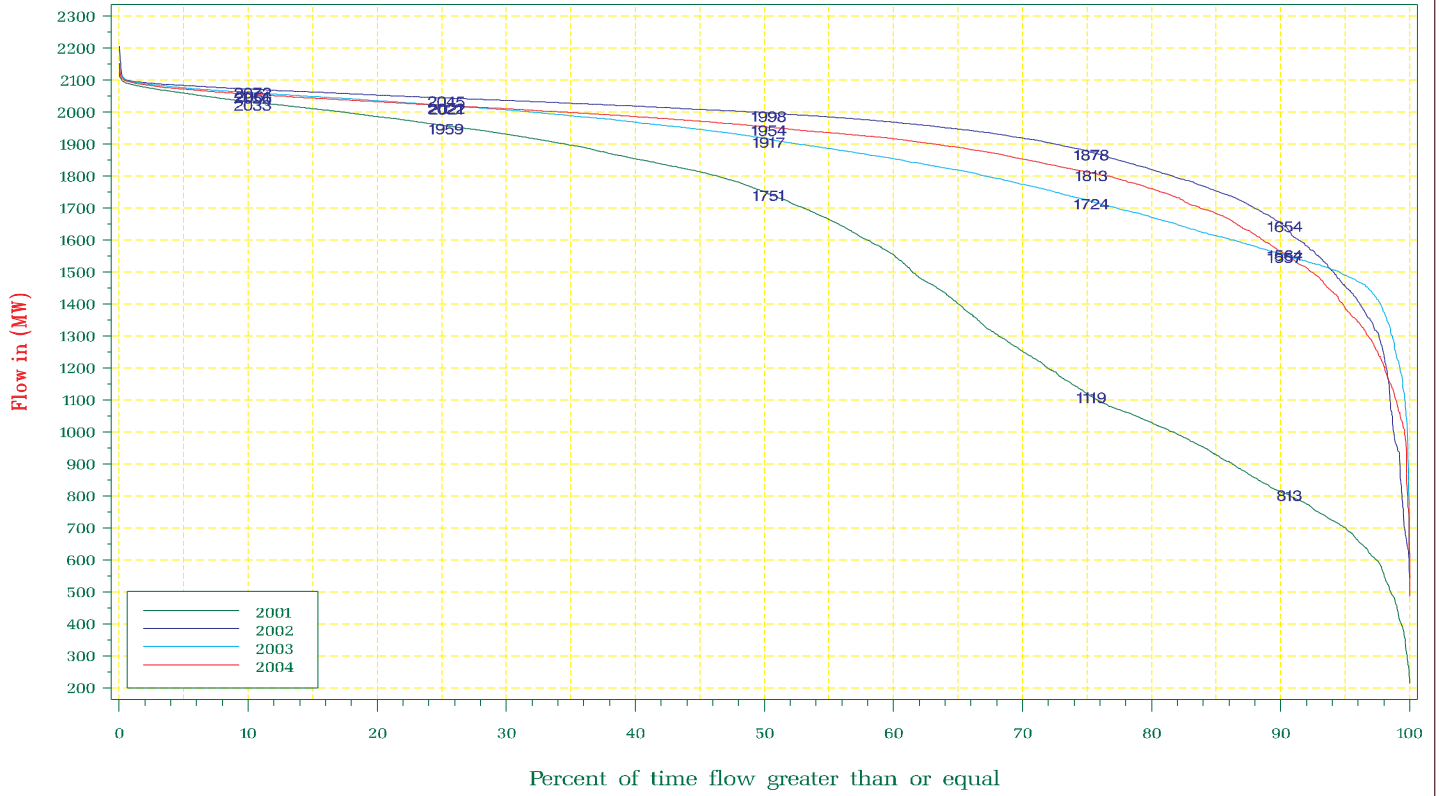
NYISO Frequency Interface Flow For January 2001 – December 2004

Margin to NY–New England Limit



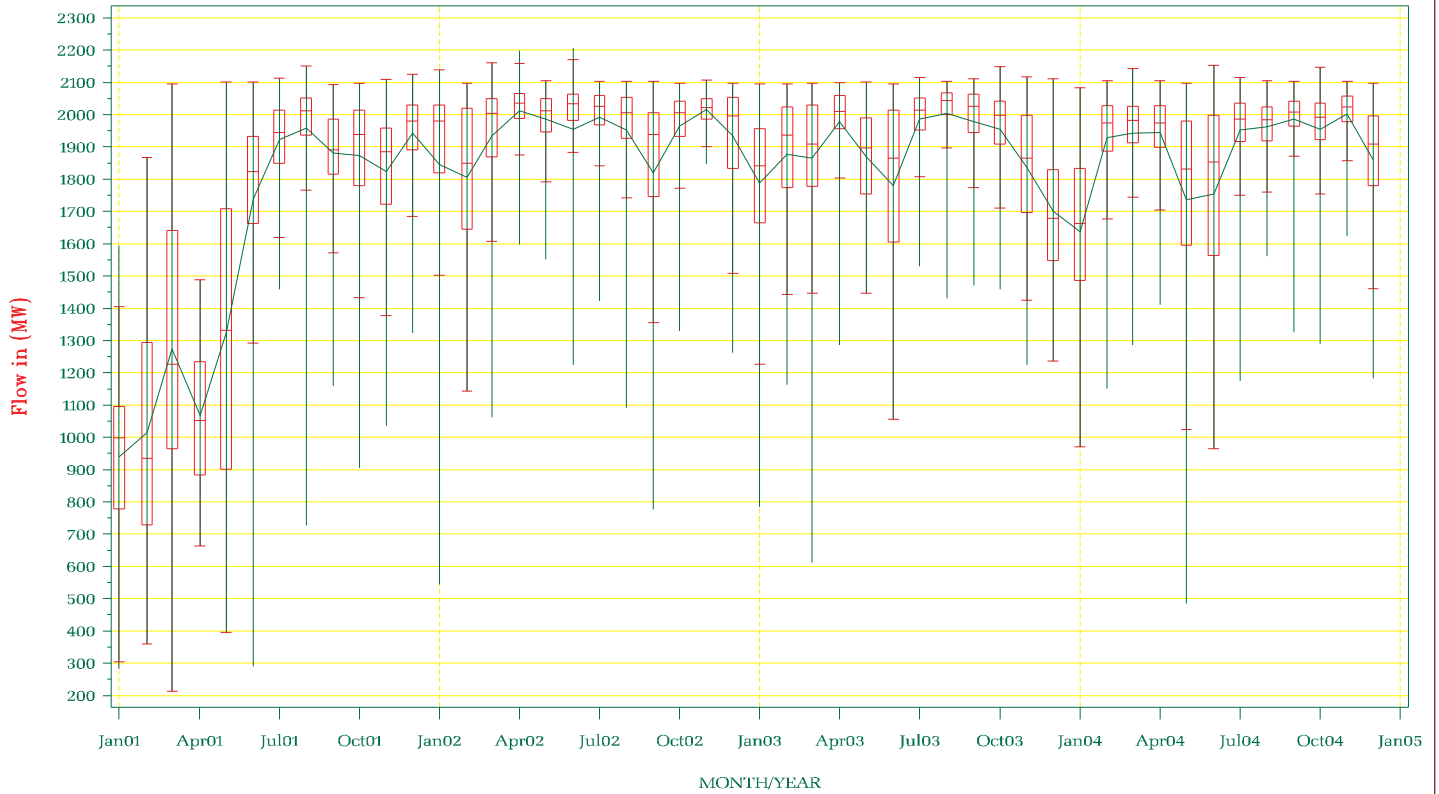
NYISO Percent of time Interface Flow For January 2001 – December 2004

Margin to NY–New England Limit



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Margin to NY–New England Limit





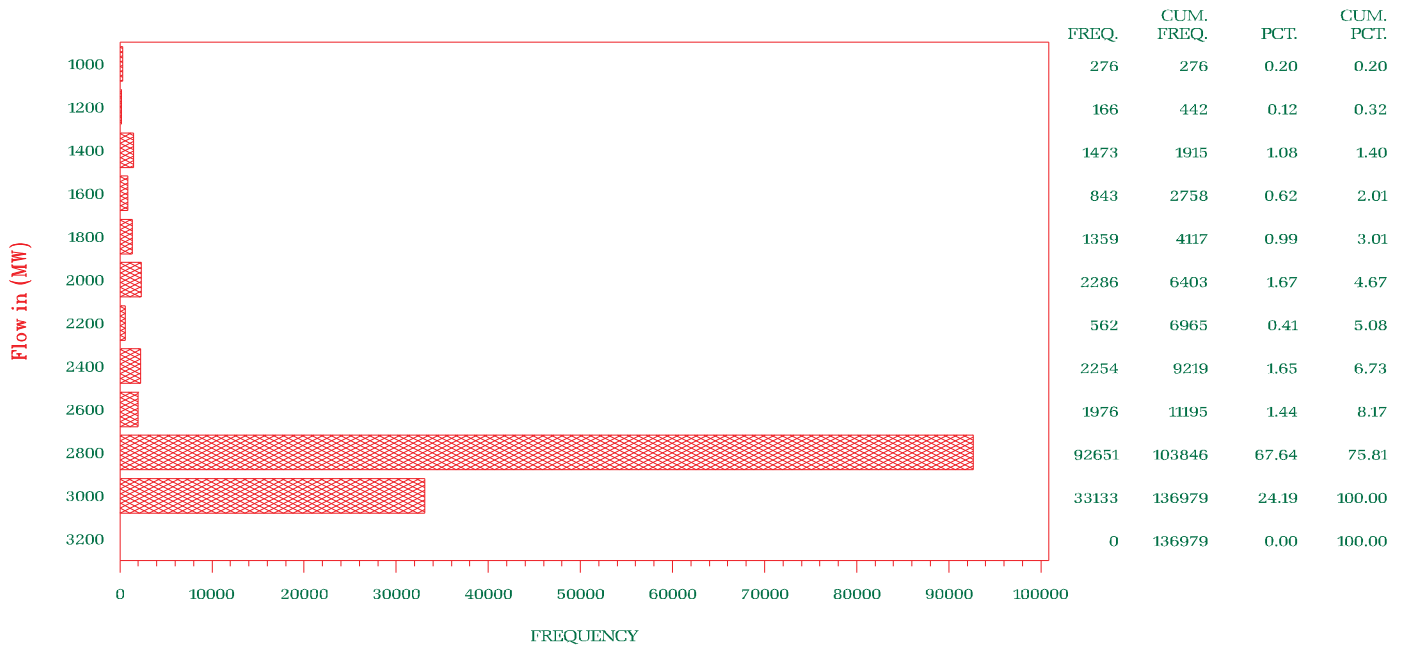
## Appendix C – Interface Limits

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Dysinger East Limit (MW)	.....	C8
UPNY Con Ed Limit (MW)	.....	C10
Dunwoodie South Limit (MW)	.....	C12
Moses South Limit (MW)	.....	C14
TE – NY Limit (MW)	.....	C16
Ontario –NY Limit	.....	C18
NY – Ontario Limit	.....	C20
PJM – NY Limit	.....	C22
NY – PJM Limit	.....	C24
NE – NY Limit	.....	C26
NY – NE Limit (MW)	.....	C28
Central East Pre-Contingency Voltage Collapse Loss of New England Generation	.....	C30
Central East Pre-Contingency Voltage Collapse Loss of Marcy South Tower	.....	C32
Central East Pre-Contingency Voltage Collapse Loss of New Scotland 99 bus	.....	C34

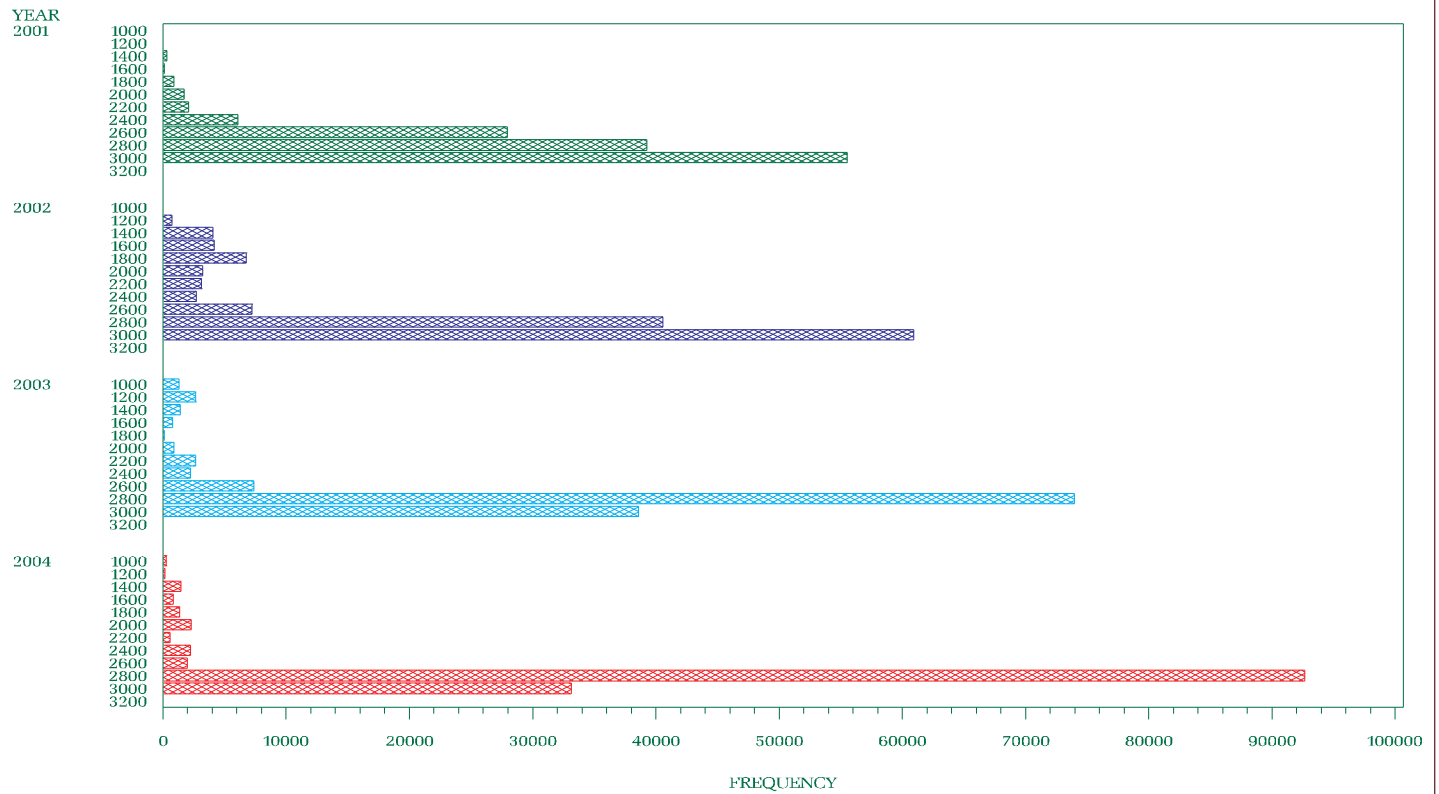
NYISO Frequency Interface Flow For January – December 2004

Central East Limit

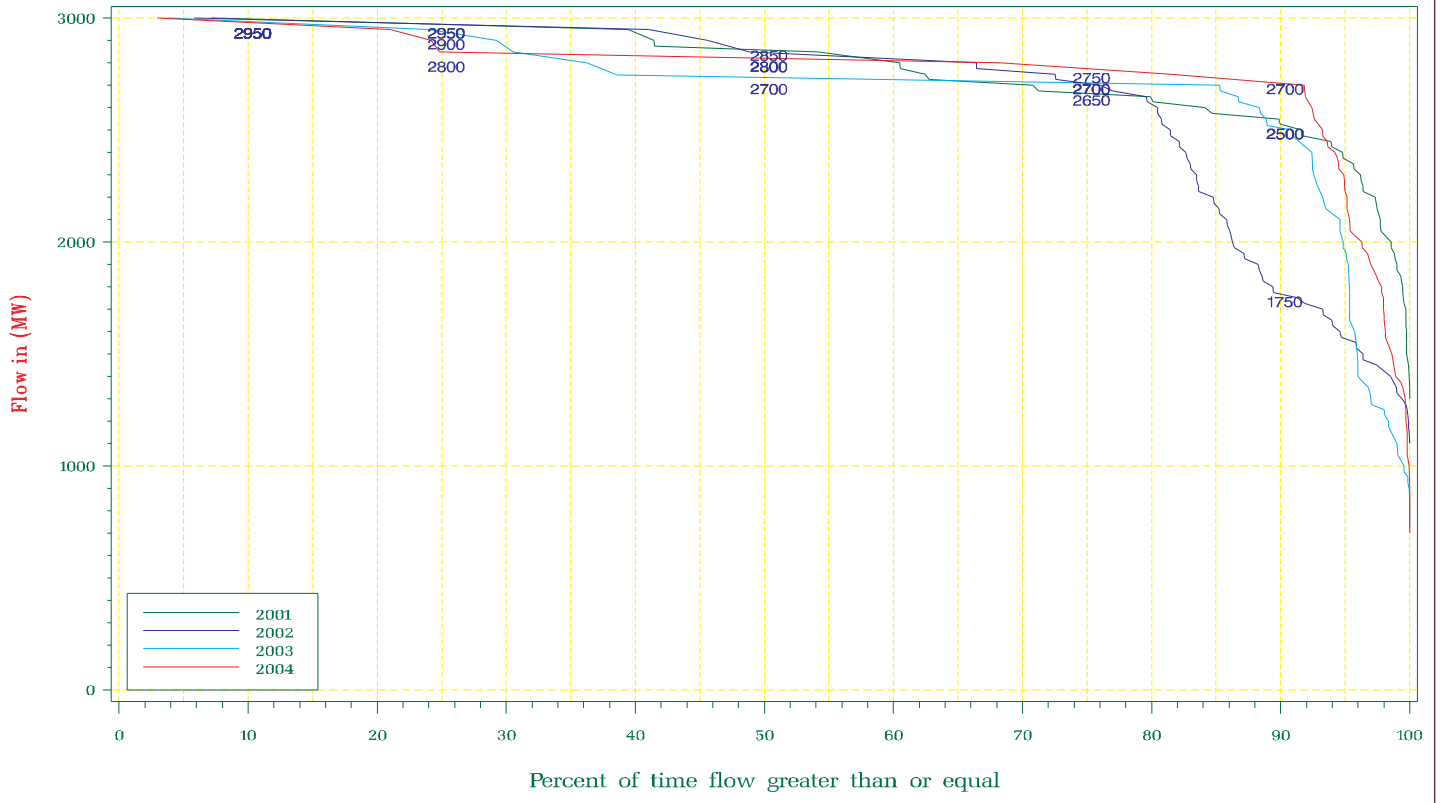


NYISO Frequency Interface Flow For January 2001 – December 2004

Central East Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**Central East Limit**

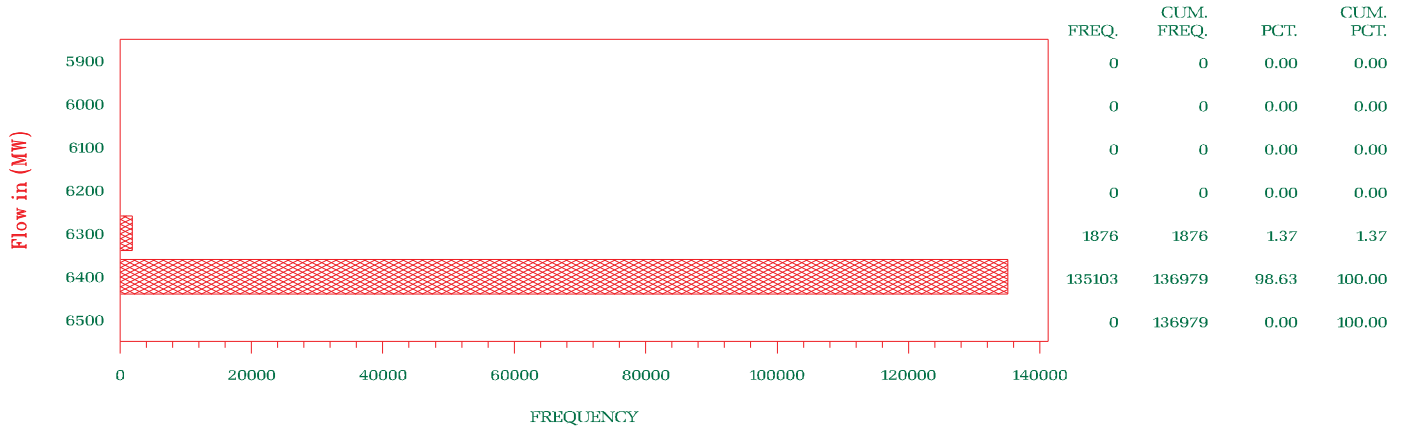


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**Central East Limit**



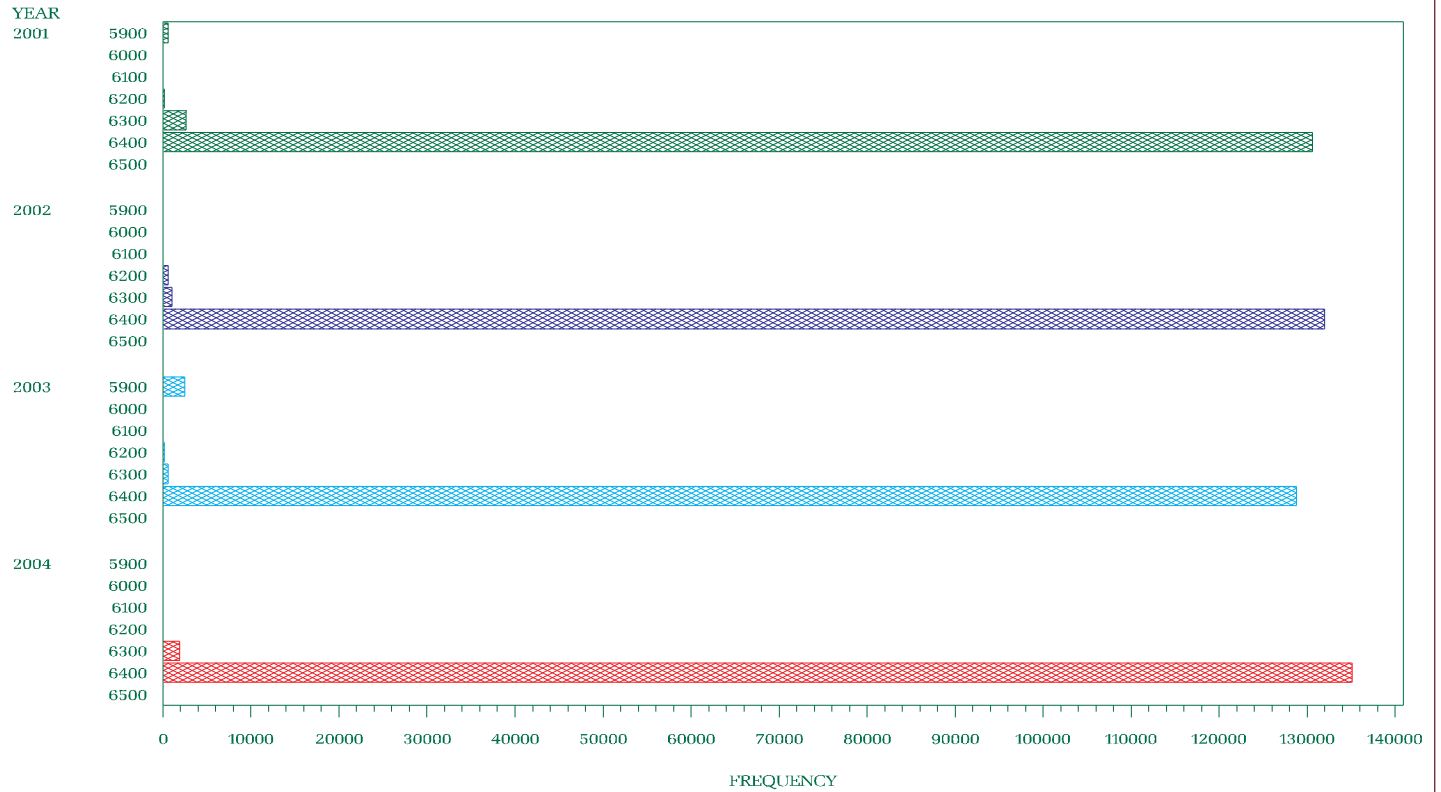
NYISO Frequency Interface Flow For January – December 2004

Total East Limit



NYISO Frequency Interface Flow For January 2001 – December 2004

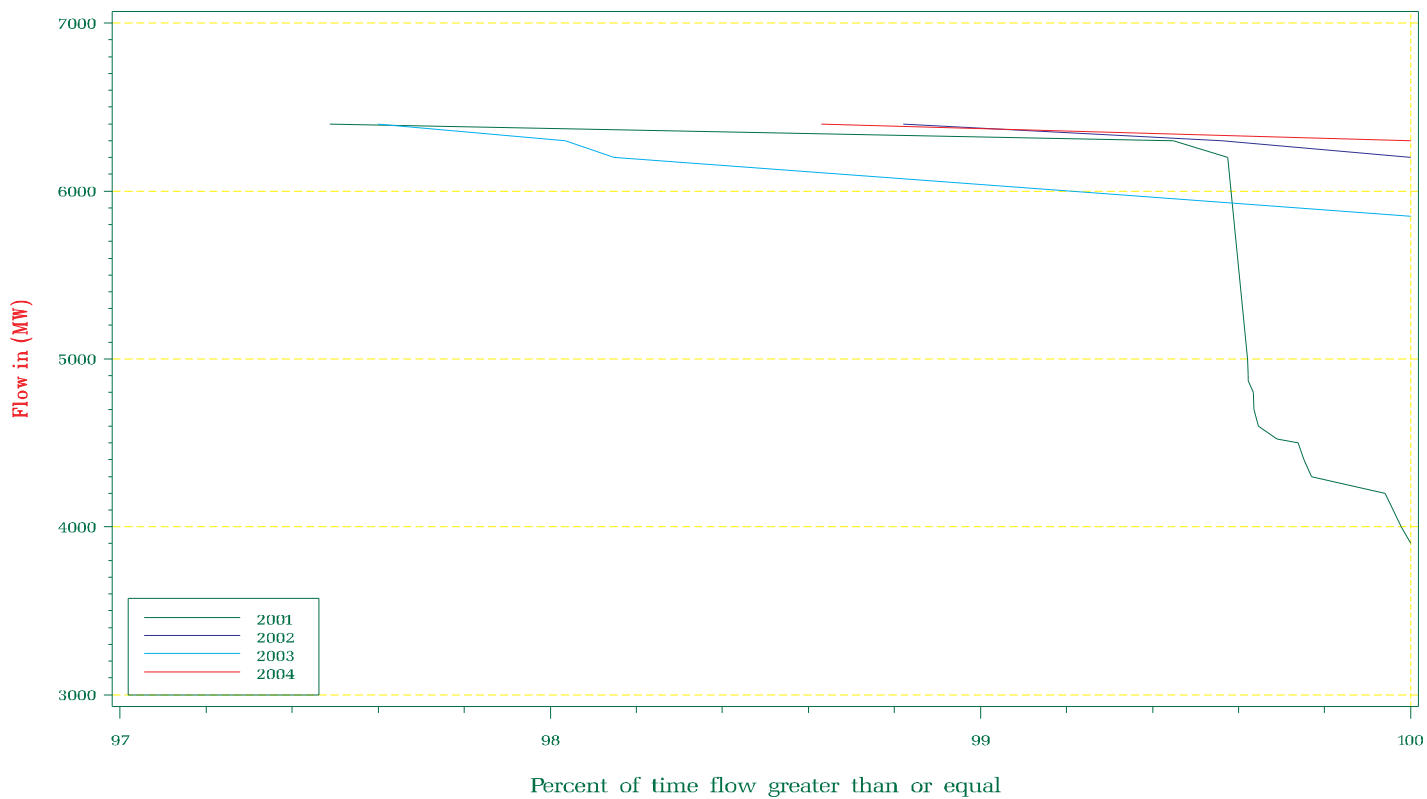
Total East Limit





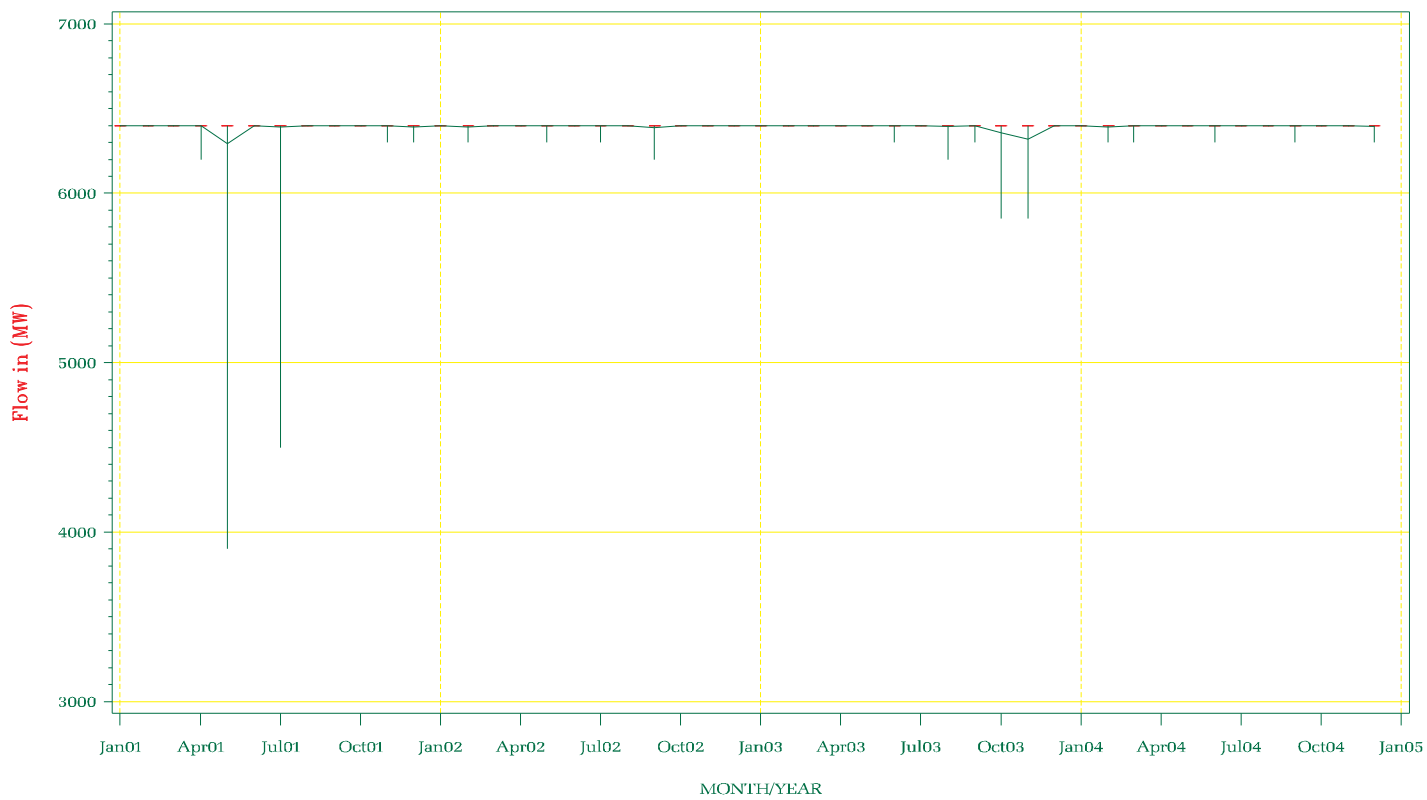
NYISO Percent of time Interface Flow For January 2001 – December 2004

Total East Limit



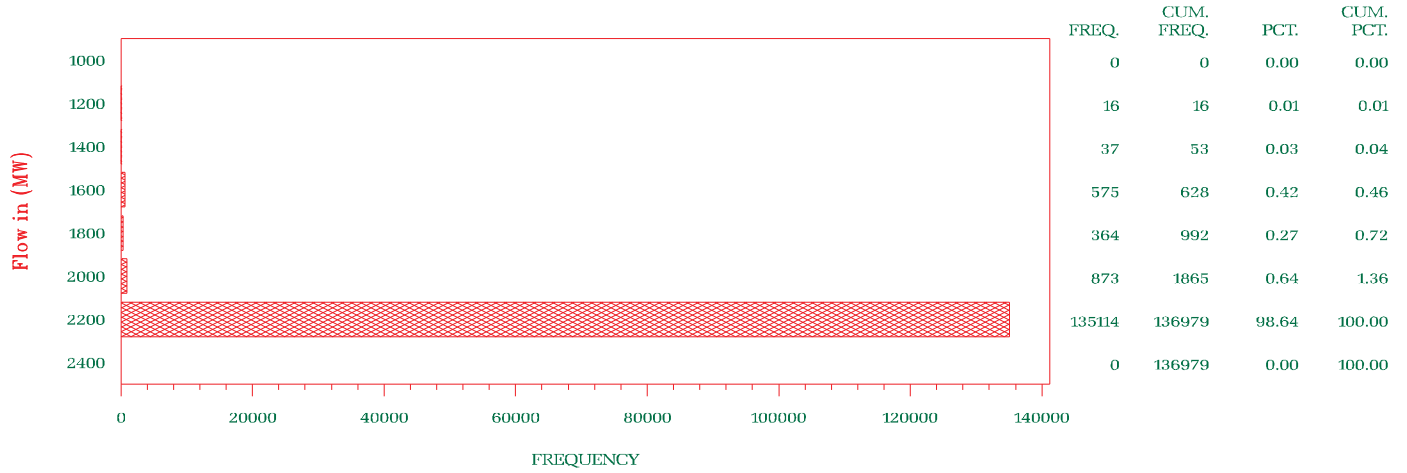
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Total East Limit



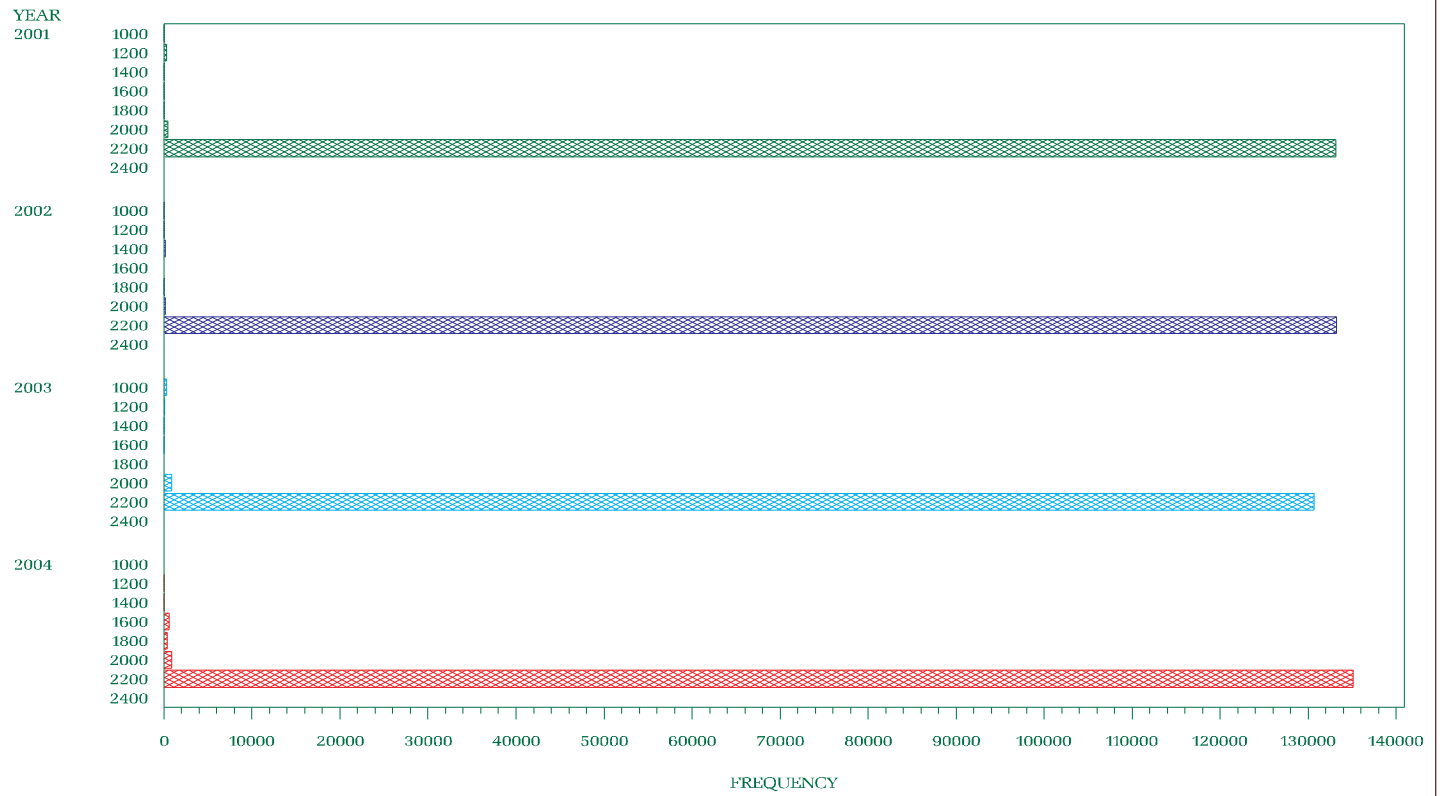
NYISO Frequency Interface Flow For January – December 2004

West Central Limit

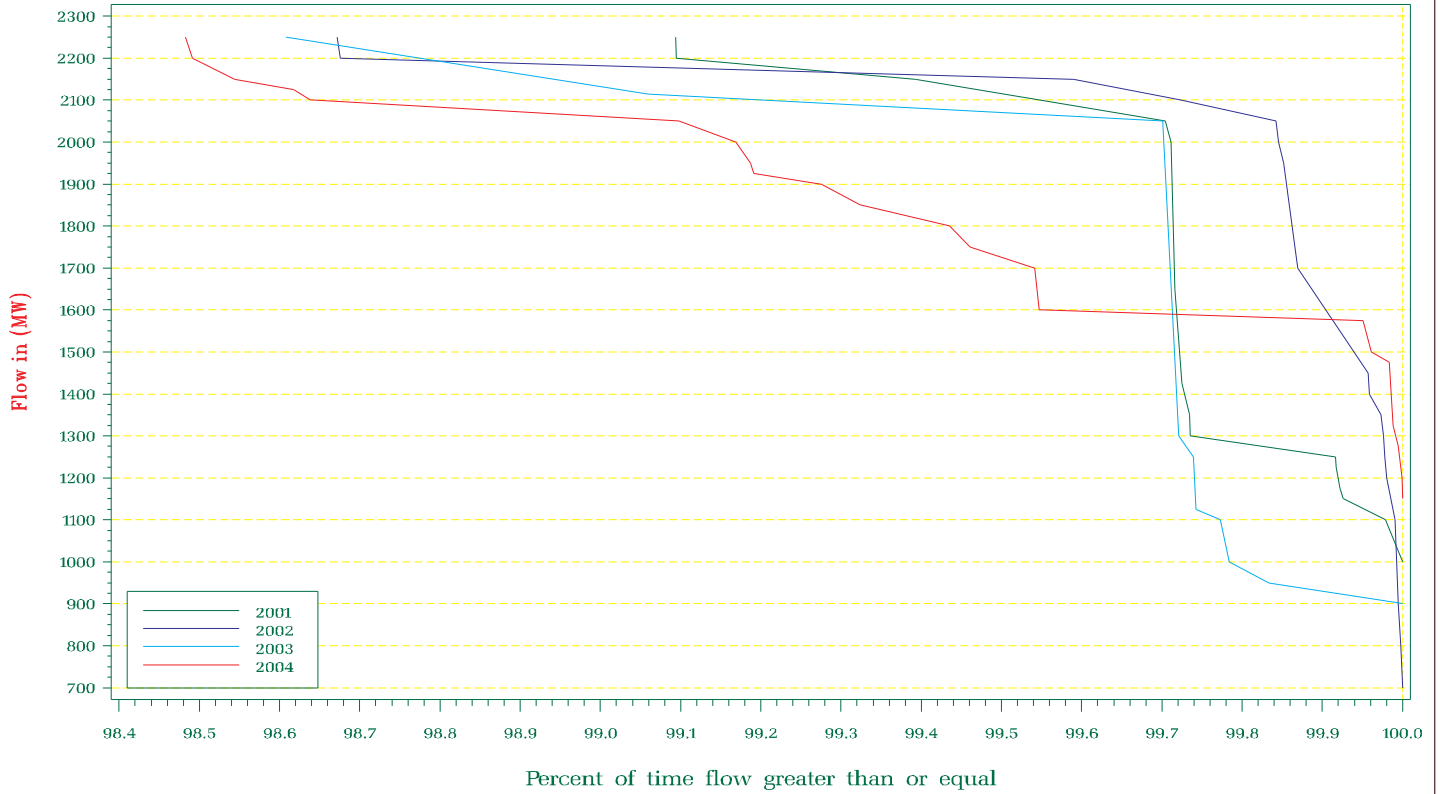


NYISO Frequency Interface Flow For January 2001 – December 2004

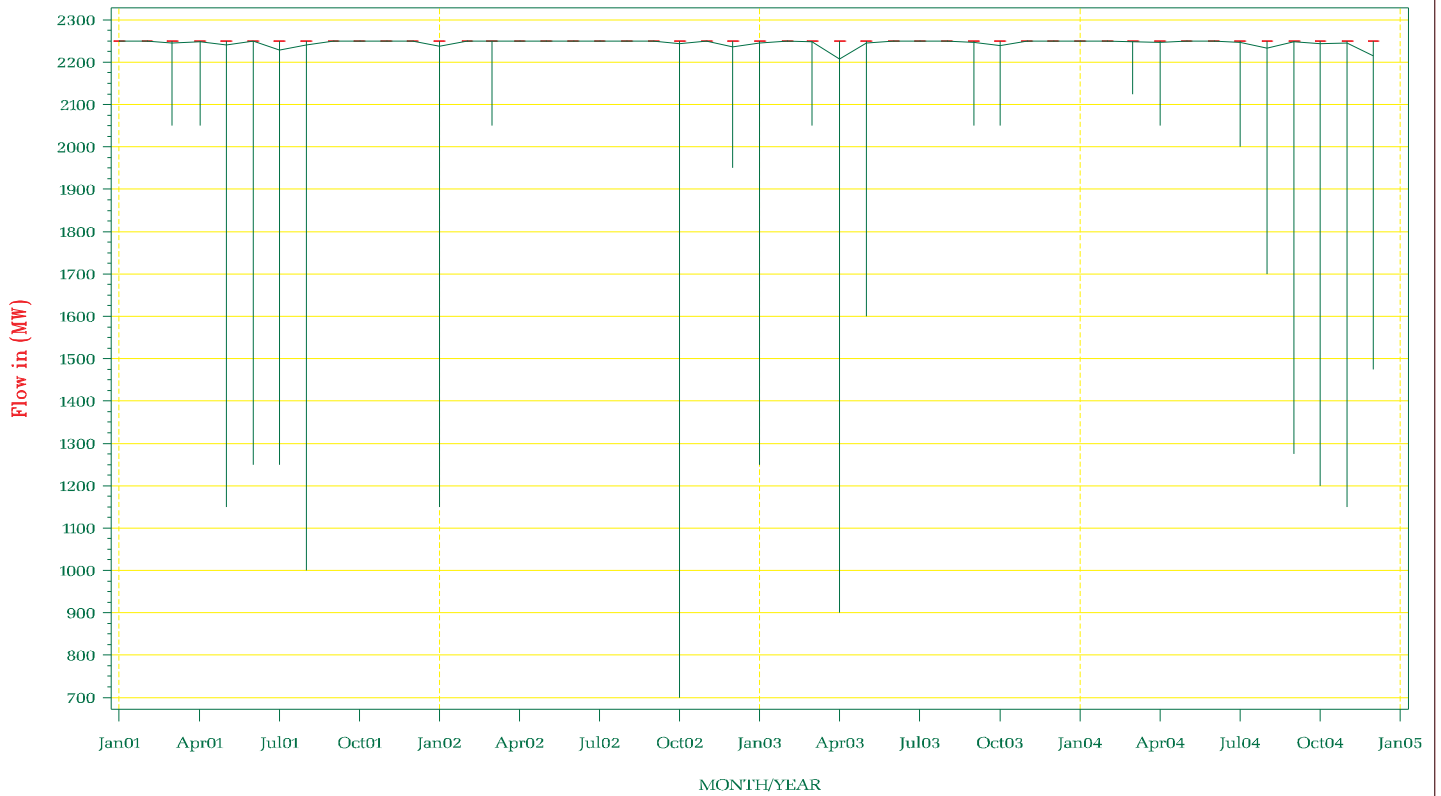
West Central Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
West Central Limit

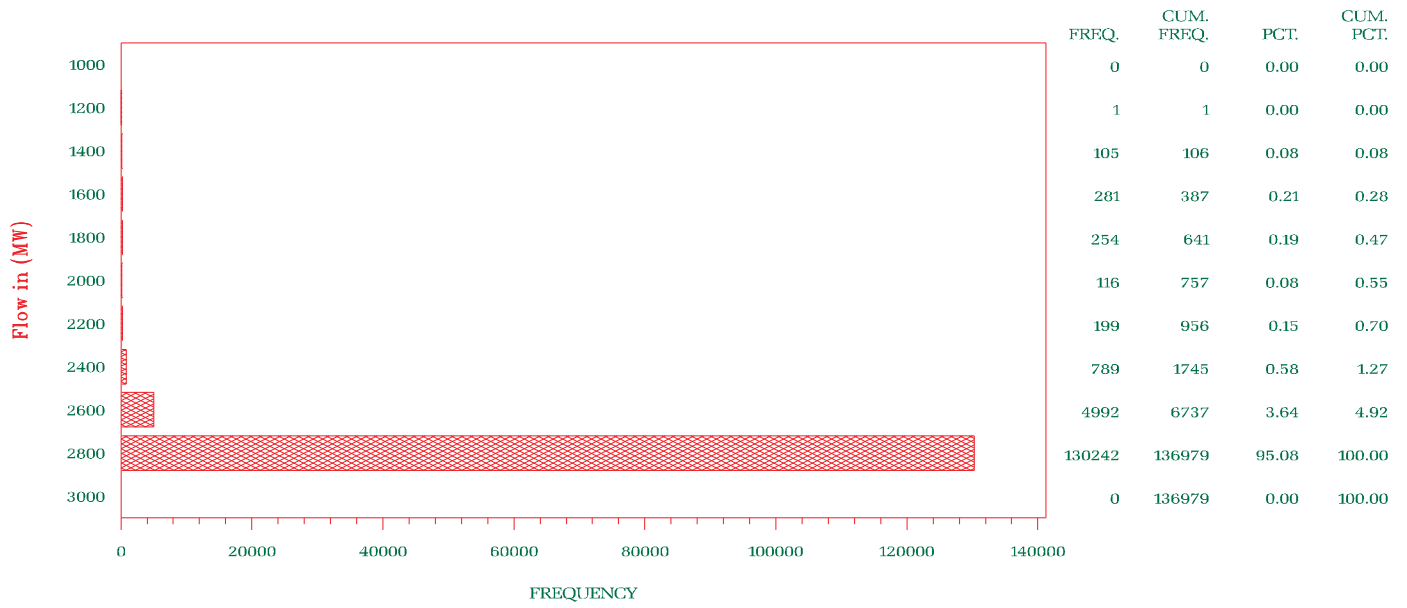


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
West Central Limit



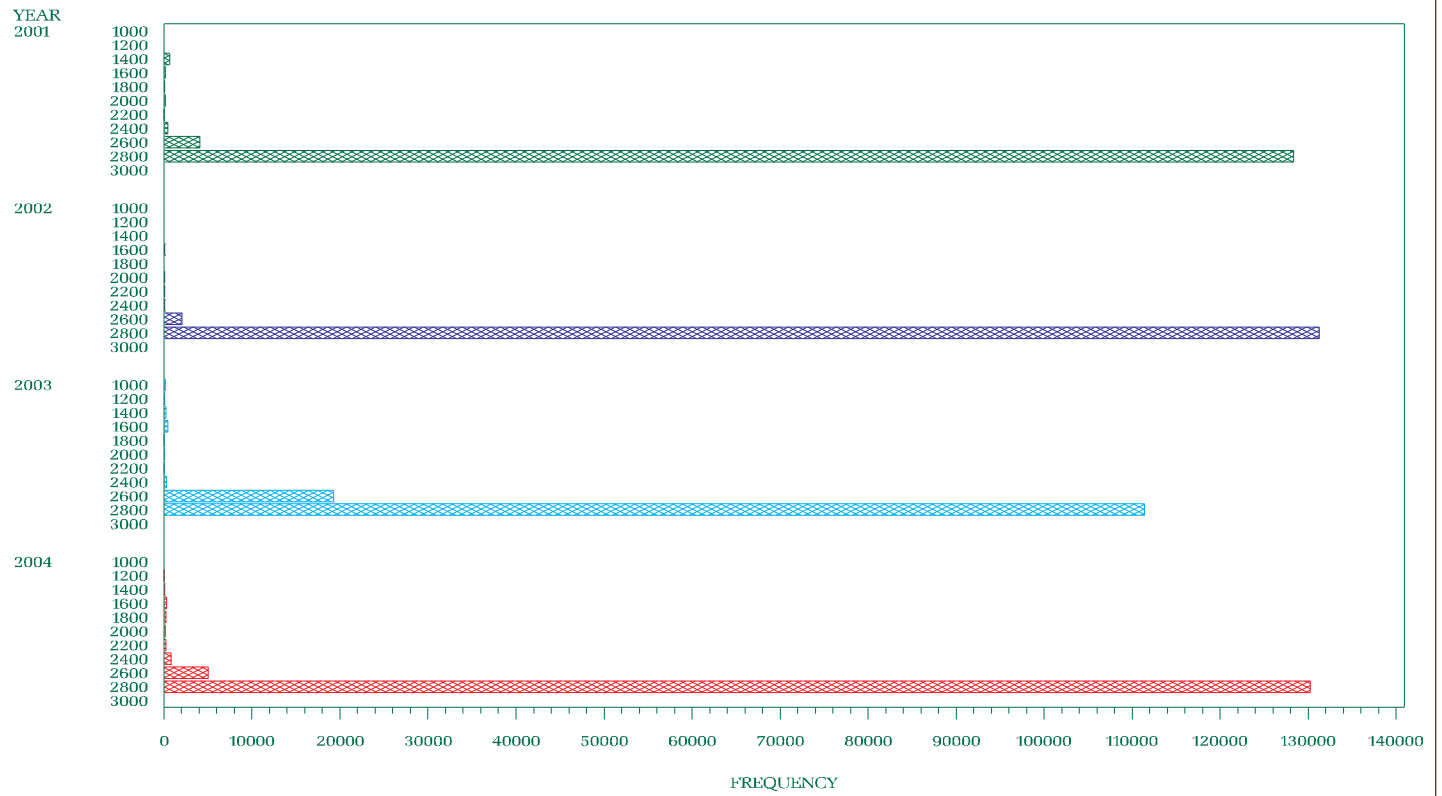
NYISO Frequency Interface Flow For January – December 2004

Dysinger East Limit

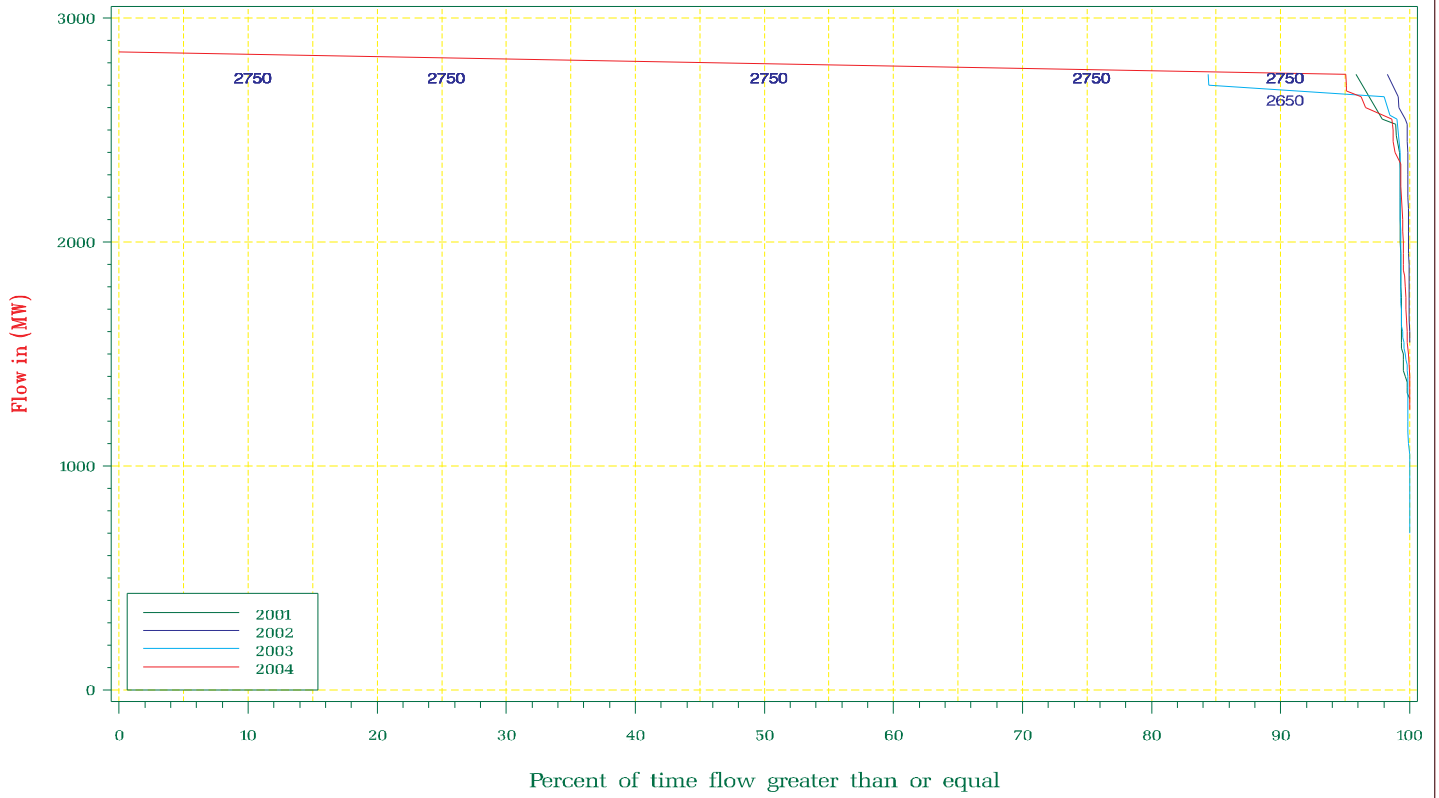


NYISO Frequency Interface Flow For January 2001 – December 2004

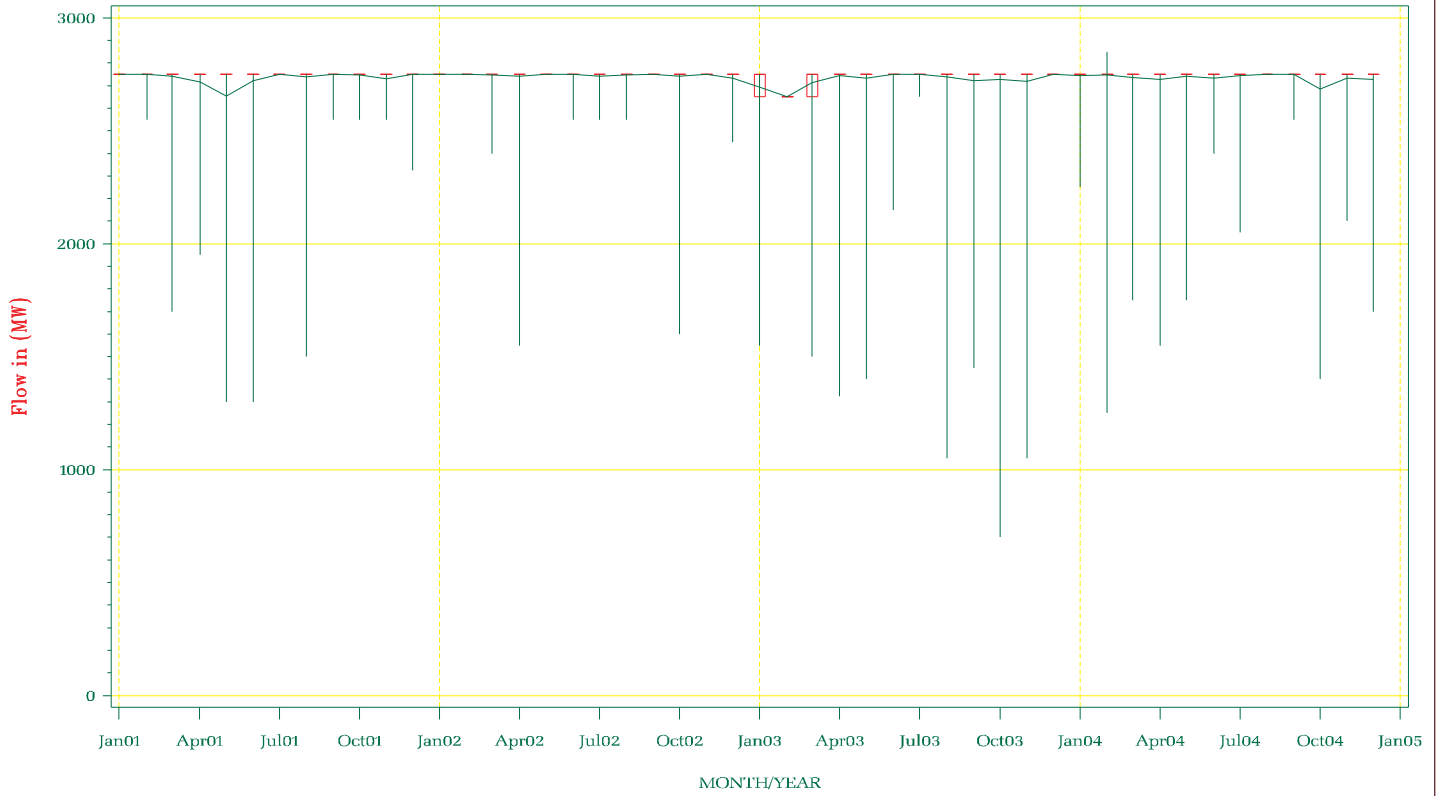
Dysinger East Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**Dysinger East Limit**

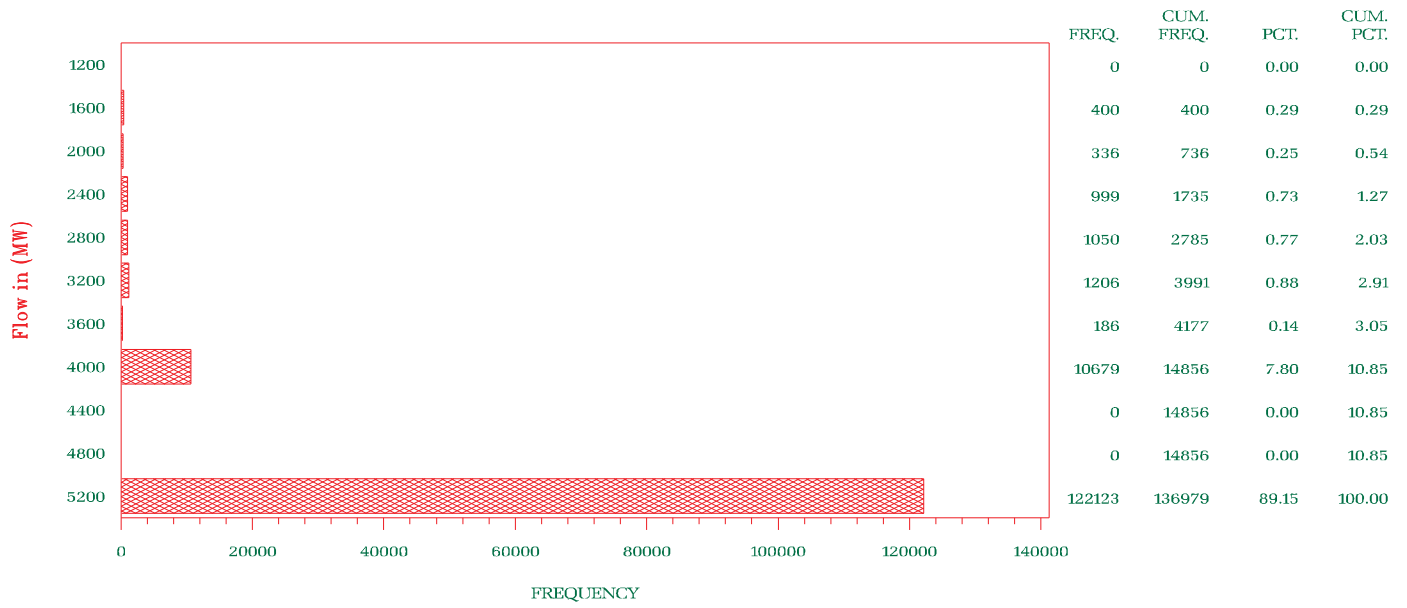


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**Dysinger East Limit**



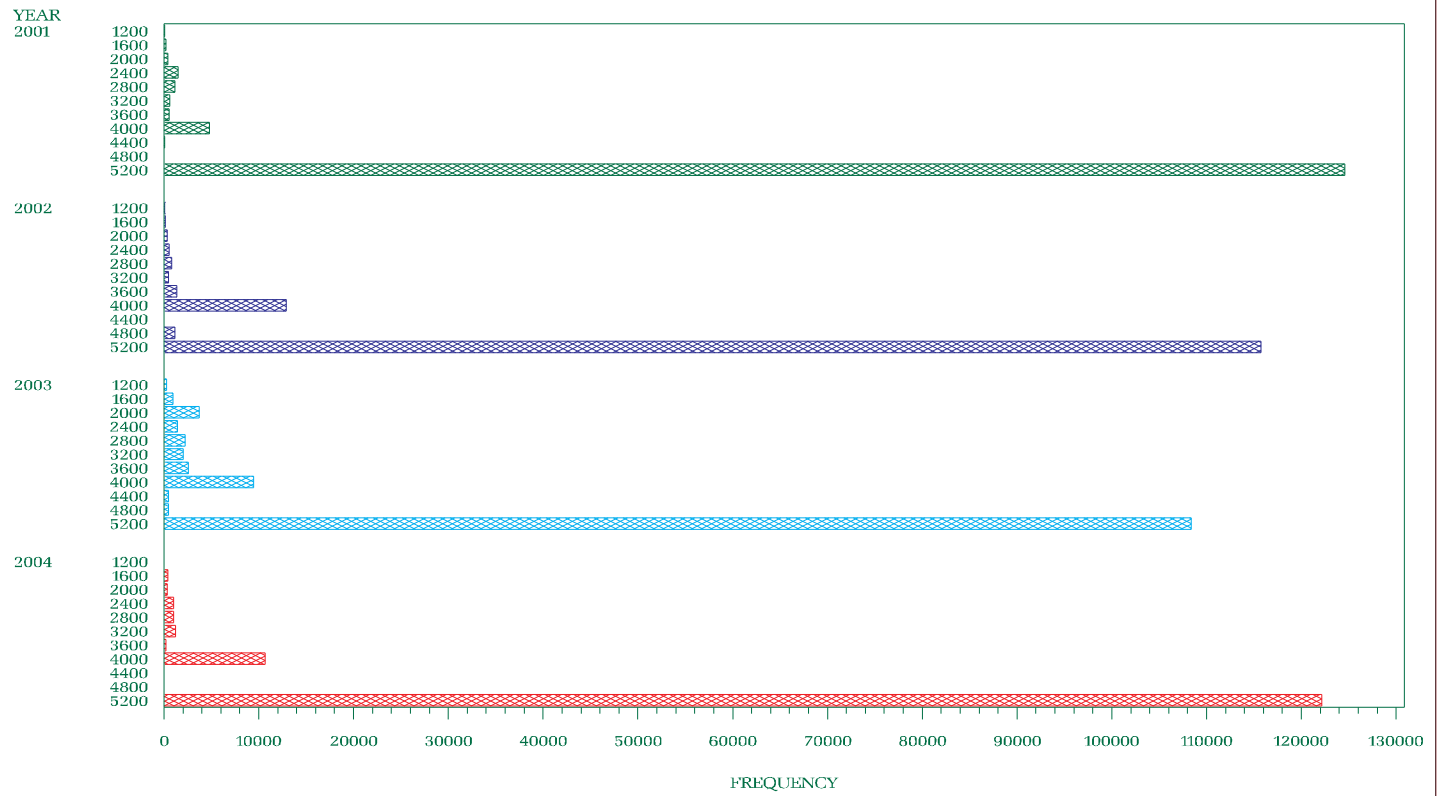
NYISO Frequency Interface Flow For January – December 2004

UPNY Con Ed Limit

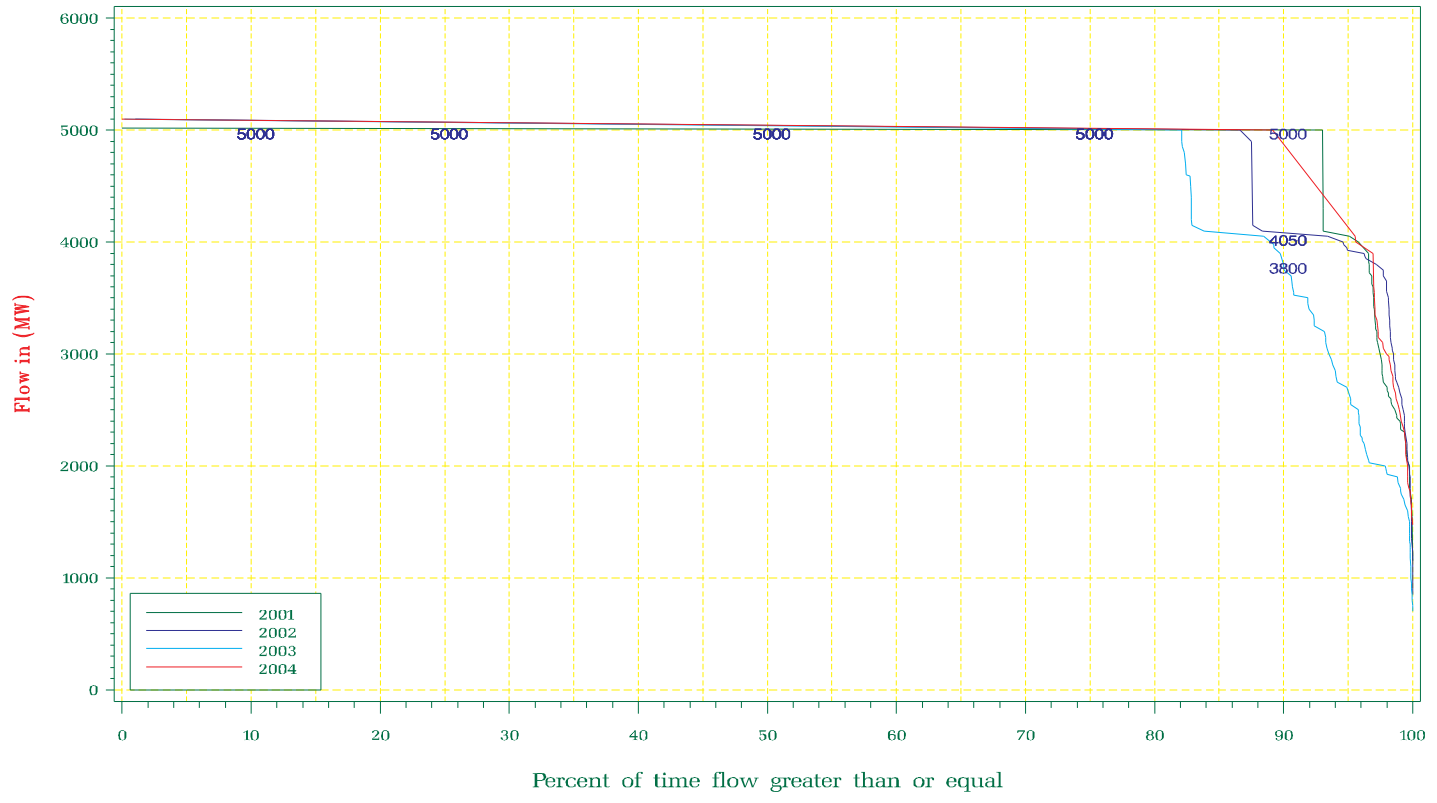


NYISO Frequency Interface Flow For January 2001 – December 2004

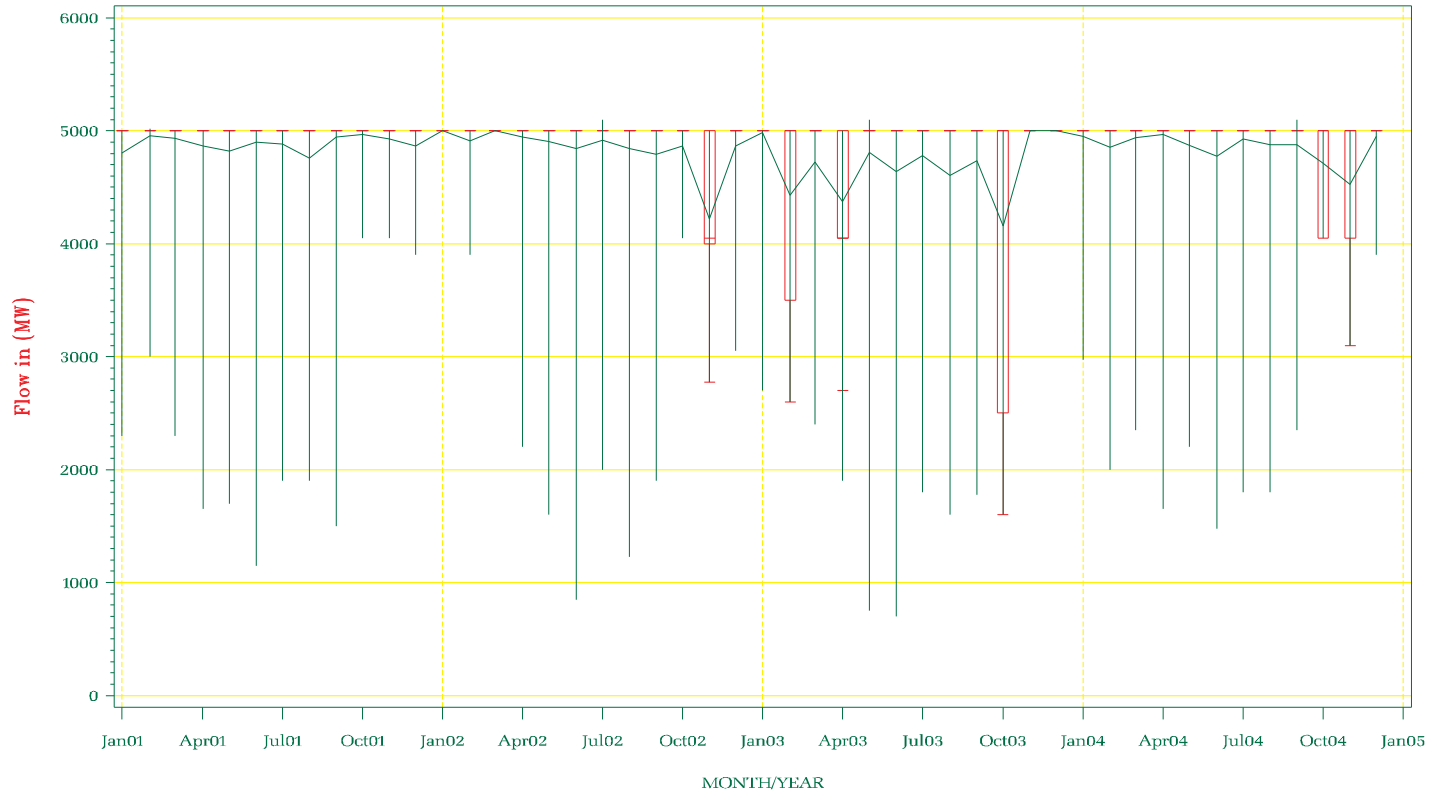
UPNY Con Ed Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
 UPNY Con Ed Limit

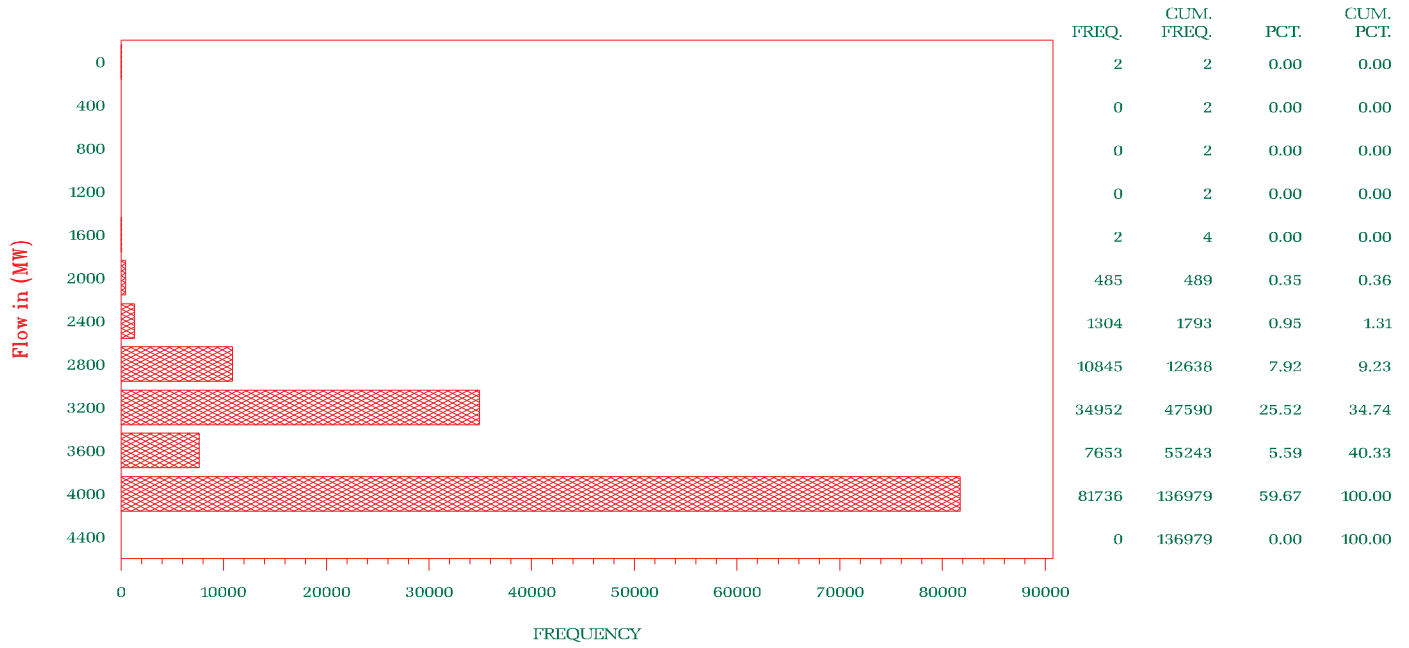


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
 UPNY Con Ed Limit



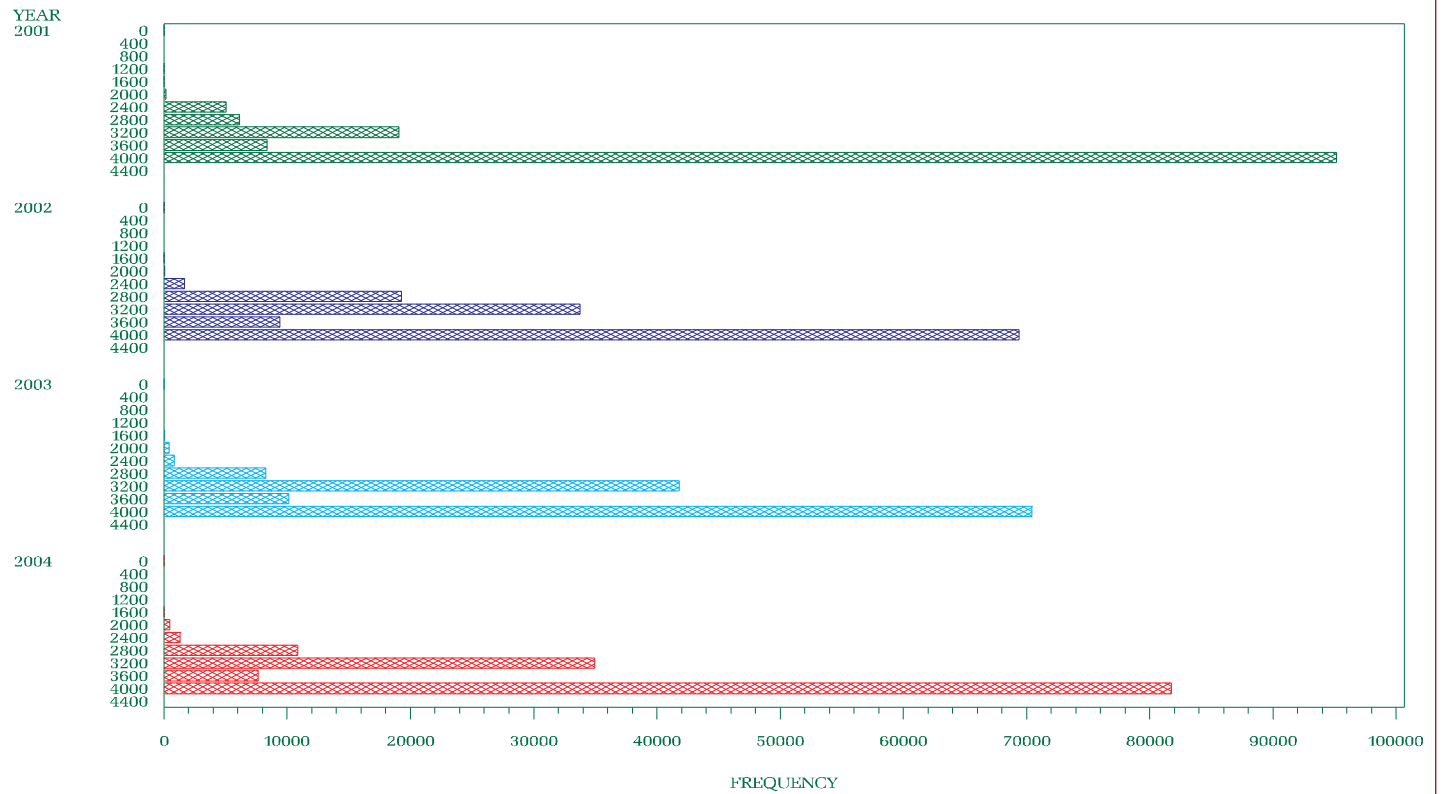
NYISO Frequency Interface Flow For January – December 2004

Dunwoodie South Limit



NYISO Frequency Interface Flow For January 2001 – December 2004

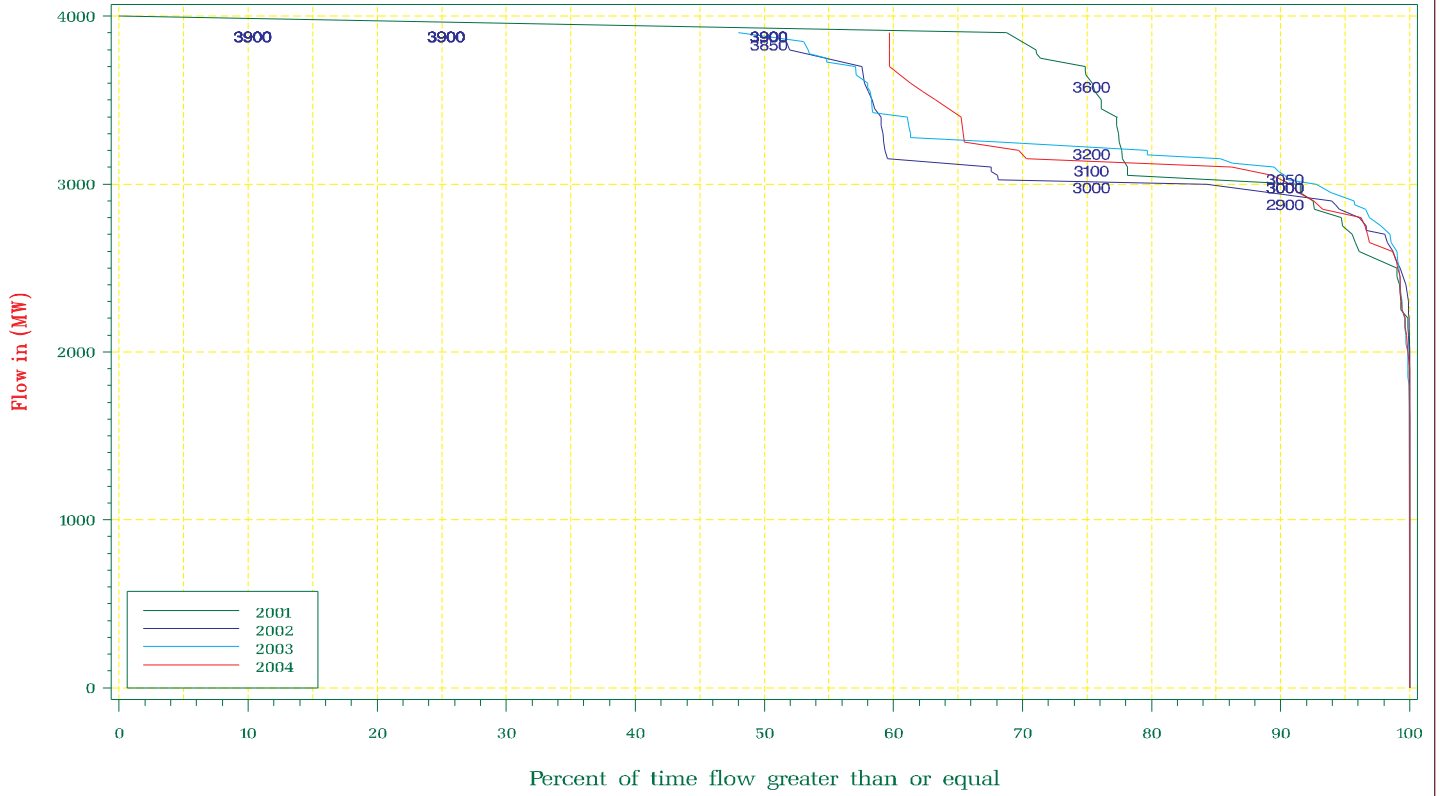
Dunwoodie South Limit





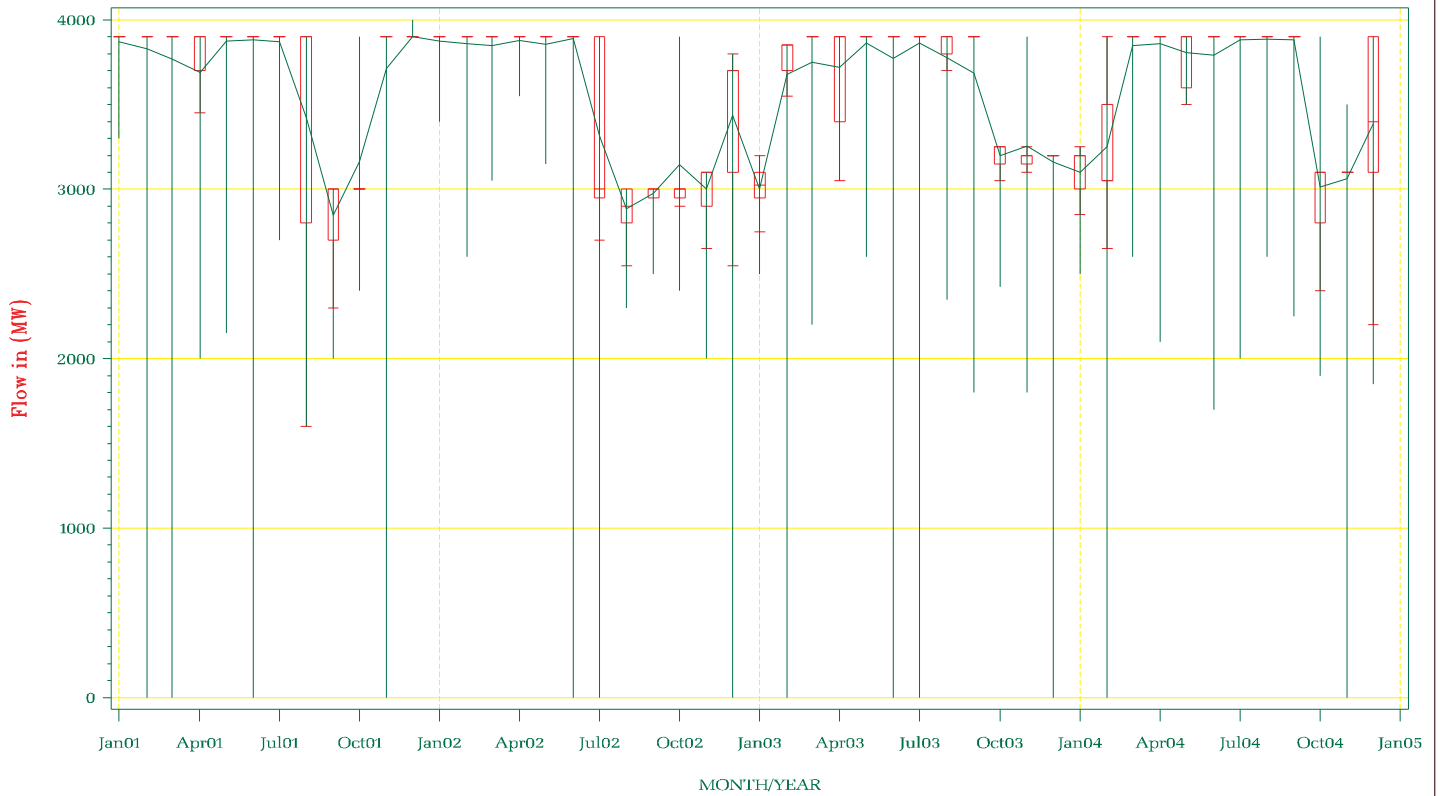
NYISO Percent of time Interface Flow For January 2001 – December 2004

Dunwoodie South Limit



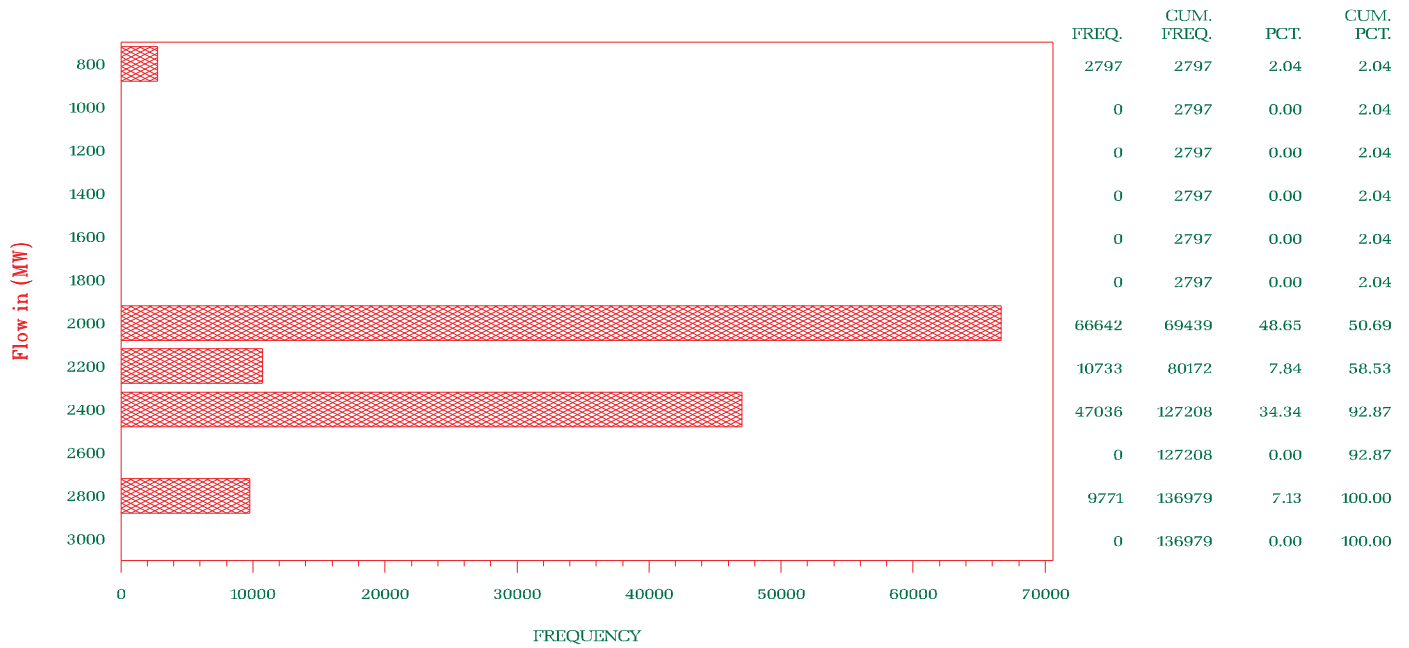
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Dunwoodie South Limit



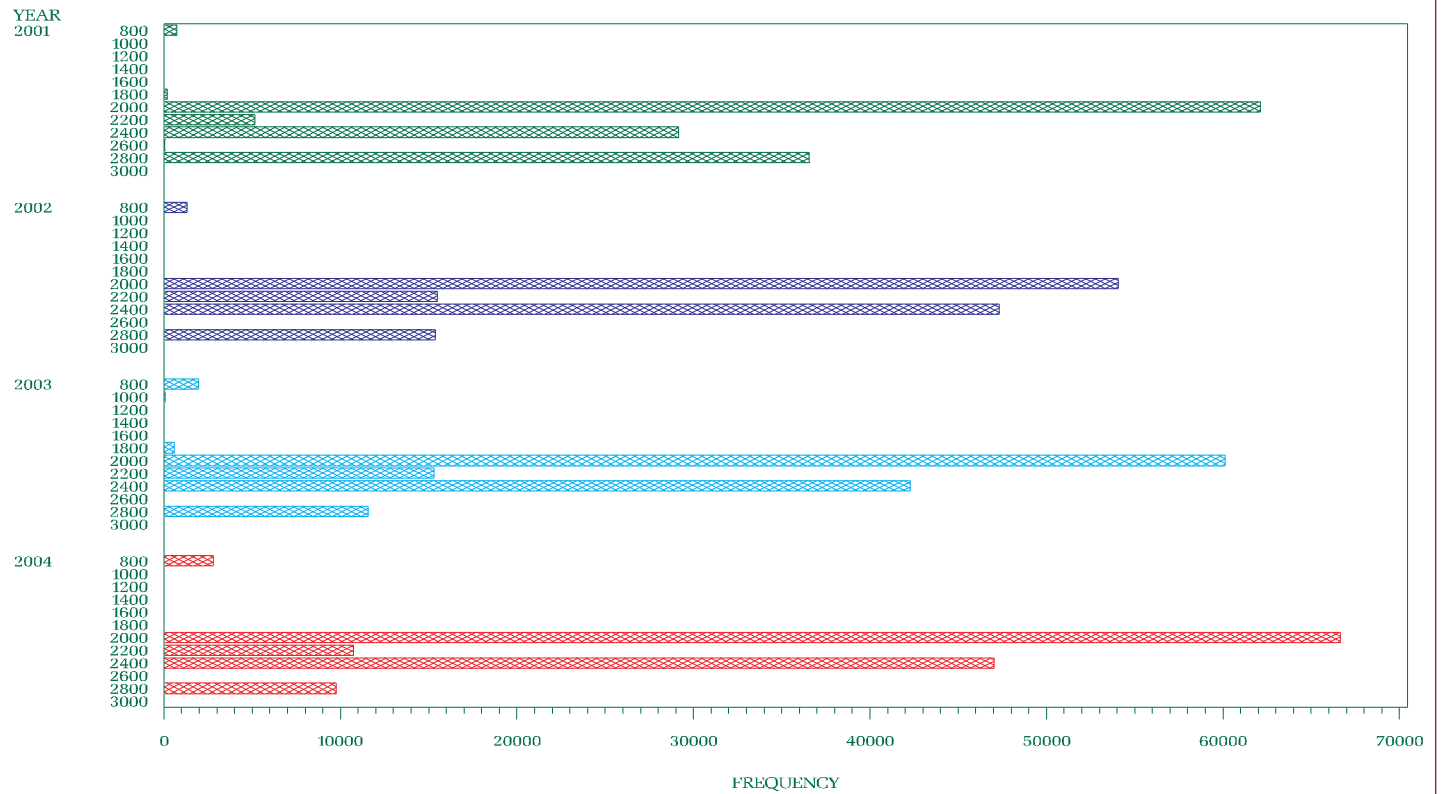
NYISO Frequency Interface Flow For January – December 2004

Moses South Limit

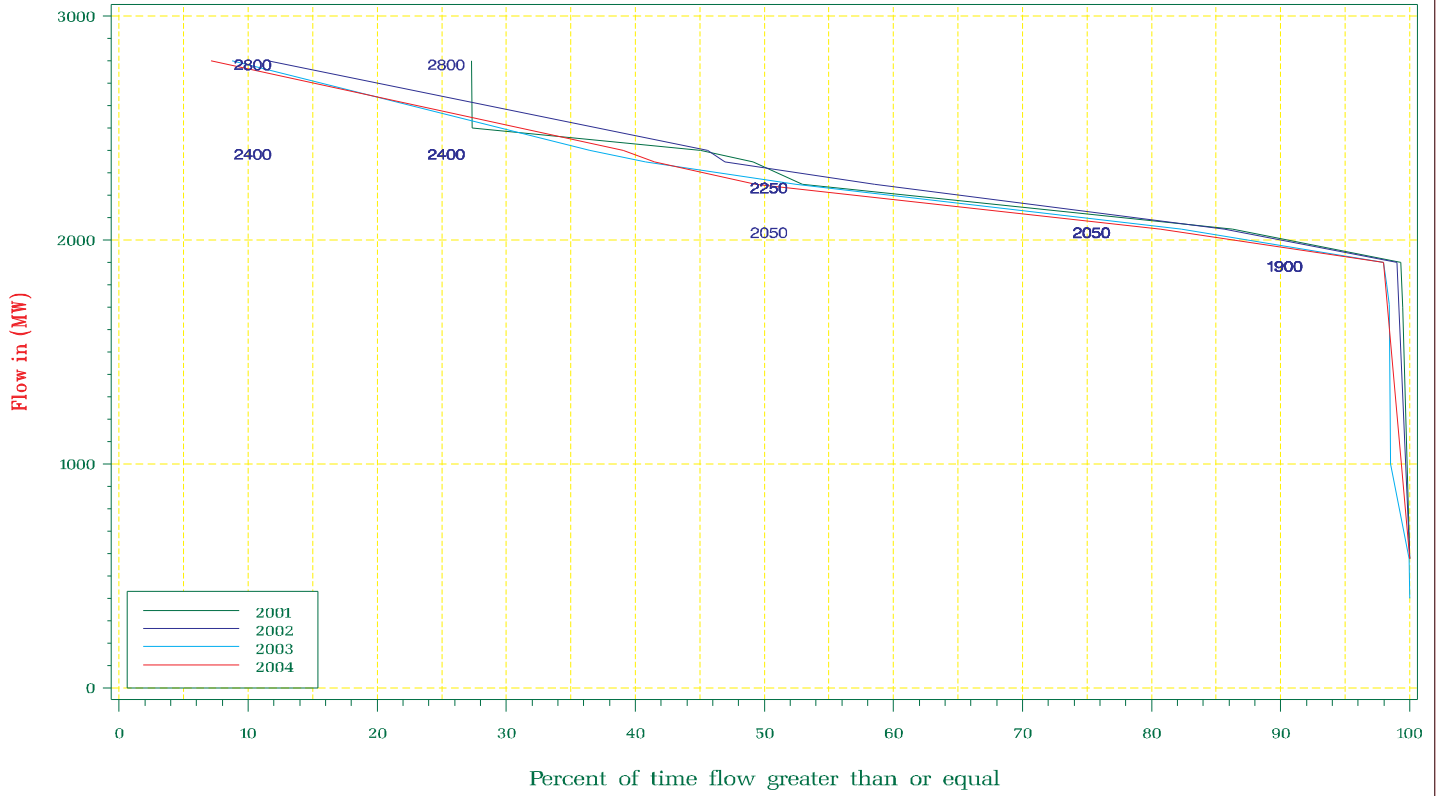


NYISO Frequency Interface Flow For January 2001 – December 2004

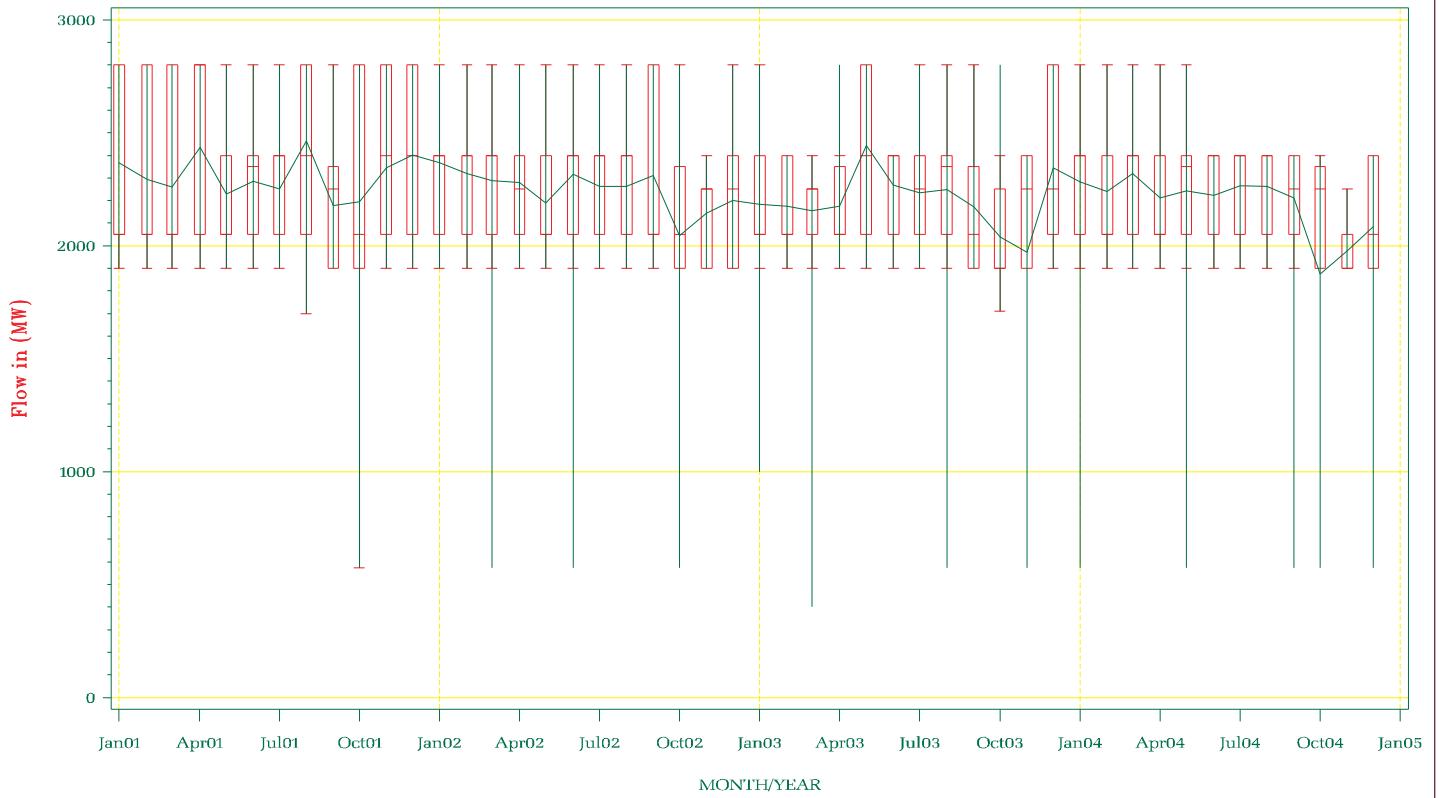
Moses South Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**Moses South Limit**

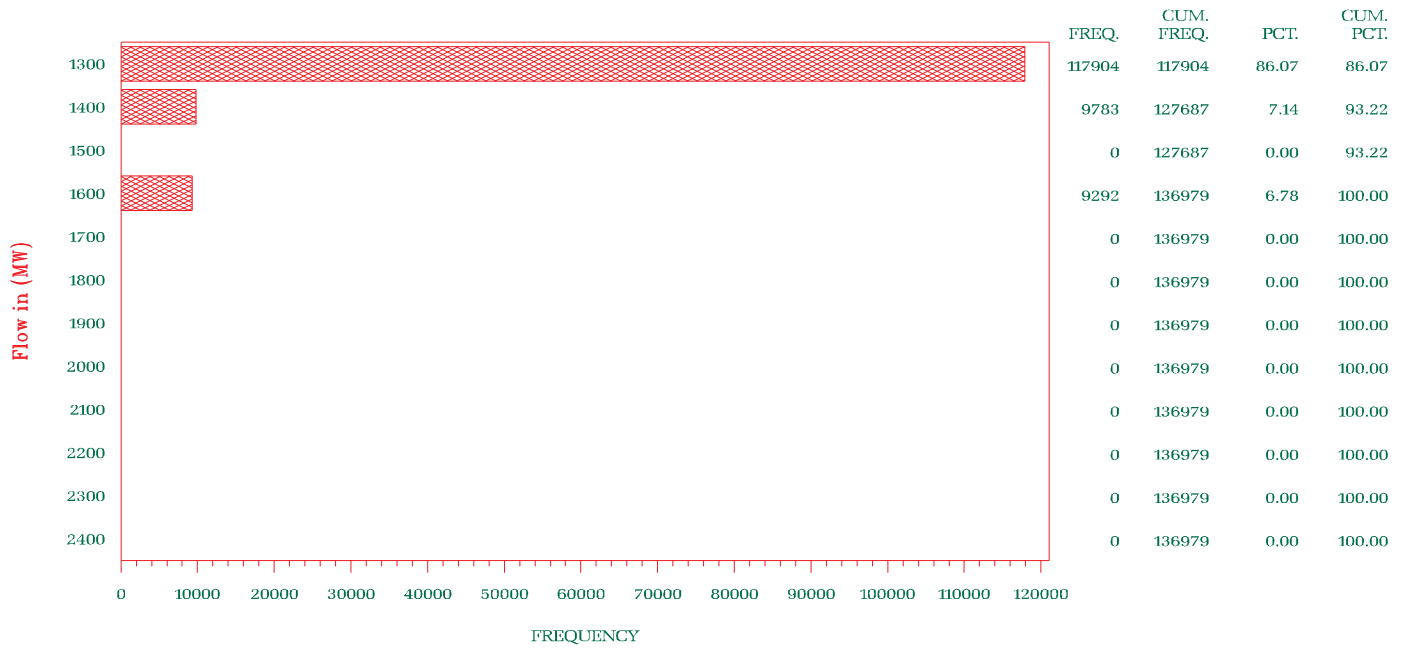


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**Moses South Limit**



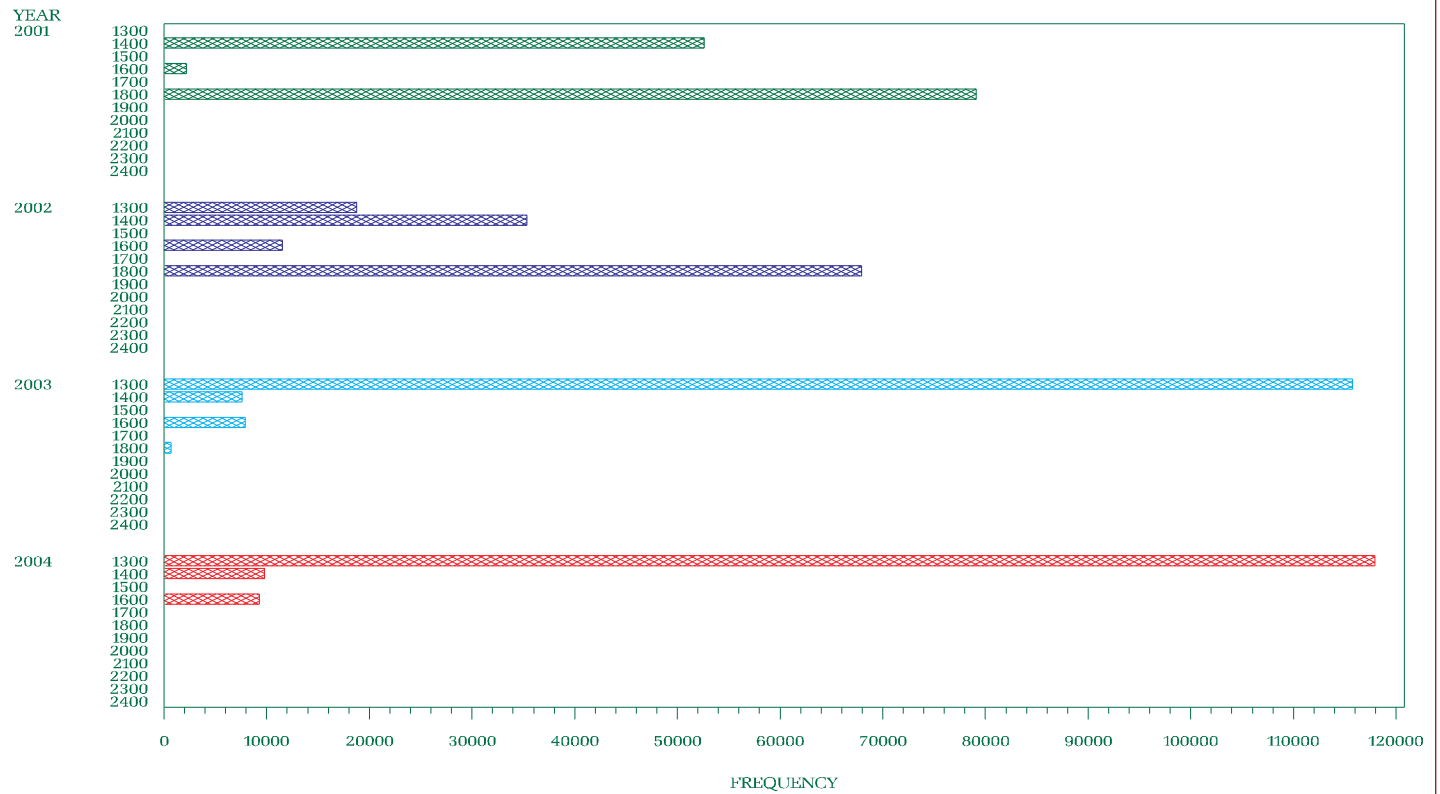
NYISO Frequency Interface Flow For January – December 2004

TE – NY Limit

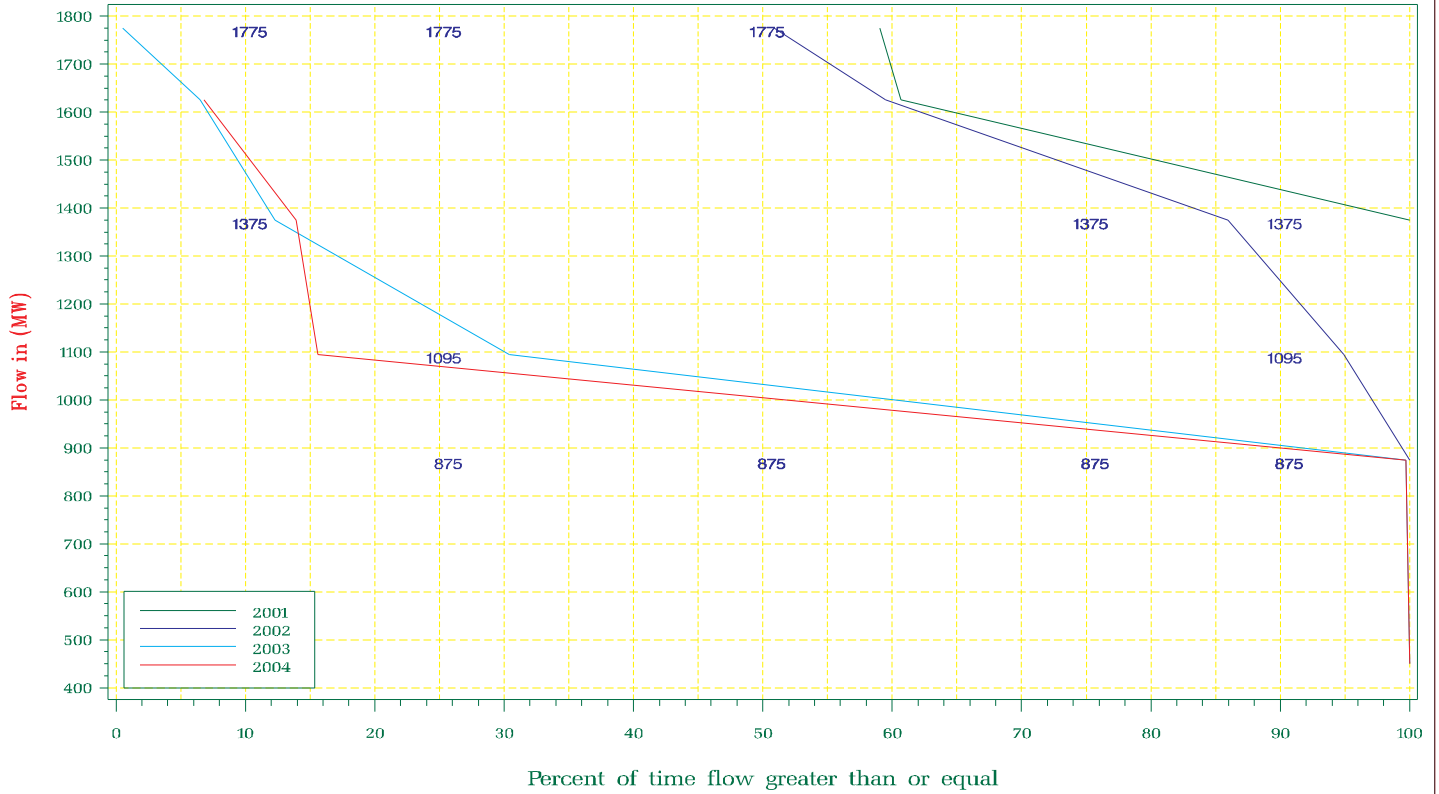


NYISO Frequency Interface Flow For January 2001 – December 2004

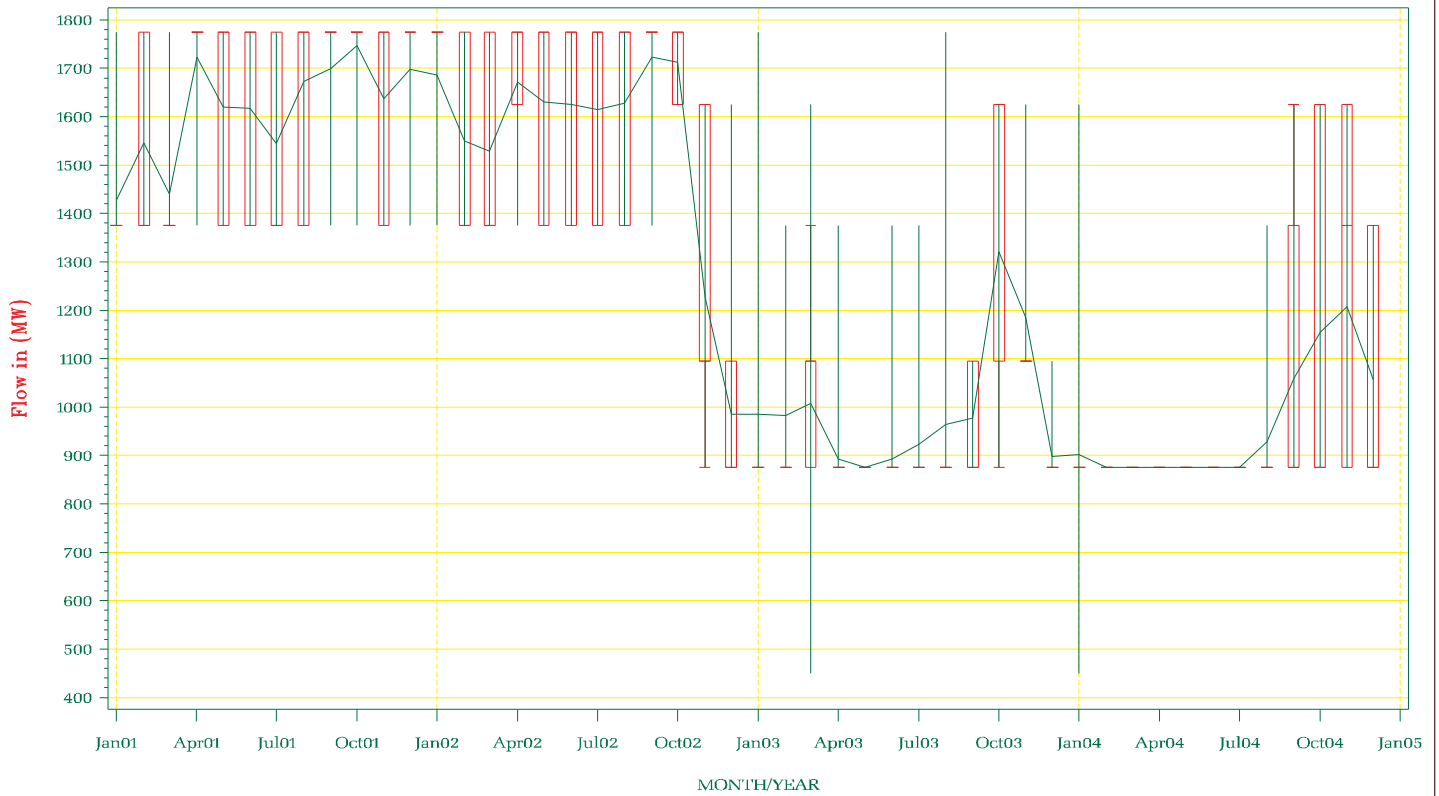
TE – NY Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**TE – NY Limit**

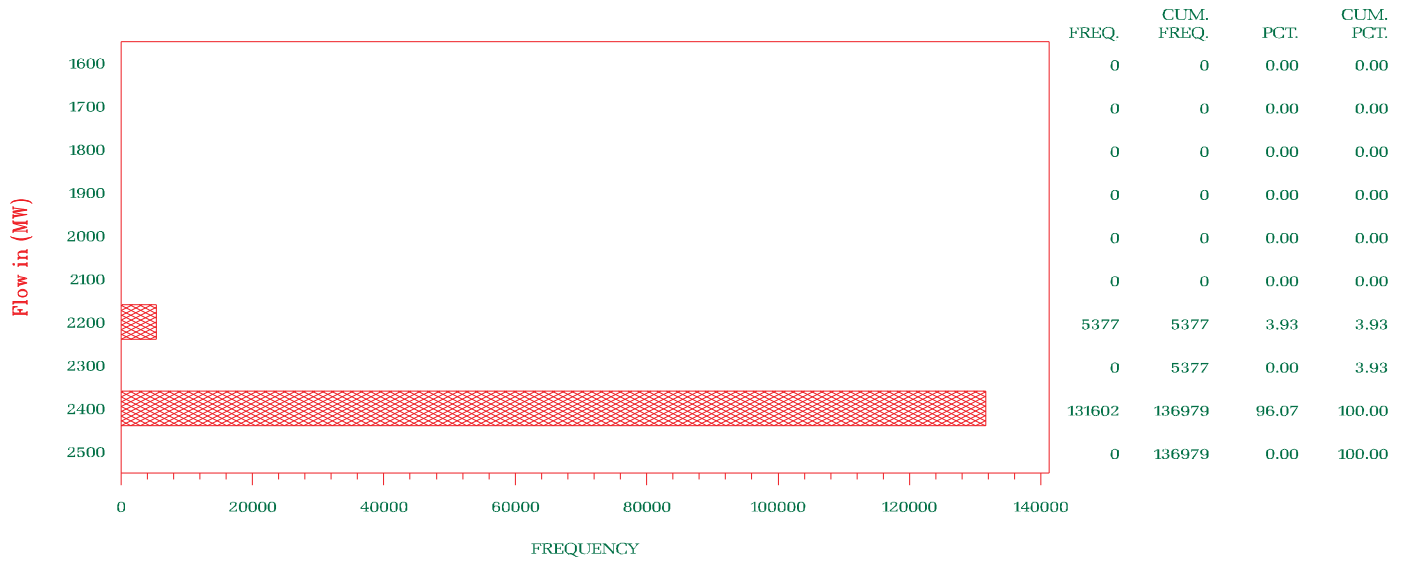


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**TE – NY Limit**



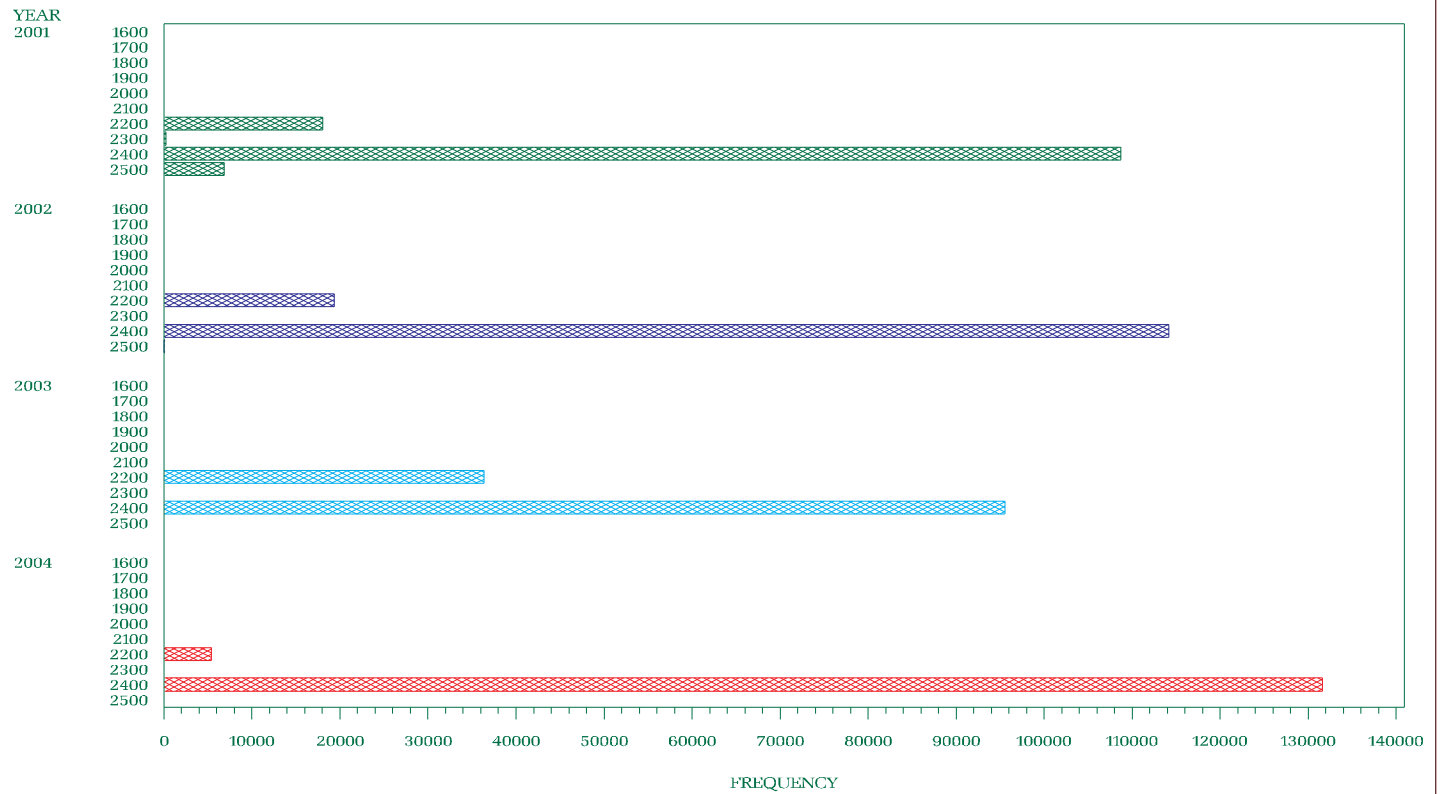
NYISO Frequency Interface Flow For January – December 2004

Ontario – NY Limit

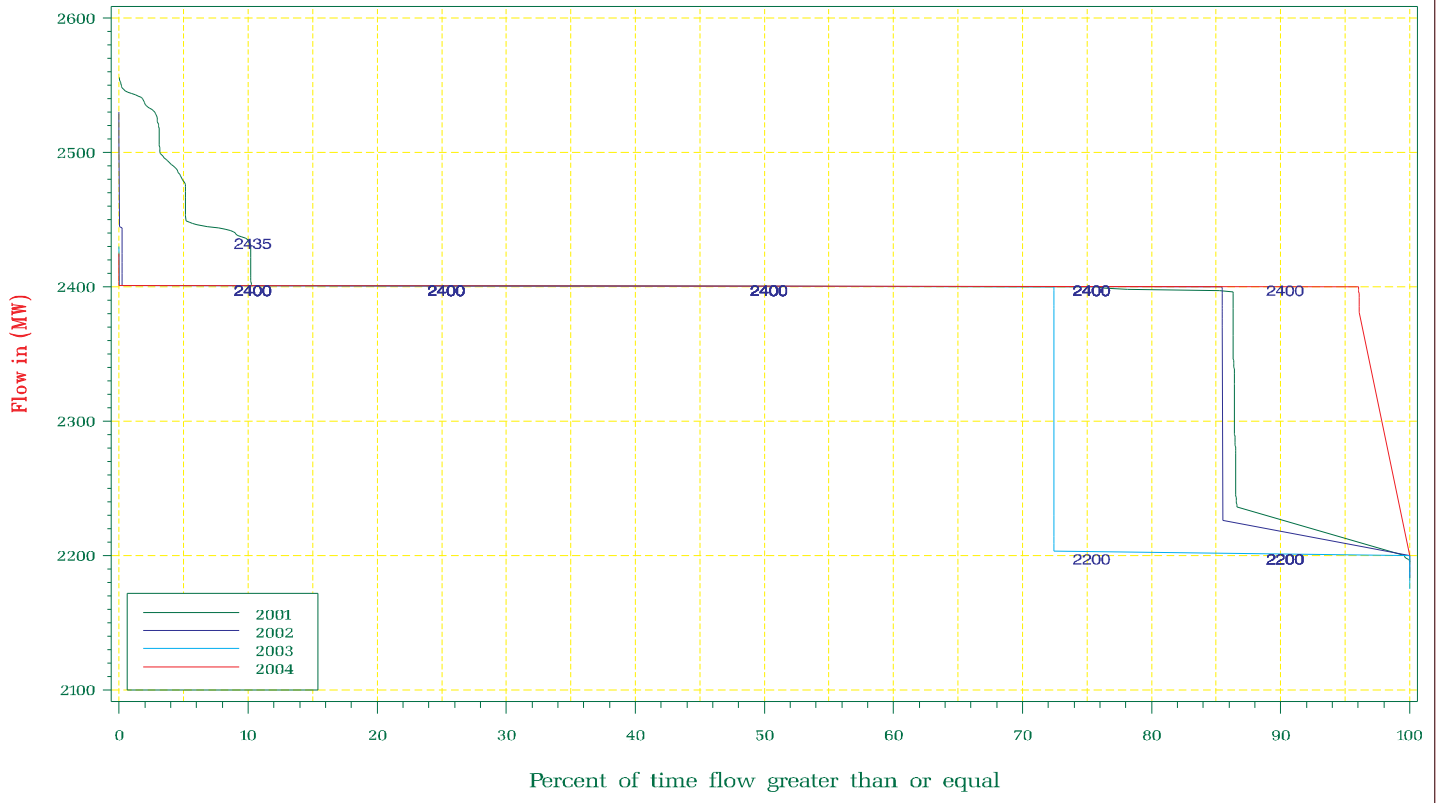


NYISO Frequency Interface Flow For January 2001 – December 2004

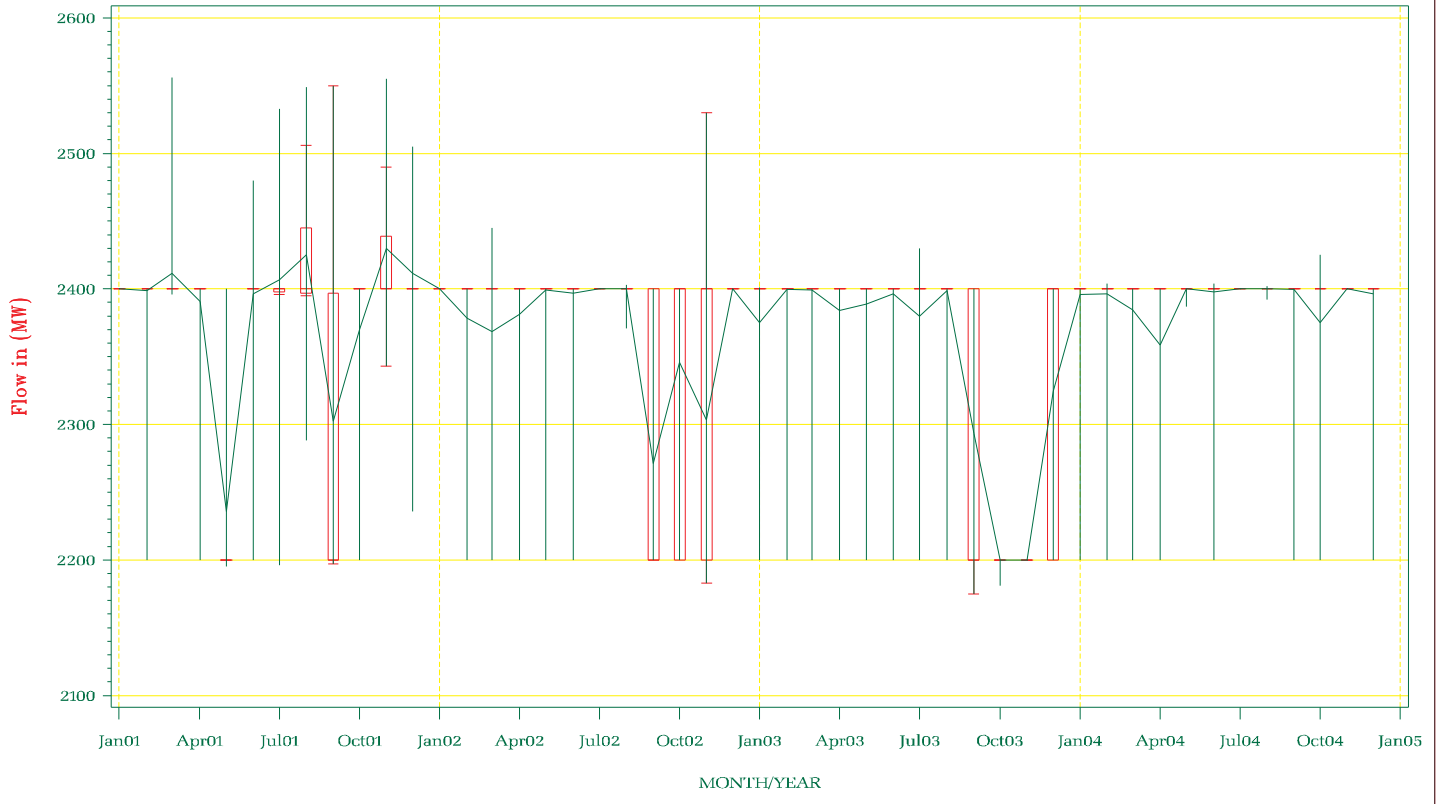
Ontario – NY Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**Ontario – NY Limit**

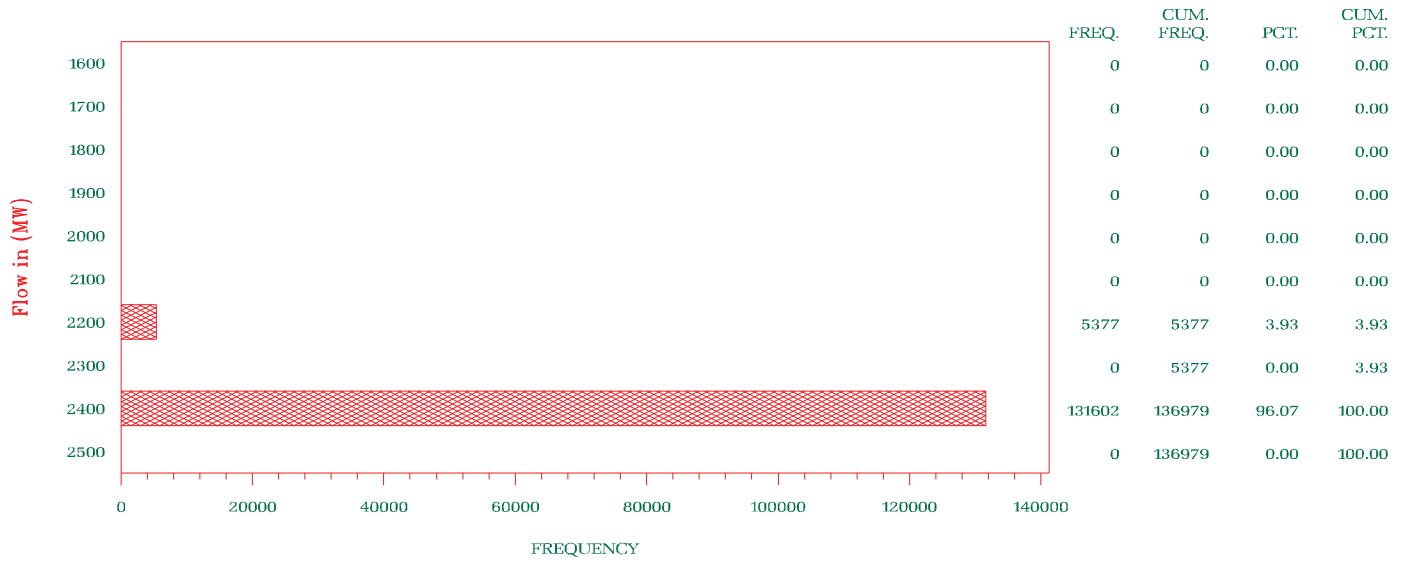


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**Ontario – NY Limit**



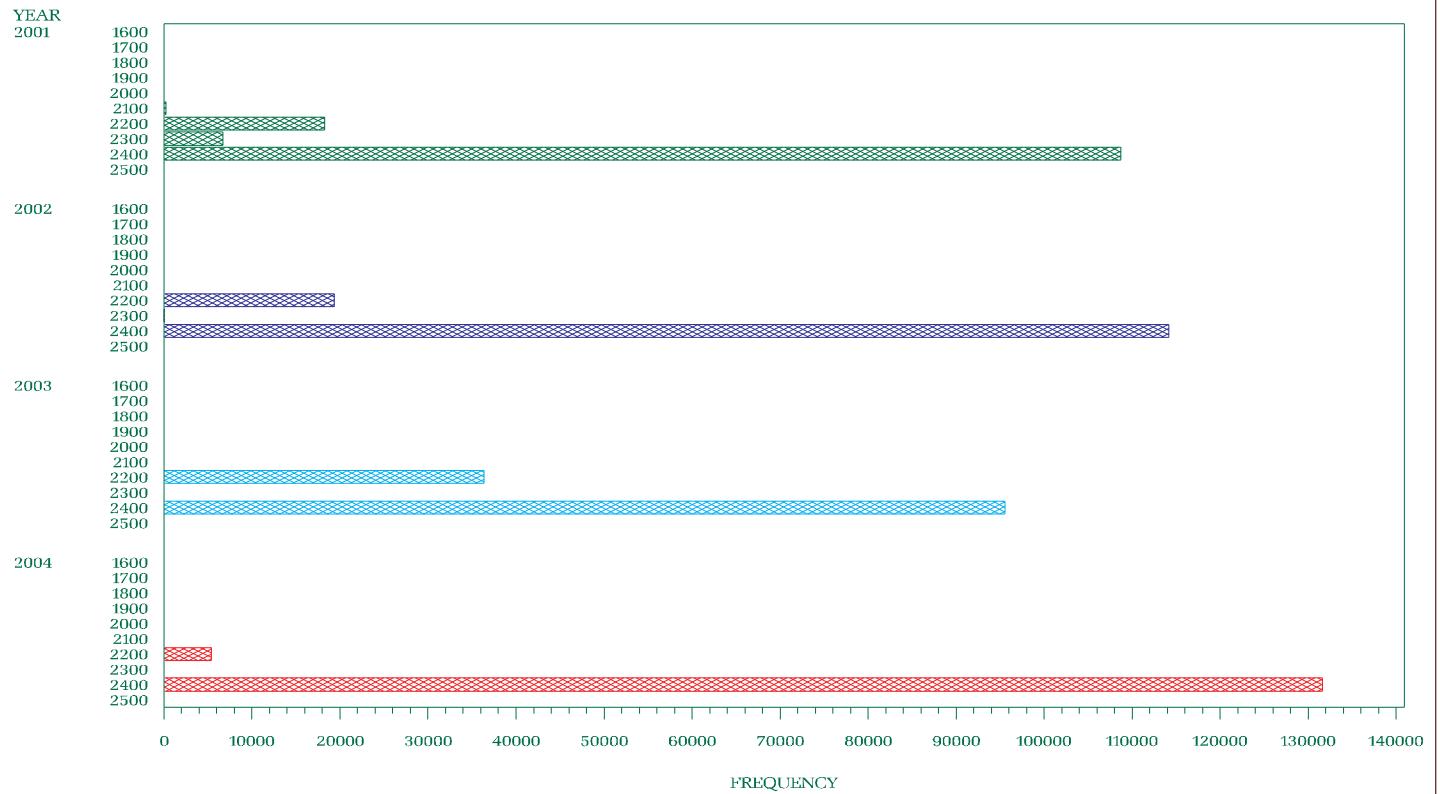
NYISO Frequency Interface Flow For January – December 2004

NY – Ontario Limit



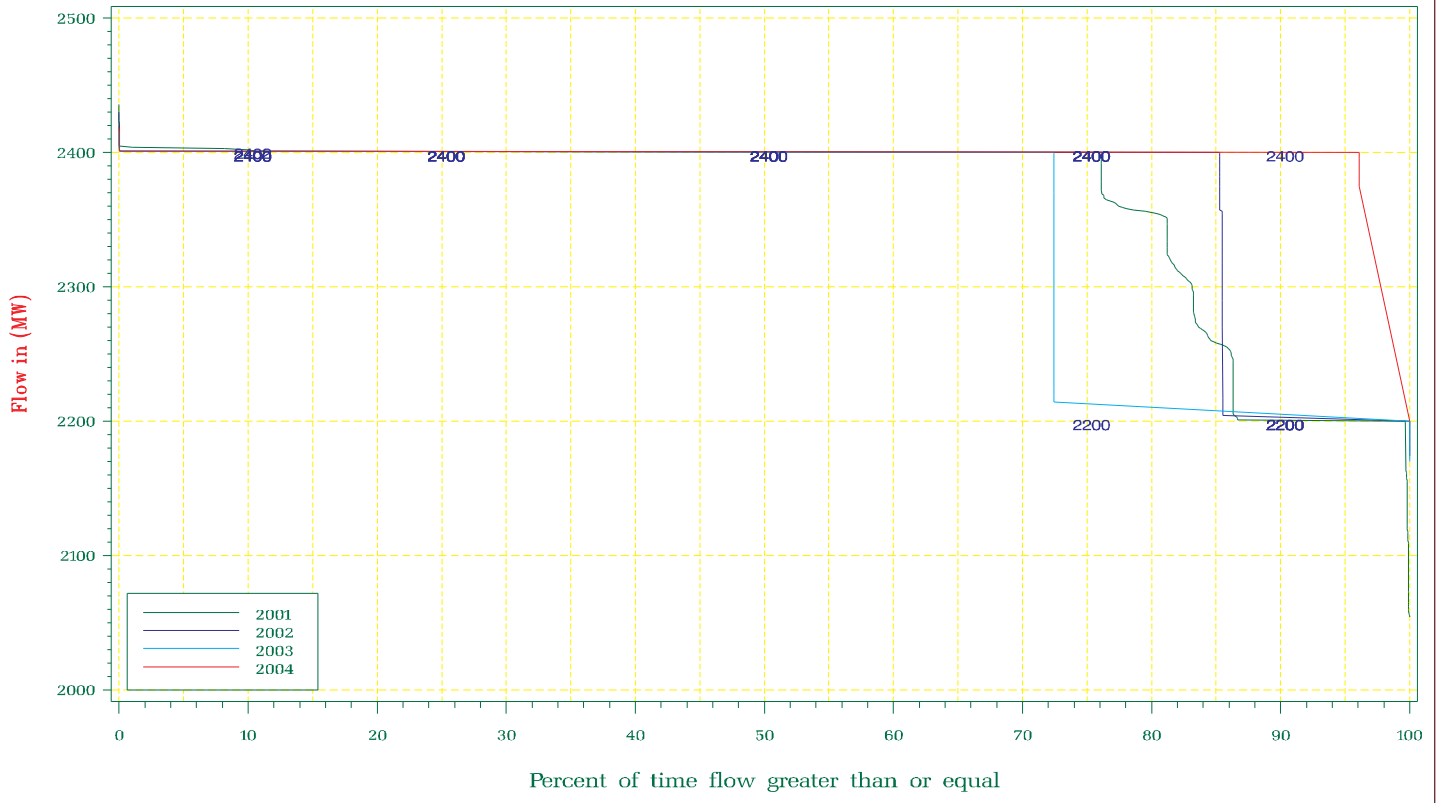
NYISO Frequency Interface Flow For January 2001 – December 2004

NY – Ontario Limit

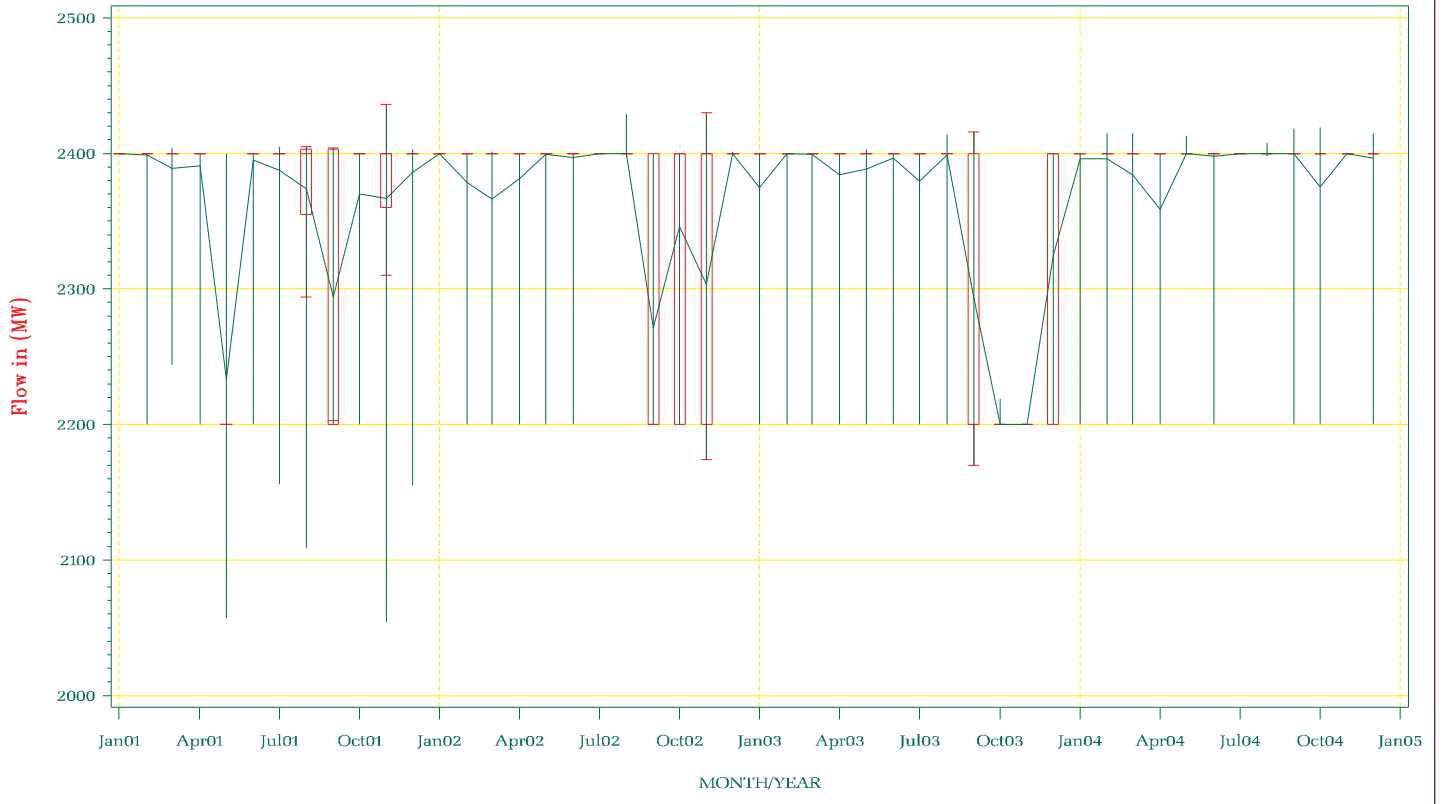




NYISO Percent of time Interface Flow For January 2001 – December 2004  
**NY–Ontario Limit**

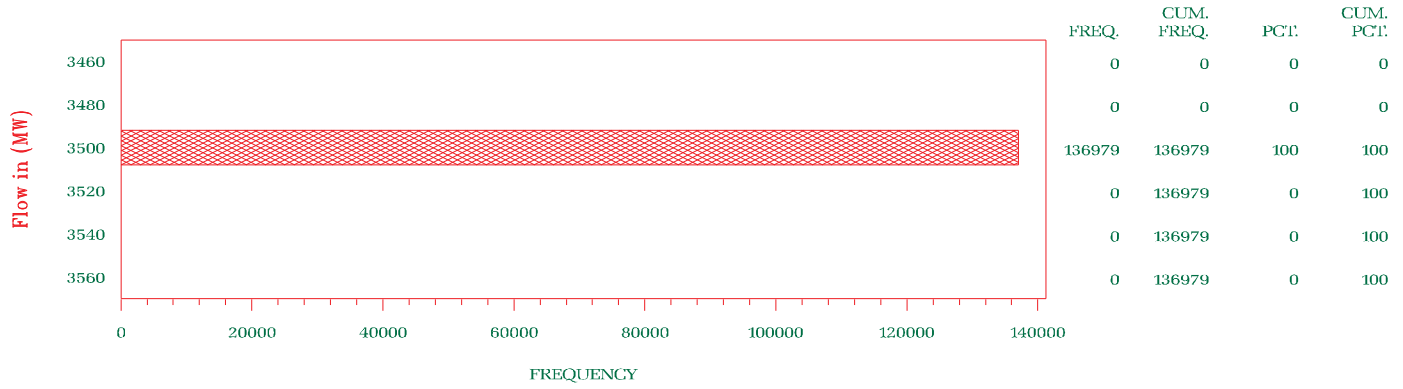


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**NY–Ontario Limit**



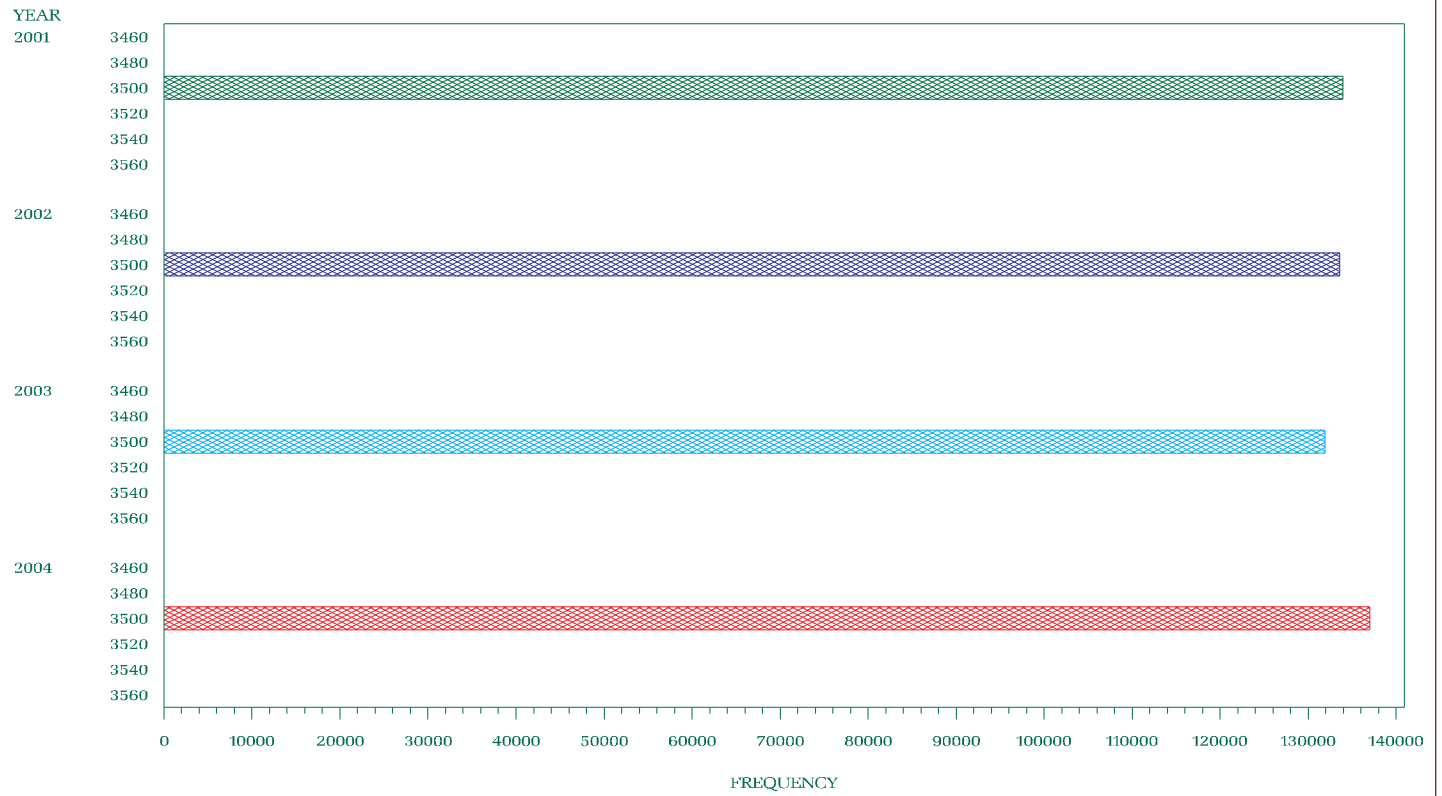
NYISO Frequency Interface Flow For January – December 2004

PJM – NY Limit



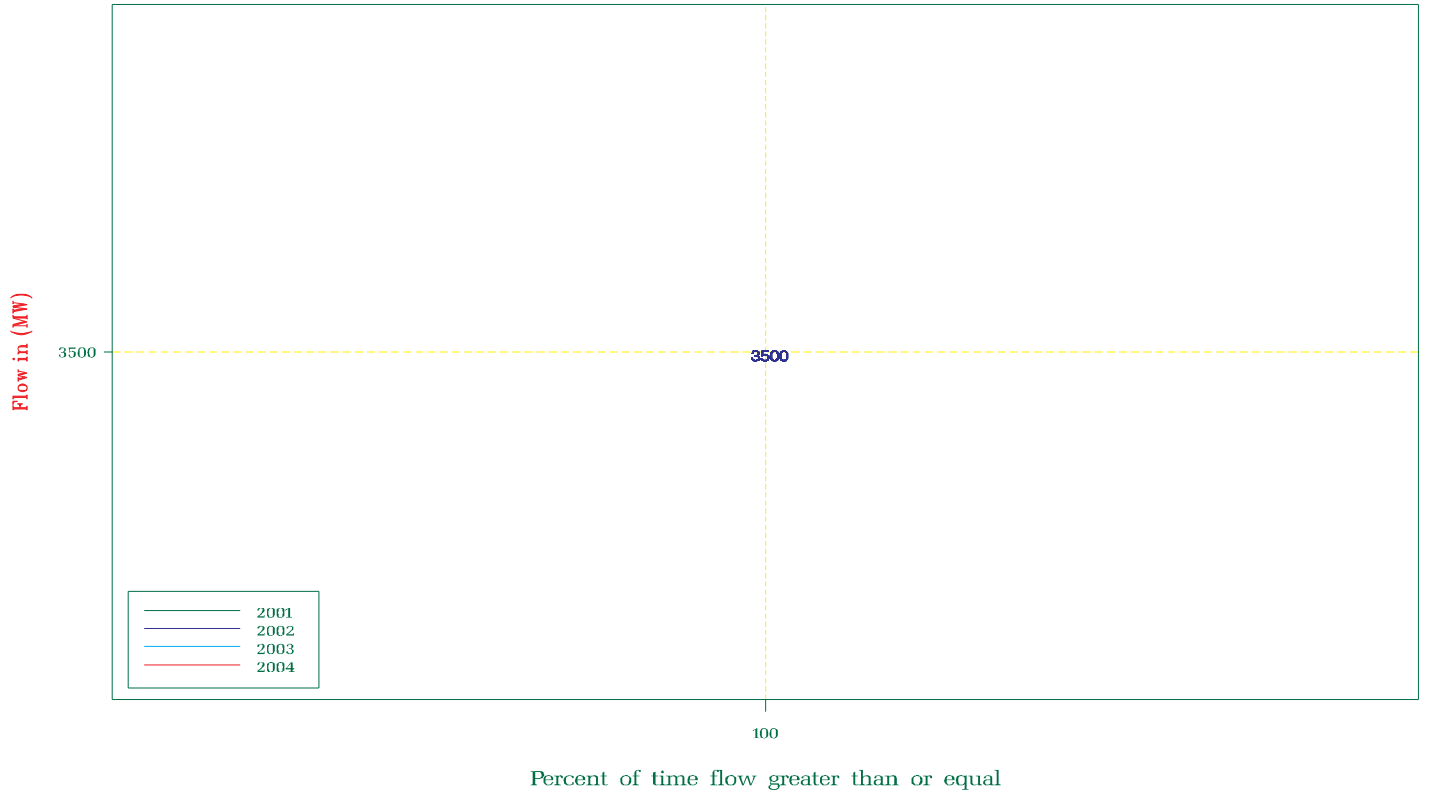
NYISO Frequency Interface Flow For January 2001 – December 2004

PJM – NY Limit



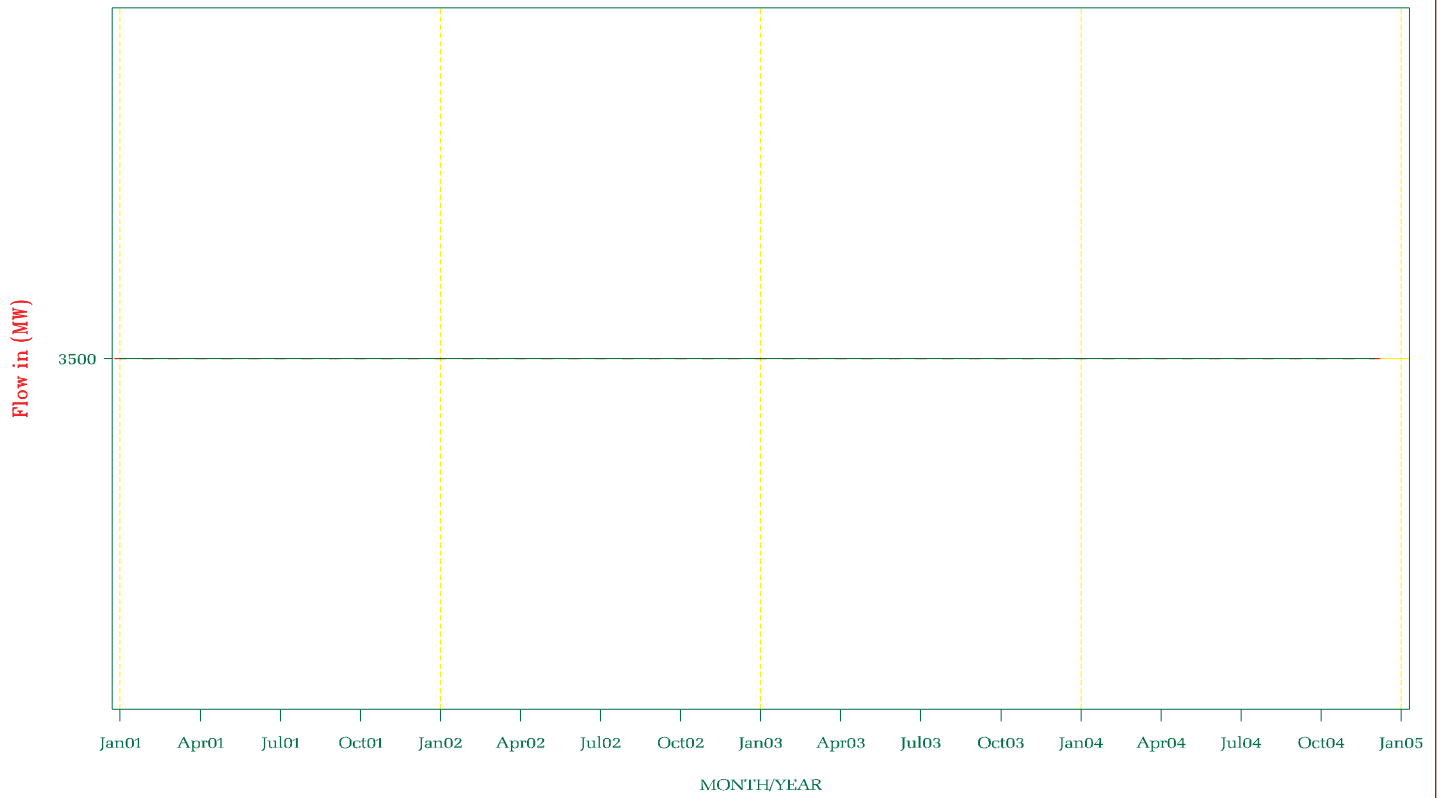
NYISO Percent of time Interface Flow For January 2001 – December 2004

PJM–NY Limit



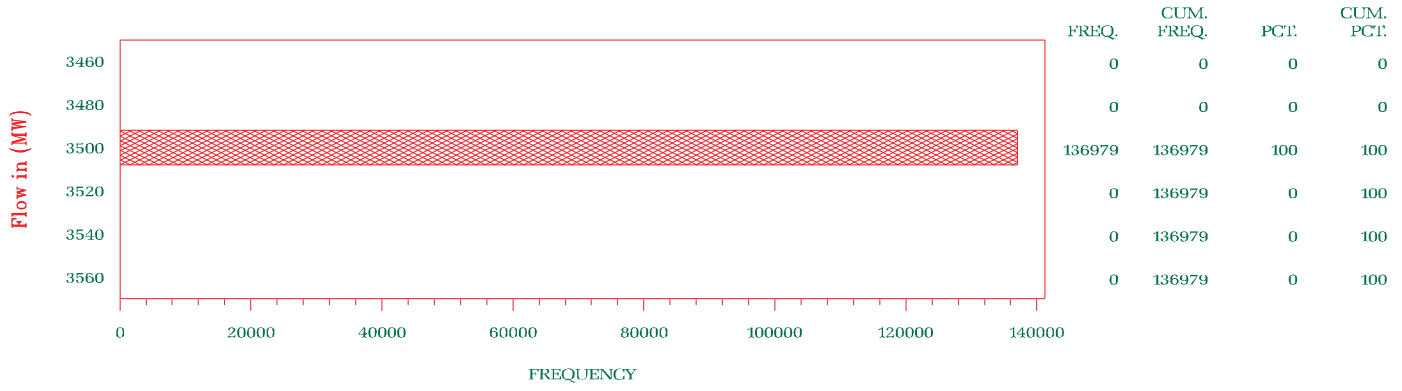
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

PJM–NY Limit



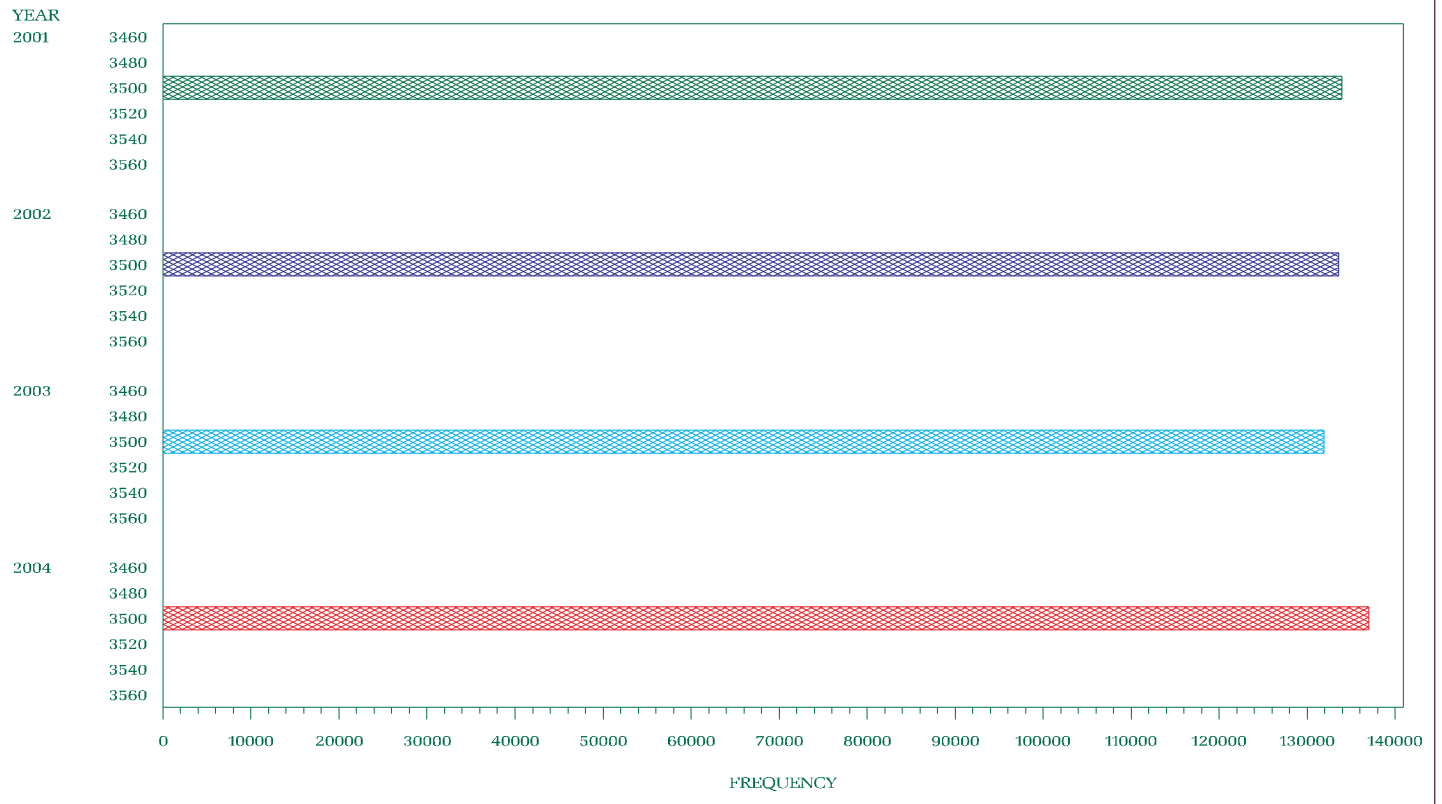
NYISO Frequency Interface Flow For January – December 2004

NY – PJM Limit



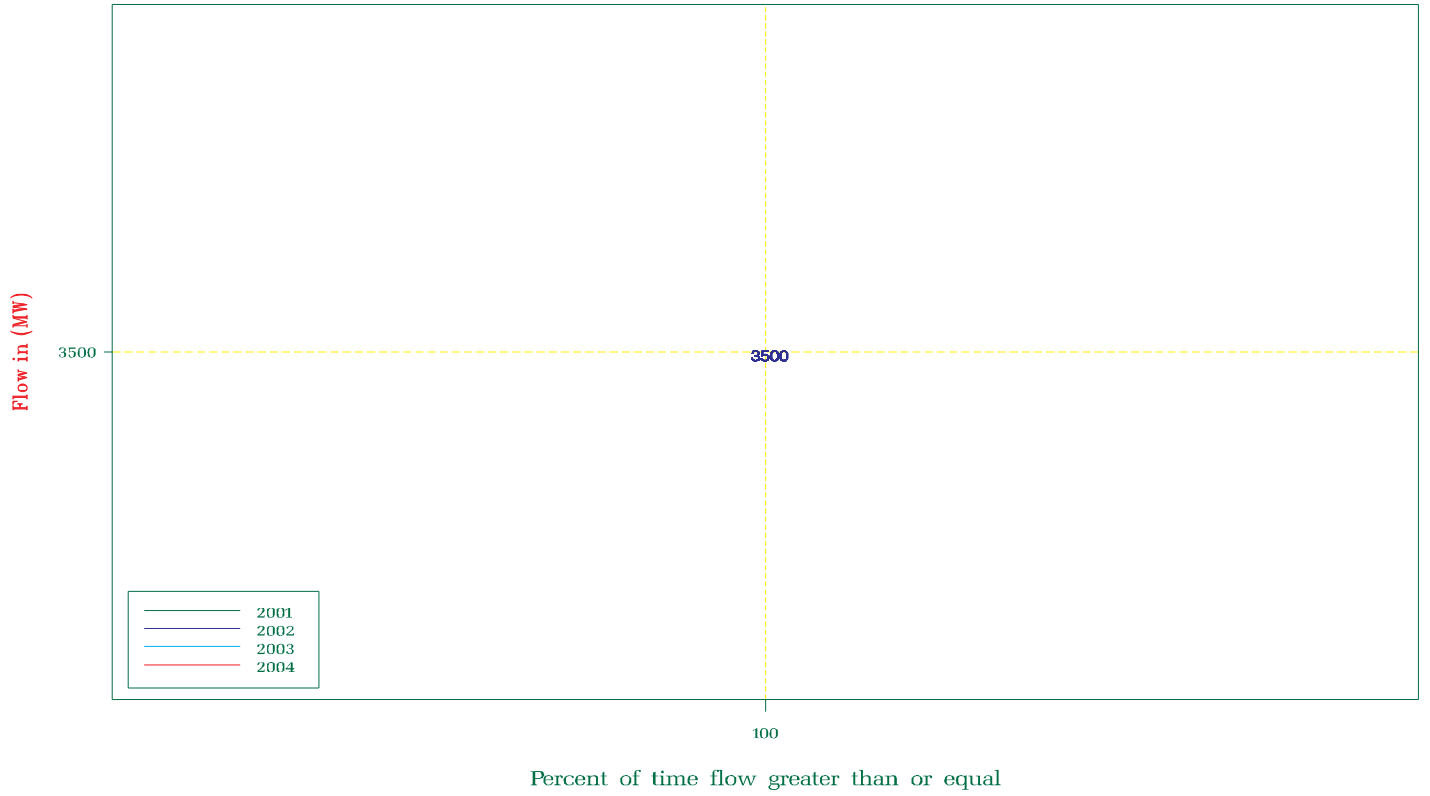
NYISO Frequency Interface Flow For January 2001 – December 2004

NY – PJM Limit



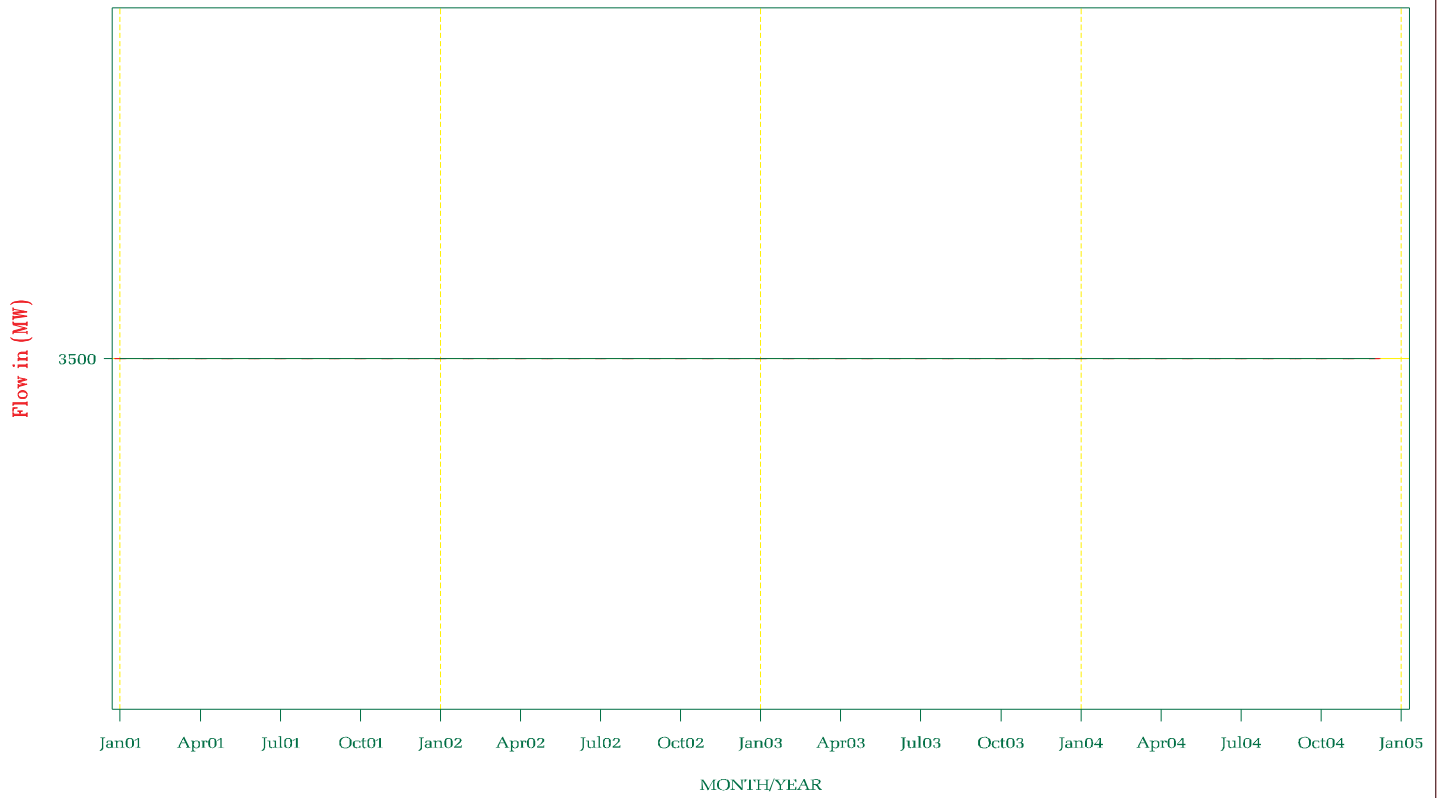
NYISO Percent of time Interface Flow For January 2001 – December 2004

NY – PJM Limit



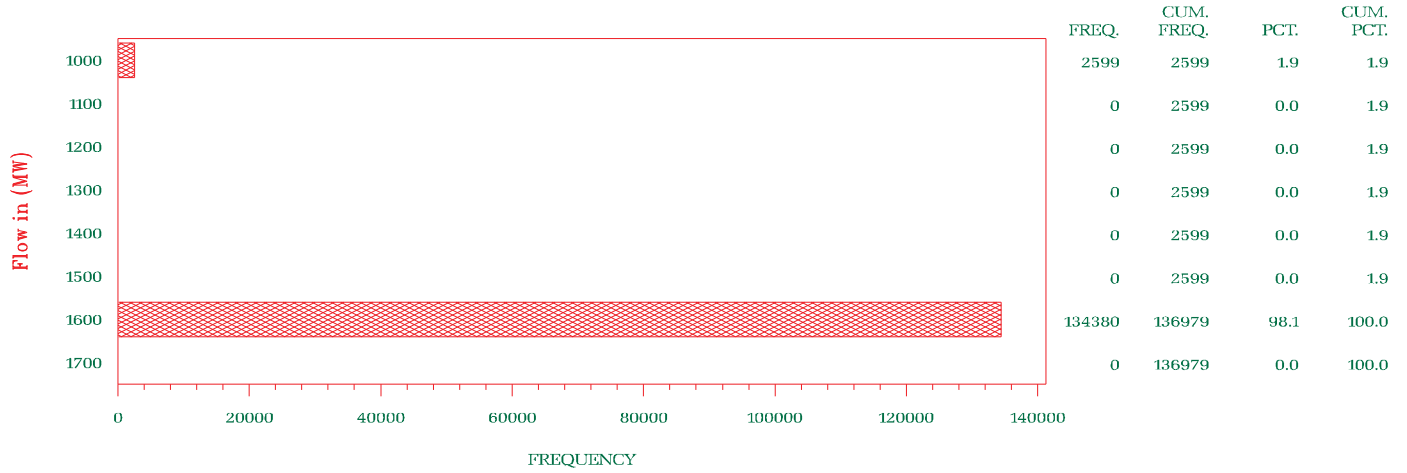
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

NY – PJM Limit



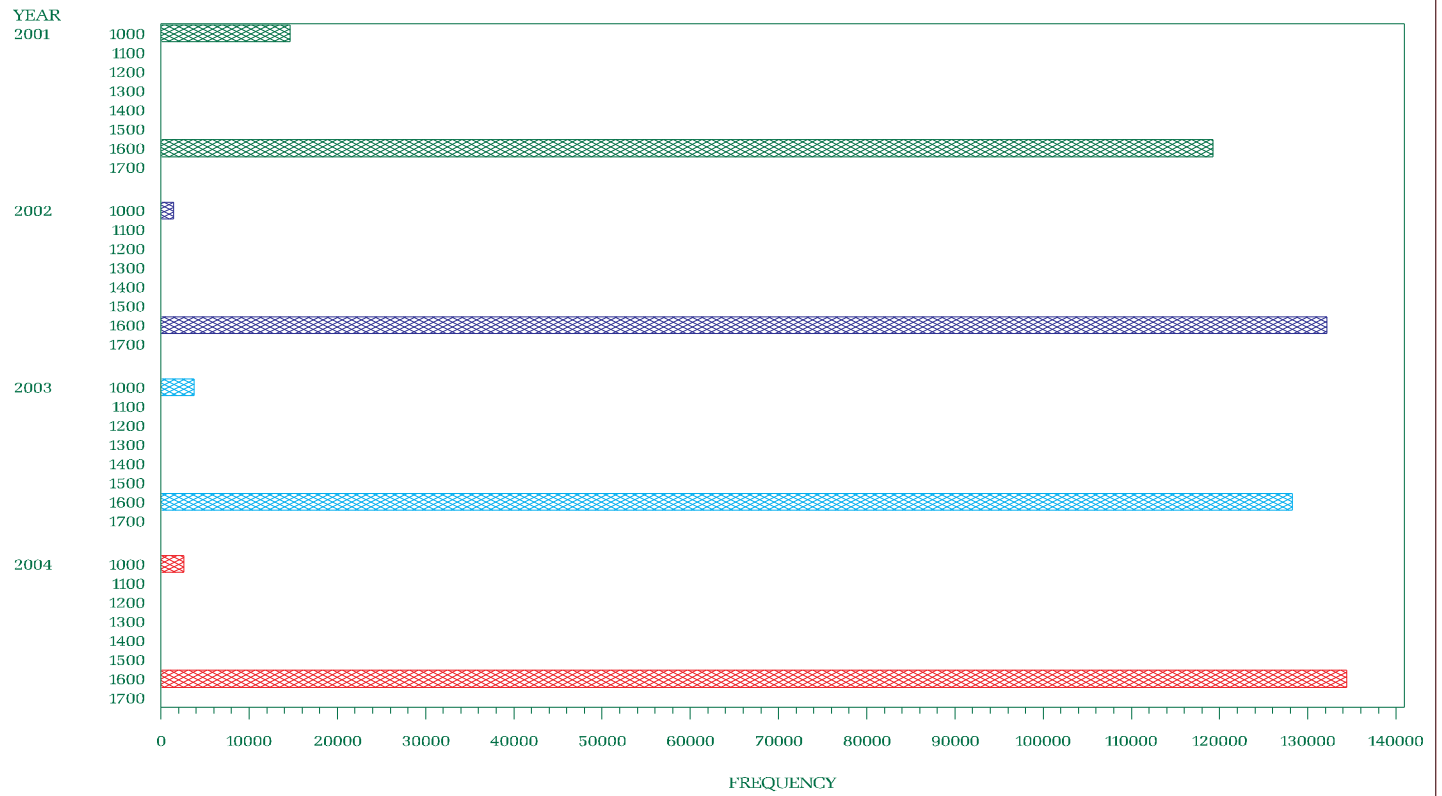
NYISO Frequency Interface Flow For January – December 2004

NE – NY Limit

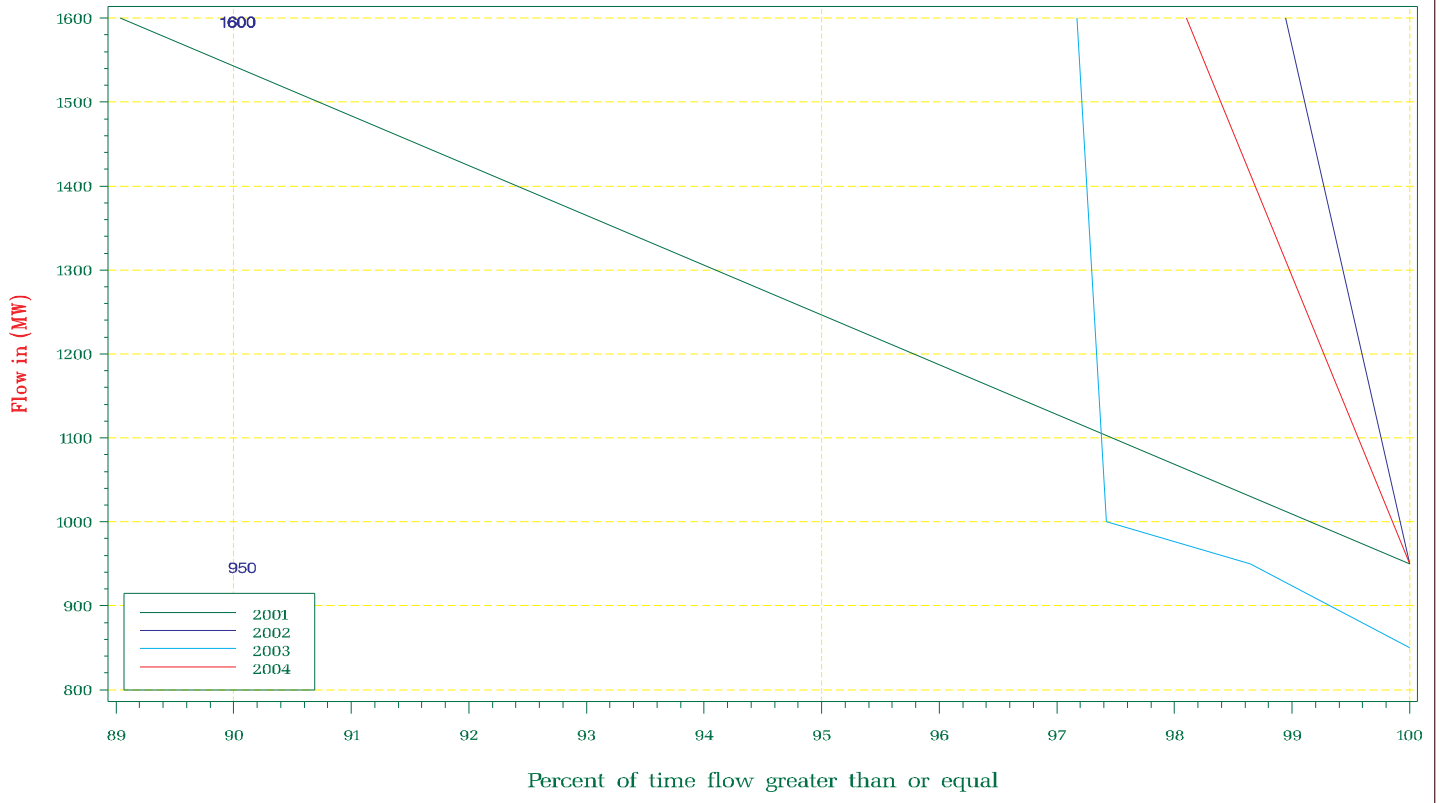


NYISO Frequency Interface Flow For January 2001 – December 2004

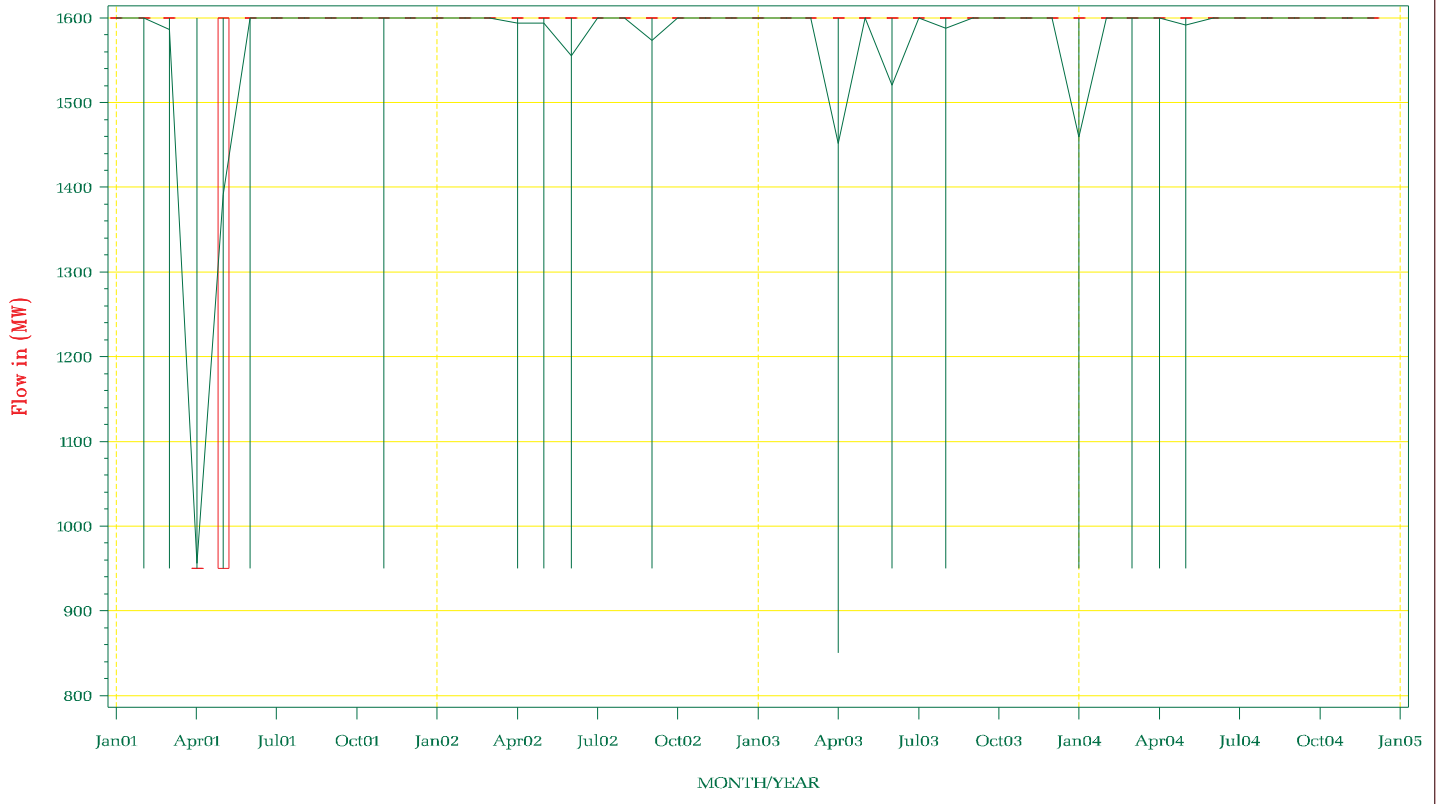
NE – NY Limit



NYISO Percent of time Interface Flow For January 2001 – December 2004  
**NE – NY Limit**

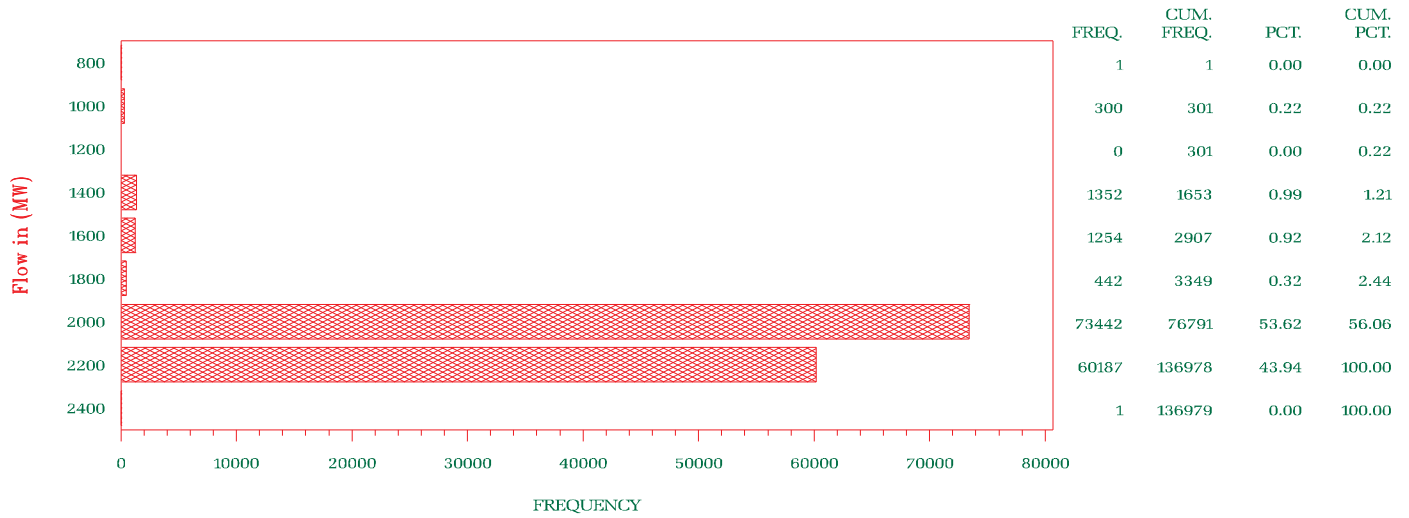


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
**NE – NY Limit**



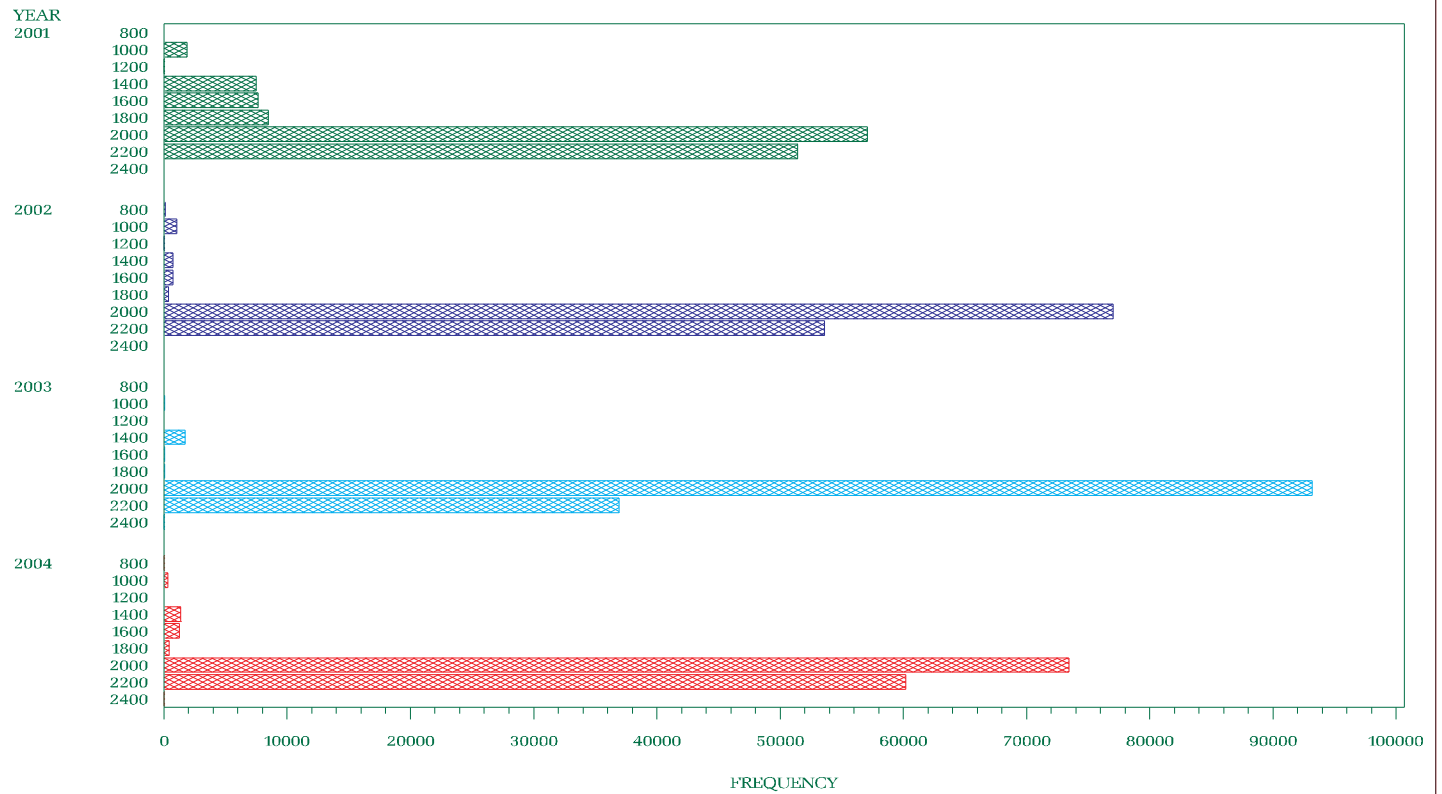
NYISO Frequency Interface Flow For January – December 2004

NY – NE Limit



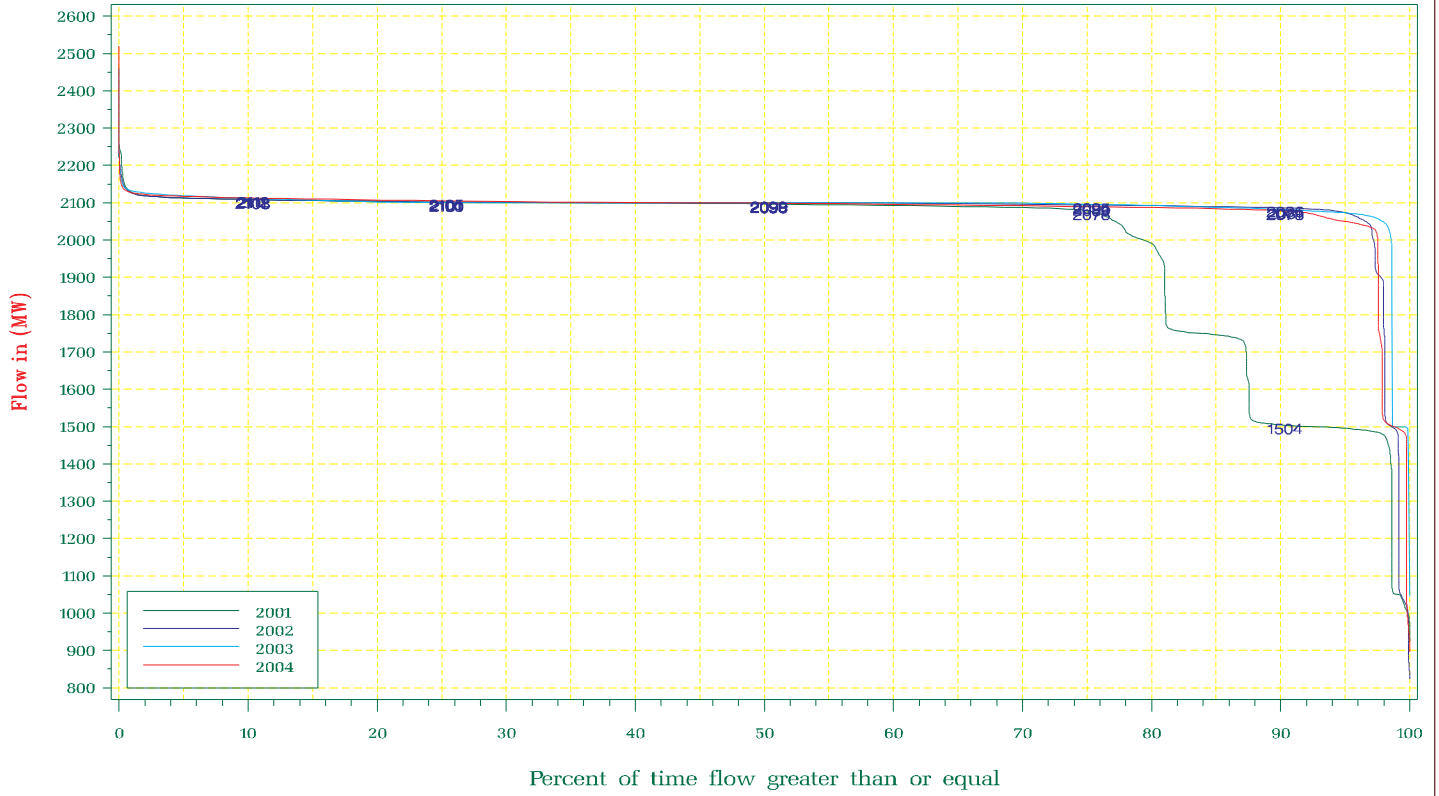
NYISO Frequency Interface Flow For January 2001 – December 2004

NY – NE Limit

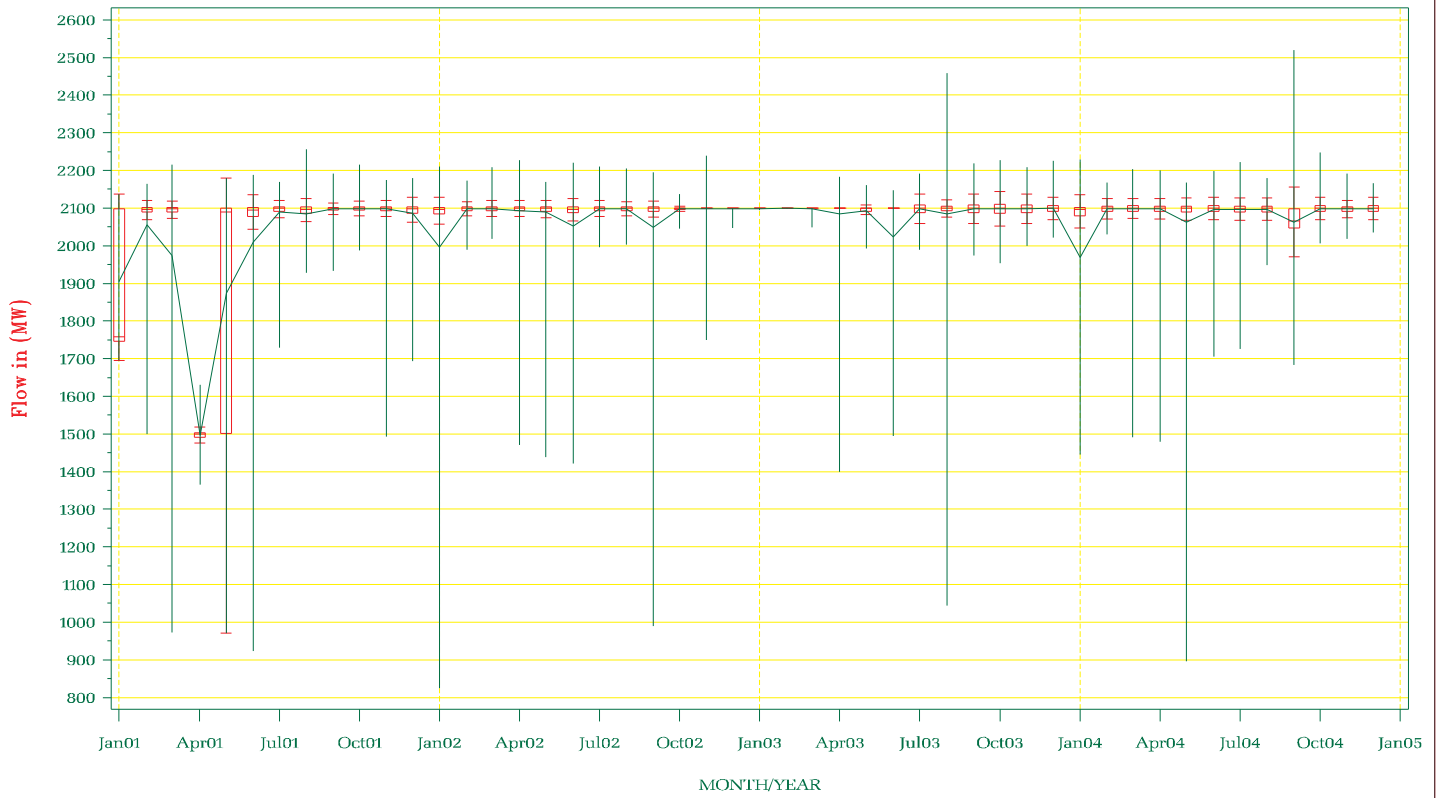




NYISO Percent of time Interface Flow For January 2001 – December 2004  
 NY – NE Limit

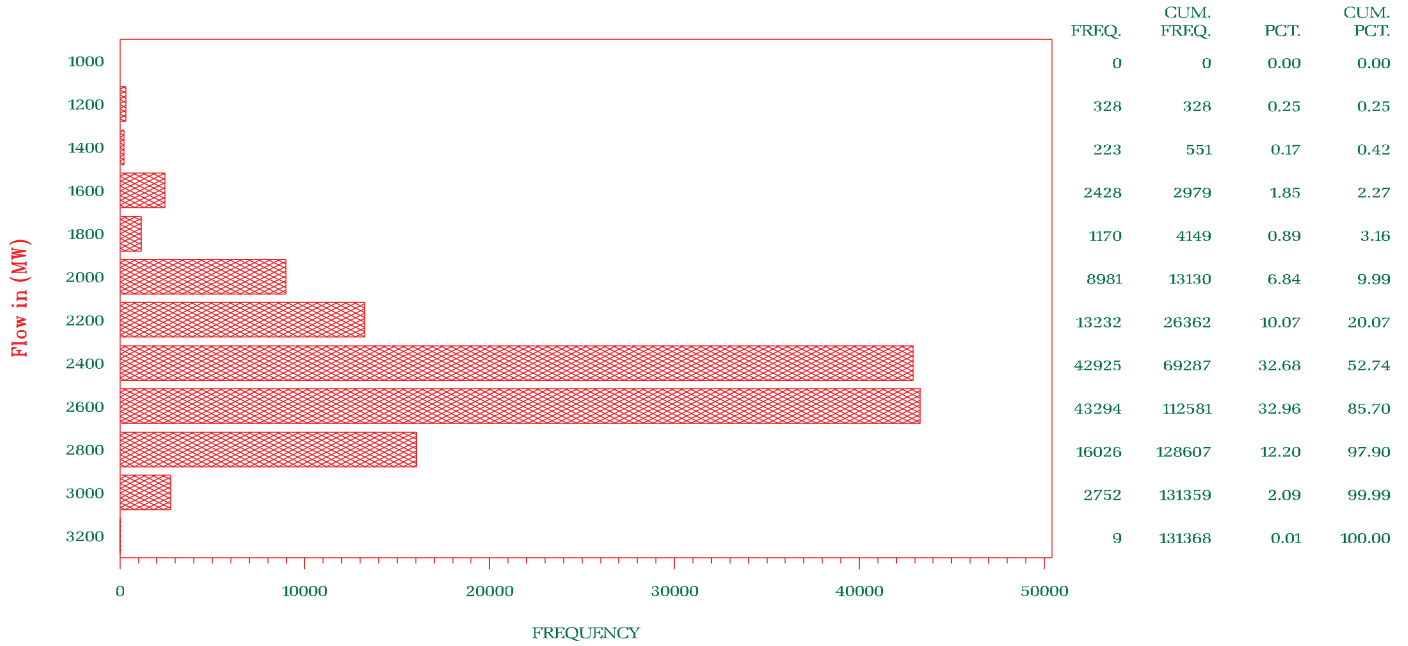


NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004  
 NY – NE Limit



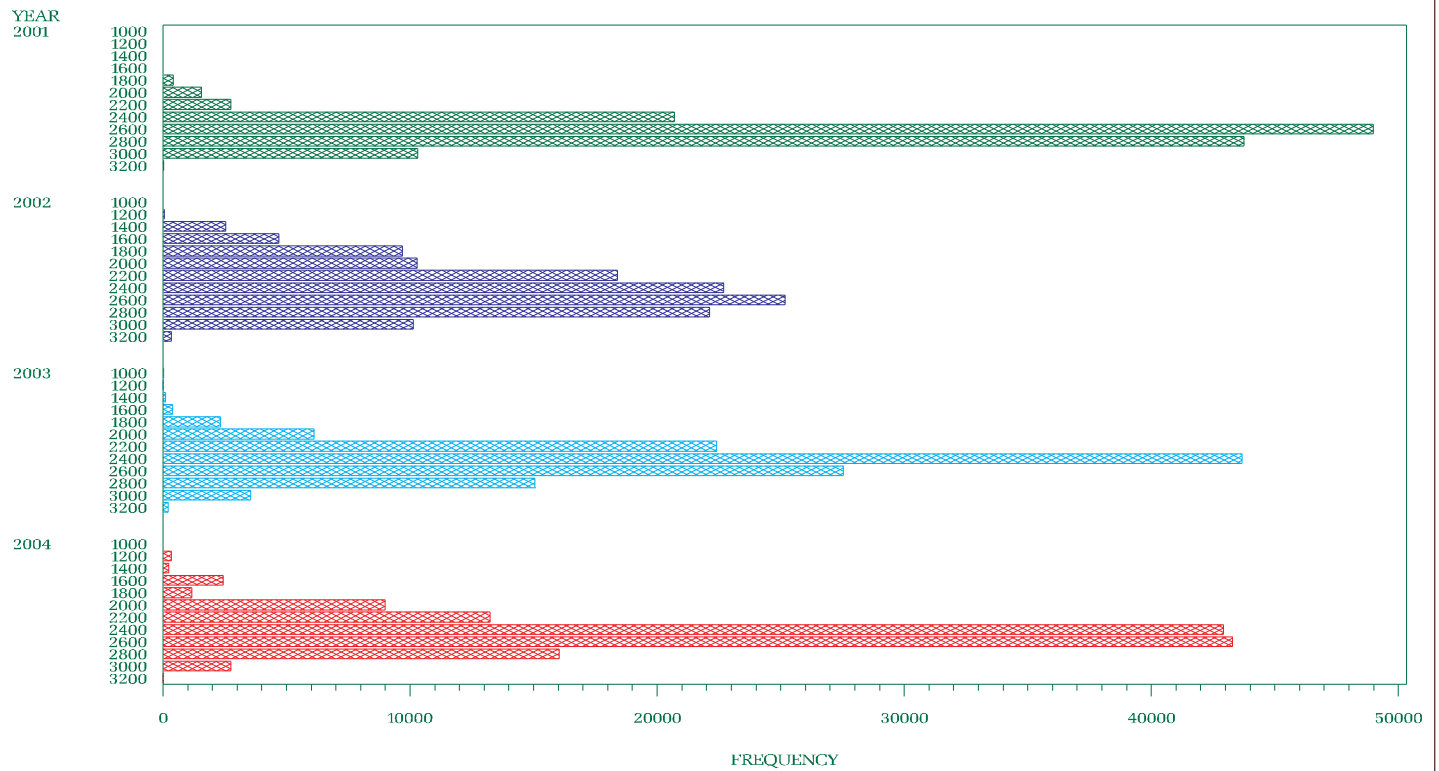
NYISO Frequency Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
/o New England Generation



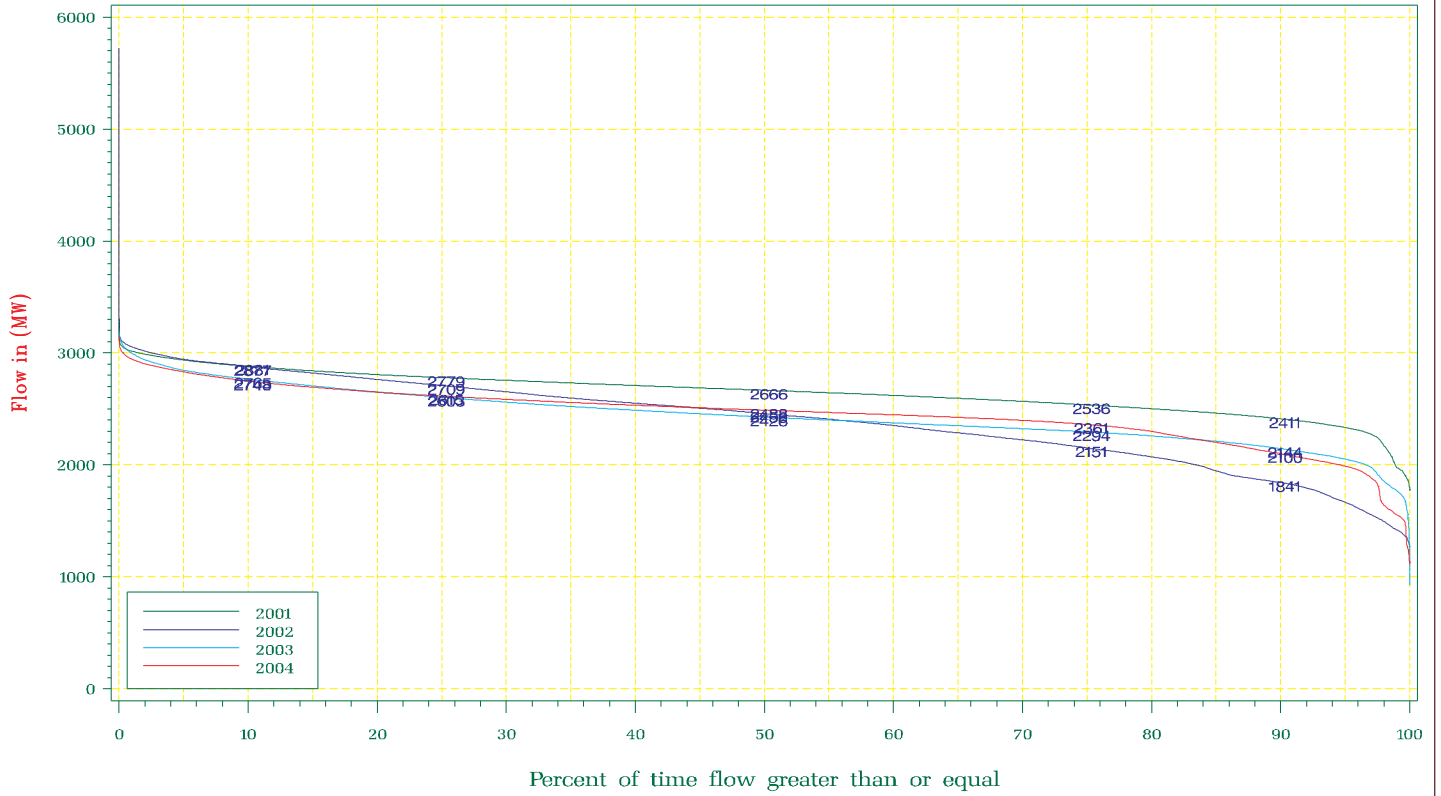
NYISO Frequency Interface Flow For January 2001 – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
/o New England Generation



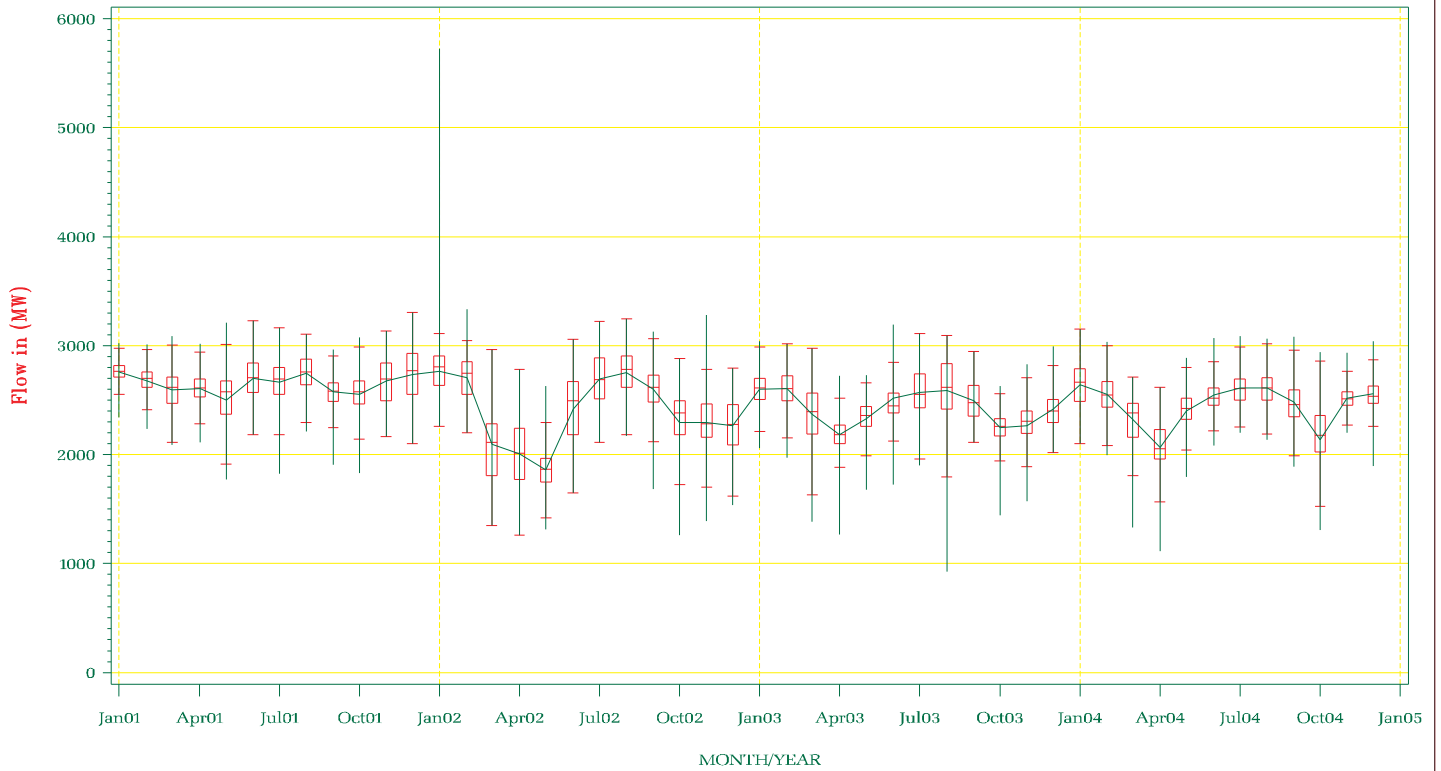
NYISO Percent of time Interface Flow For January 2001 – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
 I/o New England Generation



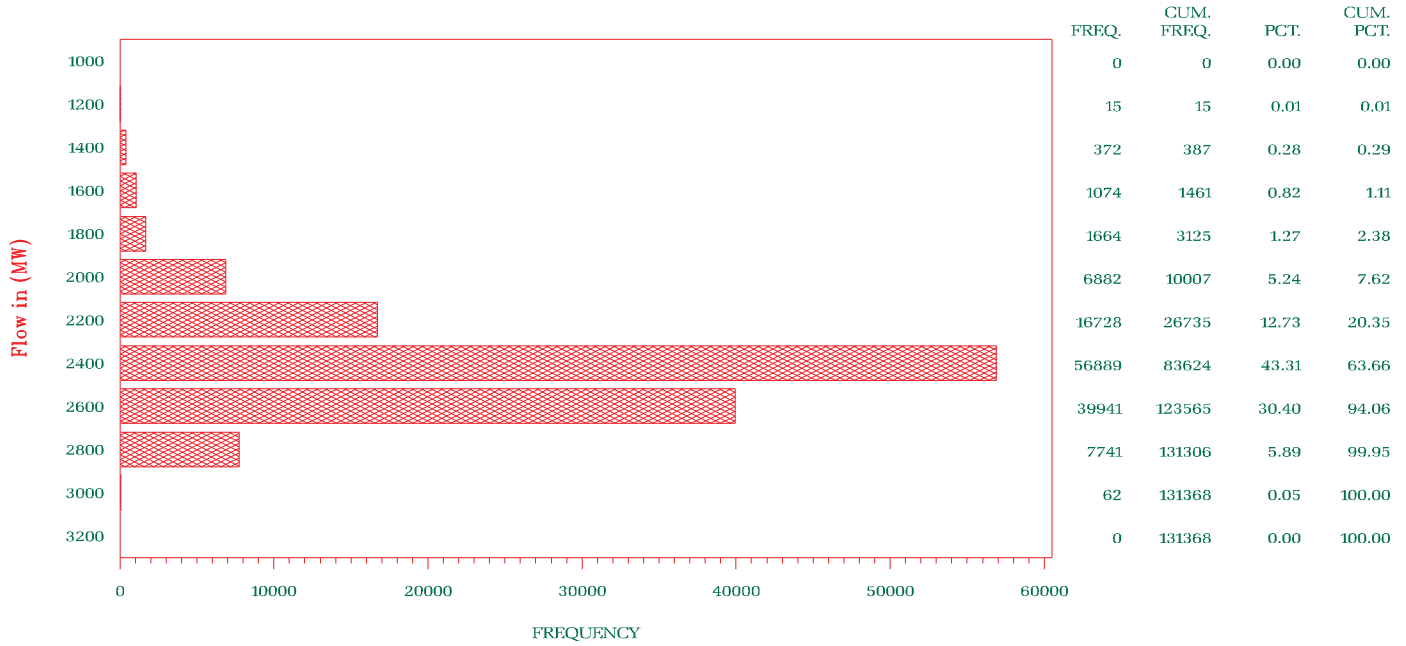
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Central East Pre-Contingency Voltage Collapse Limit  
 I/o New England Generation



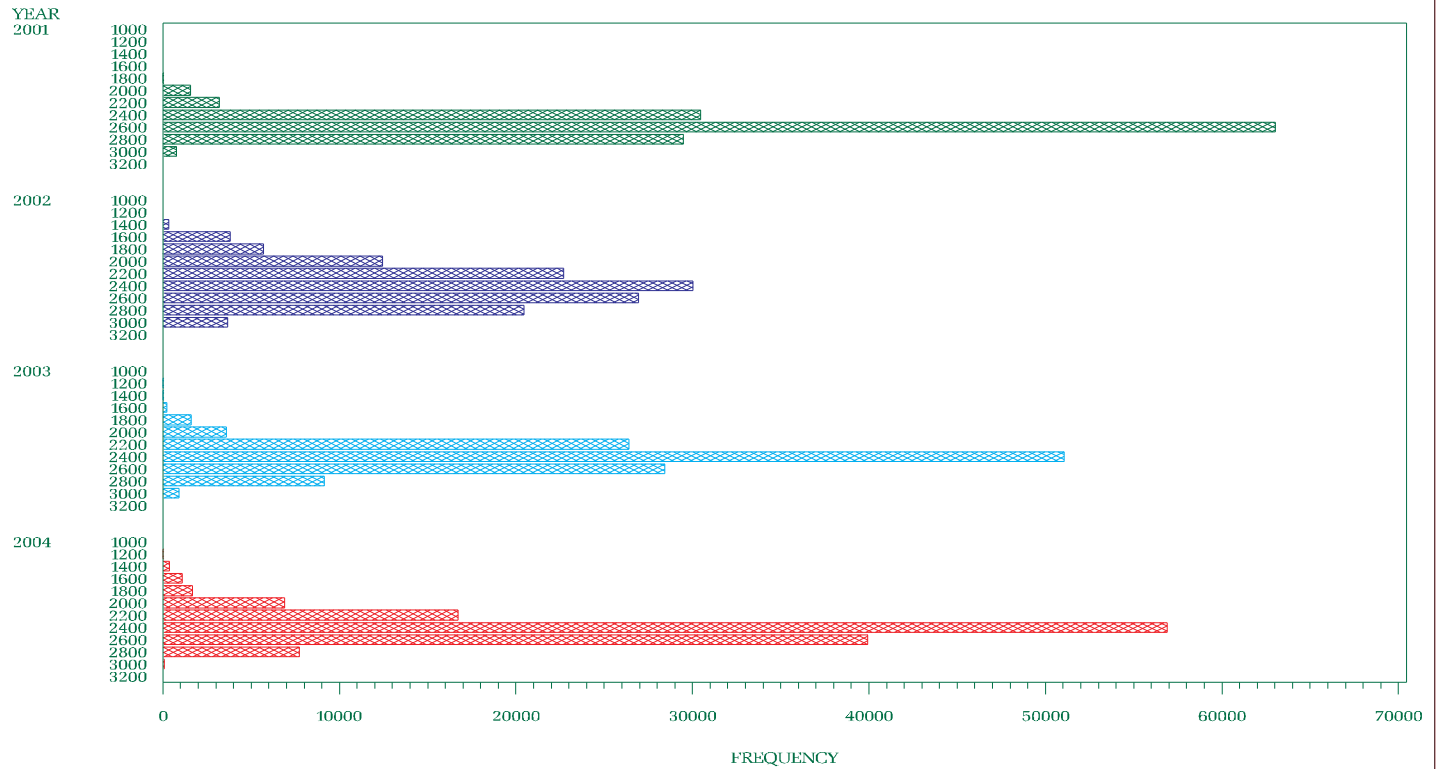
NYISO Frequency Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o Marcy South Tower



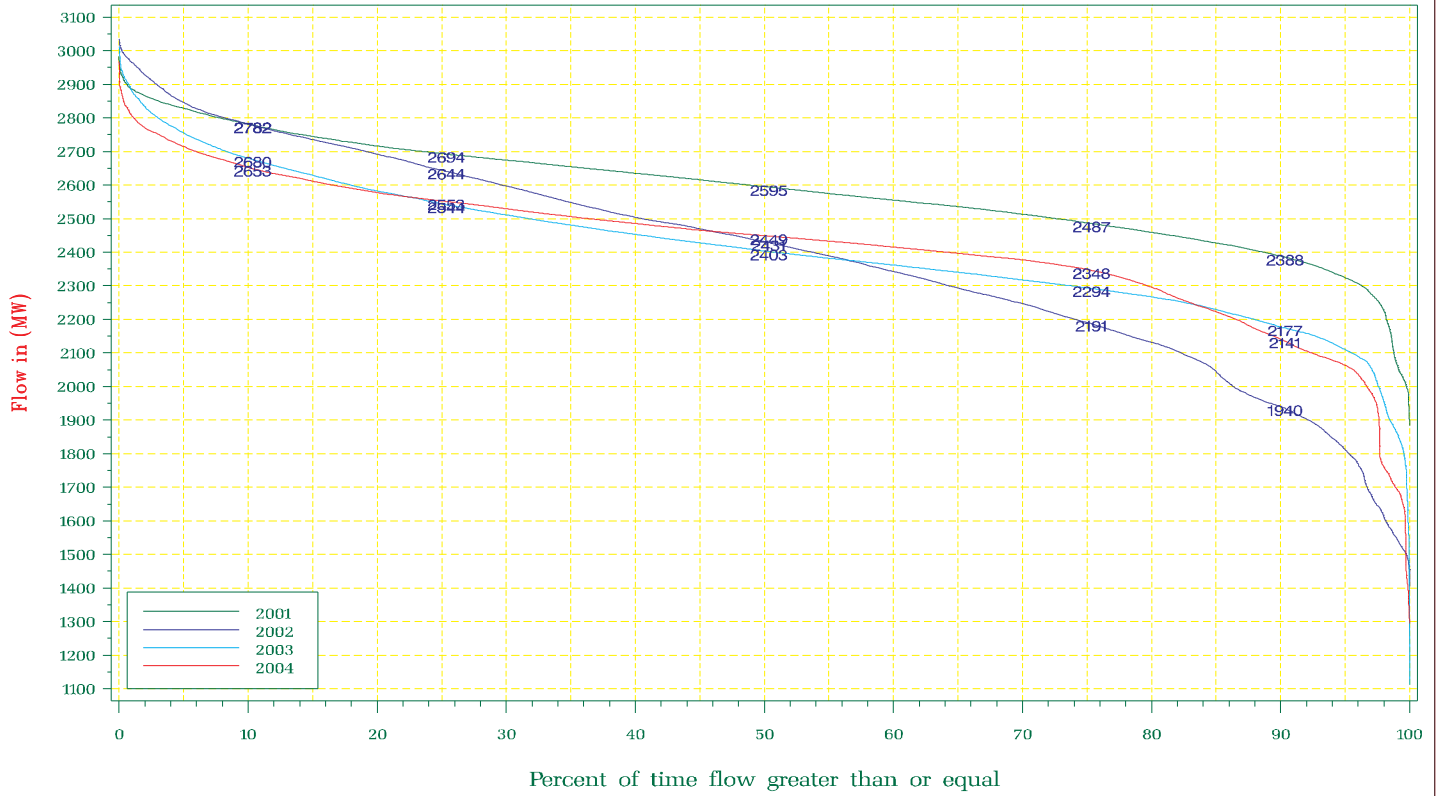
NYISO Frequency Interface Flow For January 2001 – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o Marcy South Tower



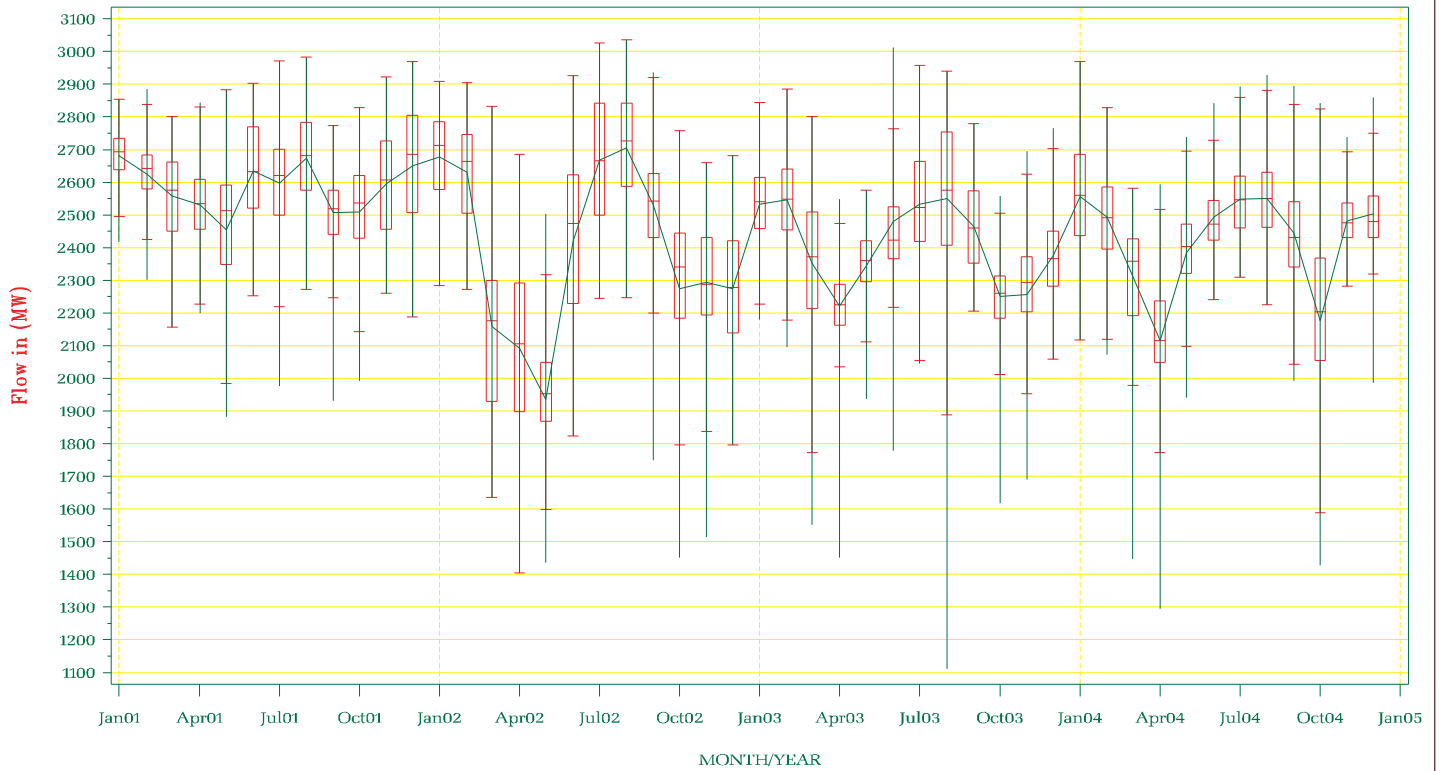
NYISO Percent of time Interface Flow For January 2001 – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o Marcy South Tower



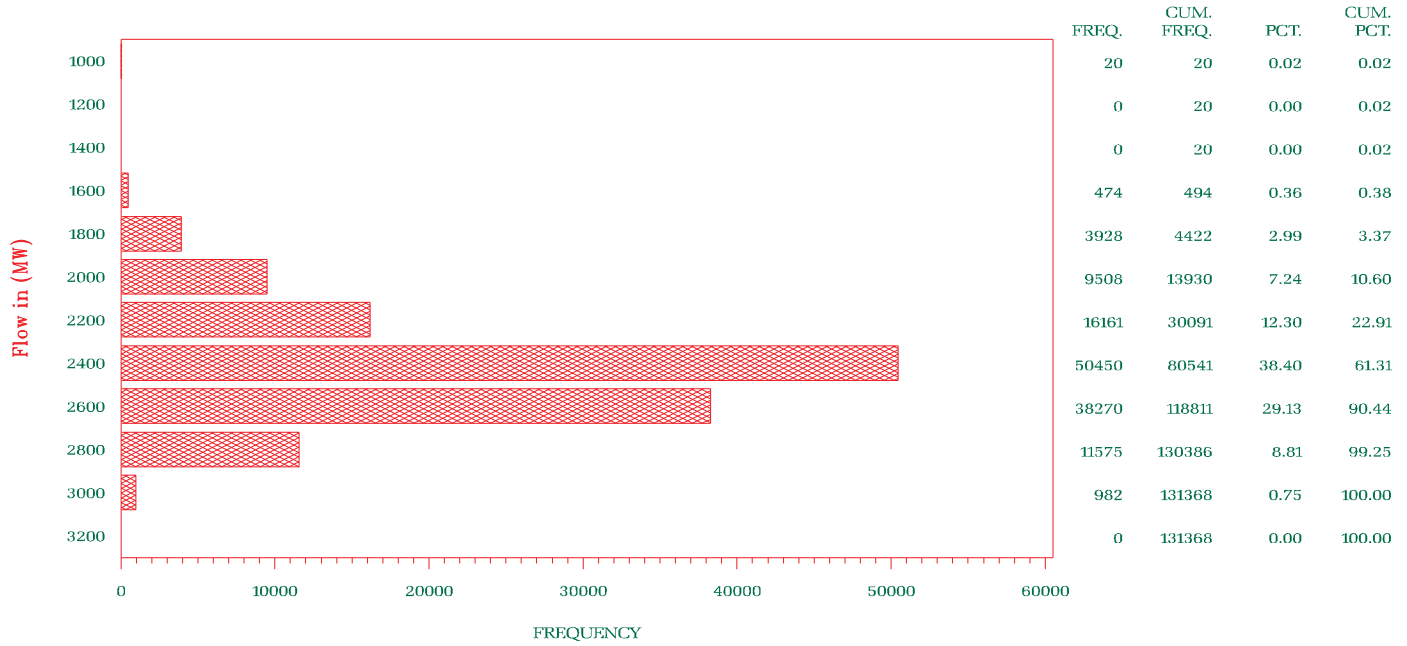
NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o Marcy South Tower



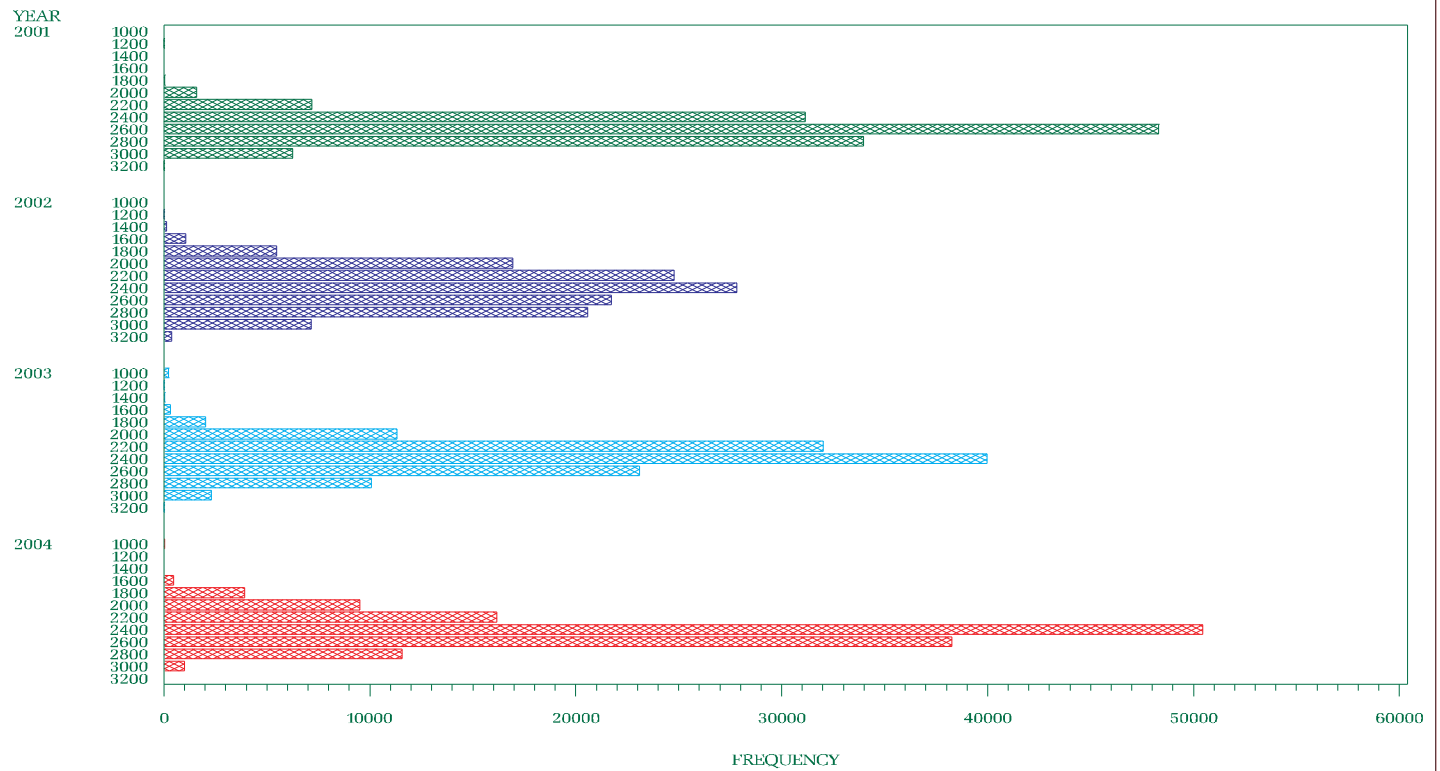
NYISO Frequency Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
/o New Scotland 99 Bus



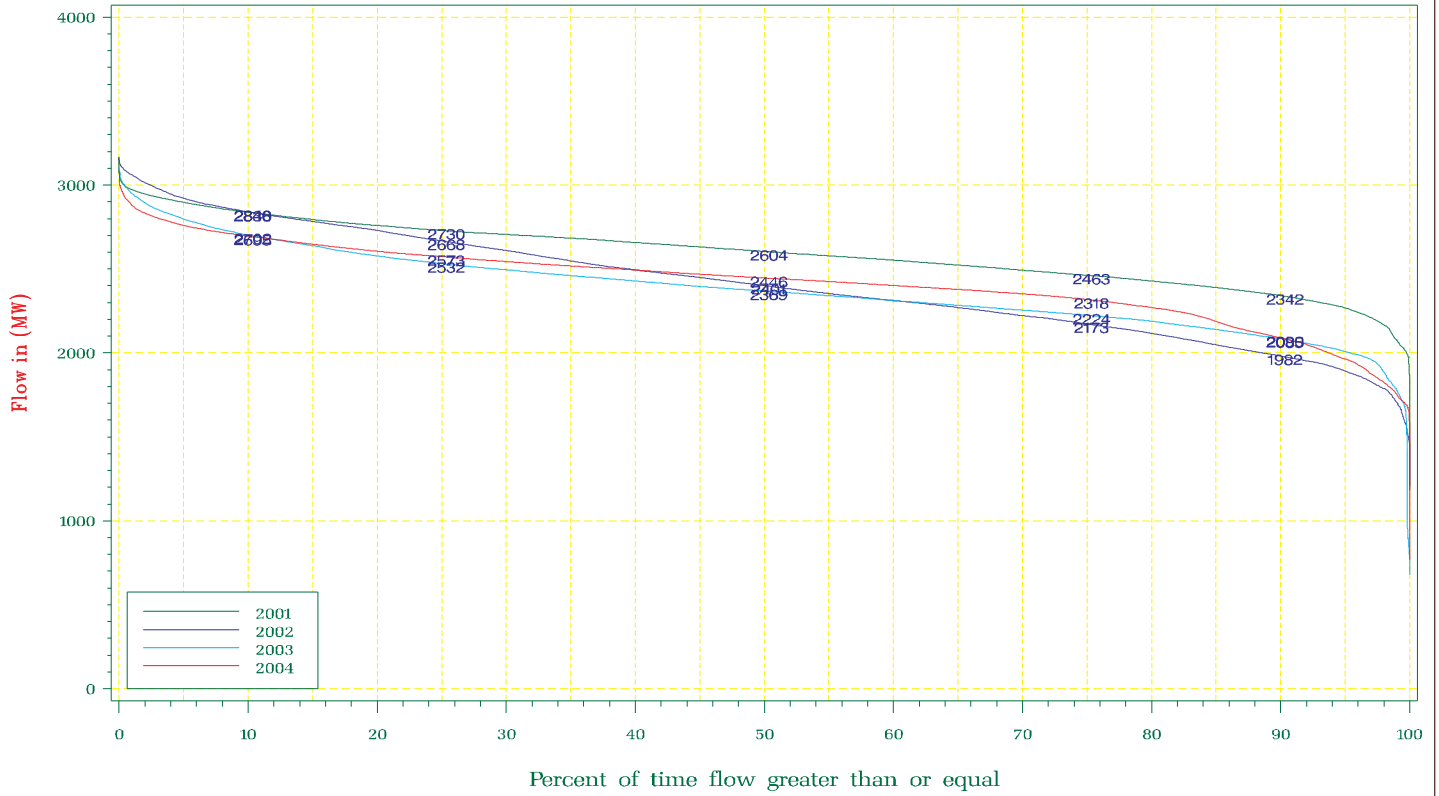
NYISO Frequency Interface Flow For January 2001 – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
/o New Scotland 99 Bus



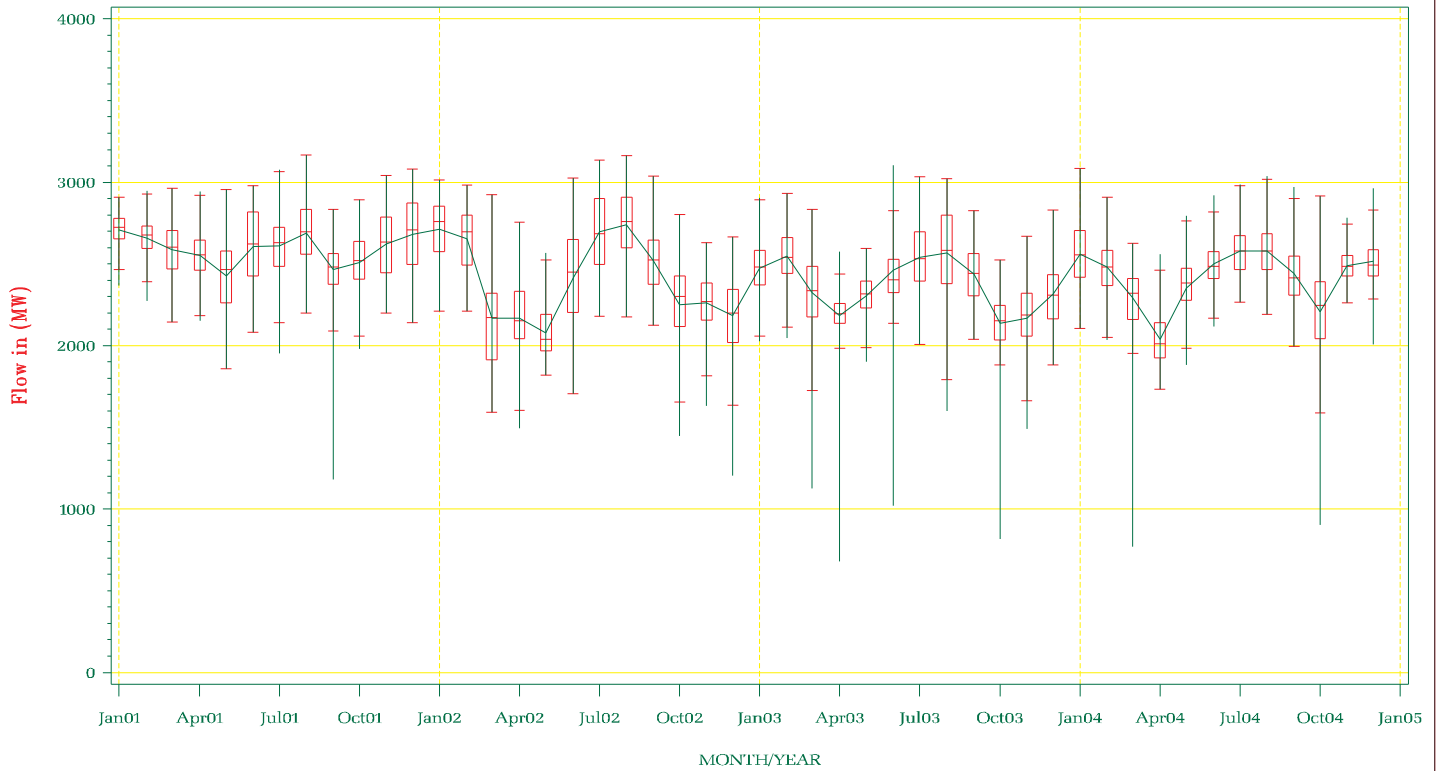
NYISO Percent of time Interface Flow For January 2001 – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o New Scotland 99 Bus



NYISO Average Monthly Interface Flow For January 01, 2001 – December 31, 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o New Scotland 99 Bus



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[Appendix D – Interfaces Simultaneously Constraining](#)

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<b>Interfaces Simultaneously Constraining</b>	<b>2001</b>		<b>2002</b>		<b>2003</b>		<b>2004</b>	
	N. of Hour	% of Year	N. of Hour	% of Year	N. of Hour	% of Year	N. of Hour	% of Year
C.EAST DYS.EAST	1	0.00%	7	0.10%	.	.	12	0.10%
C.EAST HQ-NYISO	99	1%	108	1%	158	2%	106	1%
C.EAST HQ-NYISO DYS.EAST	.	.	.	.	5	0.10%	6	0.10%
C.EAST SPRN/D.WOODIE	30	0.30%	48	0.50%	20	0.20%	1	0.00%
C.EAST SPRN/D.WOODIE DYS.EAST	.	.	3	0.00%	1	0.00%	.	.
C.EAST SPRN/D.WOODIE HQ-NYISO	21	0.20%	23	0.30%	34	0.40%	2	0.00%
C.EAST MOSES SOUTH	.	.	.	.	.	.	27	0.30%
C.EAST UPNY CON ED	20	0.20%	21	0.20%	6	0.10%	2	0.00%
C.EAST UPNY CON ED -NYISO	6	0.10%	2	0.00%	49	0.60%	13	0.10%
C.EAST UPNY CON ED HQ-NYISO DYS.EAST	.	.	.	.	5	0.10%	.	.
C.EAST UPNY CON ED SPRN/D.WOODIE	3	0.00%	2	0.00%	1	0.00%	.	.
C.EAST UPNY CON ED SPRN/D.WOODIE DYS.EAST	.	.	1	0.00%	.	.	.	.
C.EAST UPNY CON ED SPRN/D.WOODIE HQ-NYISO	3	0.00%	6	0.10%	16	0.20%	.	.
<b>C.EAST TOTAL EAST</b>	<b>1</b>	<b>0.00%</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>
<b>C.EAST C.EAST NET P/C</b>	<b>694</b>	<b>8%</b>	<b>946</b>	<b>11%</b>	<b>212</b>	<b>2%</b>	<b>179</b>	<b>2%</b>
C.EAST C.EAST NET P/C DYS.EAST	6	0.10%	2	0.00%	2	0.00%	10	0.10%
C.EAST C.EAST NET P/C HQ-NYISO	128	1%	101	1%	109	1%	65	0.70%
C.EAST C.EAST NET P/C HQ-NYISO DYS.EAST	.	.	.	.	1	0.00%	7	0.10%
C.EAST C.EAST NET P/C SPRN/D.WOODIE	61	0.70%	21	0.20%	3	0.00%	4	0.00%
C.EAST C.EAST NET P/C SPRN/D.WOODIE DYS.EAST	1	0.00%	2	0.00%	1	0.00%	.	.
C.EAST C.EAST NET P/C SPRN/D.WOODIE HQ-NYISO	24	0.30%	1	0.00%	8	0.10%	5	0.10%
C.EAST C.EAST NET P/C MOSES SOUTH	.	.	1	0.00%	.	.	30	0.30%
C.EAST C.EAST NET P/C MOSES SOUTH HQ-NYISO	.	.	1	0.00%	.	.	.	.
C.EAST C.EAST NET P/C NEPEX-NYISO HQ-NYISO	.	.	.	.	2	0.00%	.	.
C.EAST C.EAST NET P/C UPNY CON ED	42	0.50%	7	0.10%	11	0.10%	.	.
C.EAST C.EAST NET P/C UPNY CON ED HQ-NYISO	4	0.00%	1	0.00%	15	0.20%	2	0.00%
C.EAST C.EAST NET P/C UPNY CON ED SPRN/D.WOODIE	1	0.00%	.	.	.	.	.	.
C.EAST C.EAST NET P/C UPNY CON ED SPRN/D.WOODIE HQ-NYISO	2	0.00%	.	.	3	0.00%	.	.
<b>C.EAST C.EAST NET P/C TOTAL EAST</b>	<b>4</b>	<b>0.00%</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>
C.EAST NET P/C DYS.EAST	16	0.20%	3	0.00%	11	0.10%	21	0.20%
C.EAST NET P/C HQ-NYISO	210	2%	150	2%	149	2%	186	2%
C.EAST NET P/C HQ-NYISO DYS.EAST	.	.	.	.	4	0.00%	19	0.20%
C.EAST NET P/C SPRN/D.WOODIE	277	3%	41	0.50%	31	0.40%	4	0.00%
C.EAST NET P/C SPRN/D.WOODIE DYS.EAST	5	0.10%	.	.	1	0.00%	.	.
C.EAST NET P/C SPRN/D.WOODIE HQ-NYISO	43	0.50%	2	0.00%	44	0.50%	1	0.00%
C.EAST NET P/C SPRN/D.WOODIE HQ-NYISO DYS.EAST	.	.	.	.	3	0.00%	.	.
C.EAST NET P/C MOSES SOUTH	.	.	.	.	.	.	5	0.10%
C.EAST NET P/C MOSES SOUTH HQ-NYISO	.	.	.	.	2	0.00%	.	.
C.EAST NET P/C NEPEX-NYISO	.	.	.	.	2	0.00%	.	.
C.EAST NET P/C NEPEX-NYISO HQ-NYISO	.	.	.	.	3	0.00%	.	.
C.EAST NET P/C UPNY CON ED	83	0.90%	11	0.10%	23	0.30%	9	0.10%
C.EAST NET P/C UPNY CON ED HQ-NYISO	1	0.00%	1	0.00%	12	0.10%	2	0.00%
C.EAST NET P/C UPNY CON ED SPRN/D.WOODIE	3	0.00%	2	0.00%	.	.	.	.
C.EAST NET P/C UPNY CON ED SPRN/D.WOODIE HQ-NYISO	.	.	.	.	1	0.00%	.	.
C.EAST NET P/C UPNY CON ED MOSES SOUTH	.	.	.	.	1	0.00%	.	.
<b>C.EAST NET P/C TOTAL EAST</b>	<b>4</b>	<b>0.00%</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>	<b>.</b>
HQ-NYISO DYS.EAST	.	.	.	.	10	0.10%	30	0.30%
MOSES SOUTH HQ-NYISO	5	0.10%	.	.	.	.	.	.
MOSES SOUTH SPRN/D.WOODIE HQ-NYISO	1	0.00%	.	.	.	.	.	.
NEPEX-NYISO HQ-NYISO	.	.	.	.	17	0.20%	.	.
NEPEX-NYISO SPRN/D.WOODIE	.	.	.	.	5	0.10%	.	.
NEPEX-NYISO SPRN/D.WOODIE HQ-NYISO	.	.	.	.	6	0.10%	.	.
SPRN/D.WOODIE DYS.EAST	5	0.10%	13	0.10%	38	0.40%	5	0.10%
SPRN/D.WOODIE HQ-NYISO	67	0.80%	71	0.80%	415	5%	148	2%
SPRN/D.WOODIE HQ-NYISO DYS.EAST	.	.	.	.	3	0.00%	3	0.00%

UPNY CON ED DYS.EAST	1	0.00%	.	.	1	0.00%	4	0.00%
UPNY CON ED HQ-NYISO	17	0.20%	23	0.30%	104	1%	73	0.80%
UPNY CON ED HQ-NYISO DYS.EAST	.	.	.	.	2	0.00%	.	.
UPNY CON ED SPRN/D.WOODIE	31	0.40%	57	0.70%	26	0.30%	2	0.00%
UPNY CON ED SPRN/D.WOODIE HQ-NYISO	.	.	9	0.10%	41	0.50%	.	.
UPNY CON ED PJM-NYISO	.	.	.	.	1	0.00%	.	.
W.CENT DYS.EAST	2	0.00%	49	0.60%	10	0.10%	103	1%
W.CENT HQ-NYISO	.	.	.	.	.	.	11	0.10%
W.CENT HQ-NYISO DYS.EAST	.	.	.	.	.	.	3	0.00%
W.CENT SPRN/D.WOODIE	2	0.00%	2	0.00%	6	0.10%	1	0.00%
W.CENT SPRN/D.WOODIE DYS.EAST	.	.	5	0.10%	21	0.20%	.	.
W.CENT UPNY CON ED	.	.	.	.	.	.	1	0.00%
W.CENT UPNY CON ED SPRN/D.WOODIE HQ-NYISO	.	.	.	.	3	0.00%	.	.
W.CENT TOTAL EAST	2	0.00%	.	.	.	.	.	.
W.CENT C.EAST NET P/C	5	0.10%	12	0.10%	6	0.10%	9	0.10%
W.CENT C.EAST NET P/C DYS.EAST	3	0.00%	7	0.10%	3	0.00%	20	0.20%
W.CENT C.EAST NET P/C HQ-NYISO	.	.	.	.	.	.	2	0.00%
W.CENT C.EAST NET P/C HQ-NYISO DYS.EAST	.	.	.	.	.	.	2	0.00%
W.CENT C.EAST NET P/C SPRN/D.WOODIE	.	.	1	0.00%	.	.	.	.
W.CENT C.EAST NET P/C UPNY CON ED	.	.	.	.	.	.	3	0.00%
W.CENT C.EAST NET P/C UPNY CON ED HQ-NYISO	.	.	.	.	.	.	1	0.00%
W.CENT C.EAST NET P/C UPNY CON ED HQ-NYISO DYS.EAST	.	.	.	.	.	.	1	0.00%
W.CENT C.EAST	.	.	2	0.00%	.	.	2	0.00%
W.CENT C.EAST DYS.EAST	.	.	.	.	.	.	4	0.00%
W.CENT C.EAST HQ-NYISO	.	.	.	.	.	.	3	0.00%
W.CENT C.EAST HQ-NYISO DYS.EAST	.	.	.	.	.	.	2	0.00%
W.CENT C.EAST UPNY CON ED DYS.EAST	.	.	.	.	.	.	1	0.00%
W.CENT C.EAST UPNY CON ED HQ-NYISO	.	.	.	.	.	.	4	0.00%
W.CENT C.EAST C.EAST NET P/C	5	0.10%	.	.	5	0.10%	3	0.00%
W.CENT C.EAST C.EAST NET P/C DYS.EAST	3	0.00%	.	.	2	0.00%	5	0.10%
W.CENT C.EAST C.EAST NET P/C HQ-NYISO	.	.	.	.	.	.	2	0.00%
W.CENT C.EAST C.EAST NET P/C HQ-NYISO DYS.EAST	.	.	.	.	.	.	2	0.00%
W.CENT C.EAST C.EAST NET P/C UPNY CON ED	3	0.00%	.	.	.	.	.	.
W.CENT C.EAST C.EAST NET P/C UPNY CON ED DYS.EAST	1	0.00%	.	.	.	.	1	0.00%
W.CENT C.EAST C.EAST NET P/C UPNY CON ED HQ-NYISO DYS.EAST	.	.	.	.	.	.	1	0.00%
	=====	=====	=====	=====	=====	=====	=====	=====
	1946	22%	1765	20%	1674	19%	1170	13%
C_EAST/ C_EAST Net P/C excluded	1252	14%	819	9%	1462	17%	991	11%
C_EAST/ T_EAST excluded	1243	14%	819	9%	1462	17%	991	11%



**Appendix E – NYISO Operating  
Interfaces & OASIS Transmission Paths**

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Operating Interface and Transmission Path Definitions.....E-1  
Non-Operating Interface Definitions ..... E-5  
Sprainbrook/Dunwoodie South (Con Ed Cable Interface) Definitions .....E-8

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## NYISO OPERATING INTERFACES & OASIS TRANSMISSION PATHS

<b>CENTRAL EAST</b>		
Name	Line ID	Voltage (kV)
Edic-New Scotland*	14	345
Marcy-New Scotland*	UNS-18	345
Porter-Rotterdam*	30	230
Porter-Rotterdam*	31	230
*Plattsburgh - Grand Isle	PV-20	115
East Springfield - Inghams*	942	115
Inghams Bus Tie	PAR	115
<b>TOTAL EAST</b>		
Central-Capital/MidHudson		
Name	Line ID	Voltage (kV)
Coopers-Middletown*	CCRT-34	345
Coopers-Rock Tavern*	CCRT-42	345
Edic-New Scotland*	14	345
*Fraser-Gilboa	35	345
Marcy-New Scotland*	UNS-18	345
Porter-Rotterdam*	30	230
Porter-Rotterdam*	31	230
East Springfield - Inghams*	942	115
Inghams Bus Tie	PAR	115
West Woodbourne*115/69	T152	115/69
PJM East-Capital/MidHudson		
Branchburg-Ramapo*	5018	500
*Waldwick- S.Mahwah	J3410	345
* Waldwick-S.Mahwah	K3411	345
PJM East-New York City		
Hudson-Farragut*	C3403	345
Hudson-Farragut*	B3402	345
Linden-Goethals*	A2253	230
Adirondack-ISO-NE		
*Plattsburgh-Grand Isle	PV-20	115
PJM (Rockland Electric) - MidHudson		
Closter – Sparkill	751	69
Harings Corners – W. Nyack	701	69
Harings Corners – Burns	702	138
Montvale – Pearl River	491	69
Harings Corners – Pearl River	45	34
S. Mahwah – Ramapo	51	138
S. Mahwah - Hilburn	65	69
S. Mahwah 138/345		138/345

\* indicates the metered end of circuit

<b>MOSES SOUTH</b>		
Adirondack-Central		
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>
*Massena-Marcy	MSU1	765
*Moses-Adirondack	MA-1	230
*Moses-Adirondack	MA-2	230
*Dennison-Colton	4	115
*Dennison-Colton	5	115
*Alcoa-N. Ogdensburg	13	115
Malone-Colton*	3	115
<b>DYSINGER EAST</b>		
Frontier-Genessee		
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>
*AES Somerset-Rochester (Sta 80)	SR-1/39	345
Niagara-Rochester*	NR2	345
*Stolle-Meyer	67	230
*Andover - Palmiter	932	115
*Lockport-Batavia	107	115
*Lockport-N. Akron	108	115
*Lockport-Oakfield	112	115
*Lockport-Sweden 1	111	115
*Lockport-Sweden 3	113	115
*Lockport-Telegraph	114	115
<b>WEST CENTRAL</b>		
Genessee-Central		
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>
Pannell Road-Clay	PC-1	345
Pannell Road-Clay*	PC-2	345
*Stolle-Meyer	67	230
*Andover - Palmiter	932	115
Quaker - Macedon	930	115
*Mortimer-Elbridge	1	115
*Mortimer-Elbridge	2	115
*Pannell-Farmington	4	115
*Station 121-Sleight Road	13	115
St. 162 - S. Perry	906	115
*Clyde 199-Sleight Rd		115
Clyde 199-Clinton Corn		115
Hook Rd (RGE-NMPC)	TB#3	34.5/115
* Farmington (RGE-NMPC)		
(Farmington 34.5/115kV)	#7	34.5/115
(Farmington 34.5 & 12/ 115kV)	#4	34.5/115

\* indicates the metered end of circuit



<b>UPNY-CONED</b>			
<b>Capital/MidHudson-Westchester</b>			
<b>Name</b>	<b>Line ID</b>	<b>Voltage(kV)</b>	
Ladentown-Buchanan South*	Y88	345	
*Pleasant Valley-Wood St.	F30	345	
*Pleasant Valley-E. Fishkill	F36	345	
*Pleasant Valley-E. Fishkill	F37	345	
*Pleasant Valley-Millwood	F31	345	
*Ramapo-Buchanan North	Y94	345	
Roseton-E. Fishkill*	305	345	
East Fishkill – Sylvan Lake	A/990	115	
East Fishkill 115/345		115/345	
<b>SPRAINBROOK-DUNWOODIE SOUTH</b>			
<b>Name</b>	<b>Line ID</b>	<b>Voltage(kV)</b>	
*Dunwoodie-Rainey	71	345	
*Dunwoodie-Rainey	72	345	
Sprainbrook-Tremont*	28	345	
*Sprainbrook-West 49th Street	M51	345	
*Sprainbrook-West 49th Street	M52	345	
*Lake Success-Jamaica	903	138	
*Valley Stream-Jamaica	901L/M	138	
*Dunwoodie-Sherman Creek	99031	138	
Dunwoodie-Sherman Creek*	99032	138	
*Dunwoodie-East 179th Street	99153	138	
<b>CONED - LIPA</b>			
<b>Westchester - Long Island</b>			
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>	
*Dunwoodie-Shore Road	Y50	345	
*Sprainbrook-East Garden City	Y49	345	
<b>New York City - Long Island</b>			
Jamaica-Valley Stream*	901L/M	138	
Jamaica-Lake Success*	903	138	
<b>NYISO-ISONE</b>			
<b>Adirondack-ISONE</b>			
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>	
*Plattsburgh-Grand Isle	PV-20	115	
<b>Capital/MidHudson-ISONE</b>			
*Alps-Berkshire	393	345	
*Pleasant Valley-Long Mnt.	398	345	
Rotterdam-Bear Swamp*	E205W	230	
Hoosick-Bennington*	6	115	
*Whitehall-Rutland (Velco)	7/K37	115	
*Smithfield-Salisbury		69	
<b>Long Island-ISONE</b>			
*Northport-Norwalk	1385	138	

\*indicates the metered end of circuit

<b>PJM-NYISO</b>			
<b>PJM East-New York City</b>			
Name	Line ID	Voltage (kV)	
Hudson-Farragut*	C3403	345	
Hudson-Farragut*	B3402	345	
Linden-Goethals*	A2253	230	
<b>PJM West-Central</b>			
*Homer City-Watercure	30	345	
E. Towanda-Hillside*	70	230	
Tiffany-Goudey*	952	115	
*E. Sayre-N. Waverly	956	115	
<b>PJM West-Frontier</b>			
*Homer City-Stolle Road	37	345	
Erie East-South Ripley*	69	230	
*Warren-Falconer	171	115	
<b>PJM East-Capital/MidHudson</b>			
Branchburg-Ramapo*	5018	500	
*Waldwick-S.Mahwah	J3410	345	
*Waldwick-S.Mahwah	K3411	345	
<b>PJM (Rockland Electric) - MidHudson</b>			
Closter – Sparkill	751	69	
Harings Corners – W. Nyak	701	69	
Harings Corners – Burns	702	138	
Montvale – Pearl River	491	69	
Harings Corners – Pearl River	45	34	
S. Mahwah – Ramapo	51	138	
S. Mahwah - Hilburn	65	69	
S. Mahwah 138/345		138/345	
<b>IMO (Ontario)-NYISO</b>			
<b>Ontario East-Adirondack</b>			
Name	Line ID	Voltage (kV)	
St. Lawrence-Moses*	L33P	230	
St.Lawrence-Moses*	L34P	230	
<b>Ontario South-Frontier</b>			
Beck-Niagara*	PA301	345	
Beck-Niagara*	PA302	345	
Beck-Niagara*	PA27	230	
*Beck-Packard	BP76	230	
<b>TE-NYISO</b> <i>note: TE-NYISO is MSC7040 line flow alone</i>			
<b>TE-Adirondack</b>			
Name	Line ID	Voltage(kV)	
*Chateauguay-Massena	MSC7040	765	
Rosemont-Dennison*	1	115	
Rosemont-Dennison*	2	115	

\*indicates the metered end of circuit

## NYISO NON-OPERATING INTERFACES & MISC. FLOWS

### NY-Ontario Circulation

NAME
Ontario (IMO)-NY Schedule
Ontario (IMO)-NY Actual (Negative)
*Beck-TSC 105 (Negative)
*Beck-TSC 106 (Negative)

### UPNY-SENY - (not an operating interface)

NAME	LINE ID	VOLTAGE (kV)
*Leeds-Pleasant Valley	91	345
*Leeds-Pleasant Valley	92	345
*Leeds-Hurley	301	345
Long Mtn-Pleasant Valley*	398	345
Unionville-N. Catskill*	2	115
Hudson-Pleasant Valley *	12	115
Blue Stores-Pl Valley*	8	115
Blue Stores-Pl Valley*	13	115
W. Woodbourne	115/69*	115/69
Branchburg-Ramapo*	5018	500
*Coopers Corners-Rock Tavern	CCRT-34	345
*Coopers Corners-Rock Tavern	CCRT-42	345

### SENY - IMPORT/UPNY - SENY CLOSED (not an operating interface)

NAME	LINE ID	VOLTAGE (kV)
UPNY-SENY Plus the following:		
*Waldwick-South Mahwah	K3411	345
*Waldwick-South Mahwah	J3410	345
Hudson-Farragut*	B3402	345
Hudson-Farragut*	C3403	345
Linden-Goethals*	A2253	230
*Norwalk-Northport	1385	138

**WEST-CENTRAL CLOSED- (not an operating interface)**

NAME	LINE ID	VOLTAGE (kV)
All West-Central Ties plus the following:		
Saunders – St.Lawrence/FDR*	L33P*	230
Saunders – St.Lawrence/FDR*	L34P*	230
All PJM - NYISO Ties except:		
*Homer City - Stolle Road	37	345
Erie South-South Ripley*	69	230
*Warren-Falconer	171	115

**SPRAIN BROOK -DUNWOODIE SOUTH CLOSED -(not an operating interface)**

NAME	LINE ID	VOLTAGE (kV)
All Sprain Brook-Dunwoodie South Ties plus the following:		
Hudson - Farragut	B3402	345
Hudson - Farragut	C3403	345
Linden - Goethals	A2253	230

**VOLNEY EAST OPEN**

NAME	LINE ID	VOLTAGE (kV)
Oakdale - Fraser	32	345
Oakdale -Delhi	919	115
Willets - E. Norwich	945	115
Katelville - Jennison	943	115
Clay - Edic	1-16	345
Clay - Edic	2-15	345
JA Fitzpatrick - Edic	FE-1	345
Lighthouse Hill - Black River	6	115
Lighthouse Hill - E. Watertown	5	115
Teall Ave - Oneida	2	115
Teall Ave - Bridgeport	5	115
Whitman - Oneida	5	115
Volney - Marcy	VU-19	345

**VOLNEY EAST CLOSED**

<b>NAME</b>	<b>LINE ID</b>	<b>VOLTAGE (kV)</b>
All Volney East Open Ties plus the following:		
Branchburg - Ramapo	5018	500
Hudson - Farragut	B-3402	345
Hudson – Farragut	C-3403	345
Linden - Goethals	A-2253	230
Waldwick – So. Mahwah	K-3411	345
Waldwick – So. Mahwah	J-3410	345
Saunders – St.Lawrence/FDR*	L34P	230
Saunders – St.Lawrence/FDR*	L33P	230

**SPRAINBROOK/DUNWOODIE SOUTH - CON ED CABLE INTERFACE  
DEFINITIONS**

<b>Line Name</b>	<b>ID</b>	<b>Voltage</b>	<b>I</b>	<b>II</b>	<b>III</b>
Dunwoodie - Rainey	71	345	X	X	X
Dunwoodie - Rainey	72	345	X	X	X
Sprainbrook - W. 49 St.	M51	345	X	X	X
Sprainbrook - W. 49 St.	M52	345	X	X	X
Sprainbrook - Tremont	X28	345	X	X	X
Dunwoodie So. - E. 179 St.	99153	138	X	X	X
Dunwoodie No. - Sherman Creek	99031	138	X	X	X
Dunwoodie No. - Sherman Creek	99032	138	X	X	X
Lake Success - Jamaica	903	138	X	X	
Valley Stream - Jamaica	901	138	X	X	
Hudson - Farragut	B2402	345		X	X
Hudson - Farragut	C3403	345		X	X
Linden - Goethals	A2253	230		X	X
Sprainbrook - E.G.C.	Y49	345			X
Dunwoodie - Shore Rd.	Y50	345			X
Norwalk - Northport	1385	138			X

	<b>Interface Definitions</b>	<b>Department</b>
I	Sprainbrook/Dunwoodie South and Con Edison Cable Interface	Operation
II	Con Edison NYC Cable Interface - Closed	ConEd Operation
III	Sprainbrook/Dunwoodie South - Closed	Planning



Appendix F – Power Flows
On-peak vs. Off-peak

TABLE OF CONTENTS

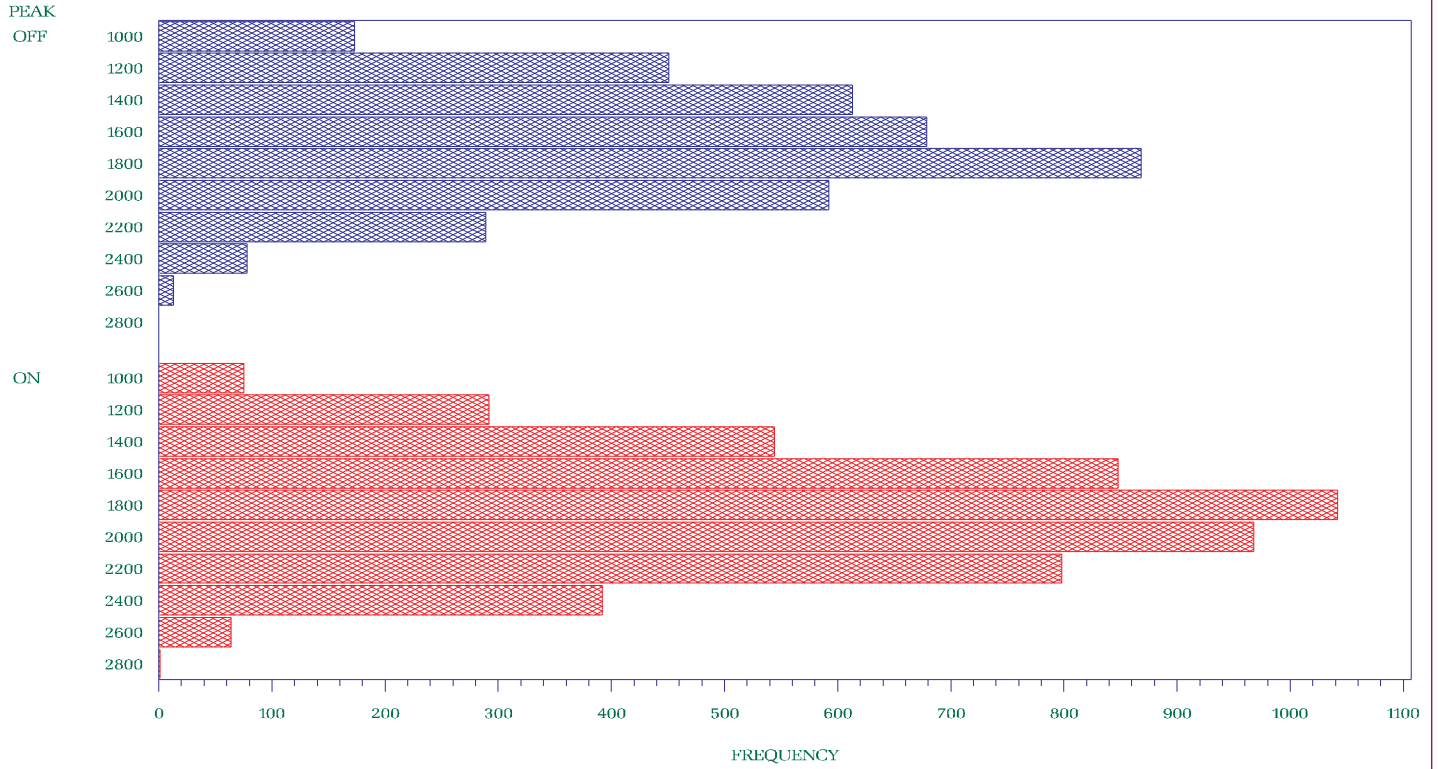
Table listing various power flow categories and their corresponding page numbers, such as CENTRAL EAST (F3), TOTAL EAST (F4), and WEST CENTRAL (F11).

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NYISO Frequency Interface Flow For January – December 2004

CENTRAL EAST

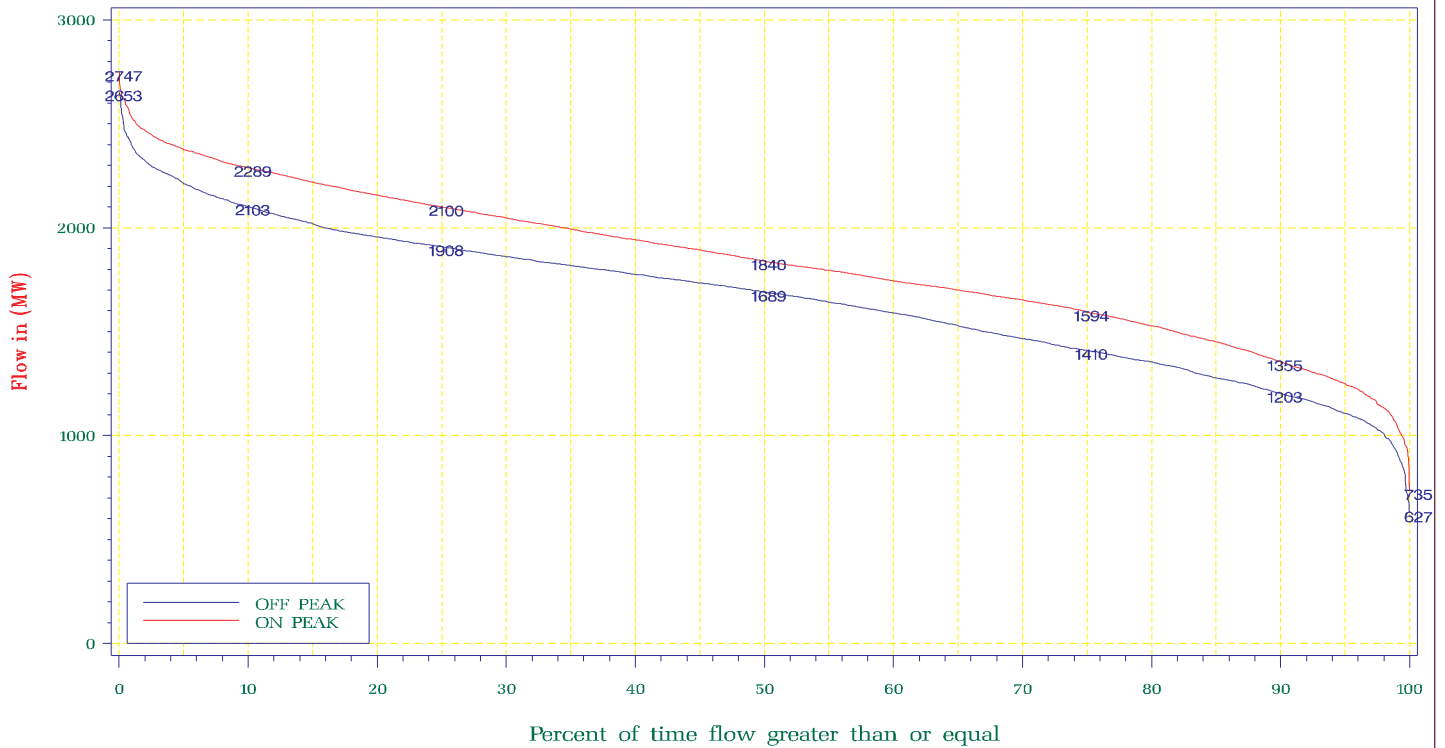


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

CENTRAL EAST

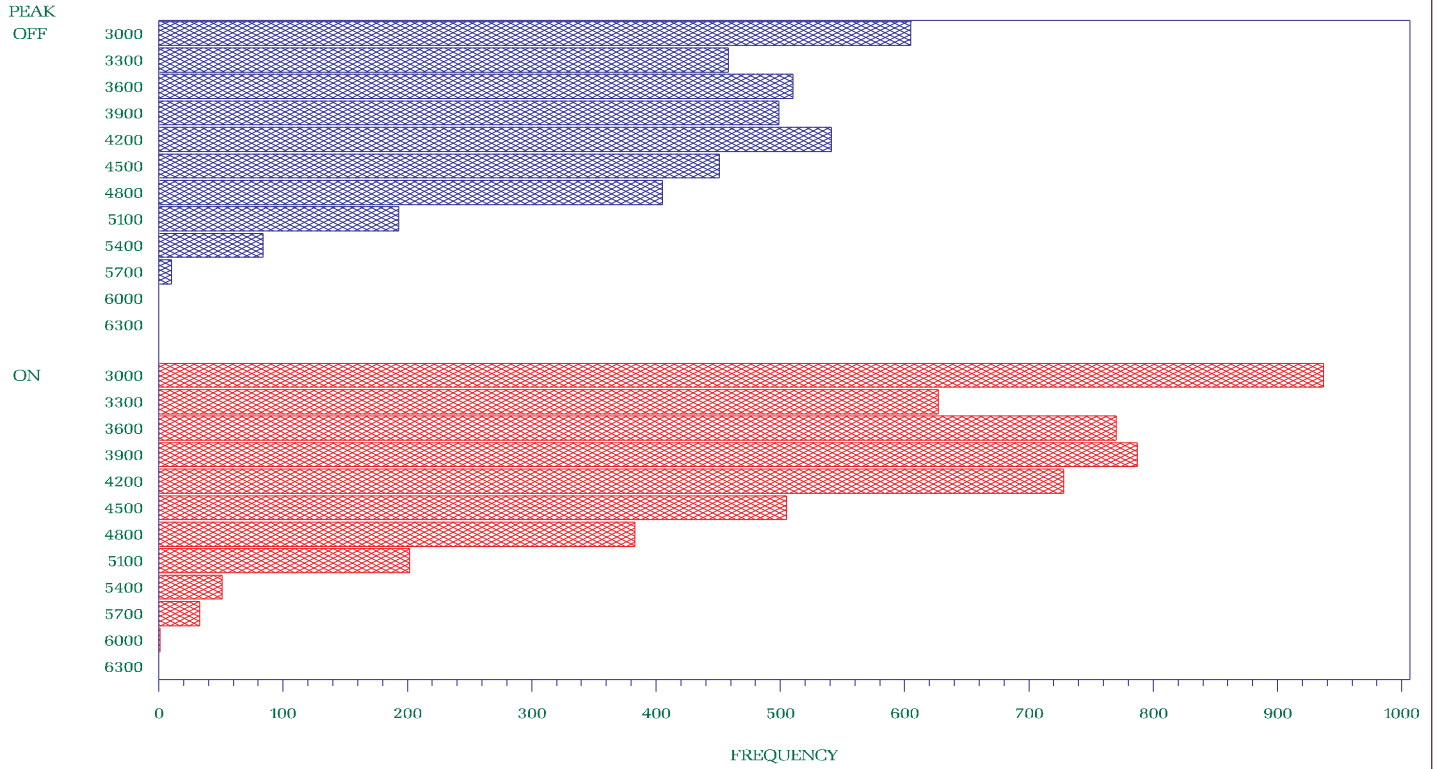


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

TOTAL EAST

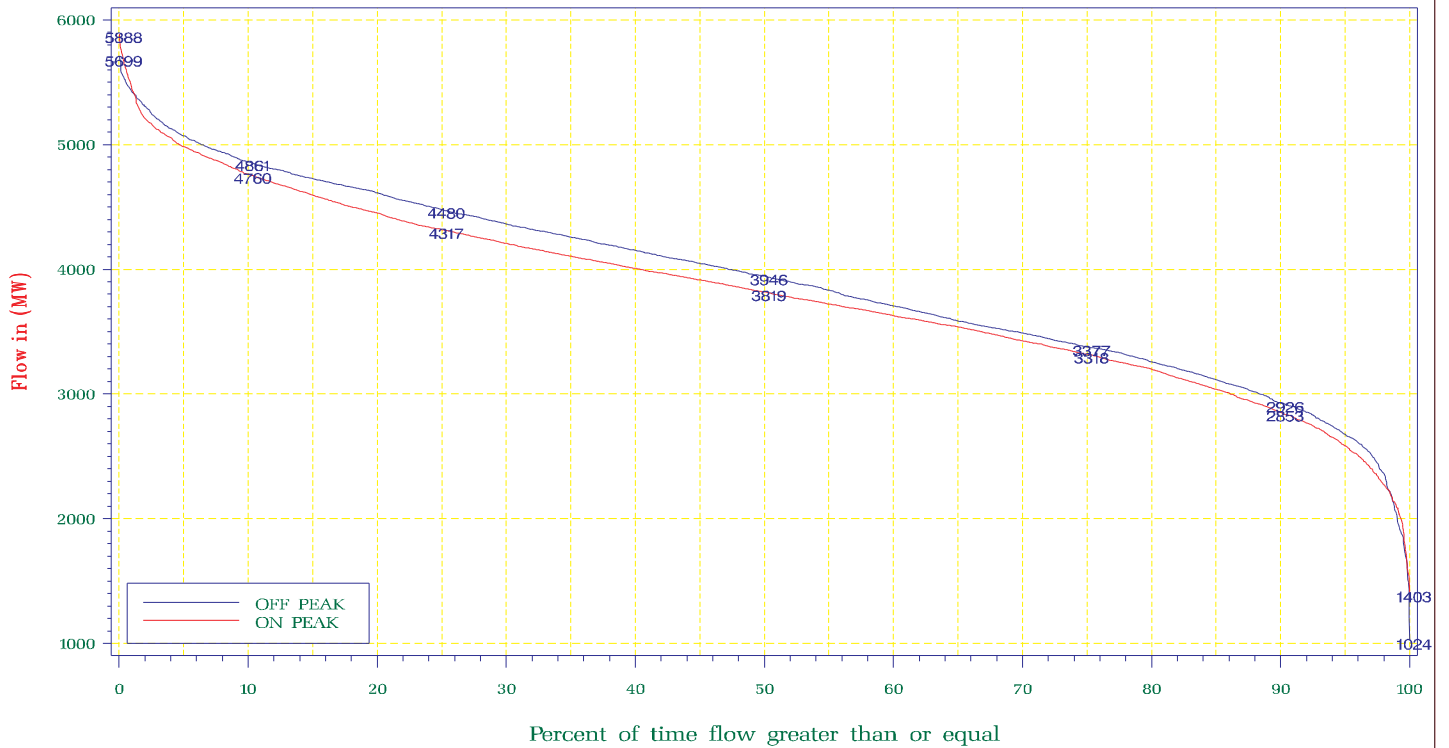


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

TOTAL EAST

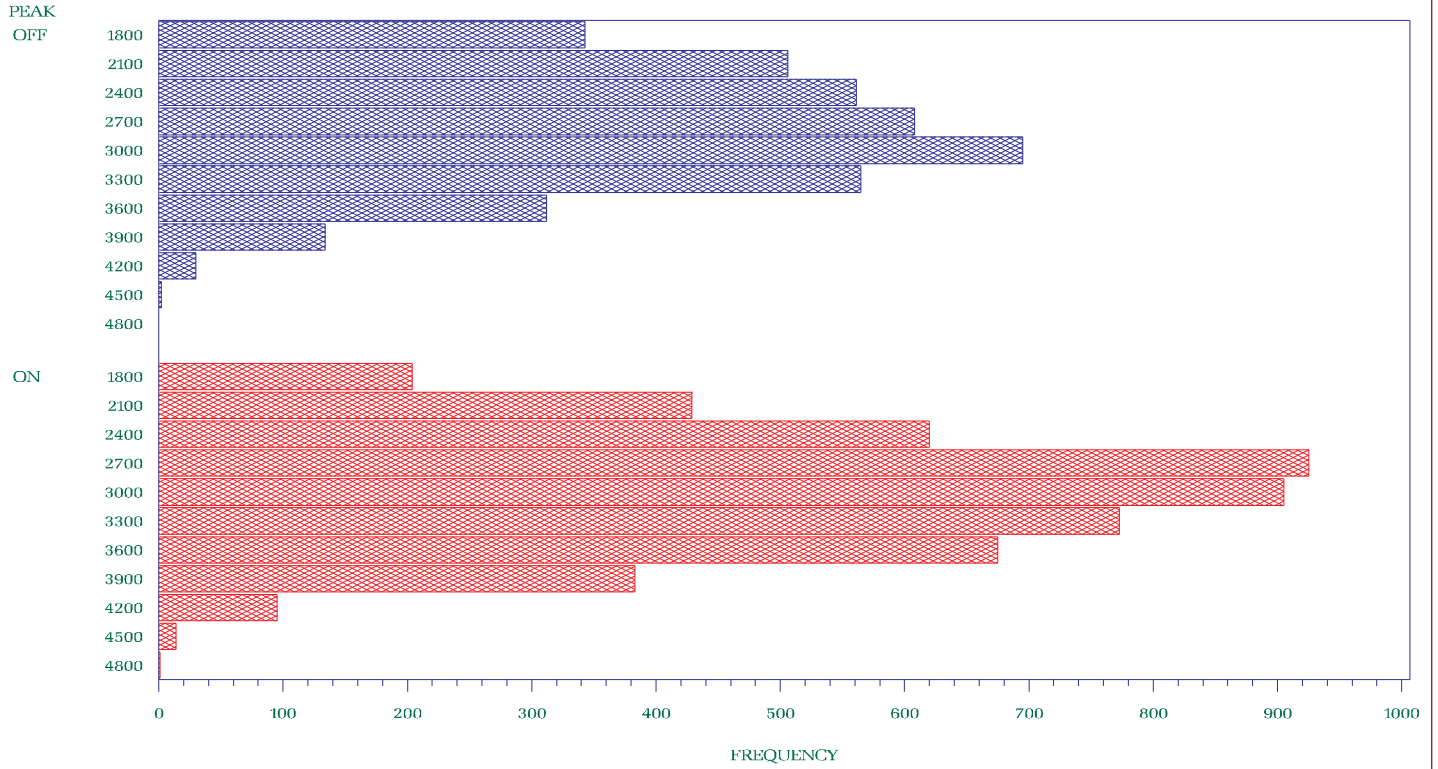


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Central – Capital/Mid Hudson

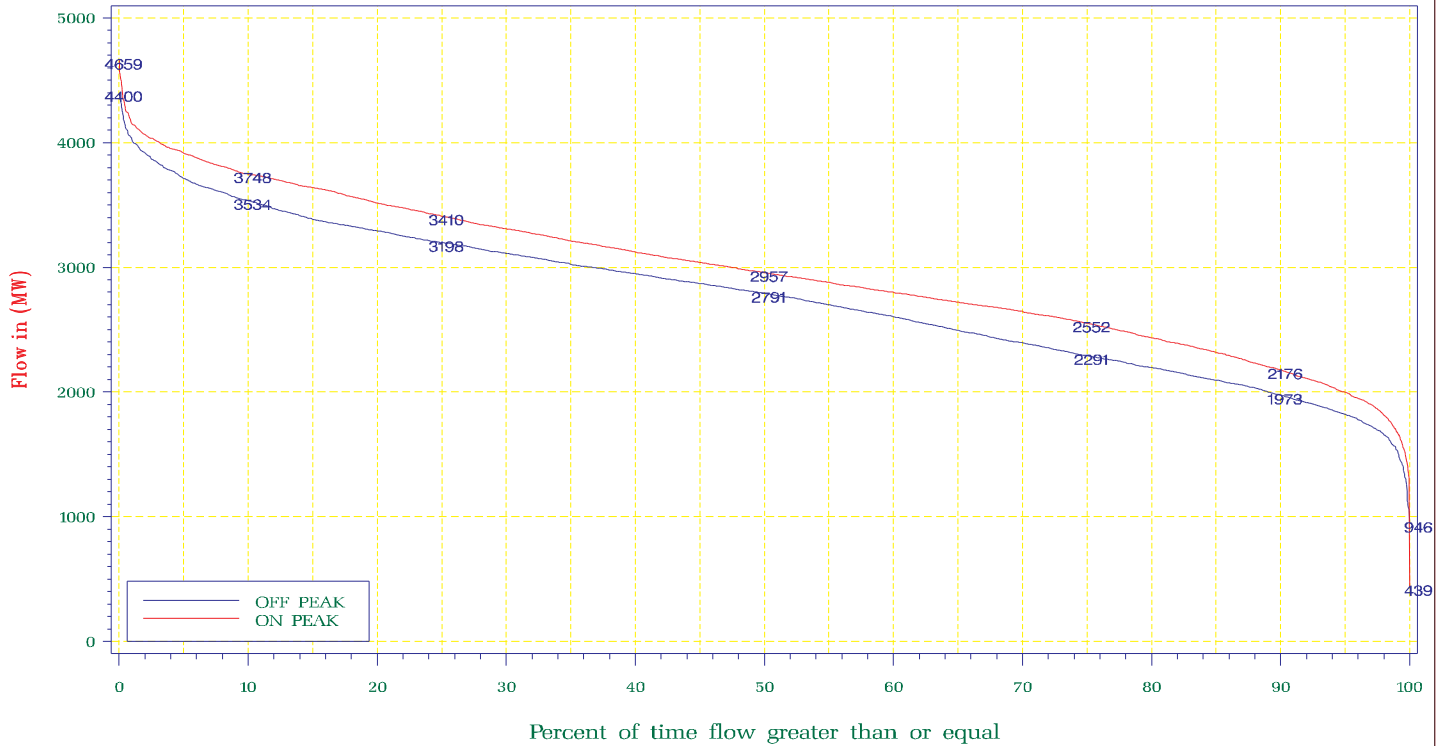


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Central – Capital/Mid Hudson

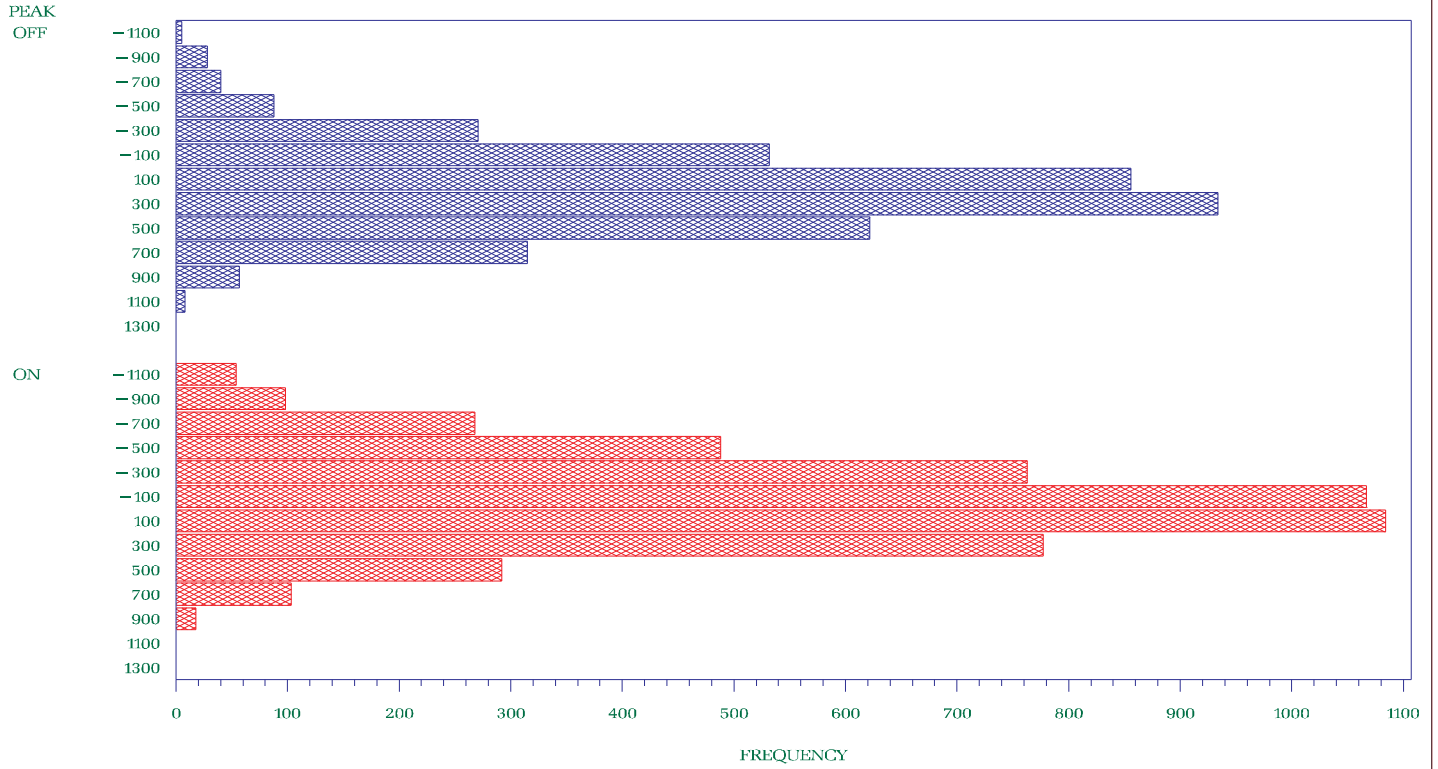


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

PJM East – Capital/Mid Hudson

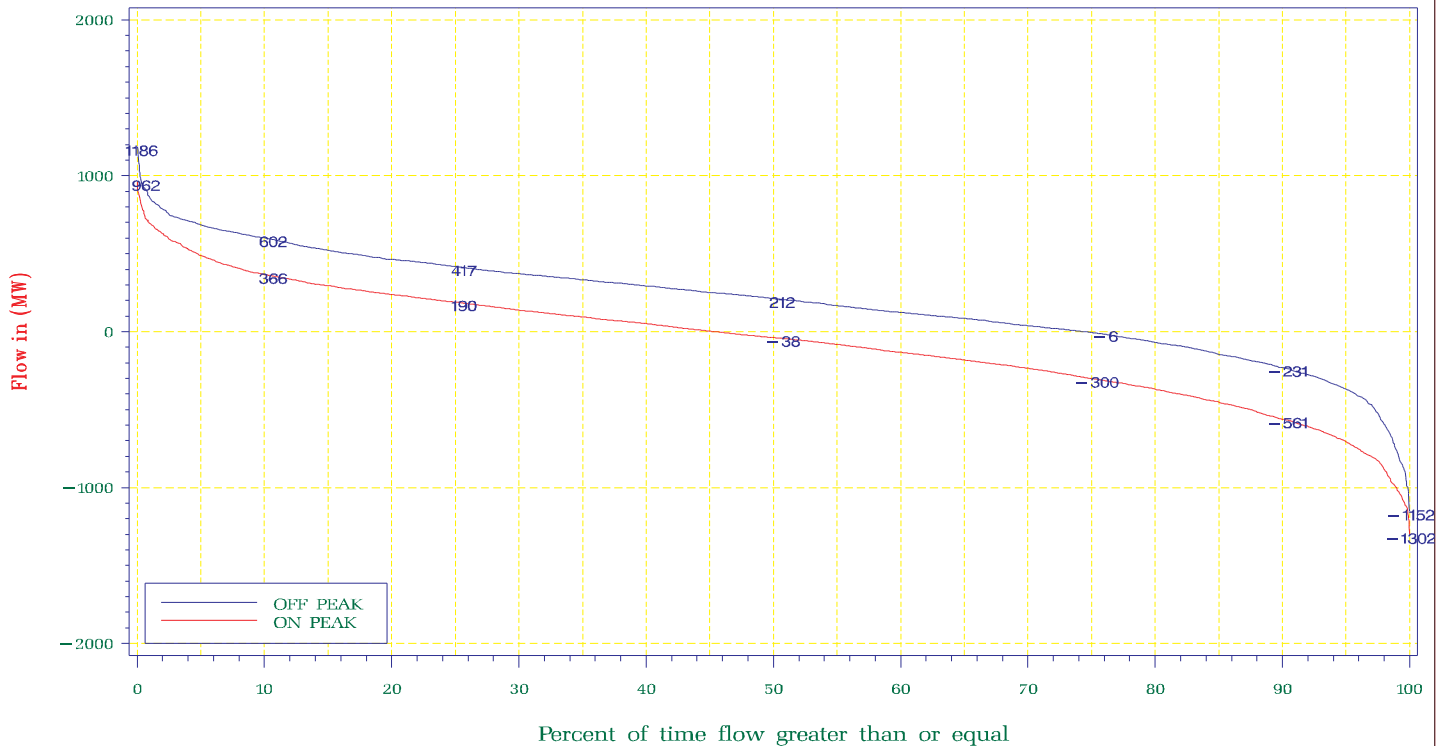


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

PJM East – Capital/Mid Hudson

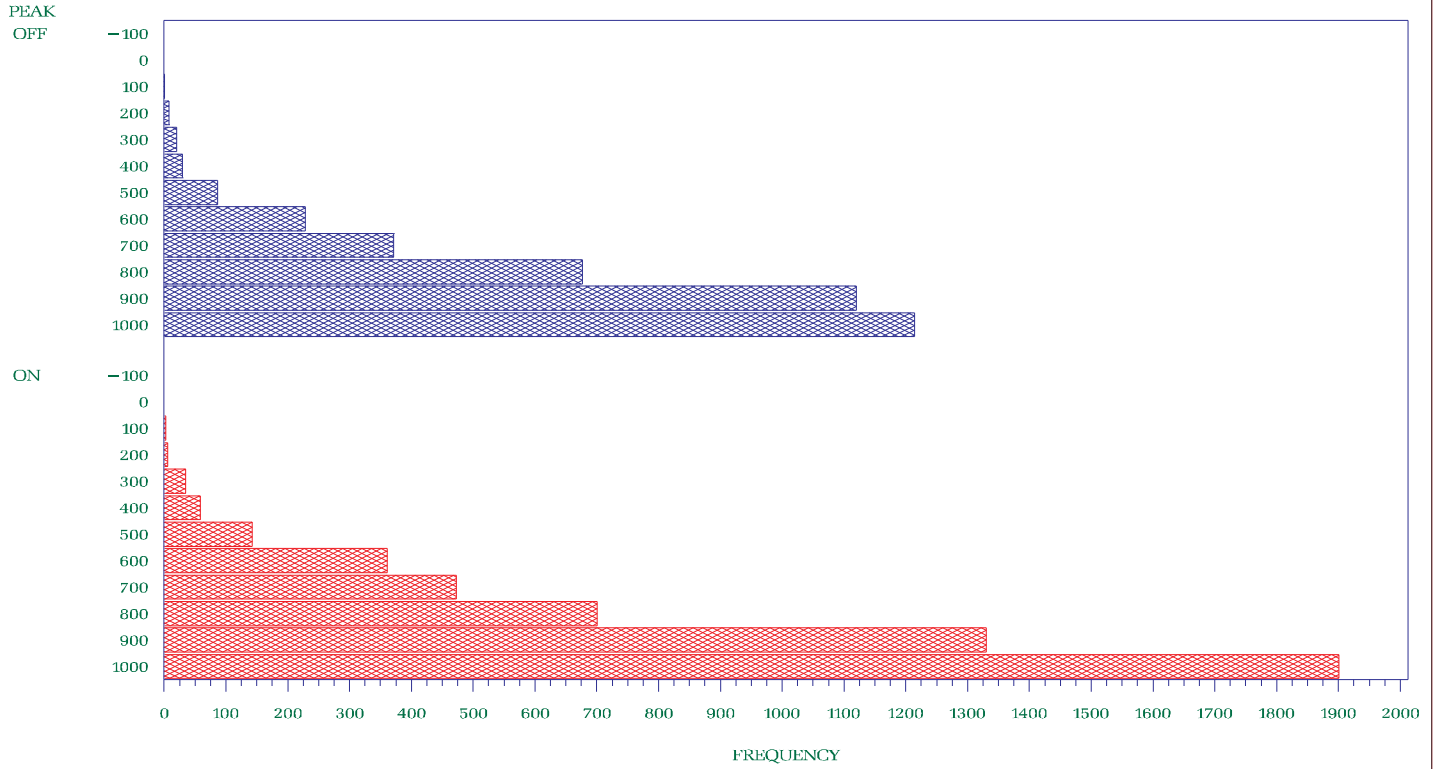


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

PJM East – New York City

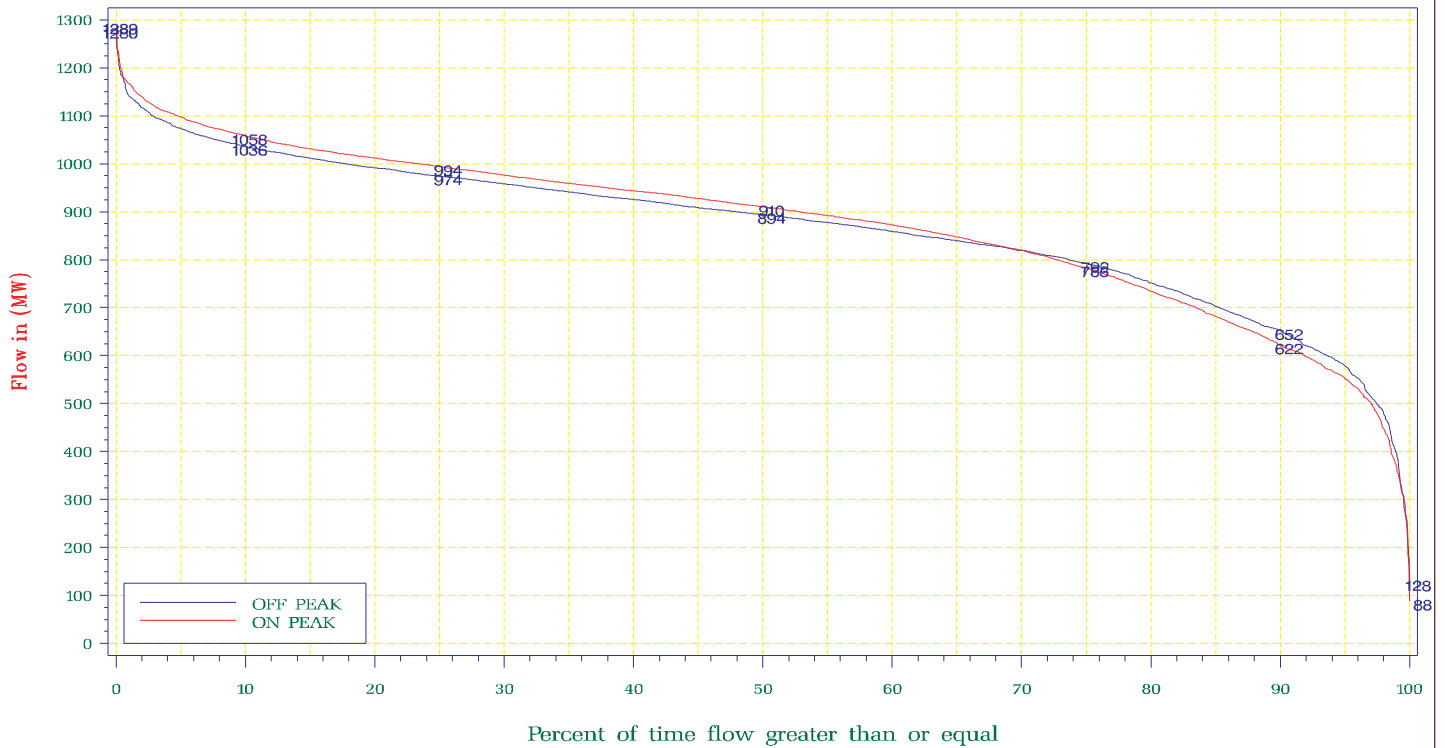


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

PJM East – New York City

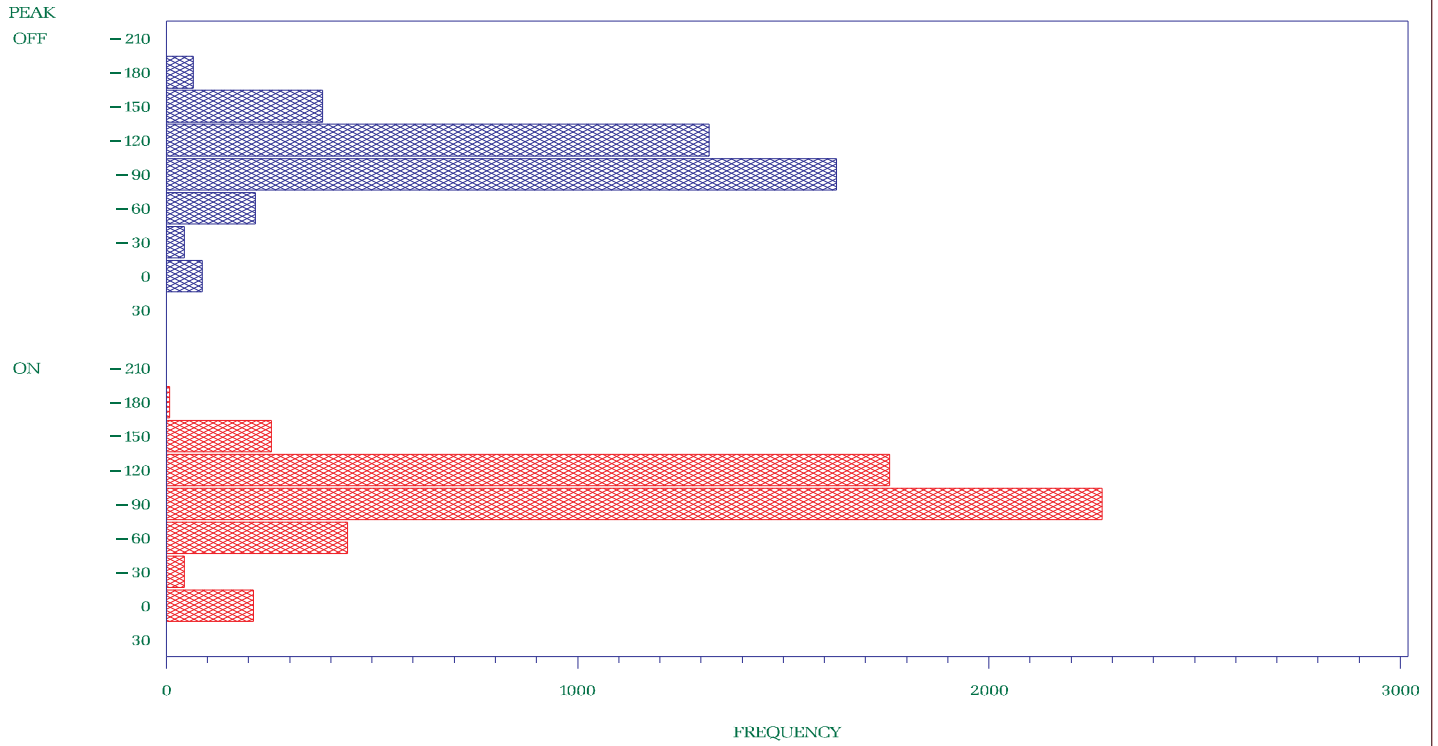


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh

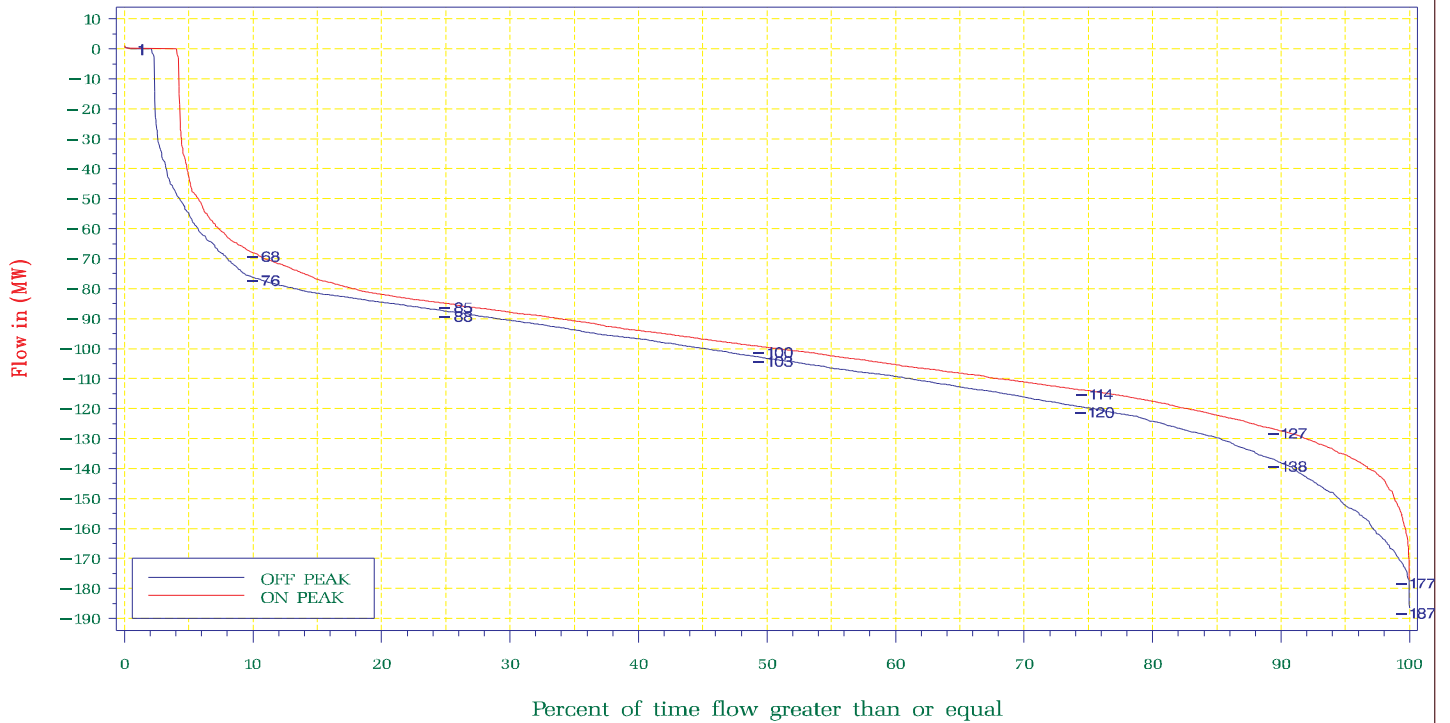


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh

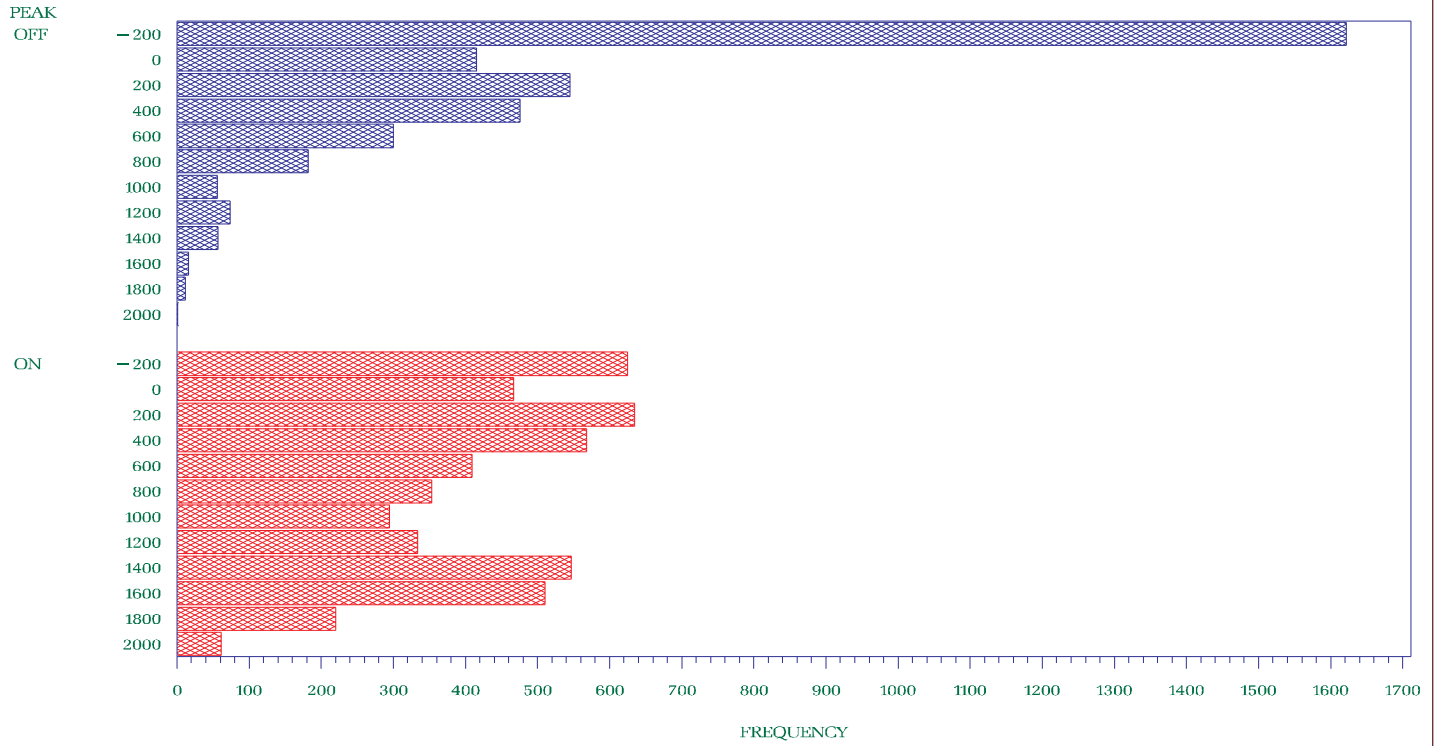


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

MOSES SOUTH  
Adirondack – Central

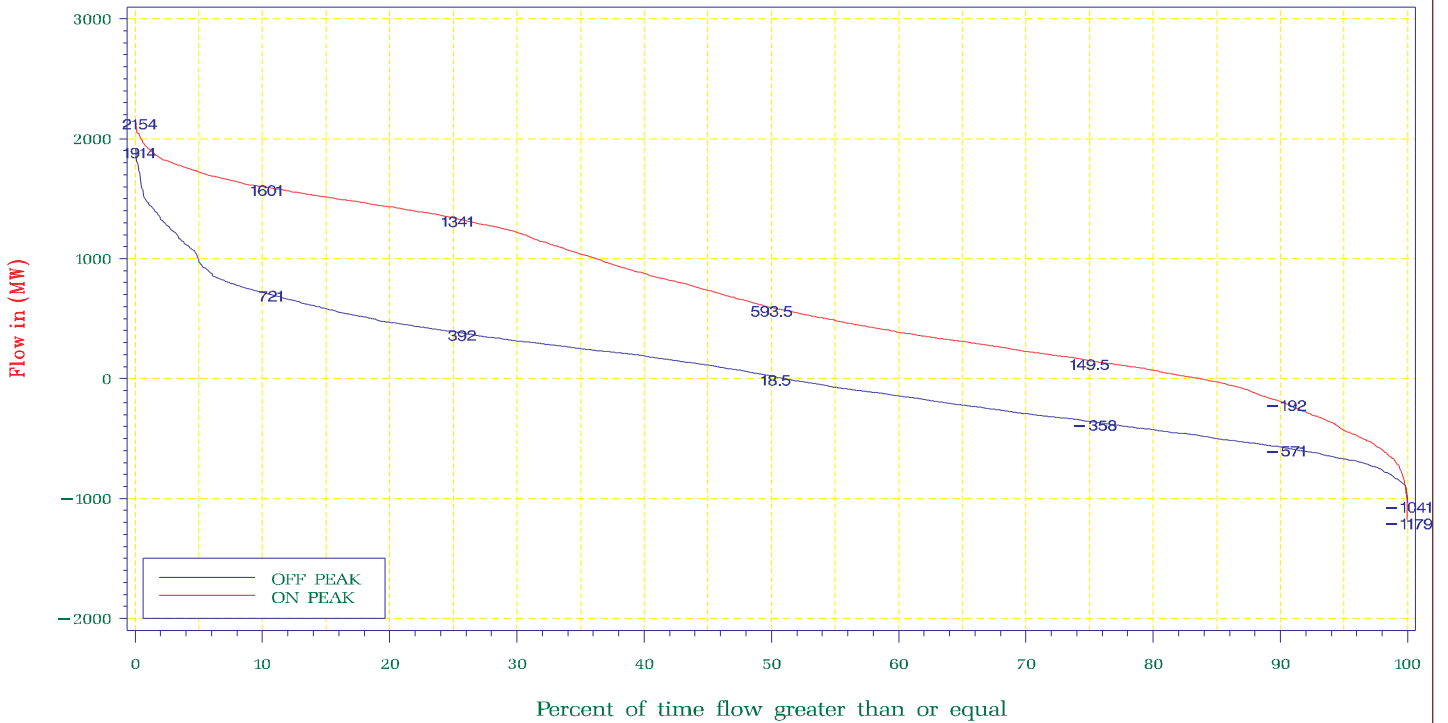


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

MOSES SOUTH  
Adirondack – Central

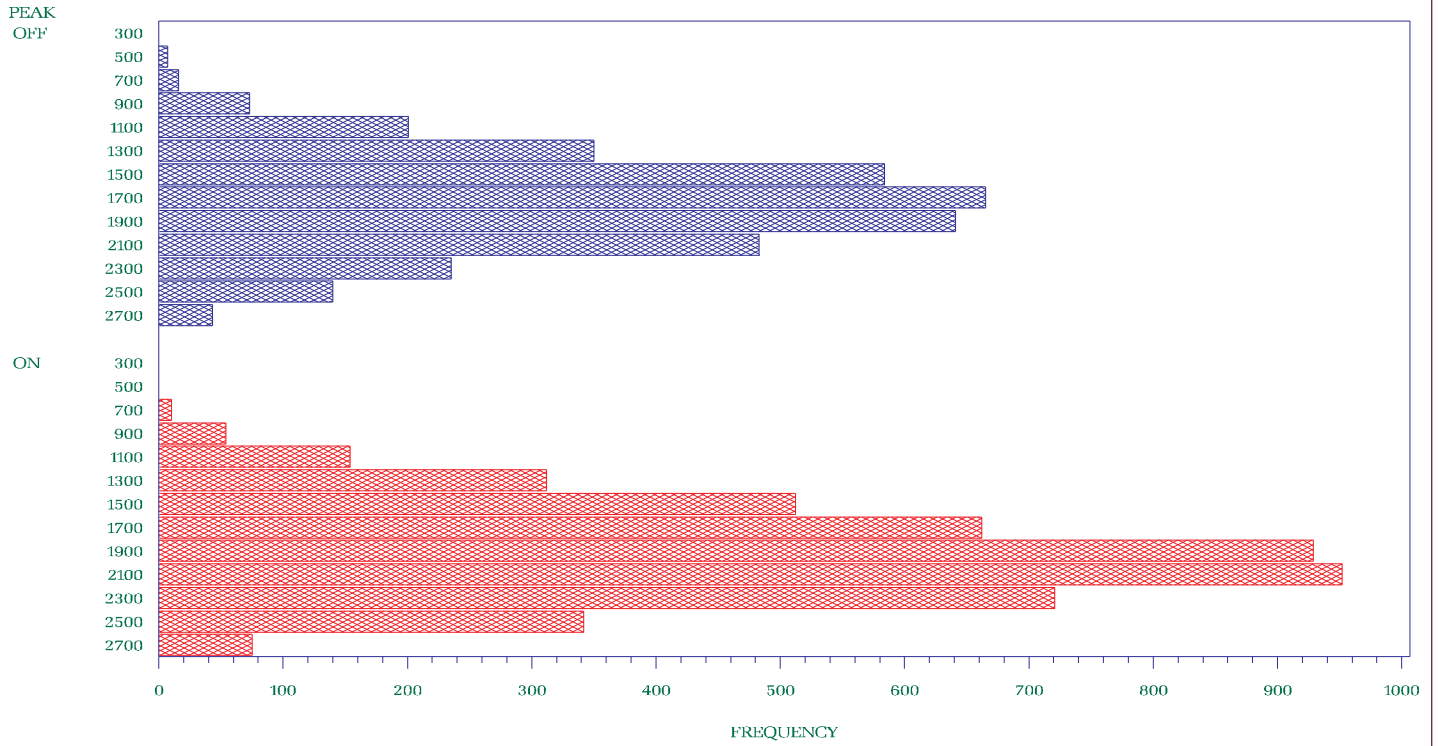


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

**DYSINGER EAST**  
Frontier – Genesee

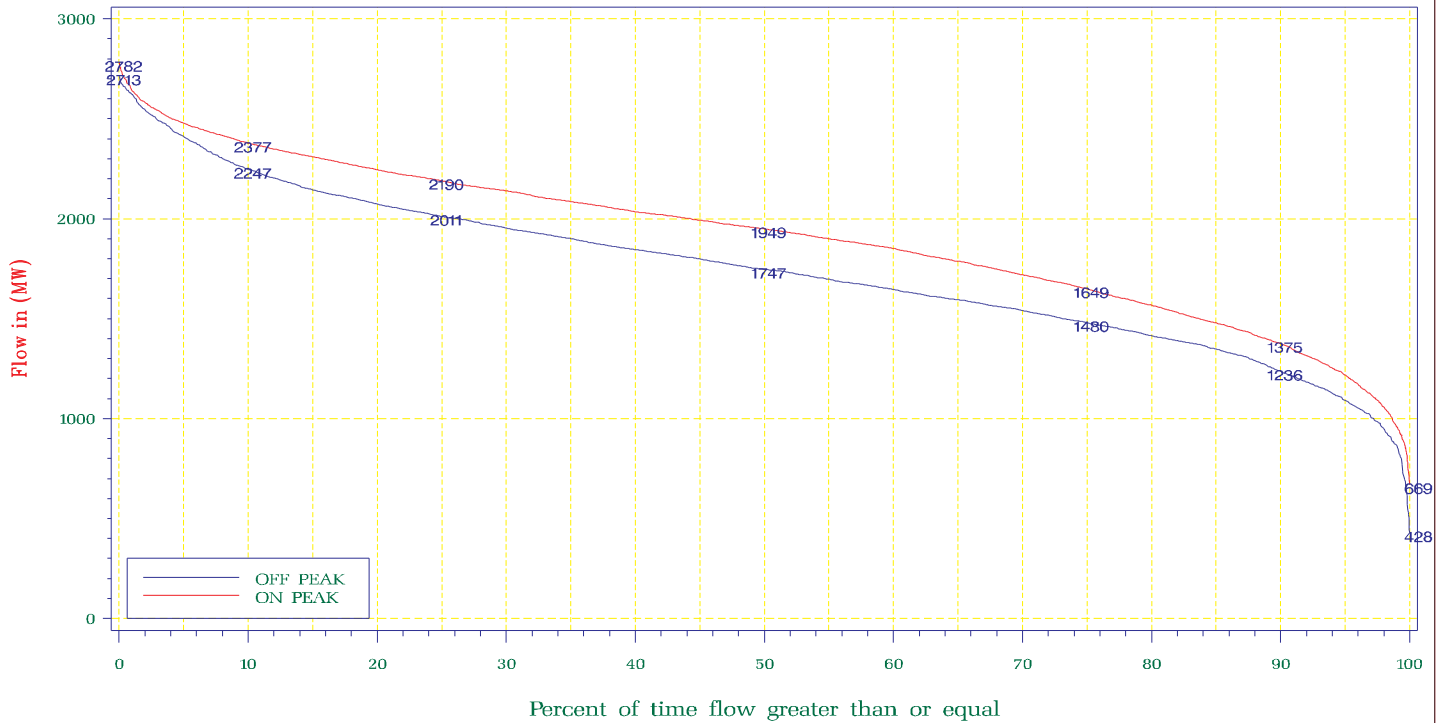


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

**DYSINGER EAST**  
Frontier – Genesee



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

WEST CENTRAL  
Genesee – Central

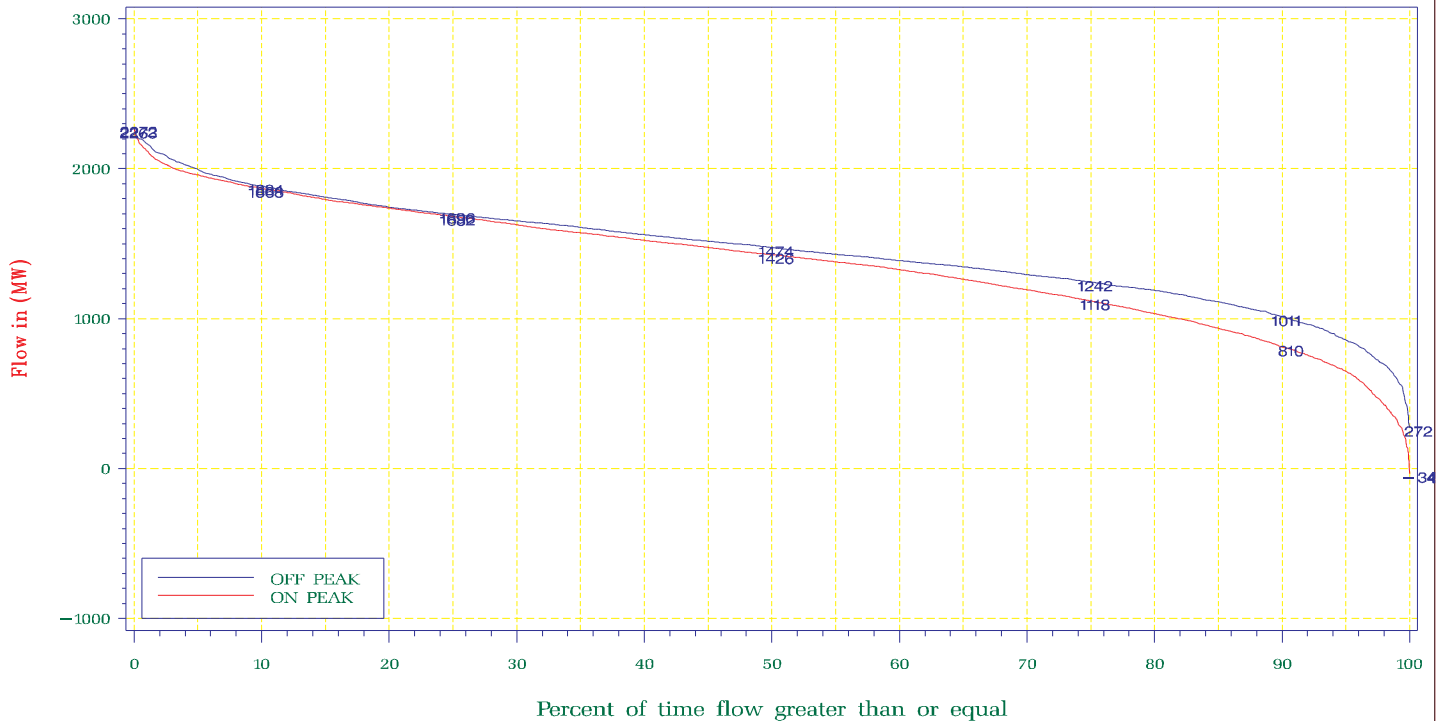


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

WEST CENTRAL  
Genesee – Central

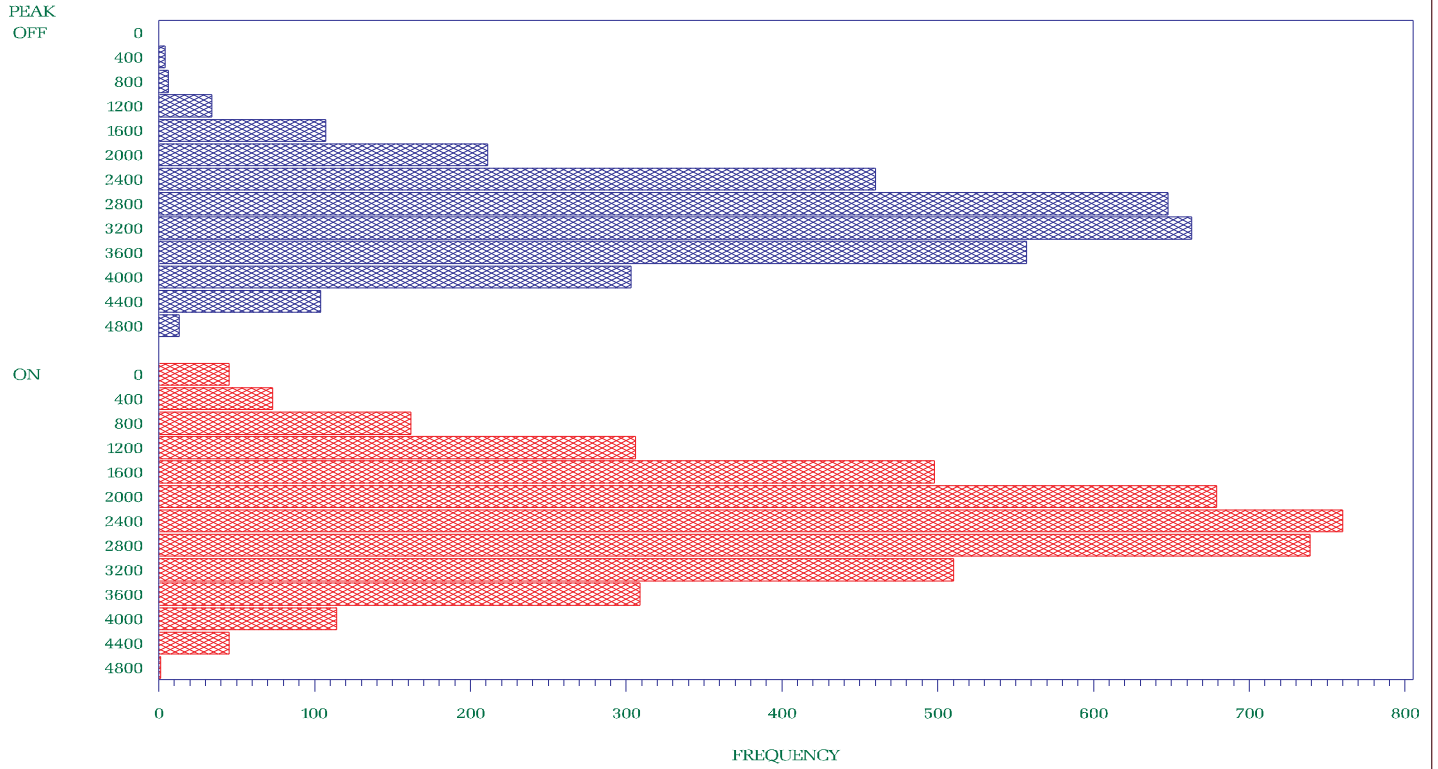


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

WEST CENTRAL (CLOSED)

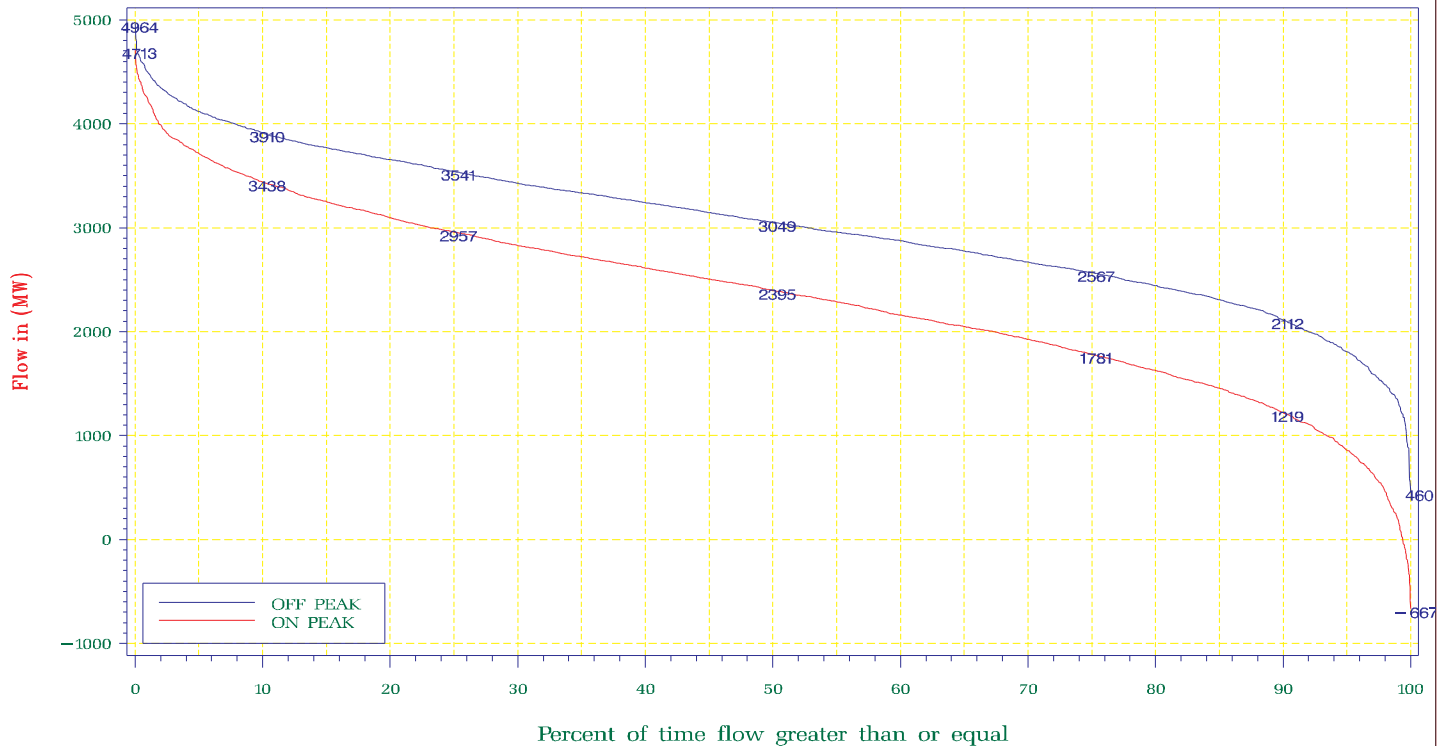


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

WEST CENTRAL (CLOSED)

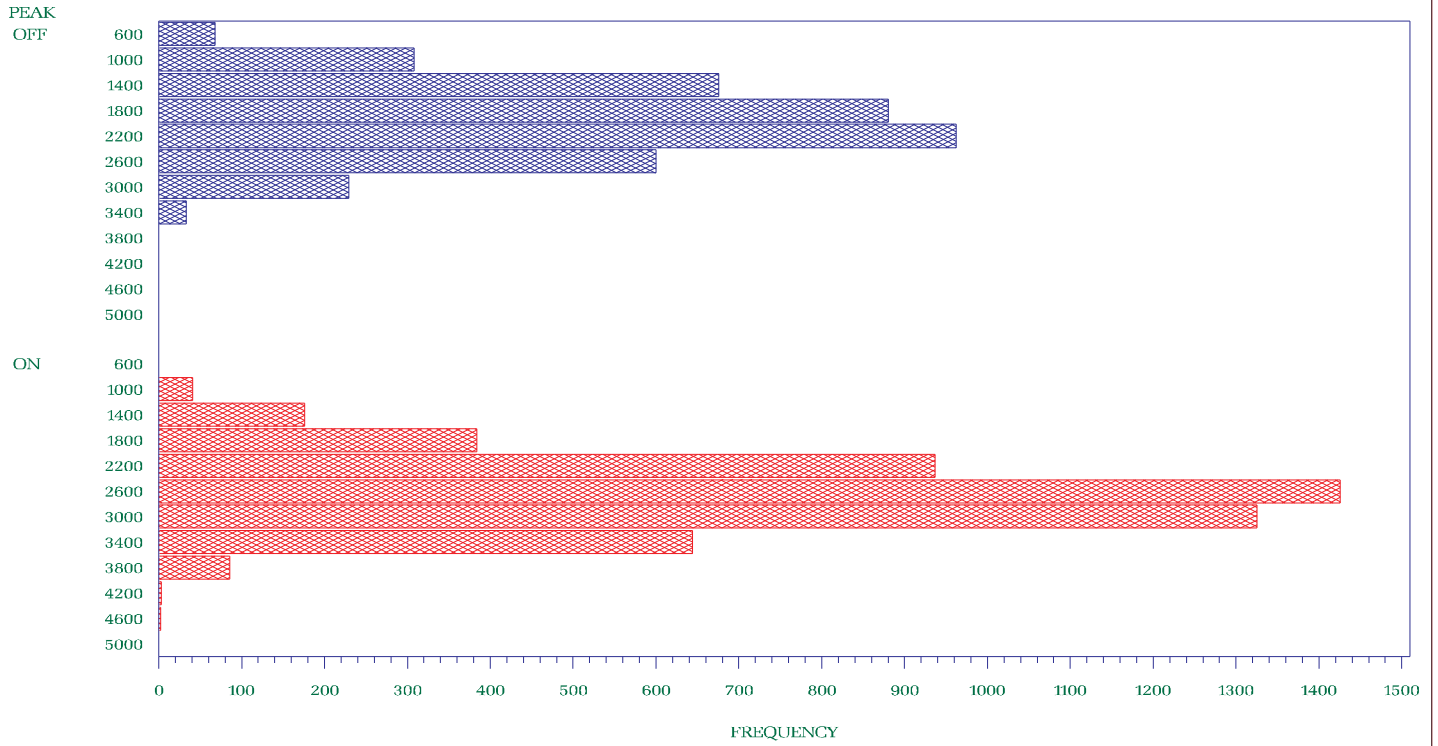


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ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

UPNY – CONED  
Capital/Mid Hudson – Westchester

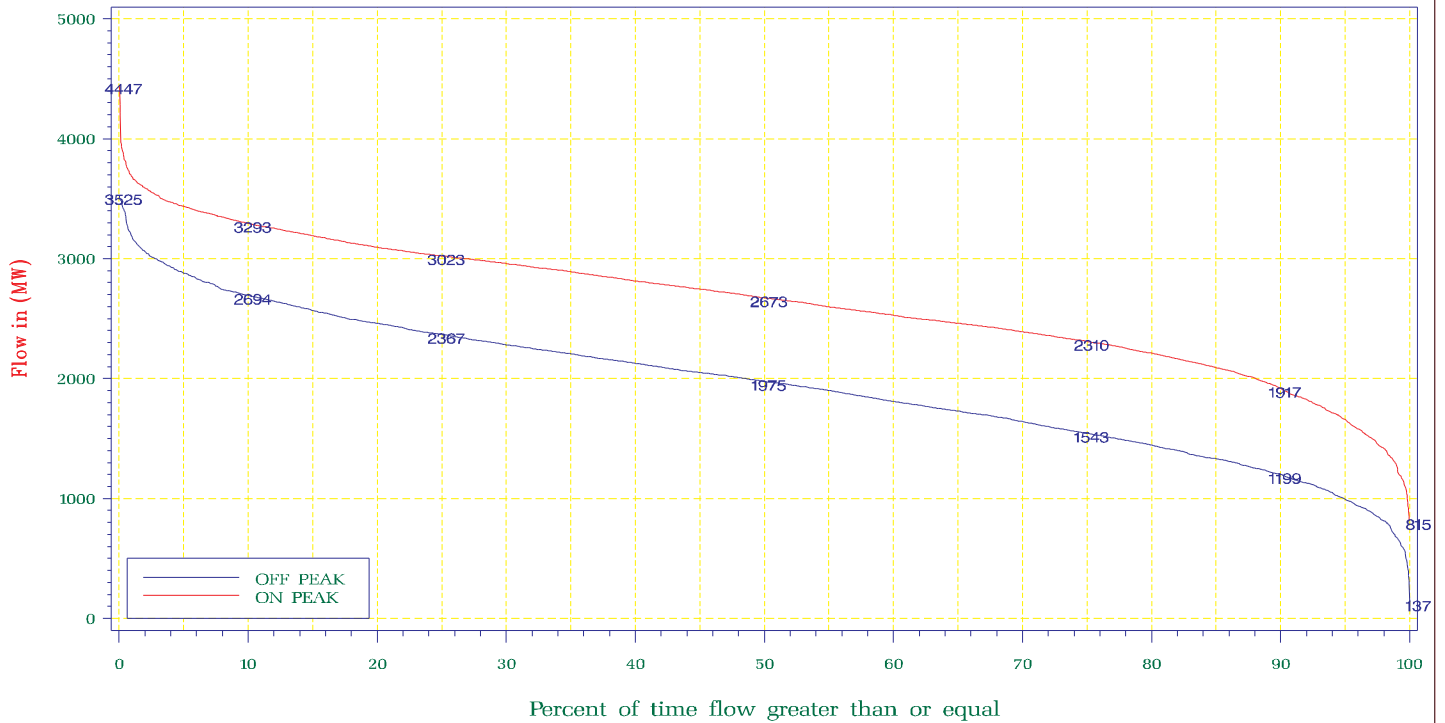


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ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

UPNY – CONED  
Capital/Mid Hudson – Westchester

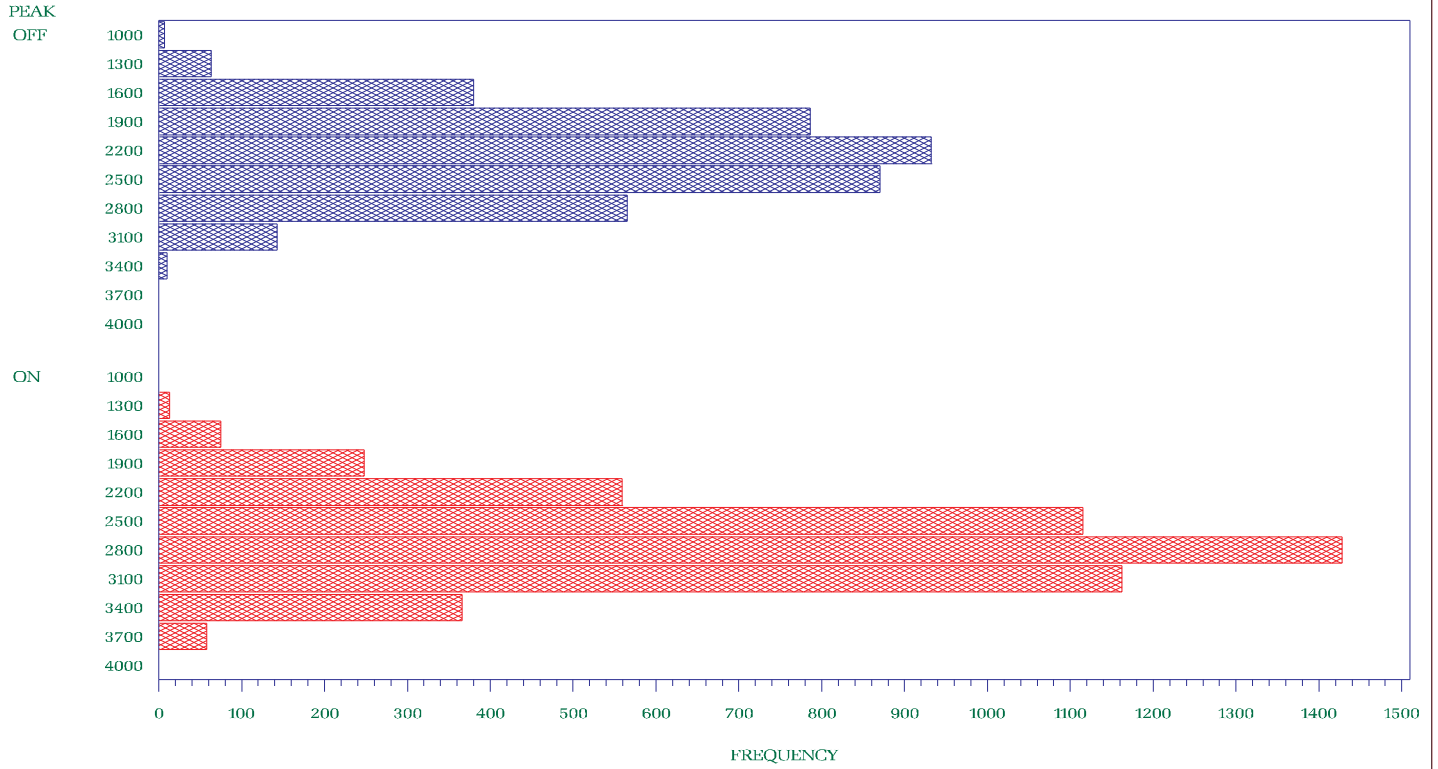


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

SPRAINBROOK – DUNWOODIE SOUTH

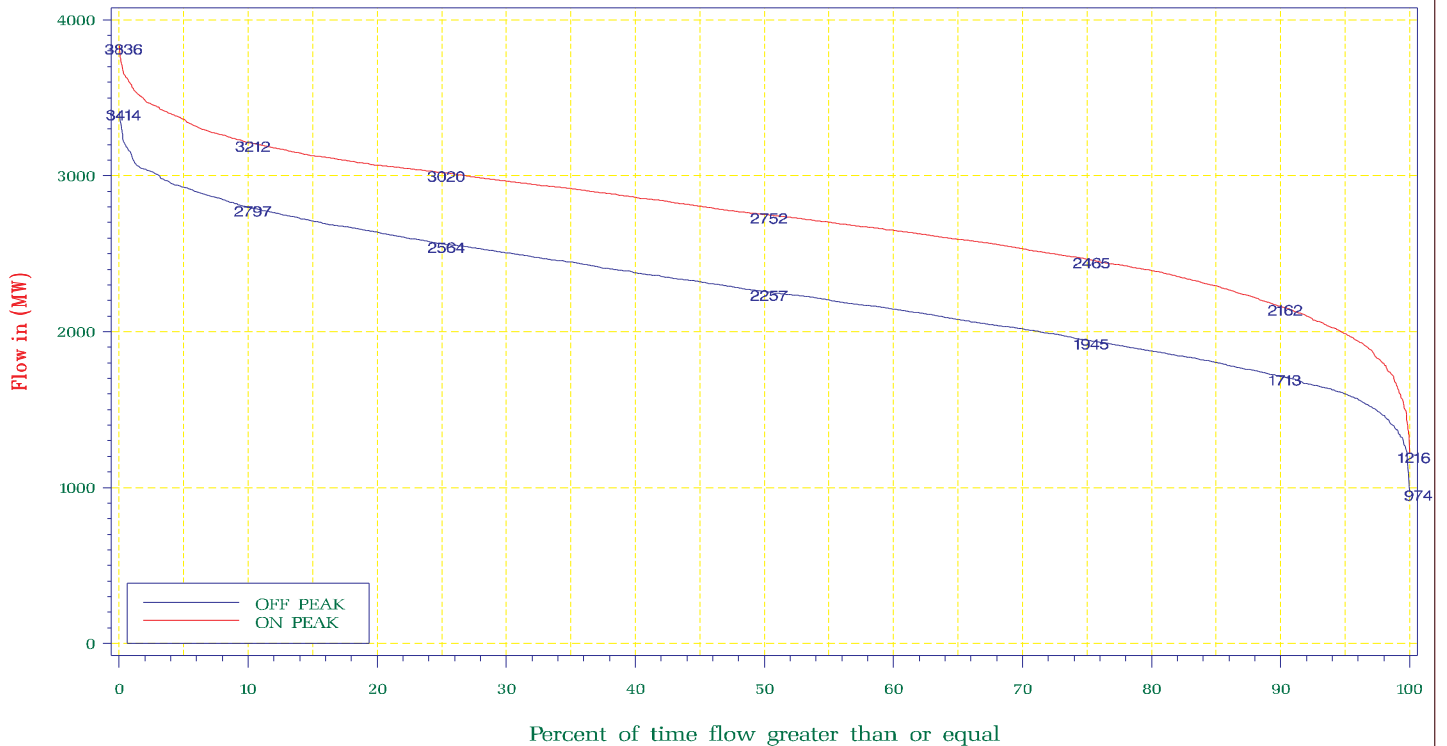


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH

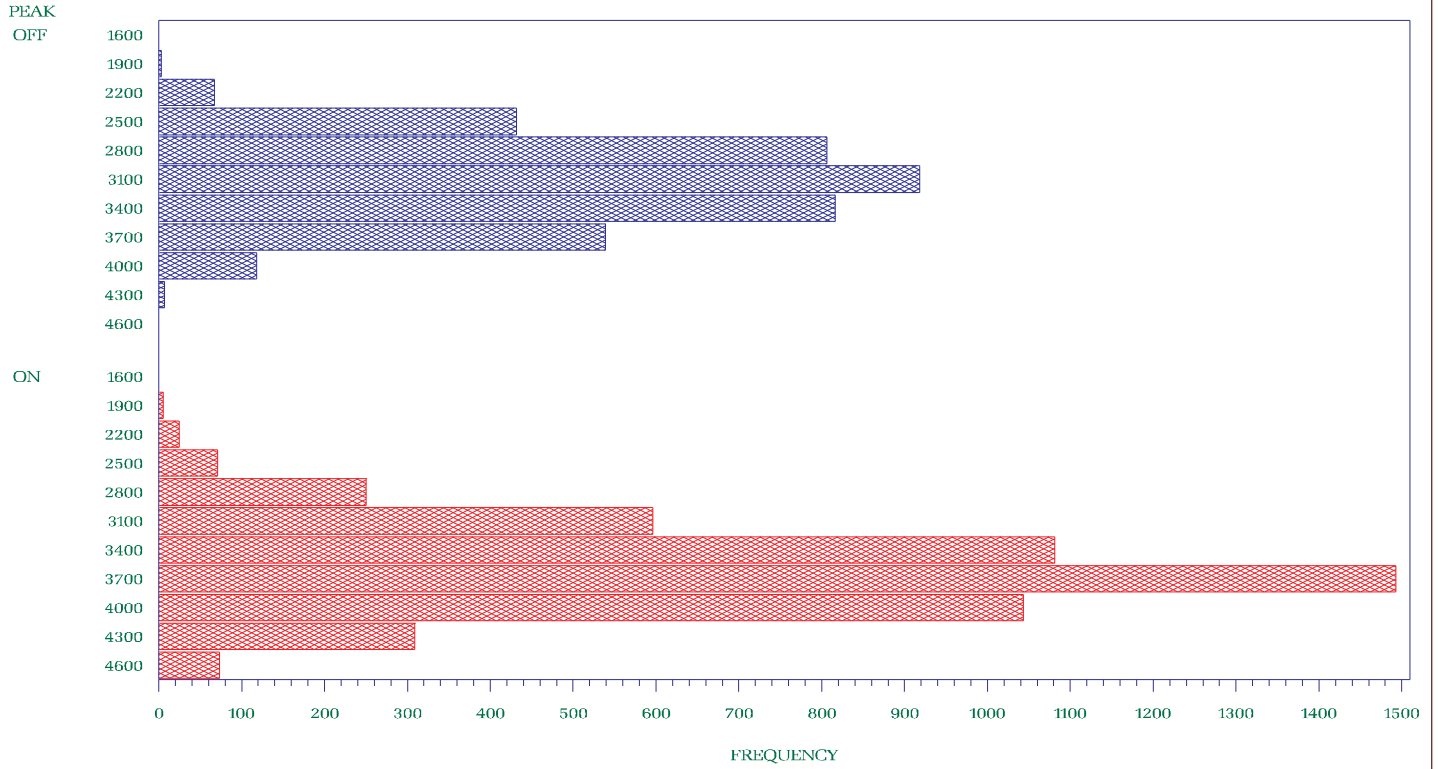


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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NYISO Frequency Interface Flow For January – December 2004

SPRAINBROOK – DUNWOODIE SOUTH (Closed)

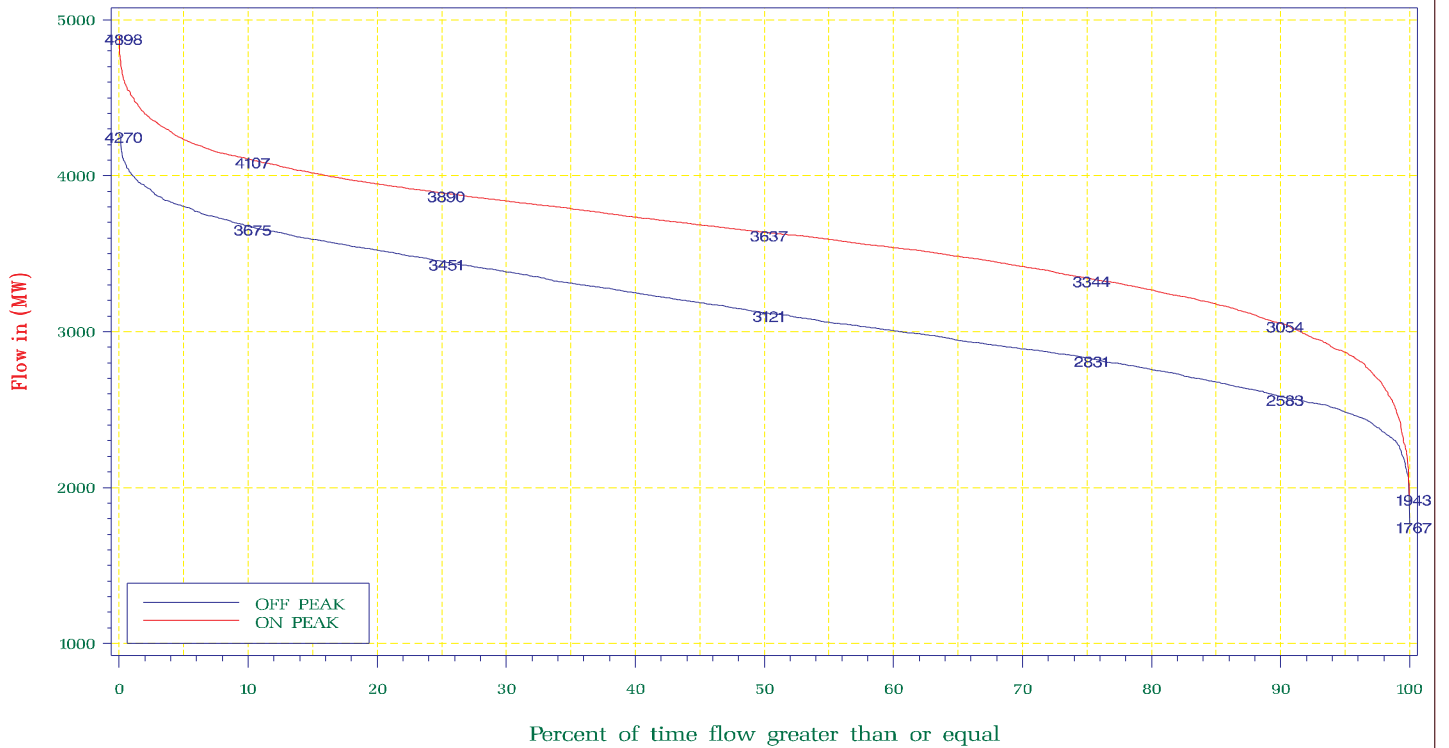


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)

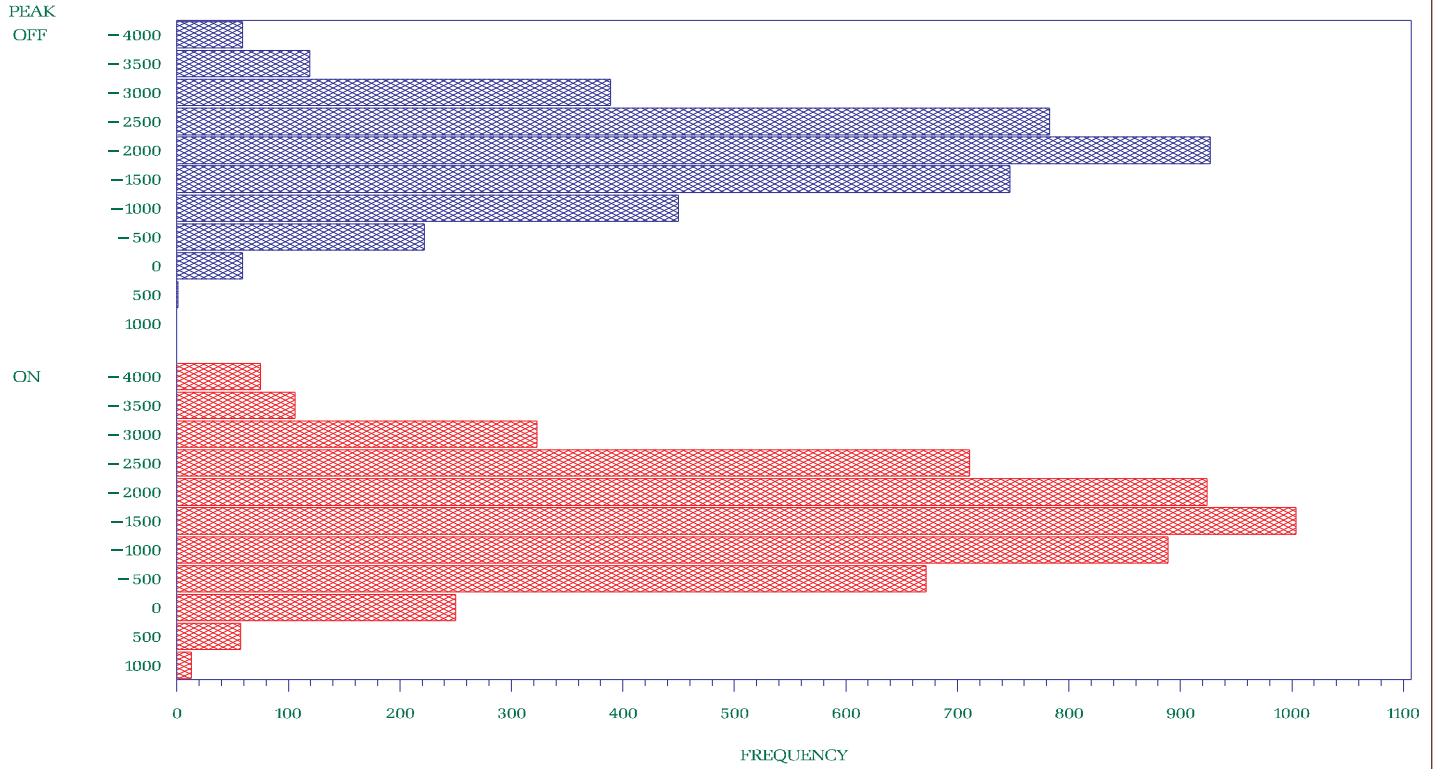


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

NY EXPORT

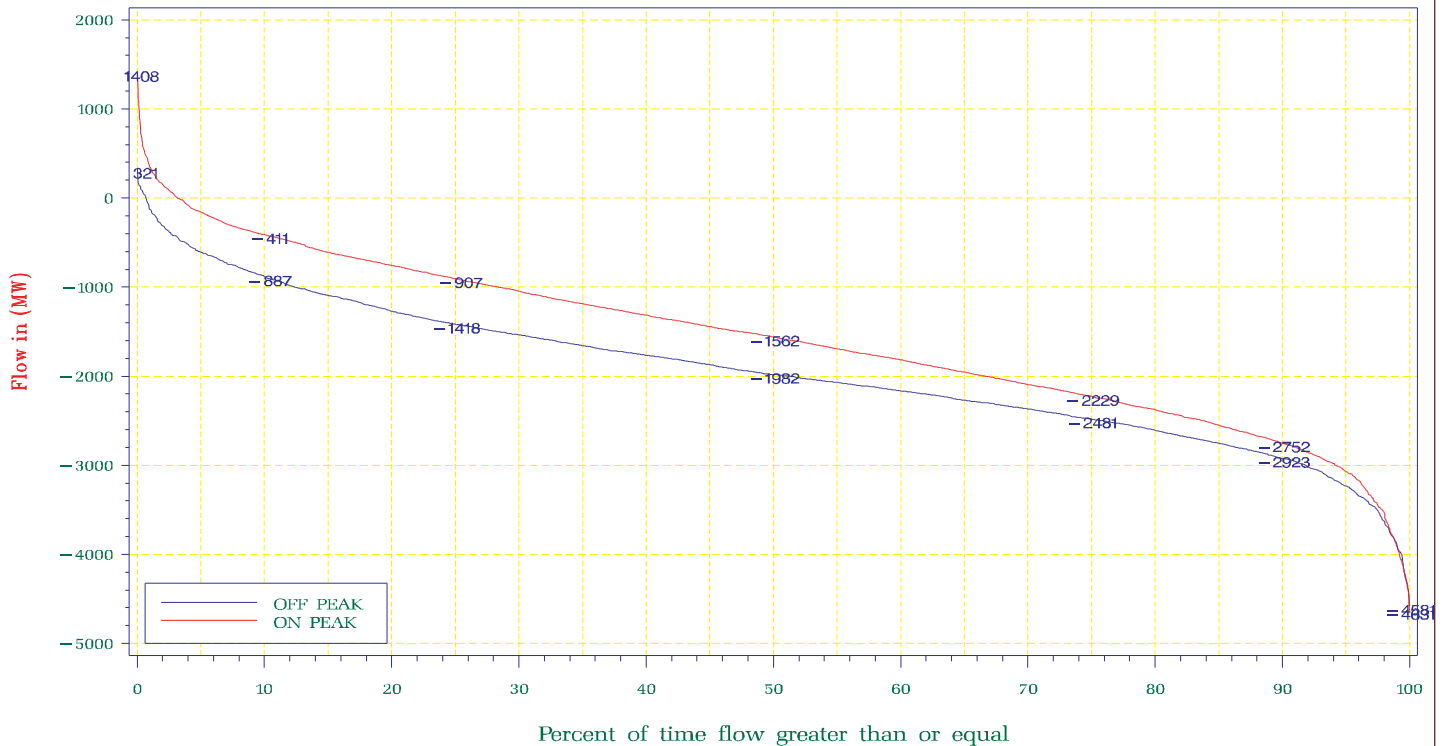


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

NY EXPORT

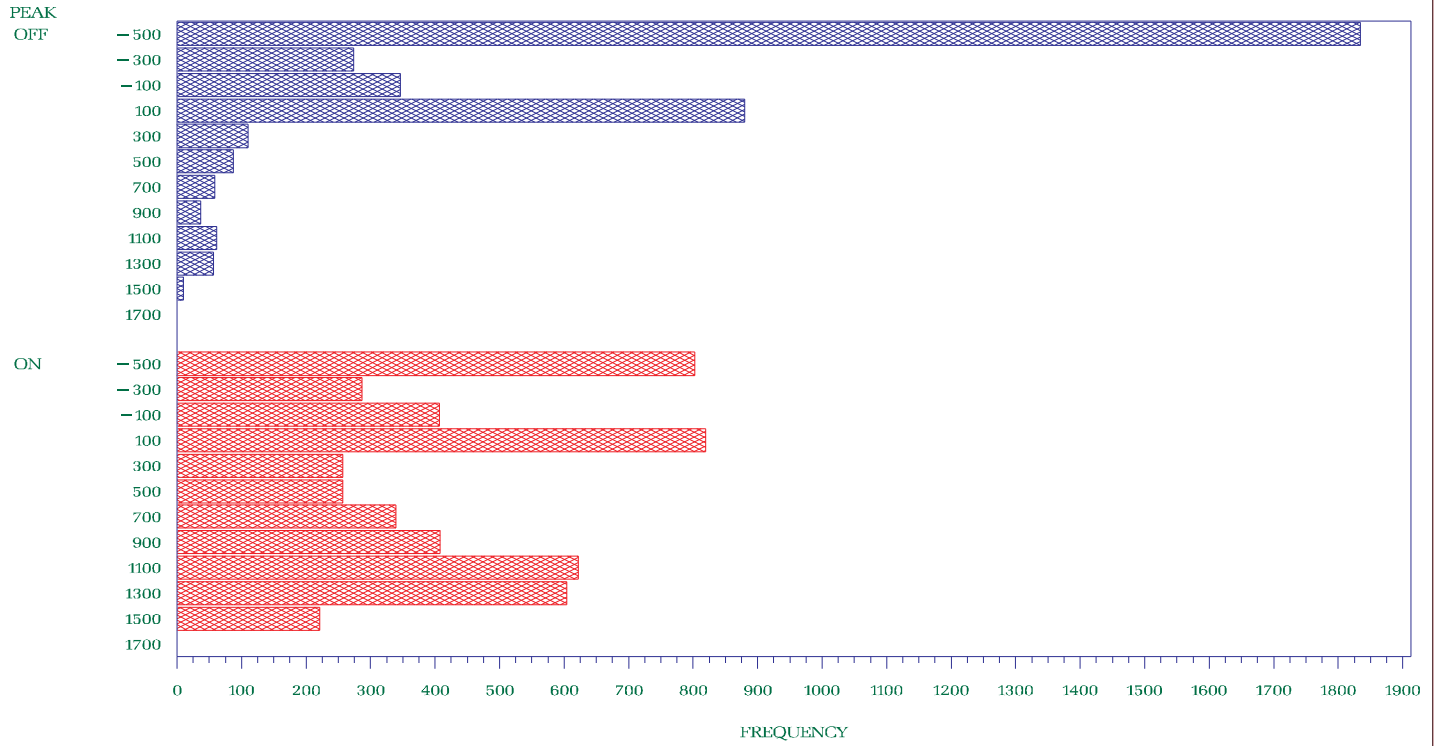


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

TE – NY SCHEDULE  
Chateauguy – Massena

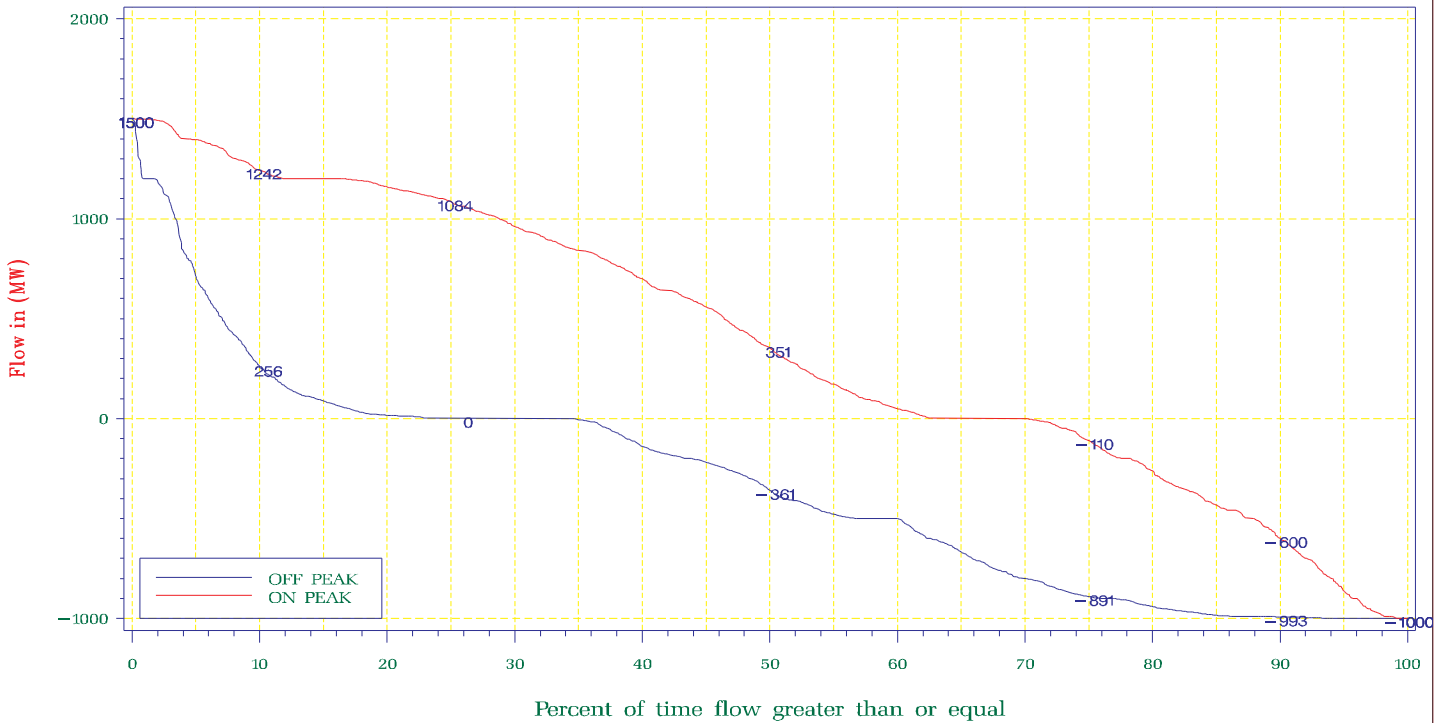


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

TE – NY SCHEDULE  
Chateauguy – Massena

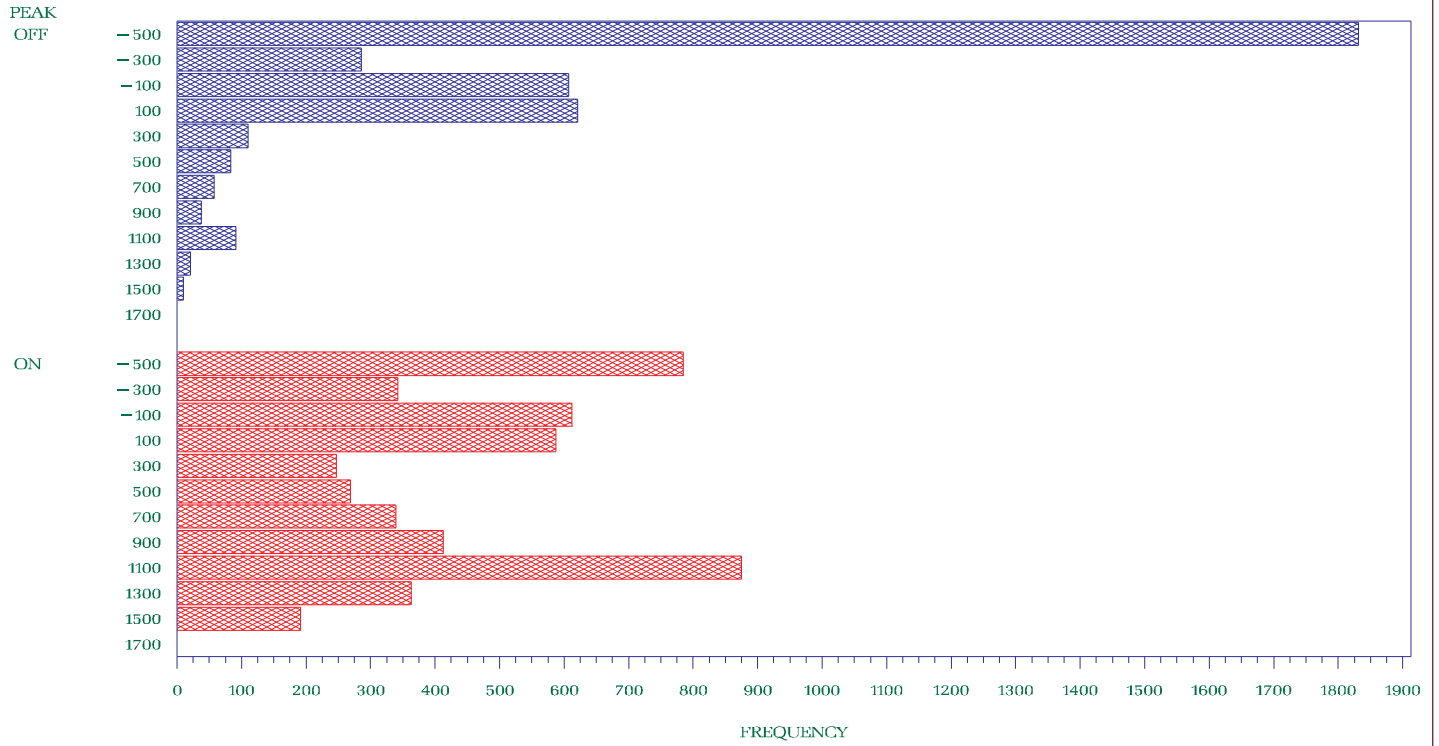


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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NYISO Frequency Interface Flow For January – December 2004

TE – NY  
Chateauguy – Massena

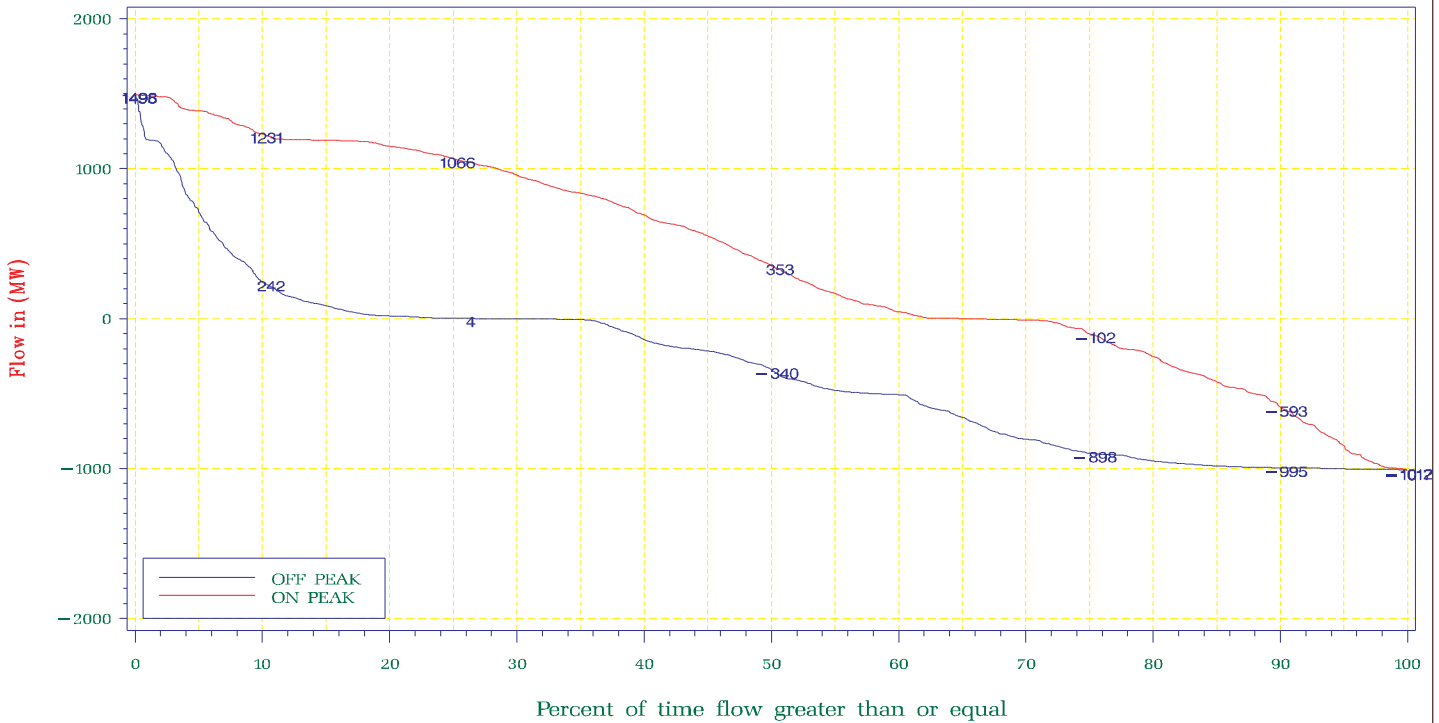


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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NYISO Percent of time Interface Flow For January – December 2003

TE – NY  
Chateauguy – Massena



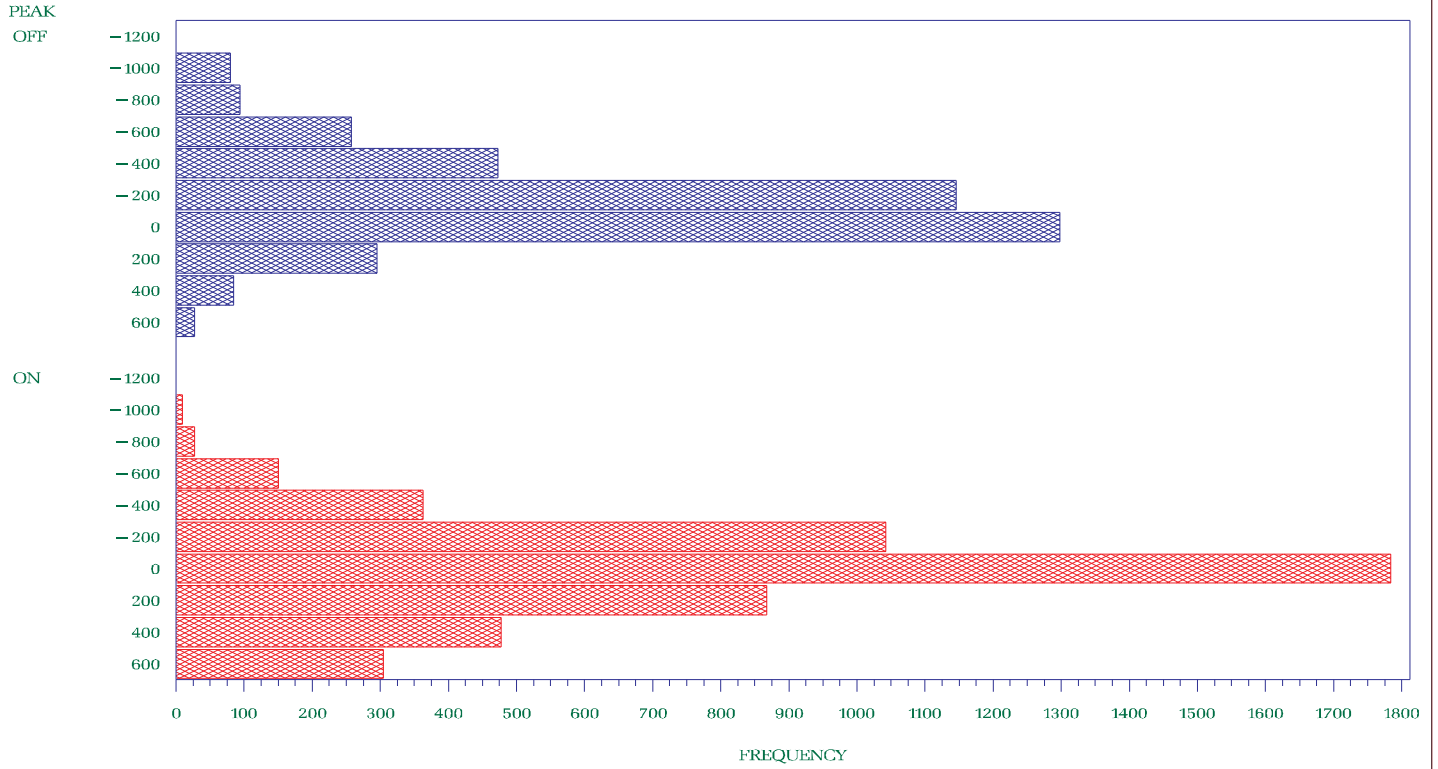
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

New England – NY SCHEDULE

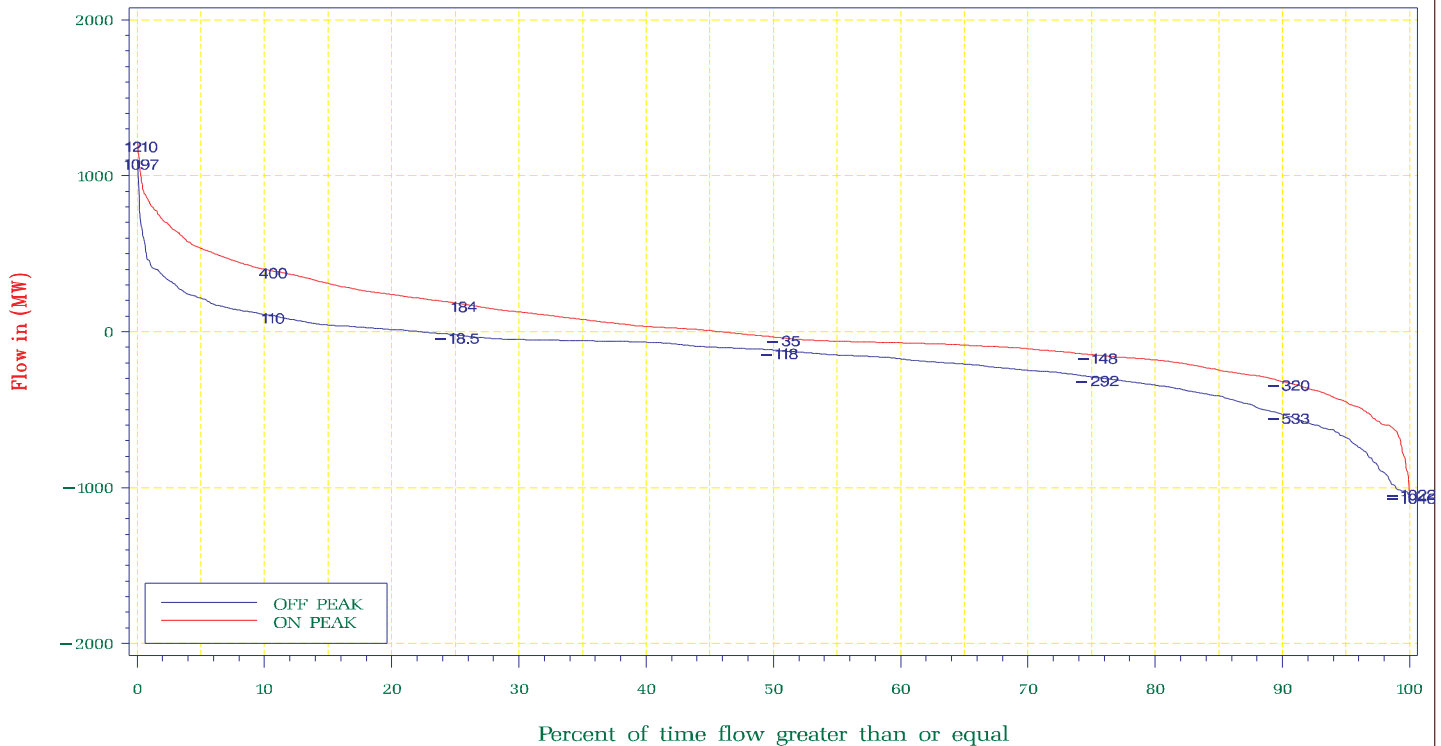


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

New England – NY SCHEDULE

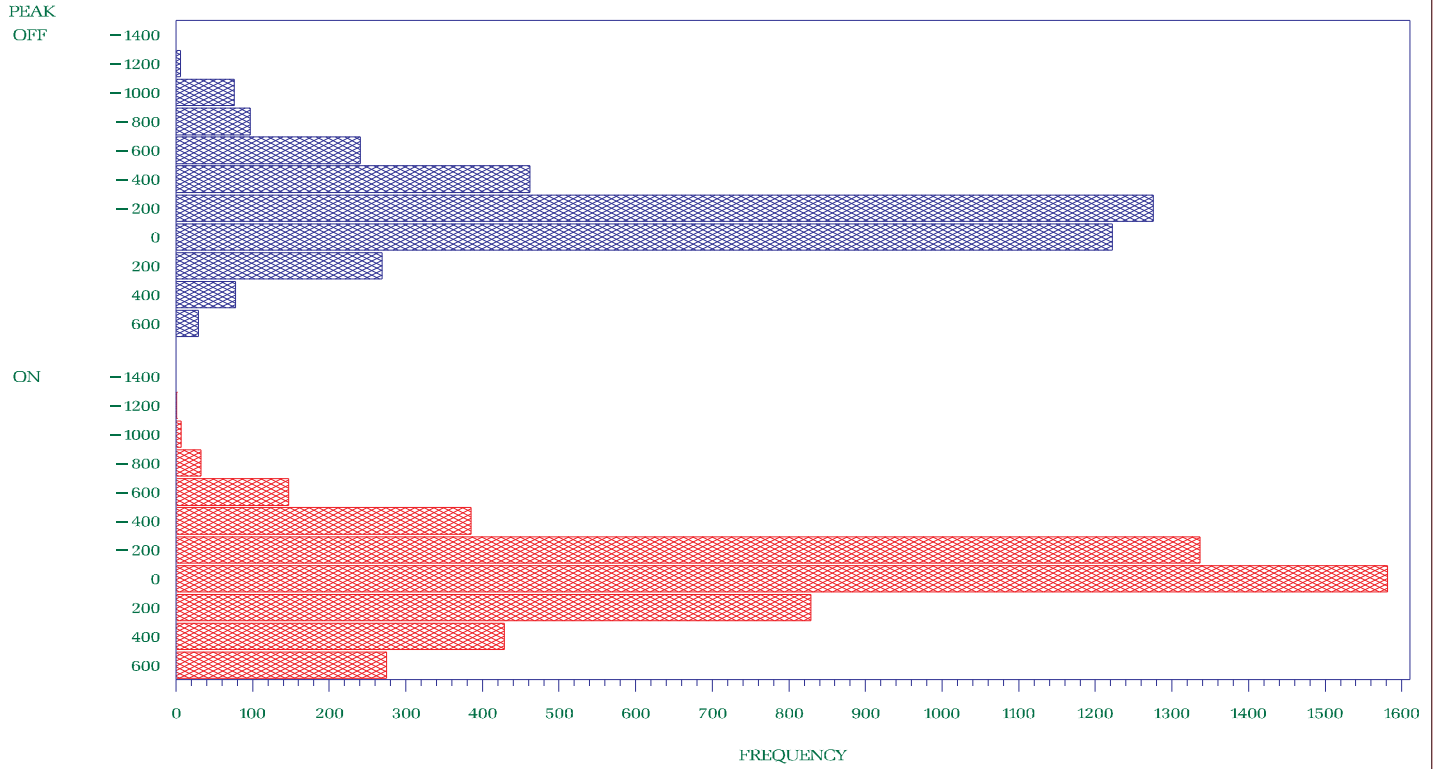


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

New England – NY

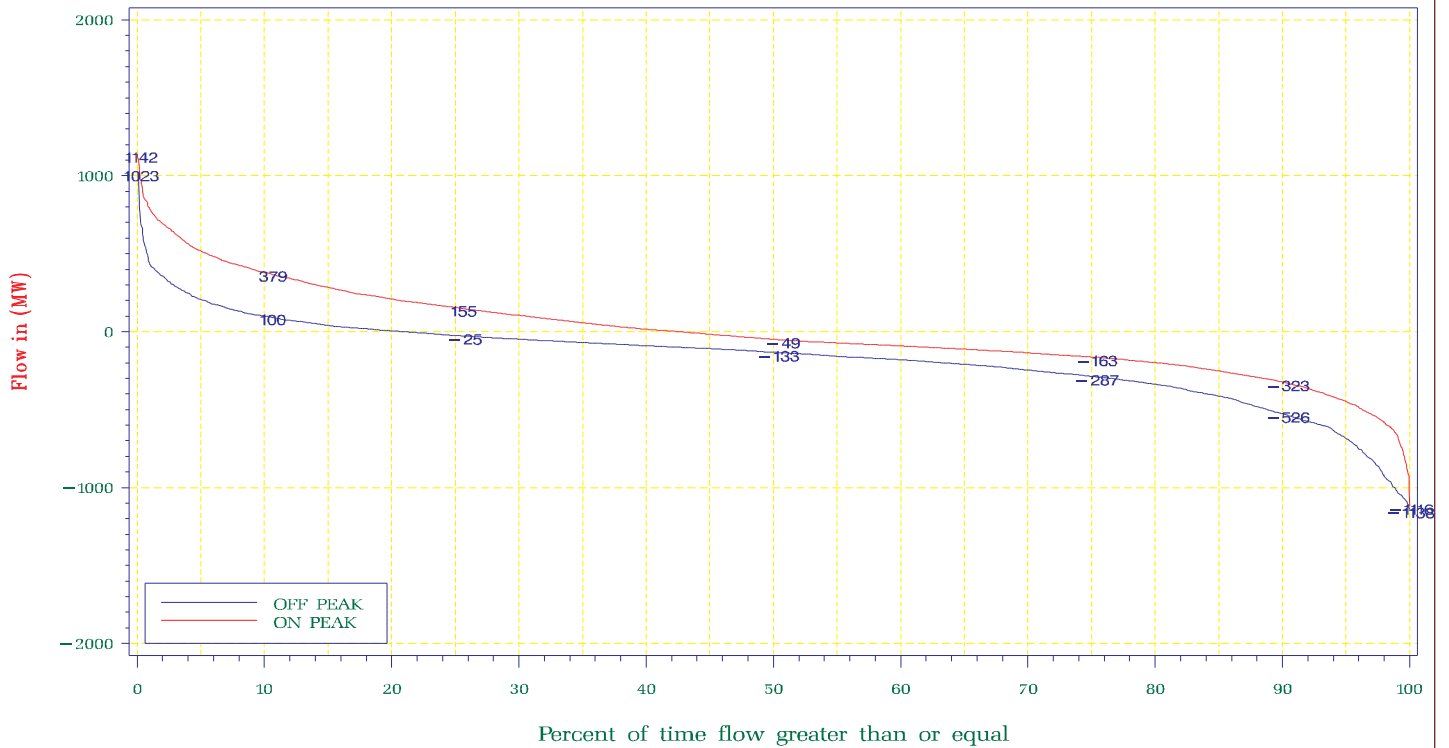


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

New England – NY

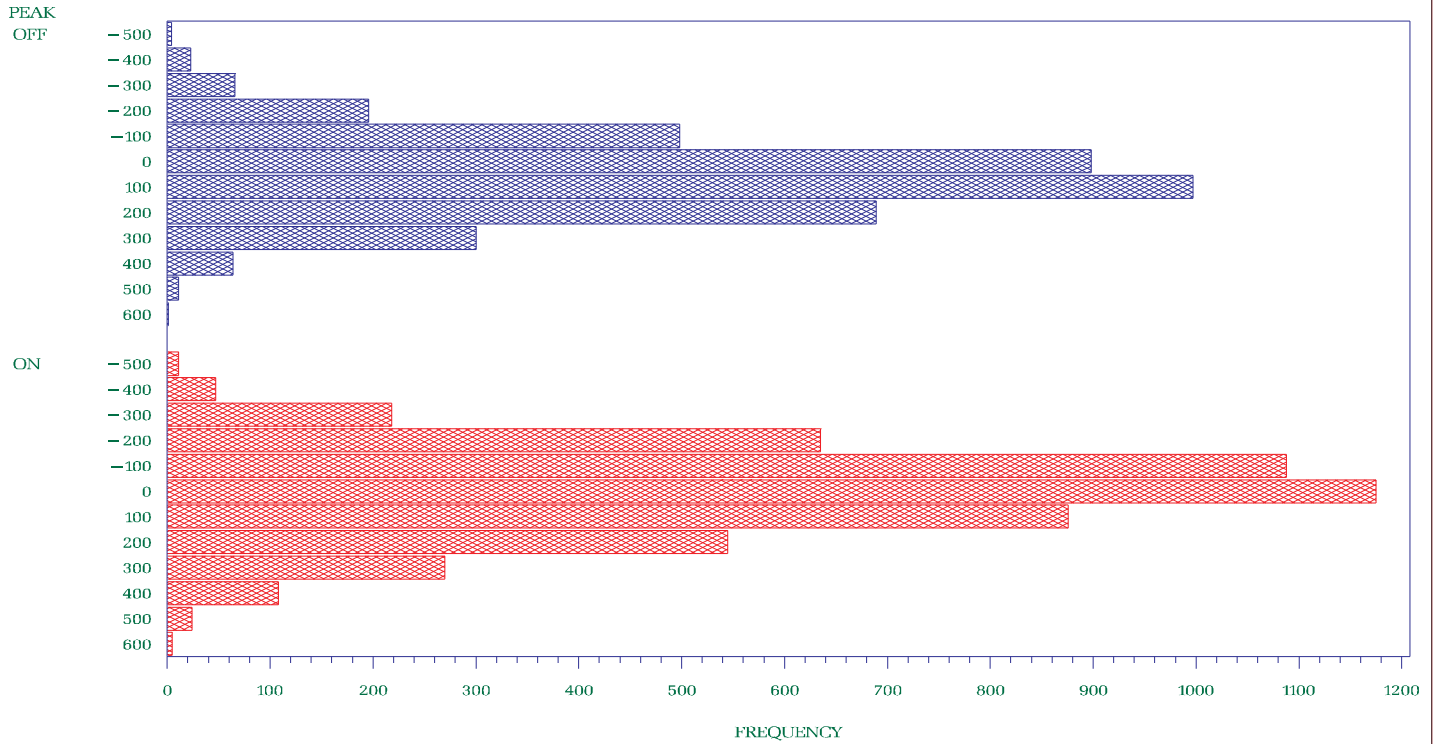


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley

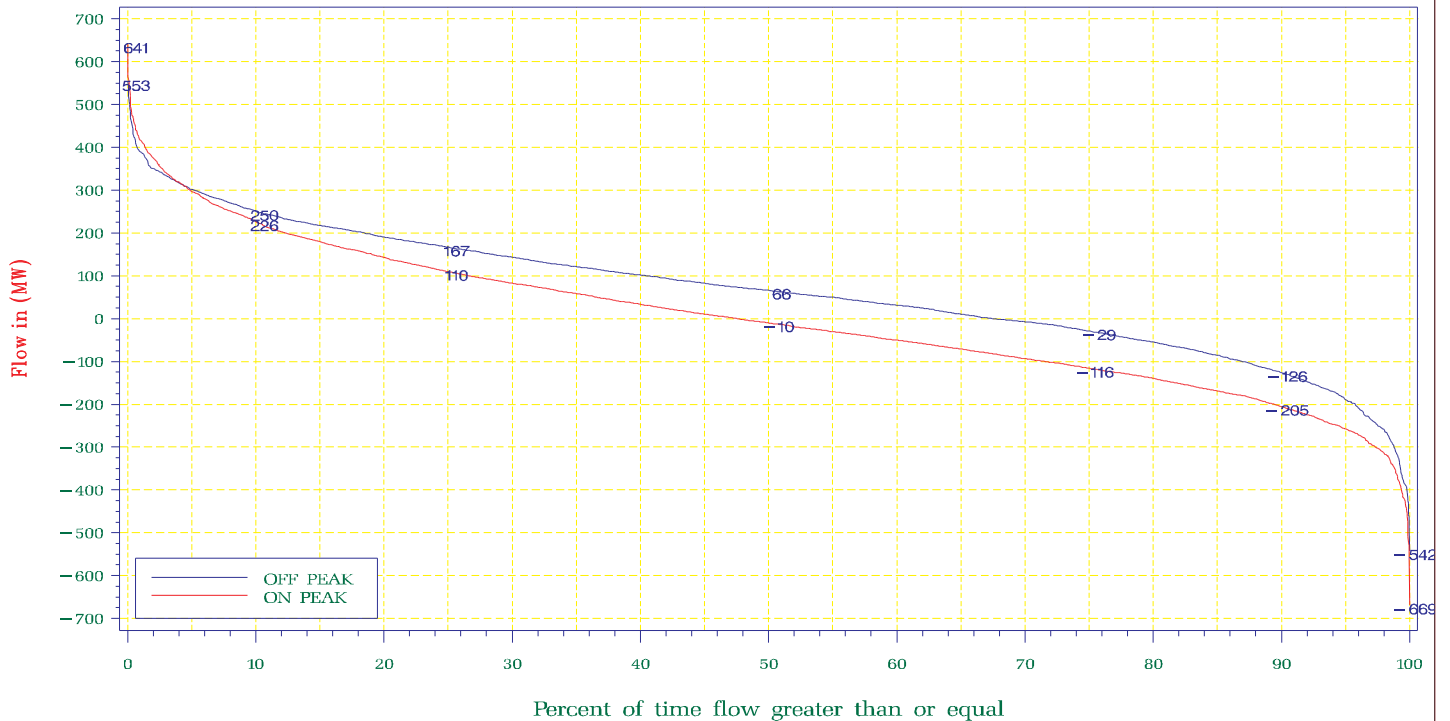


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley

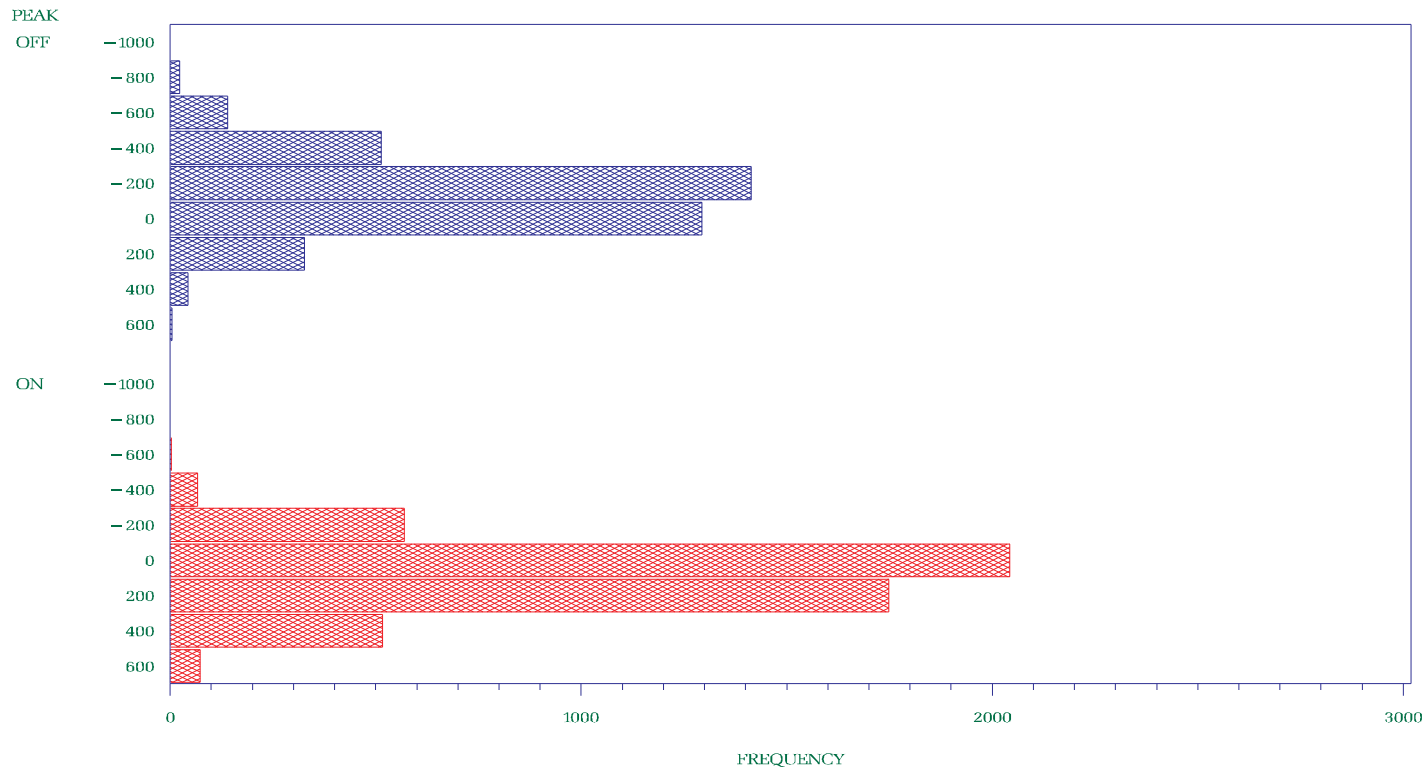


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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NYISO Frequency Interface Flow For January – December 2004

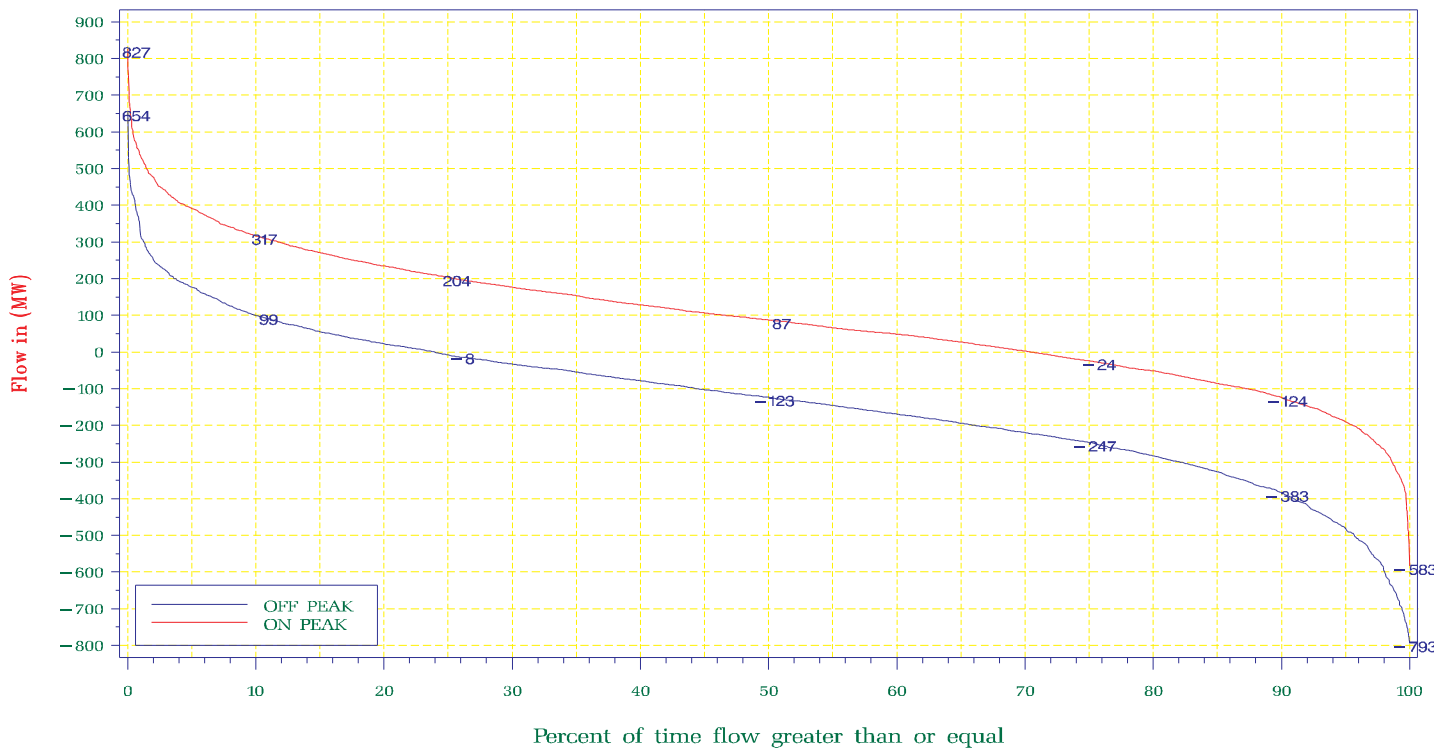
New England/Vt/NE/NU South – Capital/Mid Hudson



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday  
 ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

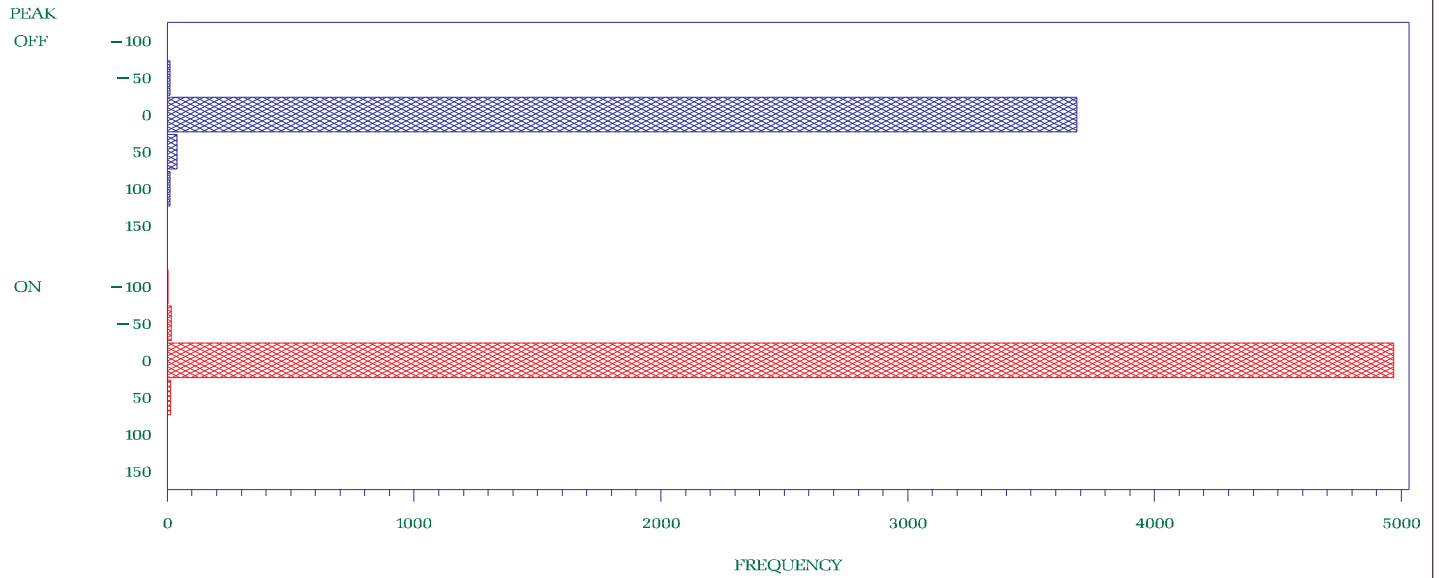
New England/Vt/NE/NU South – Capital/Mid Hudson



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday  
 ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

New England/NU – Long Island

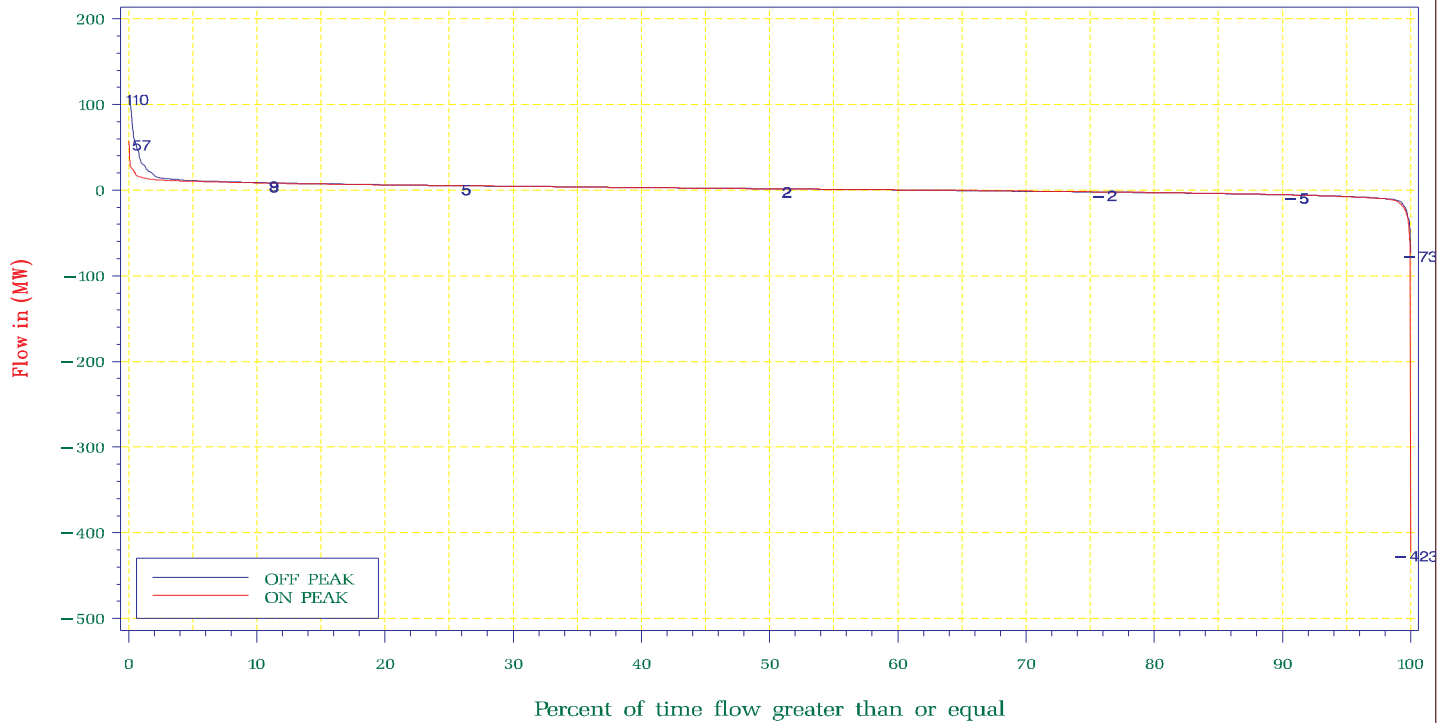


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

New England/NU – Long Island  
1385 Northport – Norwalk Harbor

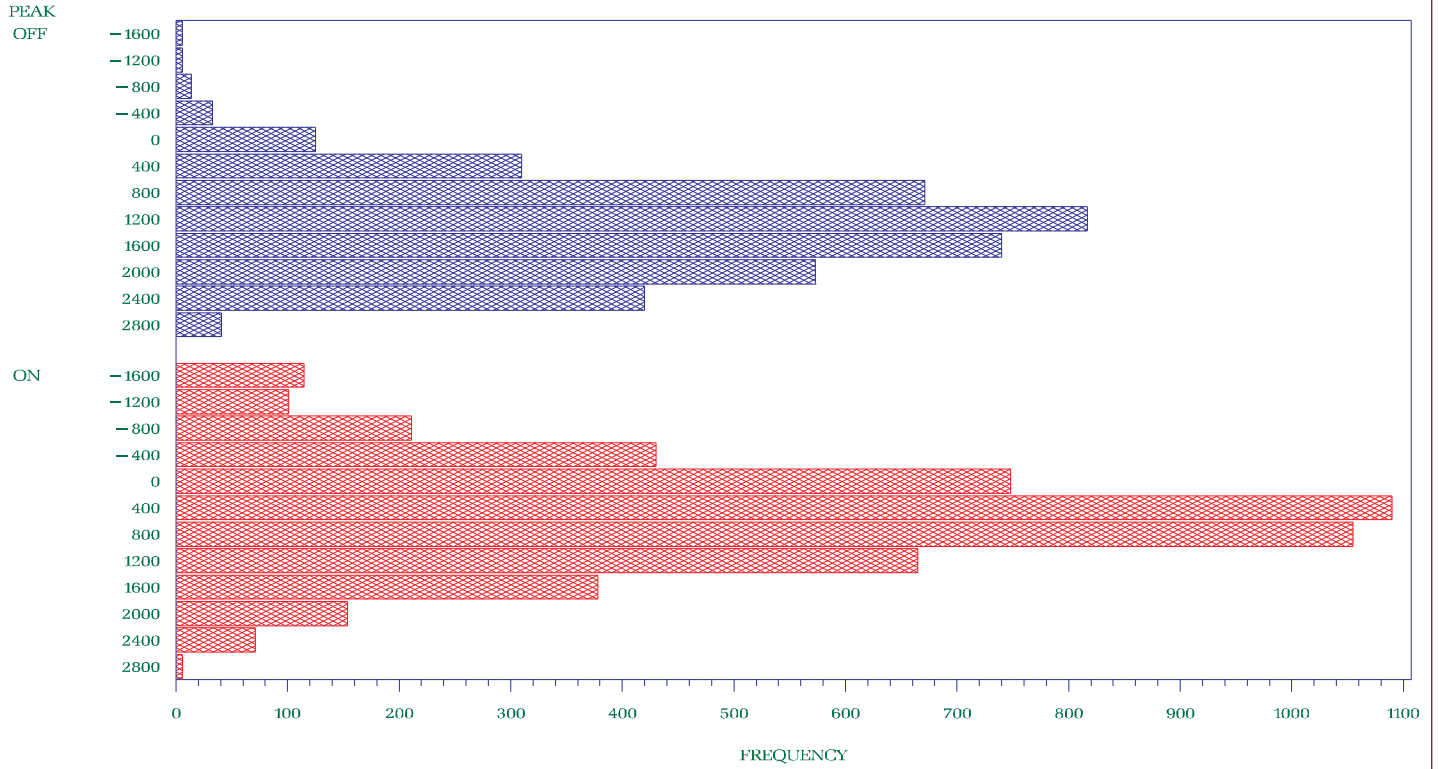


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

PJM – NY SCHEDULE

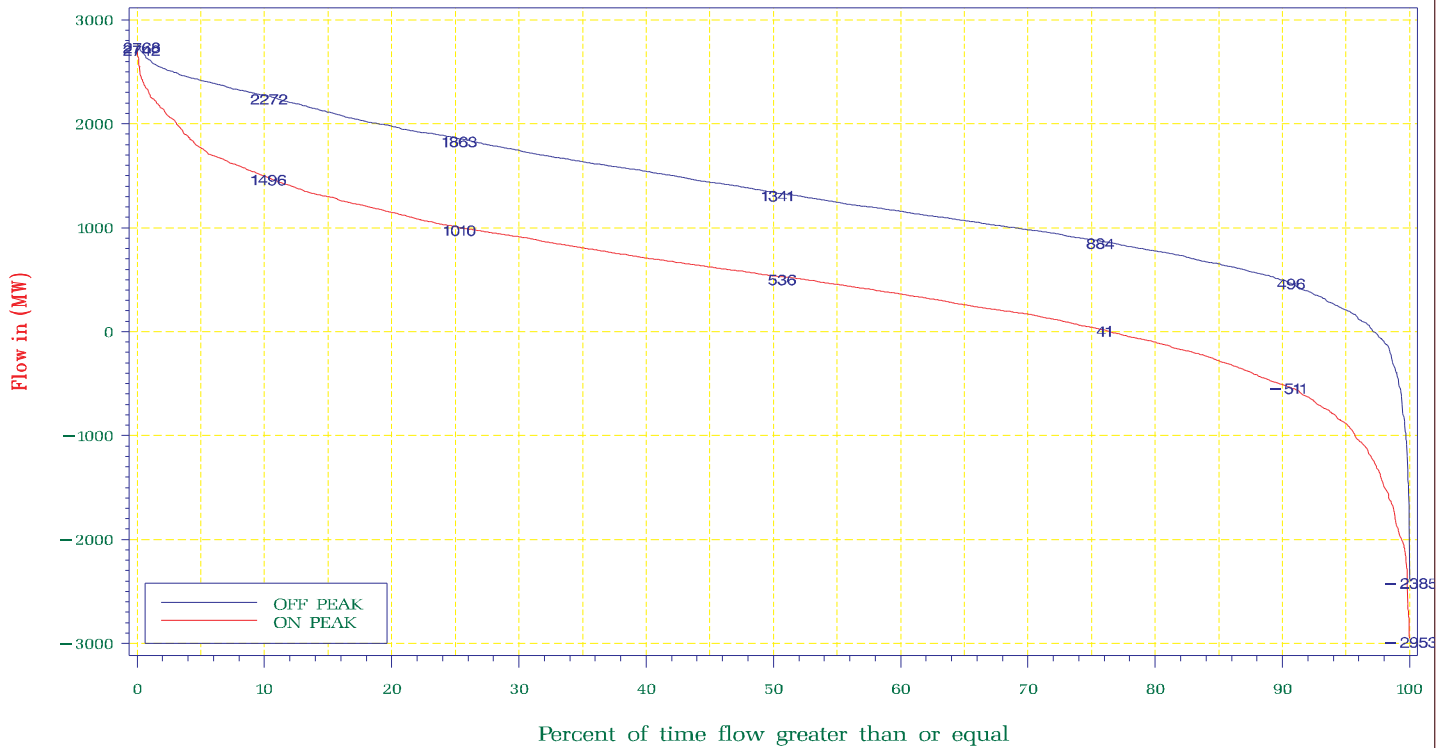


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

PJM – NY SCHEDULE



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

PJM – NY

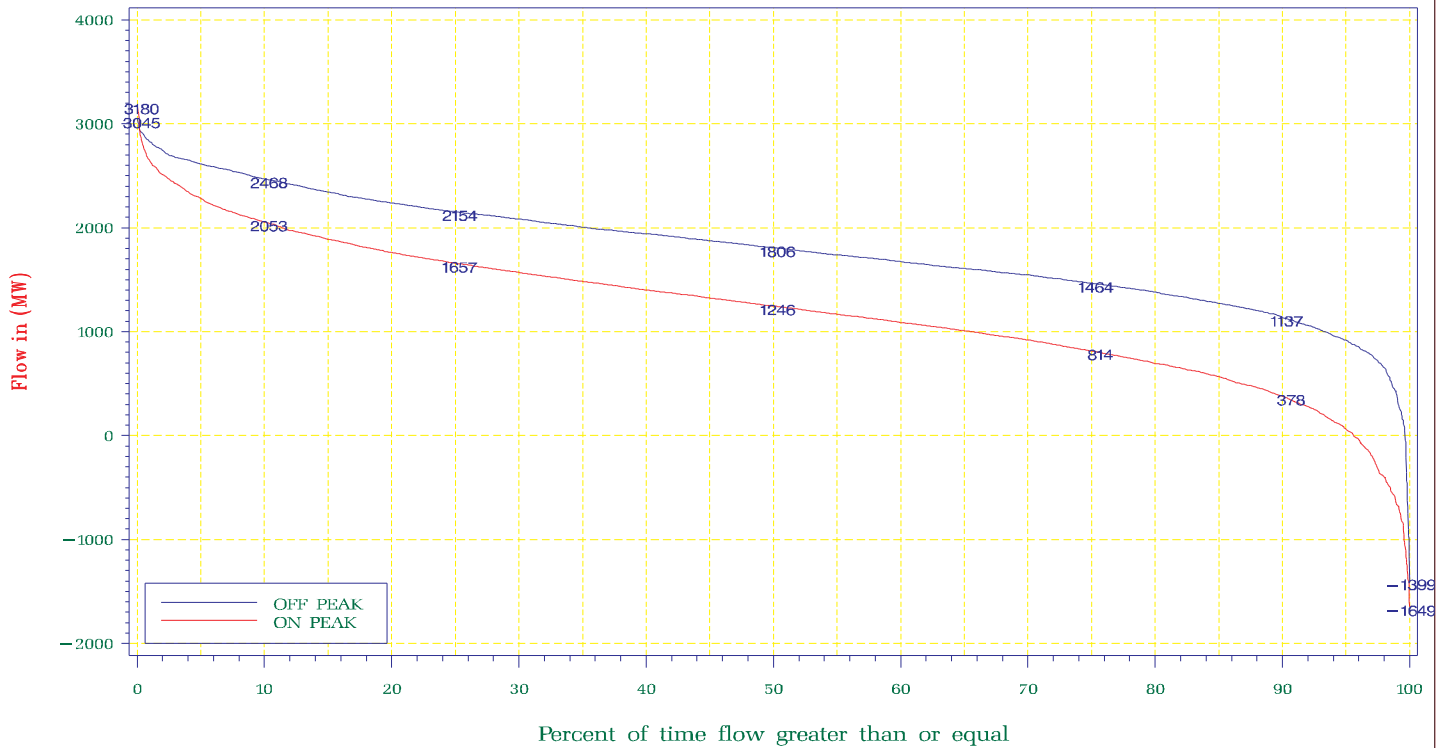


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

PJM – NY

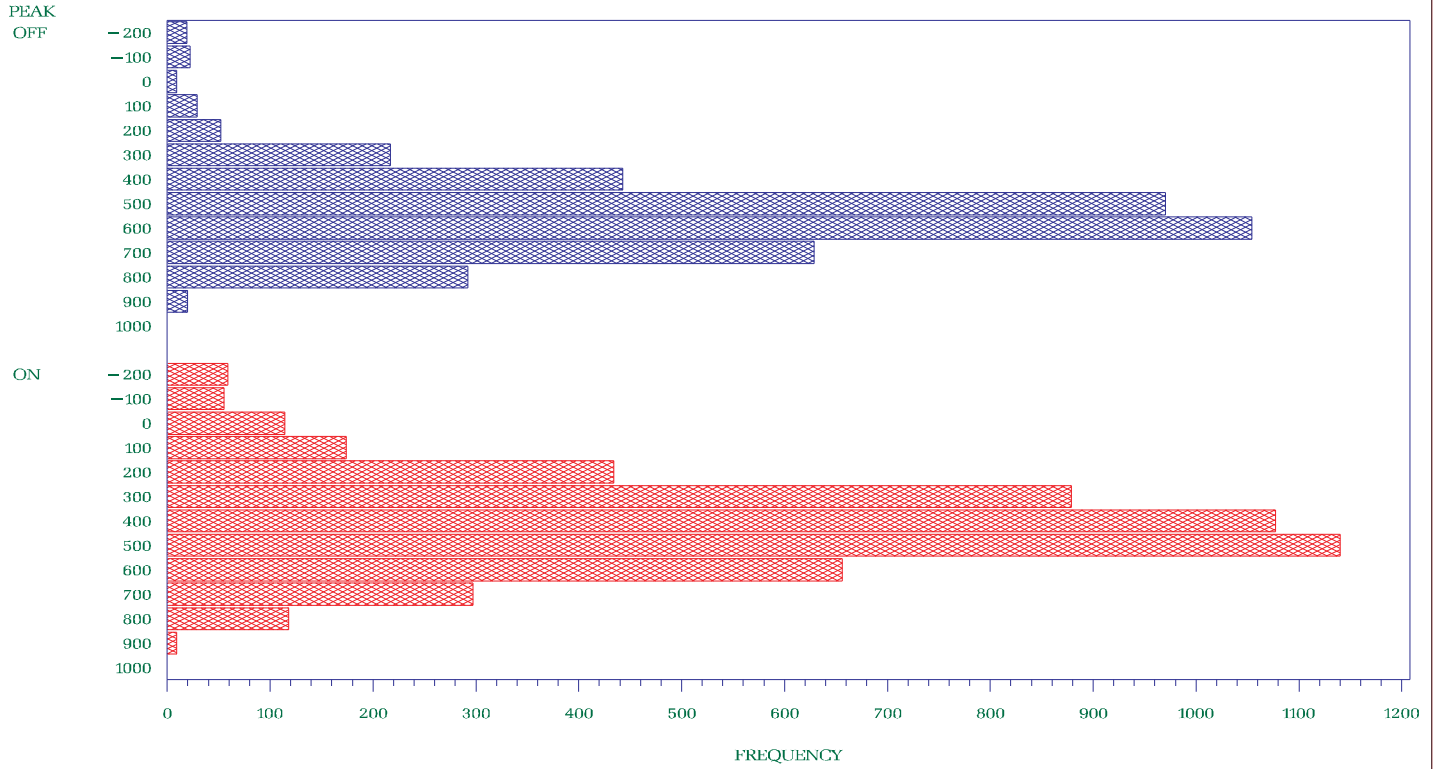


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

PJM West – Central

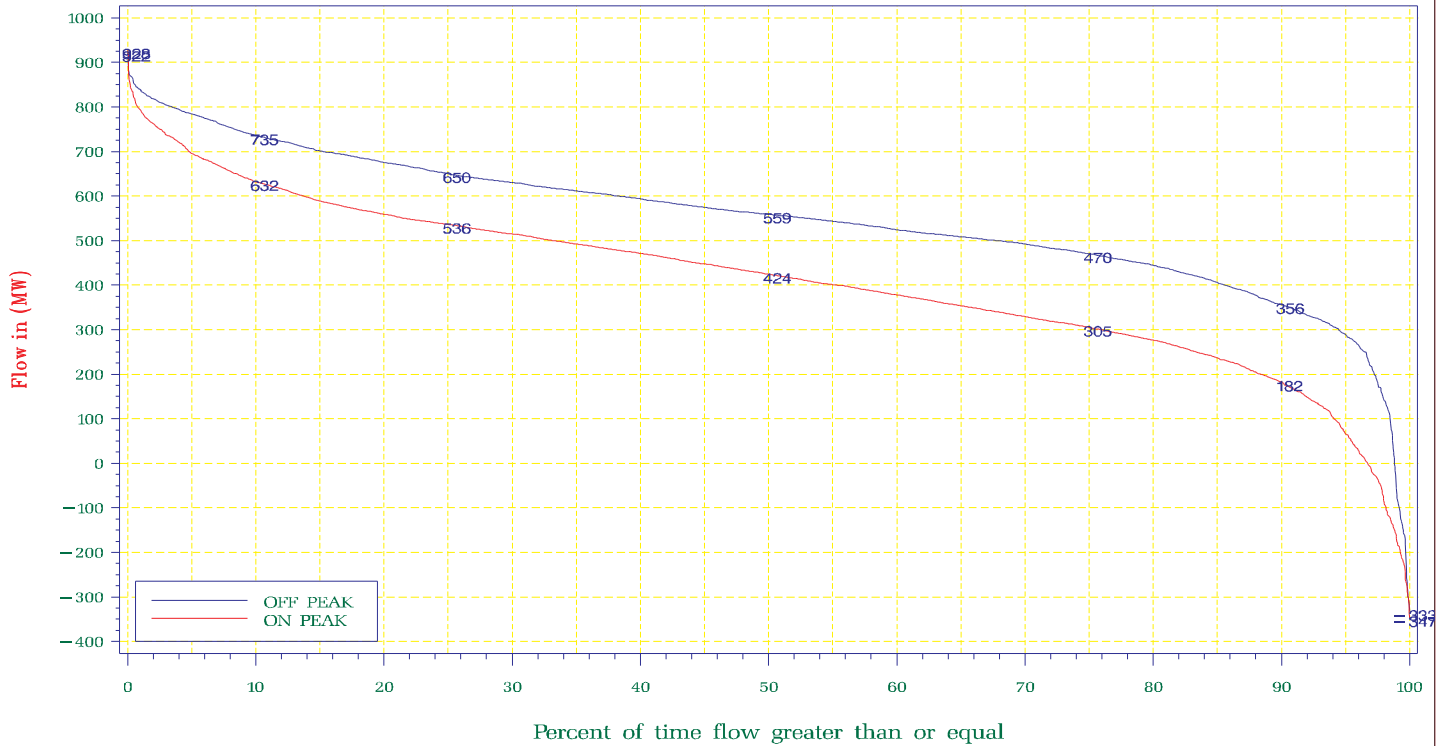


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

PJM West – Central



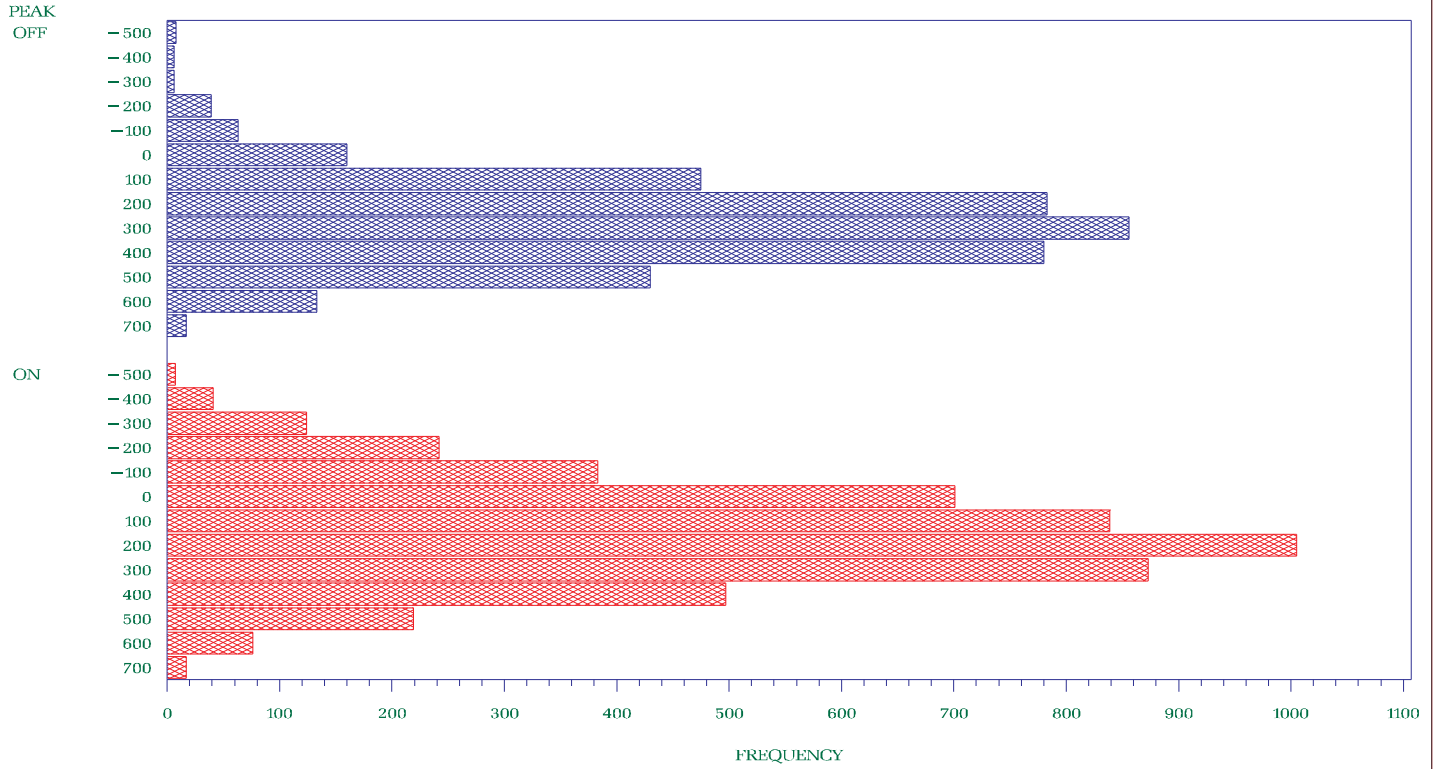
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

PJM West – Frontier

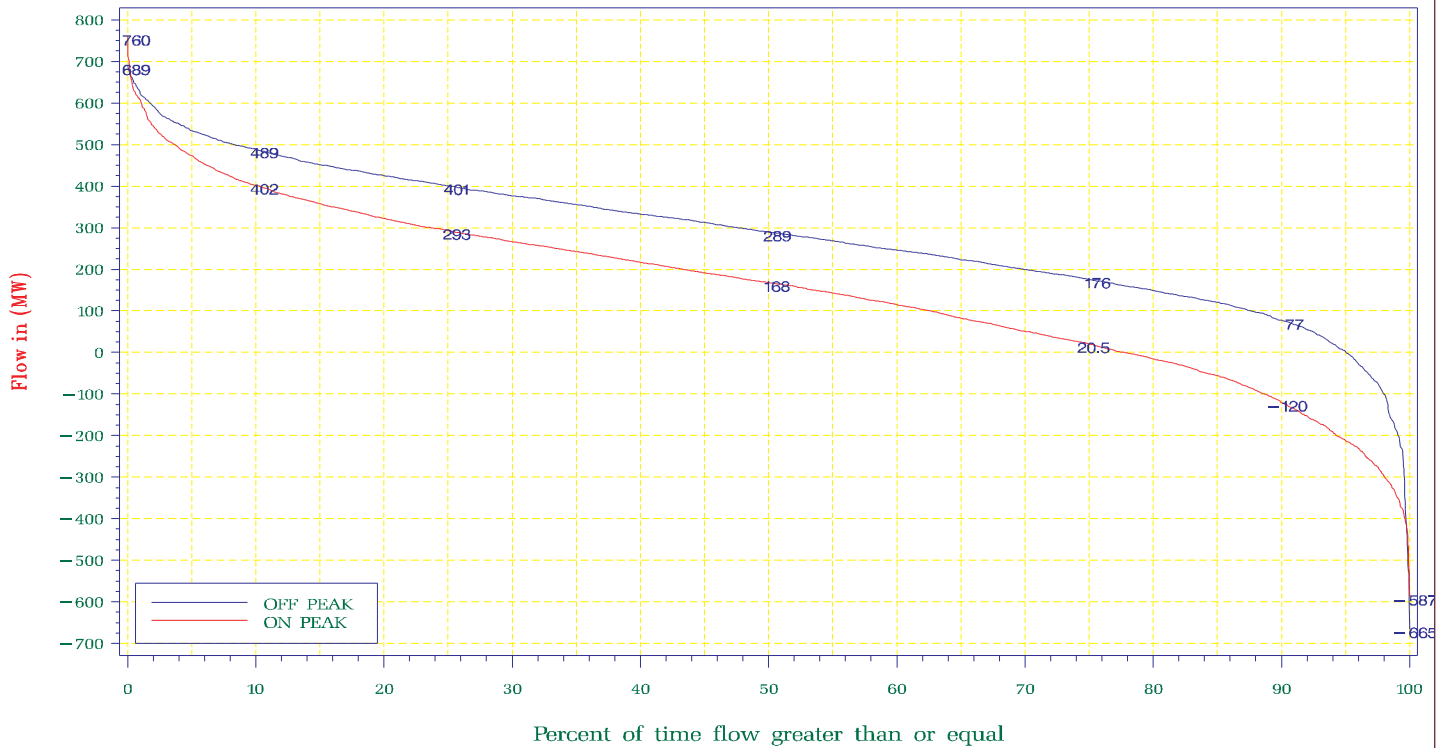


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

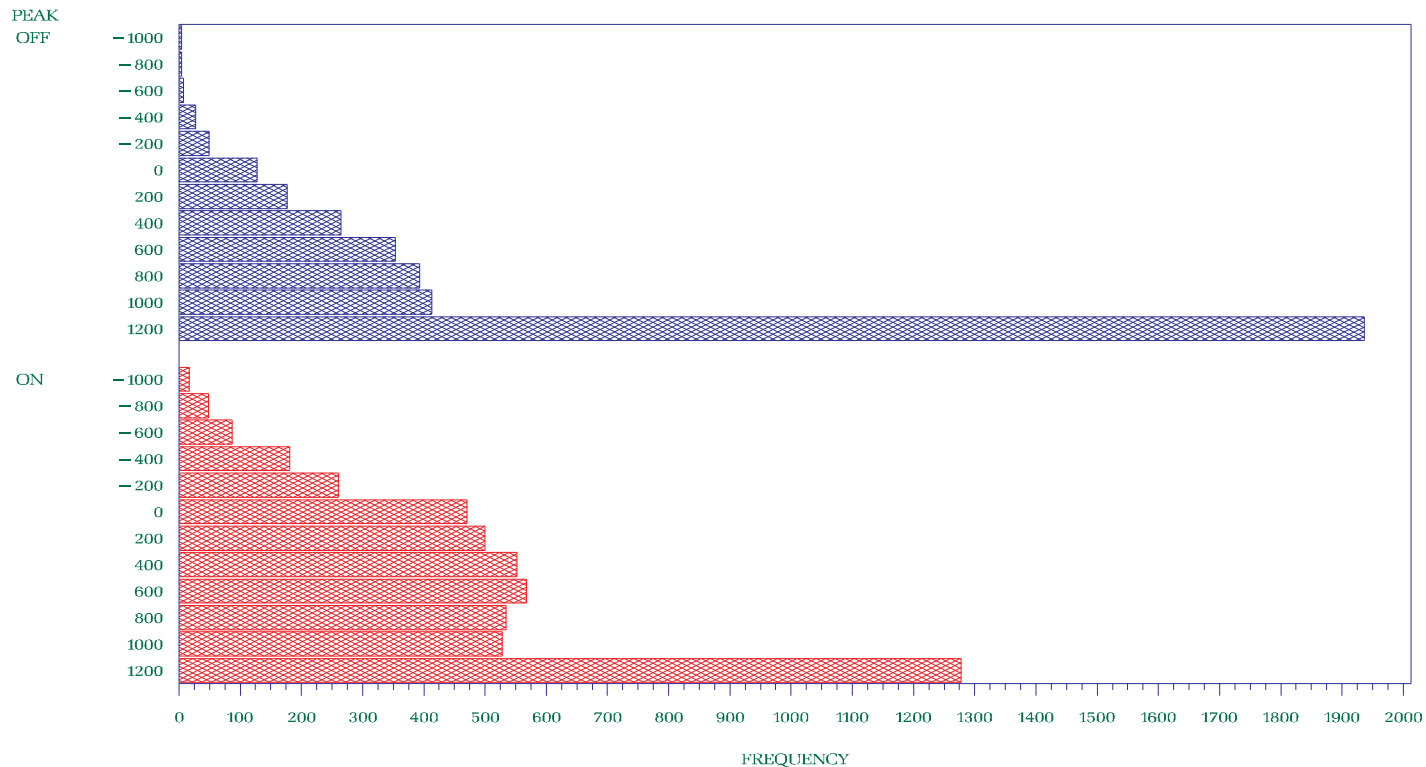
PJM West – Frontier



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

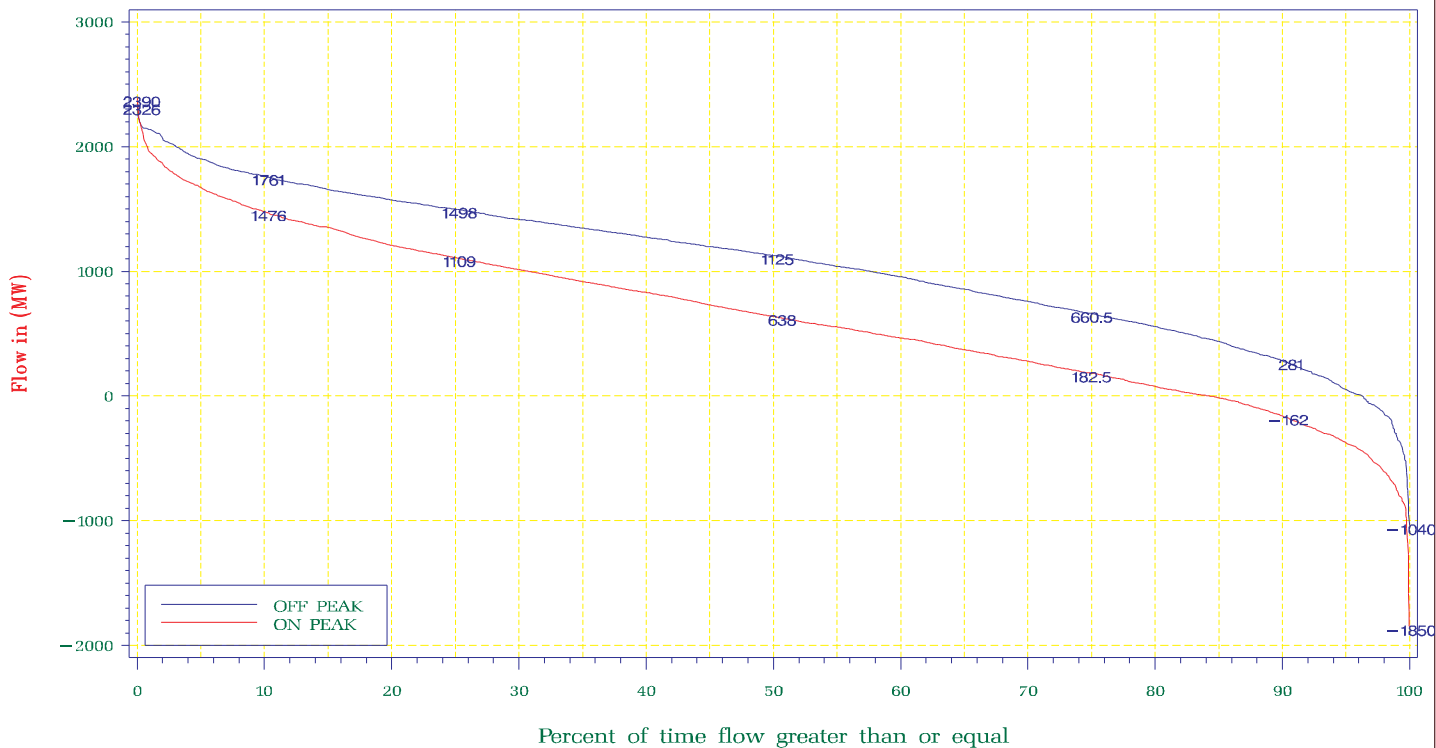
ONTARIO – NY SCHEDULE



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

ONTARIO – NY SCHEDULE



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

ONTARIO – NY

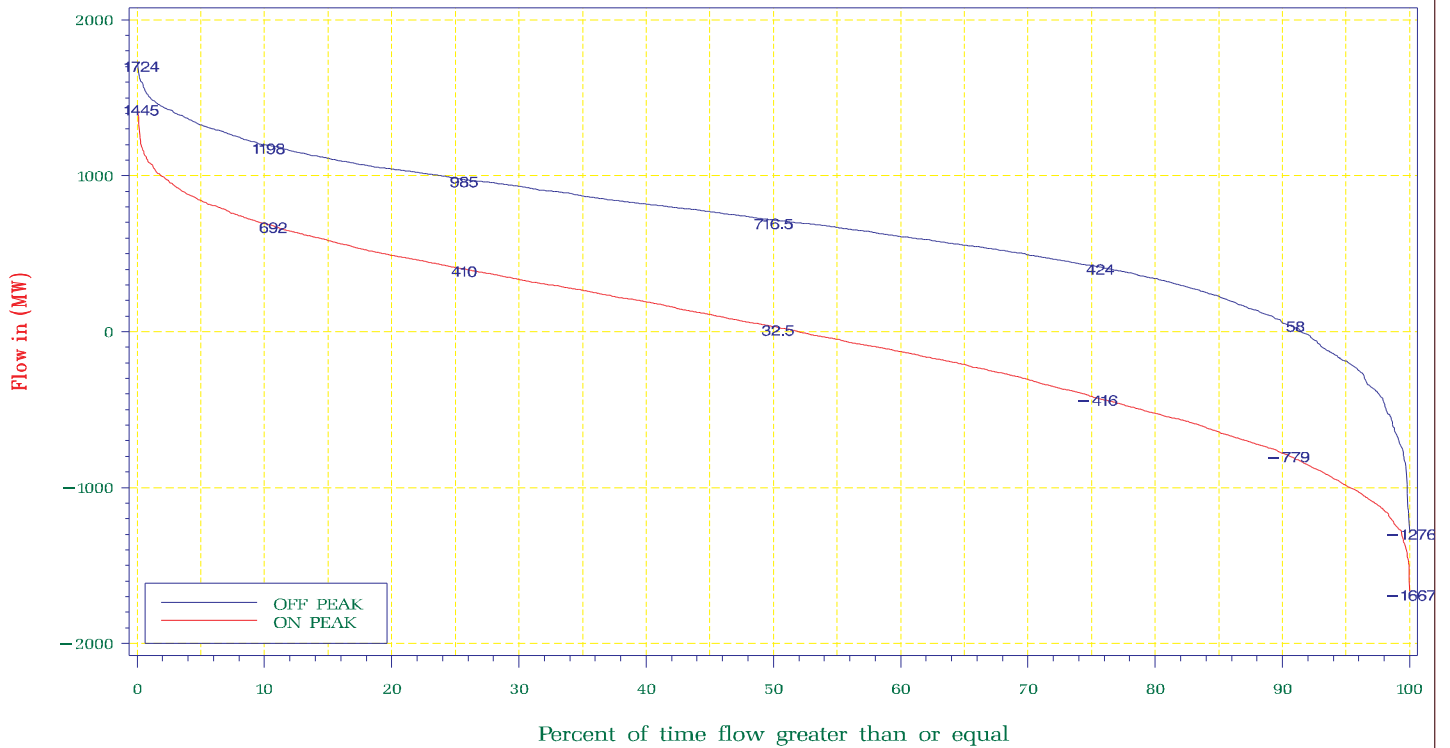


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

ONTARIO – NY

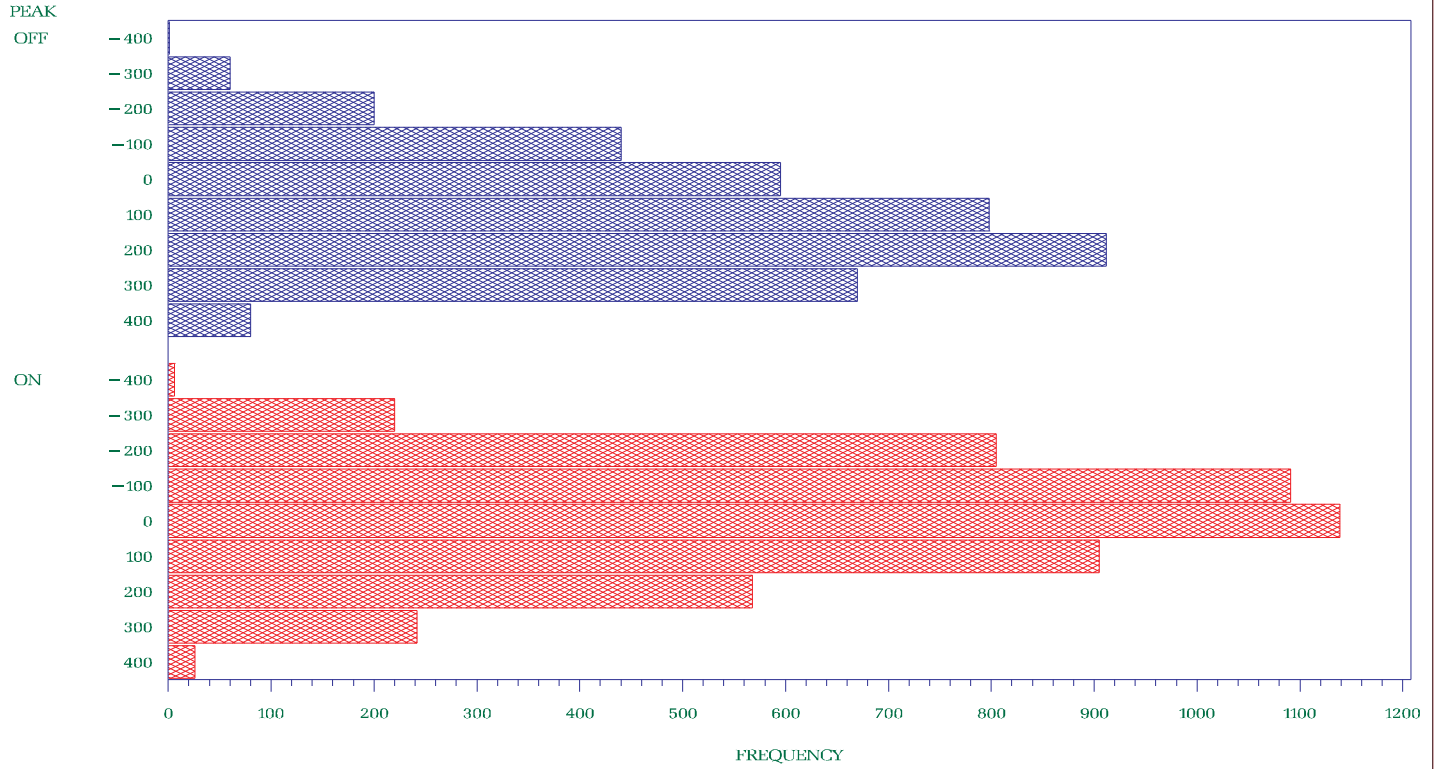


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Ontario East – Adirondack

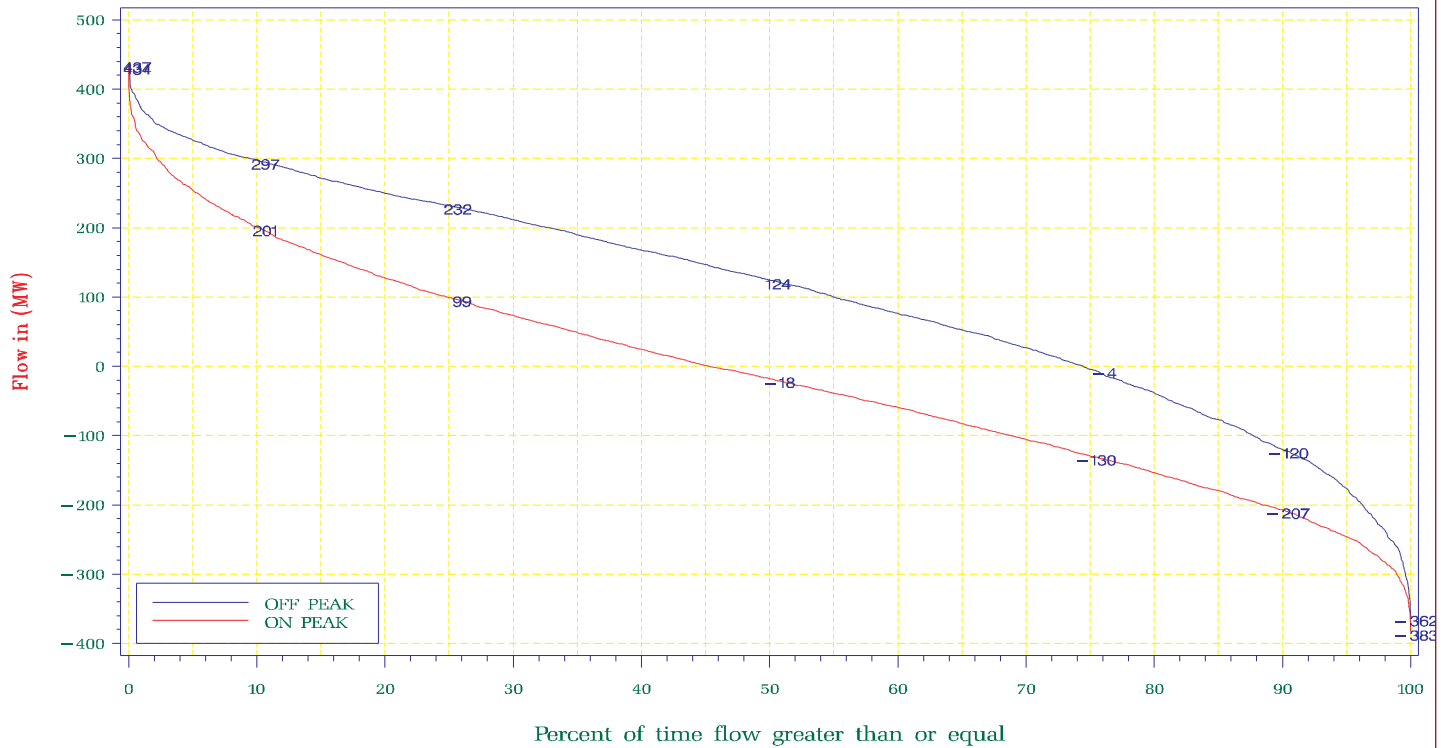


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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NYISO Percent of time Interface Flow For January – December 2003

Ontario East – Adirondack

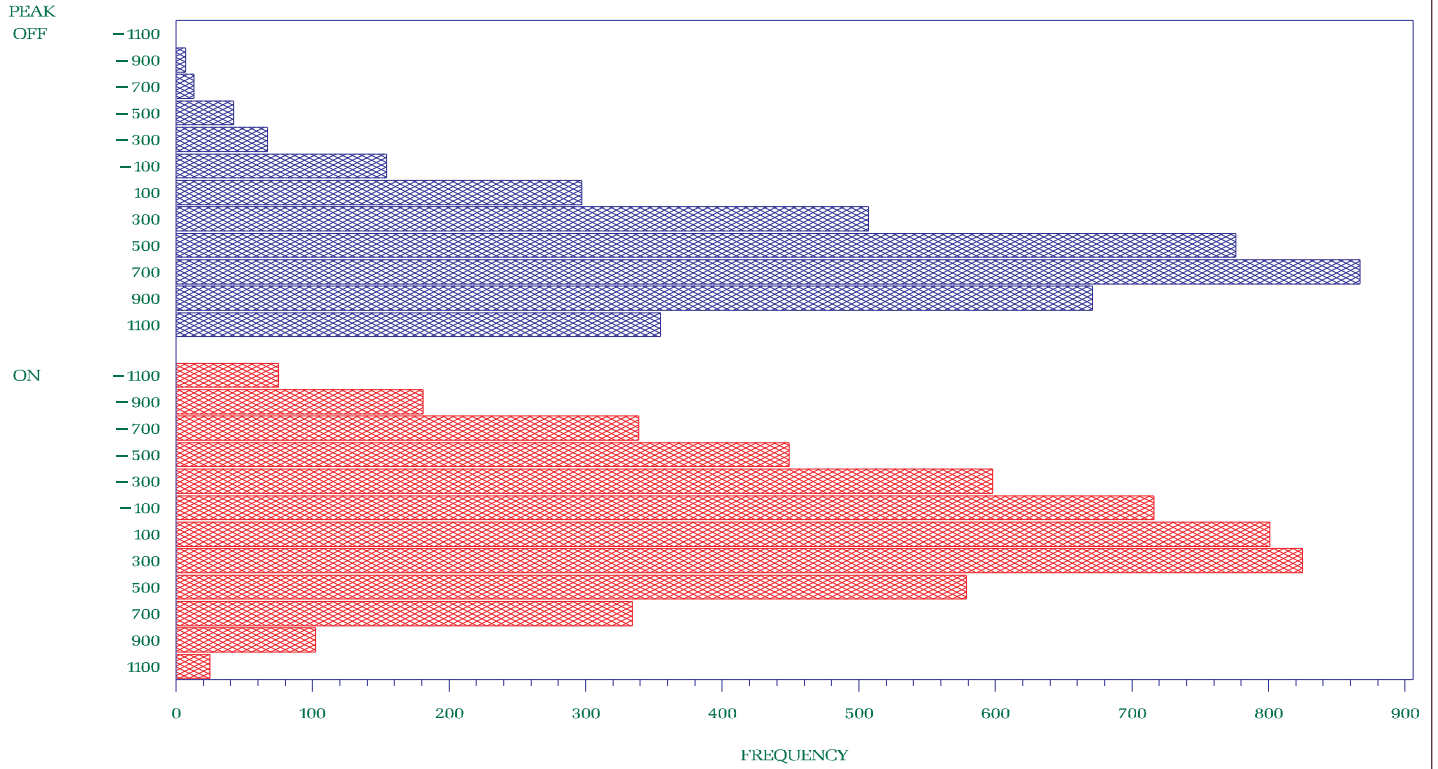


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Ontario South – Frontier

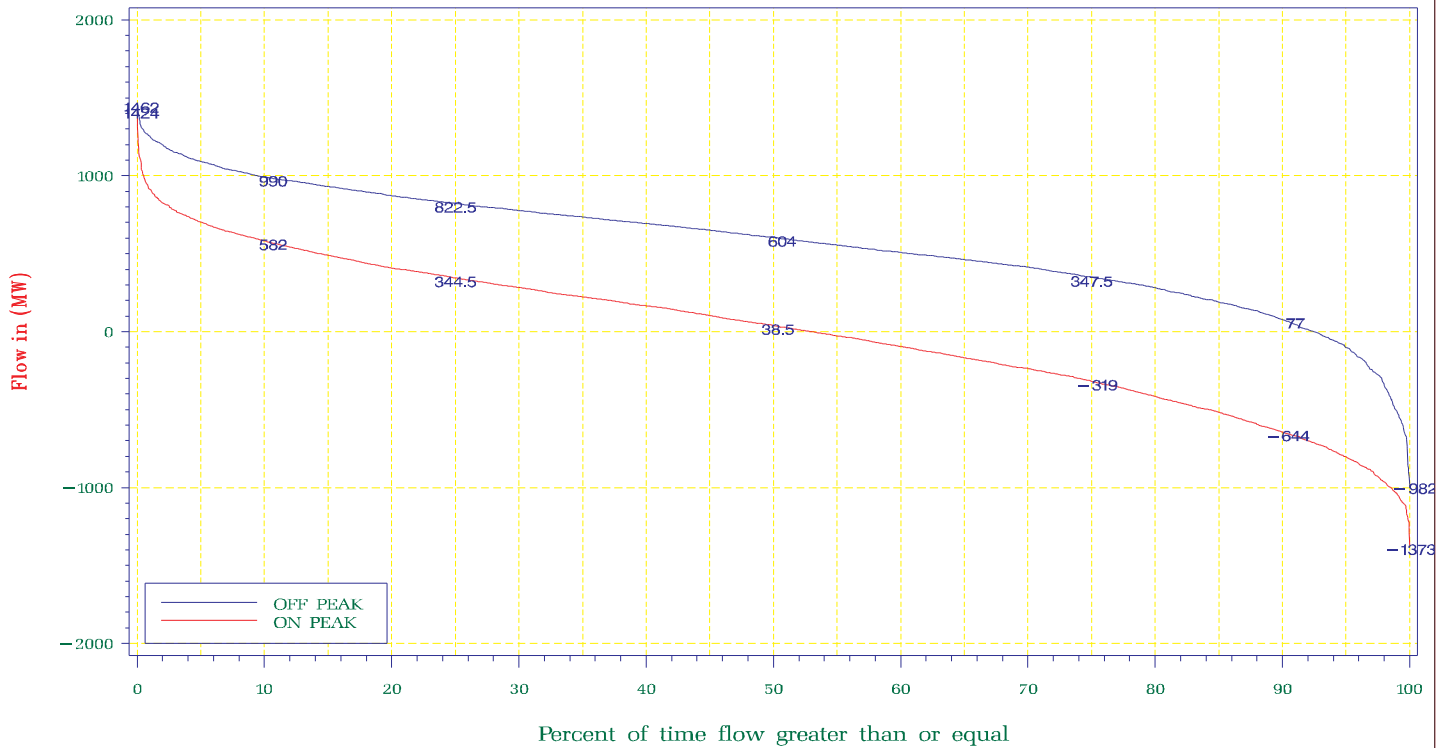


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

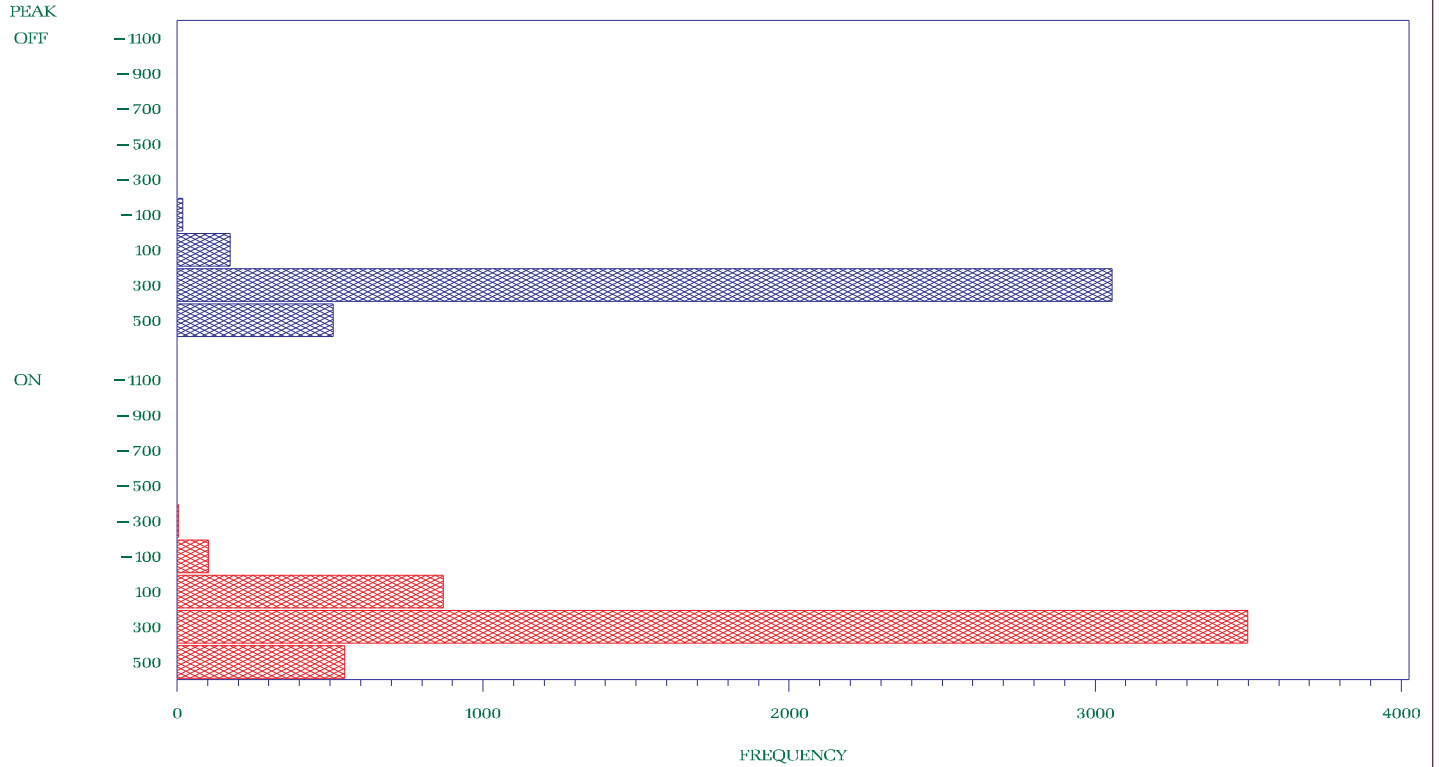
Ontario South – Frontier



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

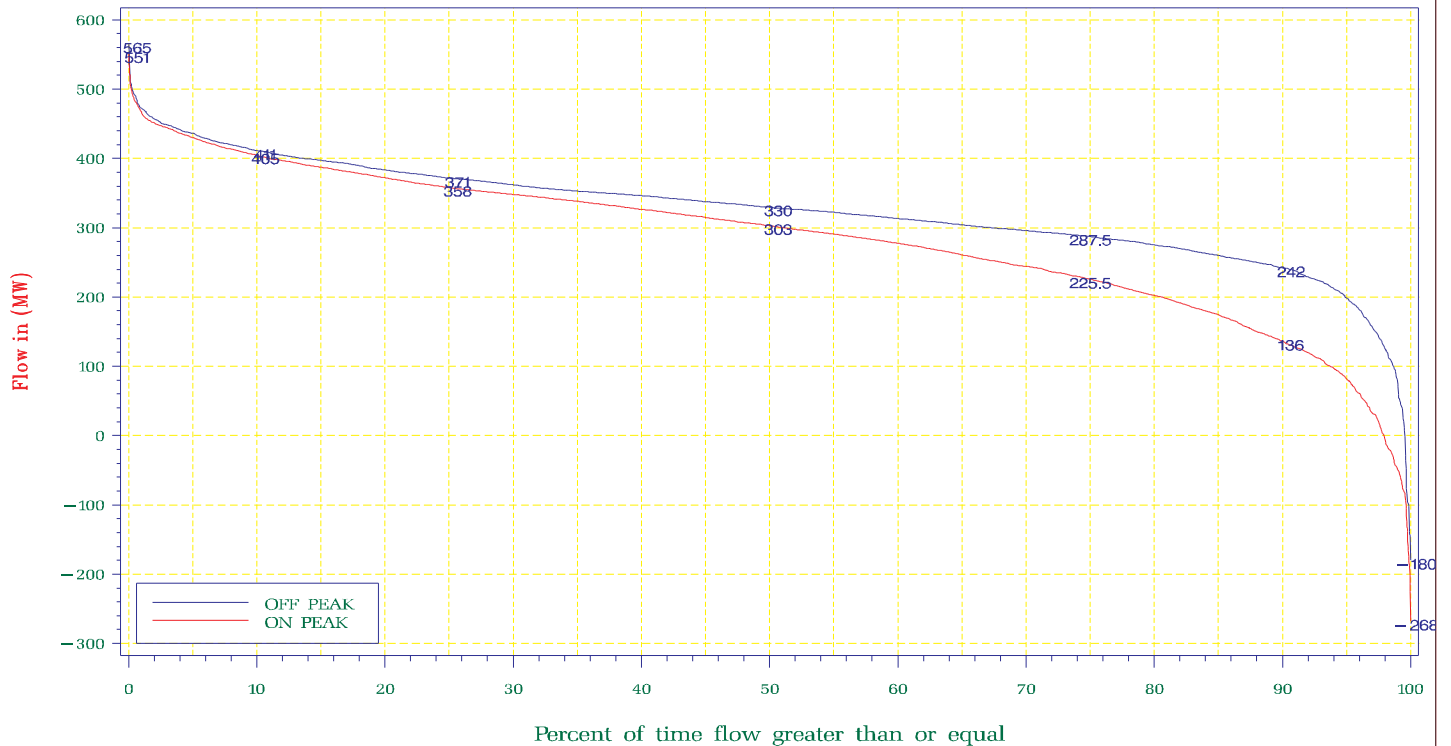
NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION

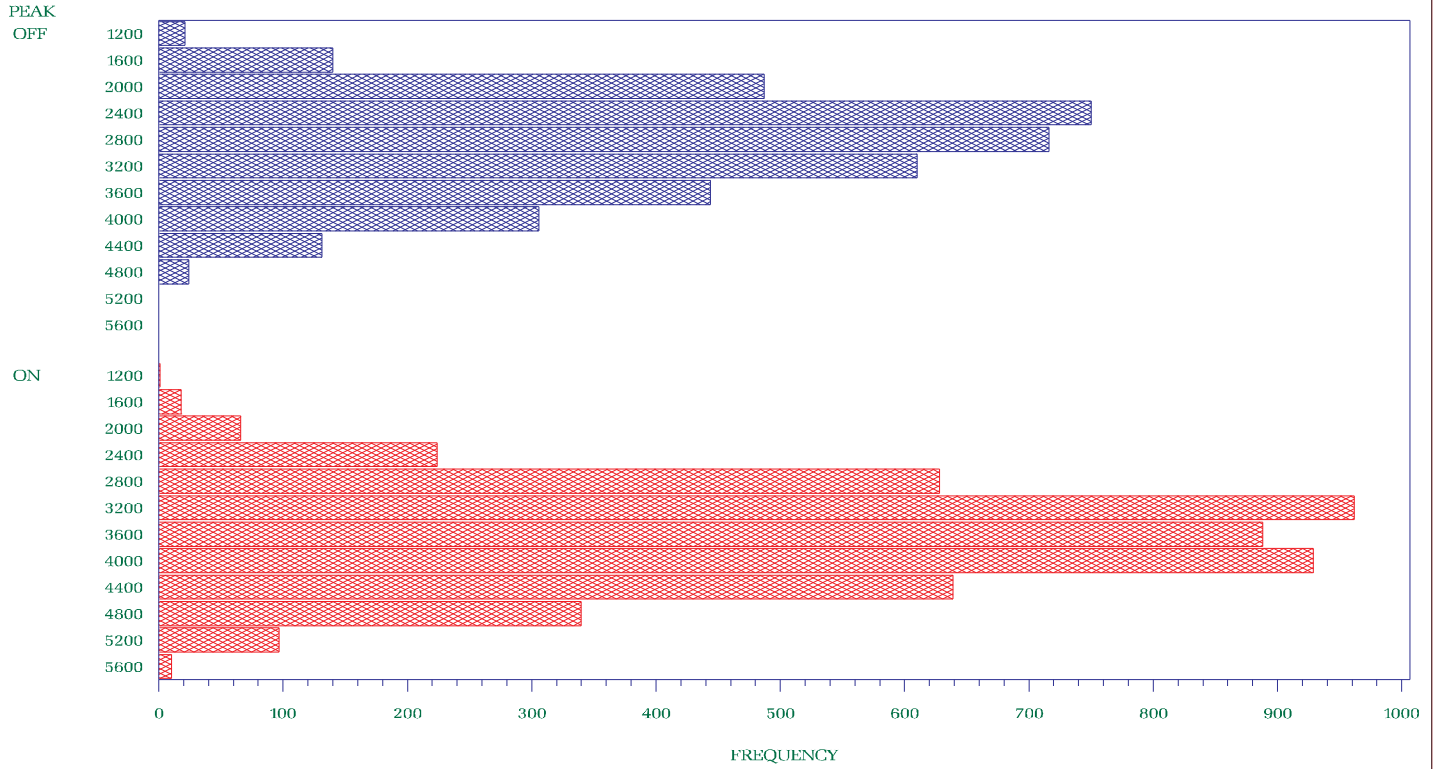


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

UPNY – SENY (OPEN)

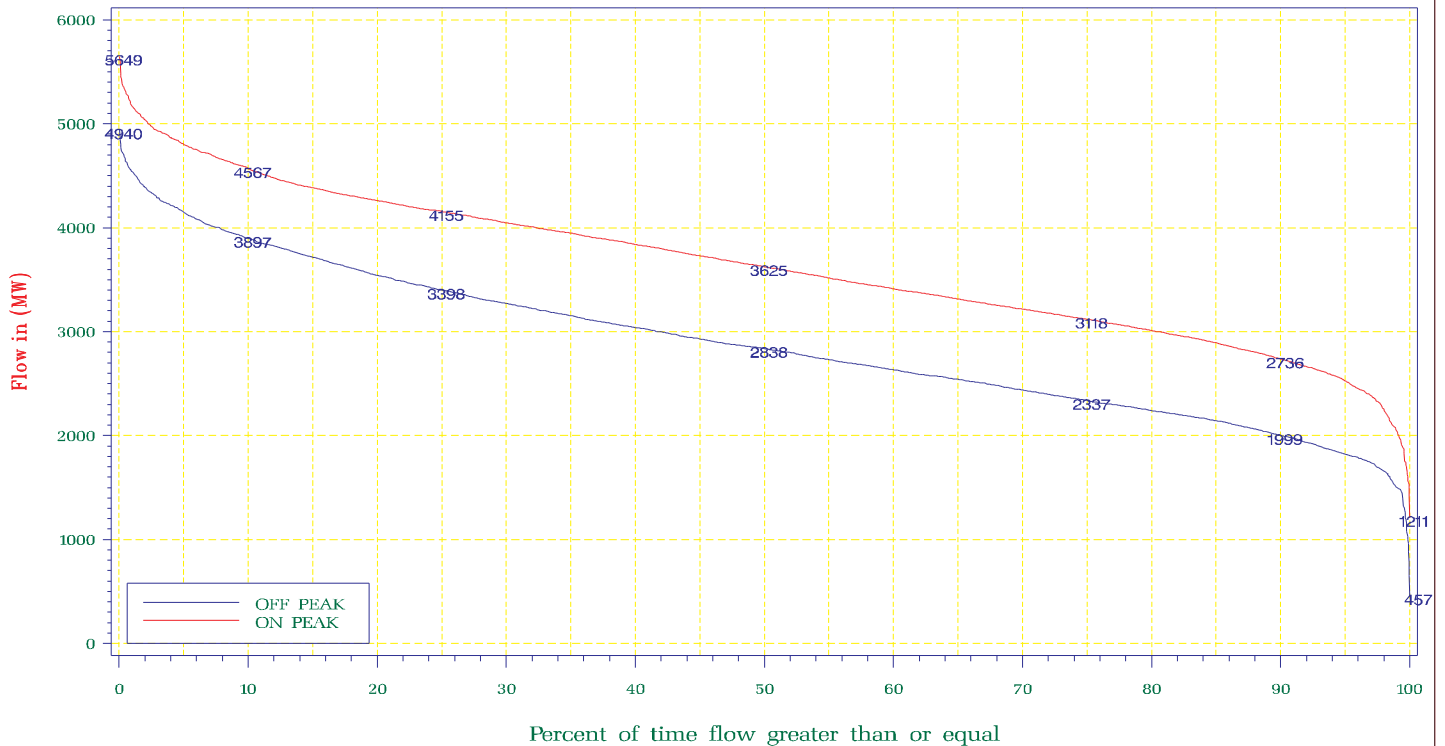


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

UPNY – SENY (OPEN)

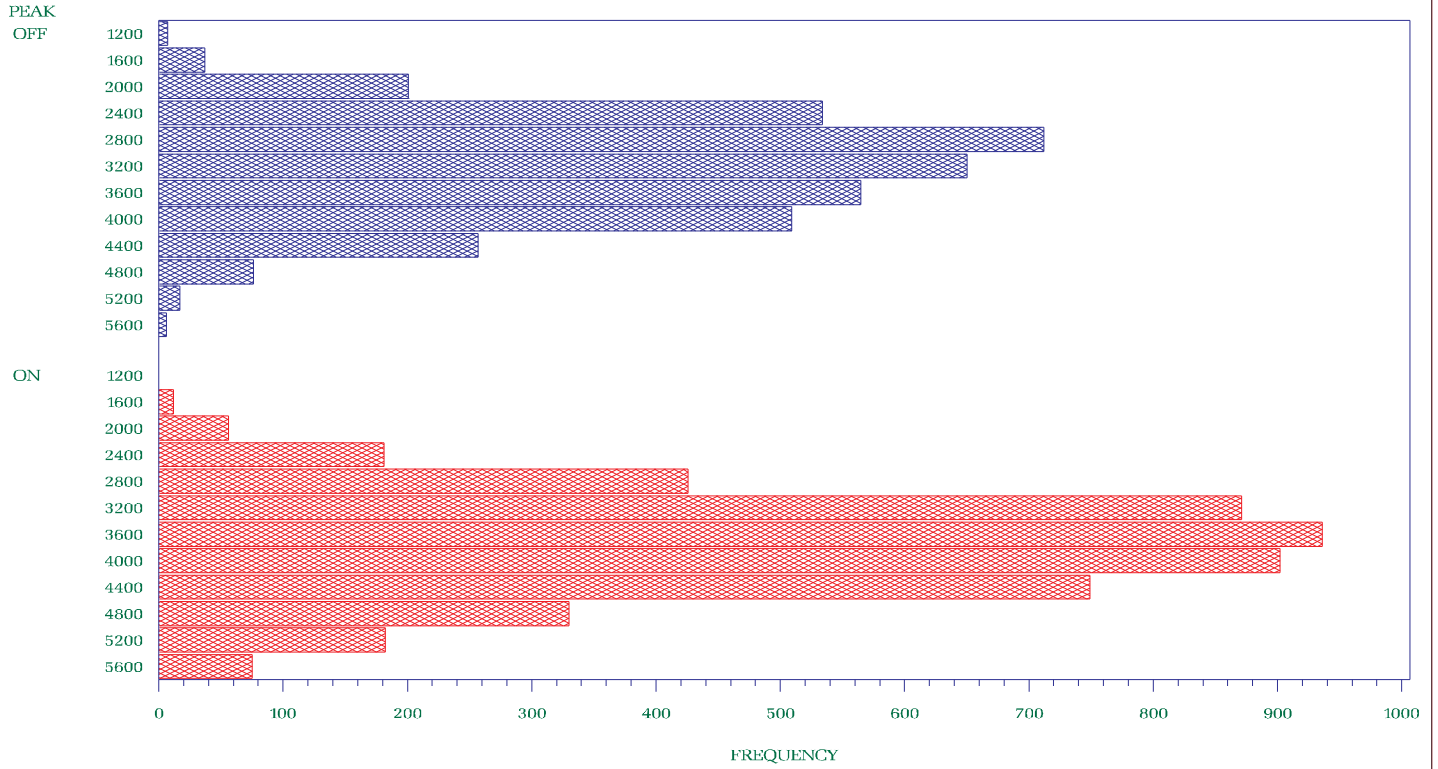


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

UPNY – SENY (CLOSED)

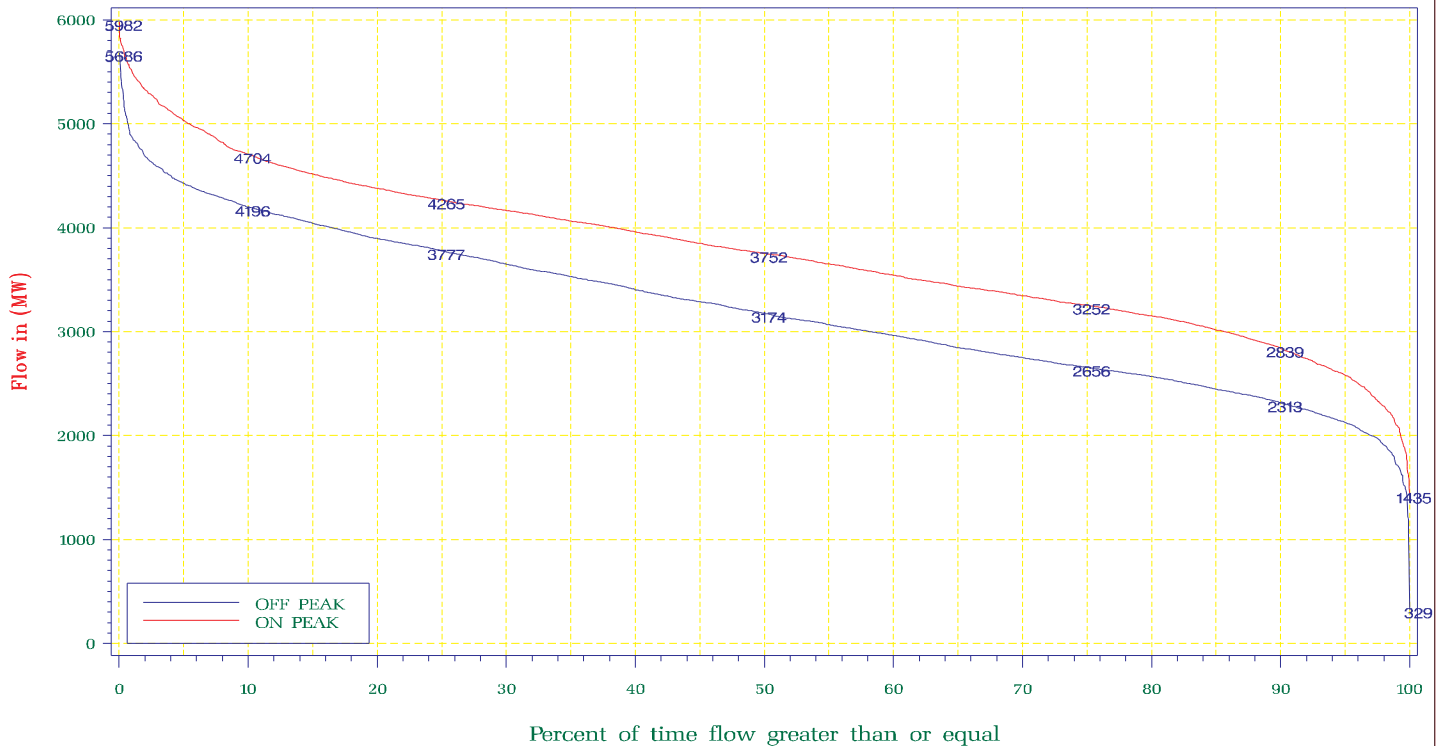


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

UPNY – SENY (CLOSED)



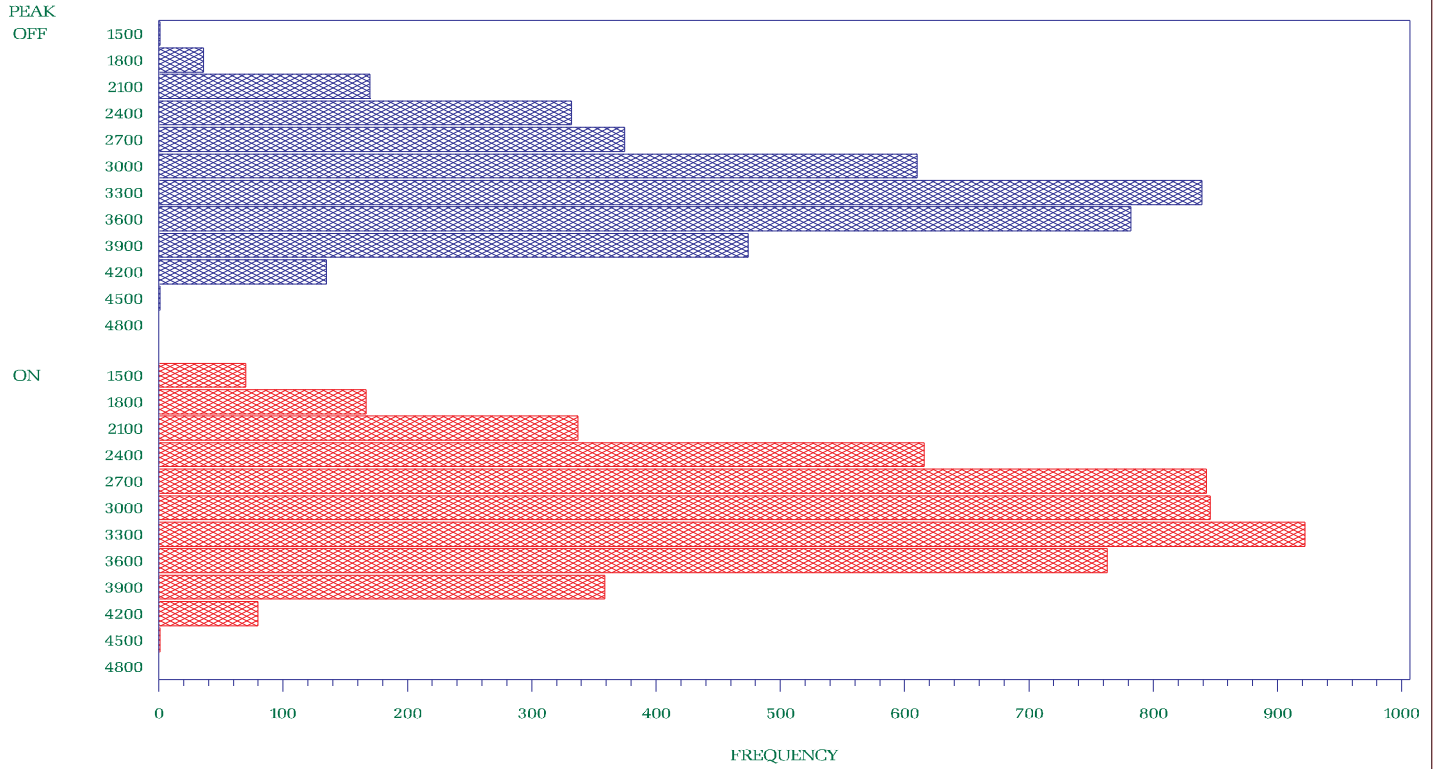
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

Volney – East (OPEN)

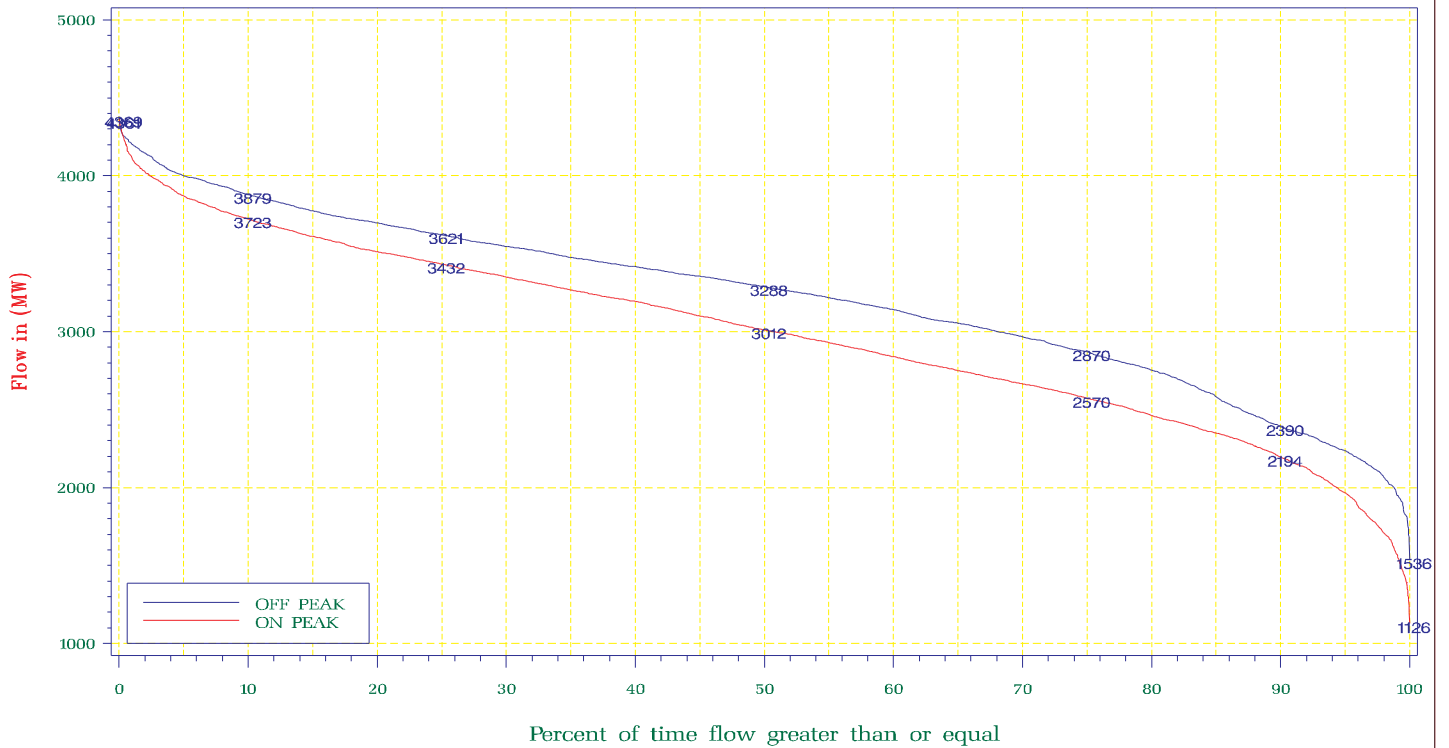


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Volney – East (OPEN)

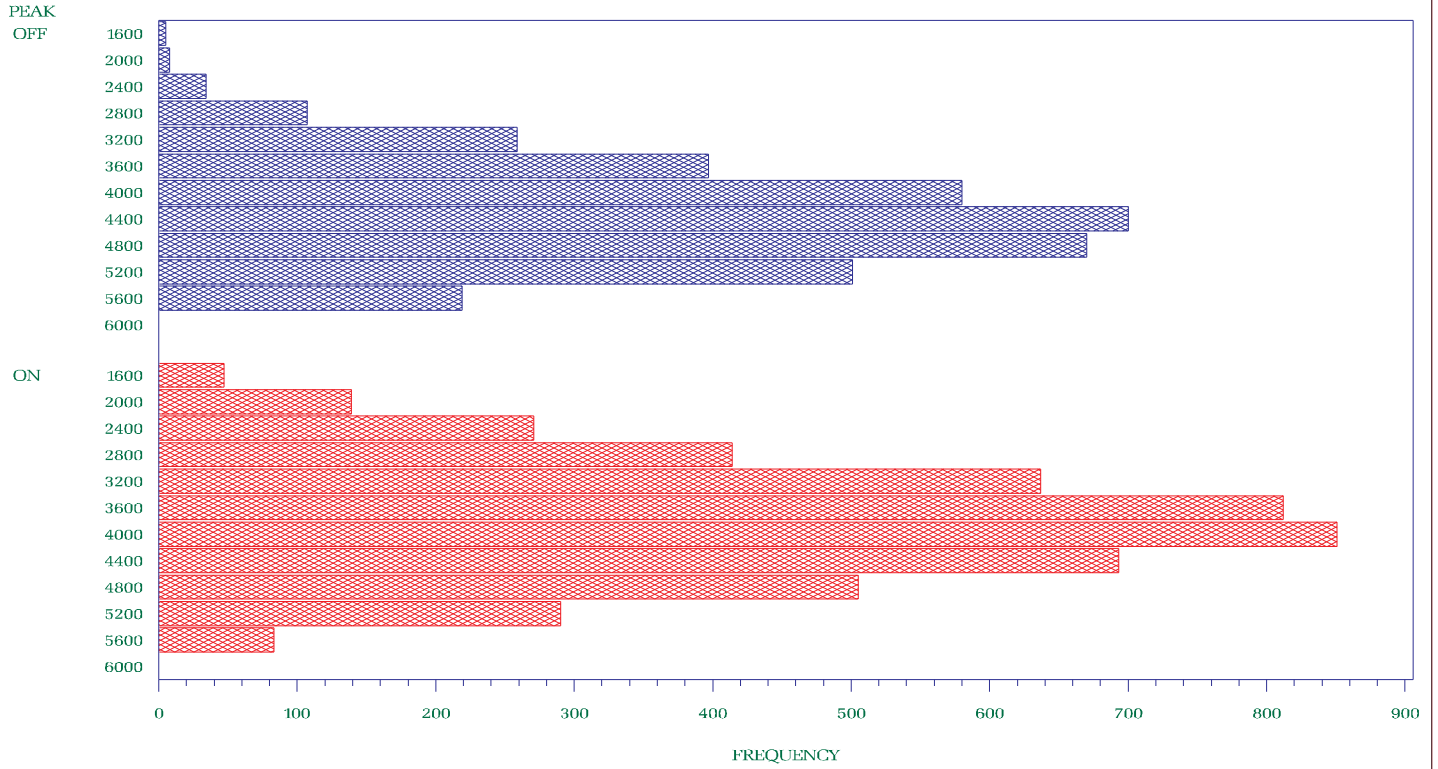


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Volney – East (CLOSED)

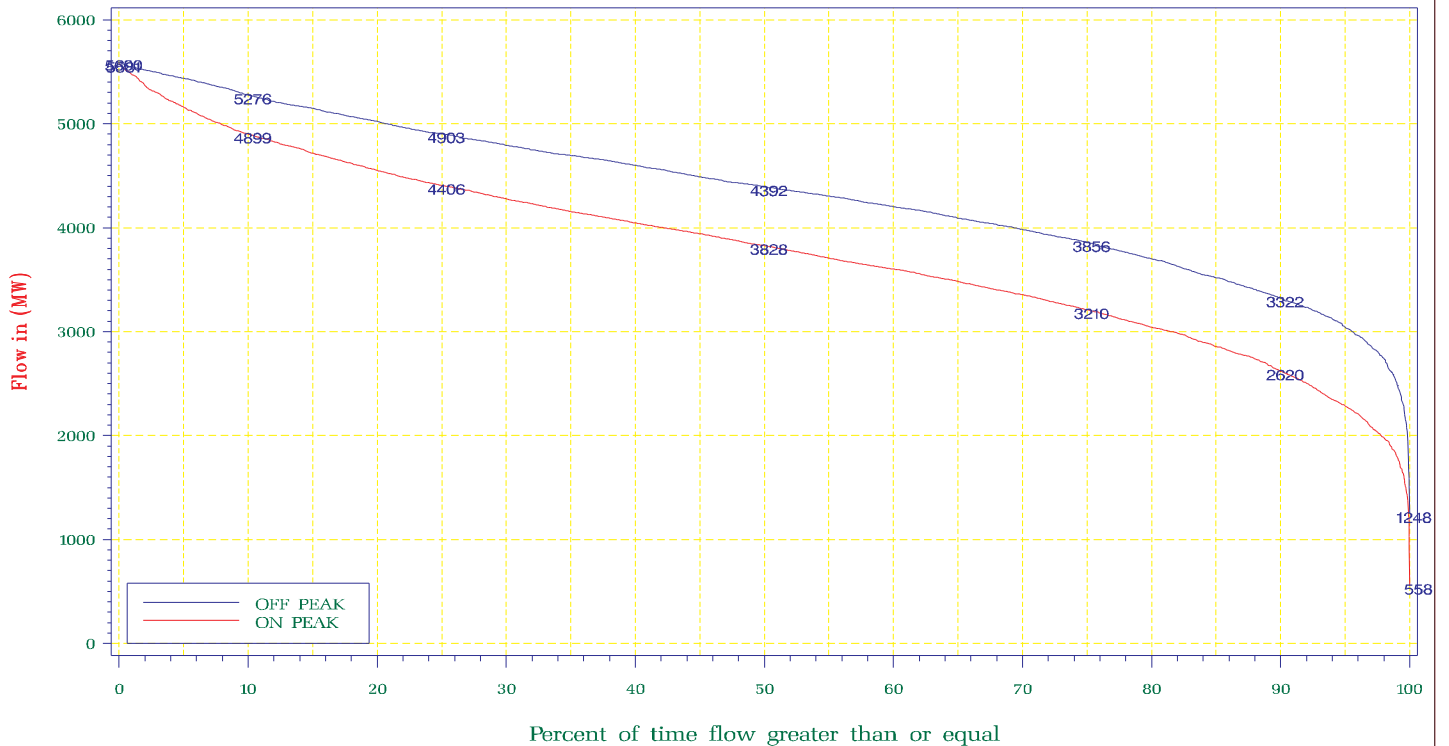


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Volney – East (CLOSED)

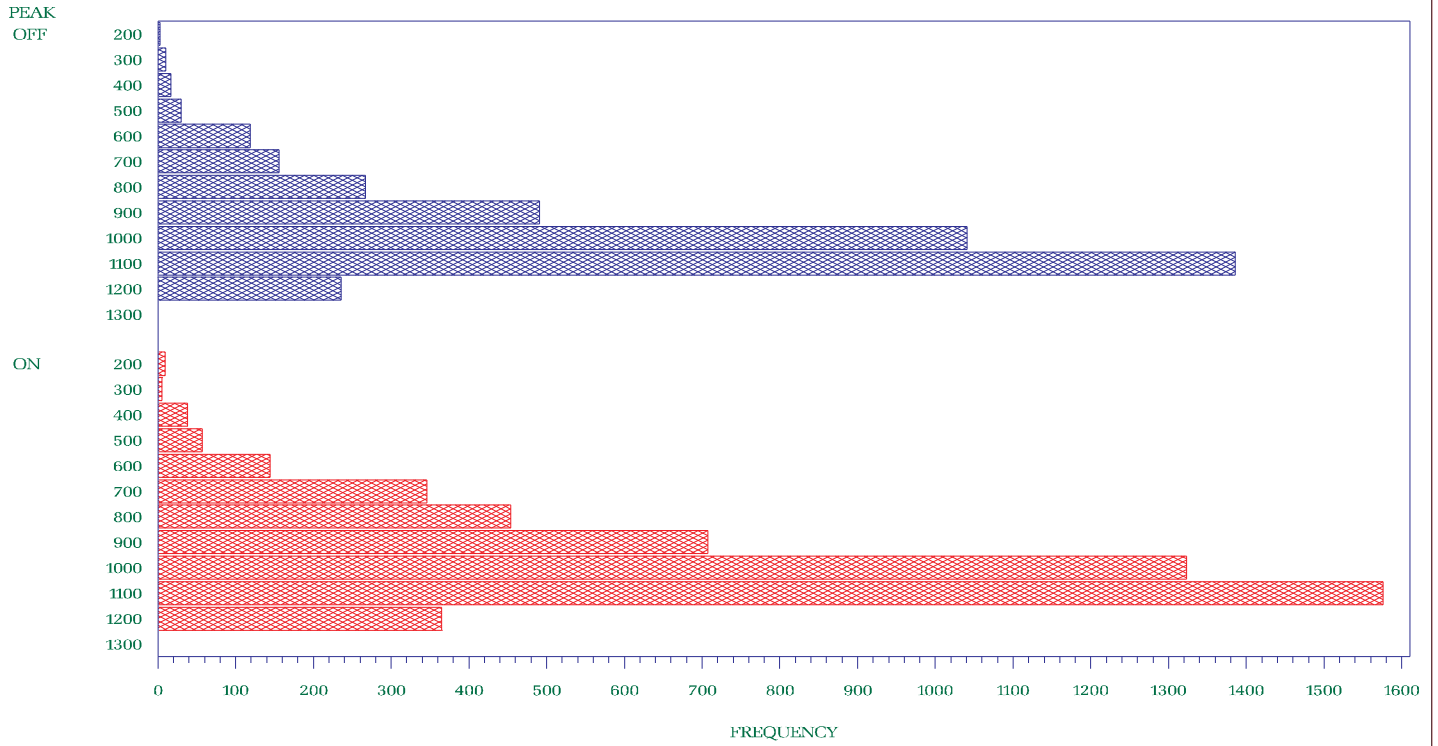


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Westchester – Long Island  
Y49 + Y50

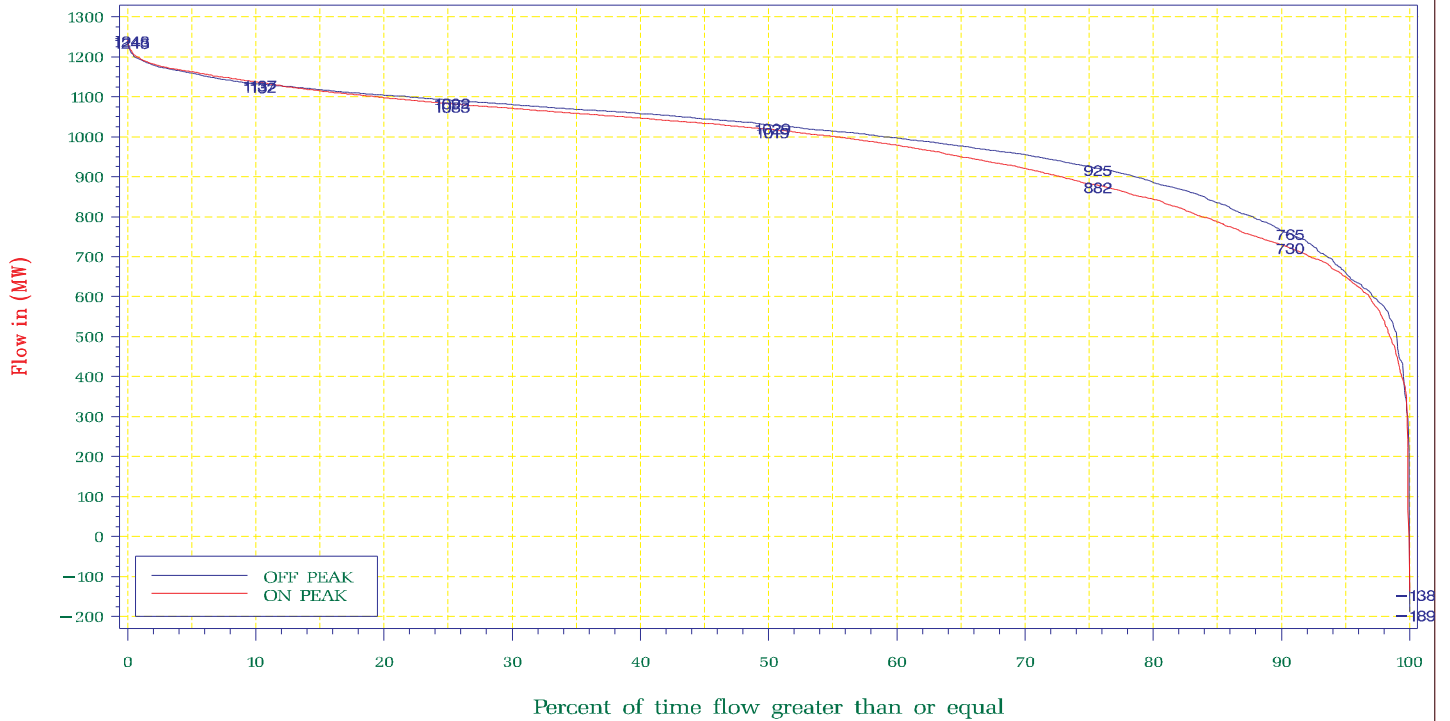


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Westchester – Long Island  
Y49 + Y50

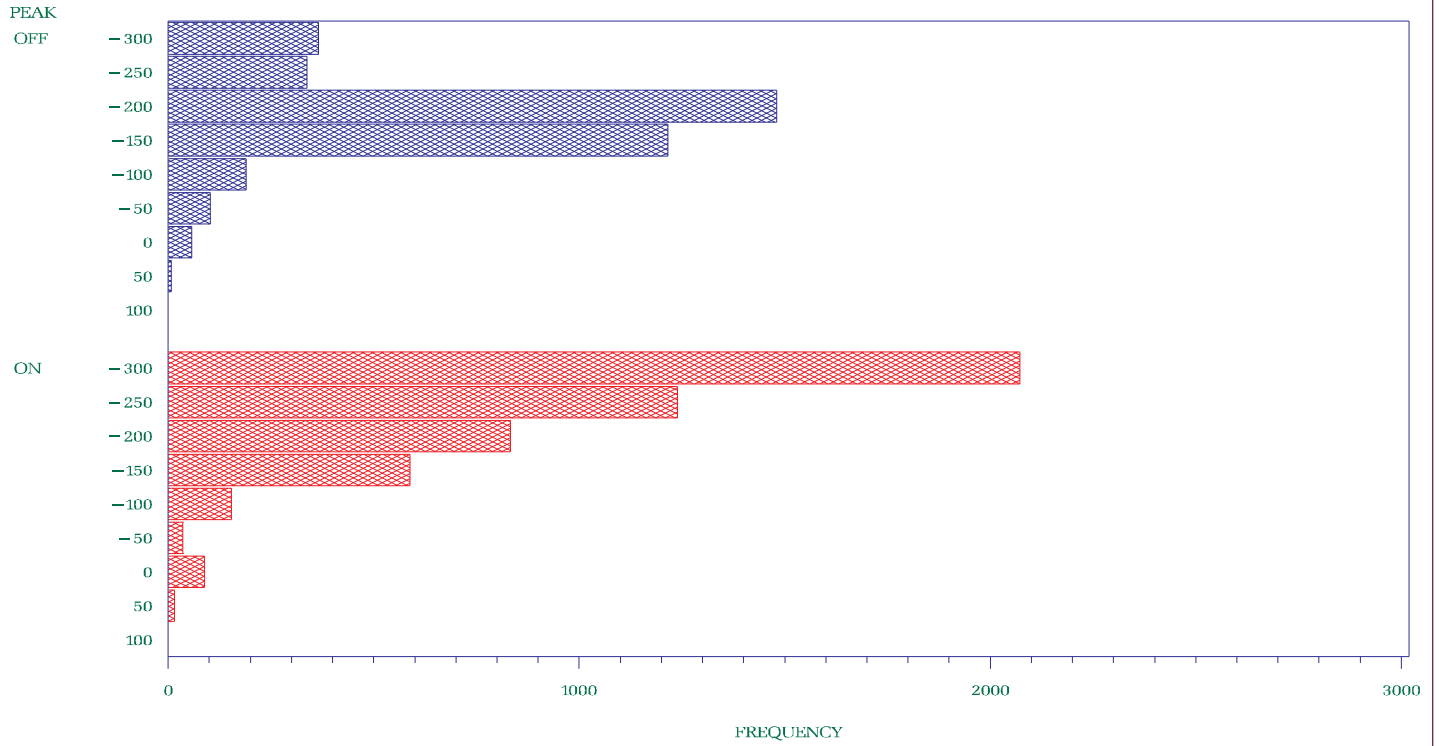


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

New York City – Long Island  
901 + 903

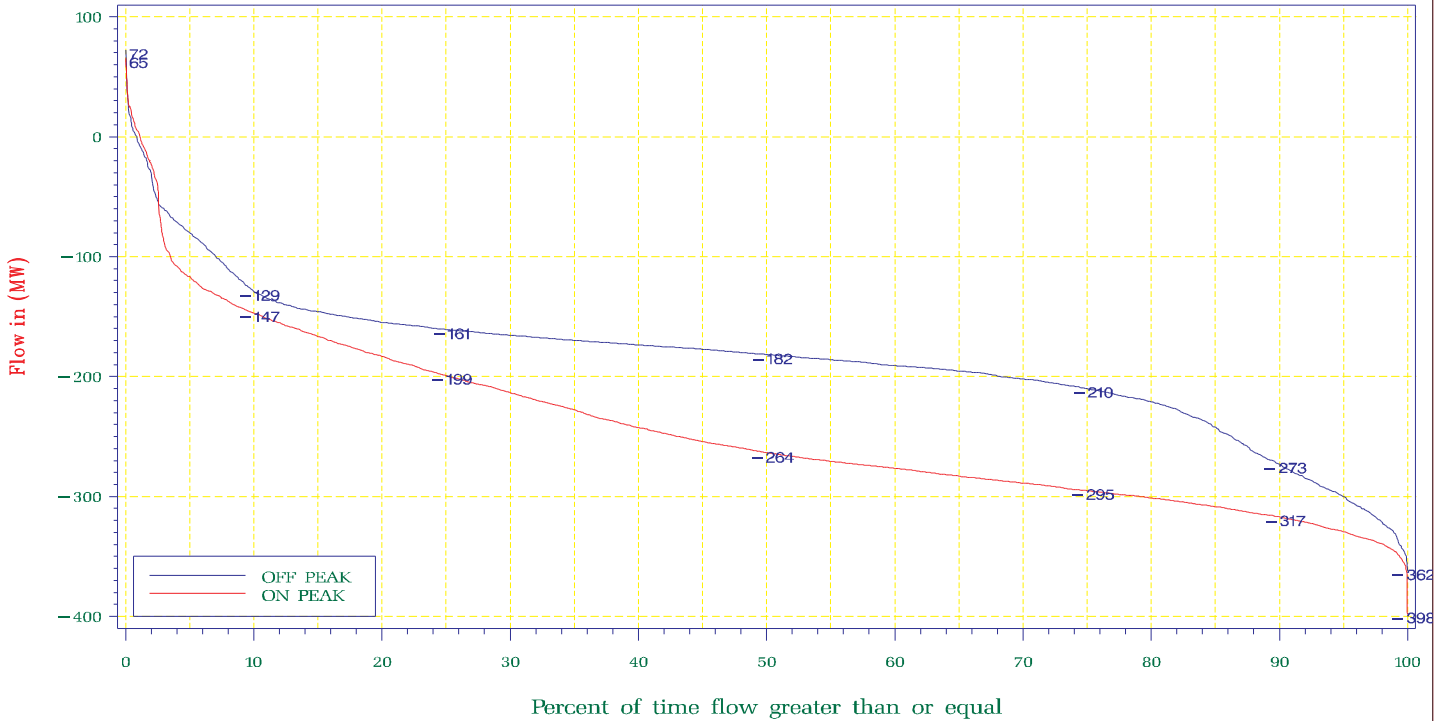


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

New York City – Long Island  
901 + 903

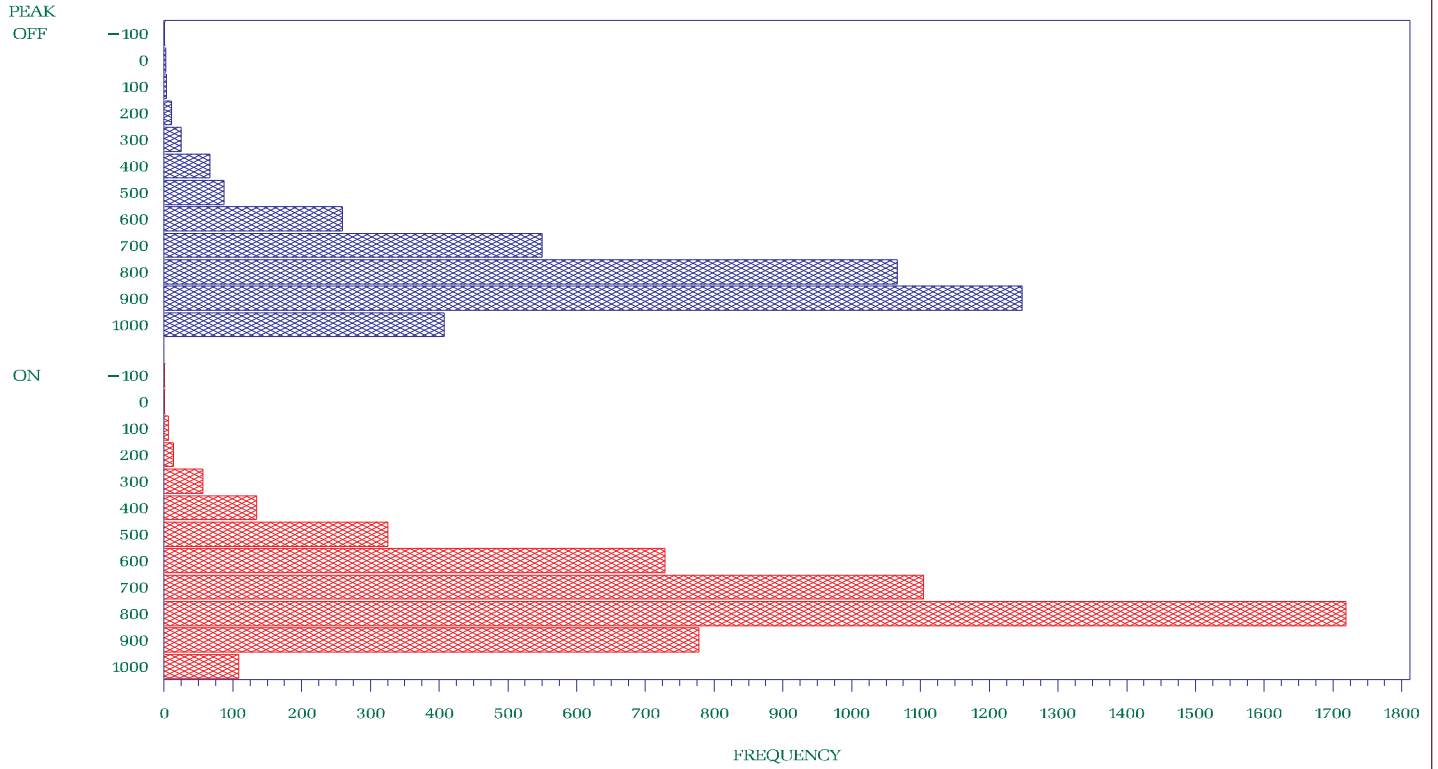


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

LIPA Import

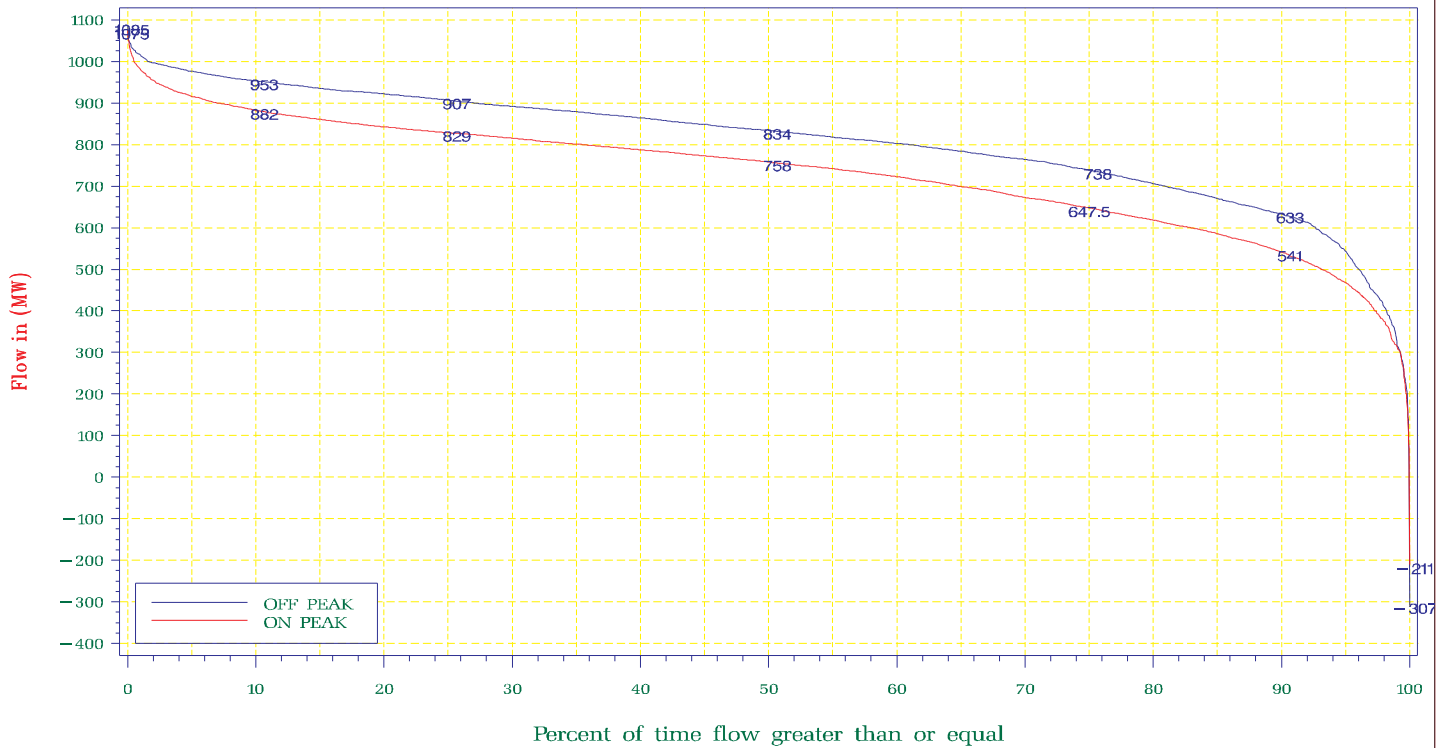


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

LIPA Import



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Con Ed – LIPA

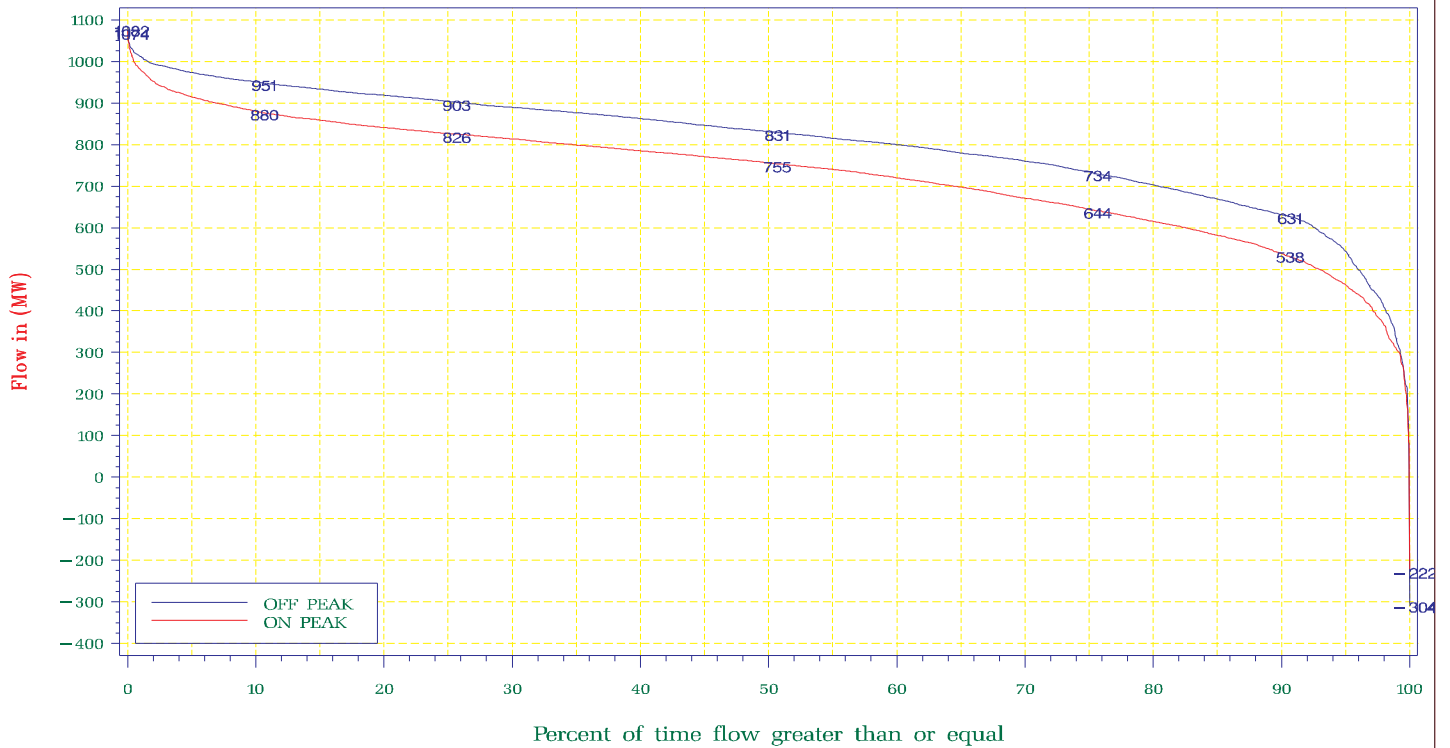


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Con Ed – LIPA

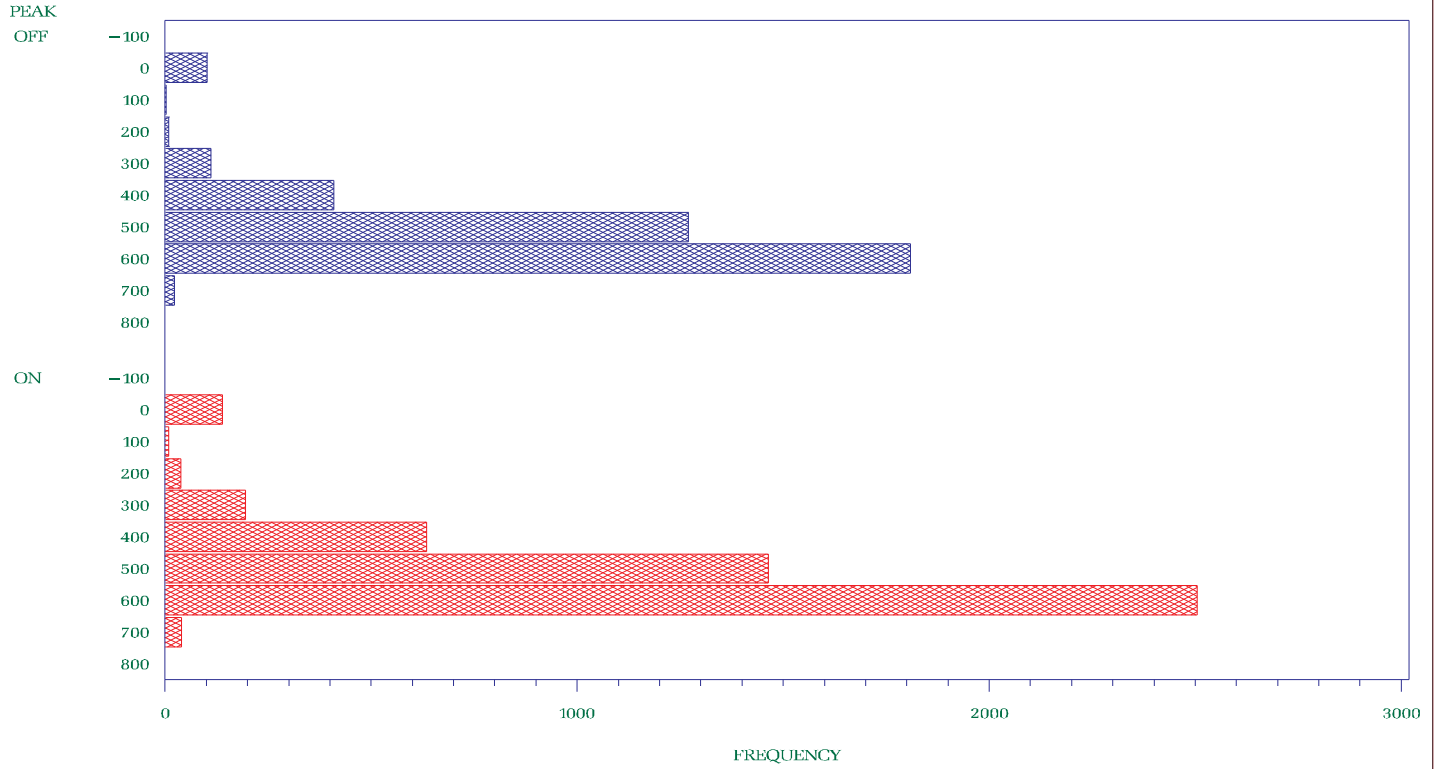


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Y50:Dunwoodie – Shore Rd.

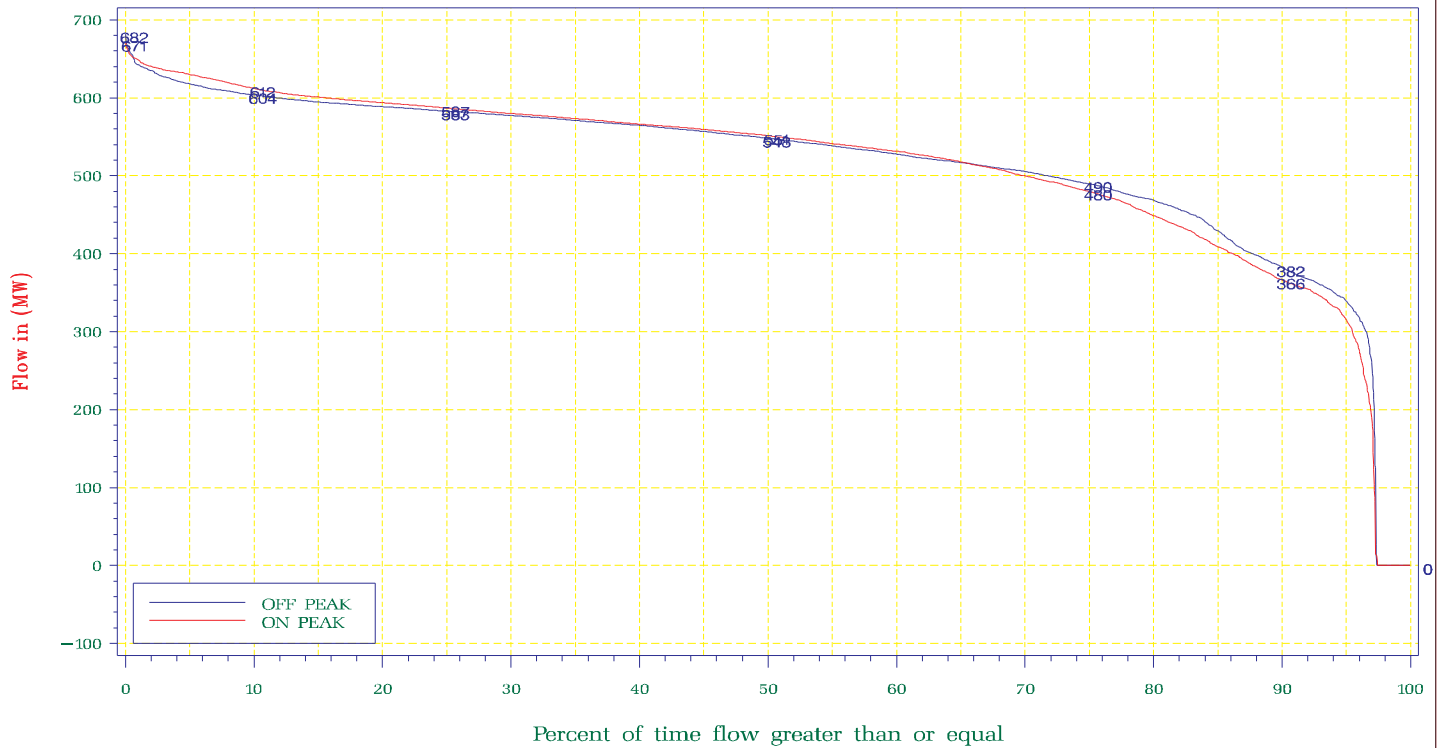


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Y50:Dunwoodie – Shore Rd.

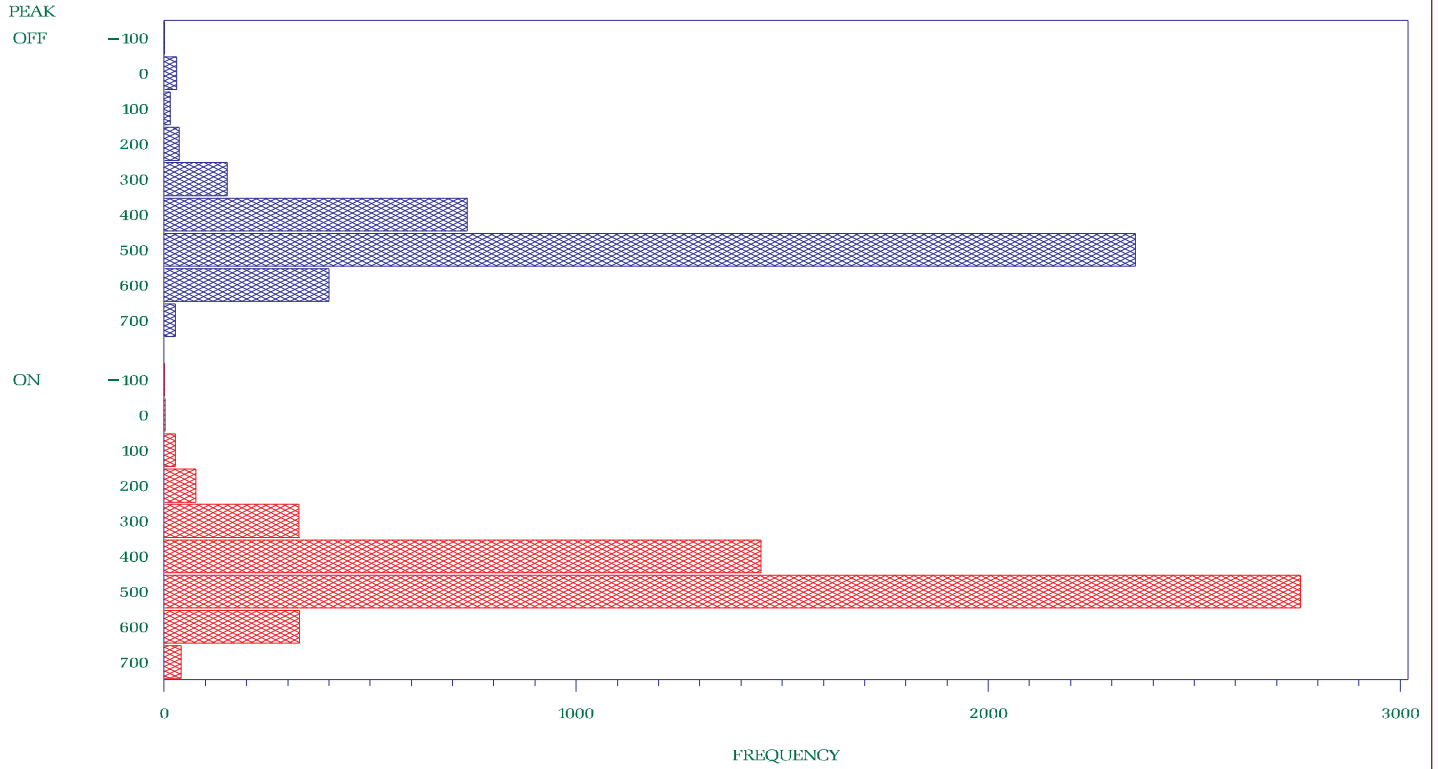


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Y49:Sprainbrook – E.Garden City

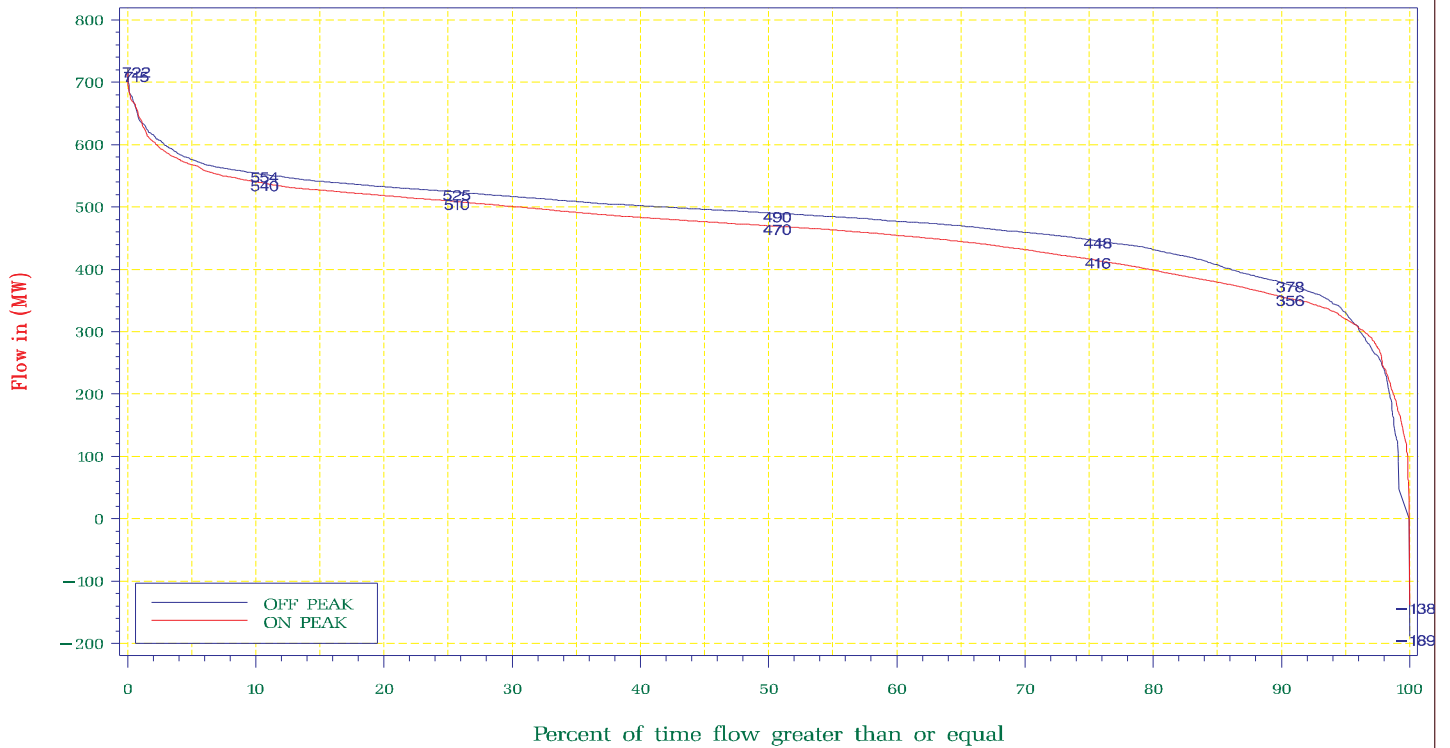


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Y49:Sprainbrook – E.Garden City



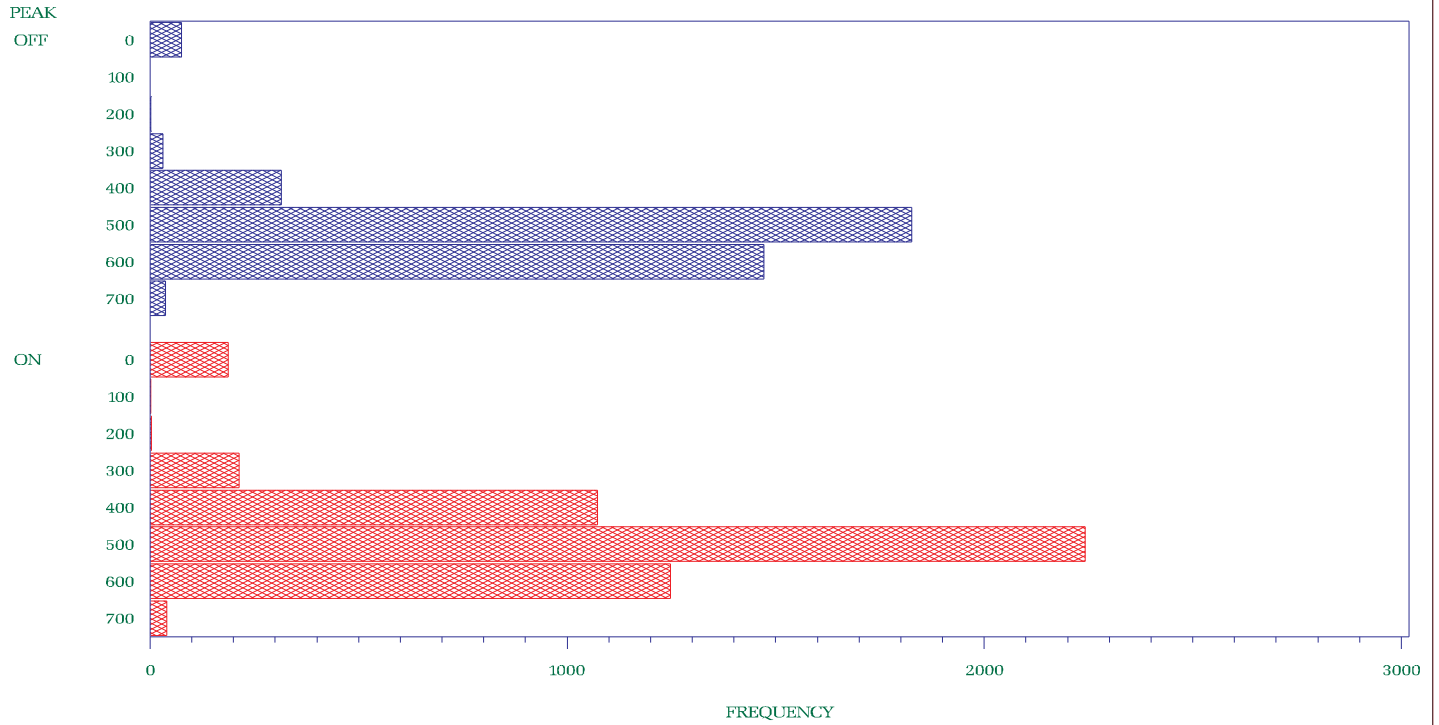
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

HOMER CITY – WATERCURE

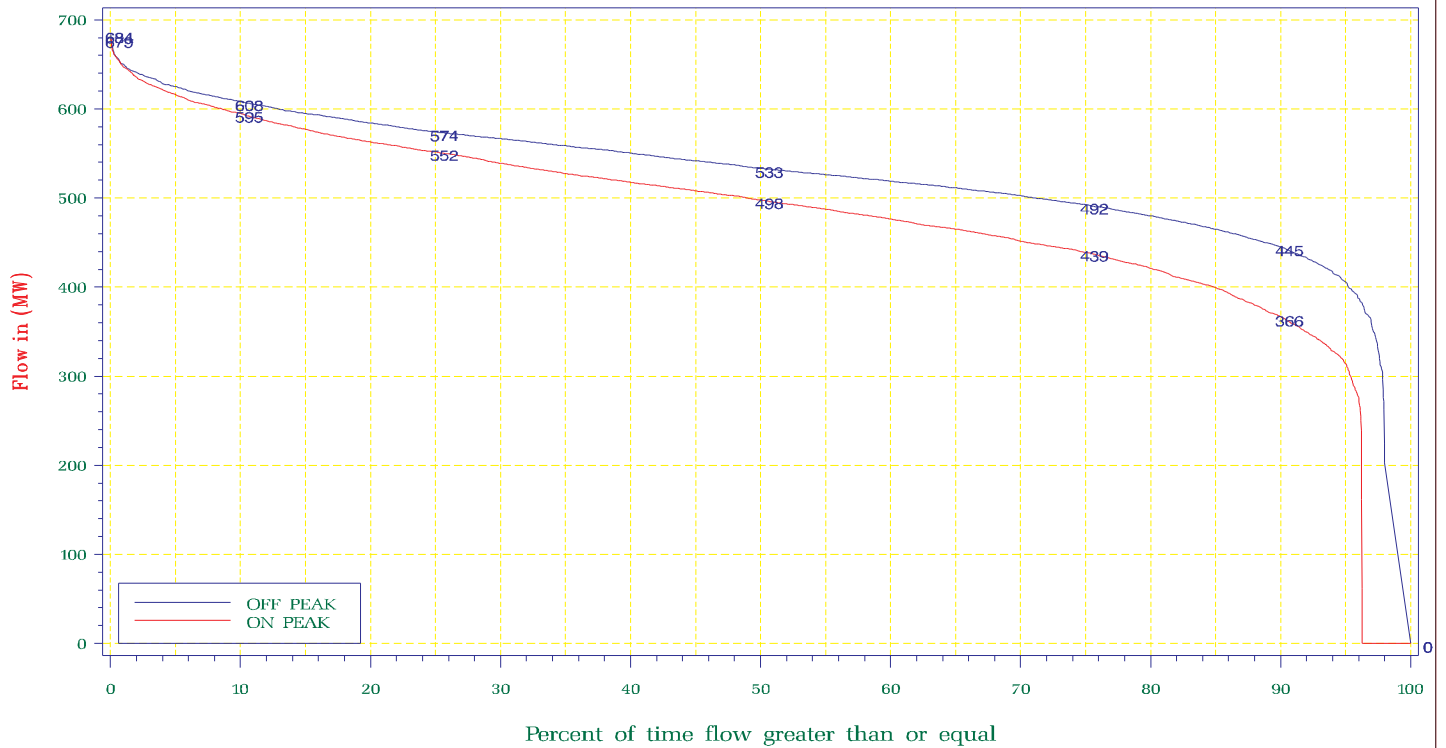


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

HOMER CITY – WATERCURE

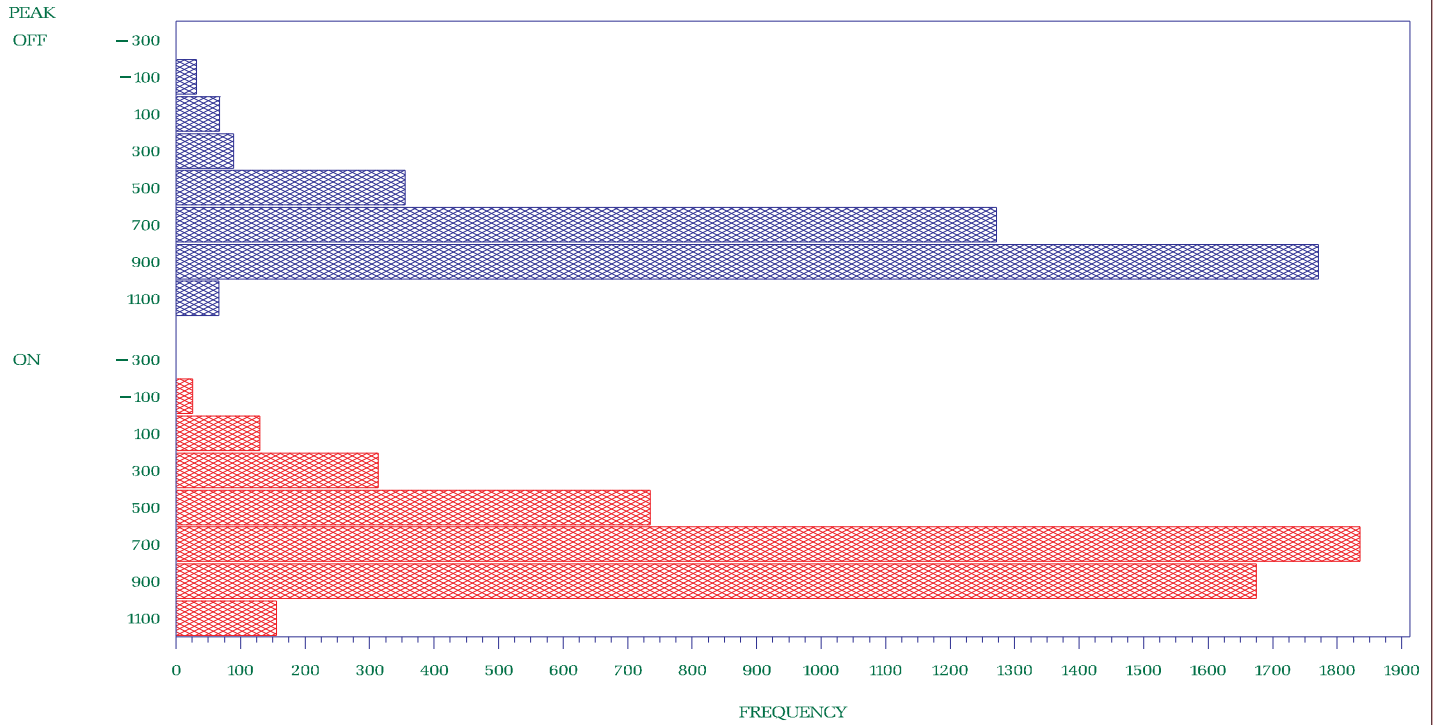


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

5018:BRANCHBURG – RAMAPO

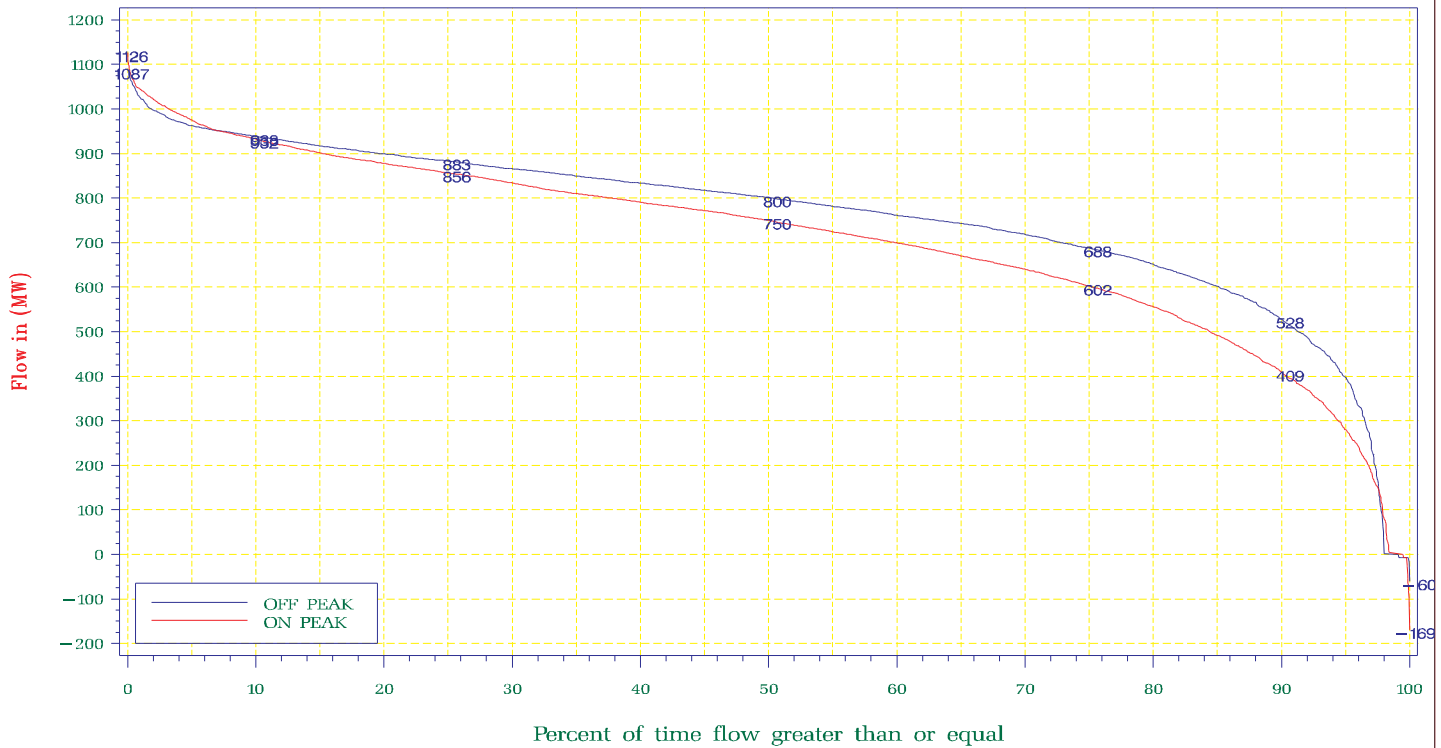


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

5018:BRANCHBURG – RAMAPO



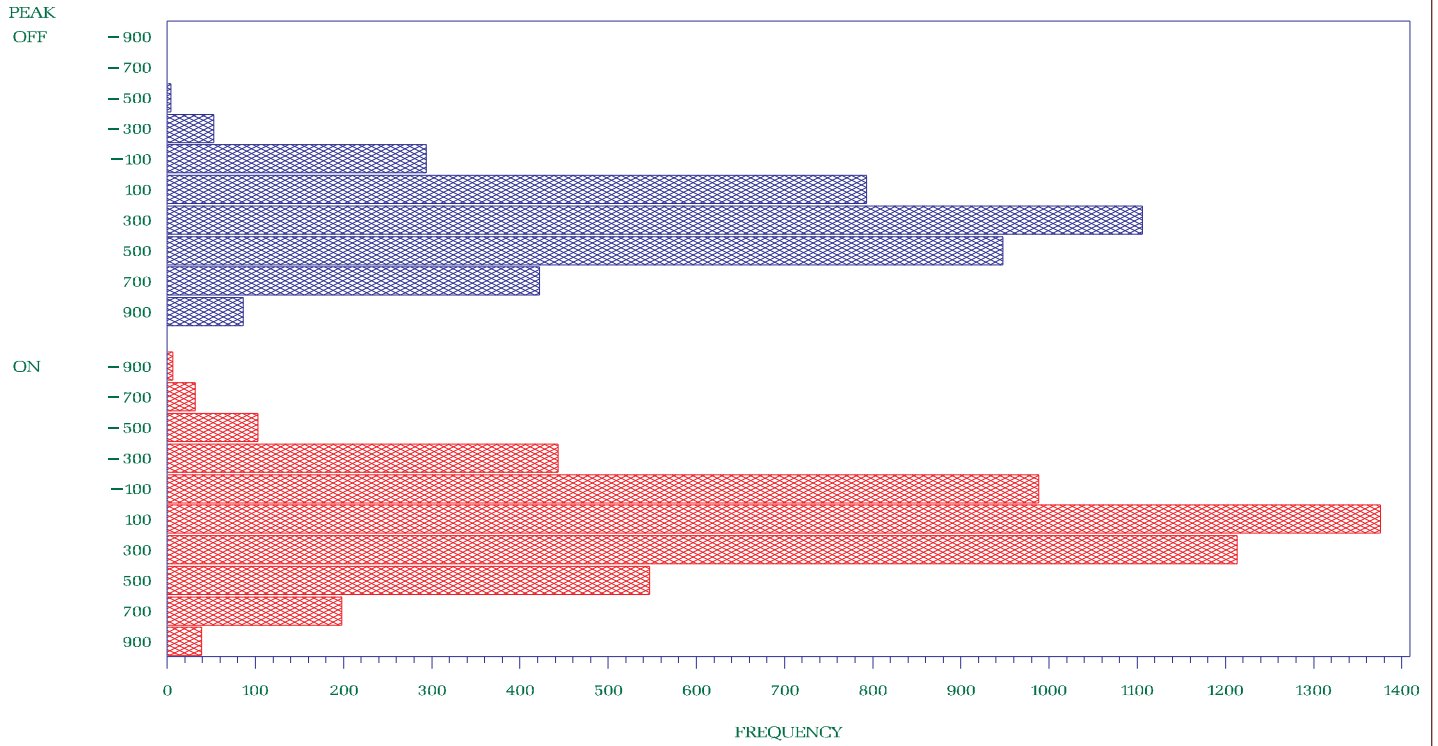
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Con Ed/PSEG PAR (JK/ABC) Imbalance

+ is toward PSEG



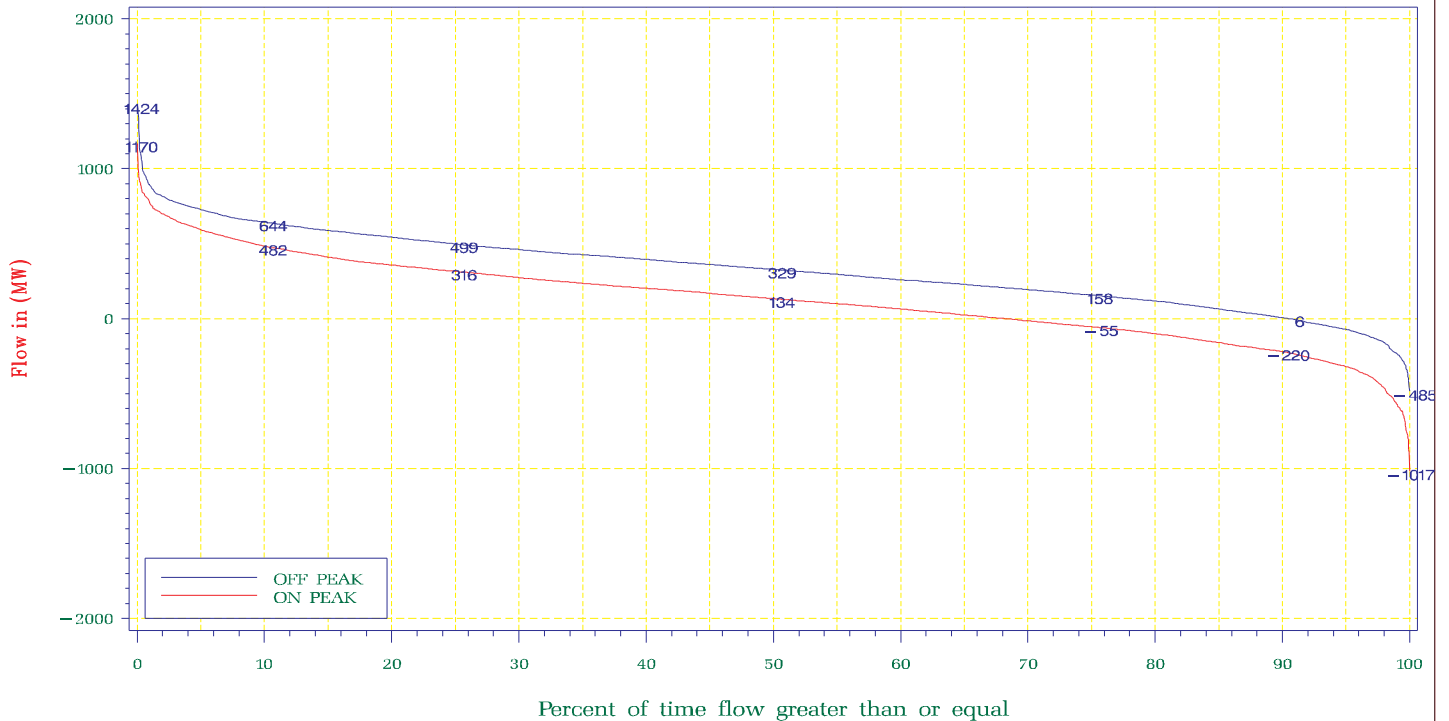
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Con Ed/PSEG PAR (JK/ABC) Imbalance

+ is toward PSEG



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

West NY Gen Export

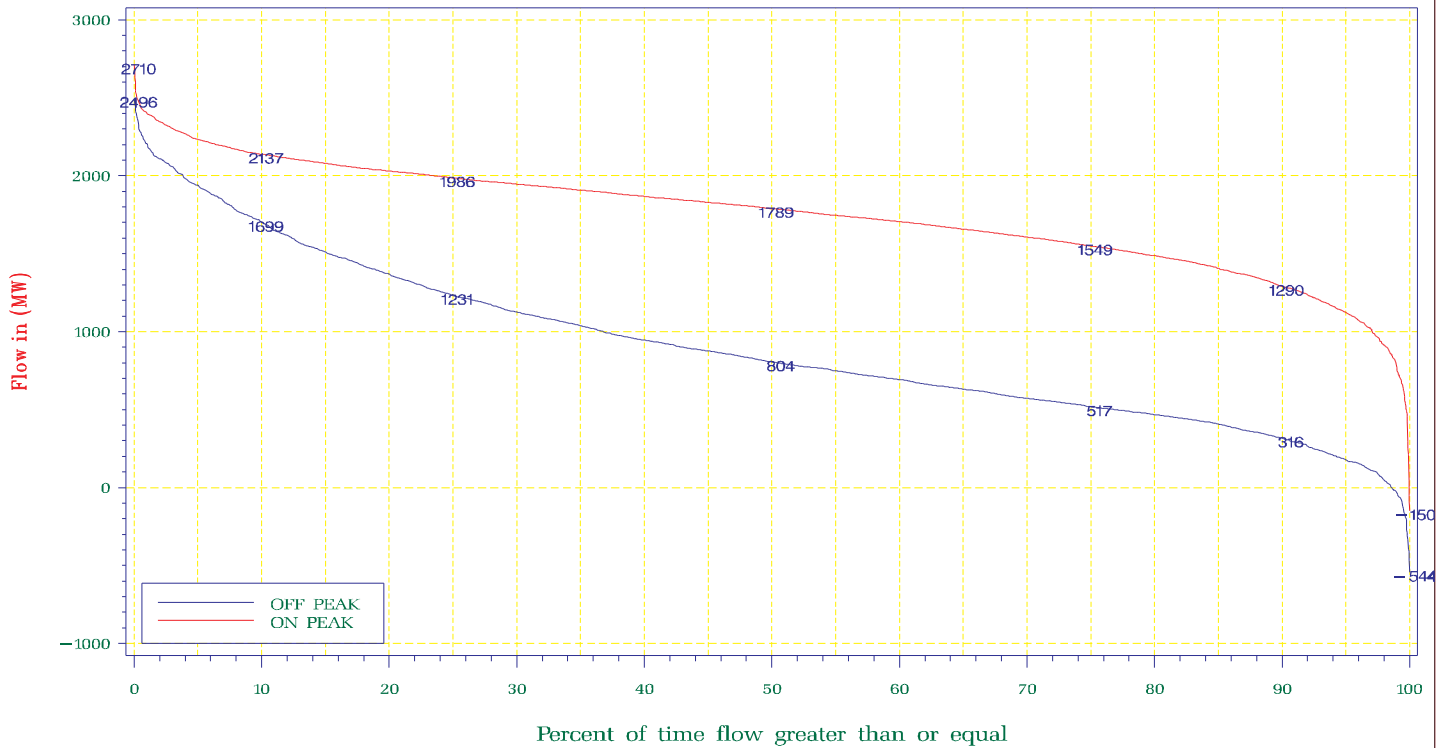


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

West NY Gen Export



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

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Appendix G – Margins to Limits  
On- Peak vs. Off- Peak

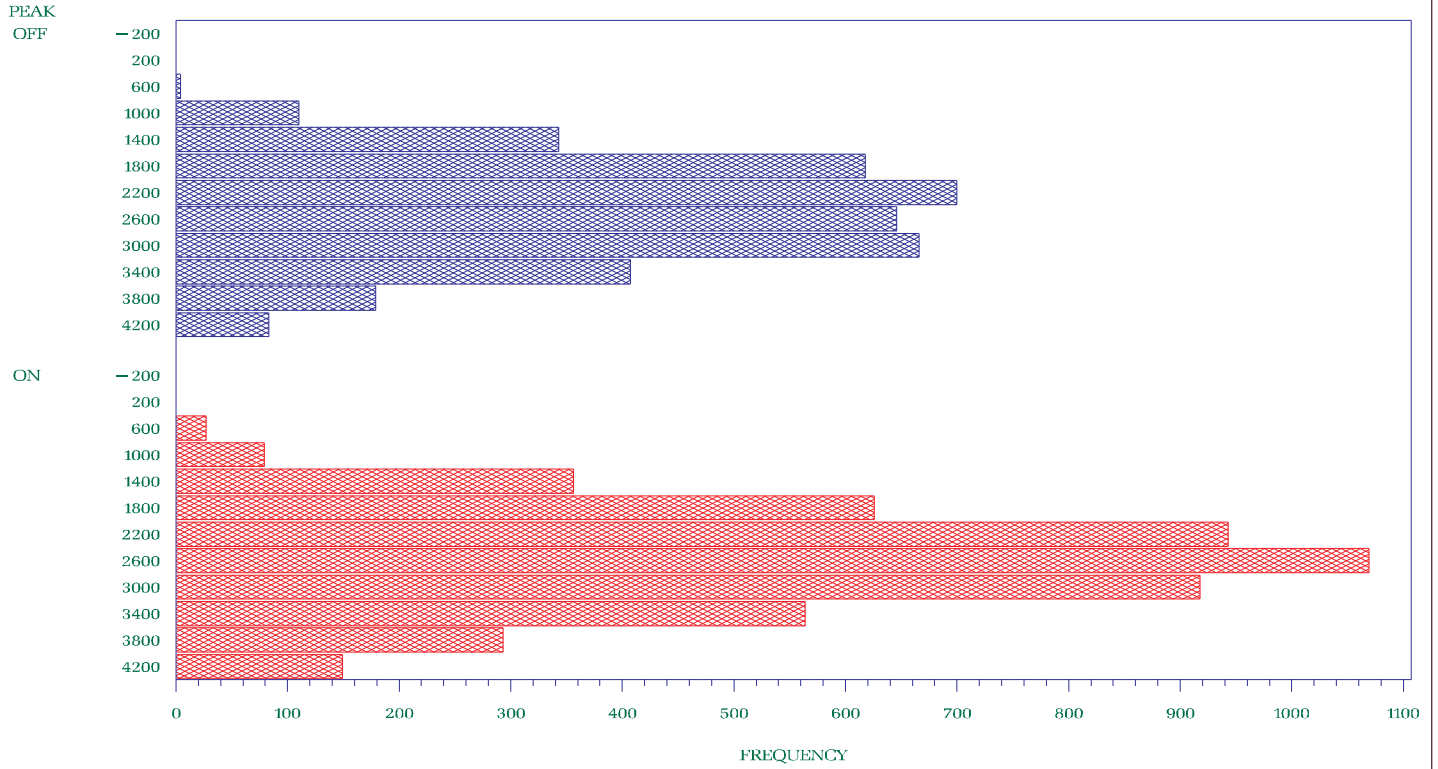
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NYISO Frequency Interface Flow For January – December 2004

Margin to Total East Limit

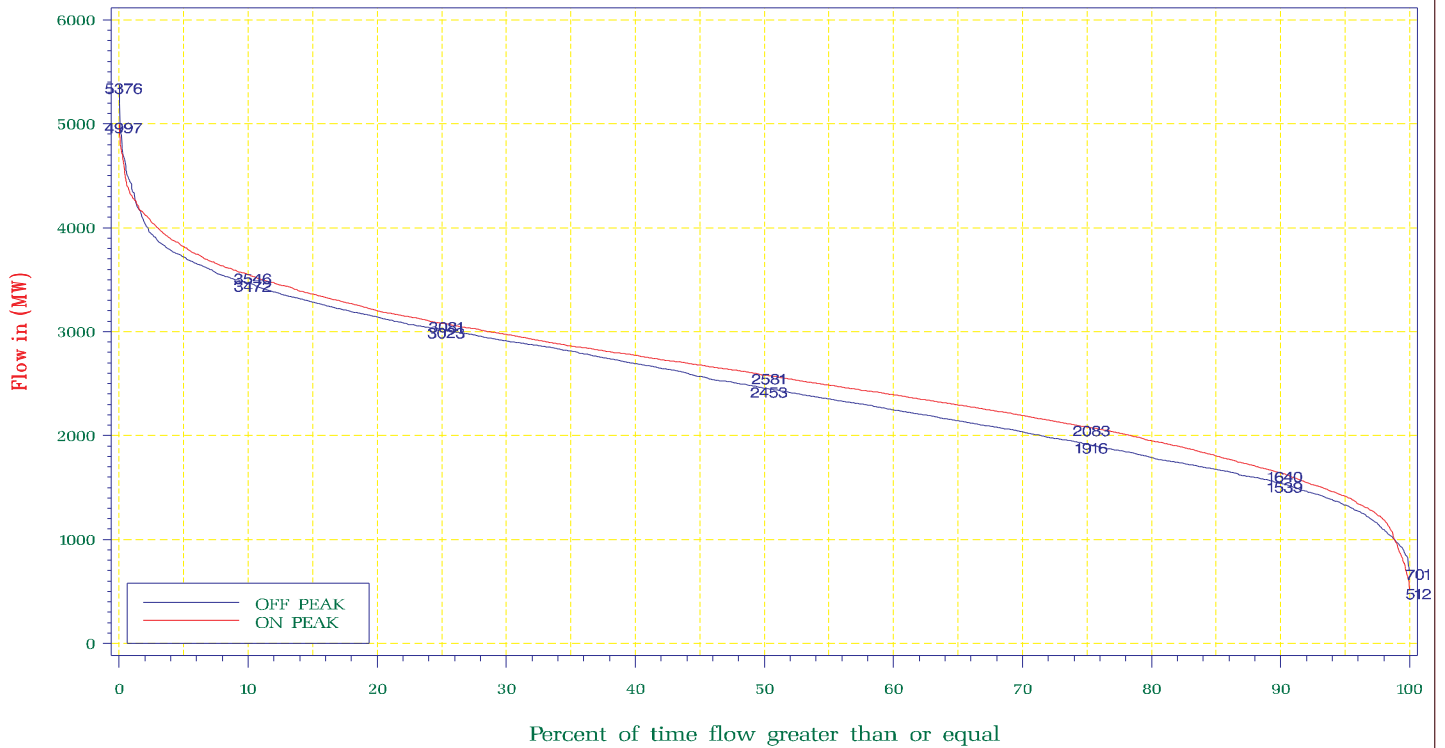


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to Total East Limit



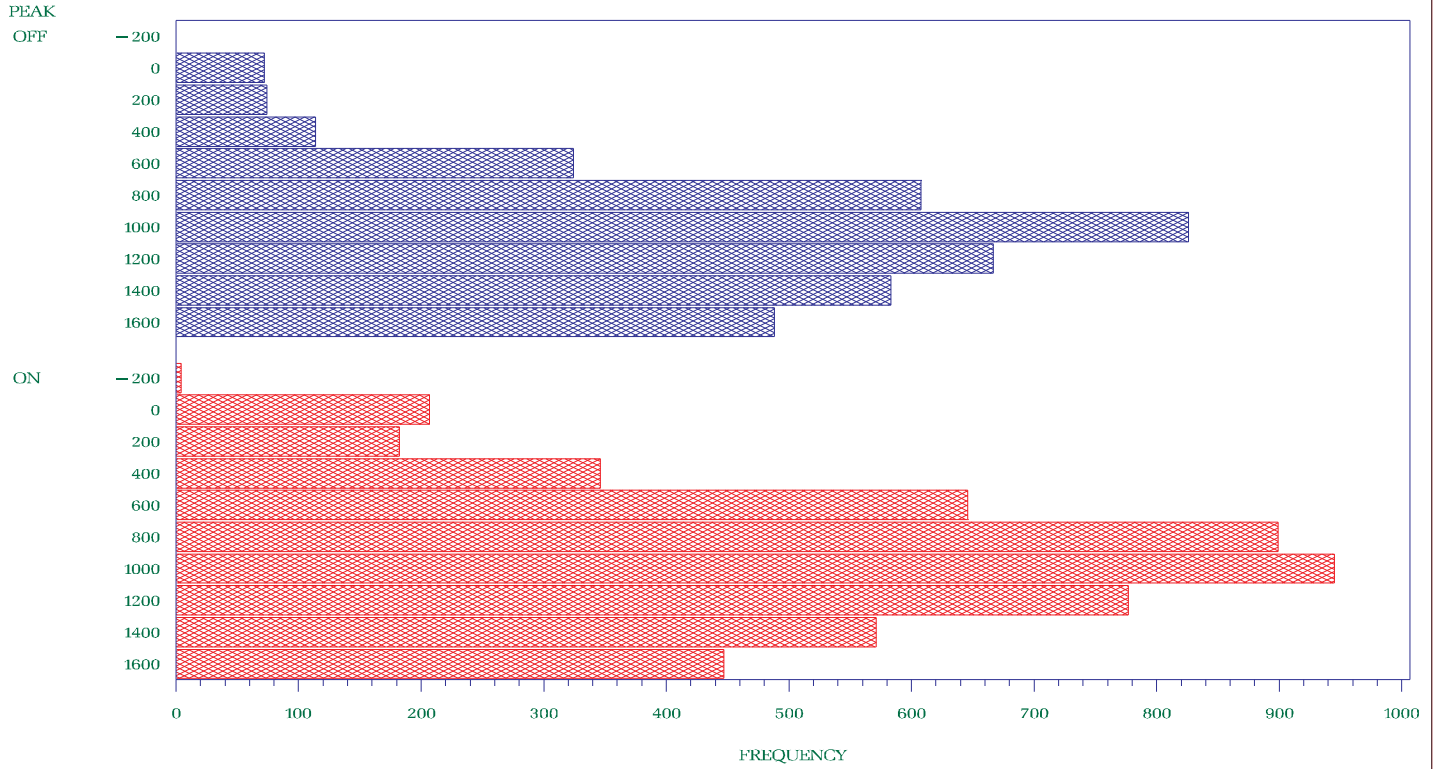
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

Margin to Central East Stability Limit

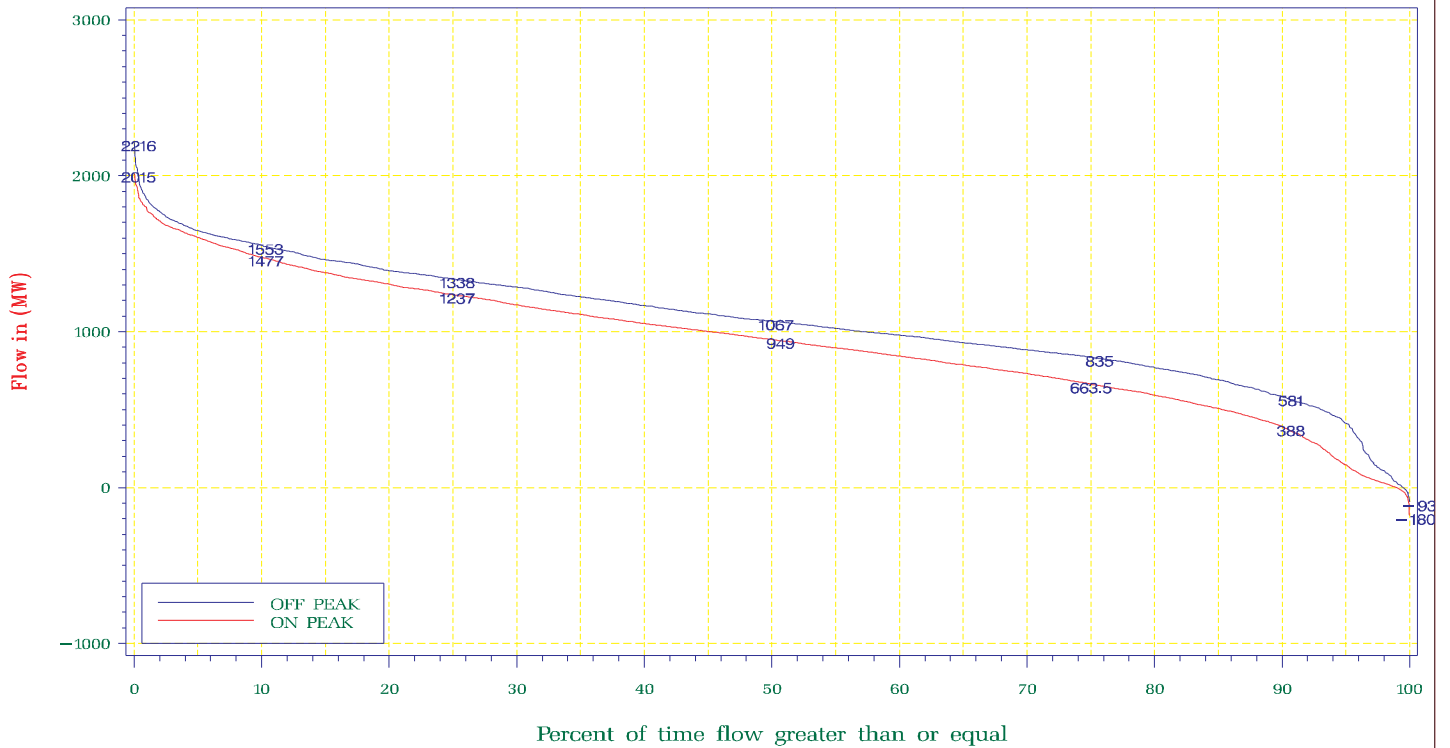


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to Central East Stability Limit

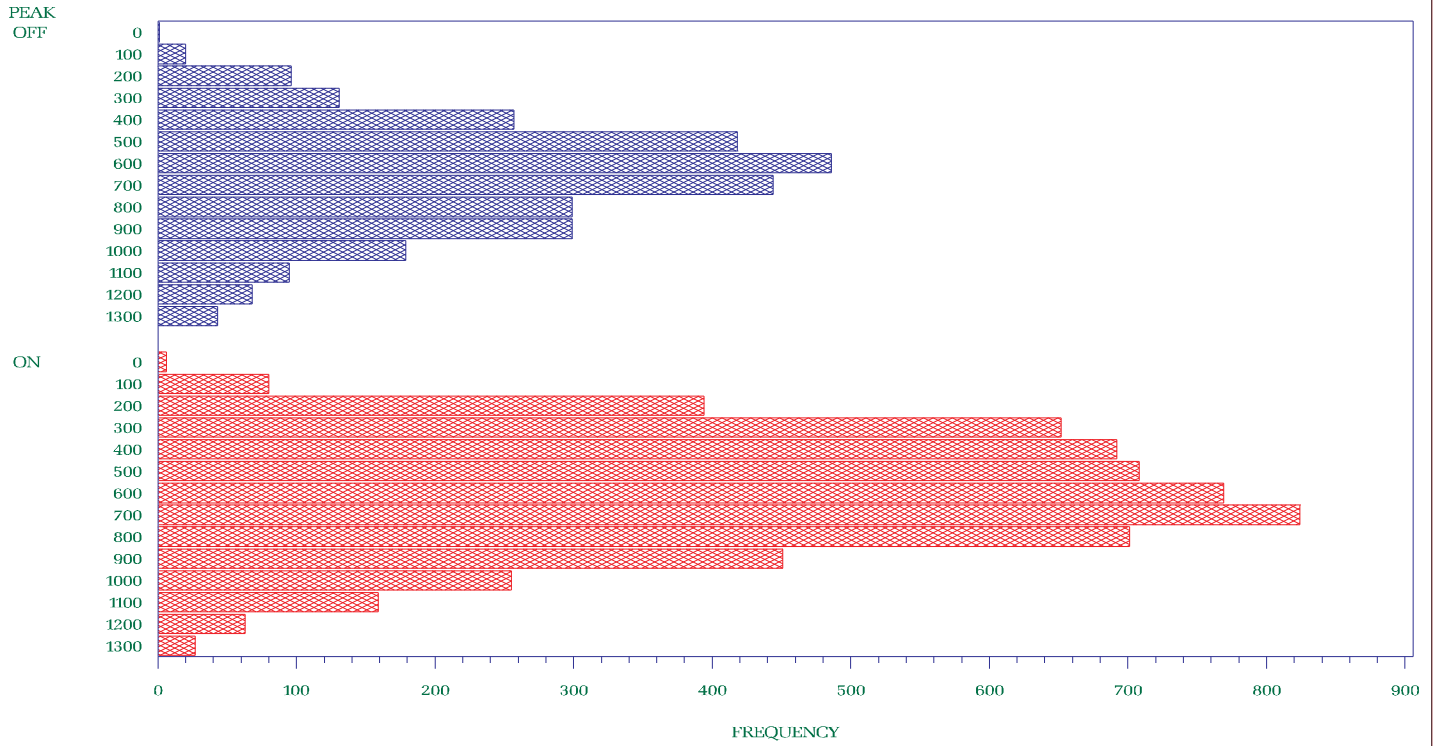


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Pre-Contingency Margin to Central East Limit  
Minimum of 3 Most Limiting Voltage Collapse Limits

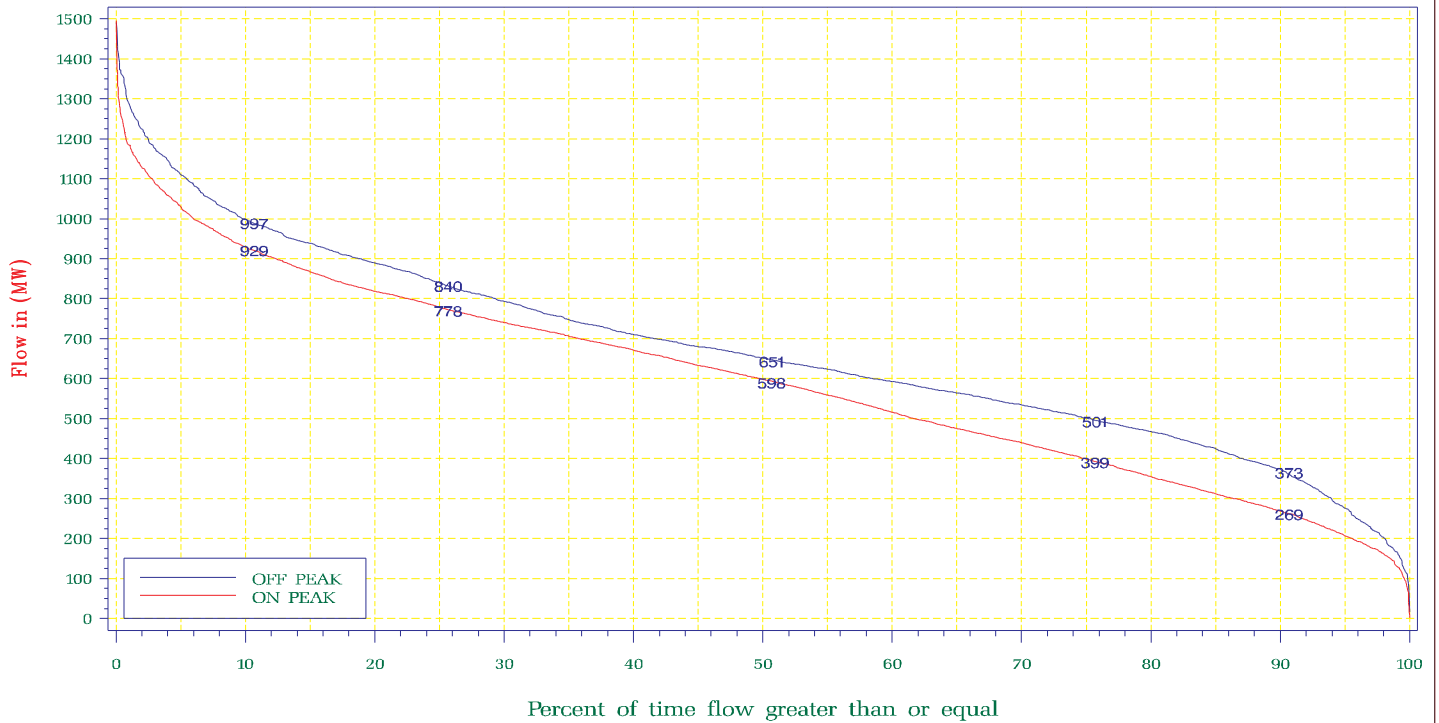


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Pre-Contingency Margin to Central East Limit  
Minimum of 3 Most Limiting Voltage Collapse Limits



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to West Central Limit

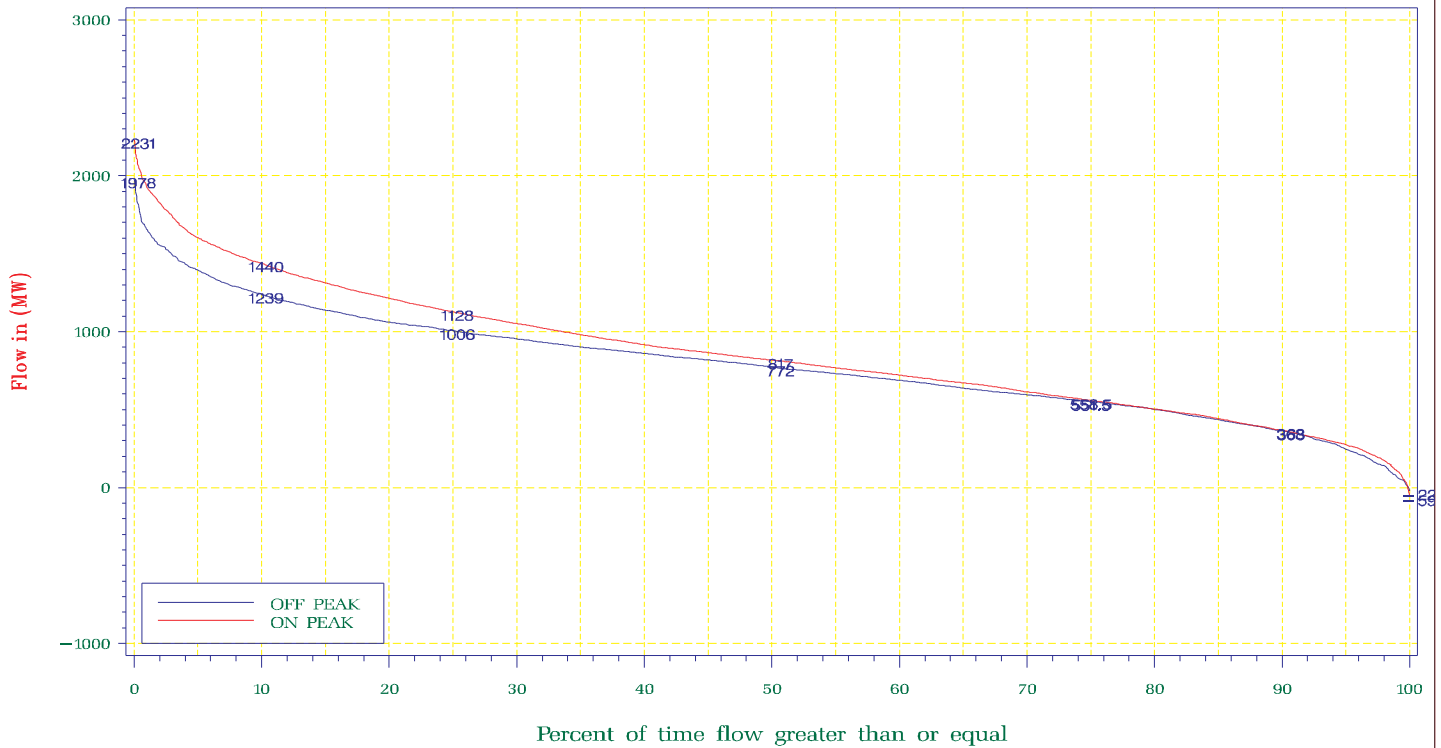


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to West Central Limit



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to Dysinger East Limit

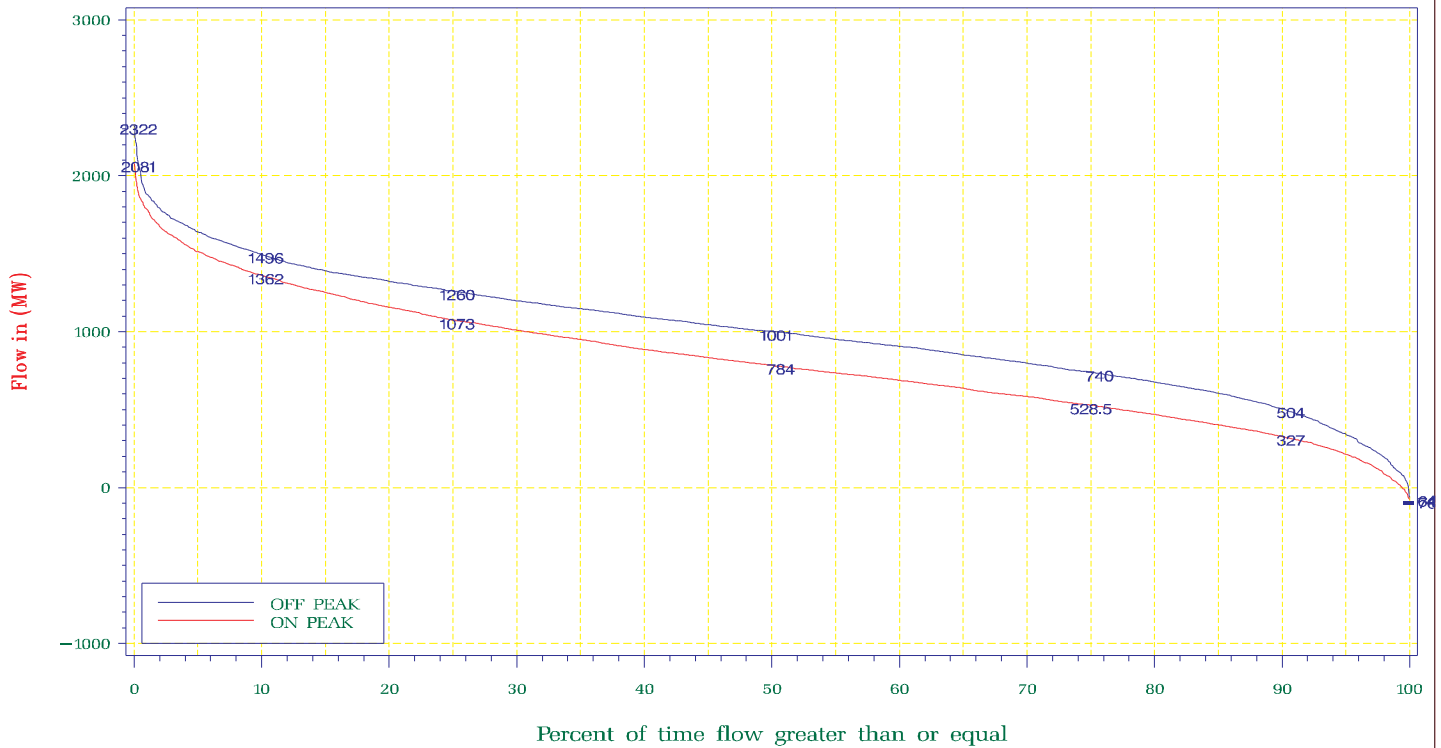


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to Dysinger East Limit

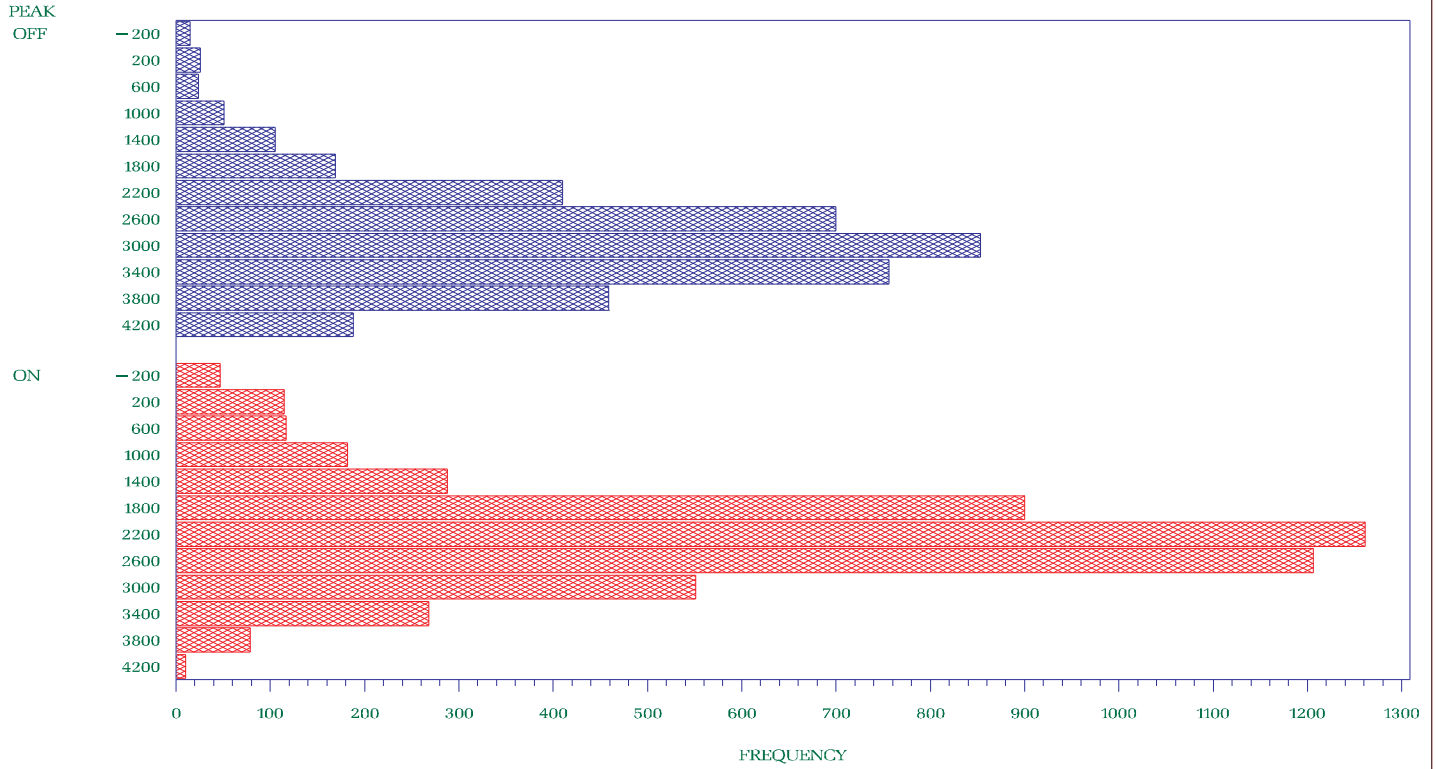


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to UPNY Con Ed Limit

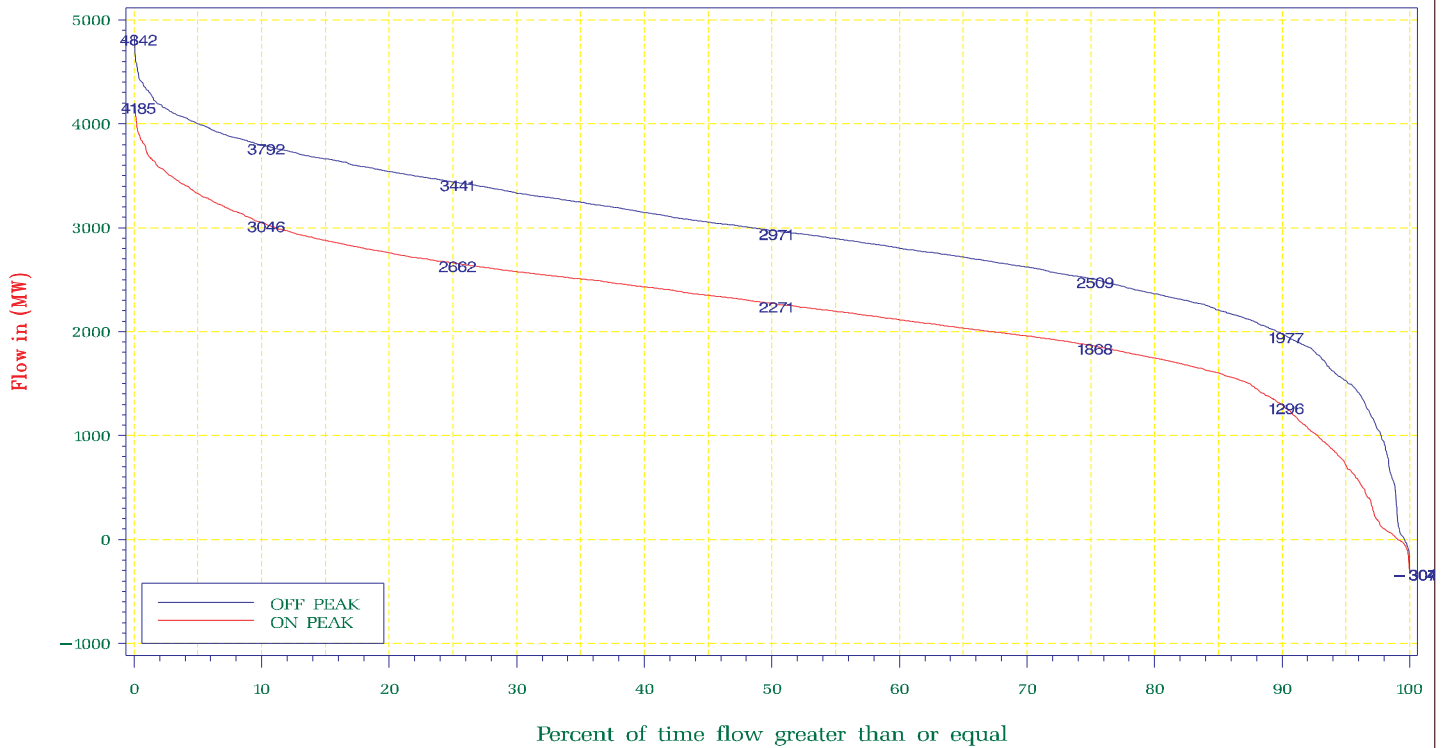


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to UPNY Con Ed Limit



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to Sprainbrook/Dunwoodie Limit

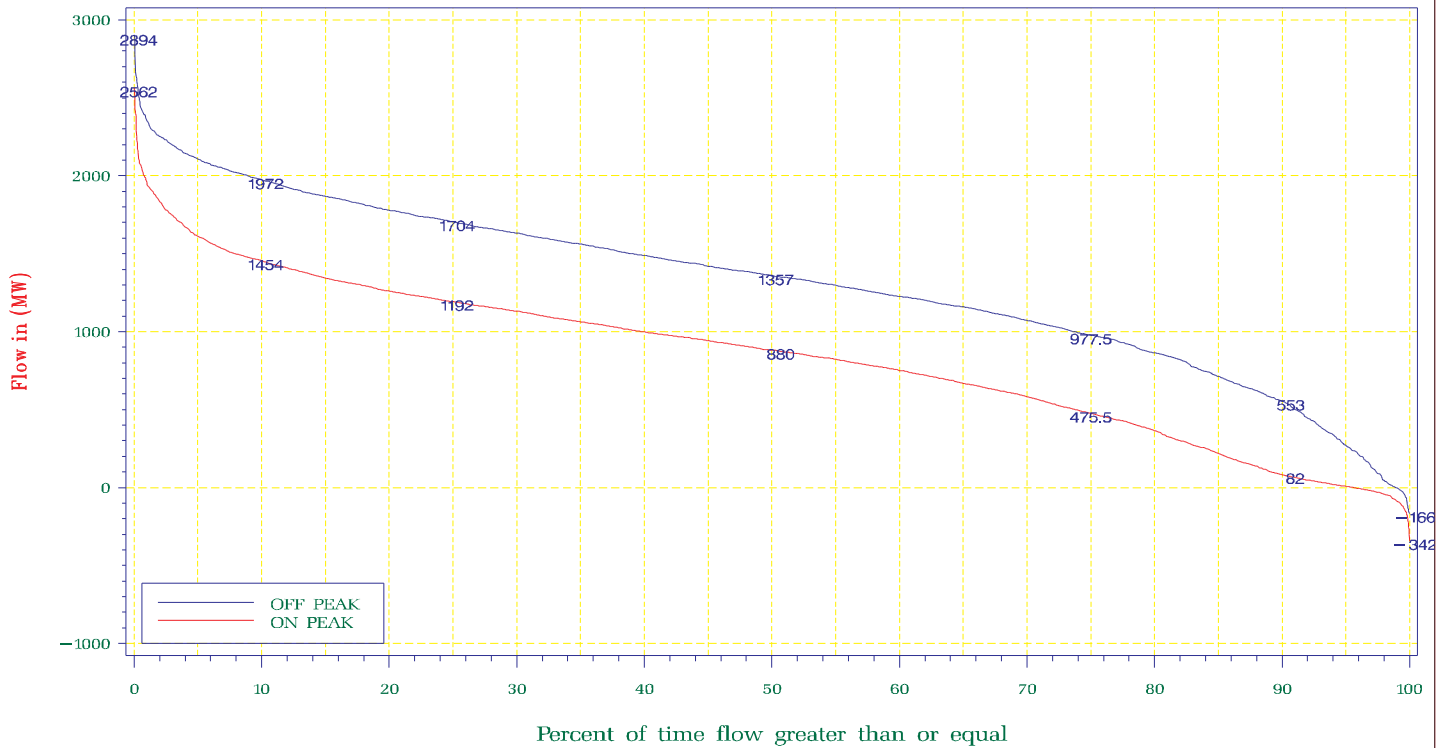


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to Sprainbrook/Dunwoodie Limit

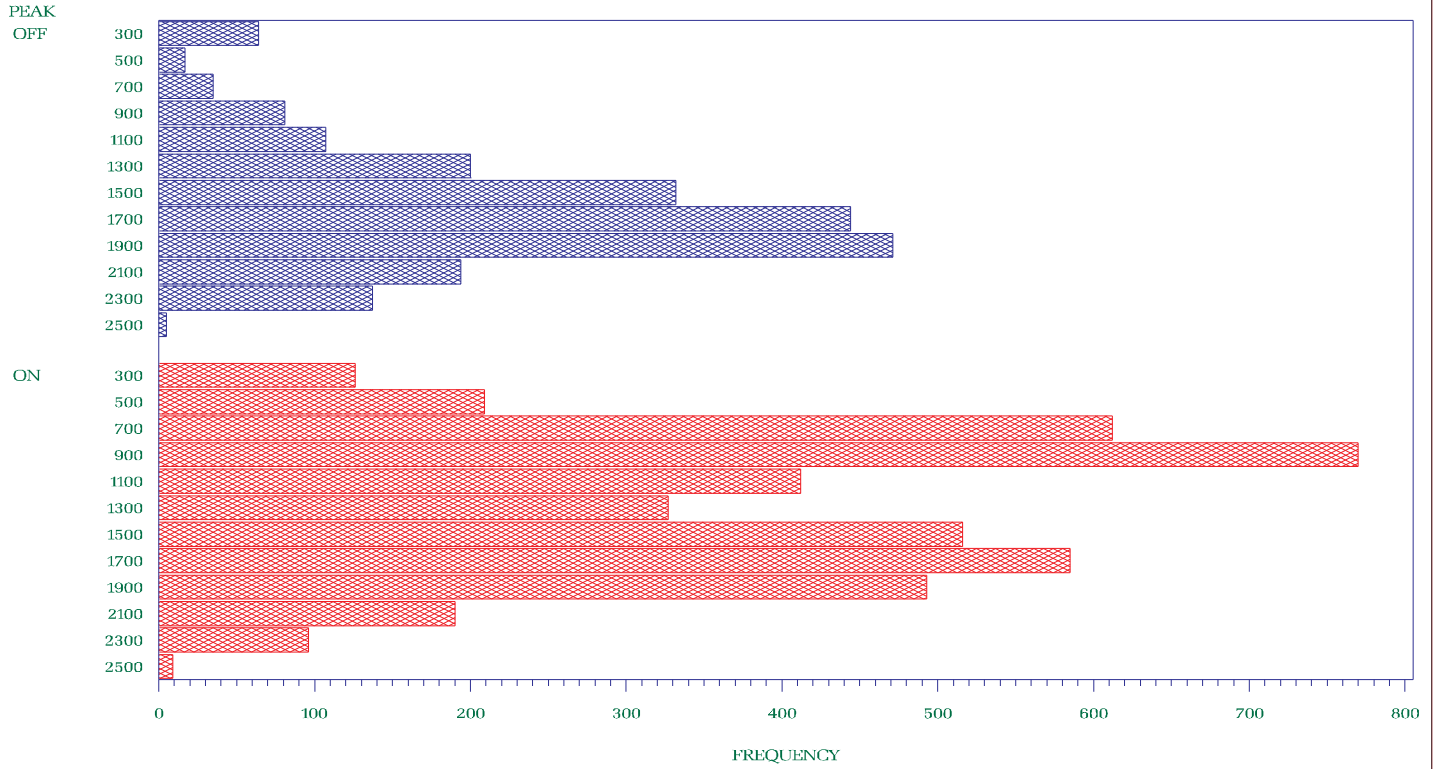


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to Moses South Limit

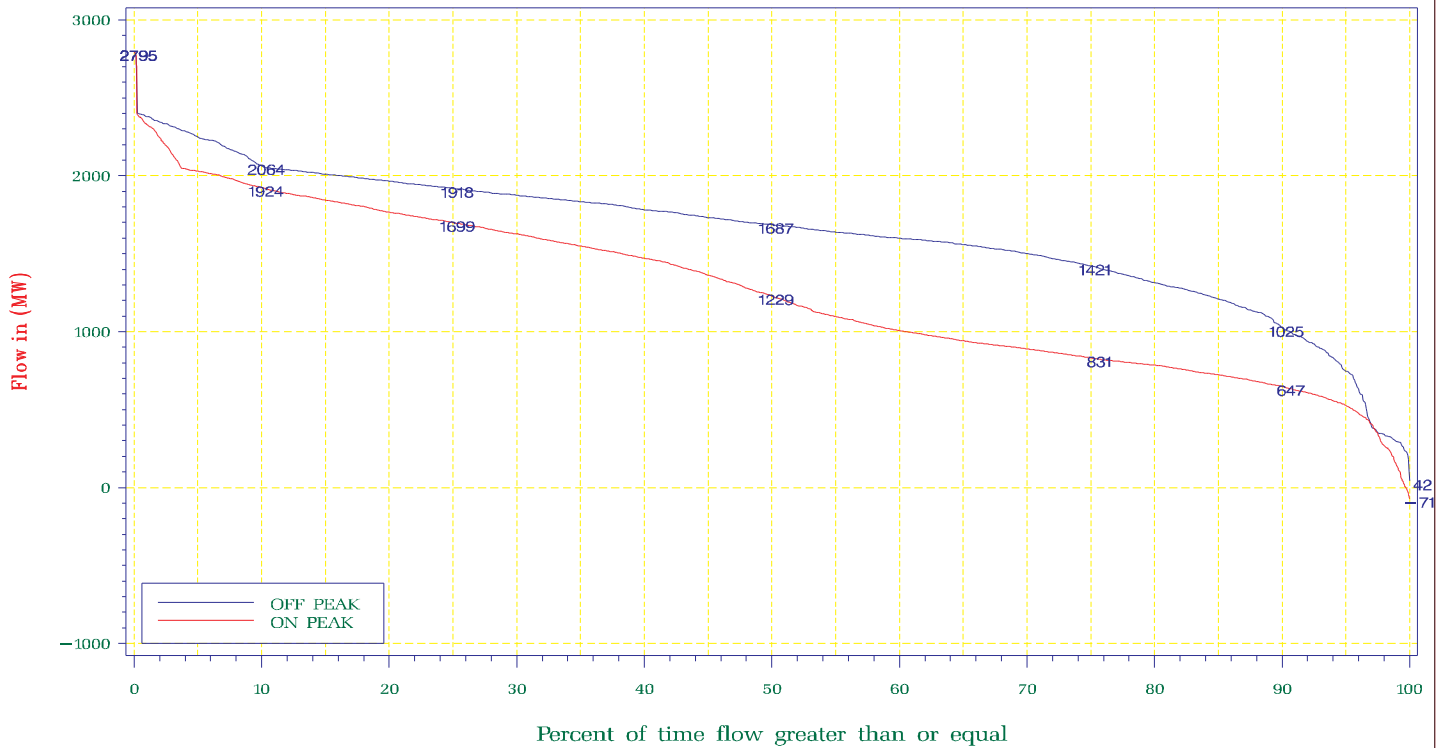


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to Moses South Limit

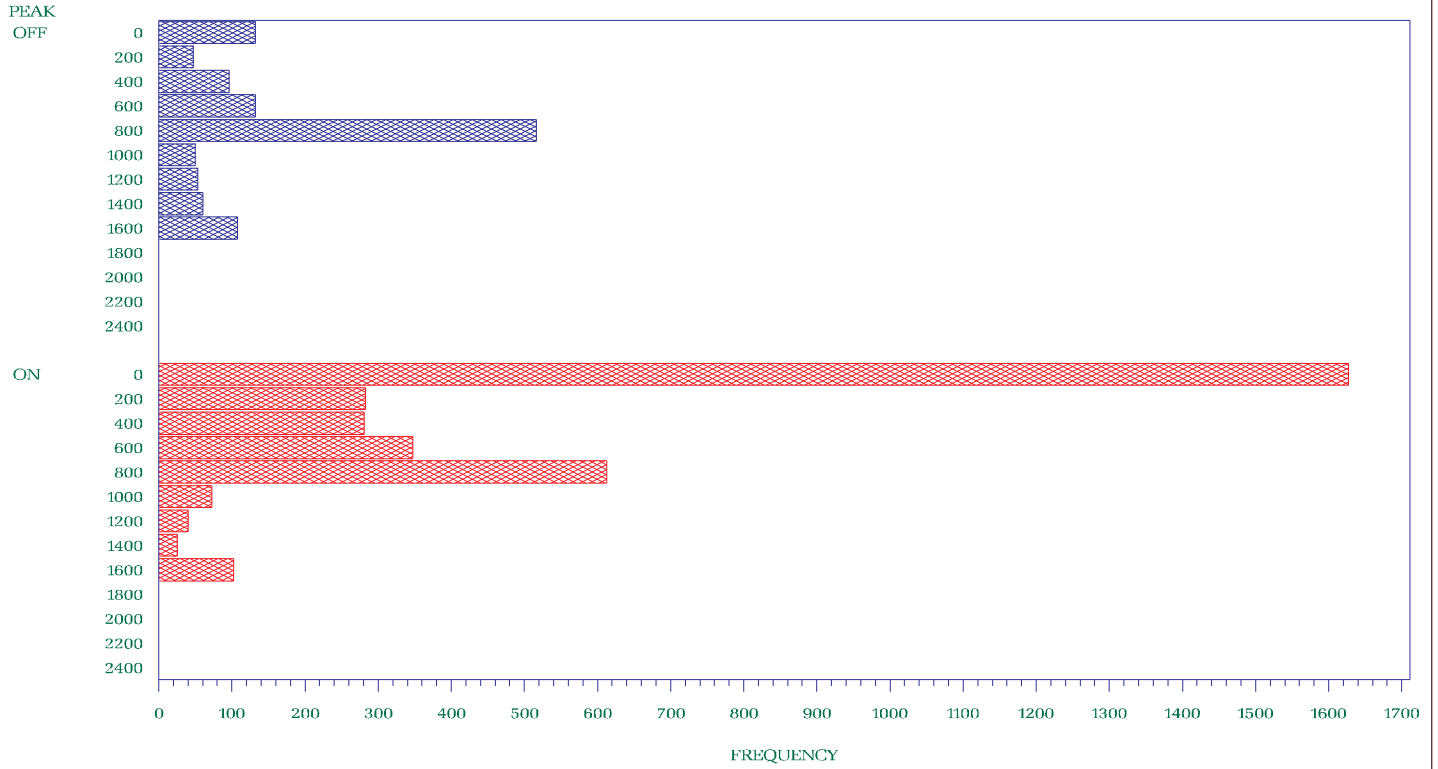


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to TE–NY Limit

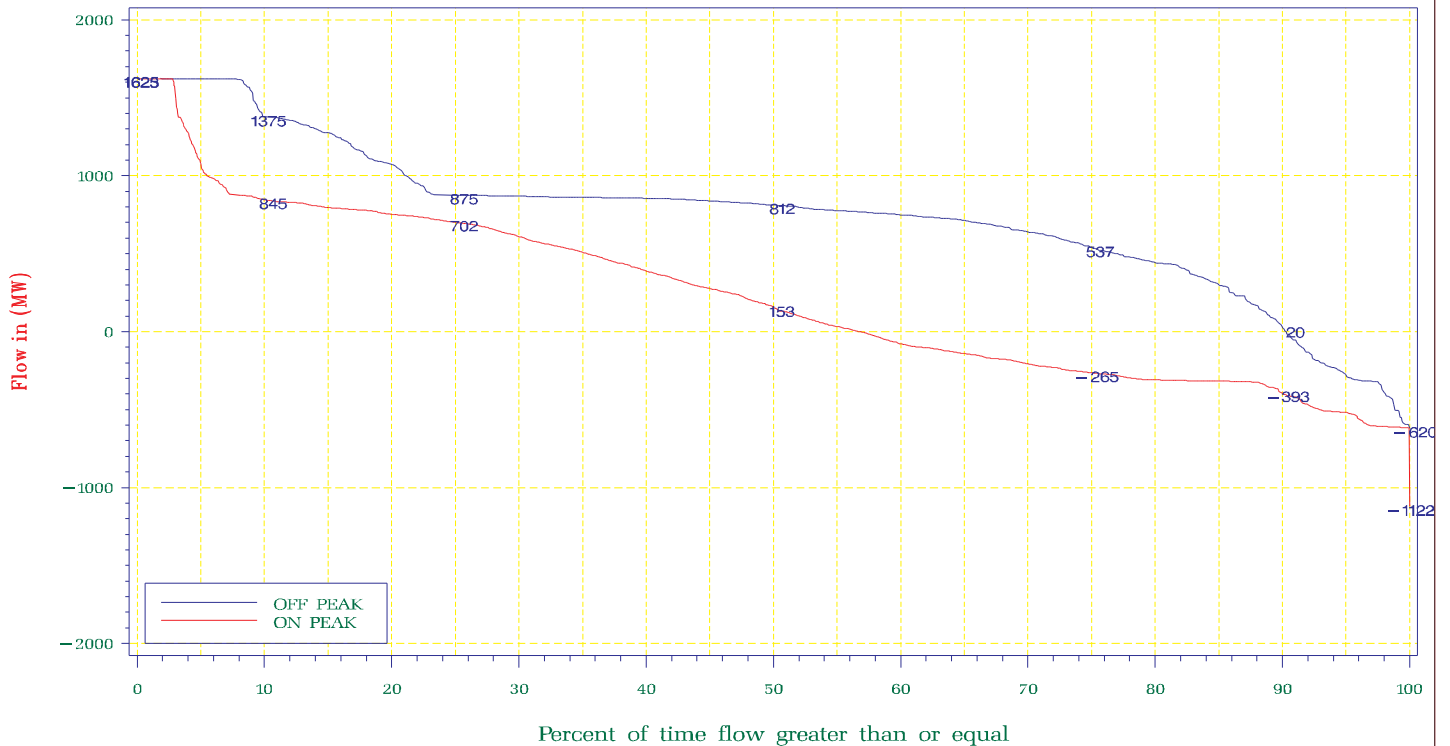


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to TE–NY Limit



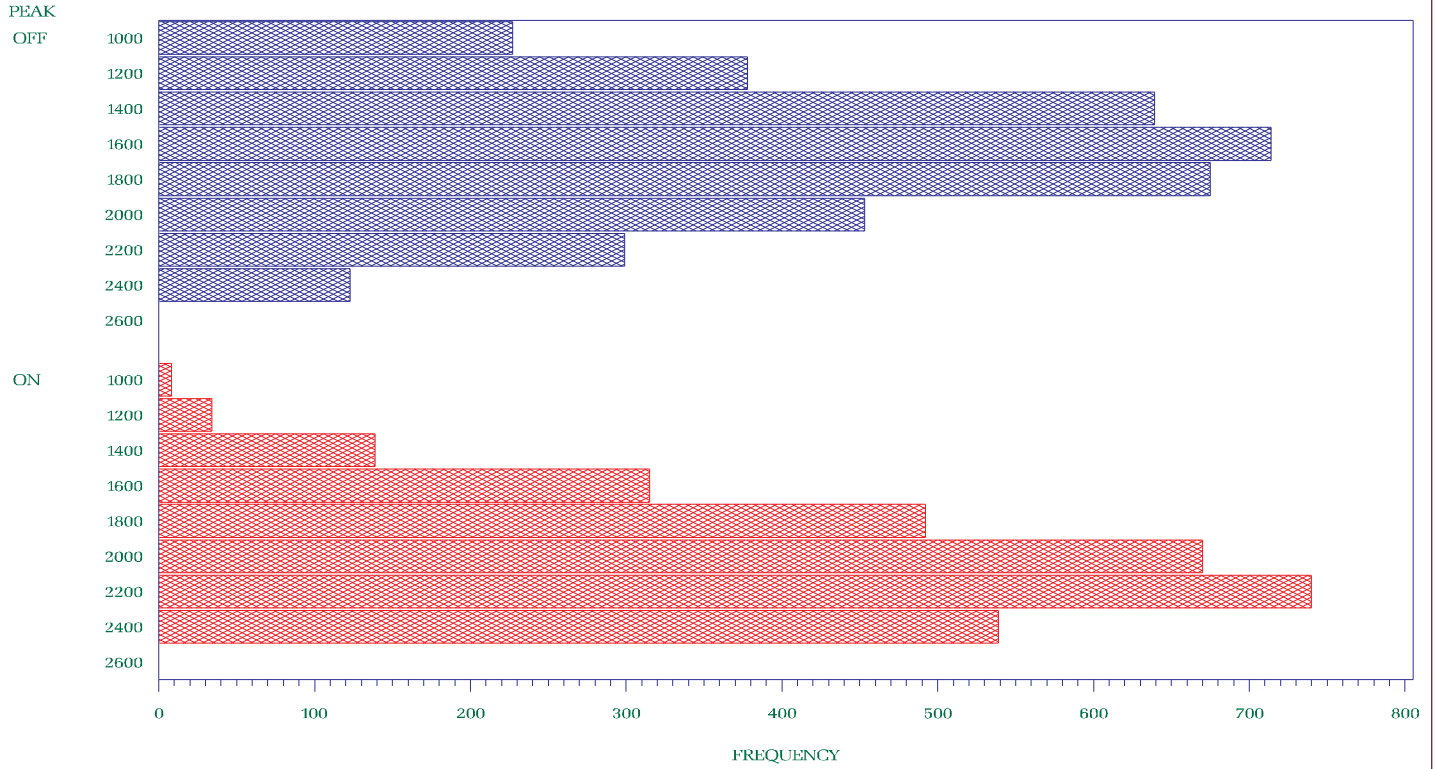
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

Margin to Ontario – NY Limit

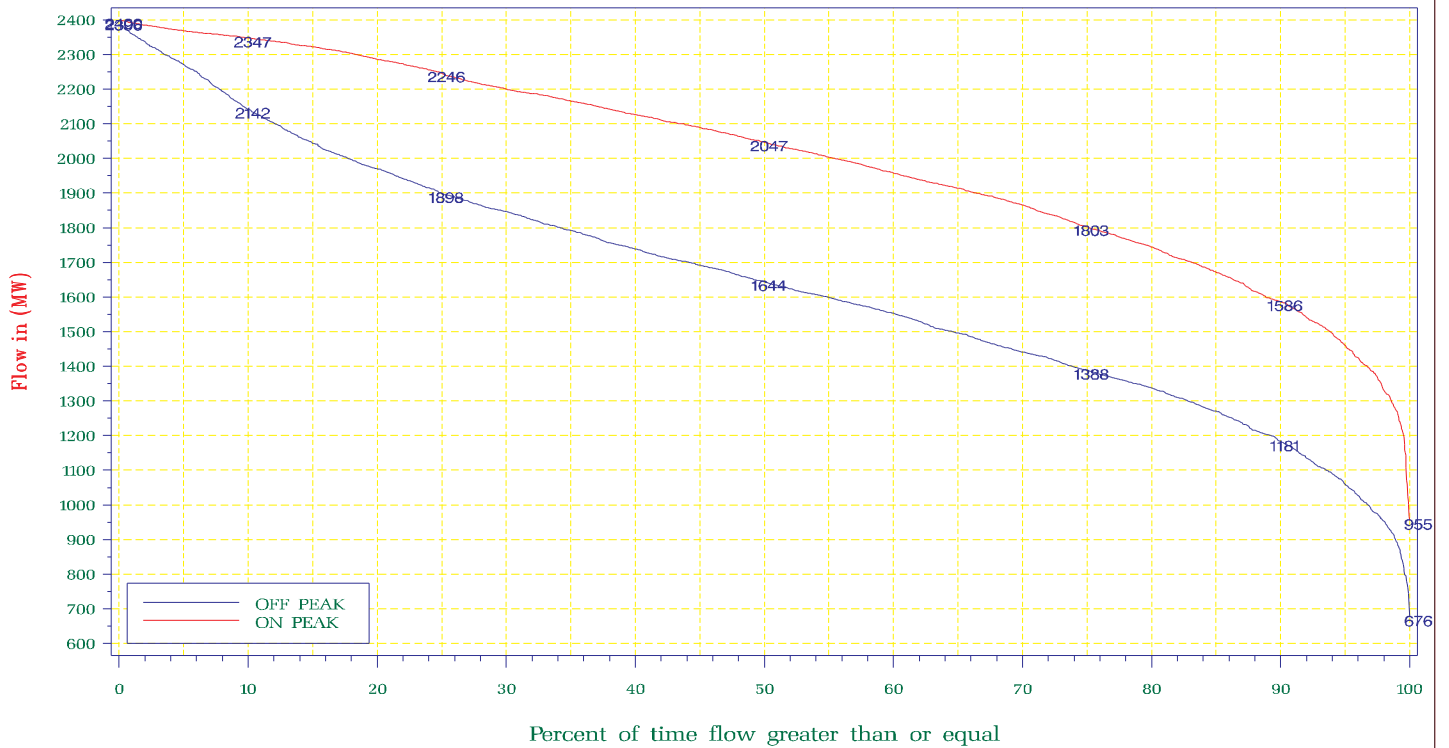


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to Ontario – NY Limit

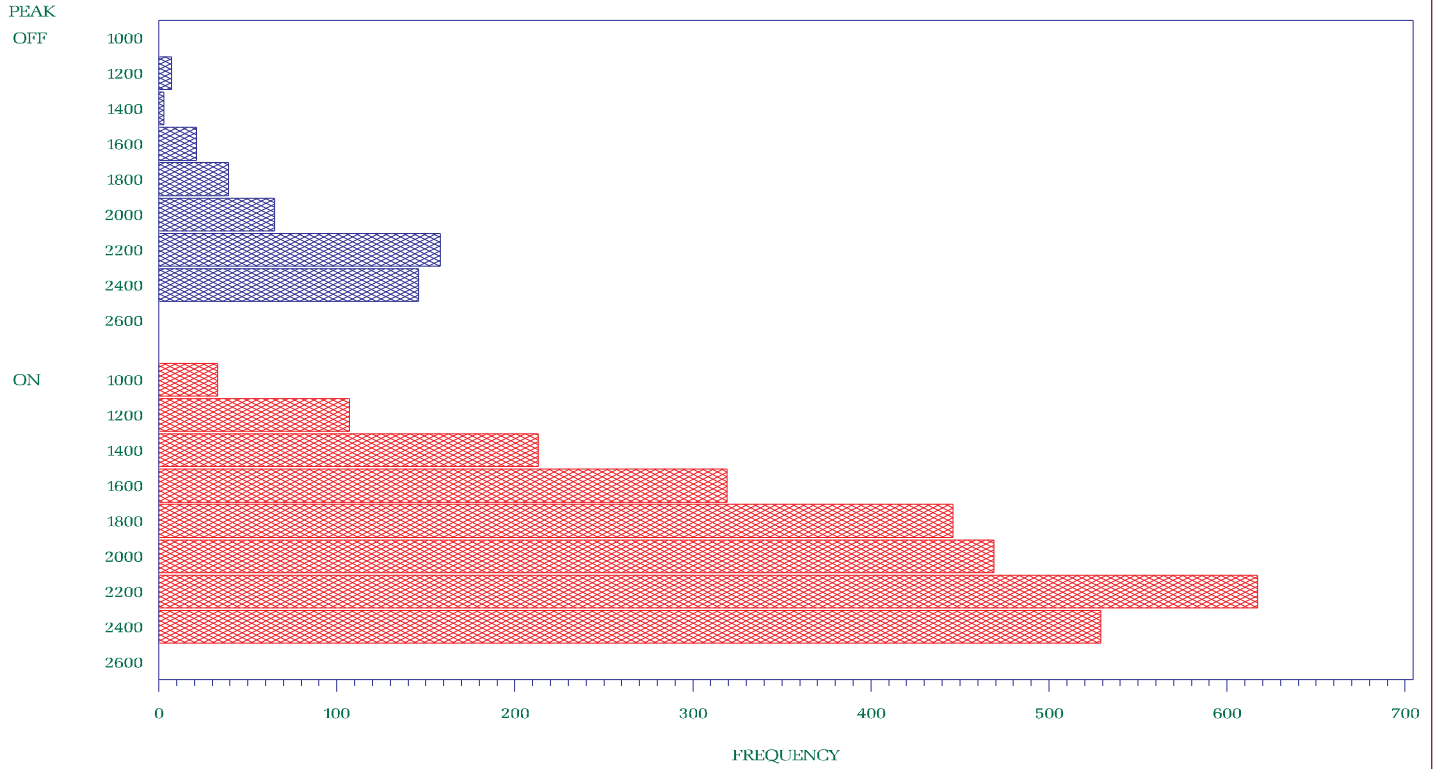


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to NY–Ontario Limit

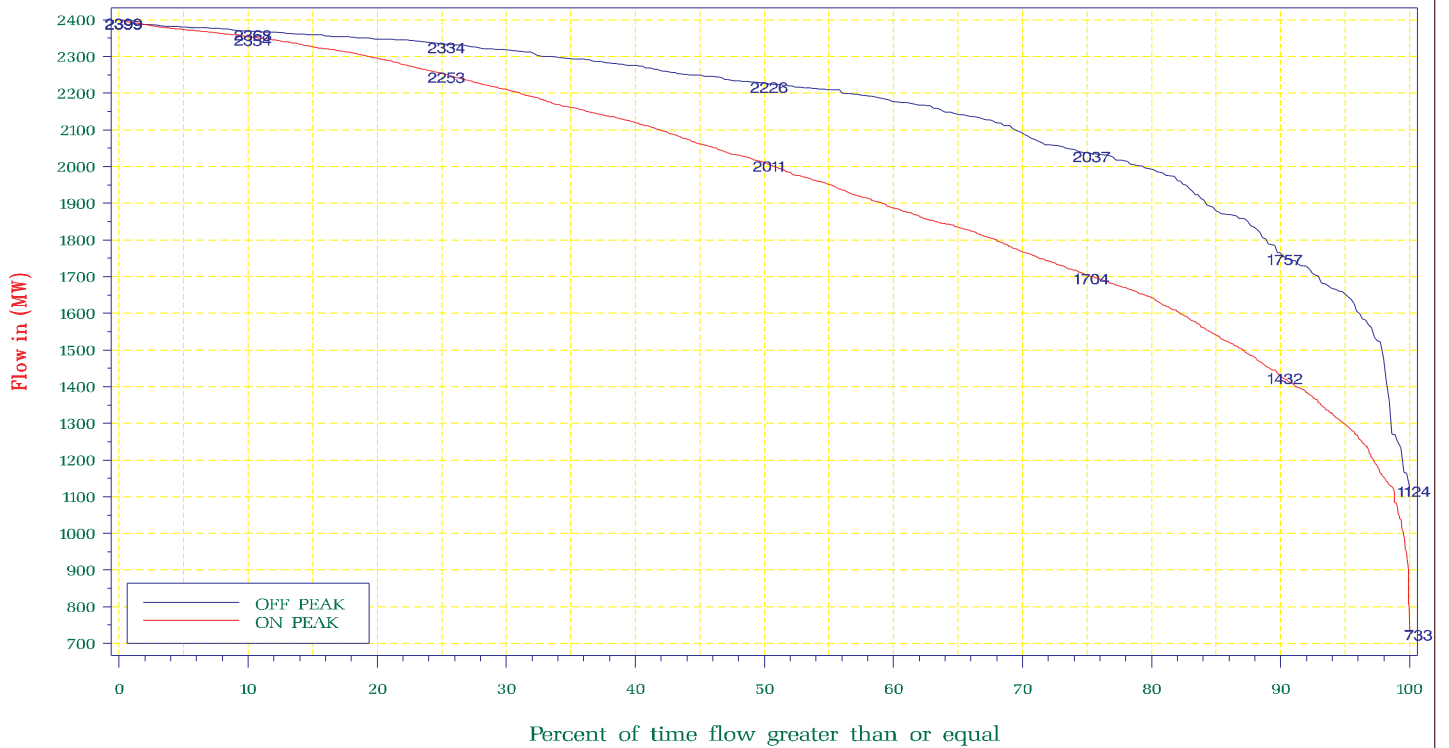


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to NY–Ontario Limit

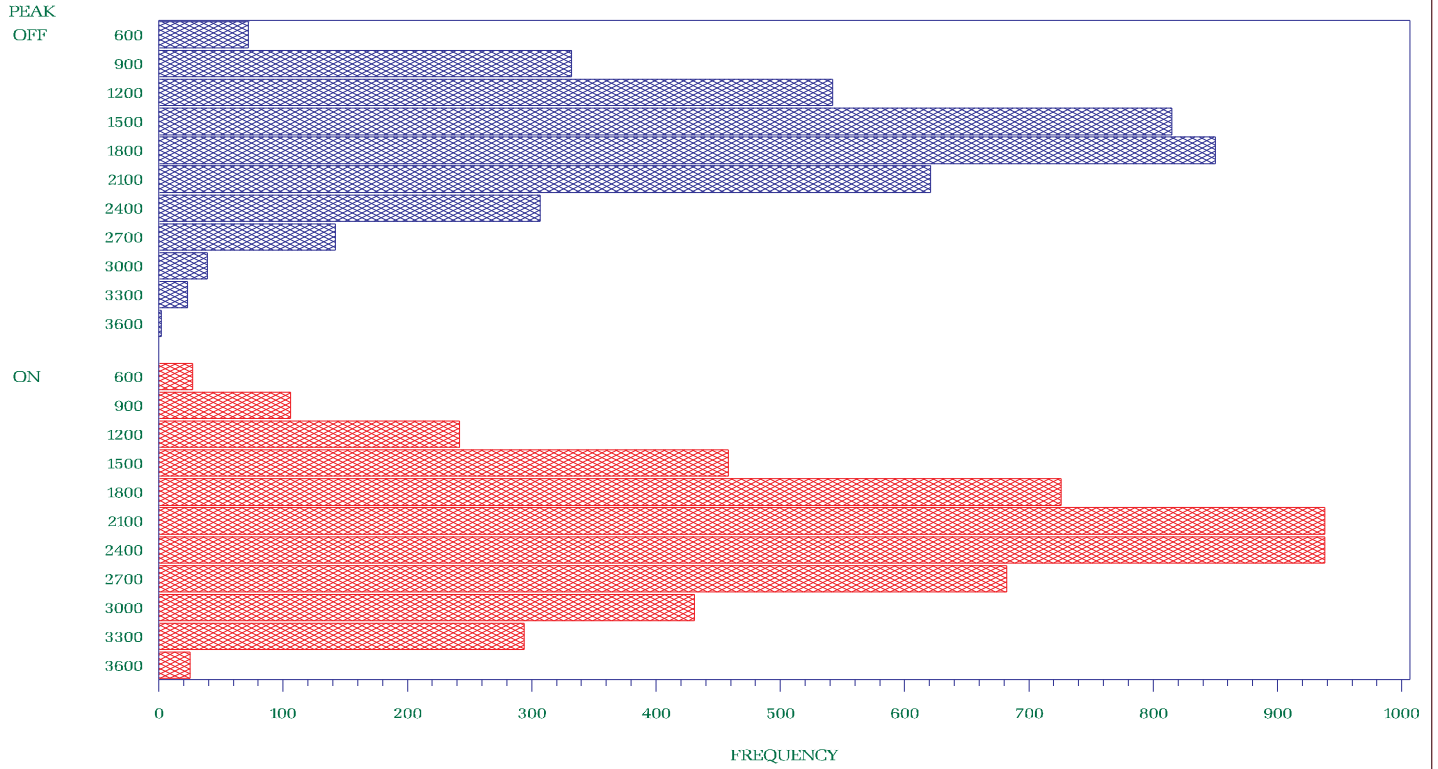


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to PJM – NY Limit

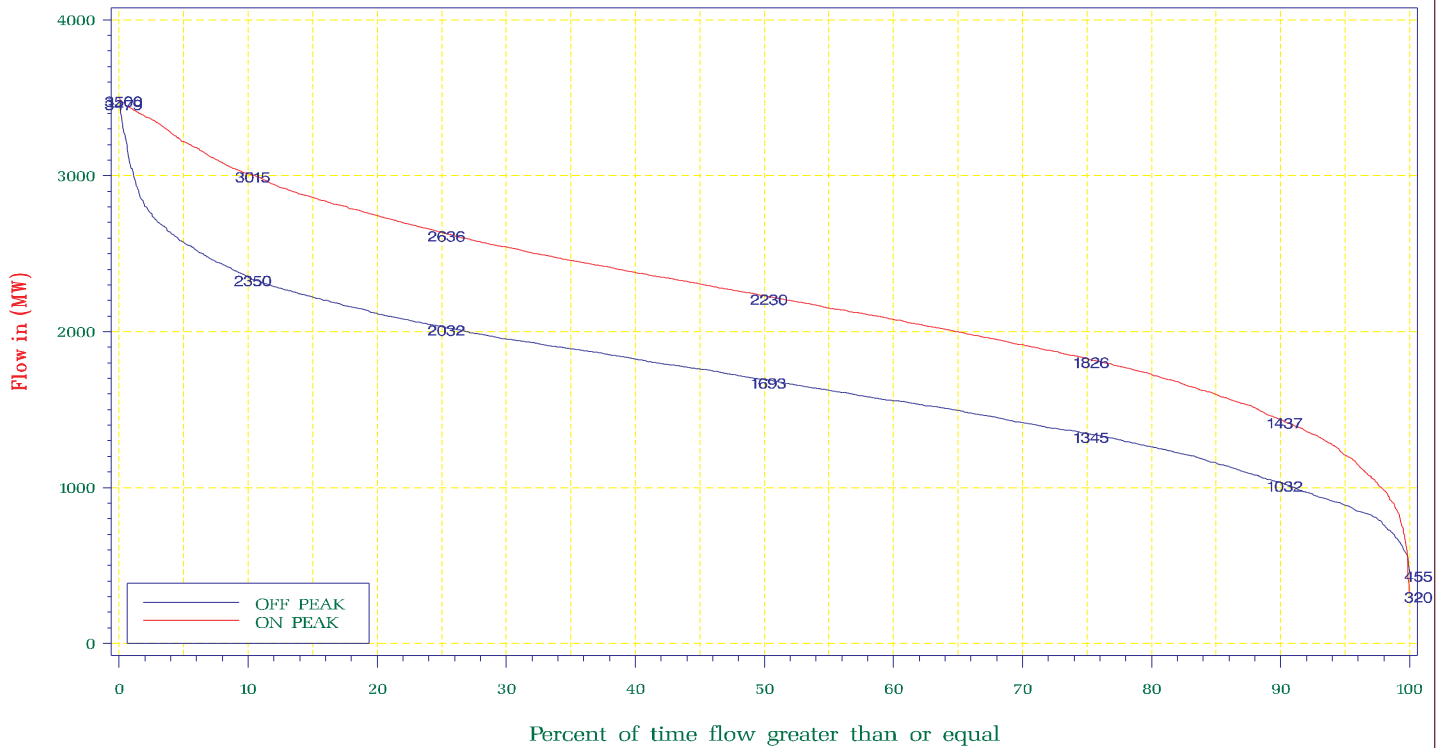


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to PJM – NY Limit

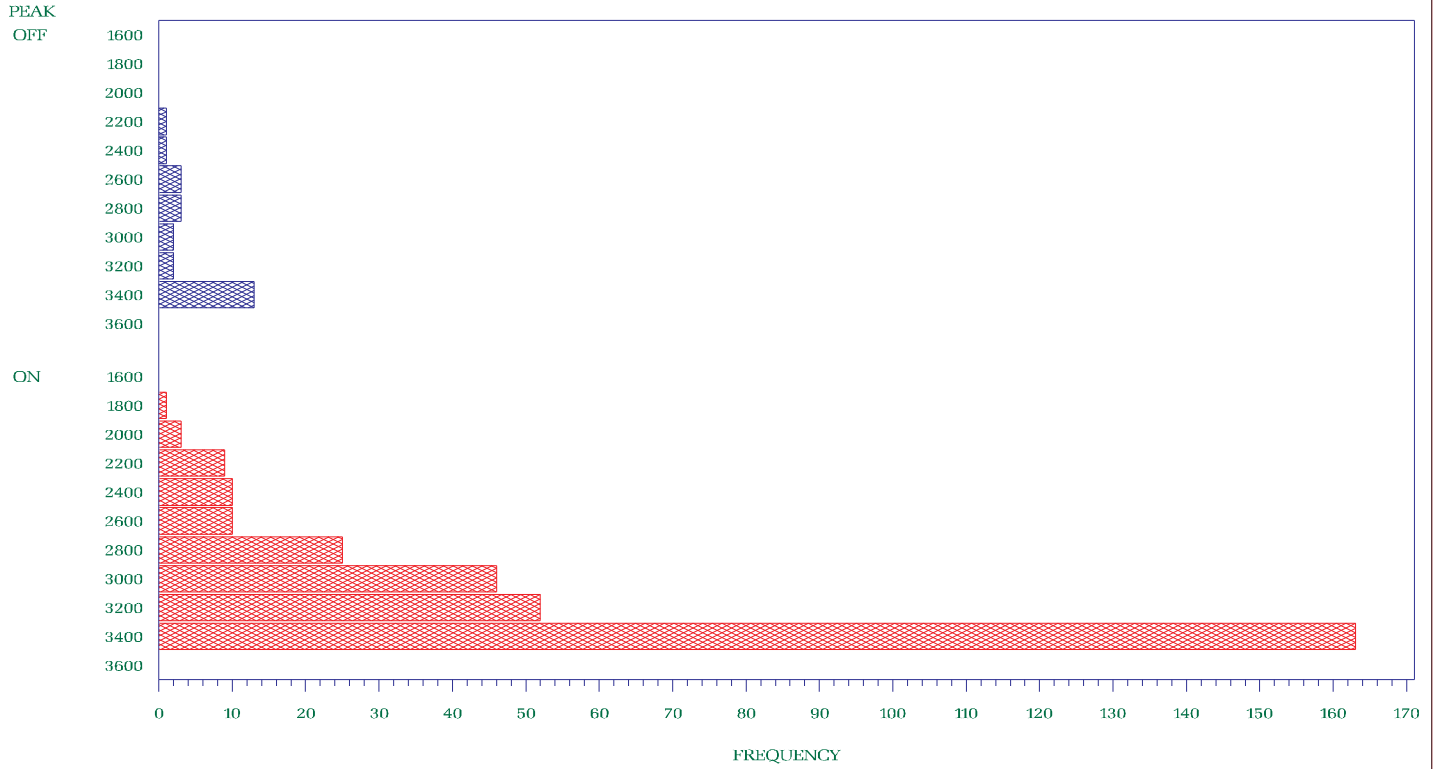


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to NY – PJM Limit

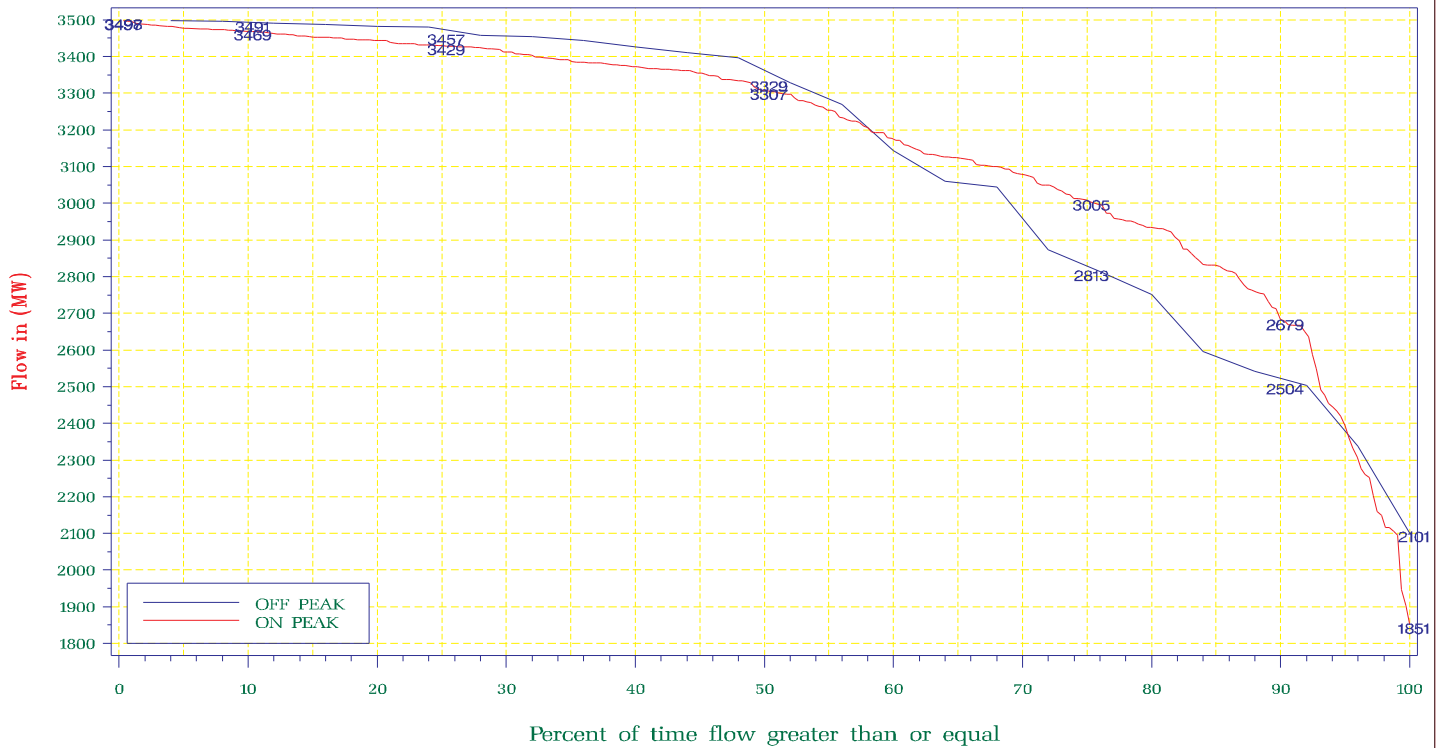


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to NY – PJM Limit

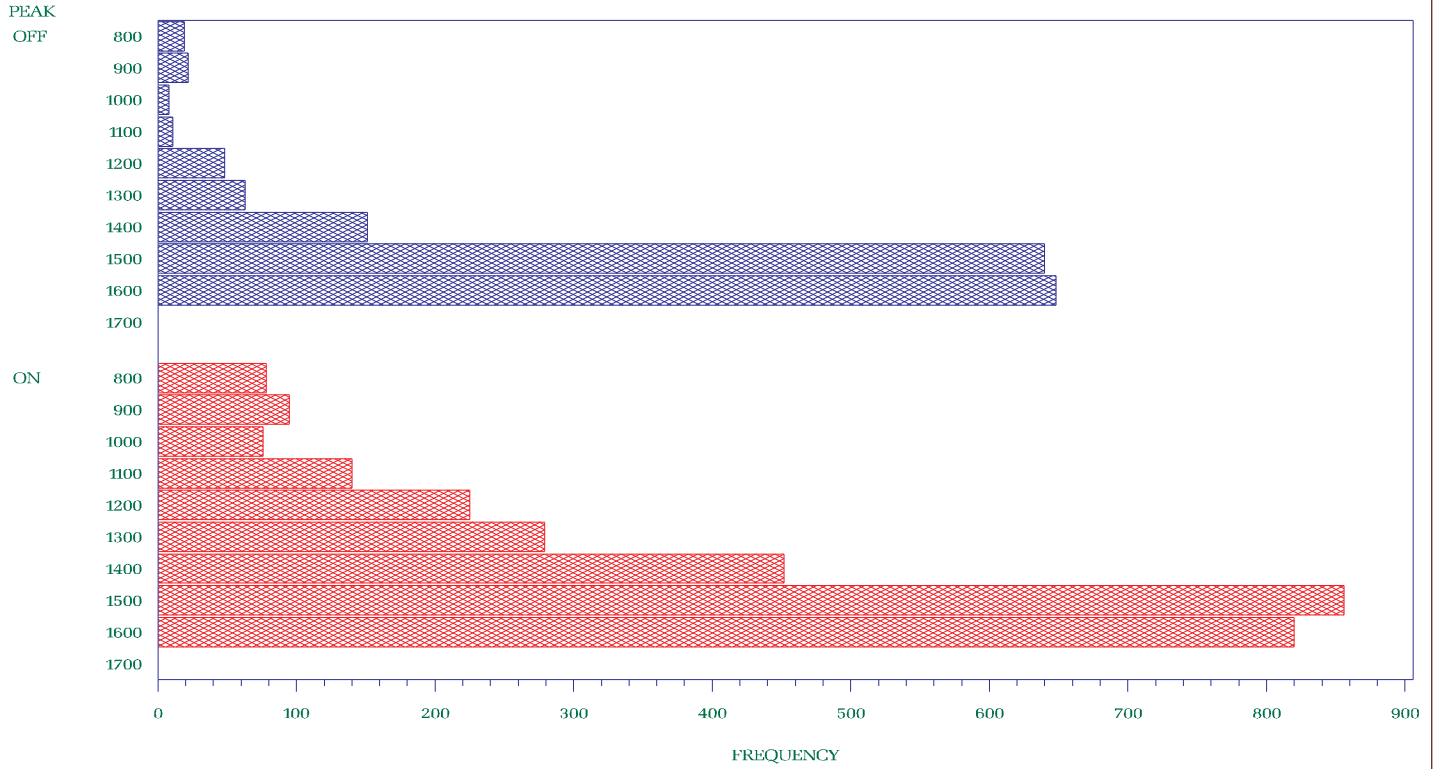


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to New England – NY Limit

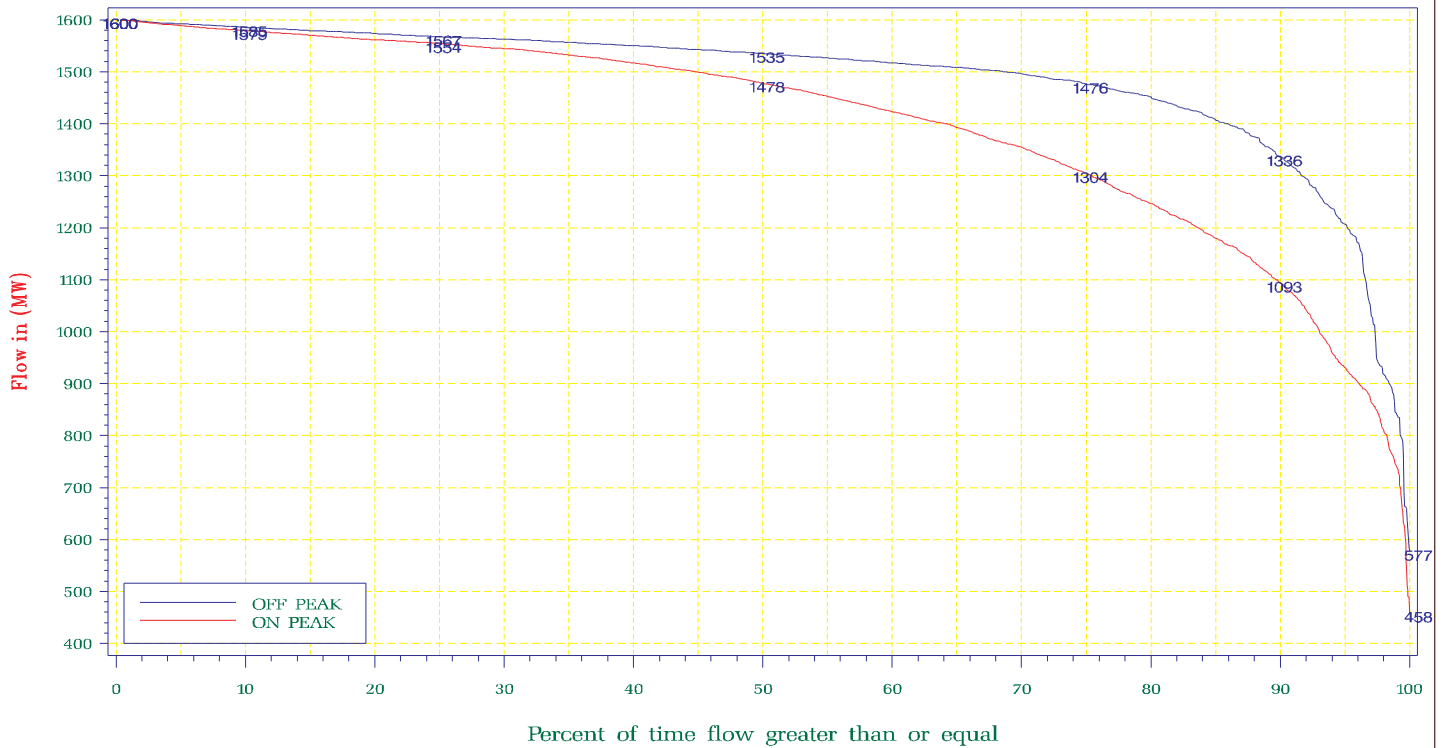


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to New England – NY Limit

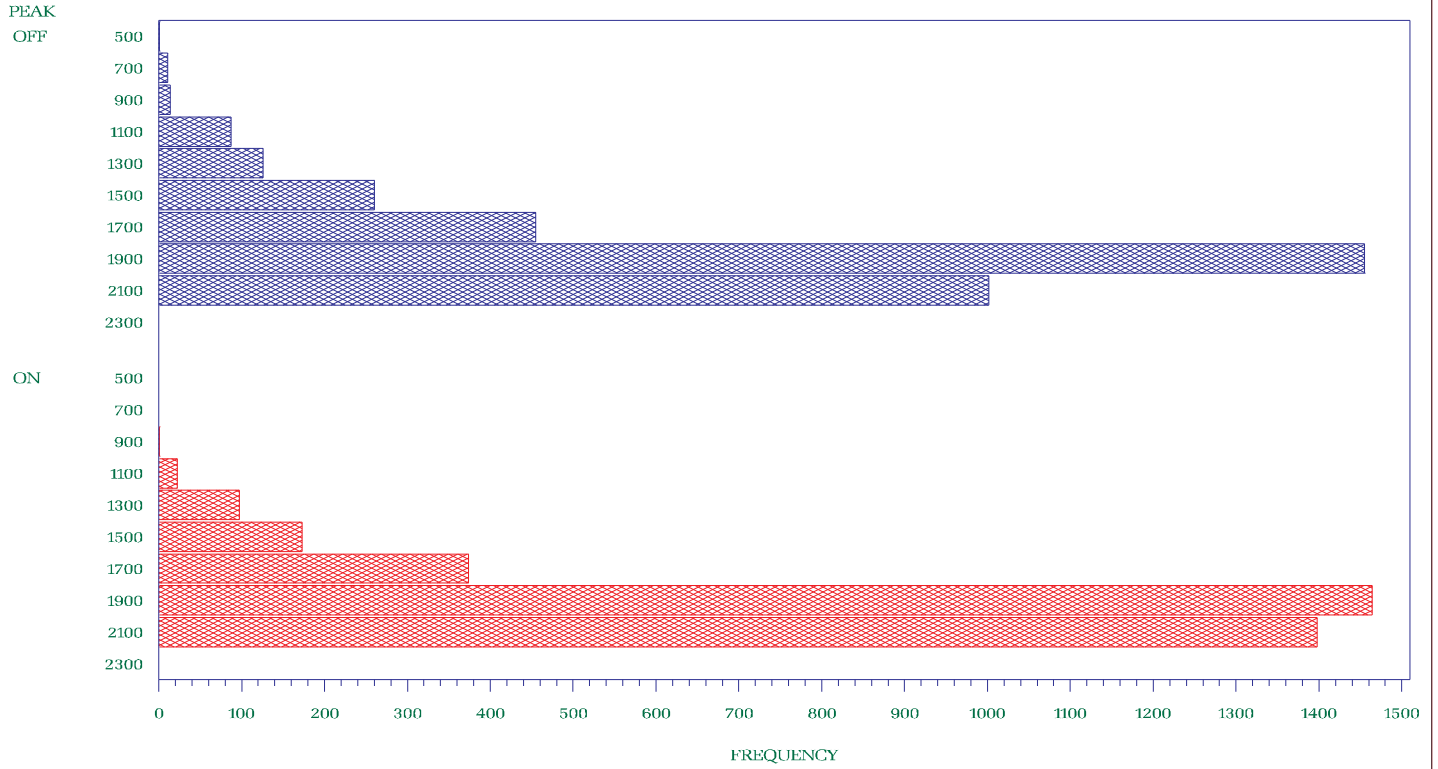


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Margin to NY–New England Limit

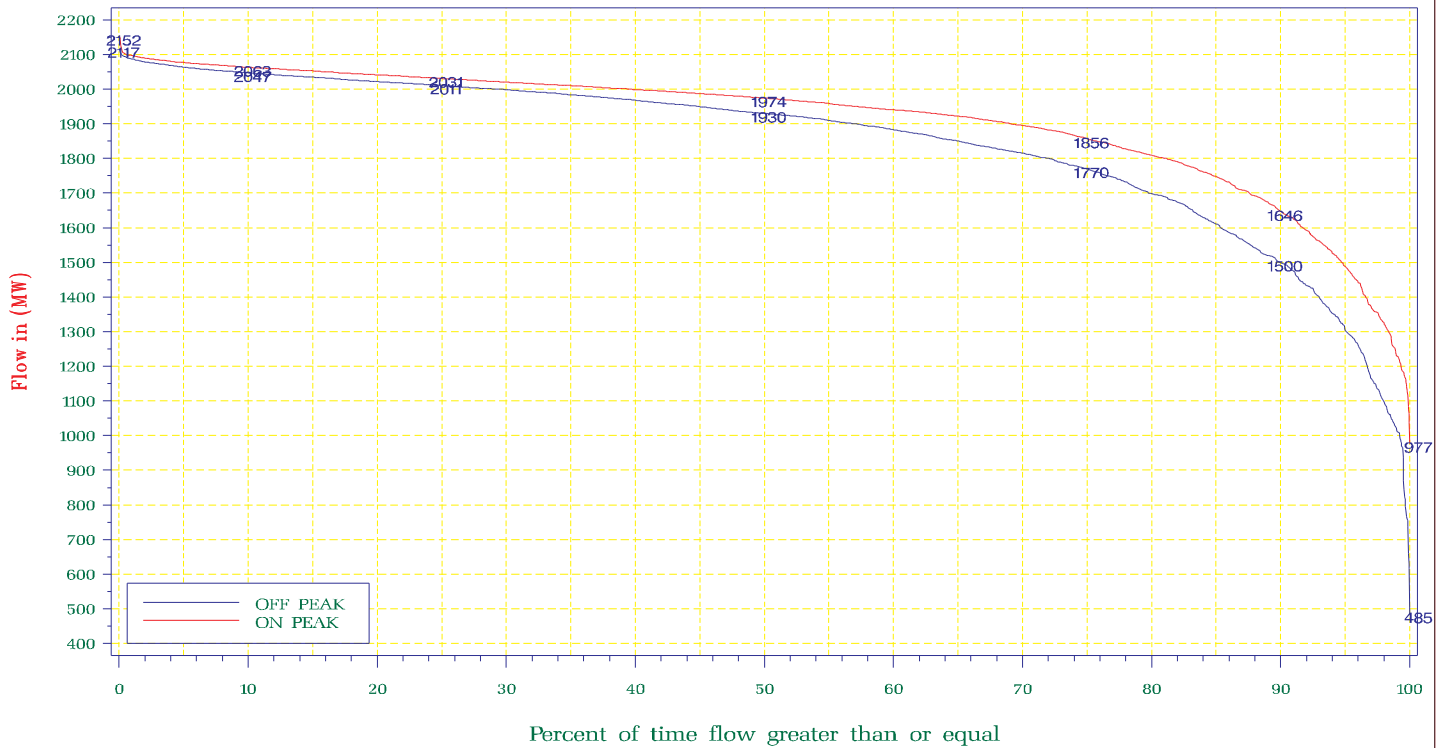


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Margin to NY–New England Limit



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm



Appendix H – Interface Limits  
On-peak vs. Off-Peak

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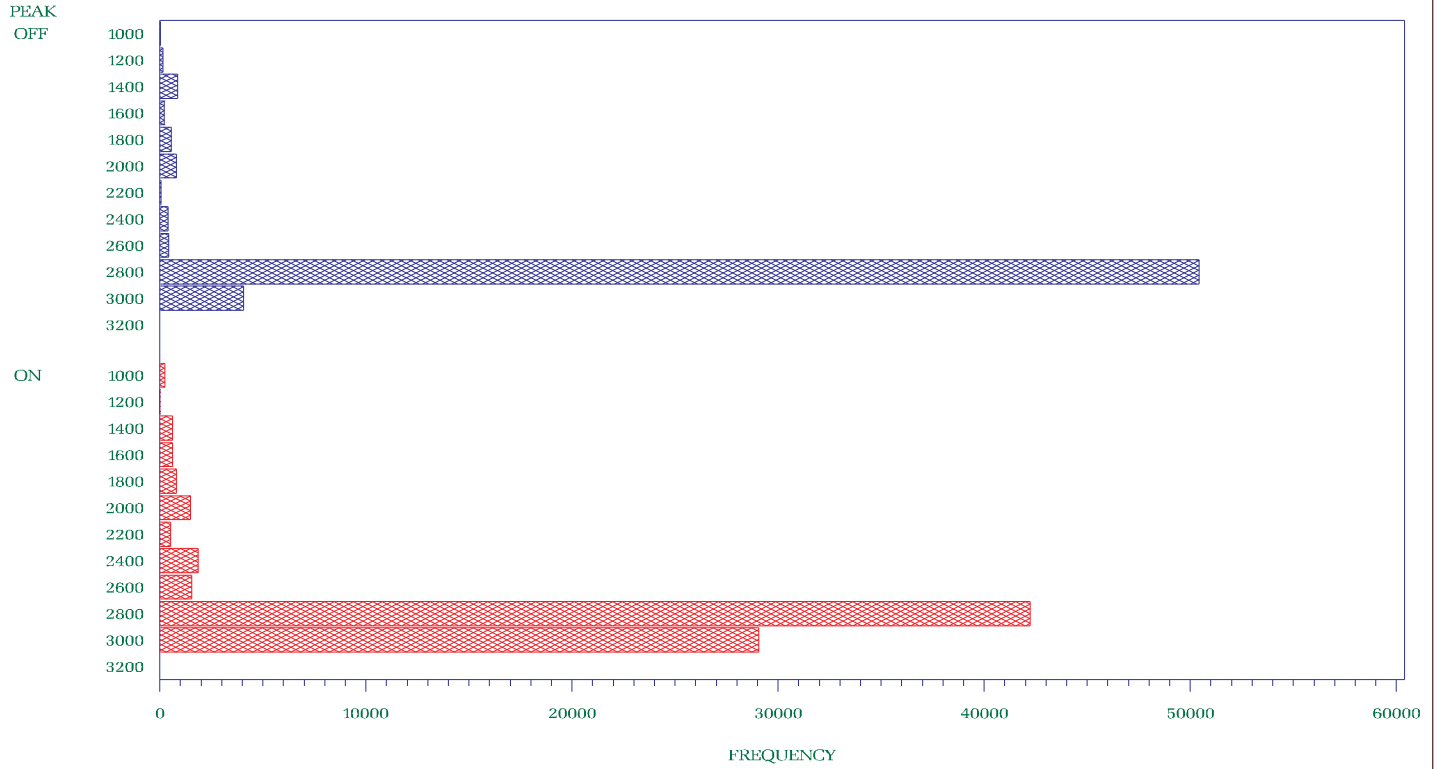
Central East Limit (MW)	.....	H3
Total East Limit (MW)	.....	H4
West Central Limit (MW)	.....	H5
Dysinger East Limit (MW)	.....	H6
UPNY Con Ed Limit (MW)	.....	H7
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Central East Pre-Contingency Voltage Collapse		
Loss of Marcy South Tower	.....	H18
Central East Pre-Contingency Voltage Collapse		
Loss of New Scotland 99 bus	.....	H19

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NYISO Frequency Interface Flow For January – December 2004

Central East Limit

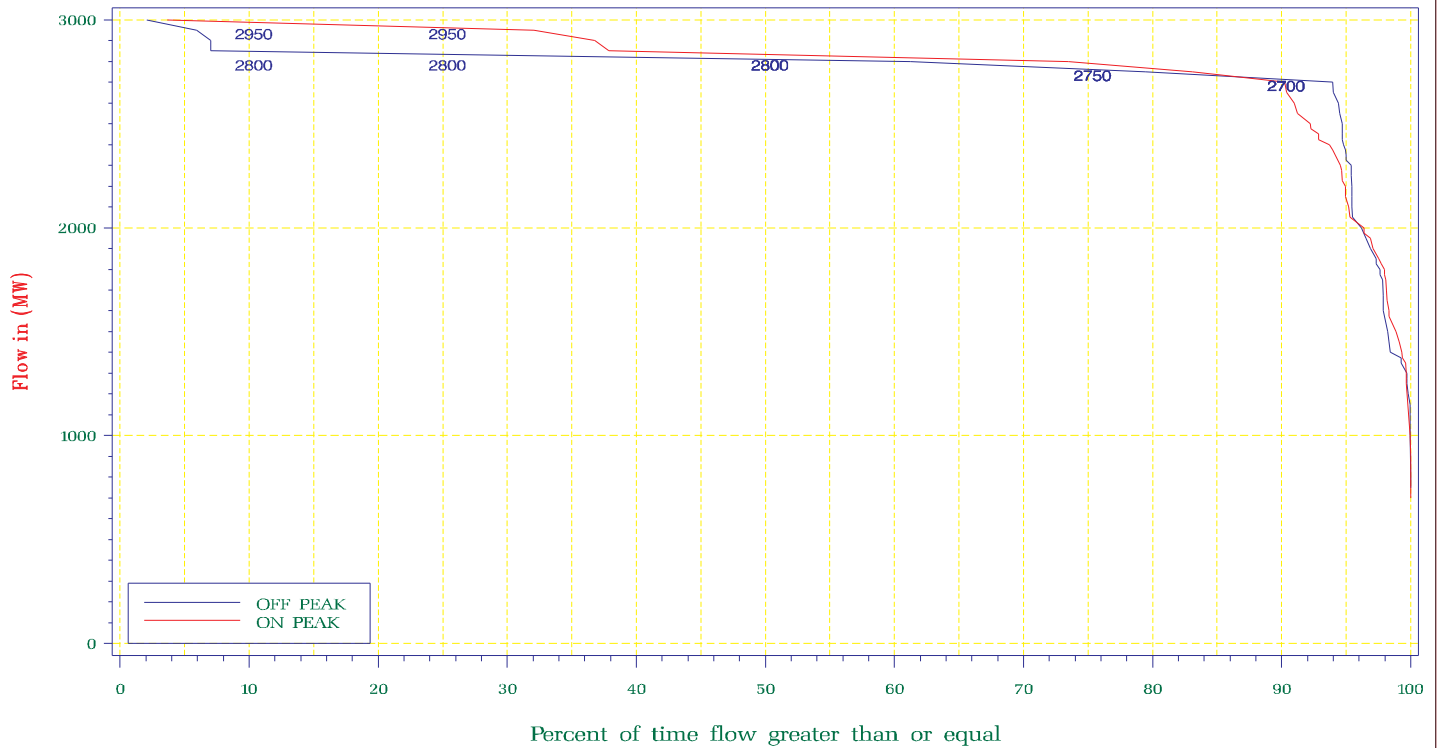


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Central East Limit

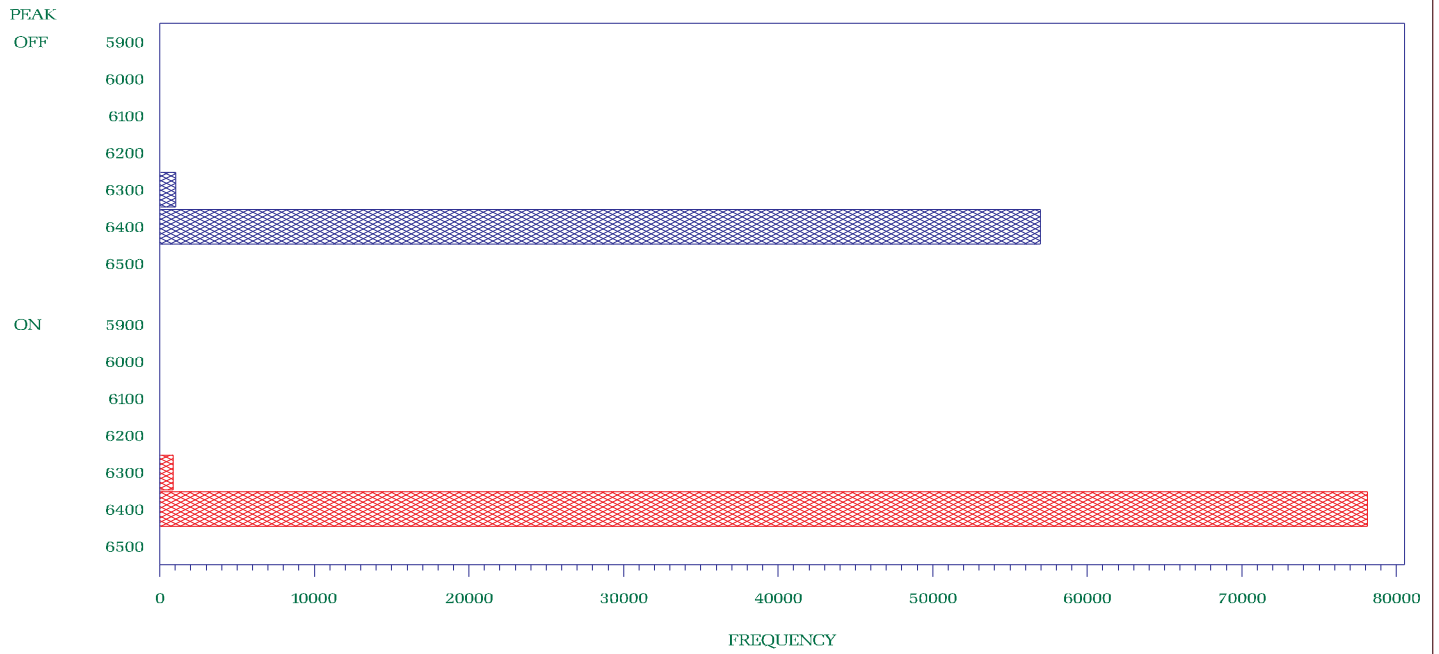


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Total East Limit

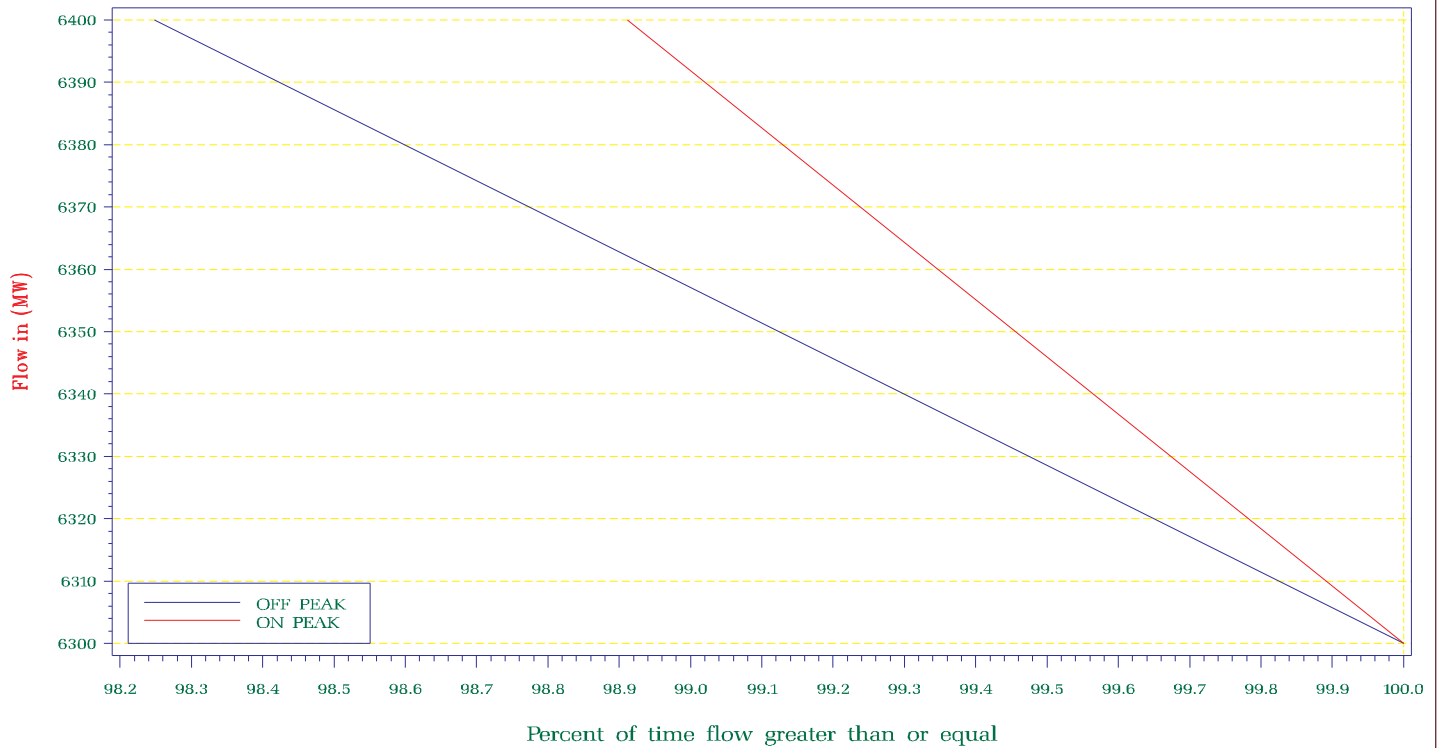


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Total East Limit

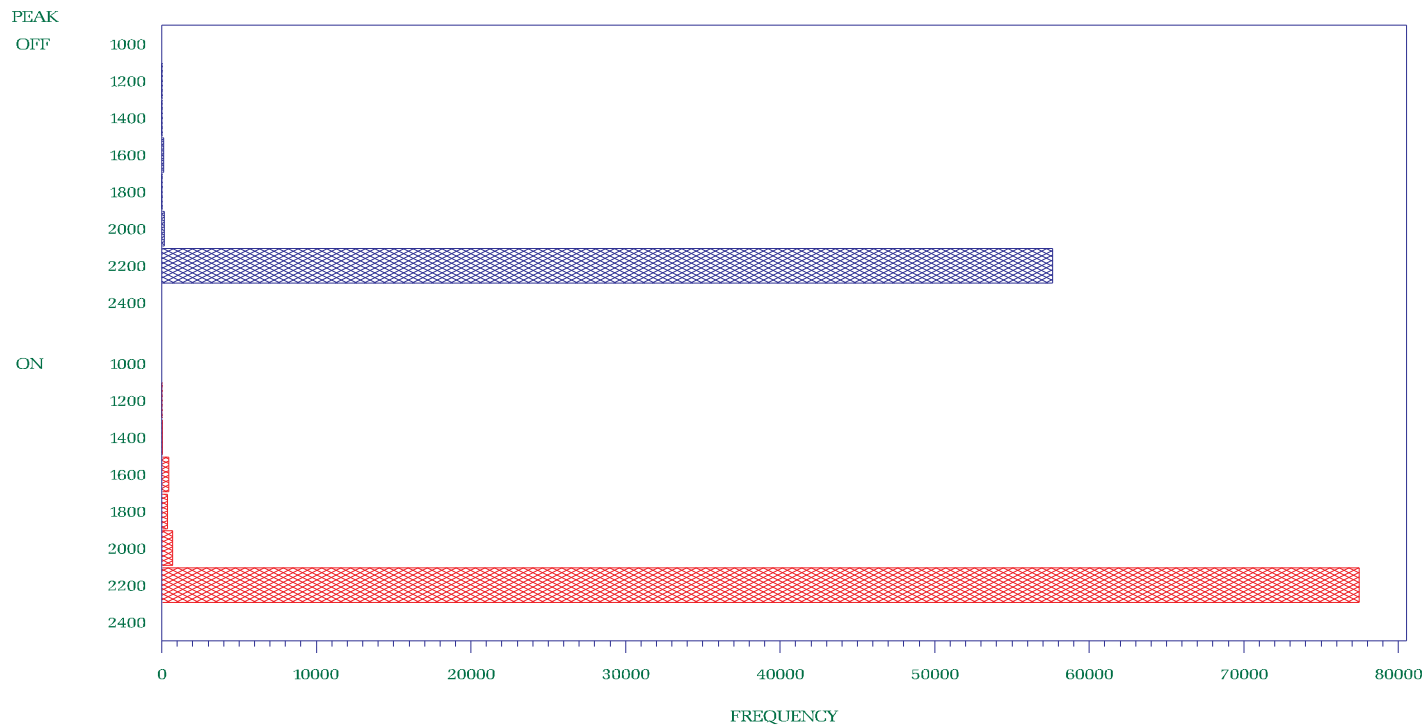


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

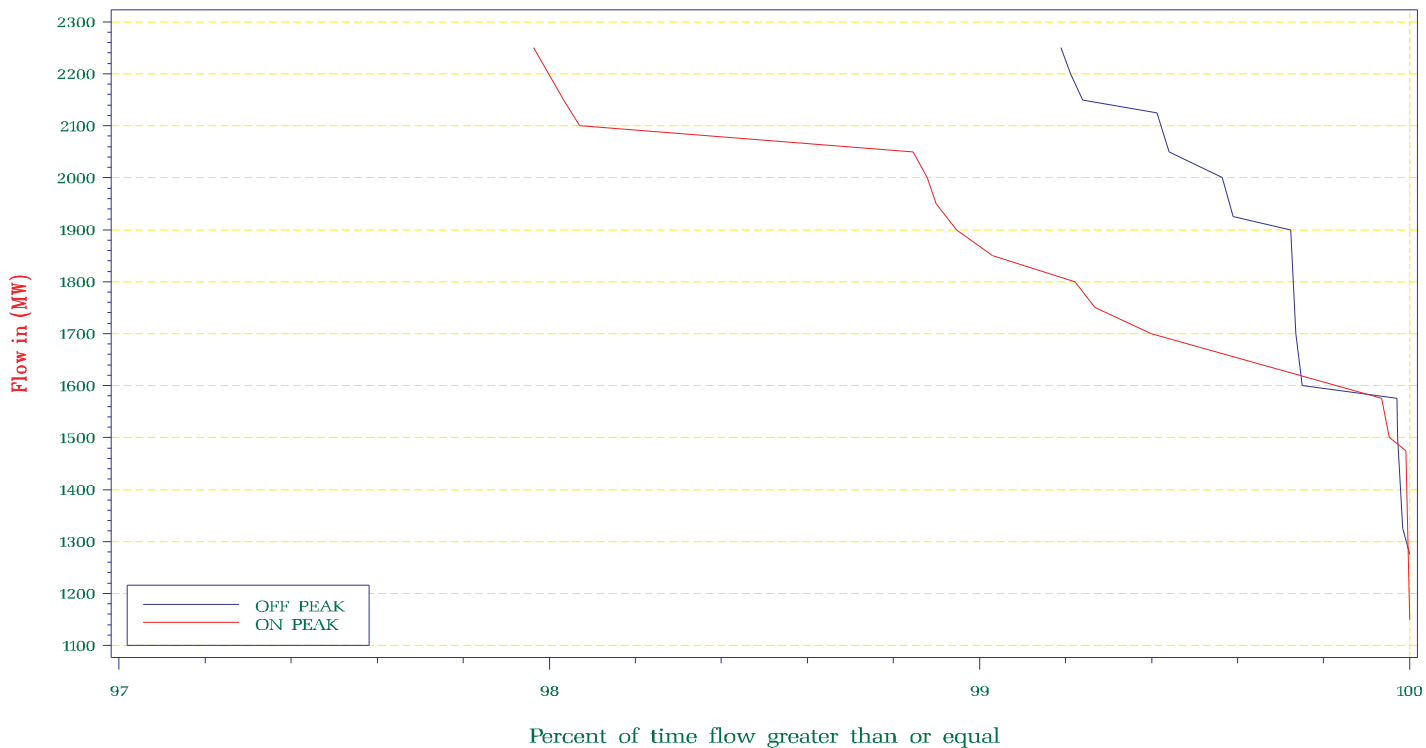
West Central Limit



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday  
 ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

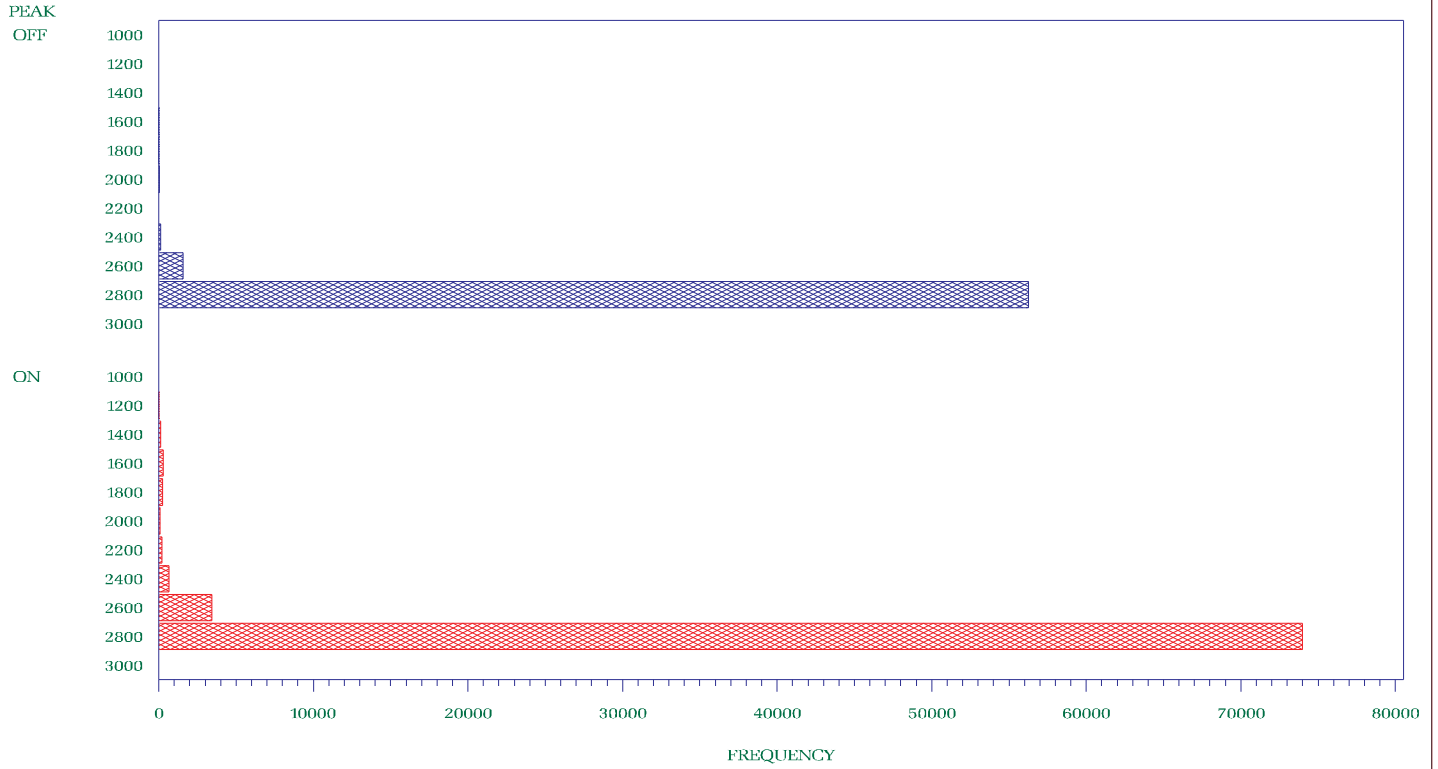
West Central Limit



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday  
 ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Dysinger East Limit

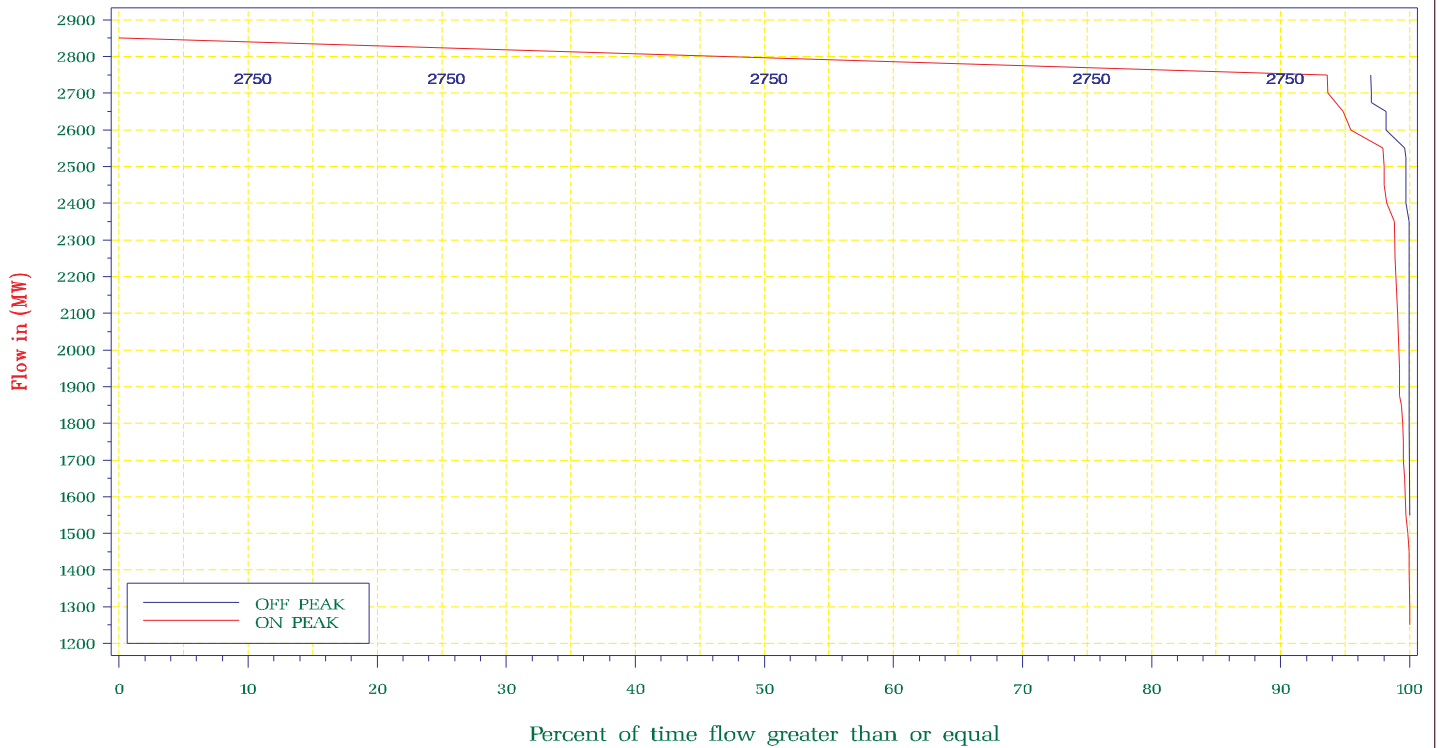


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Dysinger East Limit

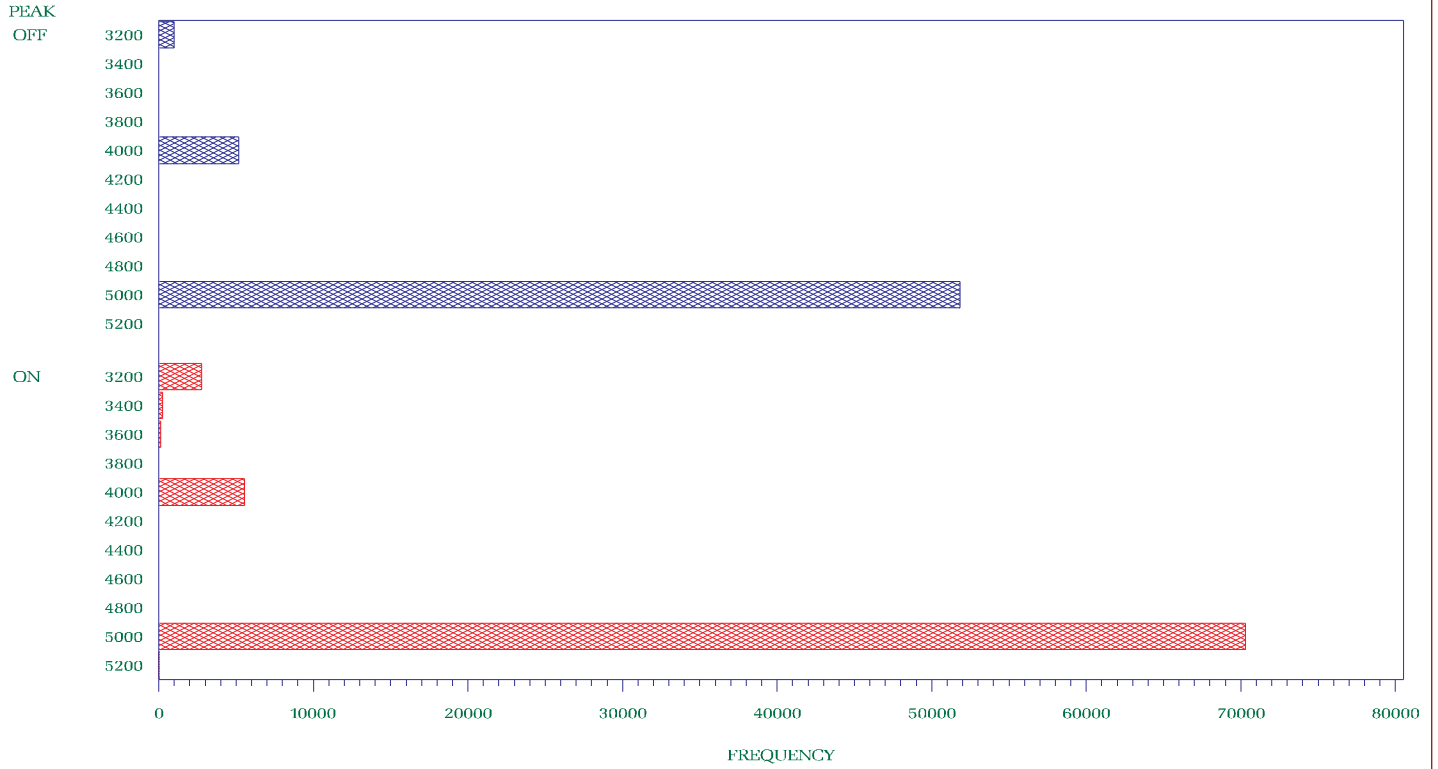


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

UPNY Con Ed Limit

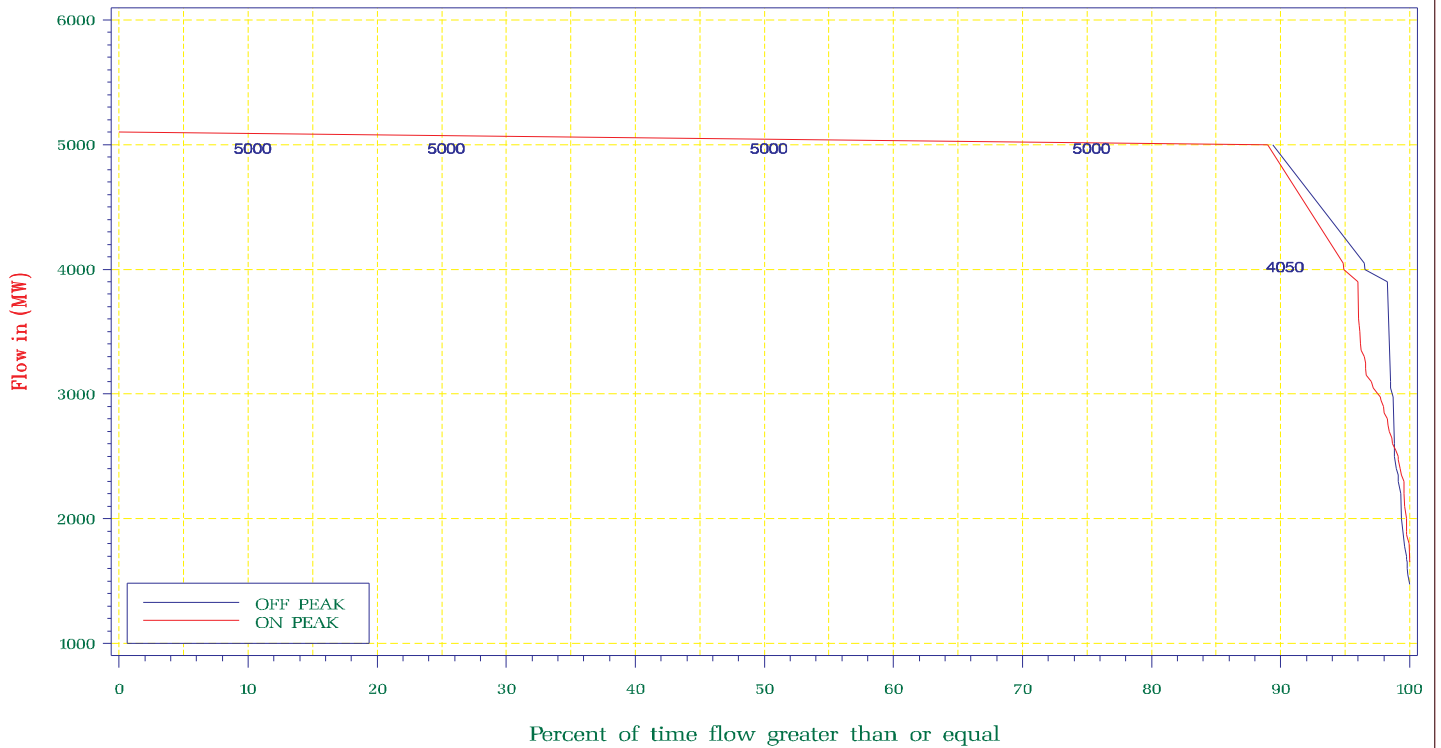


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

UPNY Con Ed Limit

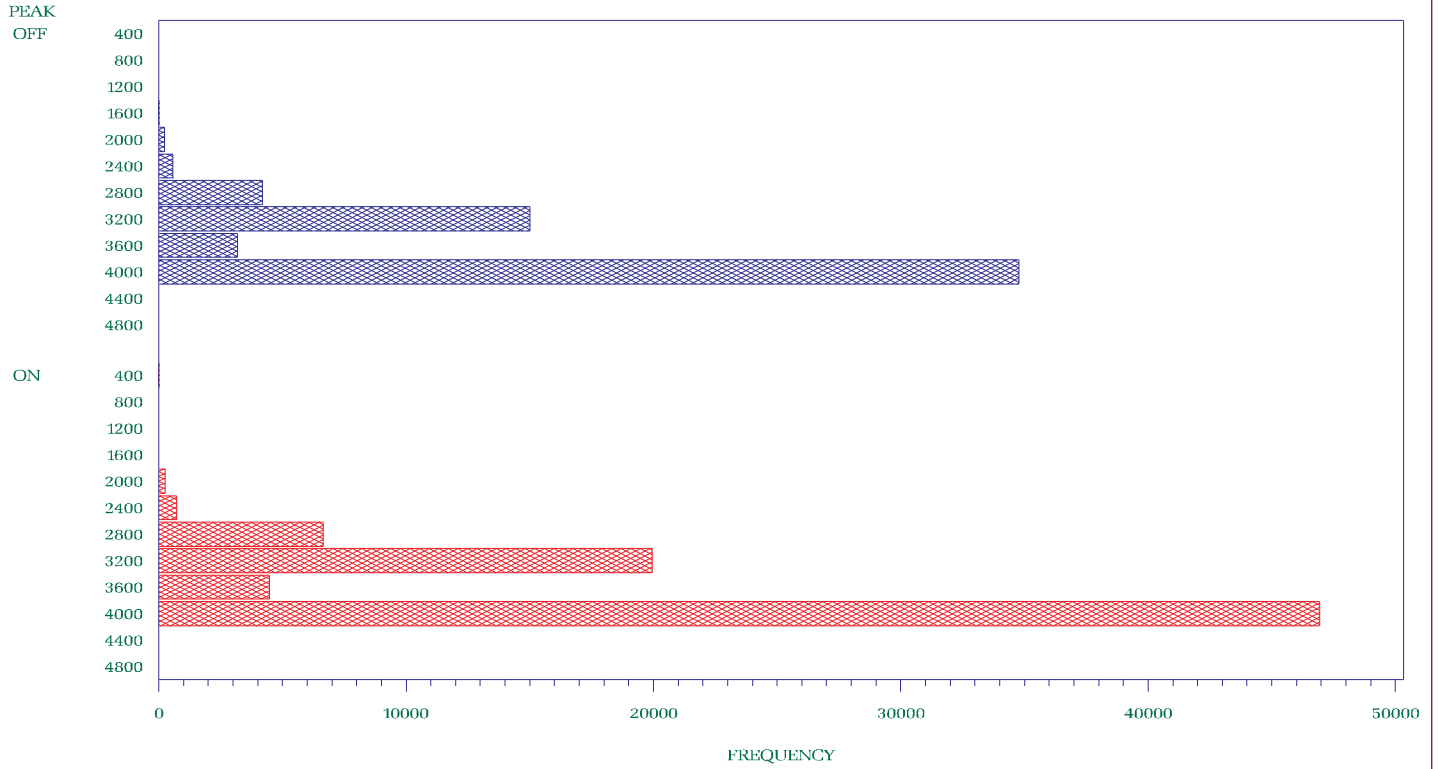


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK: Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Dunwoodie South Limit

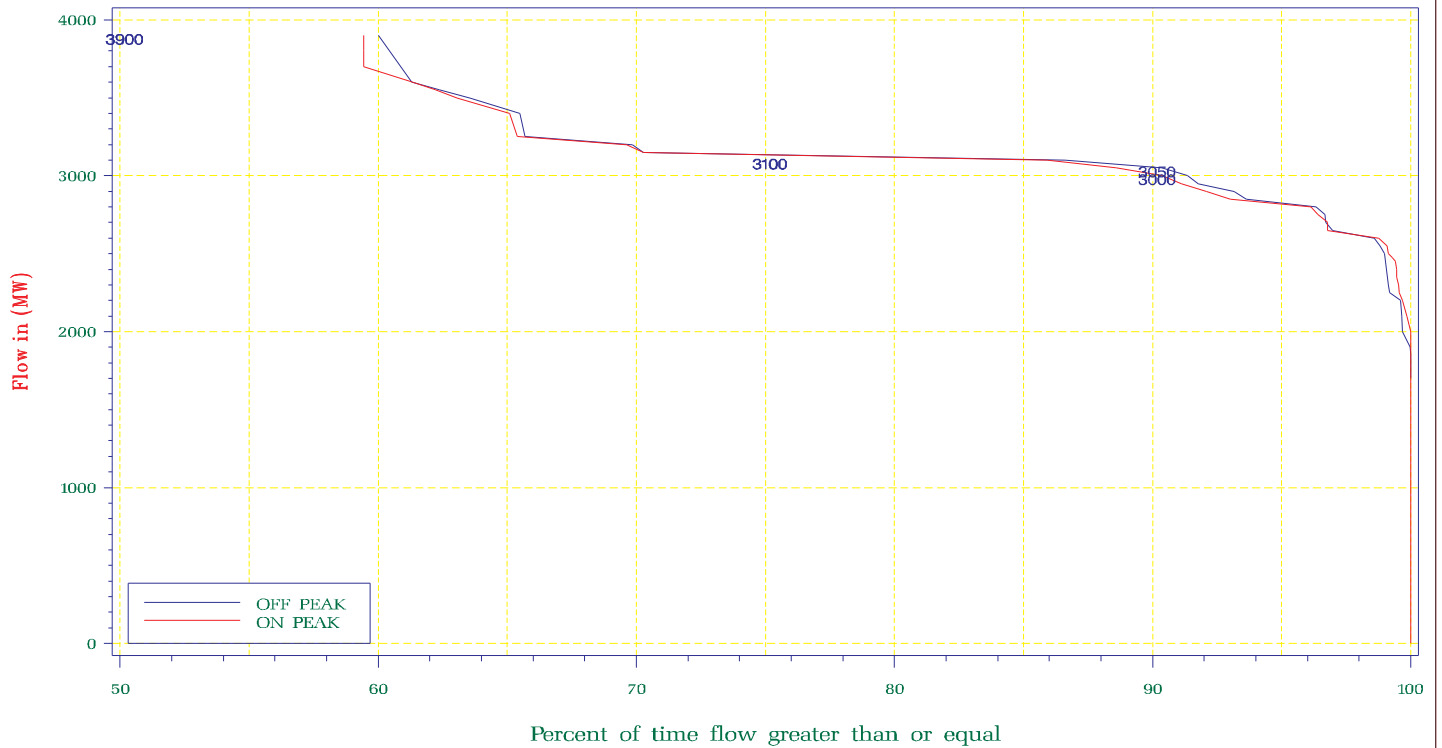


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Dunwoodie South Limit

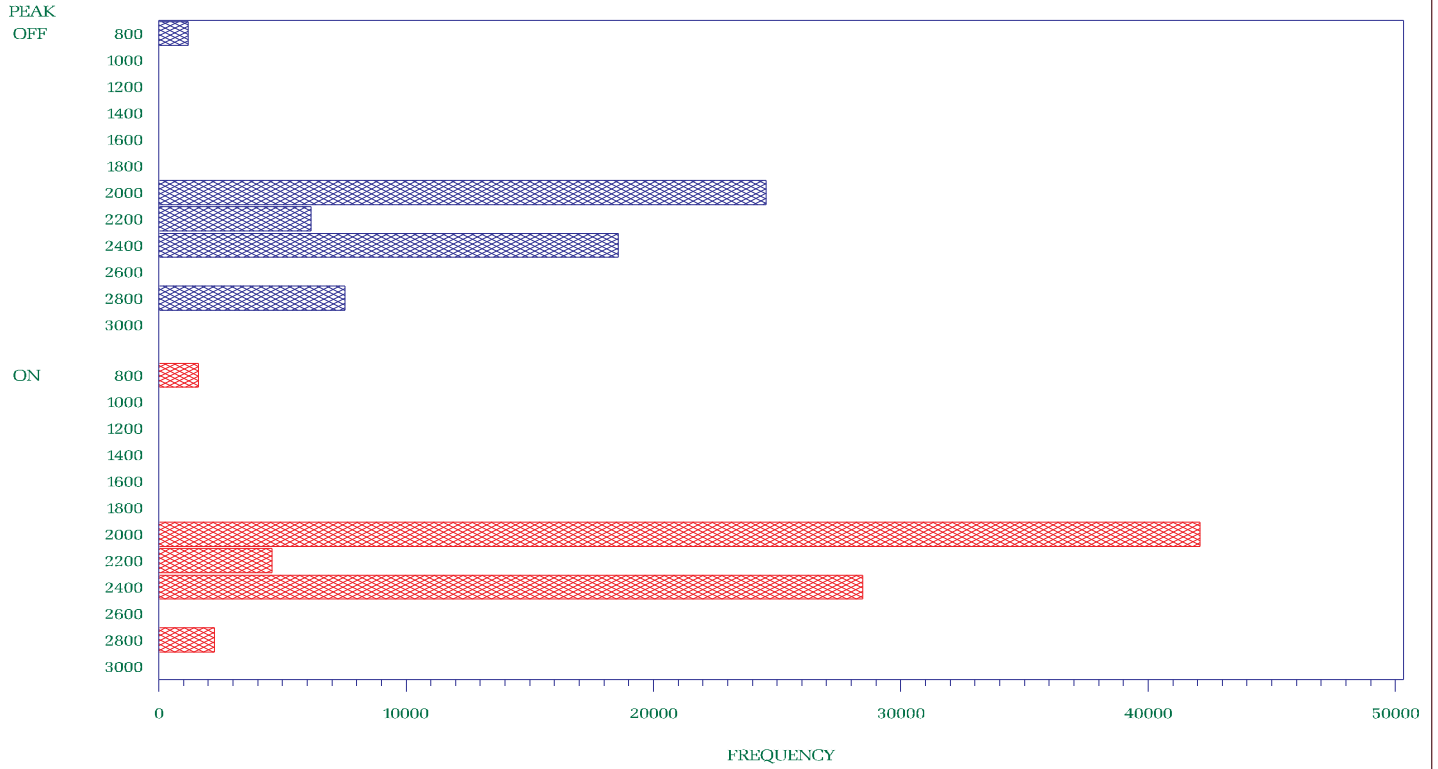


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Moses South Limit

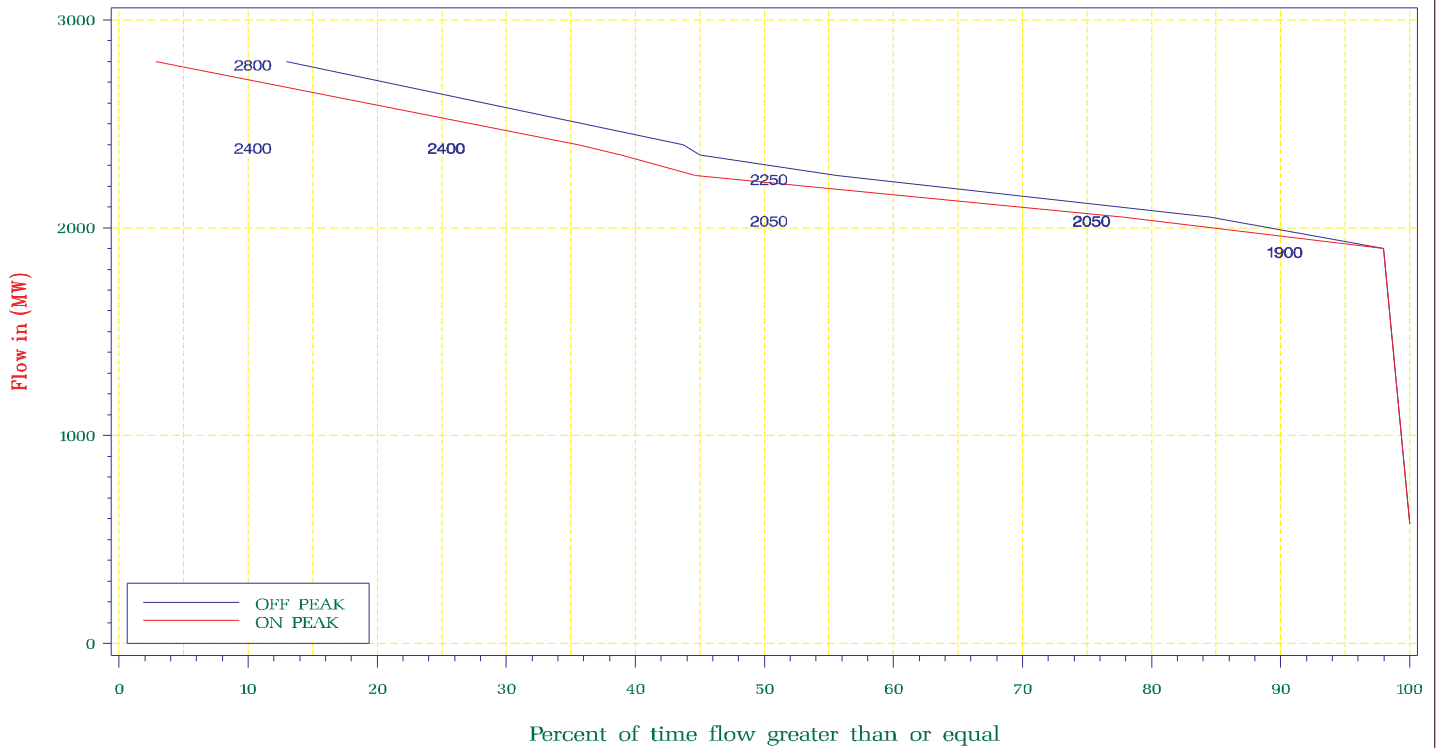


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Moses South Limit

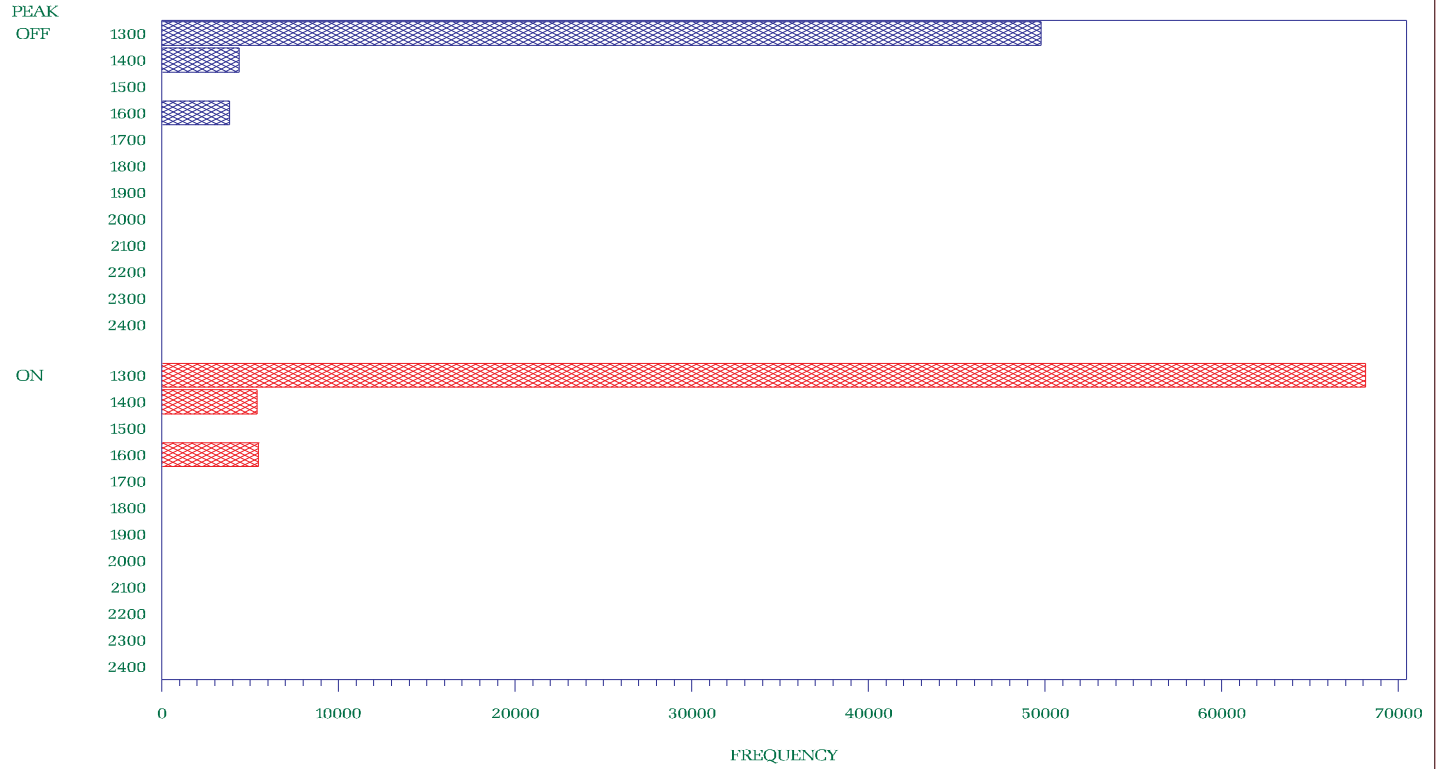


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

TE – NY Limit

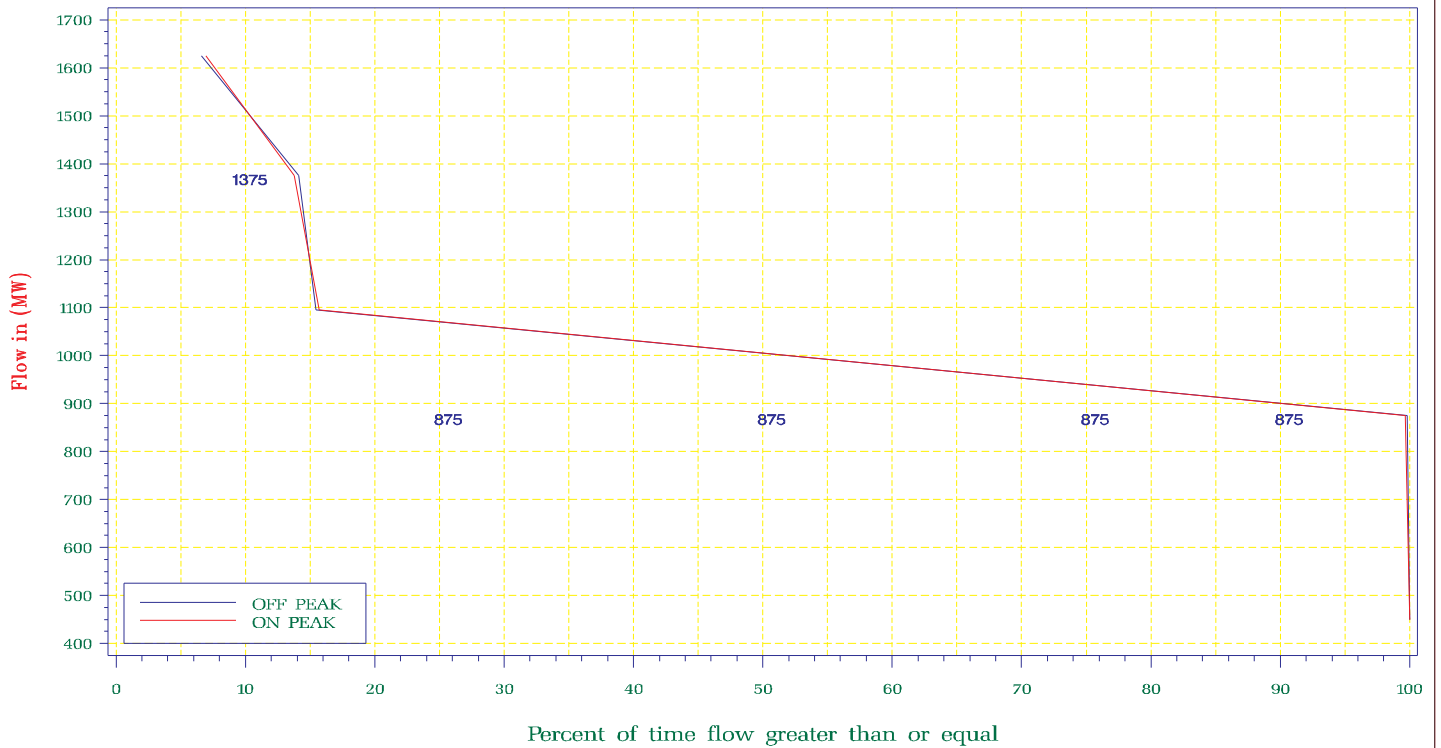


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

TE – NY Limit



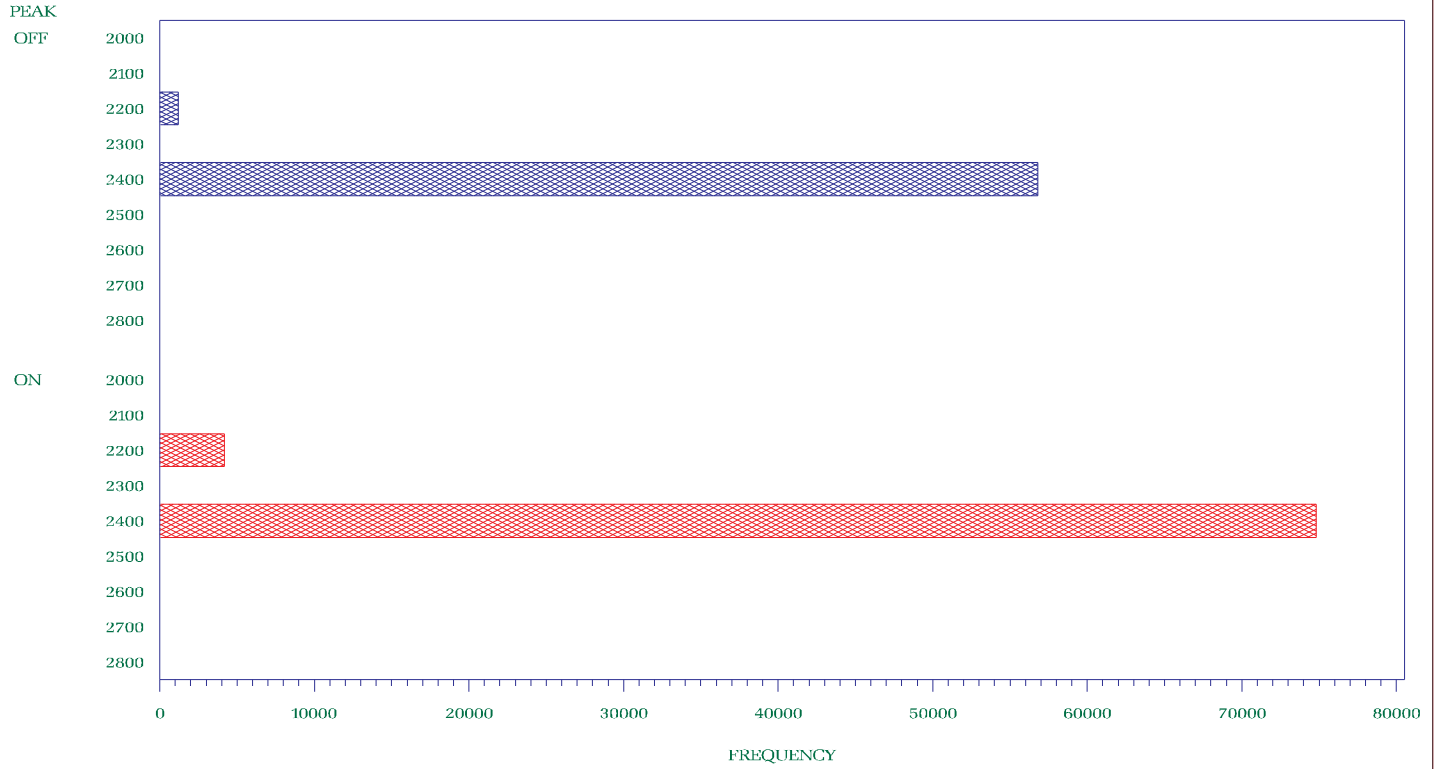
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

Ontario – NY Limit

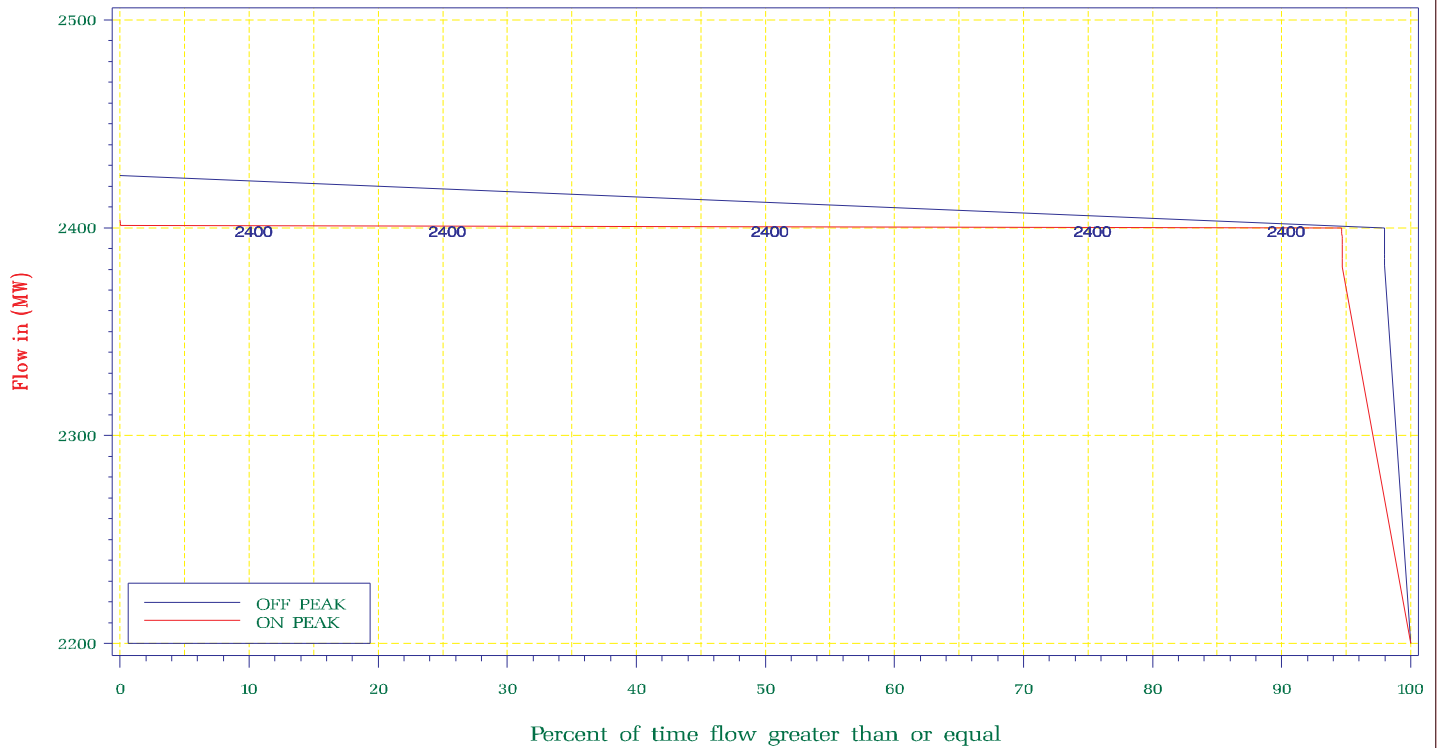


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Ontario – NY Limit

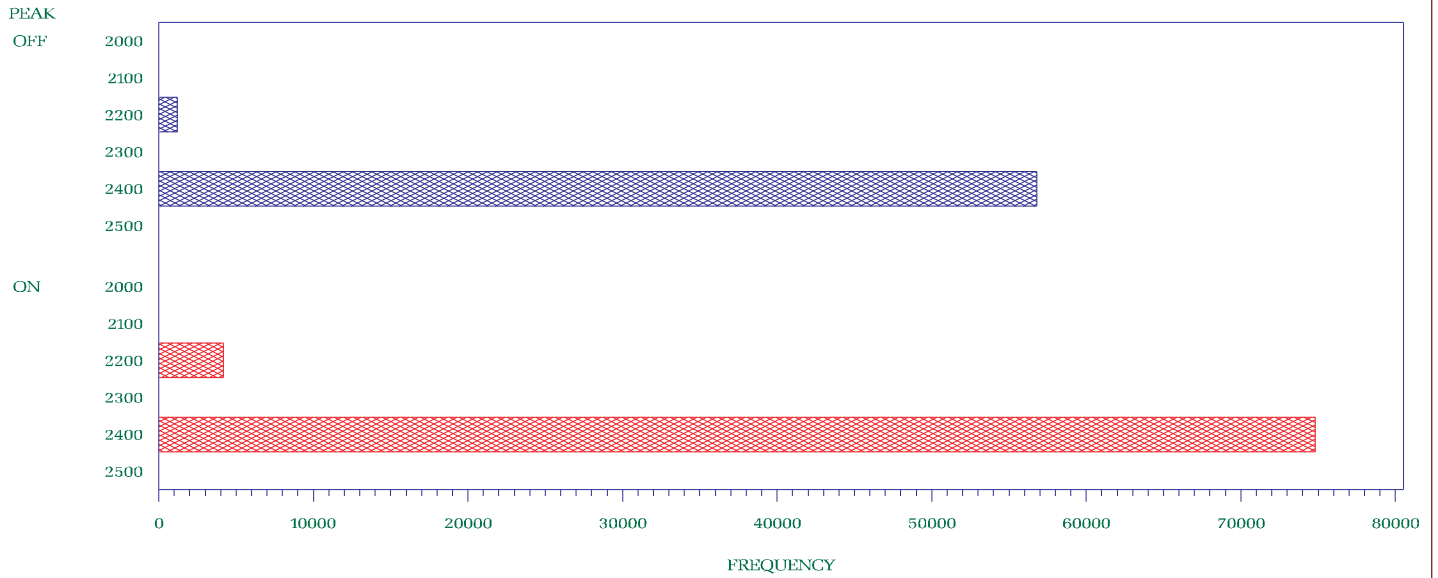


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

NY – Ontario Limit

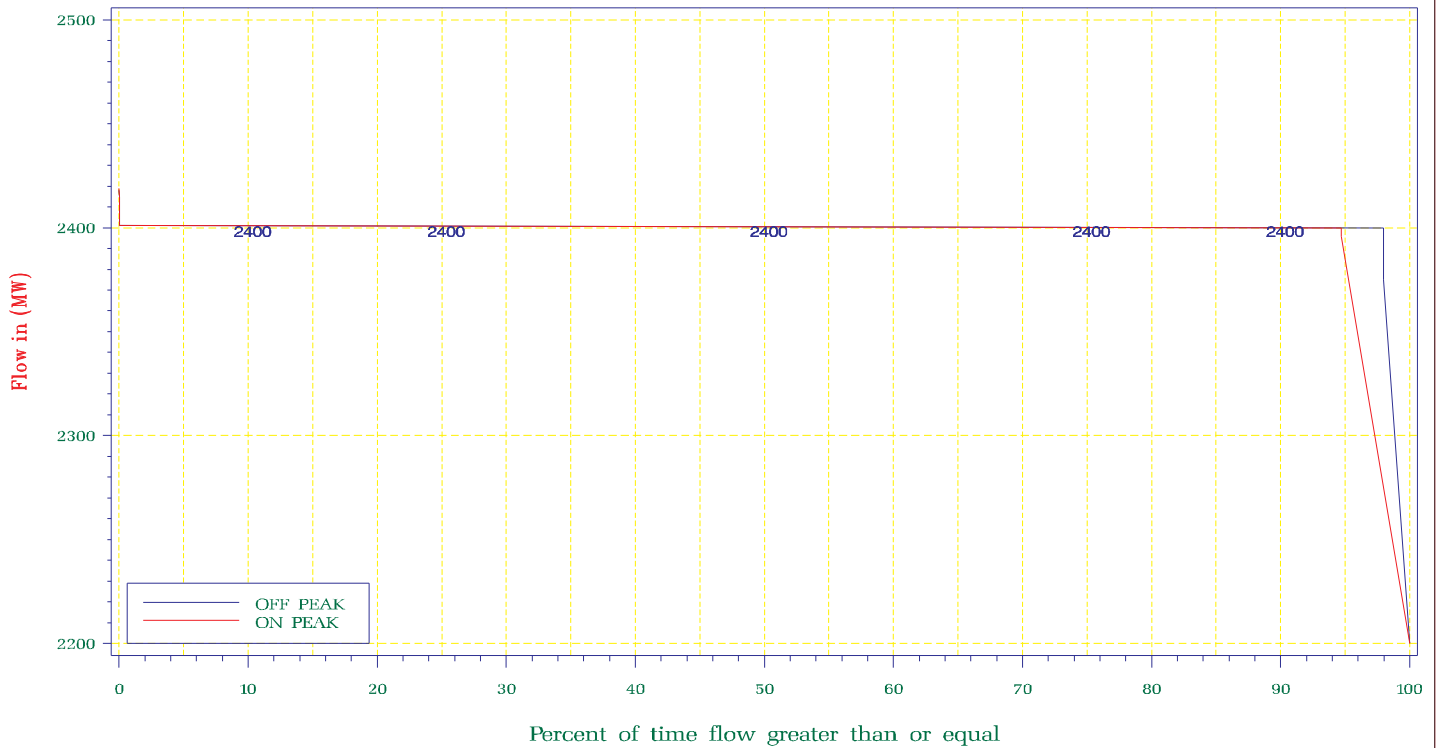


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

NY – Ontario Limit

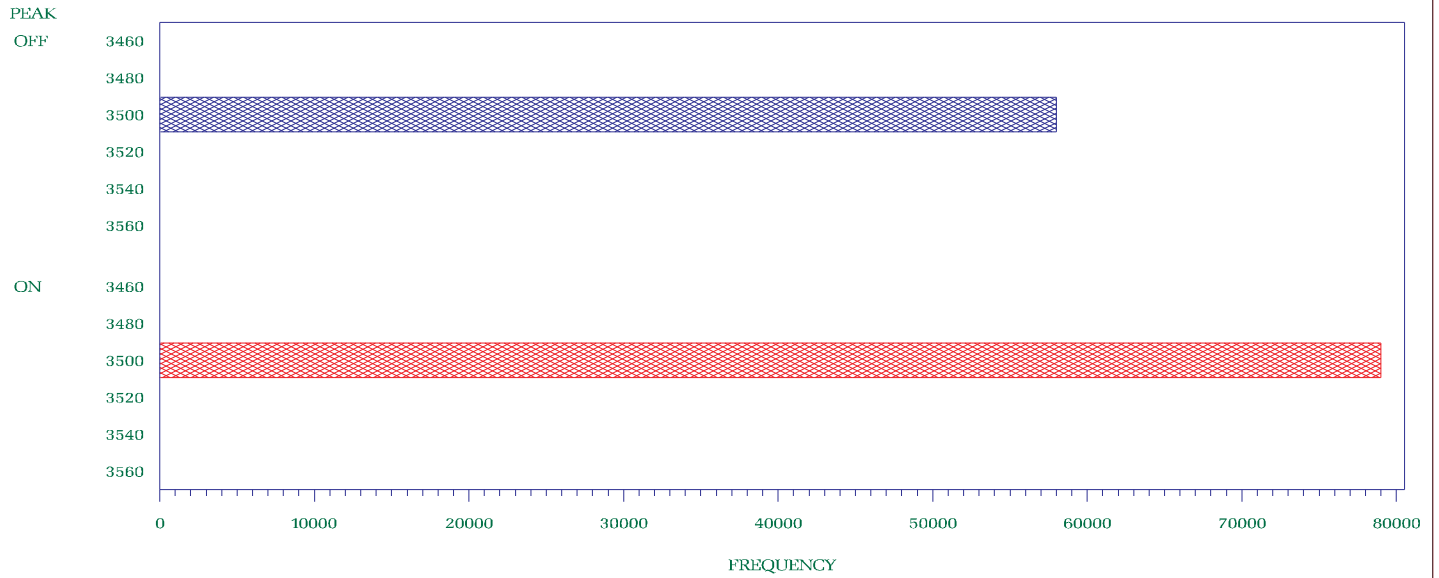


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

PJM – NY Limit

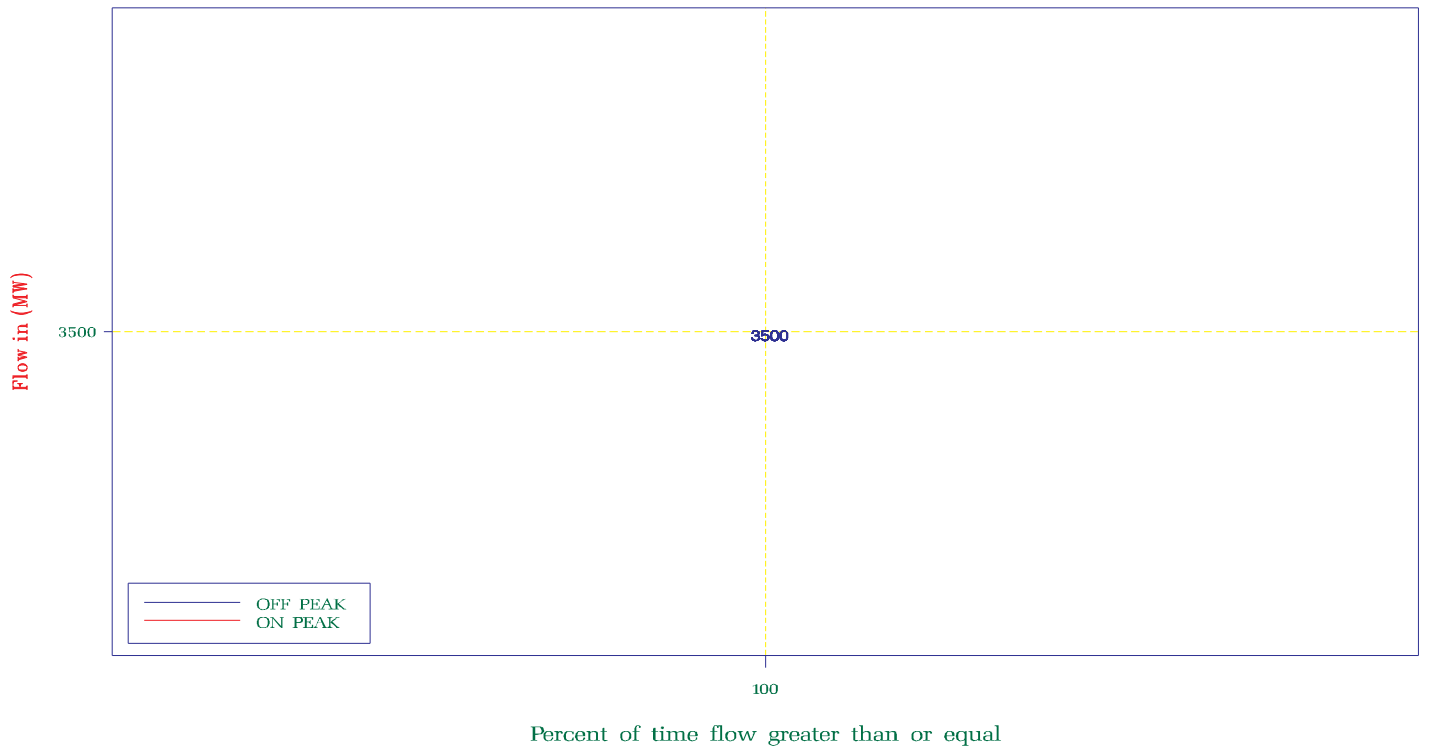


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

PJM – NY Limit

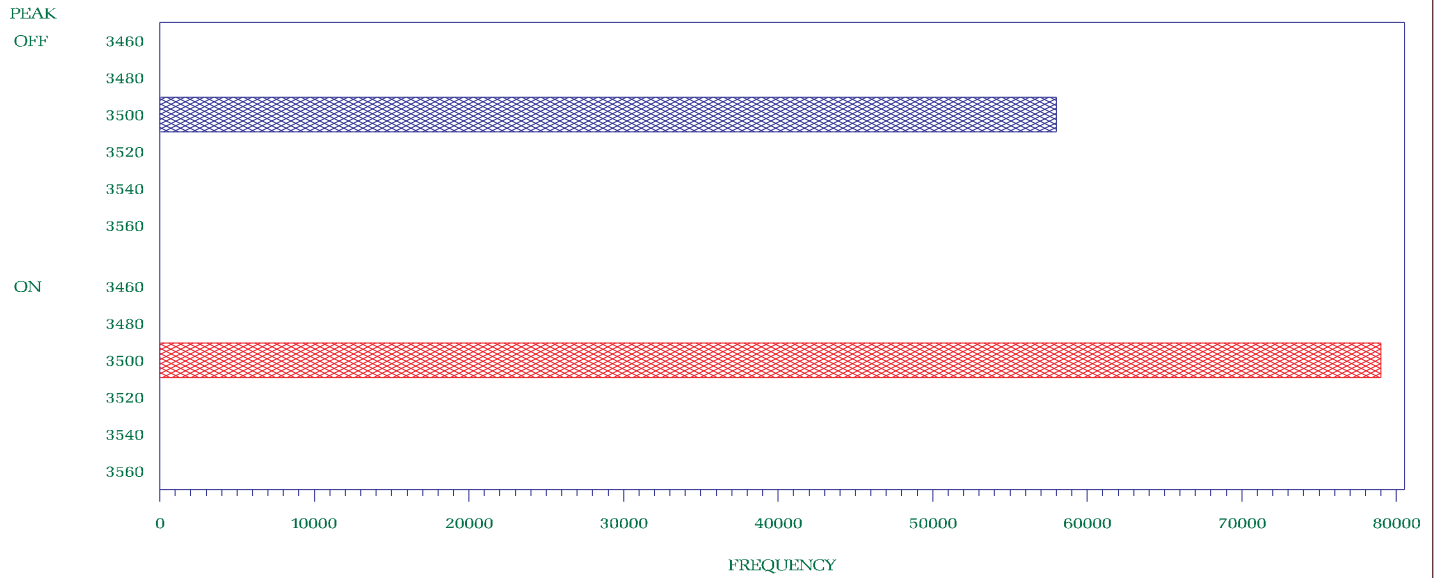


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

NY – PJM Limit

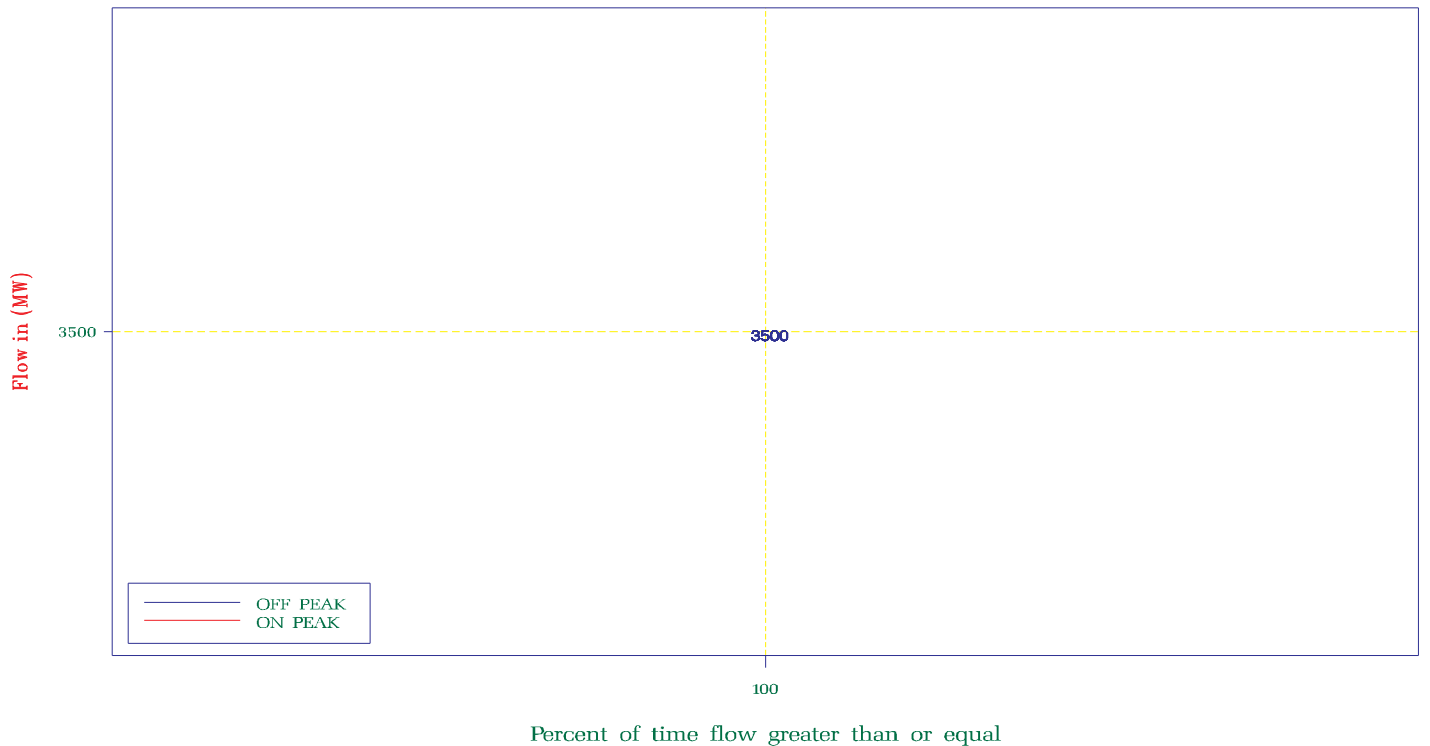


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

NY – PJM Limit

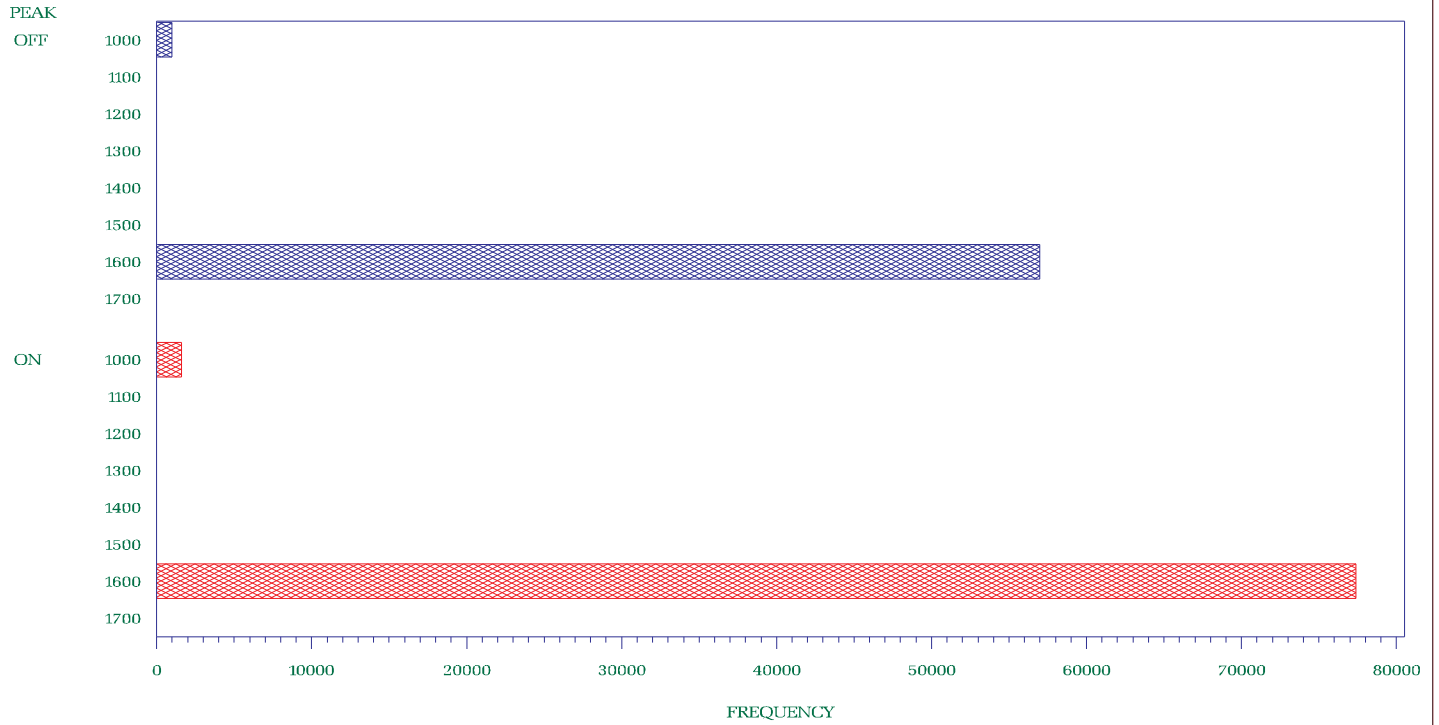


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

NE – NY Limit

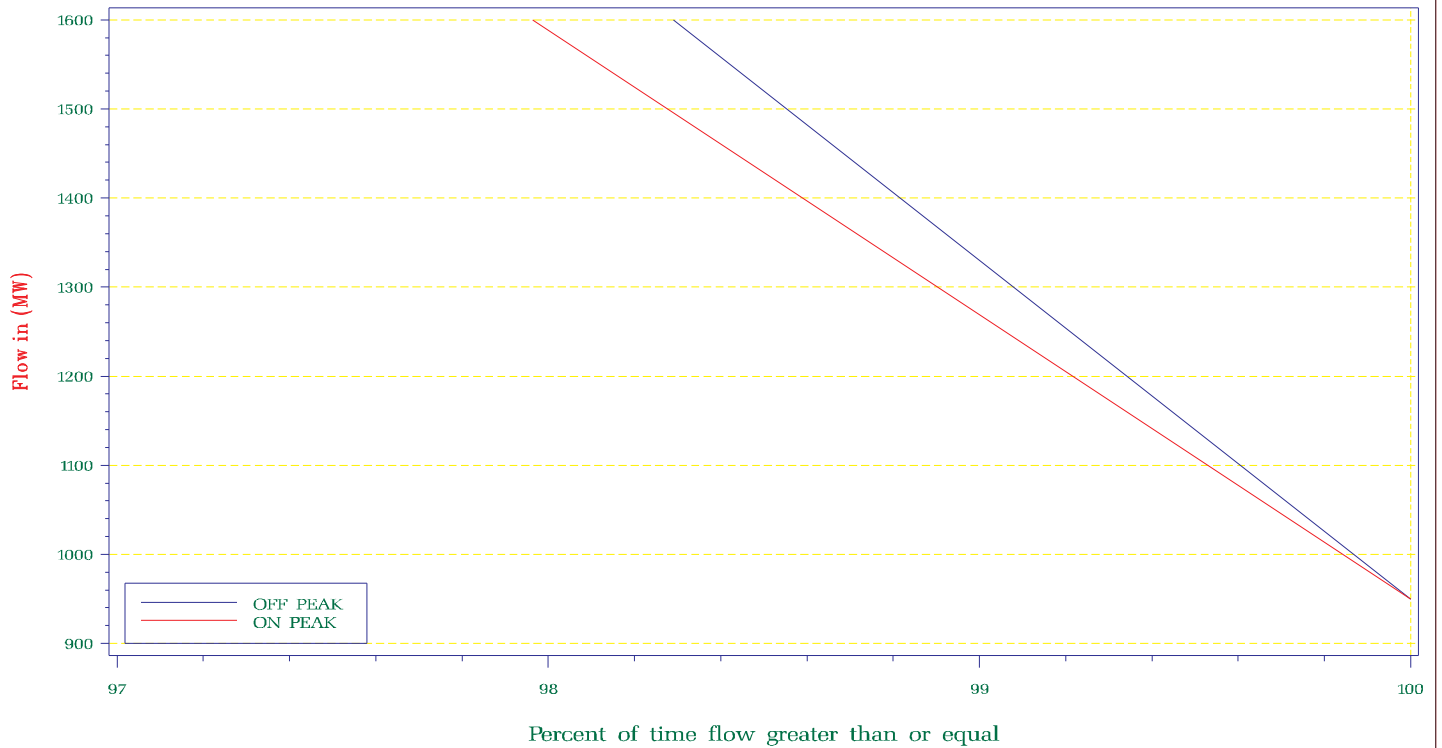


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

NE – NY Limit

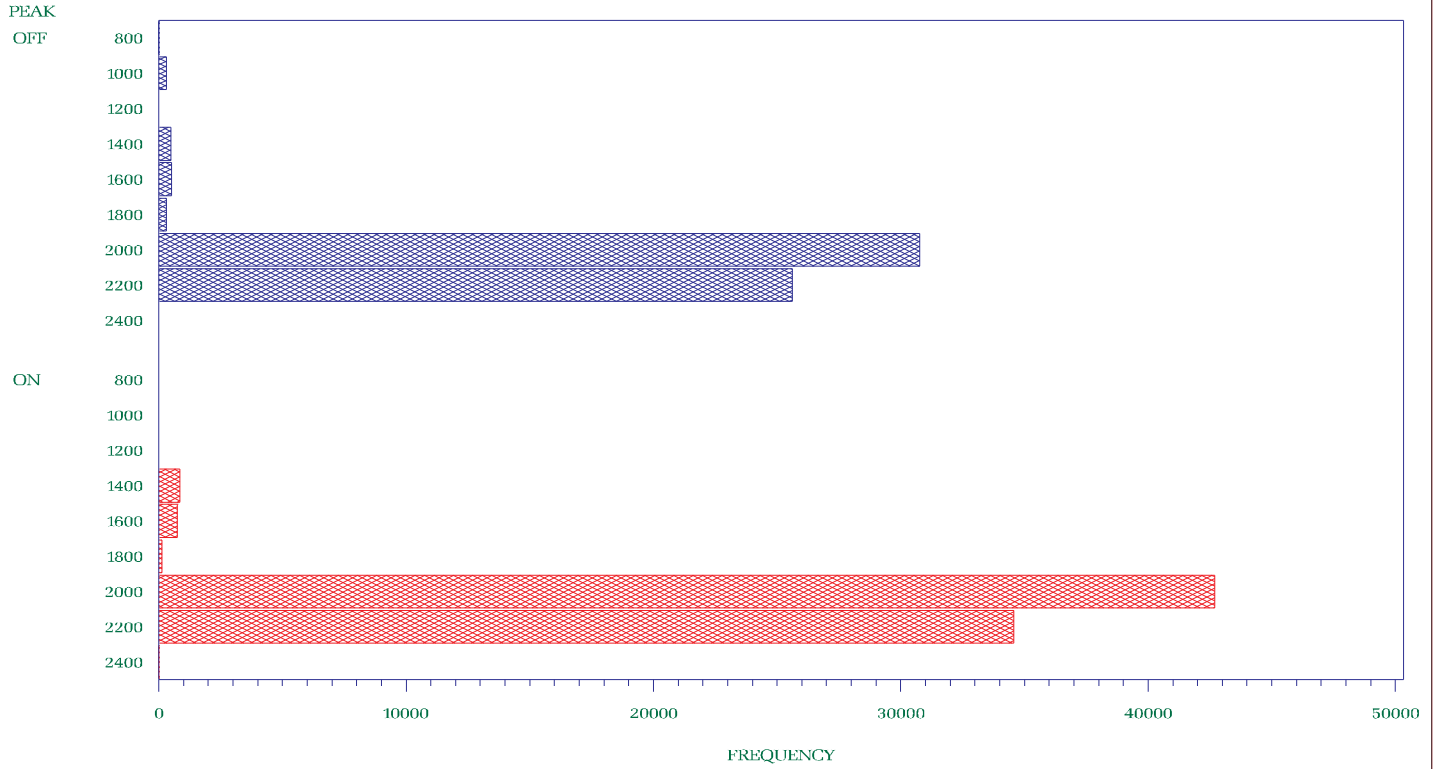


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

NY – NE Limit

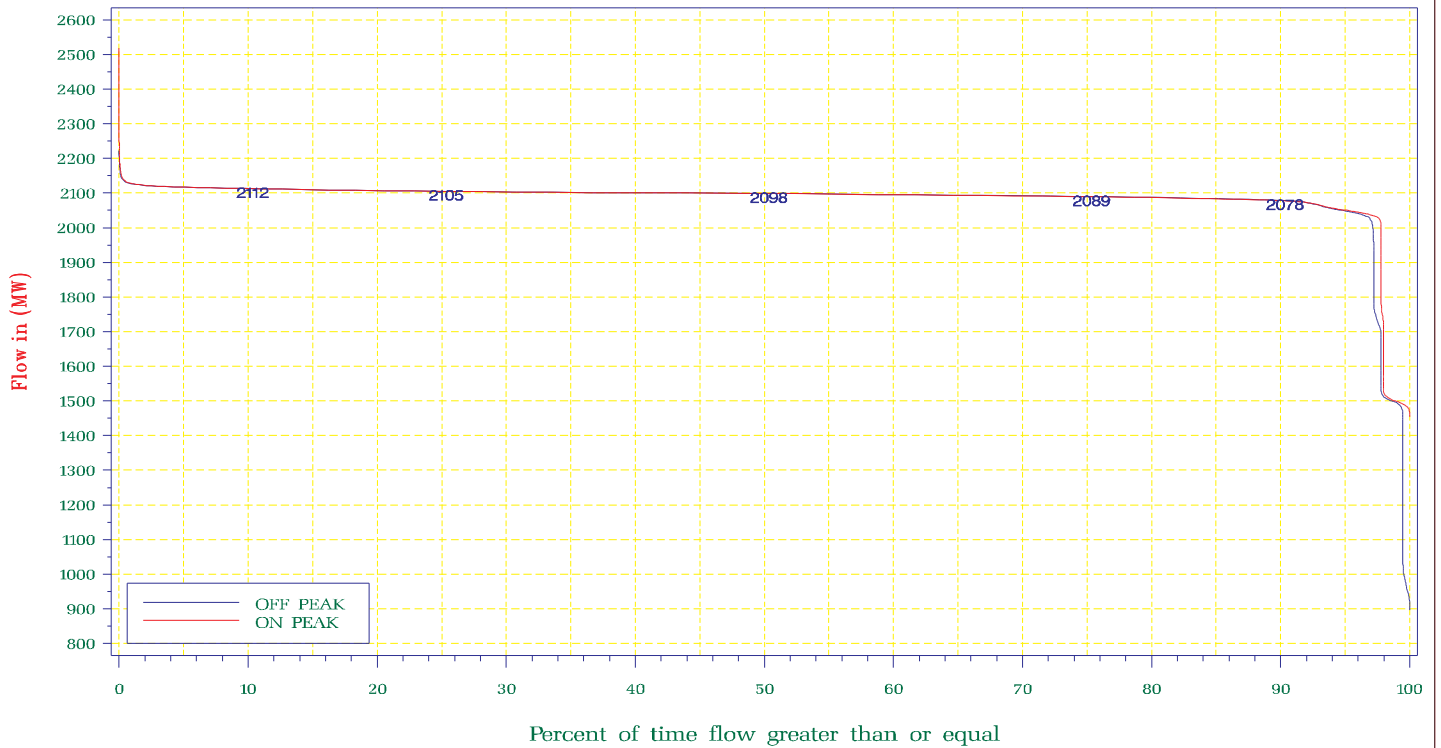


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

NY – NE Limit

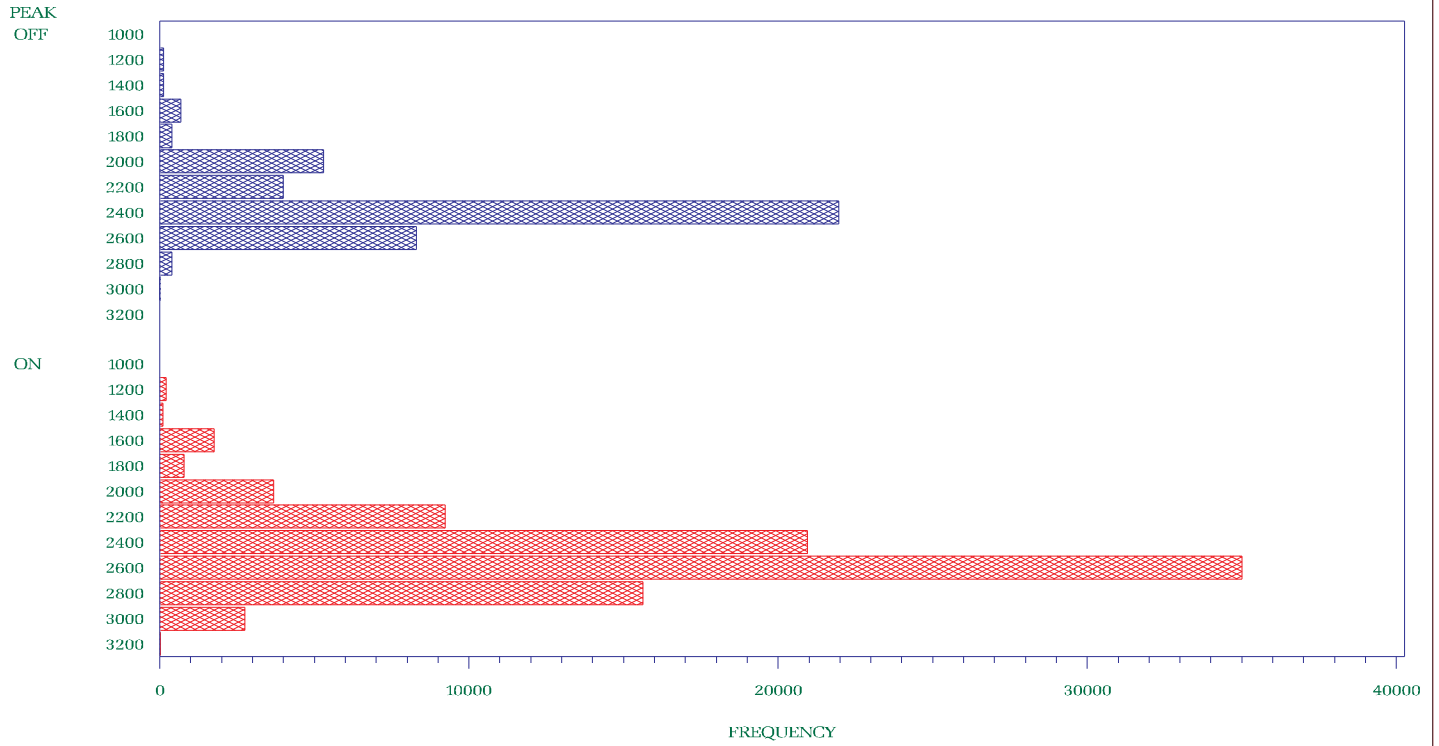


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
 /o New England Generation

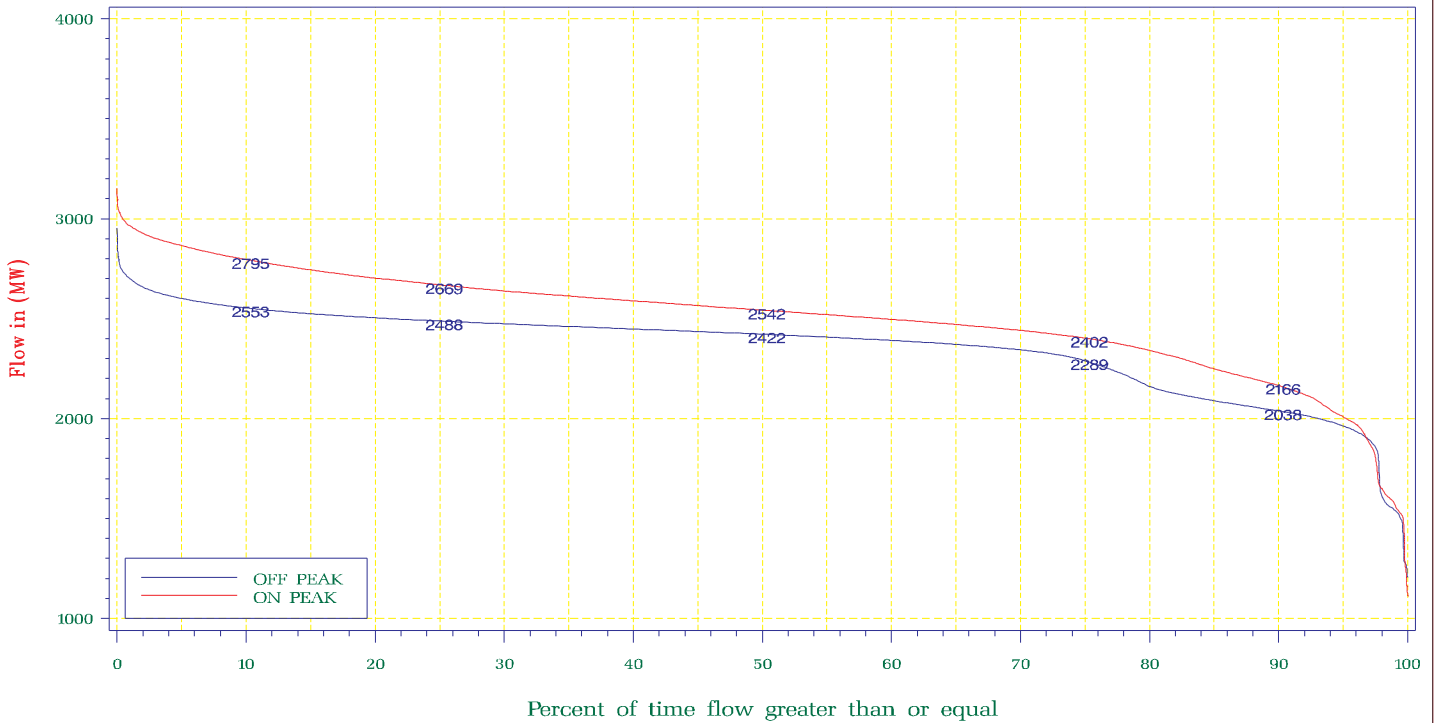


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
 /o New England Generation

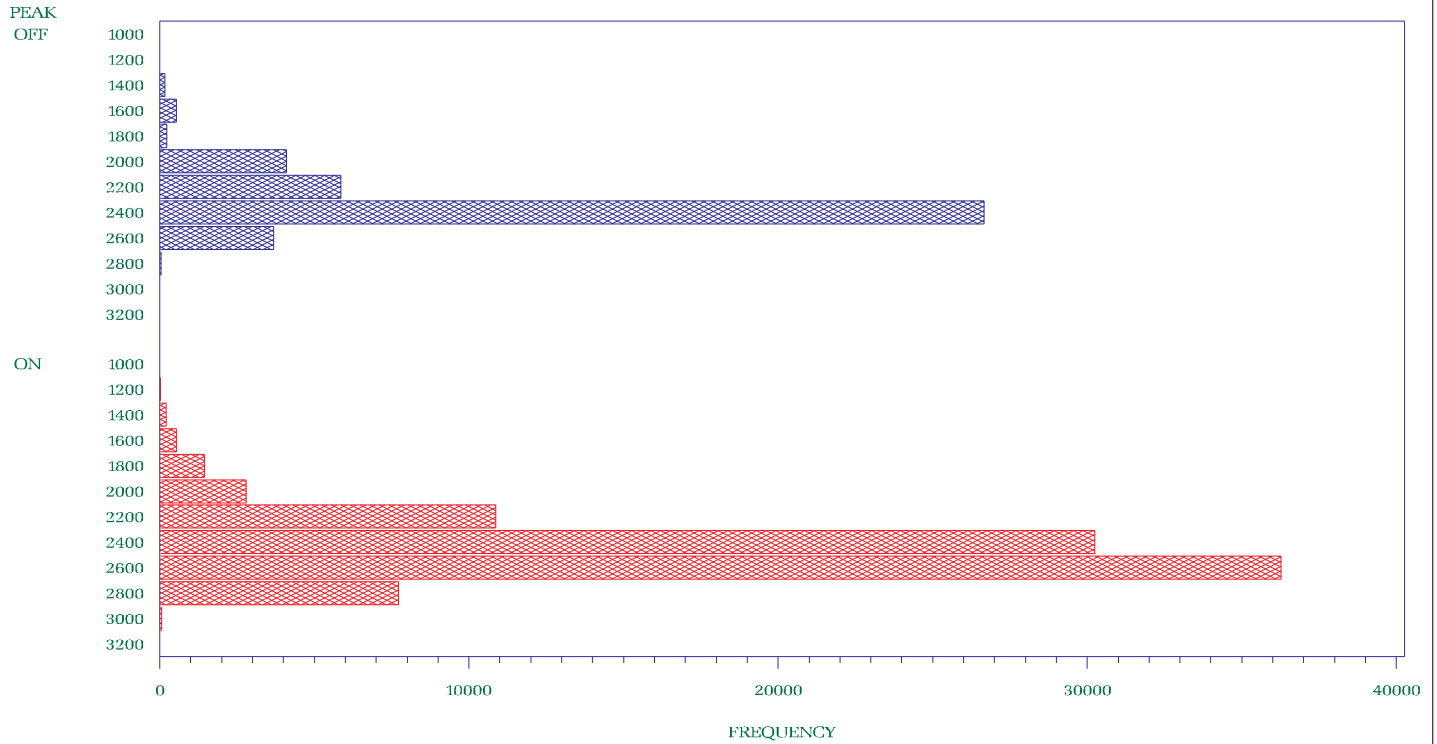


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Frequency Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o Marcy South Tower

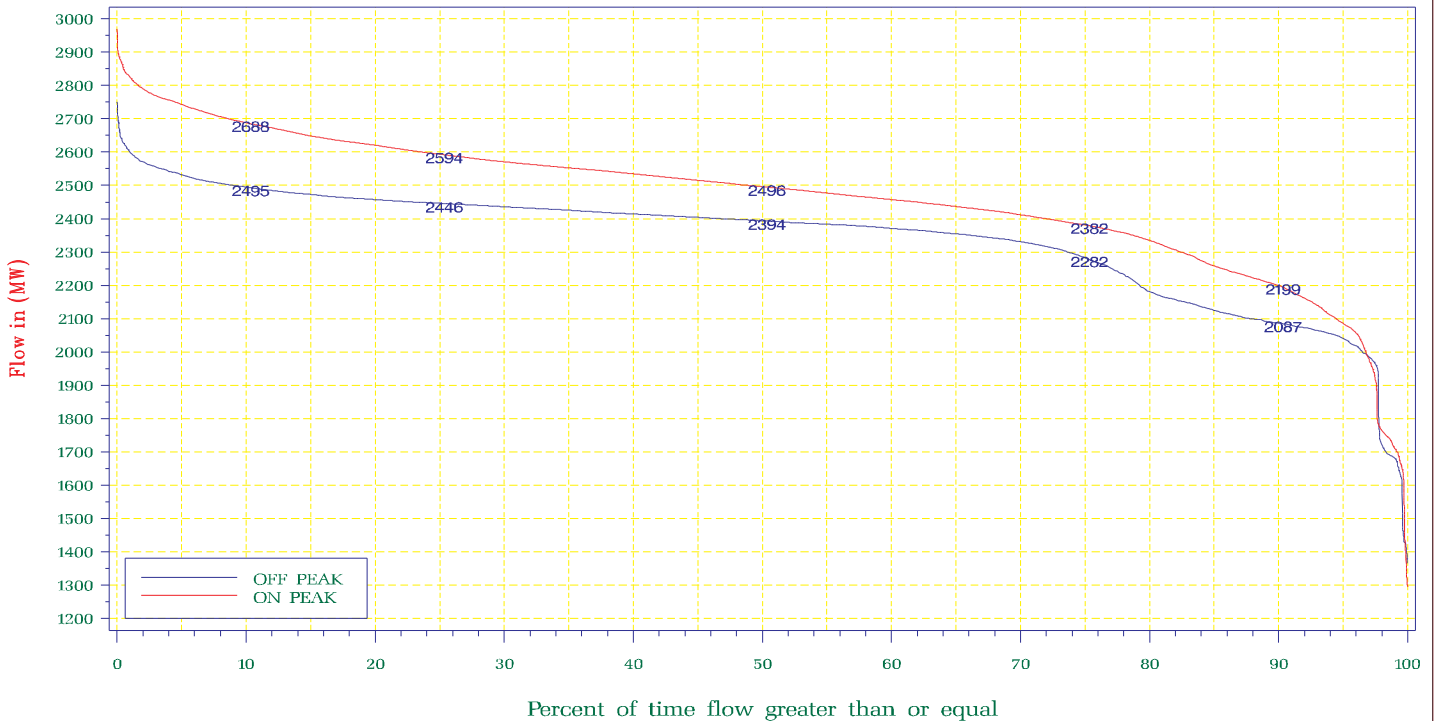


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
l/o Marcy South Tower



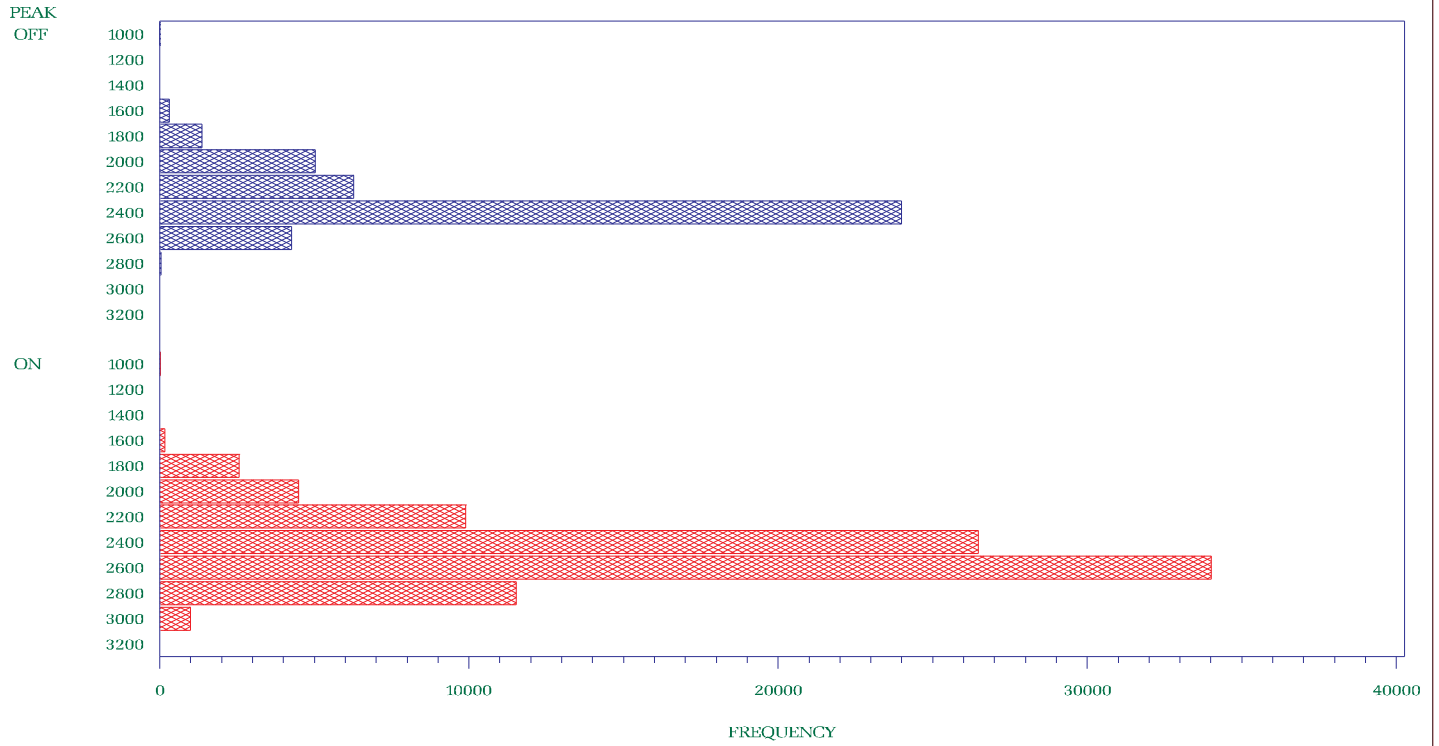
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm



NYISO Frequency Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
/o New Scotland 99 Bus

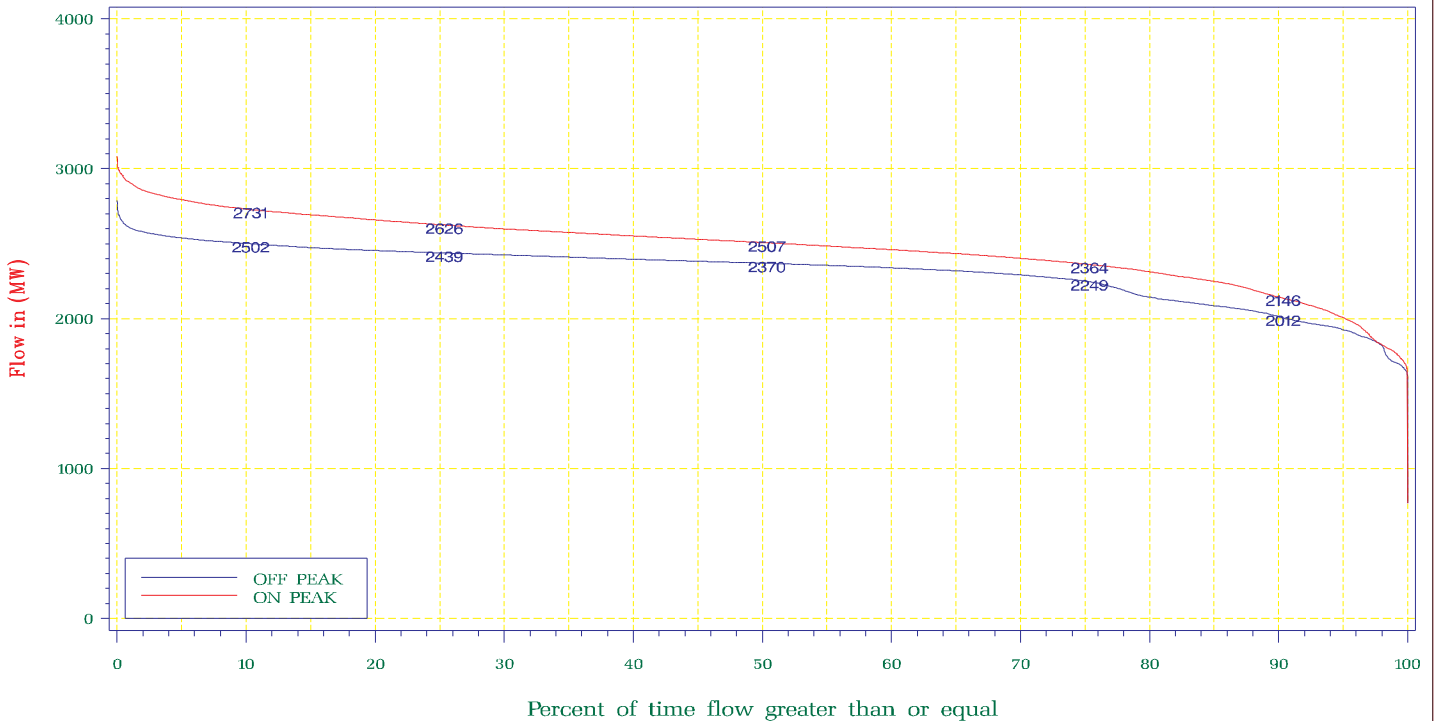


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2004

Central East Pre-Contingency Voltage Collapse Limit  
/o New Scotland 99 Bus



OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

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