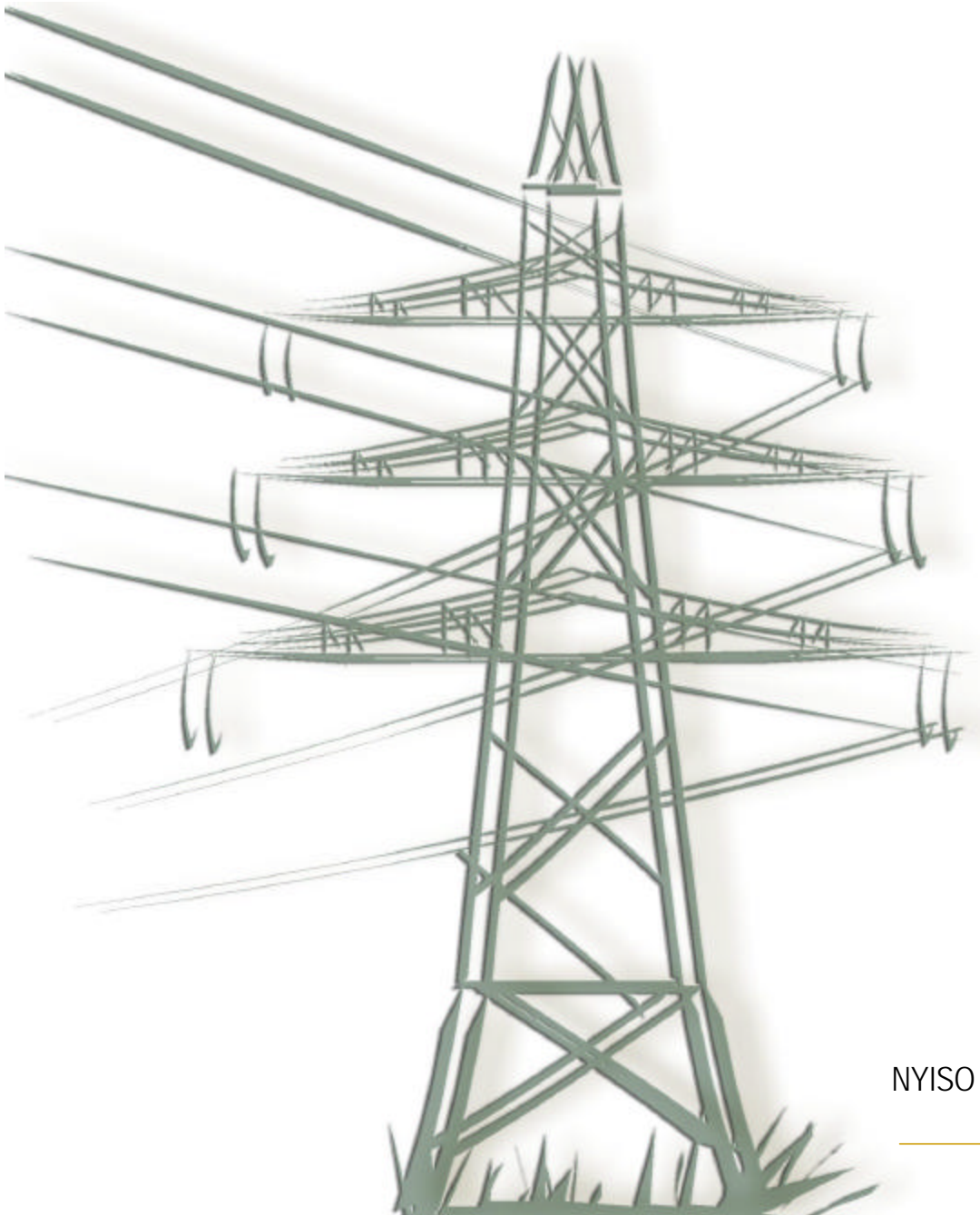




# 2003 TRANSMISSION PERFORMANCE REPORT



April 2004  
*prepared by*  
NYISO Operations Engineering

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## NYISO Transmission Performance Report – 2003

### Introduction

This report summarizes NYISO transmission utilization during 2003 and compares this with transmission use in the previous three years. 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 Control Areas.

There are also sections on power transfer margins 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 internal 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 On-Peak vs. Off-Peak transmission flow has been included. This data is presented in two graphical formats: histograms (frequency bar charts) and flow duration curves.

### Conclusions

The Open Access Same Time Information System (OASIS) transmission paths have been monitored since 1997. The flow data on these paths are presented in this report for informational purposes only. Schedules and actual power flows between NYISO and external systems vary significantly.

In 2003, NY was exporting about 1% of the time, the same as in 2002 and 2000, about 2% of the time in 2001. The maximum and average NY imports were higher in 2003 than in the previous three years. In July 2003, the average import was greater than 2500MW. The maximum import was greater than 4600 MW in 2003, about 4000 MW in 2002 and 2000, and 3500 MW in 2001.

NY scheduled imports from PJM 96% of the time in 2003; higher than the previous three years; 87% in 2002, 88% in 2001, and 86% in 2000. During On-Peak hours about 93% of the time in 2003, 77% in 2002, and during Off-Peak hours was 98% of the time, about the same as last year. The maximum scheduled export to PJM was lower than in last 3 years, about 1200 MW, compared to 2400 MW in 2002.

NY actually imported from PJM about 99% of the time in 2003, 92% in 2002, 95% in 2001, and 94% in 2000. In 2003, import during On-Peak and Off-Peak hours were the same; 99% of the time.

The highest maximum and average NY exports to PJM occurred between June and August during the last 4 years. In the summer months of 2003, NY exports to PJM were lower than in 2002, 2001 and 2000.

NY scheduled imports from IMO in 2003 about the same in 2002 but lower than in 2001 and 2000, about 10% of time flow in 2000, 14% in 2001, and 25% in 2002 and 2003. During the On-Peak hours about 40% of the time, 16% of the time during the Off-Peak hours, compare to 35%, and 15% of the time in 2002, respectively.

NY scheduled exports to NE 58% of the time, and imports 42% of the time. NY imported from NE about 52% of time during On-Peak hours and about 28% of the time during Off-Peak. NY imports from NE were highest in April 2003 at 1500 MW, higher than the previous three years, and exports to NE highest in March 2003 at 1500 MW.

In 2003, NY scheduled imports and export with TE were lower than in last 3 years in both magnitude and duration; importing about 55% of time, about 75% during the On-Peak hours and 25% during the Off-Peak hours. Scheduled imports from TE were below 1000 MW about the same as last year, 37% of the time and below 700 MW about the same in 2002, 30% of the time.

Average transmission utilization on most internal NYISO operating interfaces in 2003 was similar to levels observed during the previous three years. In 2003, the Total East, Central East, Moses-South flow duration curves were lower than in last 3 years in both magnitude and duration. Moses South flows were north less than 3% of the time.

The Total East interface was consistently operated near its limit, however because of the black out, the margin to Total East reached to about 5600 MW, and the margin to Sprain Brook-Dunwoodie South reached to above 3800 MW on August 14, 2003. Total East interface was above limit of 5450 MW was lower the last 3 years, about 1 % in 2003, compared to 2% of the time in 2002, 3% in 2001, and 10% in 2000. Sprain Brook- Dunwoodie South interface was above limit of 2450 MW less than 1% in 4 years.

The Dysinger-East, West-Central, UPNY-ConEd, and Sprain Brook/Dunwoodie-South flows duration curves were similar to levels observed in the last 3 years. Plots of the flow duration curves for the PJM East-New York City, LIPA Import, ConEd-LIPA, Dunwoodie-Shore Road, Sprain Brook/Dunwoodie-South, Volney-East flows drop off the chart, and the Ontario



East-Adirondack flow duration curve goes above the chart due to the flows experienced during the blackout of August 14, 2003.

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 time within 200 MW of limit	Flow > 75% of the time	% of time within 200 MW of limit
2003	1483MW	17%	3359MW	<1%
2002	1540MW	29%	3486MW	<1%
2001	1827MW	42%	3795MW	<1%
2000	2021 MW	68%	4231 MW	< 1%

## 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 (2003). 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, 2003, and the previous three years (2000, 2001 and 2002). 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 (2003) and the previous three years (2000-2002). 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 2003 has midpoints at 600 and 1000 MW. The bar at 1000 means that Total East was operating within 400 MW of its active limit 2.37% of the time during 2003. The bar at 2200 means that Total East was operating within 400 MW of its active limit 19.81% of the time, at levels potentially up to 2400 MW limit 44.17% during 2003. Except in the case of unusually high overloads on an interface (i.e., spikes, contingencies), the margins are generally zero or greater.

There are two sets of charts for Central East Transfer Margins: one for pre-contingency flows, and the second for post-contingency flow and limits. The Central East post-contingency transfer margin is calculated by taking the minimum margin, or difference, of the three post contingency voltage collapse limits and their respectively calculated post contingency flows.

*Interfaces Simultaneously Constraining Transfers*

The table in Appendix D summarizes the combinations of interfaces as they were simultaneously constraining during 2000, 2001, 2002 and 2003. 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 80 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 22% of the time in a given year between 2000 and 2003. The Central East/Central East net PC (post-contingency) appeared 2% to 16% of the time. Most of the rest of the simultaneous constraints occurred 7% 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. In 2003, the Central East/Total East combination was not constraining. During the last 2 years, the annual totals with and without the Total East/Central East combination are the same 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
2000	1921	22.0%	1874	21.4%
2001	1252	14.0%	1243	14.0%
2002	819	9.0%	819	9.0%
2003	1462	17.0%	1462	17.0%



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 2000 to 2003 is decreased simultaneous interface limits; this may be the result of Central East, by itself, being more constraining.



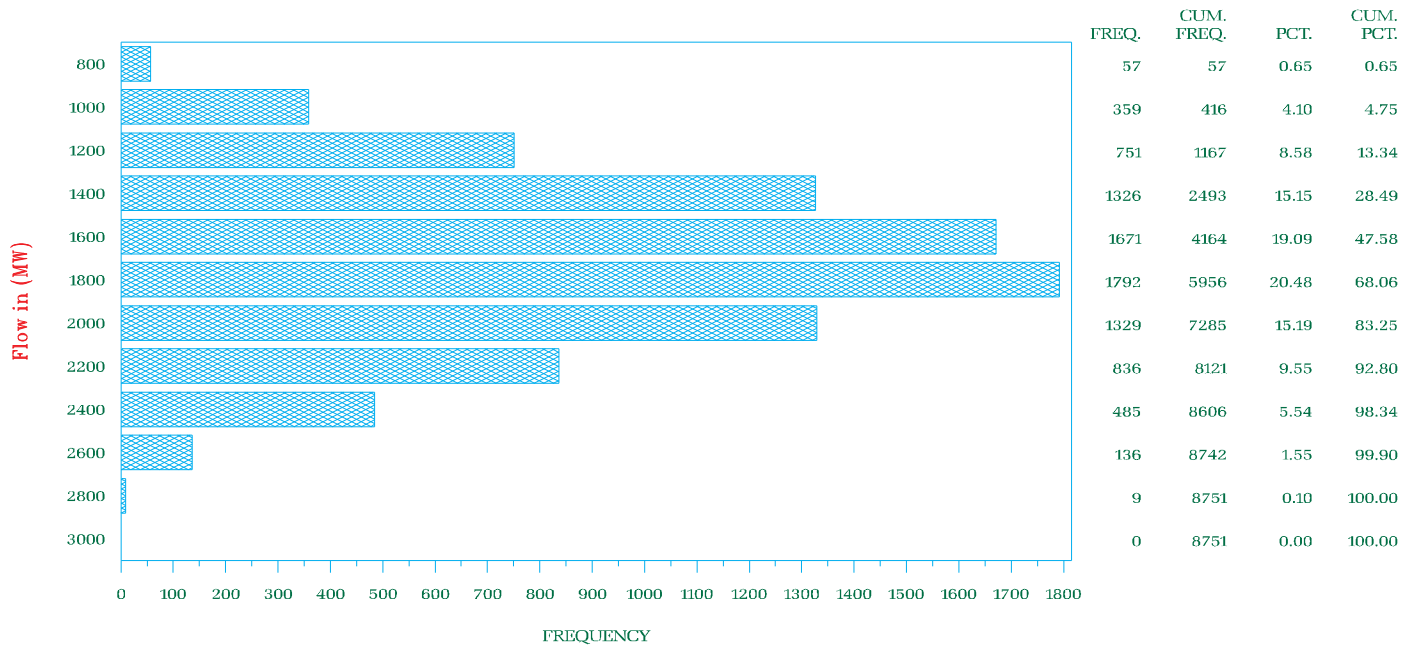
Appendix A – Power Flows

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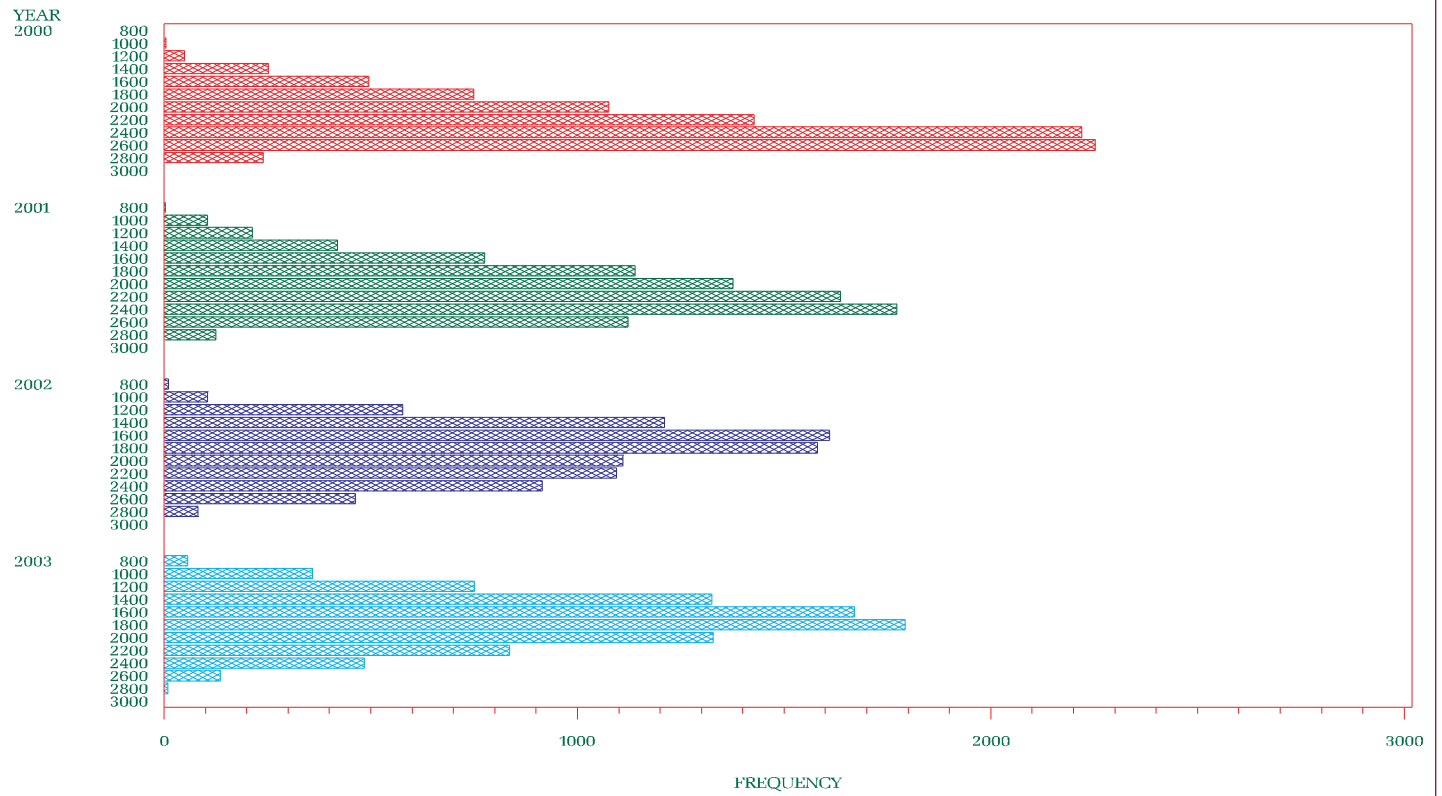
NYISO Frequency Interface Flow For January – December 2003

CENTRAL EAST

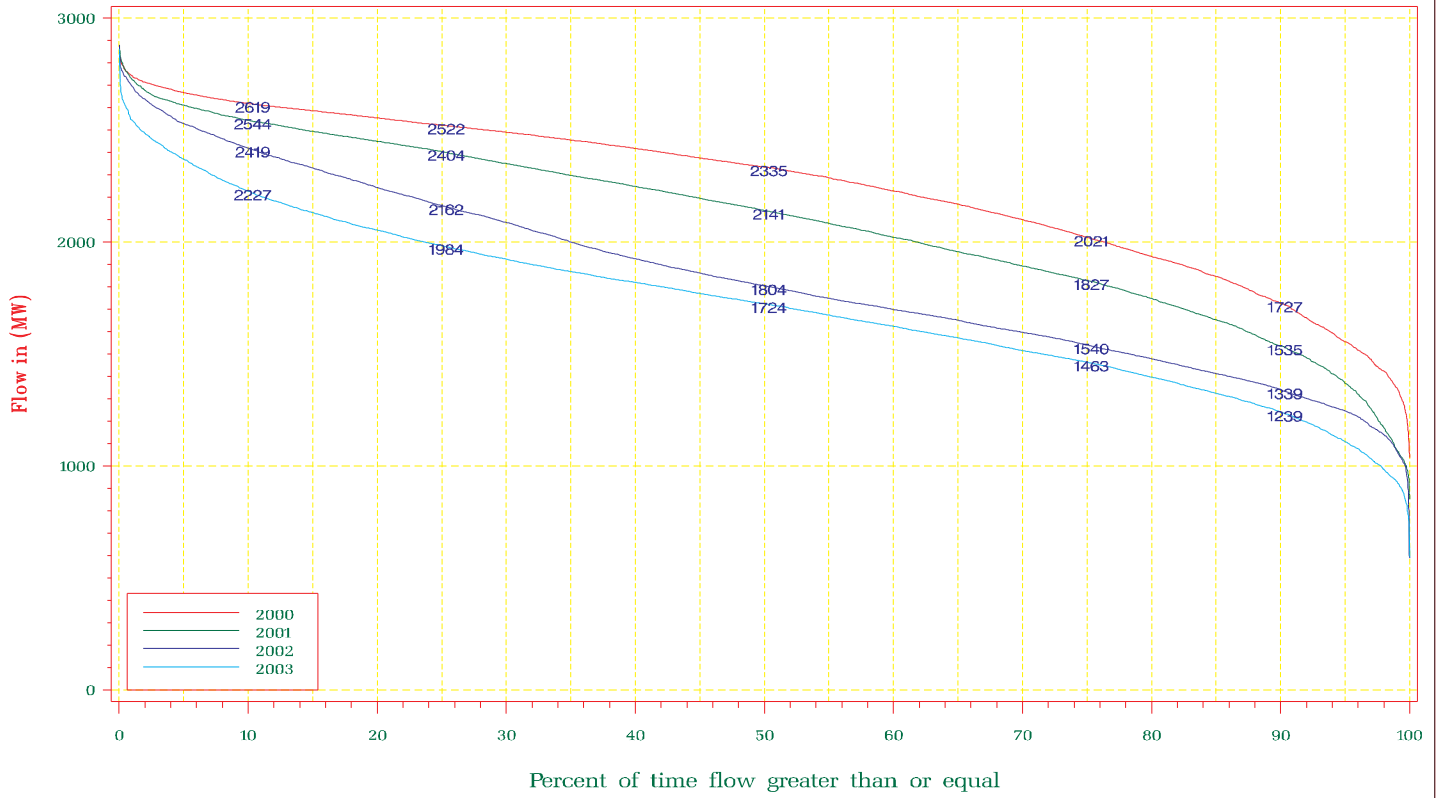


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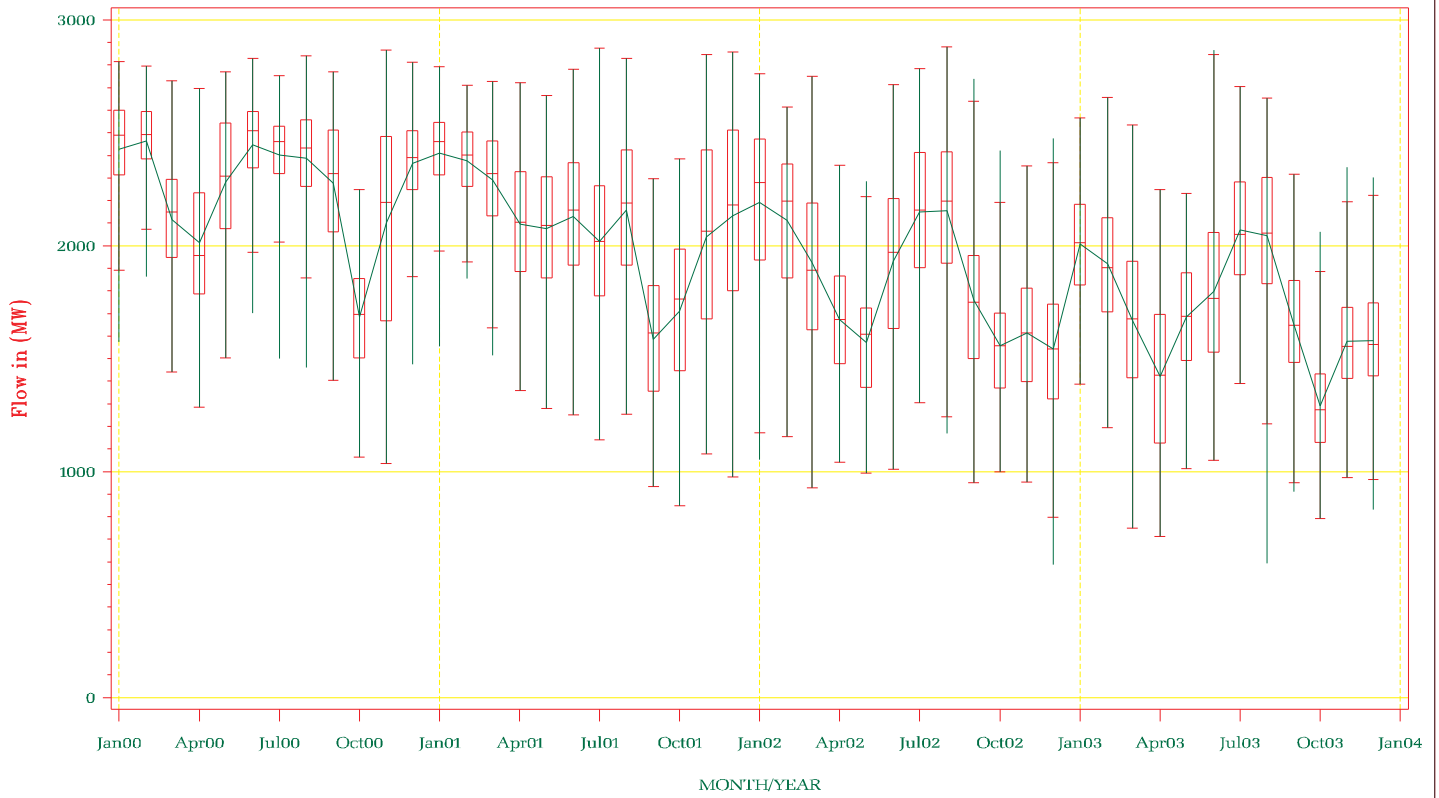
CENTRAL EAST



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**CENTRAL EAST**

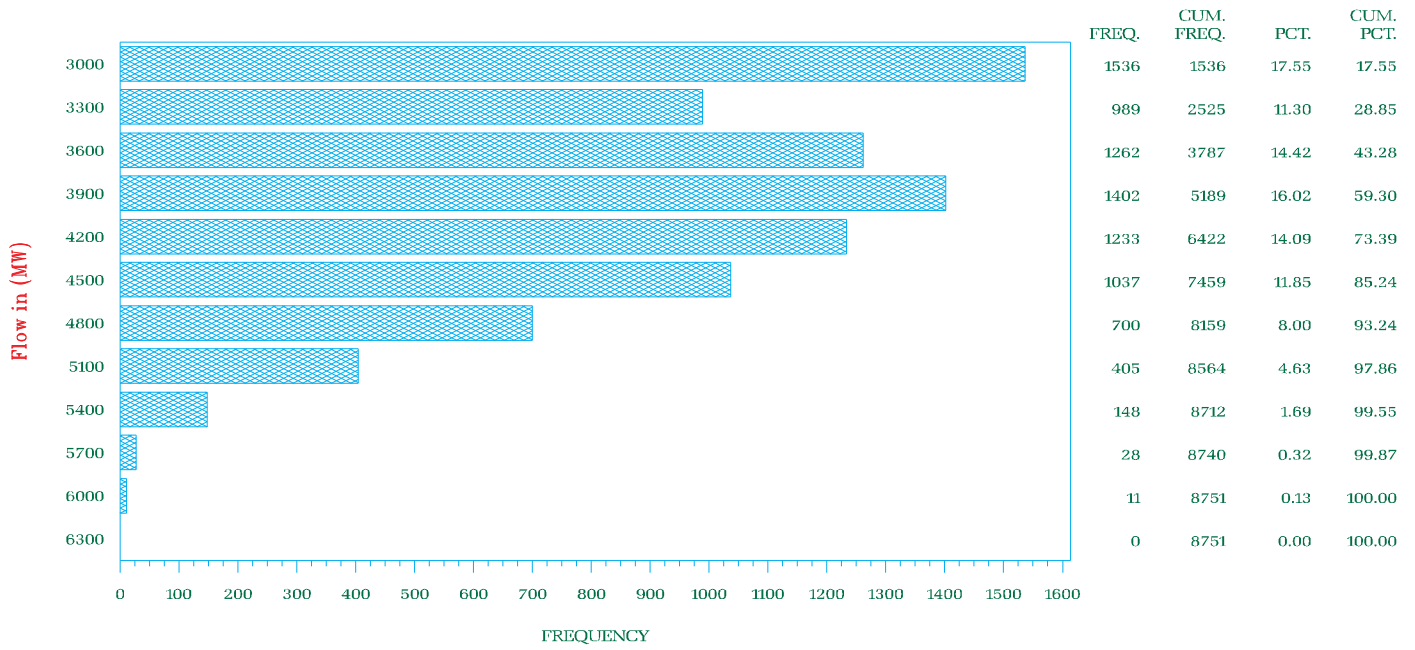


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**CENTRAL EAST**



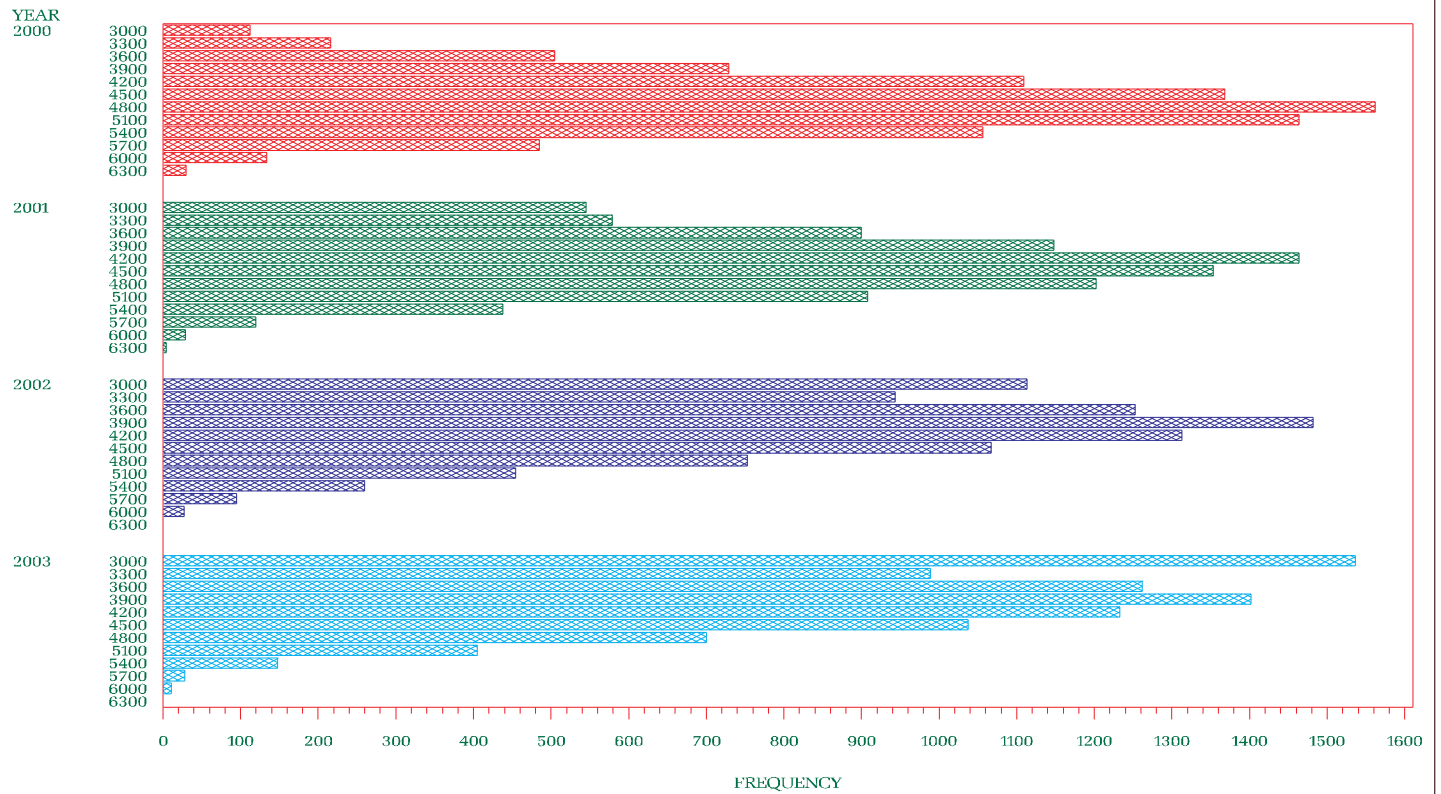
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TOTAL EAST



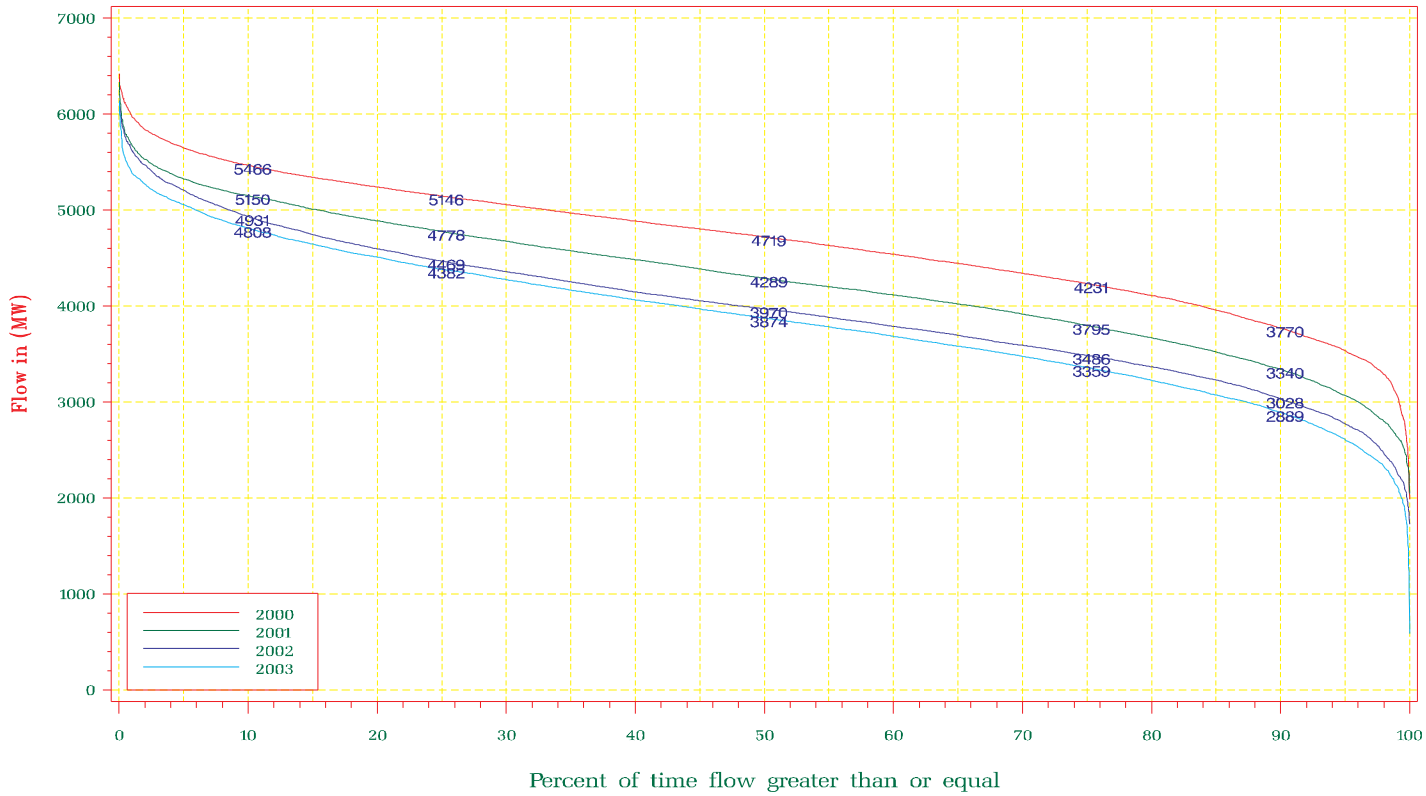
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TOTAL EAST



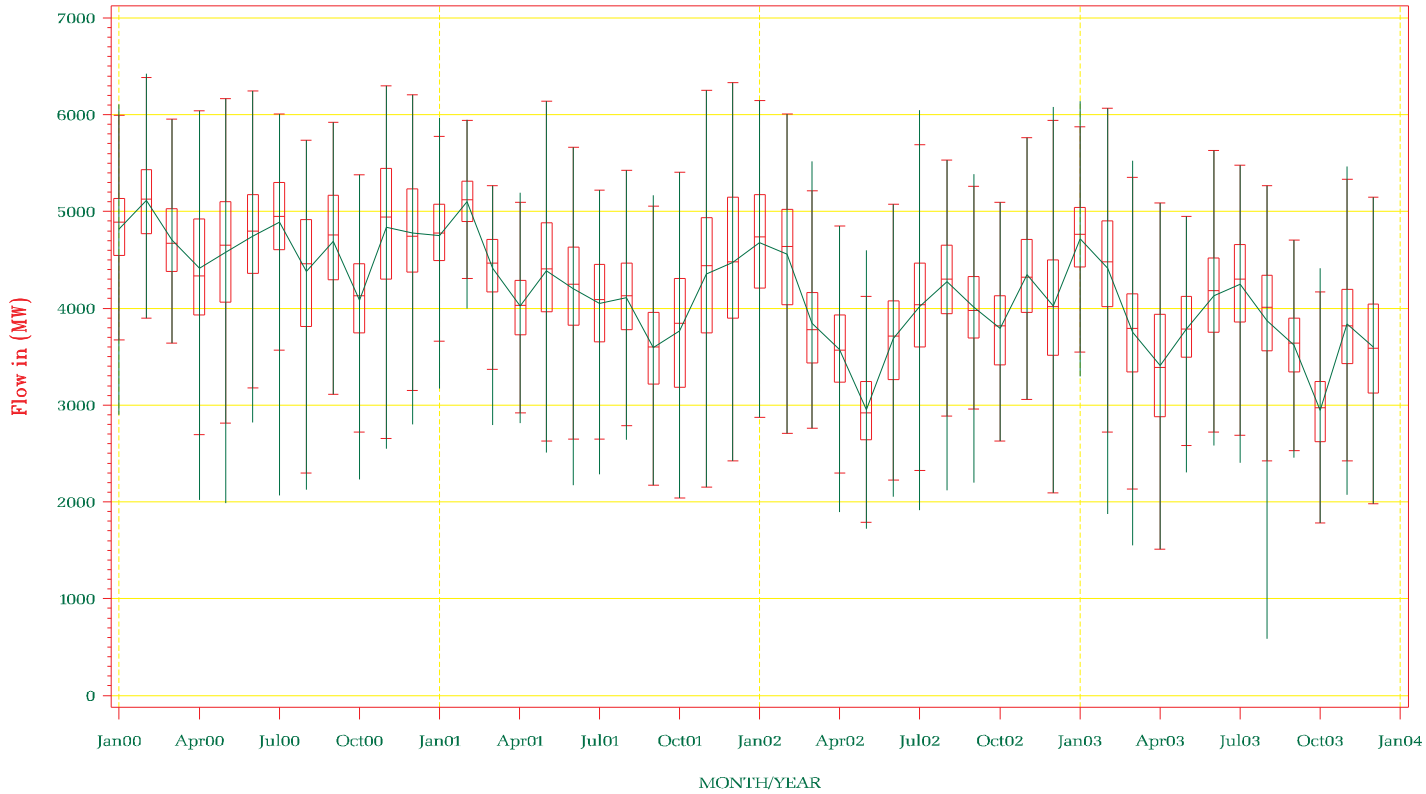
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TOTAL EAST



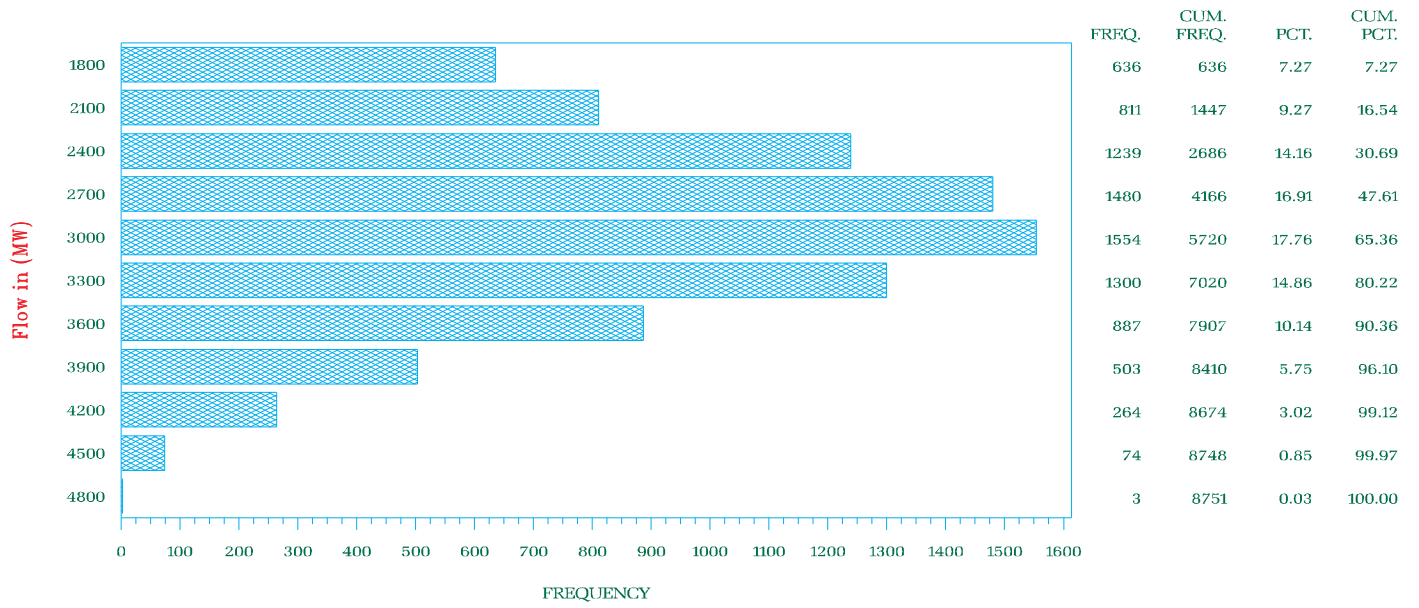
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TOTAL EAST



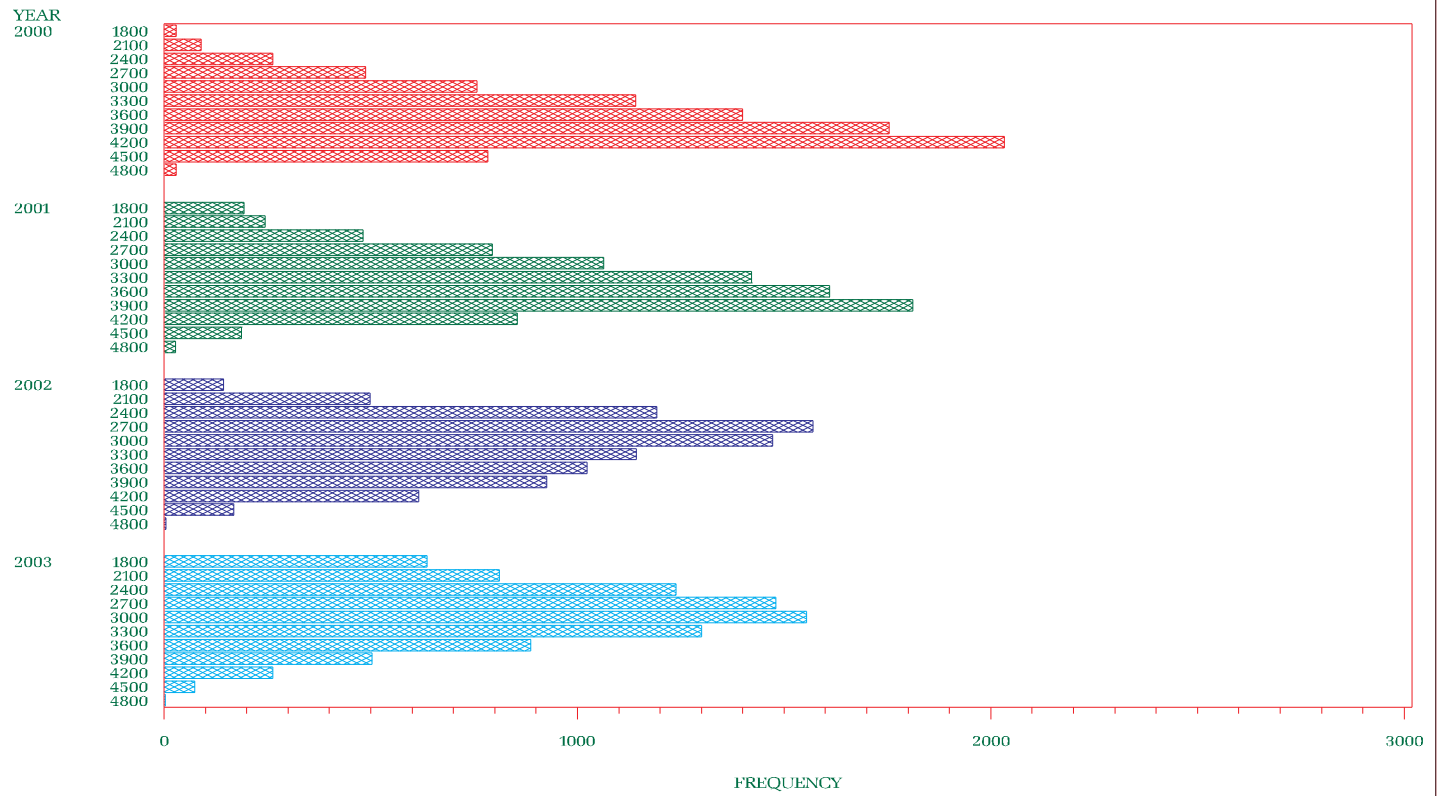
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Central – Capital/Mid Hudson



NYISO Frequency Interface Flow For January 2000 – December 2003

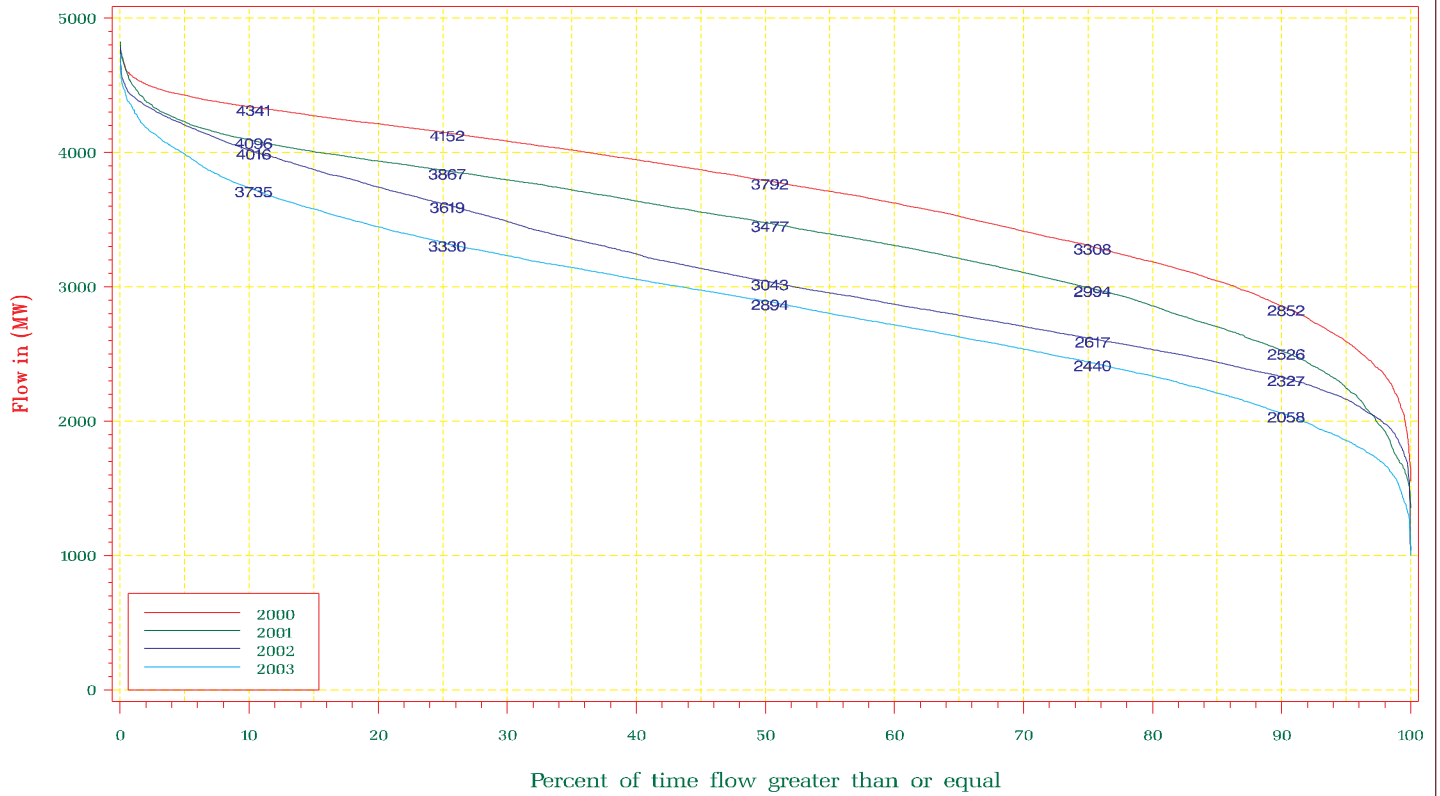
Central – Capital/Mid Hudson





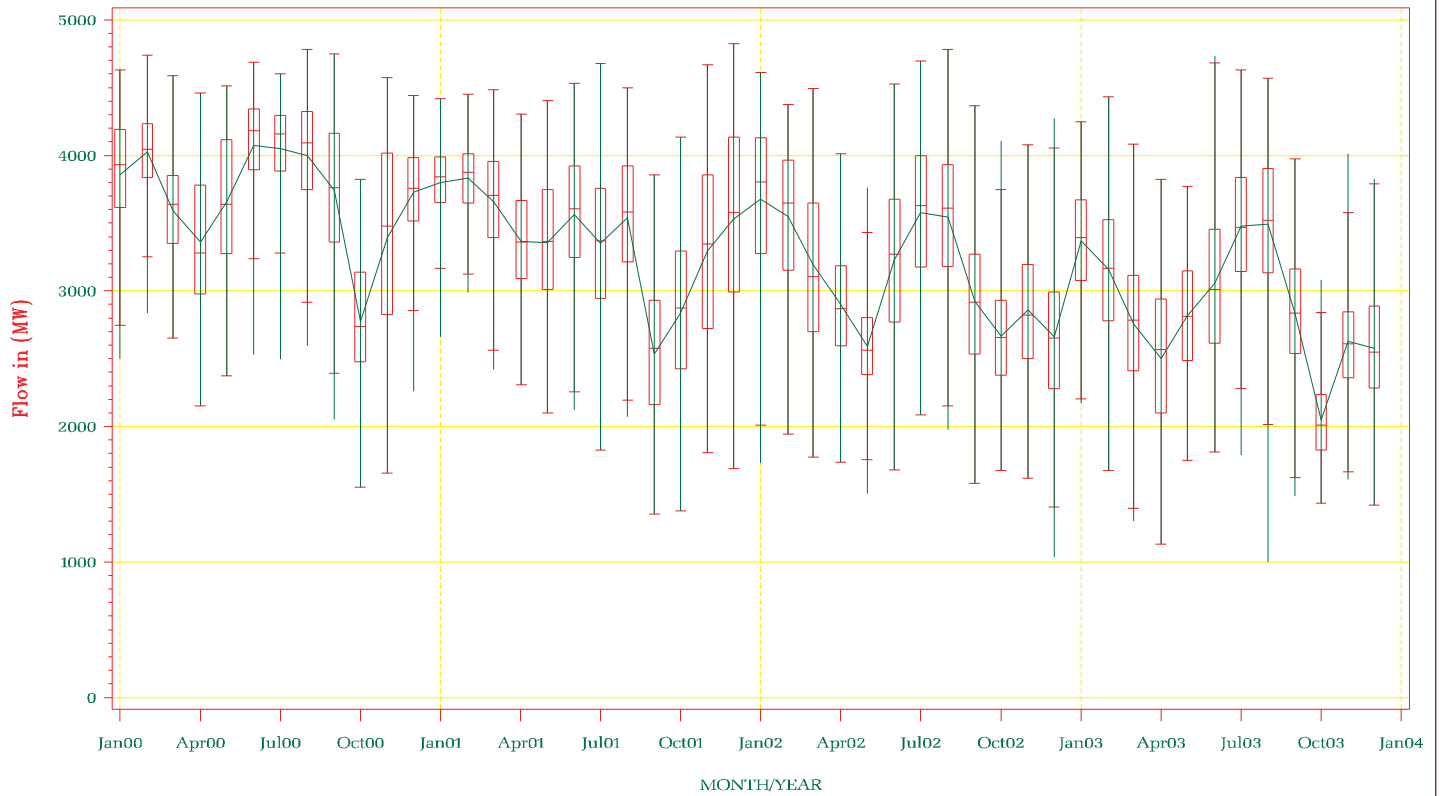
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Central – Capital/Mid Hudson



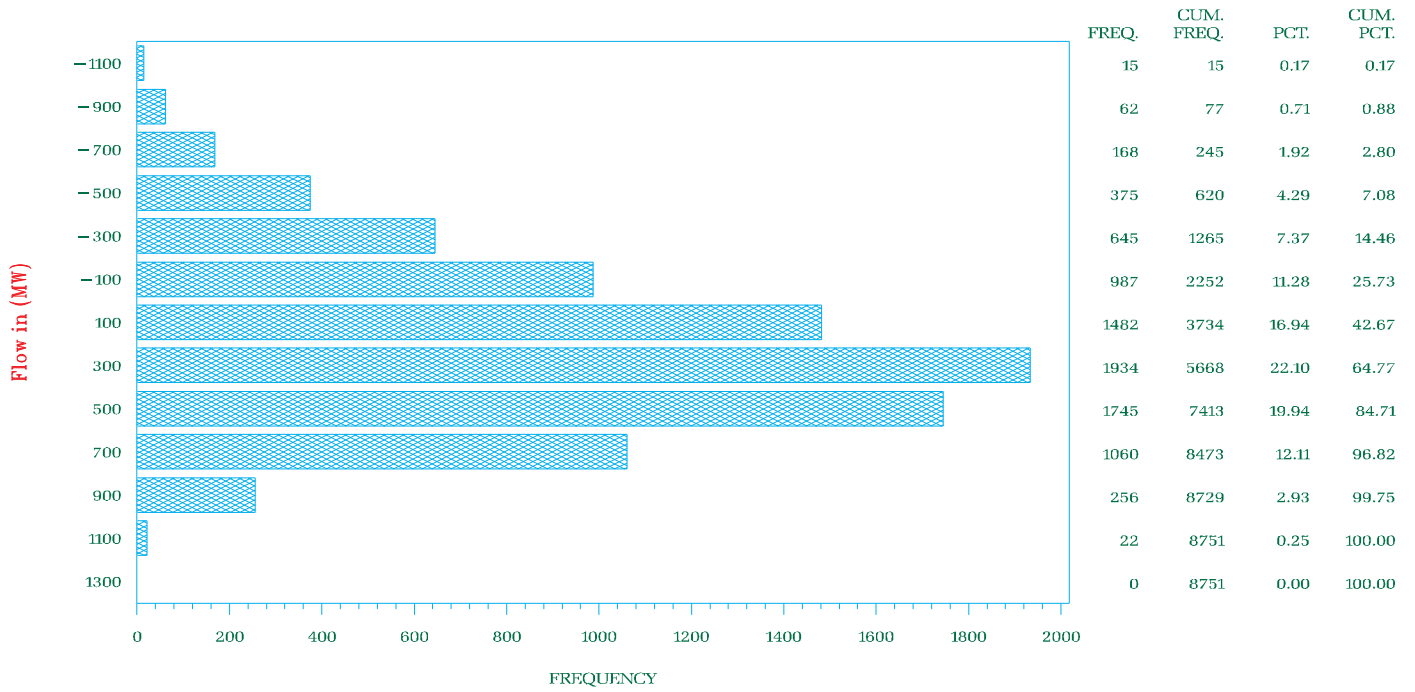
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Central – Capital/Mid Hudson



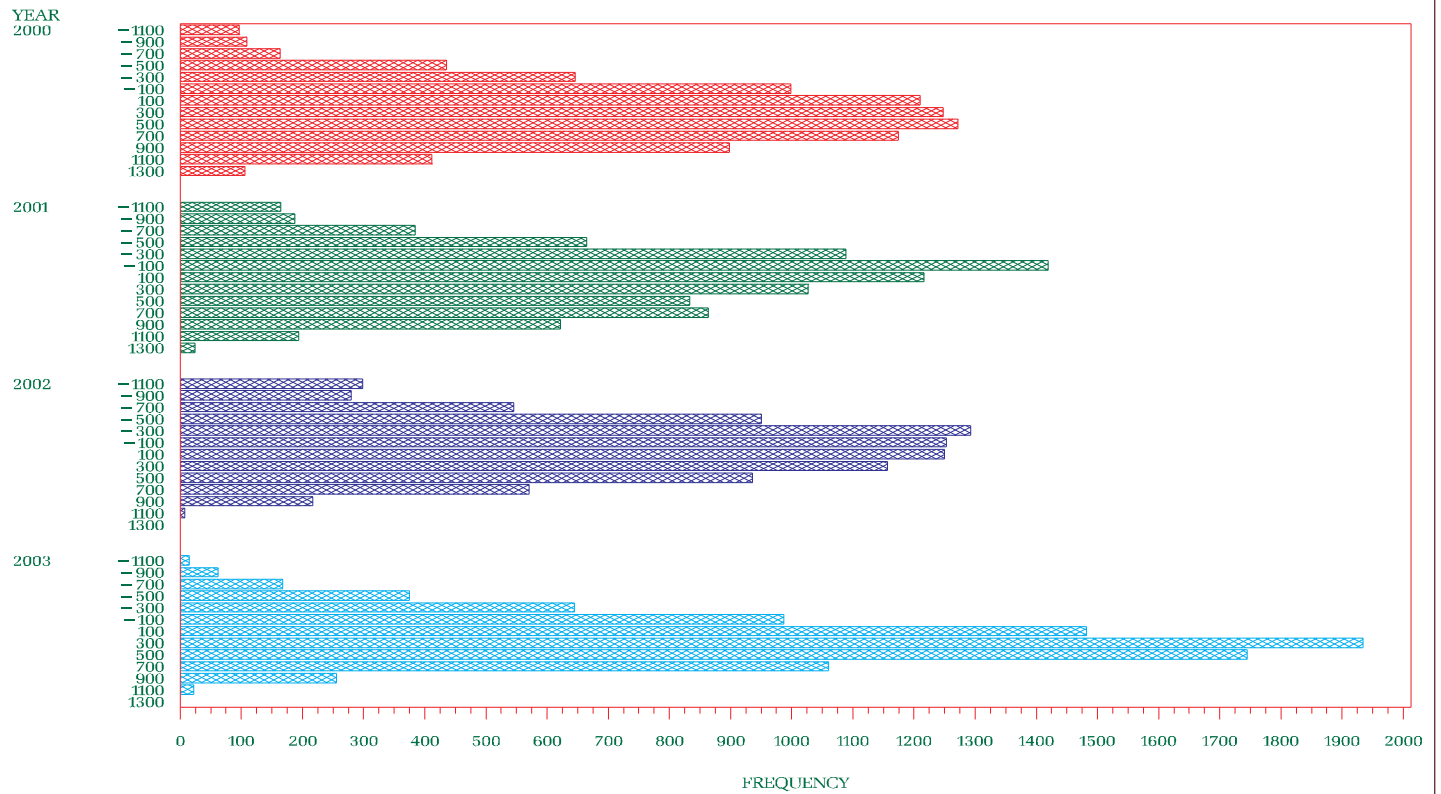
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PJM East – Capital/Mid Hudson



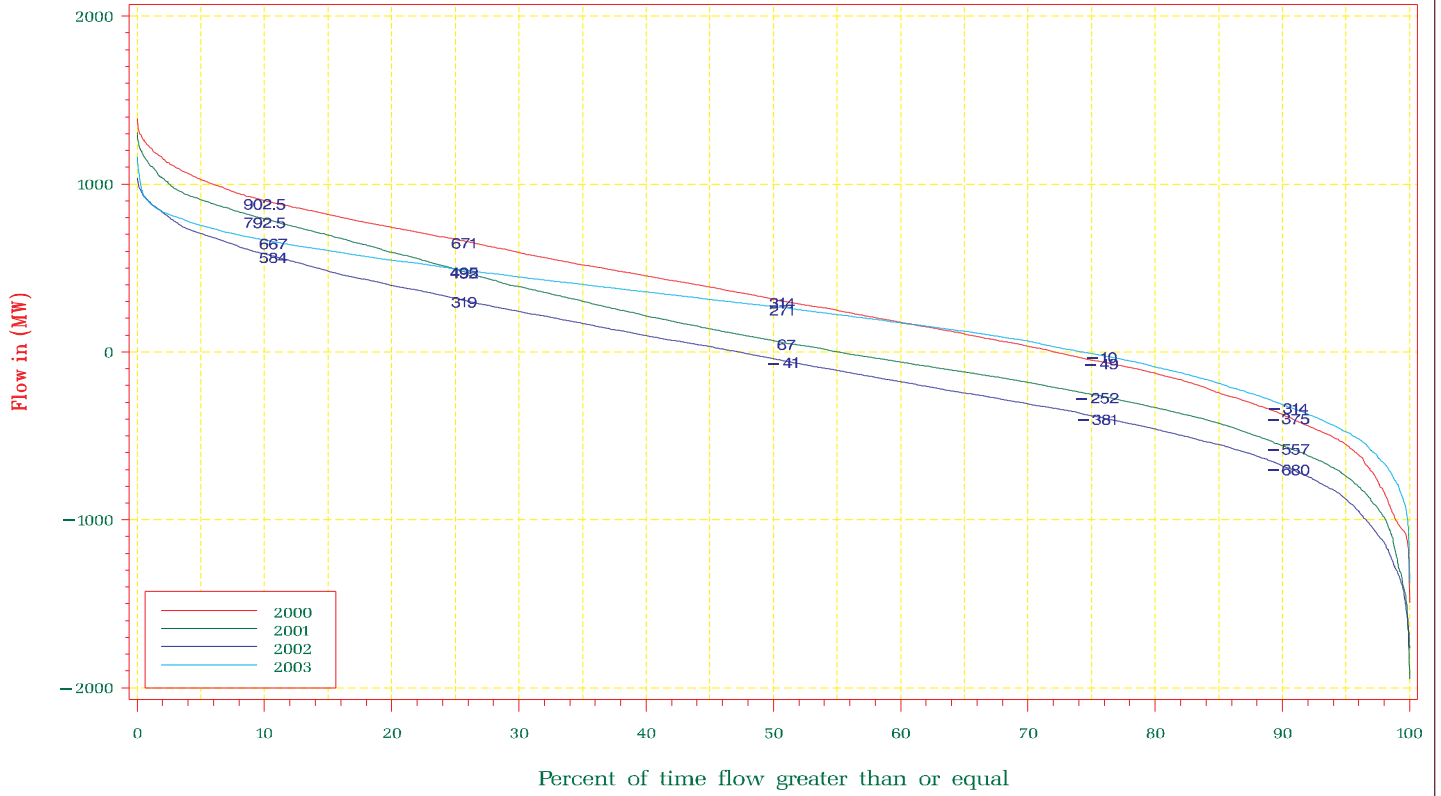
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PJM East – Capital/Mid Hudson



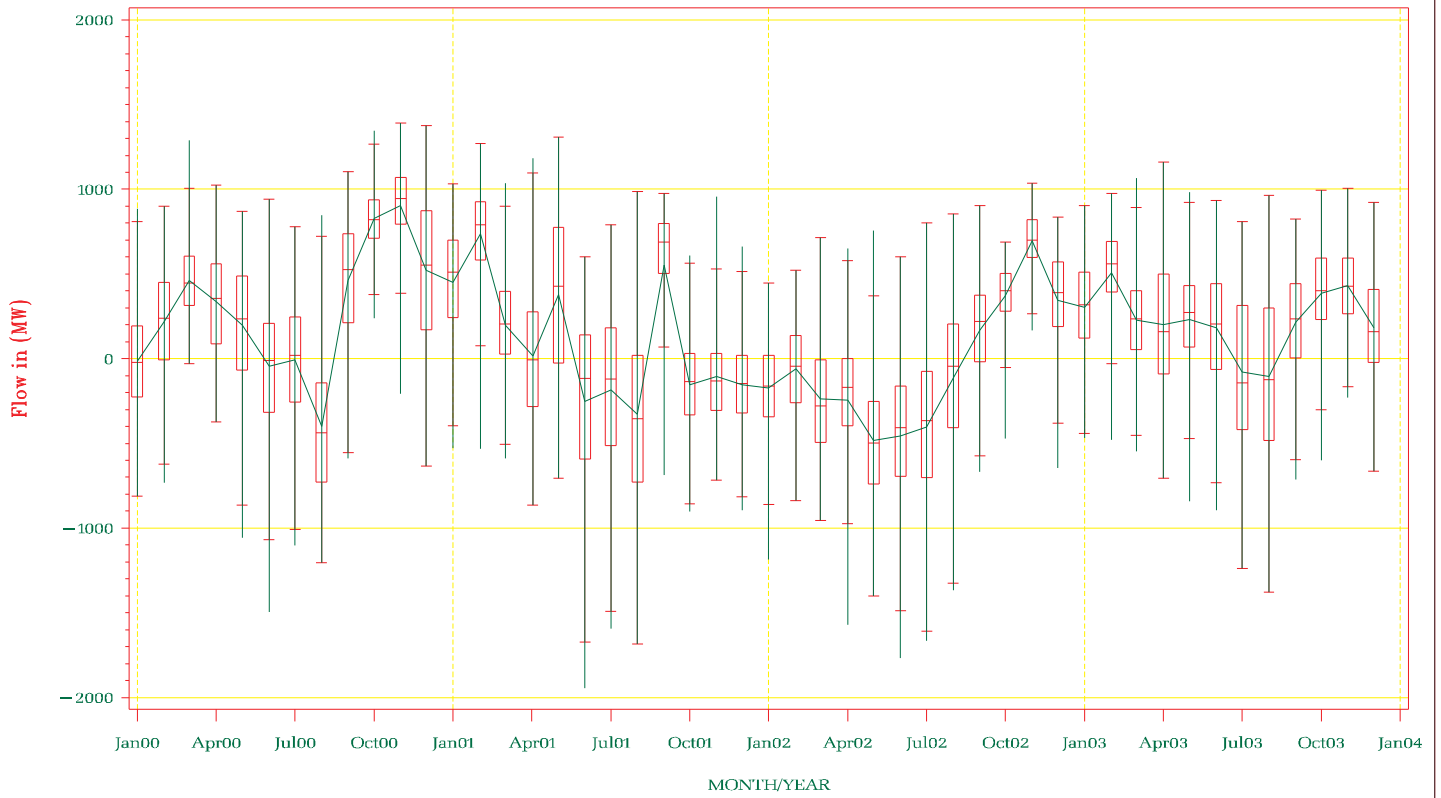
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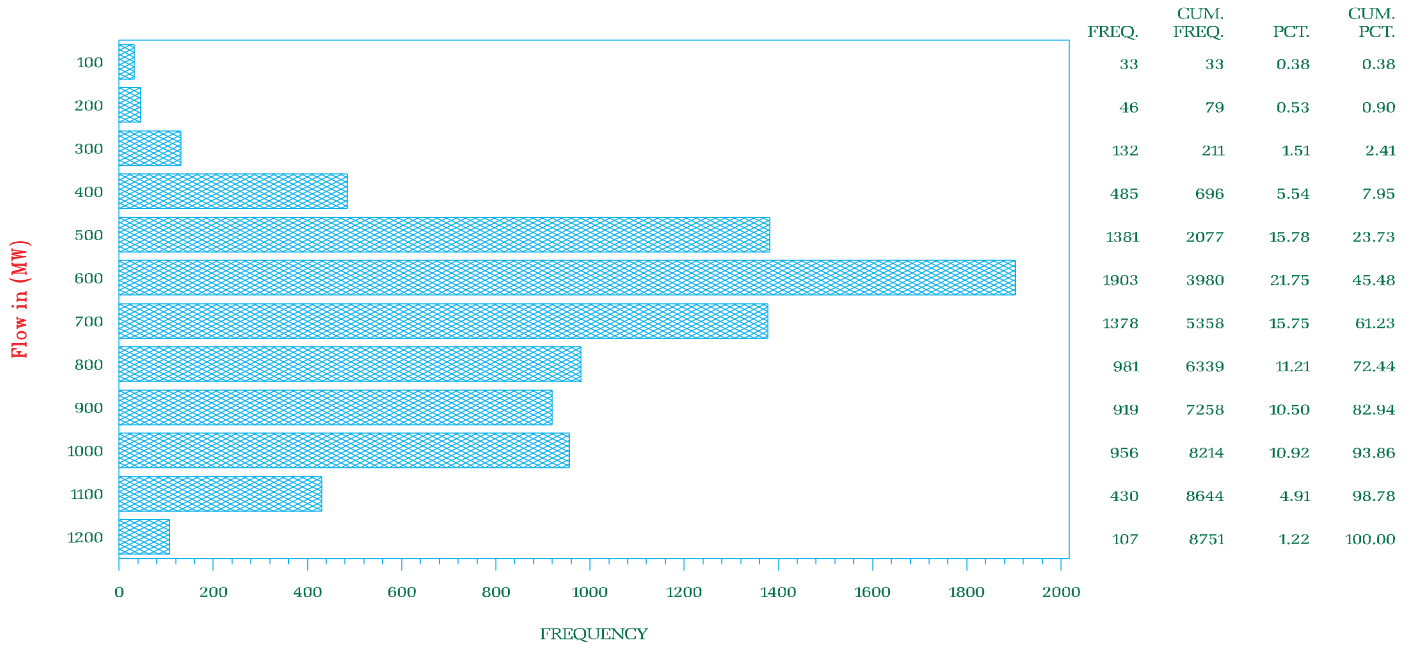
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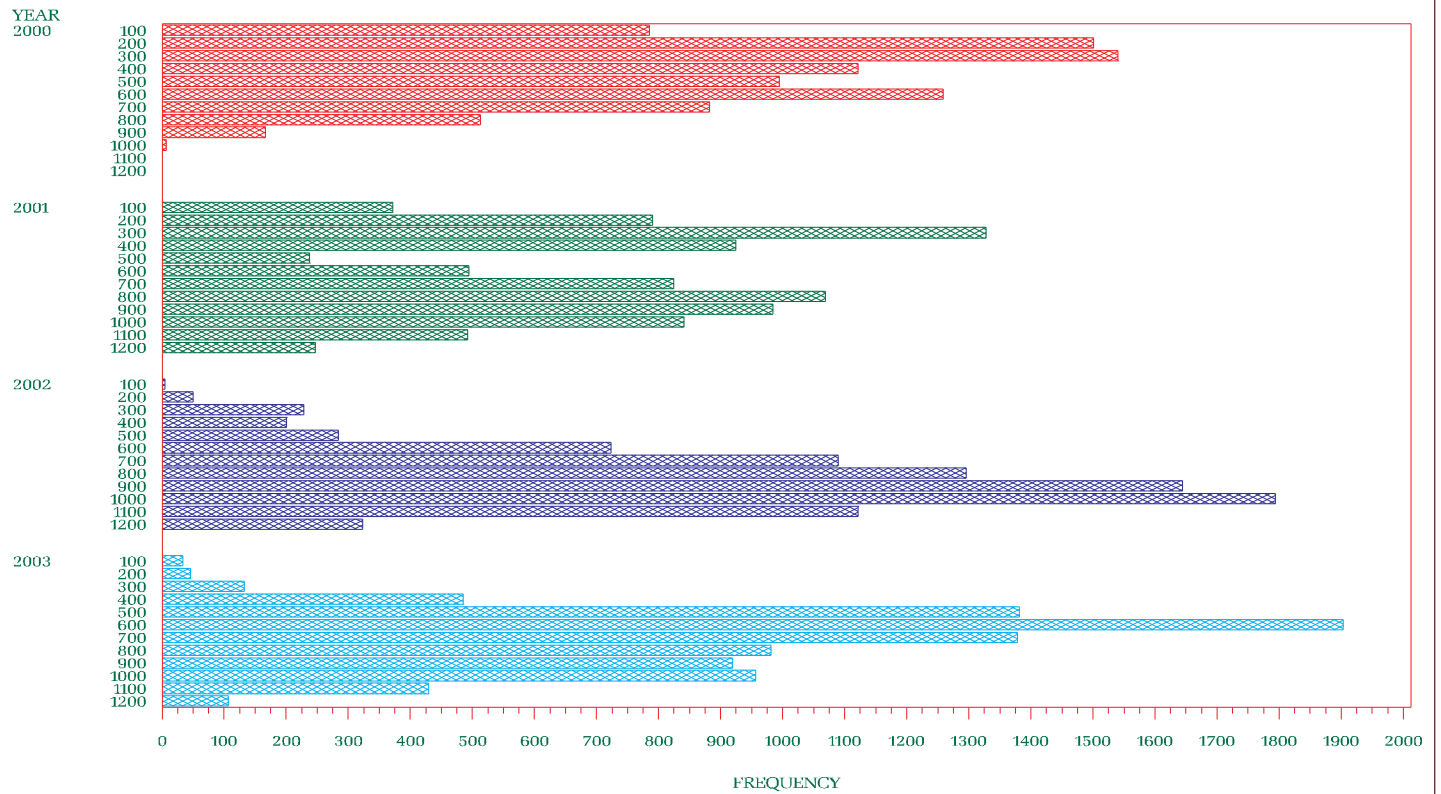
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PJM East – New York City



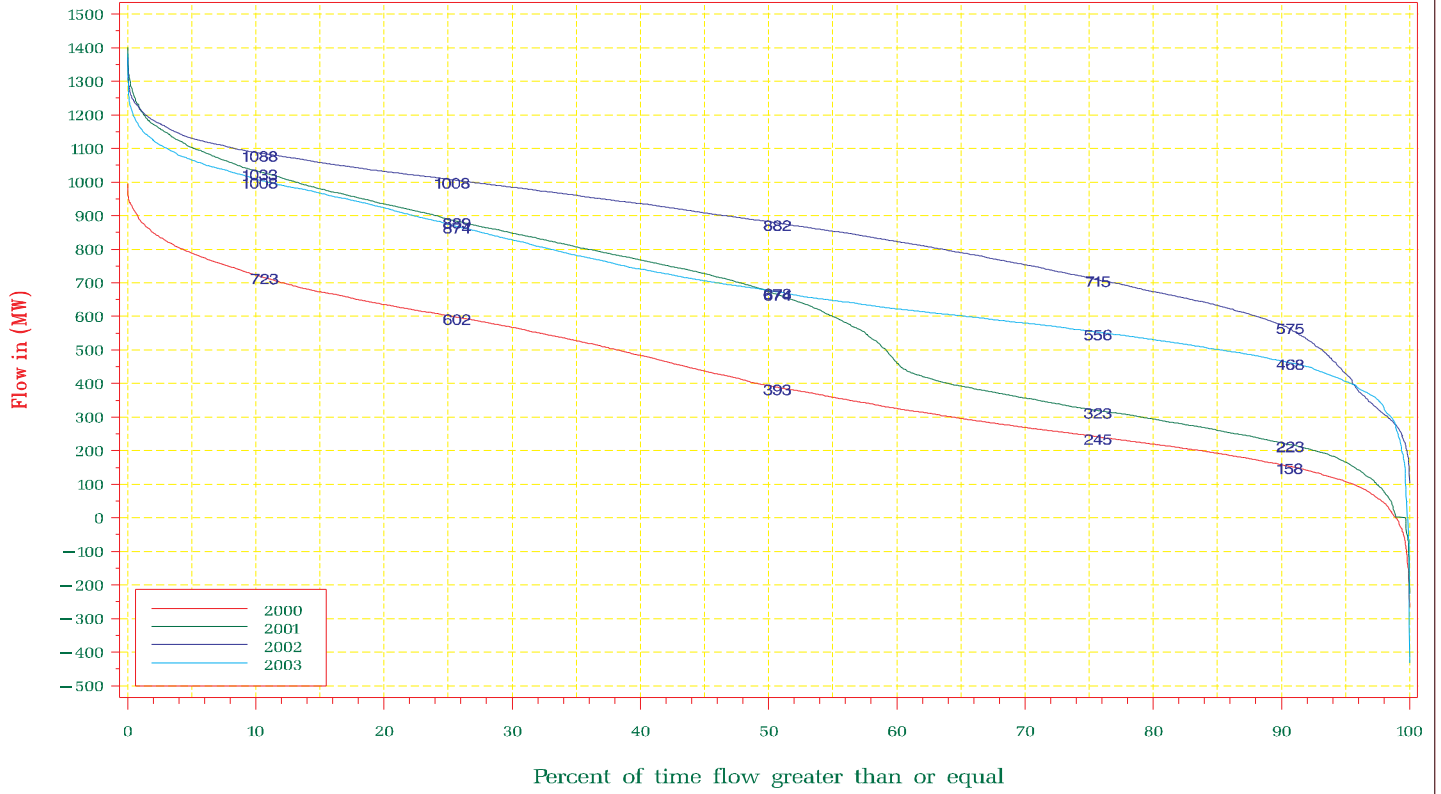
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PJM East – New York City



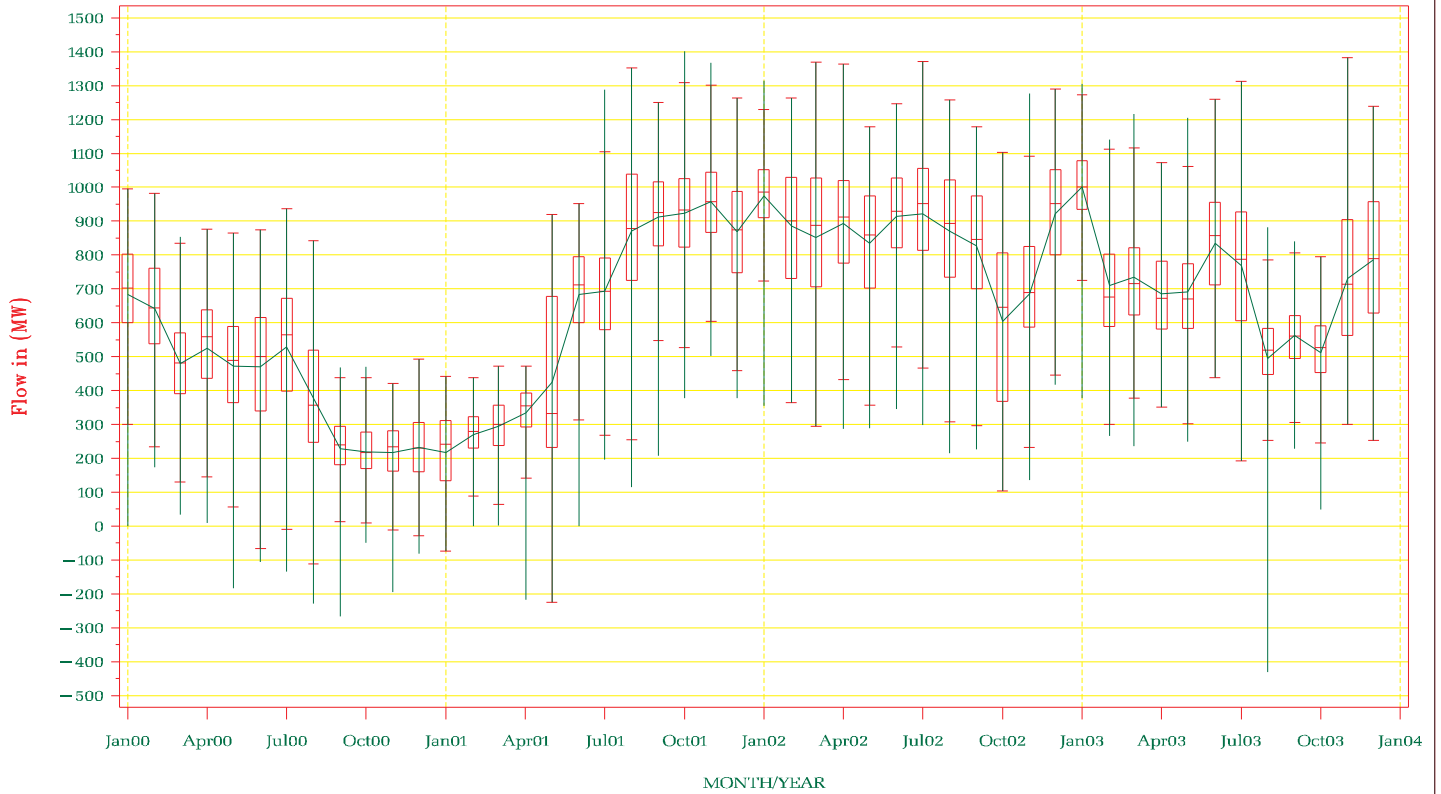
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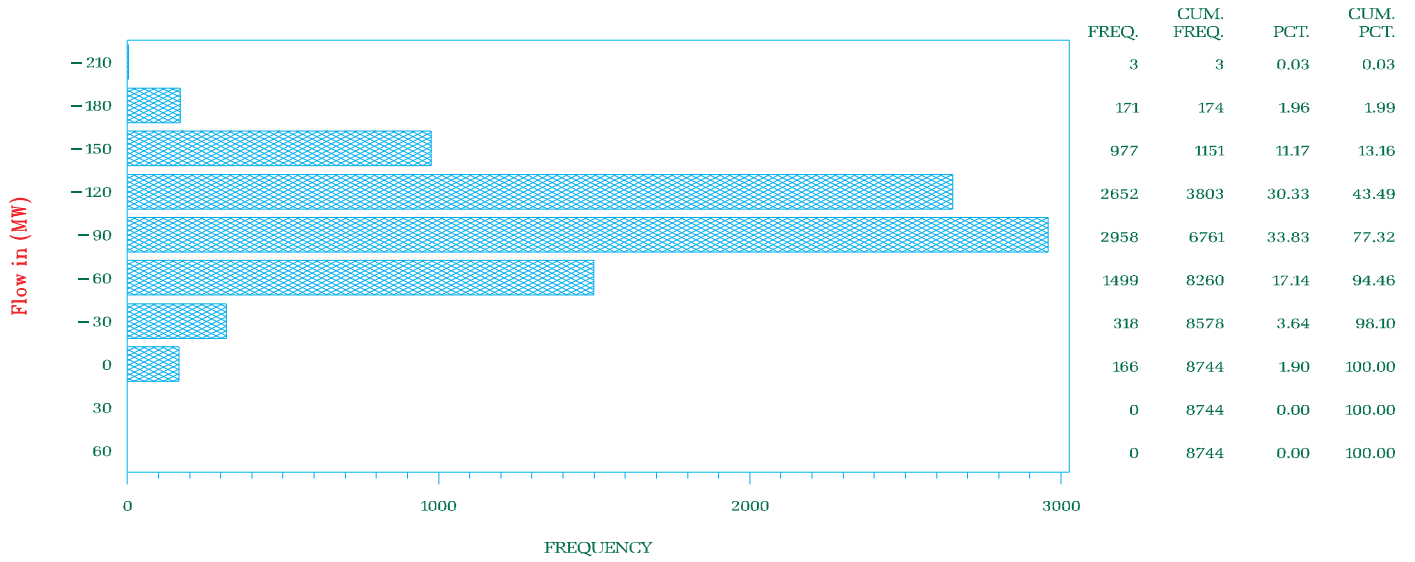
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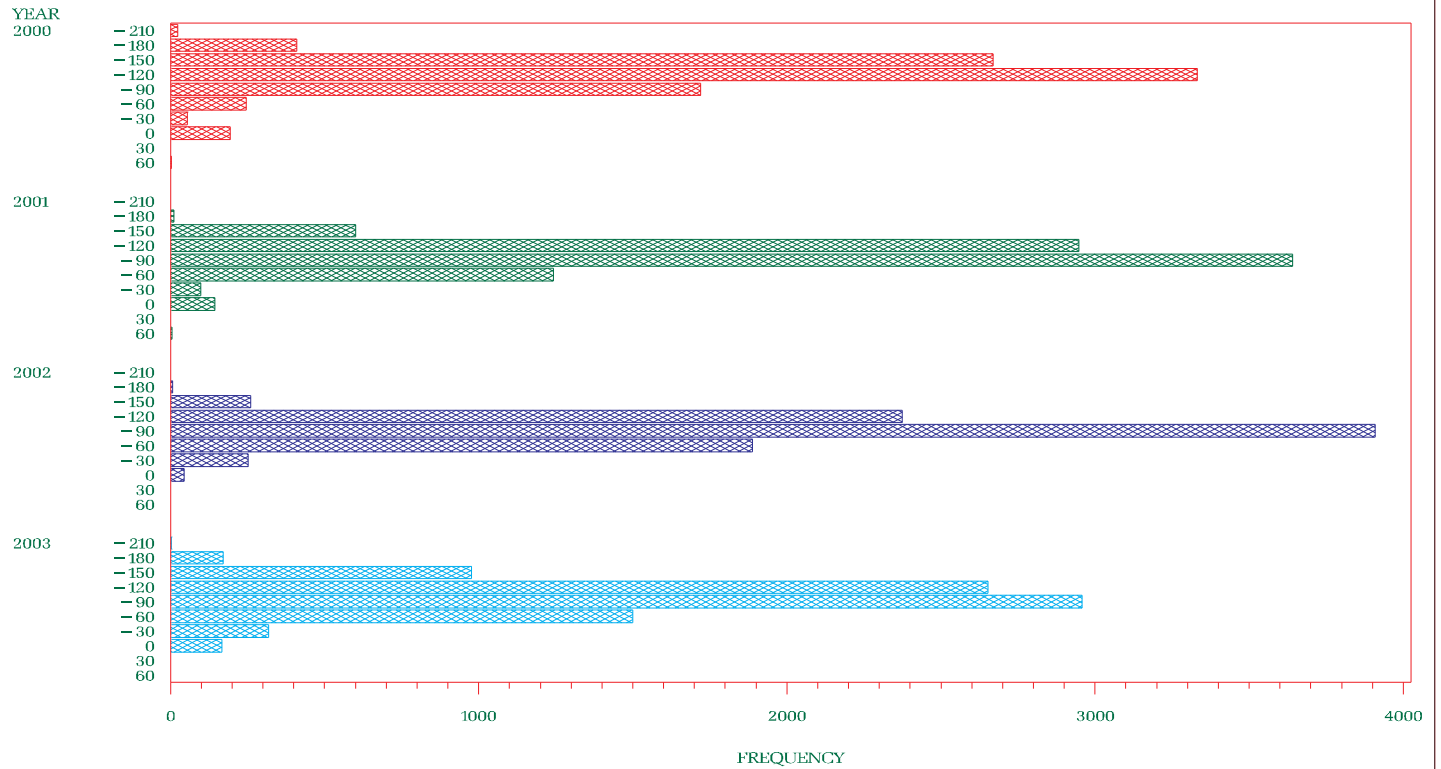
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NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh



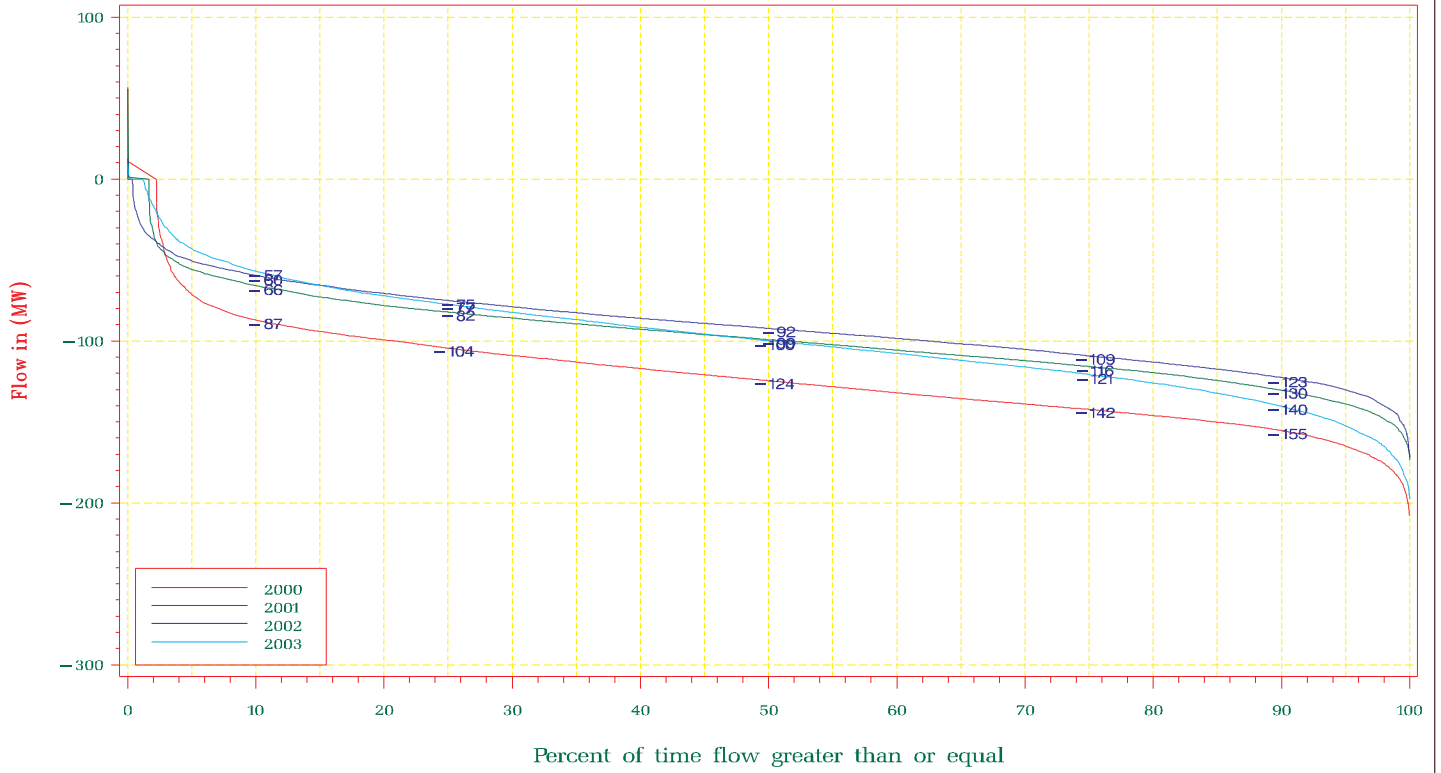
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NE/Vt. North – Adirondack  
 PV – 20 Grand Isle – Plattsburgh



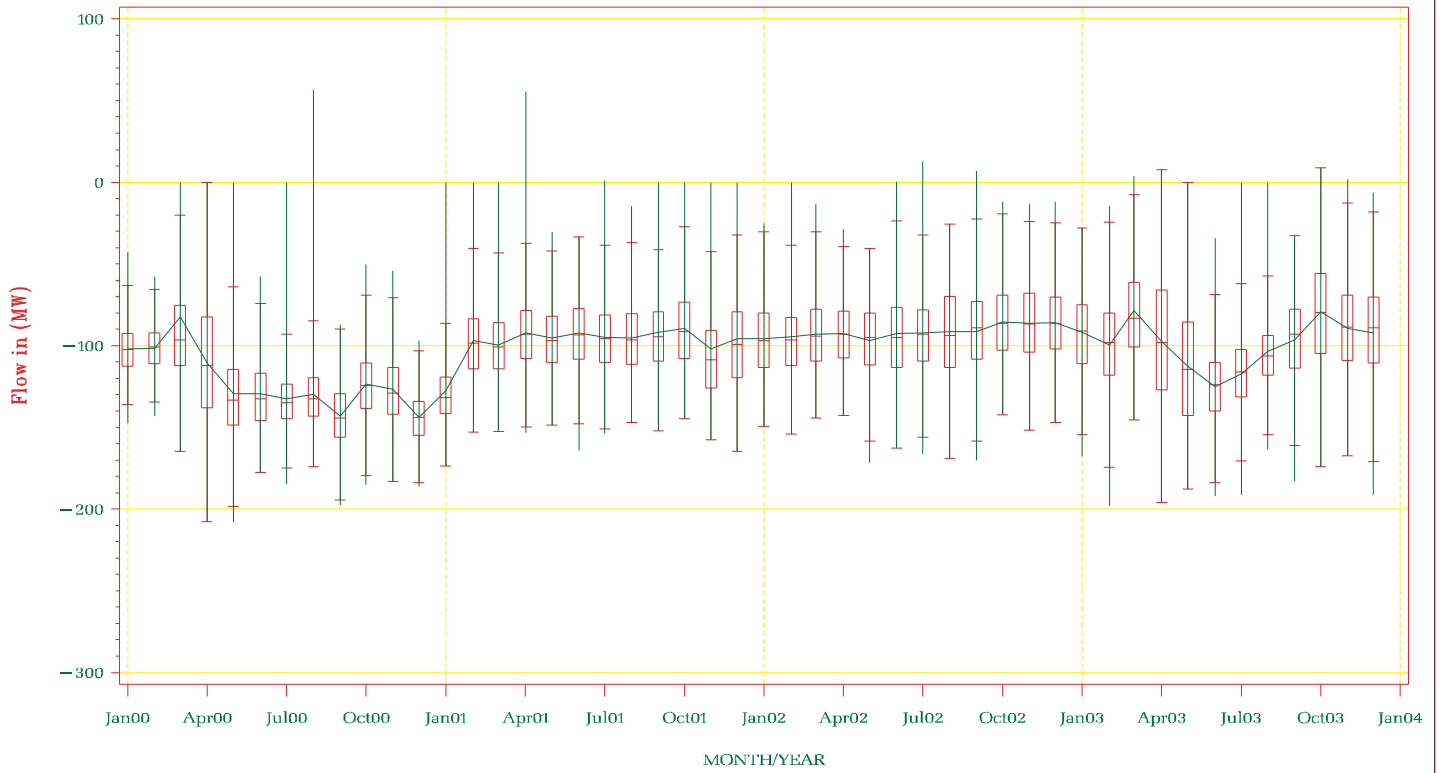
NYISO Percent of time Interface Flow For January 2000 – December 2003

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



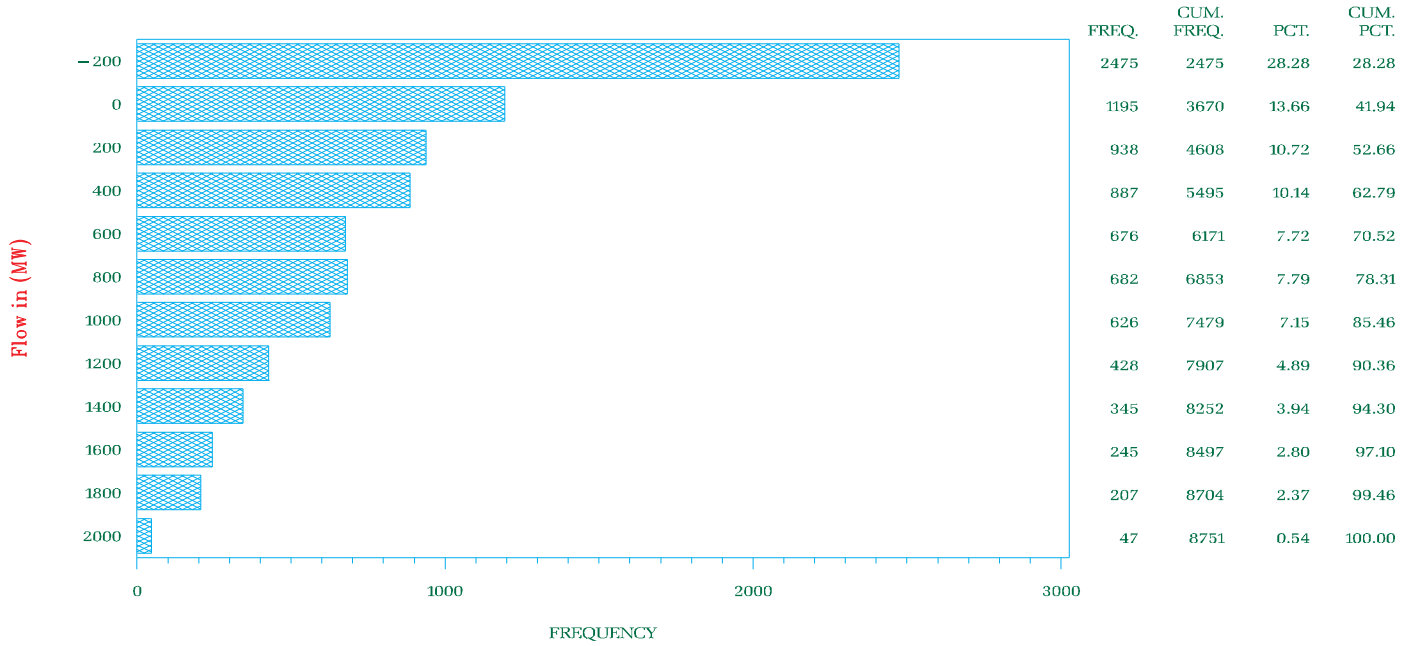
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

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



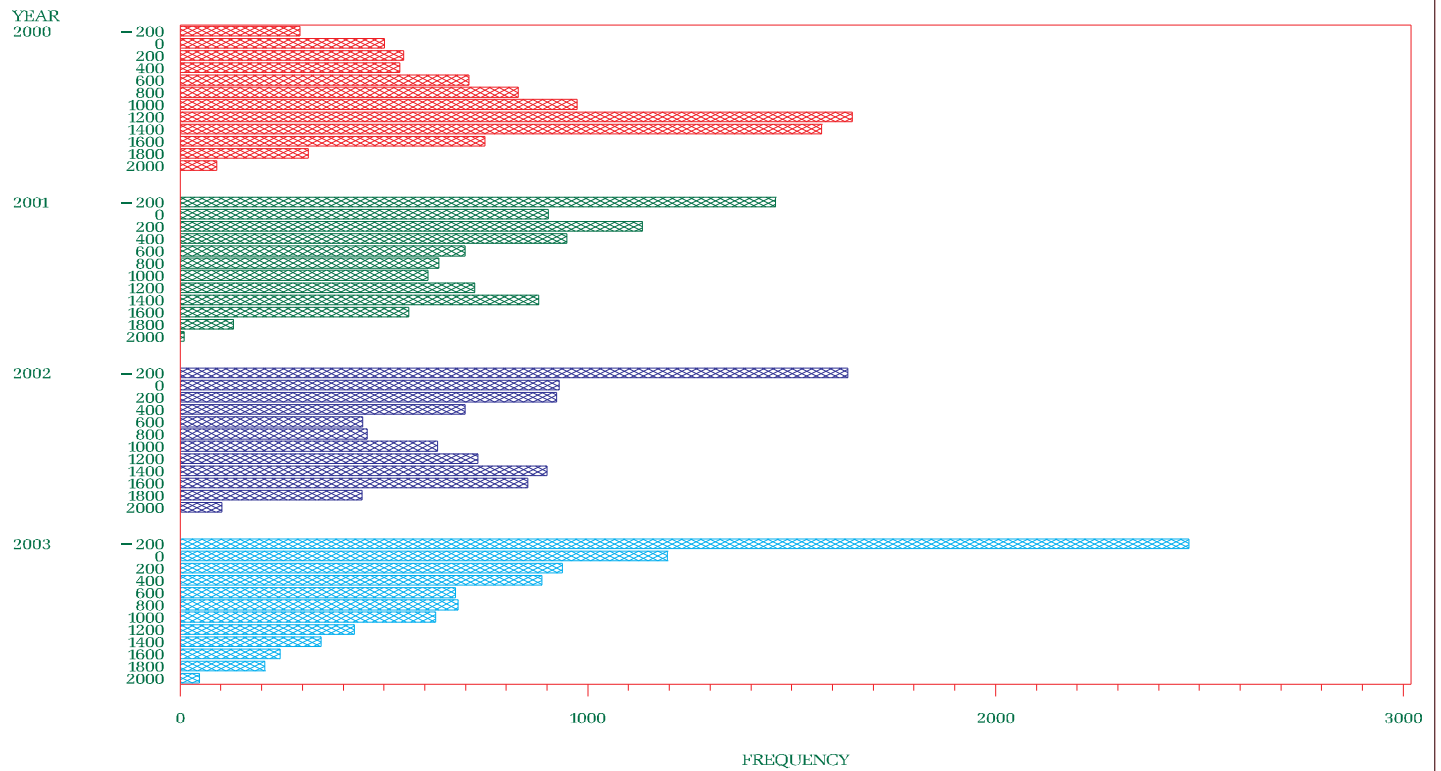
NYISO Frequency Interface Flow For January – December 2003

MOSES SOUTH  
Adirondack – Central



NYISO Frequency Interface Flow For January 2000 – December 2003

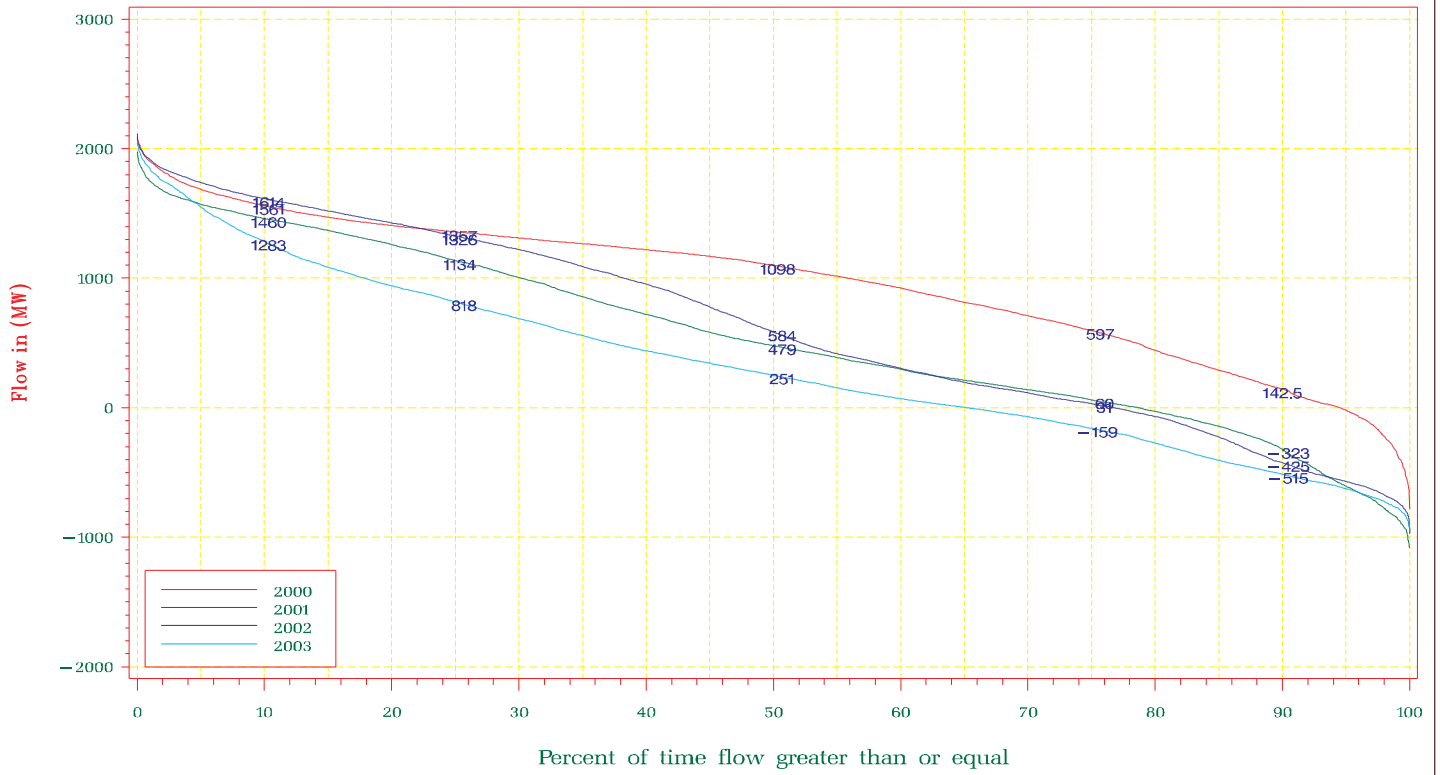
MOSES SOUTH  
Adirondack – Central





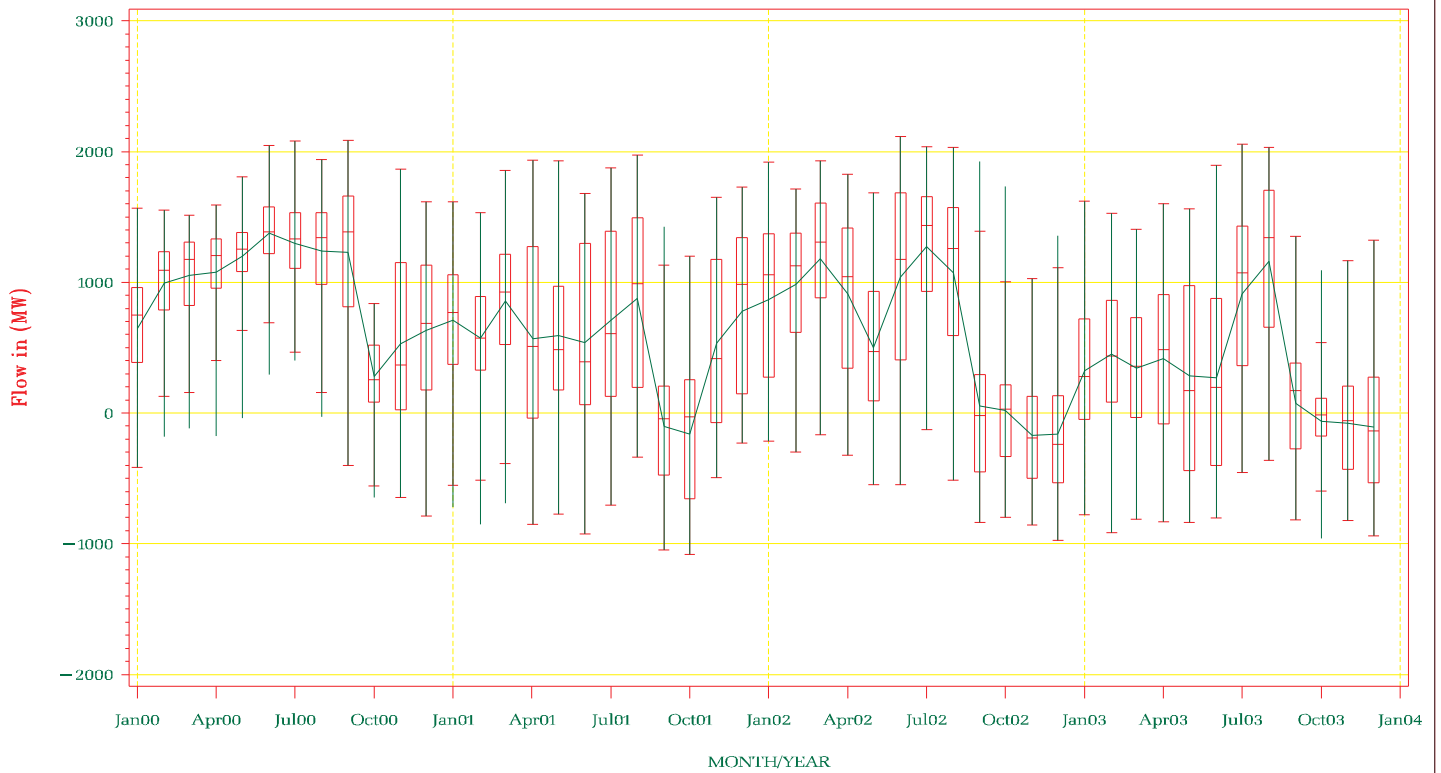
NYISO Percent of time Interface Flow For January 2000 – December 2003

**MOSES SOUTH**  
Adirondack – Central



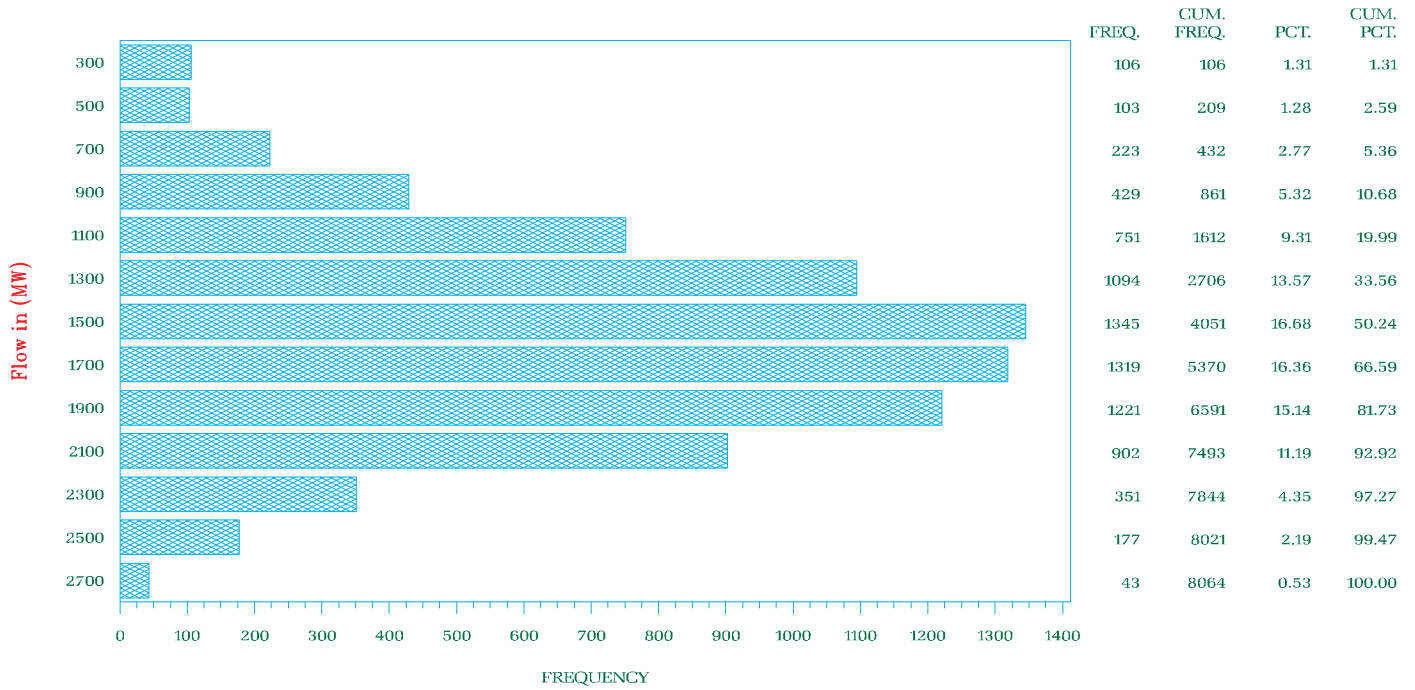
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**MOSES SOUTH**  
Adirondack – Central



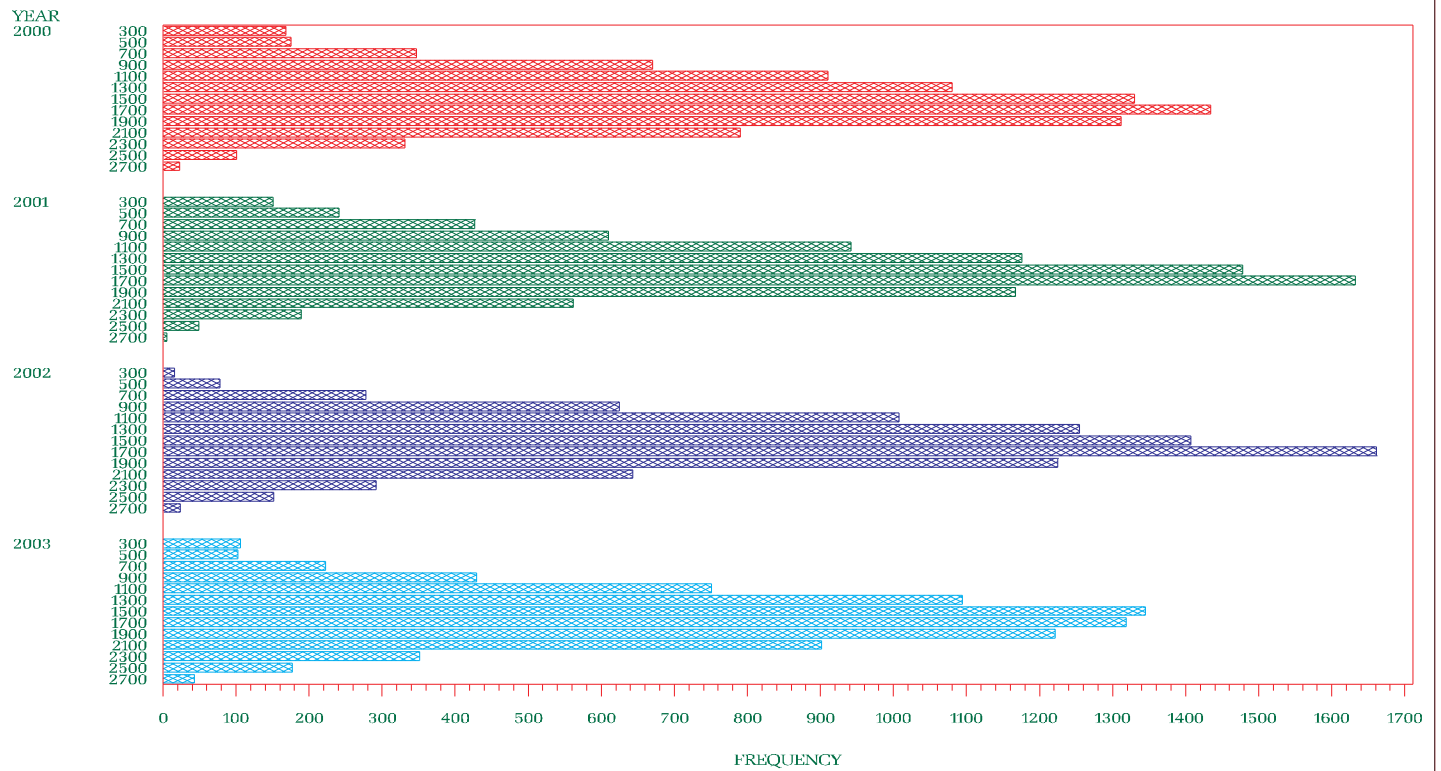
NYISO Frequency Interface Flow For January – December 2003

**DYSINGER EAST**  
Frontier – Genesee



NYISO Frequency Interface Flow For January 2000 – December 2003

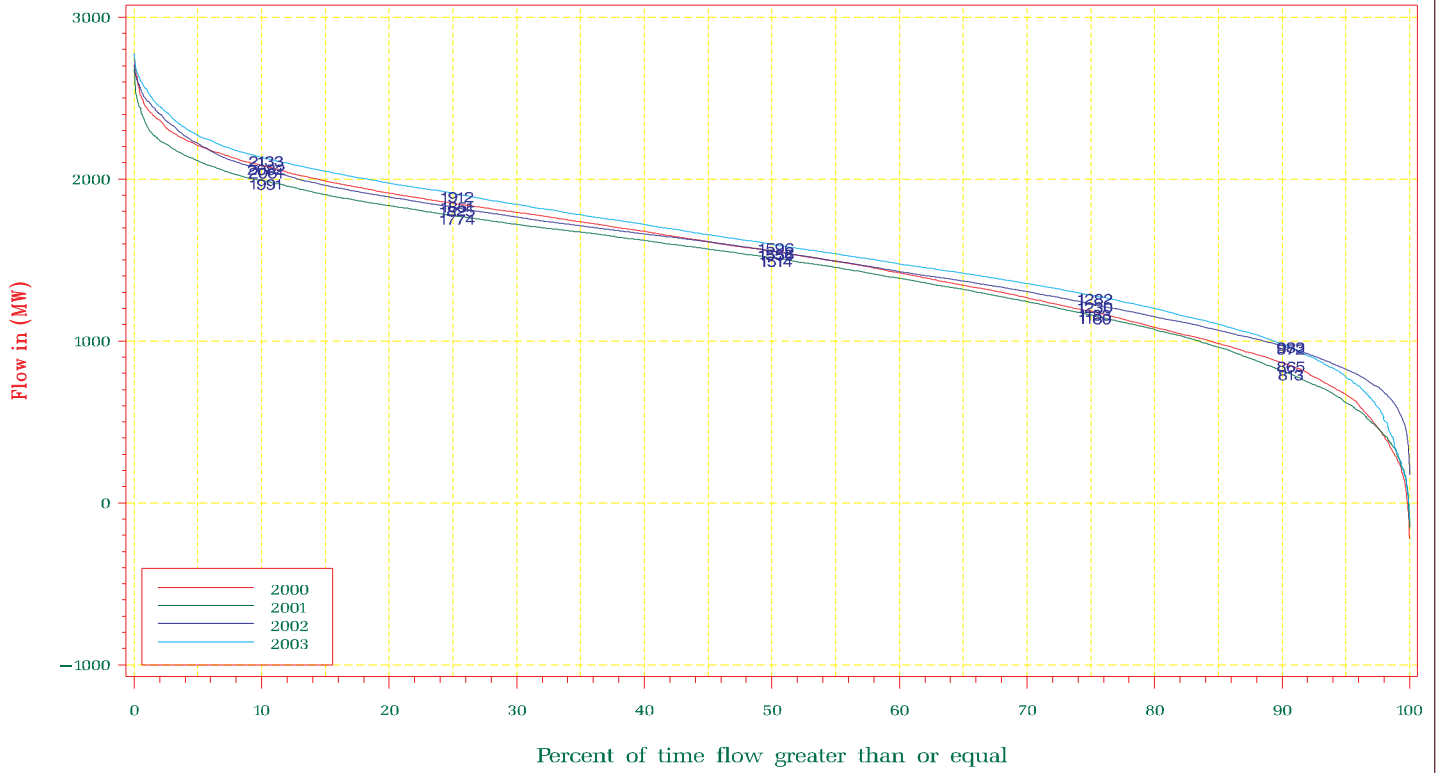
**DYSINGER EAST**  
Frontier – Genesee



NYISO Percent of time Interface Flow For January 2000 – December 2003

**DYSINGER EAST**

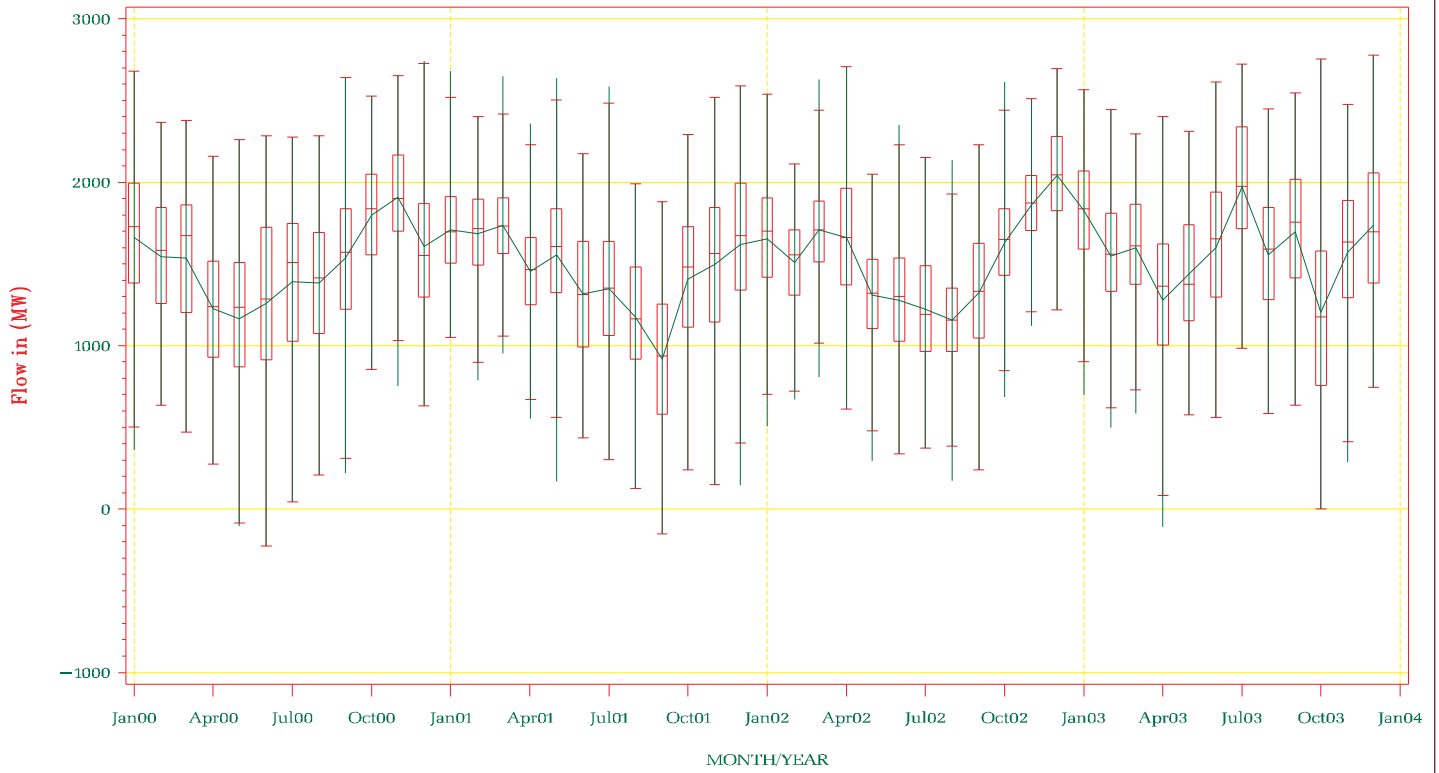
Frontier – Genesee



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

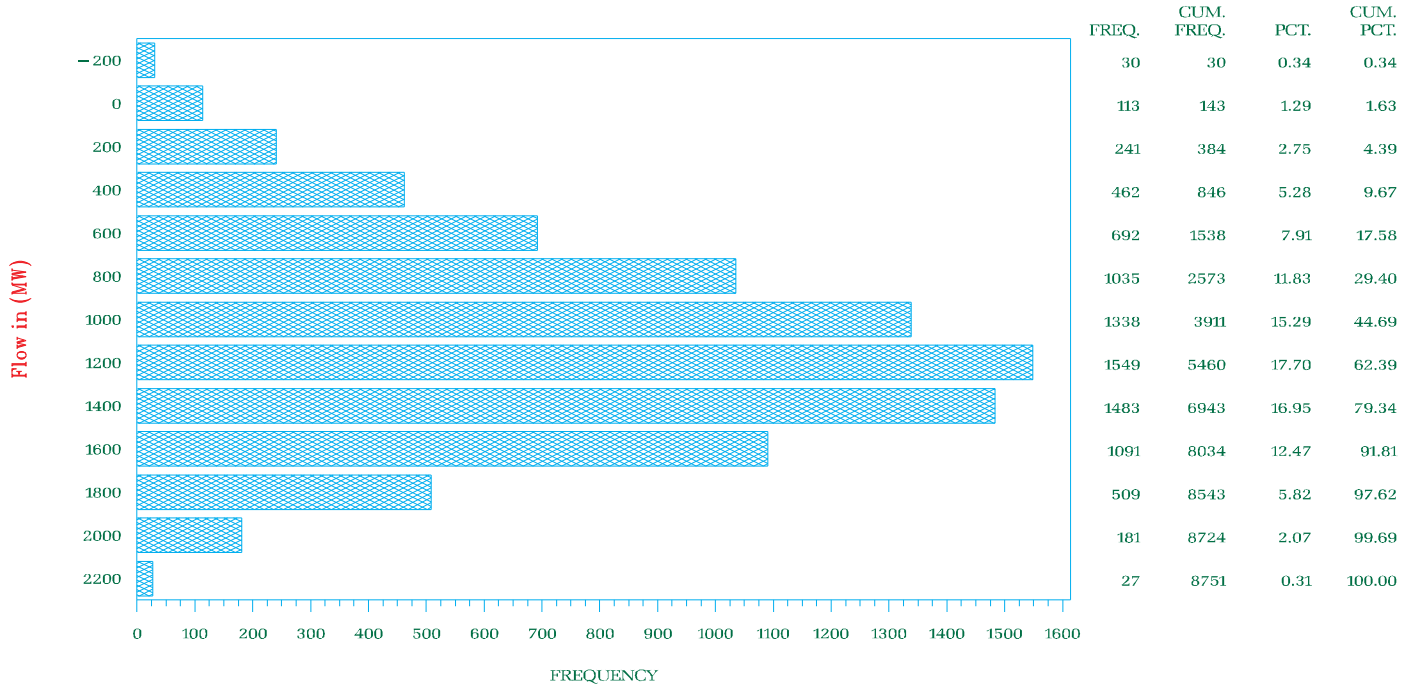
**DYSINGER EAST**

Frontier – Genesee



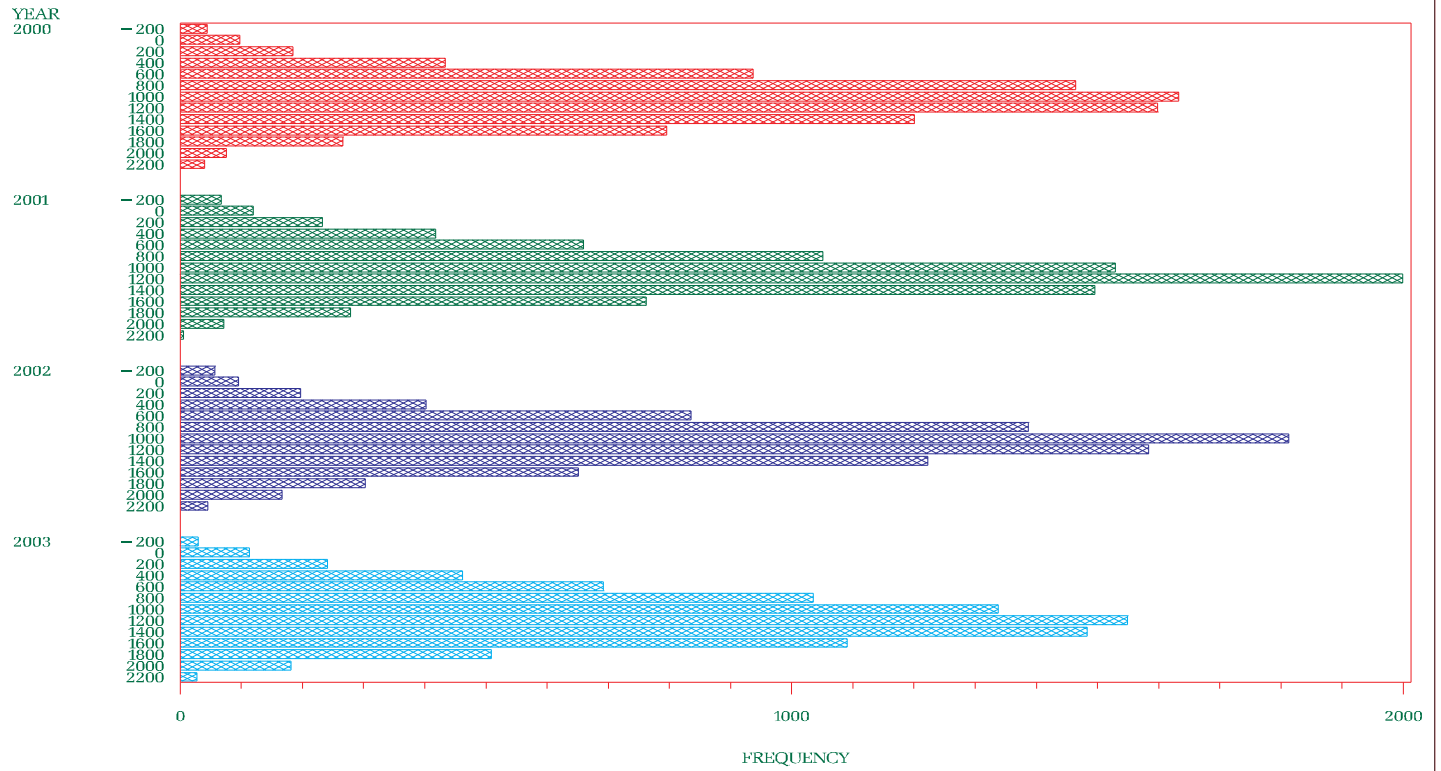
NYISO Frequency Interface Flow For January – December 2003

WEST CENTRAL  
Genesee – Central



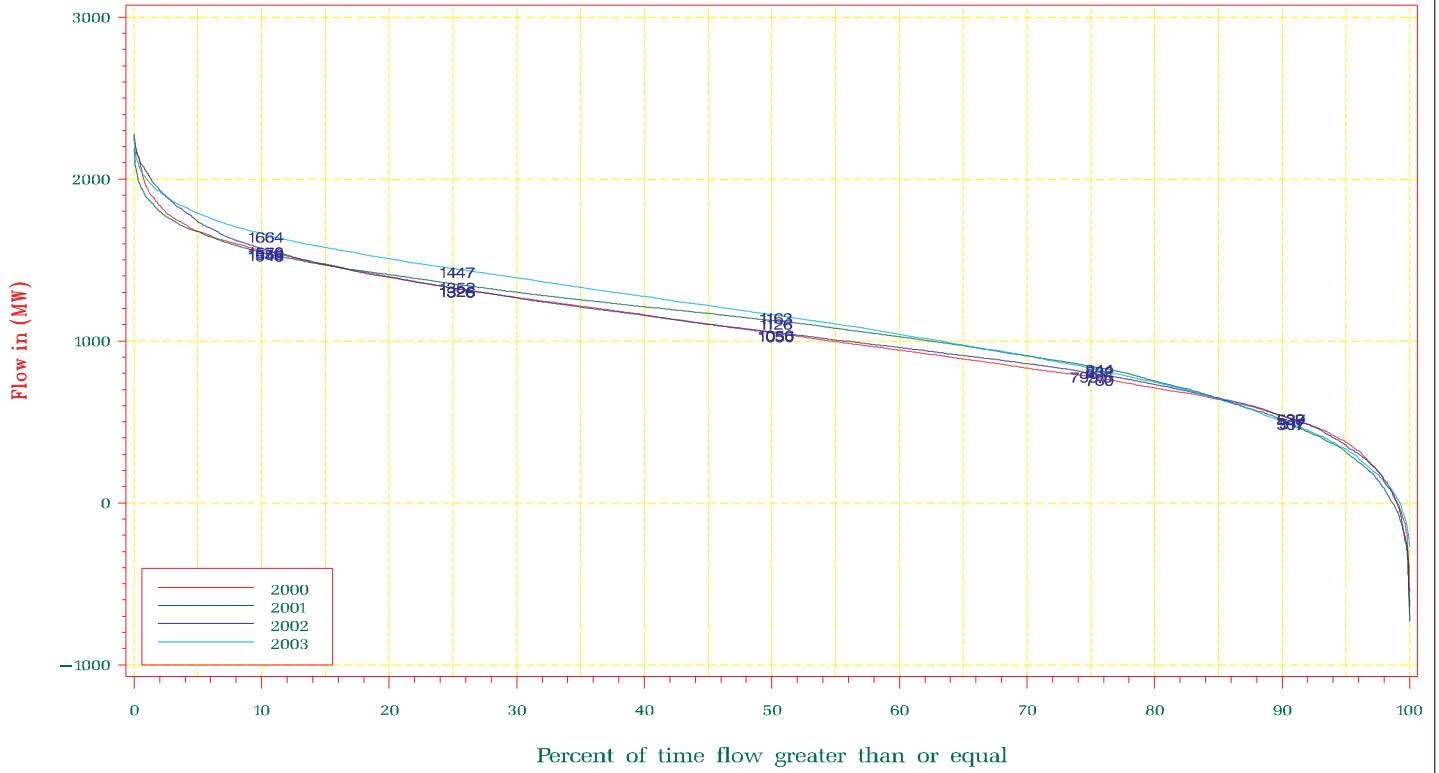
NYISO Frequency Interface Flow For January 2000 – December 2003

WEST CENTRAL  
Genesee – Central



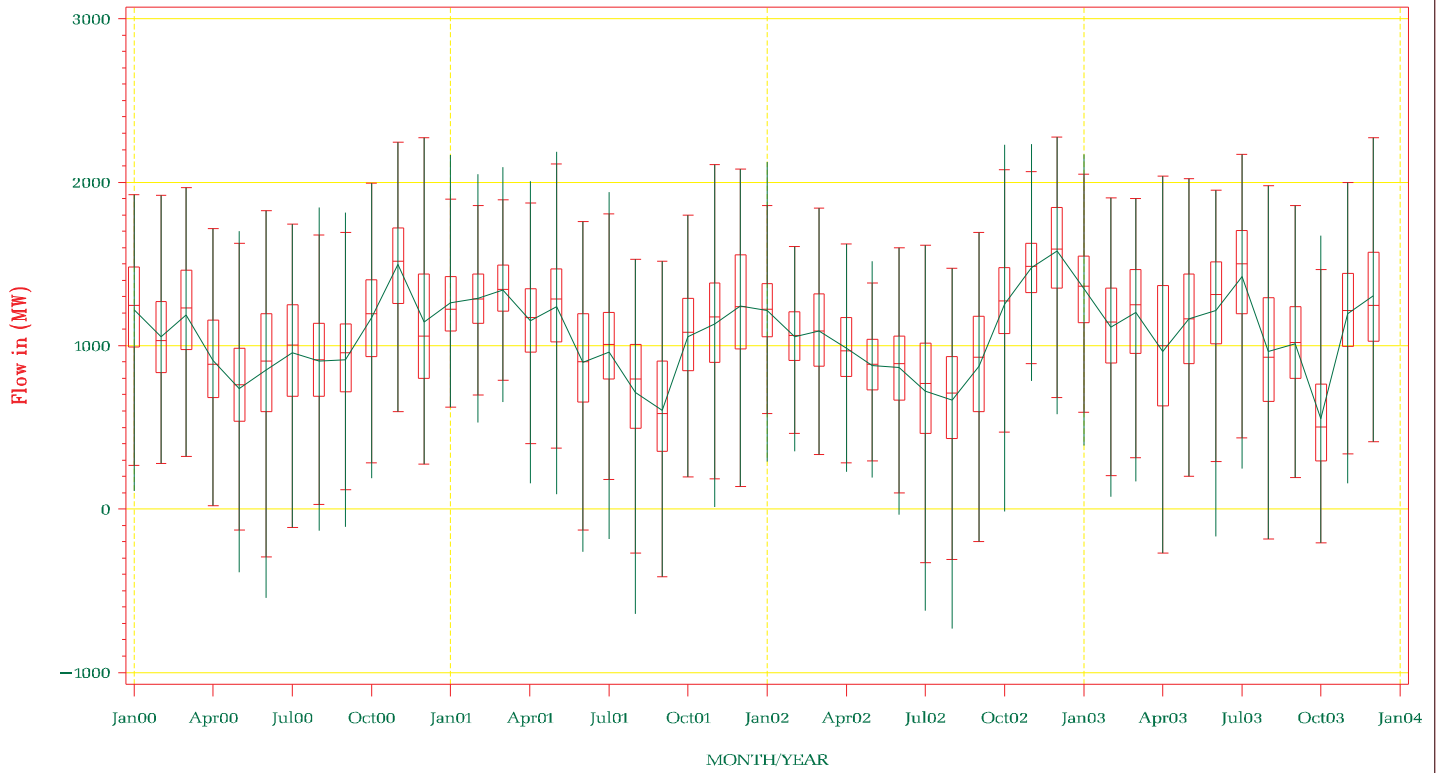
NYISO Percent of time Interface Flow For January 2000 – December 2003

**WEST CENTRAL**  
Genesee – Central



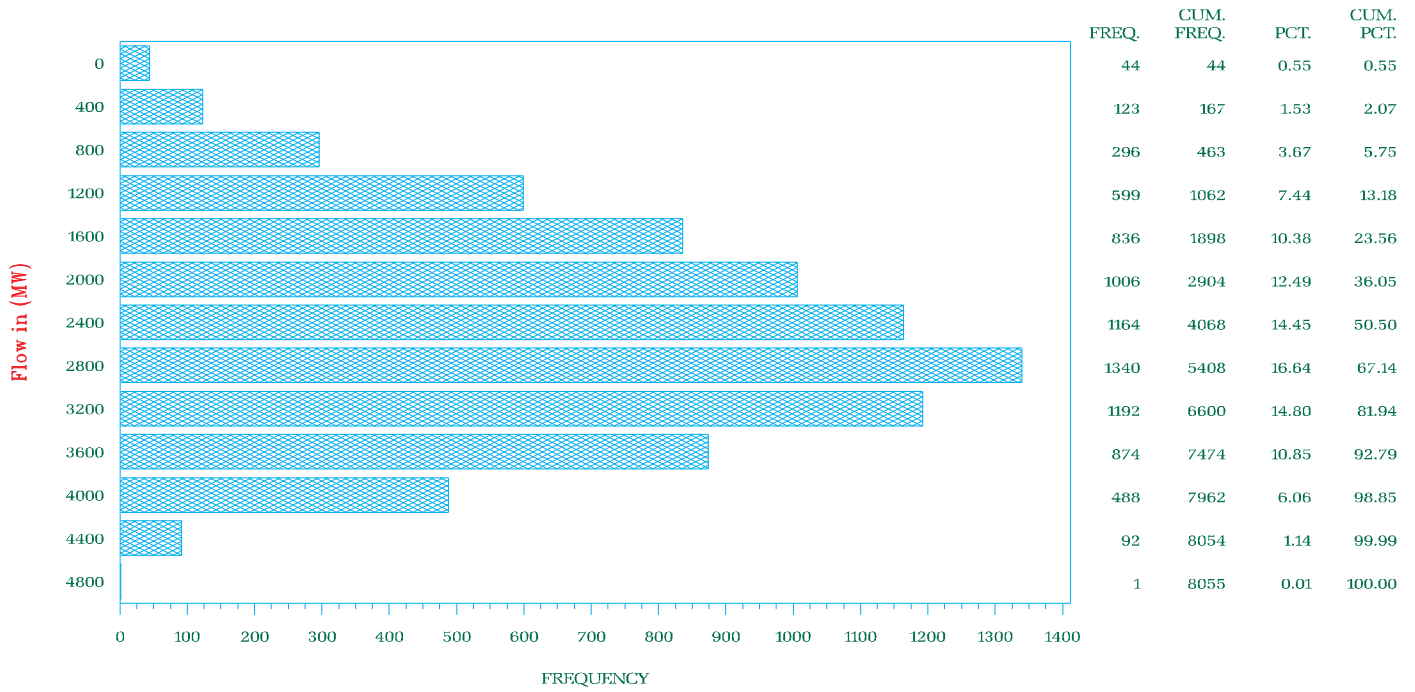
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

**WEST CENTRAL**  
Genesee – Central



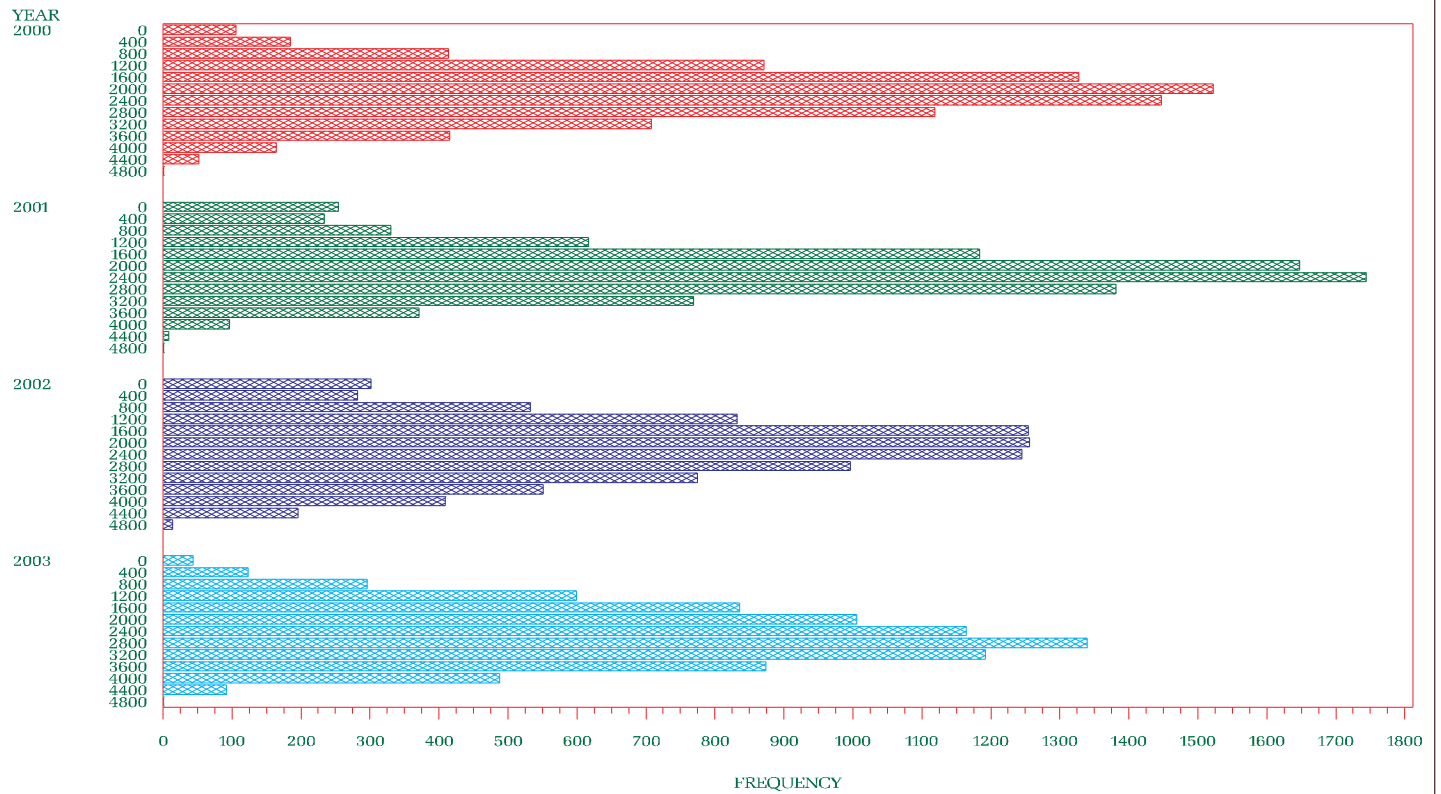
NYISO Frequency Interface Flow For January – December 2003

WEST CENTRAL (CLOSED)



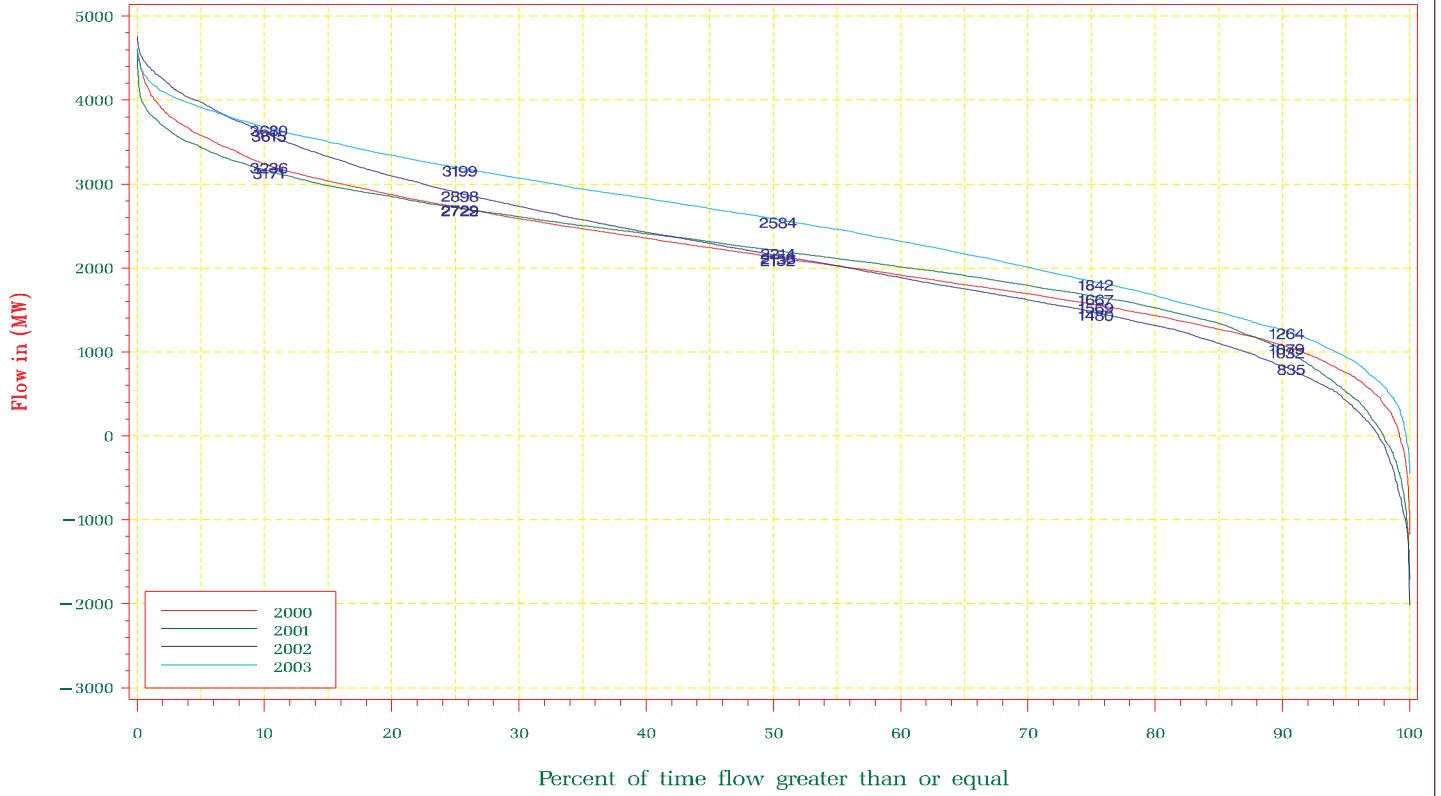
NYISO Frequency Interface Flow For January 2000 – December 2003

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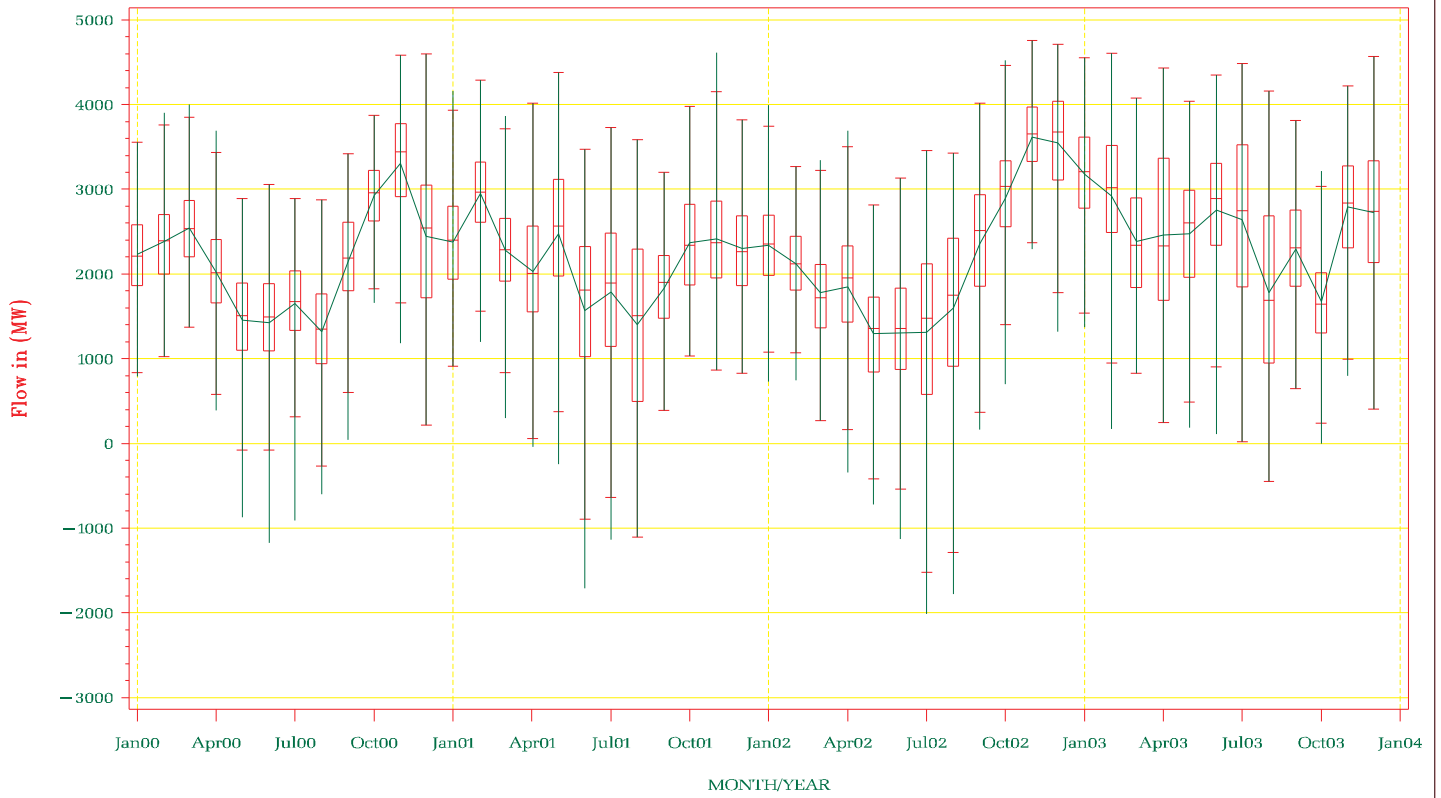
NYISO Percent of time Interface Flow For January 2000 – December 2003

WEST CENTRAL (CLOSED)



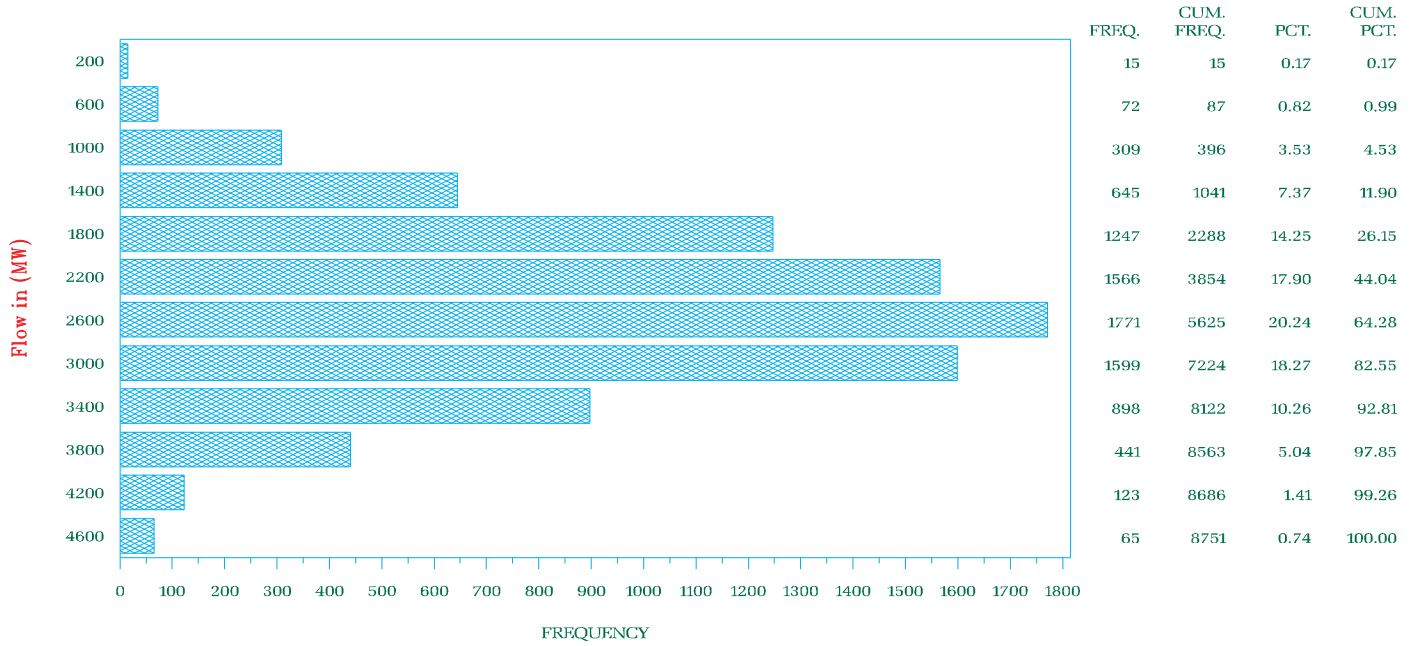
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

WEST CENTRAL (CLOSED)



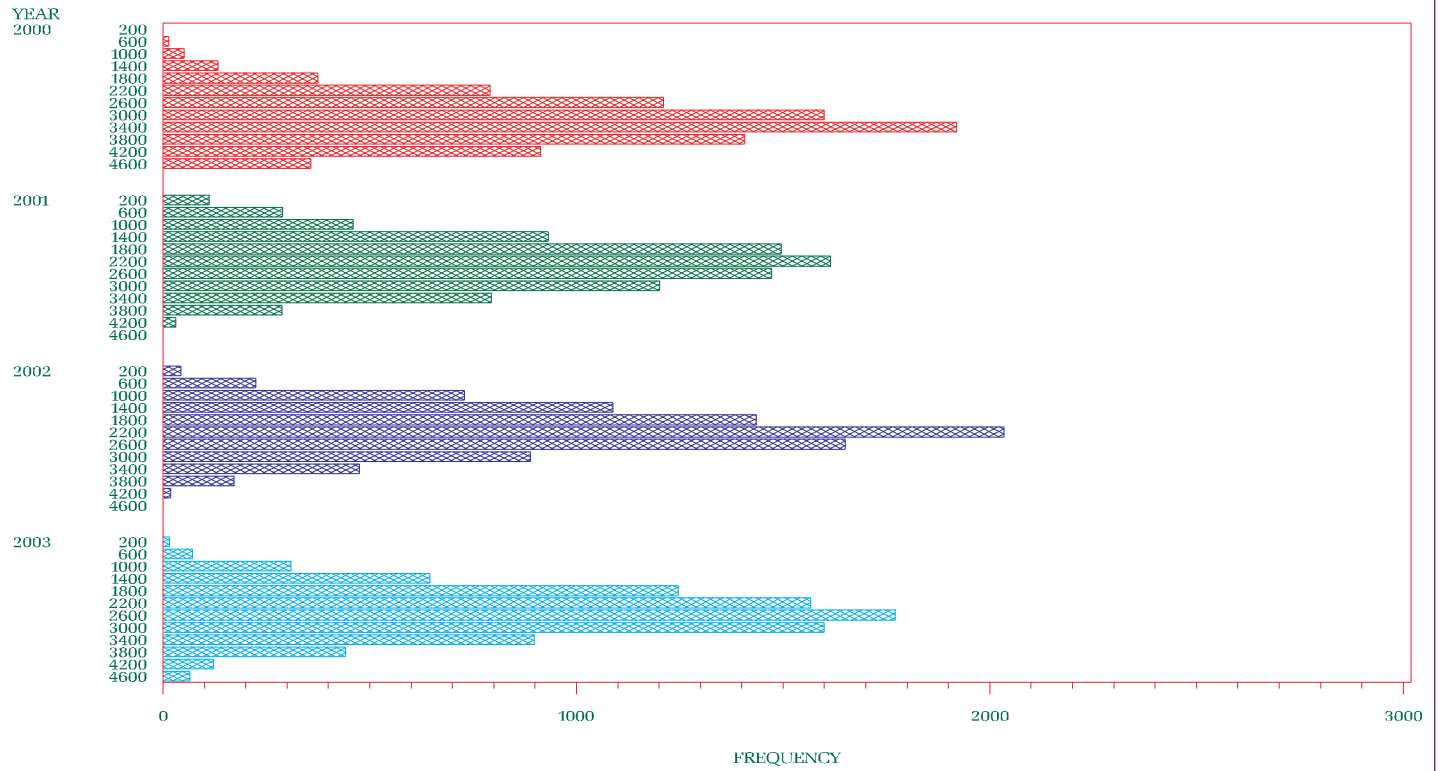
NYISO Frequency Interface Flow For January – December 2003

UPNY – CONED  
Capital/Mid Hudson – Westchester



NYISO Frequency Interface Flow For January 2000 – December 2003

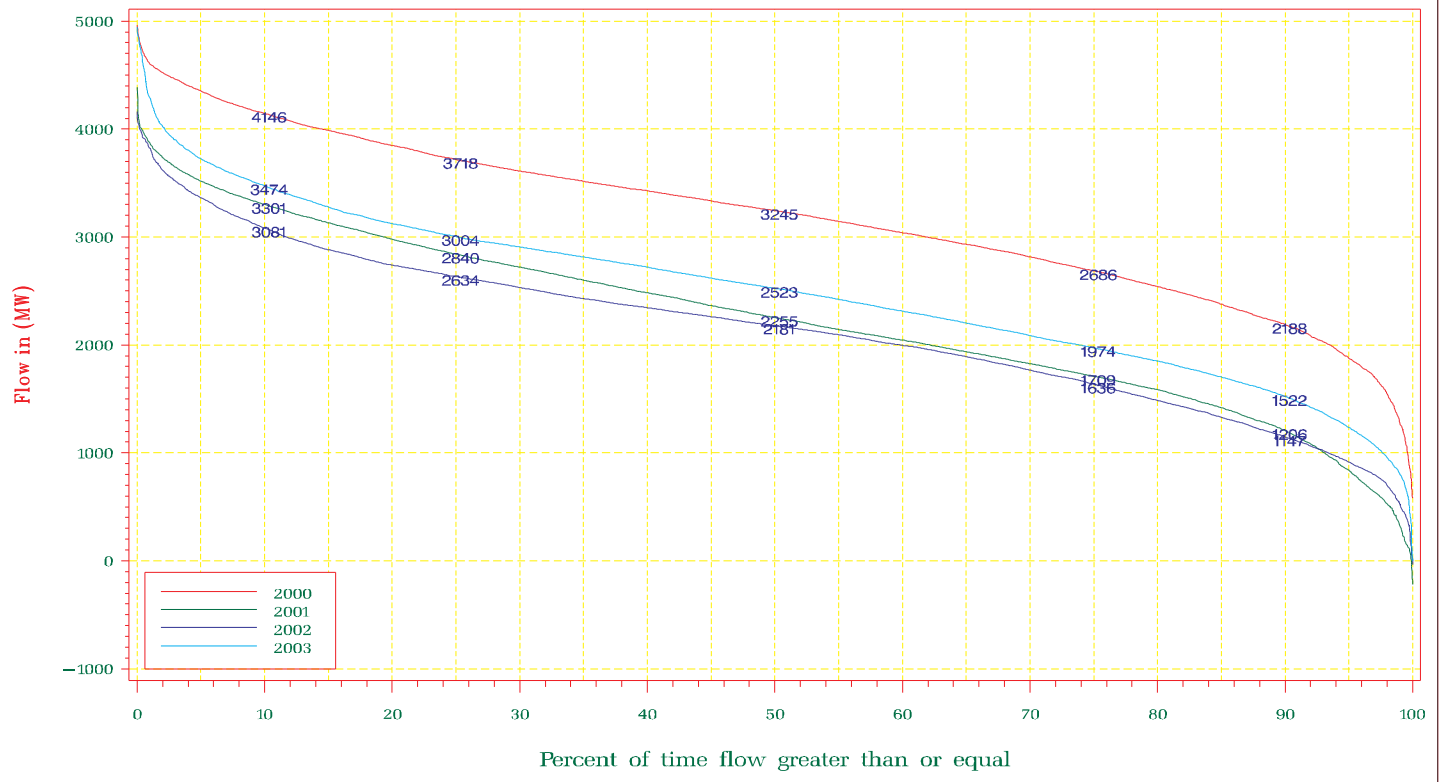
UPNY – CONED  
Capital/Mid Hudson – Westchester





NYISO Percent of time Interface Flow For January 2000 – December 2003

UPNY – CONED  
Capital/Mid Hudson – Westchester



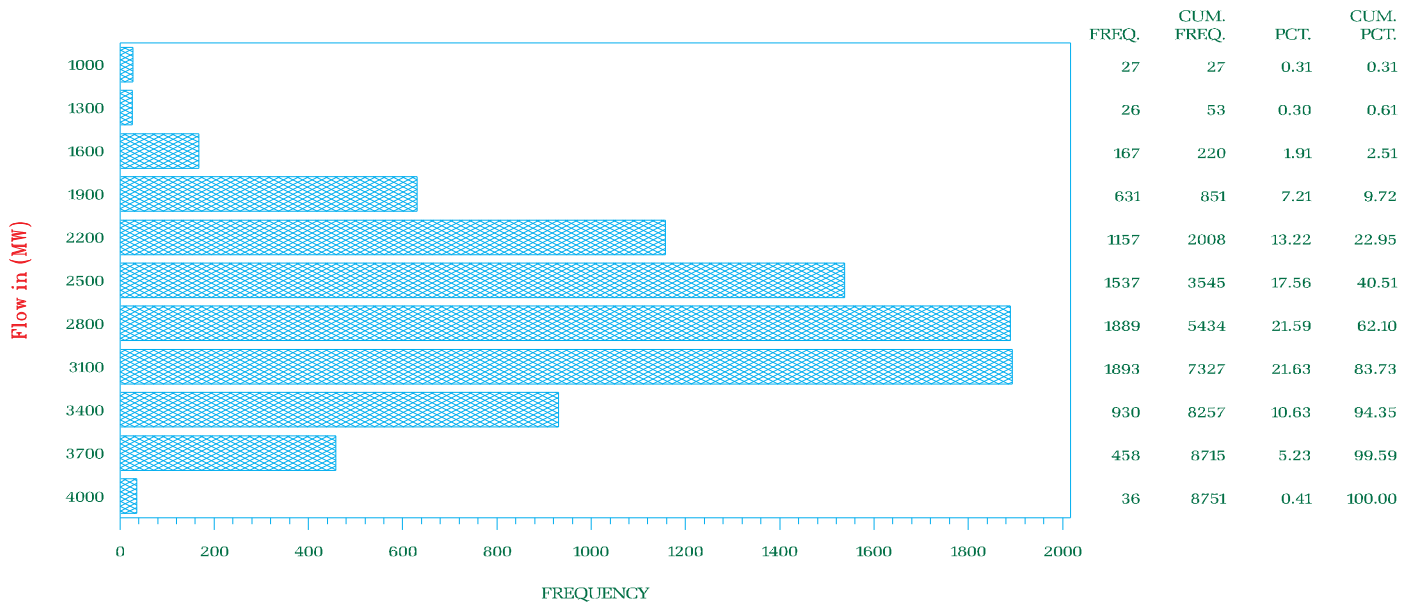
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

UPNY – CONED  
Capital/Mid Hudson – Westchester



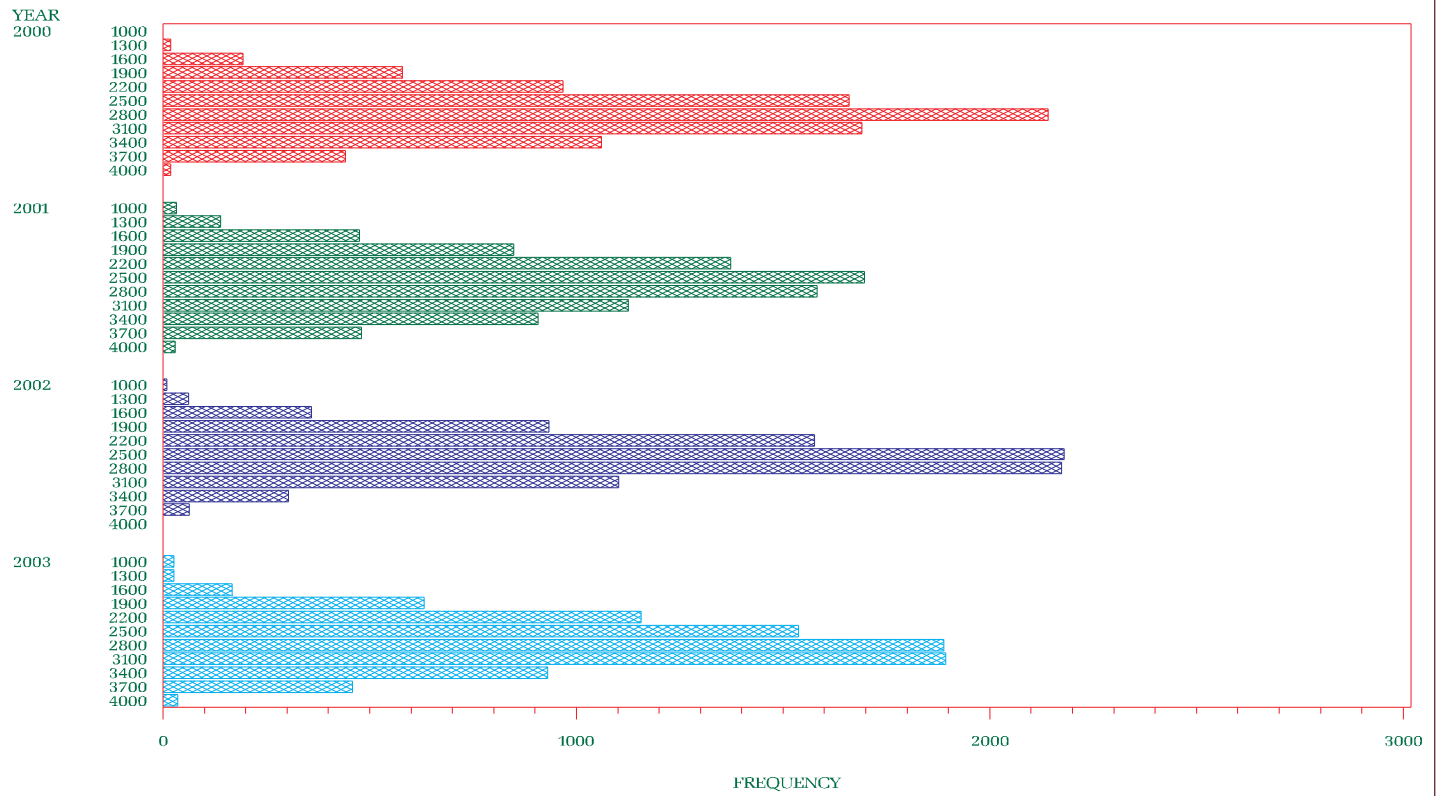
NYISO Frequency Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH



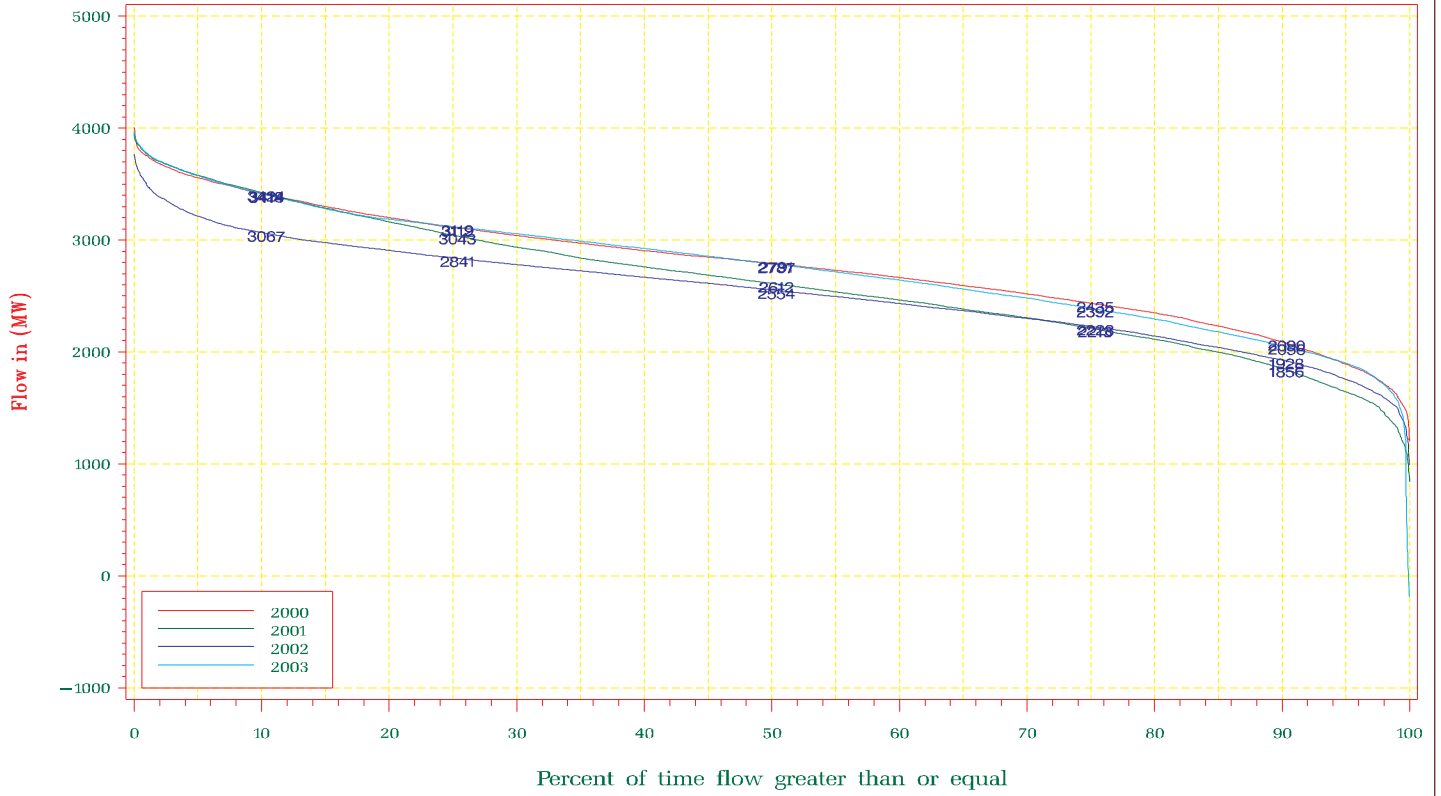
NYISO Frequency Interface Flow For January 2000 – December 2003

SPRAINBROOK – DUNWOODIE SOUTH



NYISO Percent of time Interface Flow For January 2000 – December 2003

**SPRAINBROOK – DUNWOODIE SOUTH**



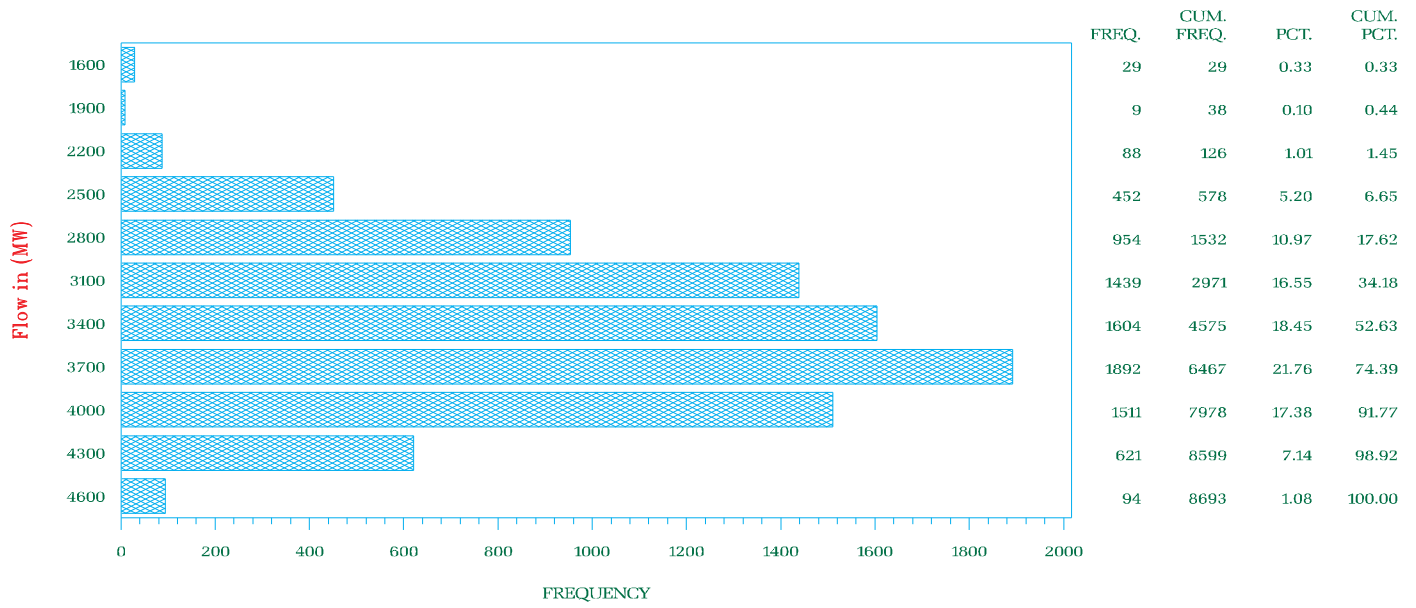
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

**SPRAINBROOK – DUNWOODIE SOUTH**



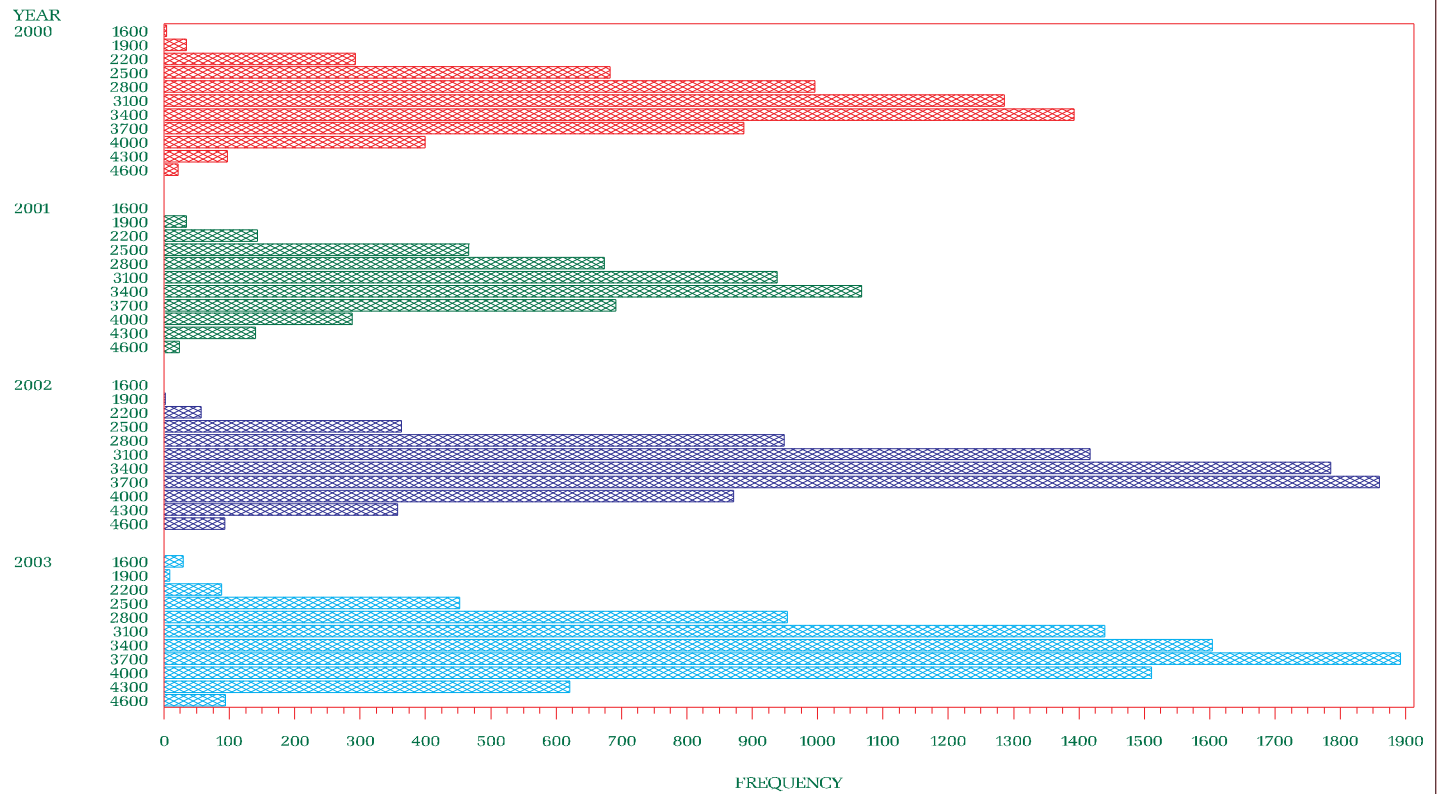
NYISO Frequency Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



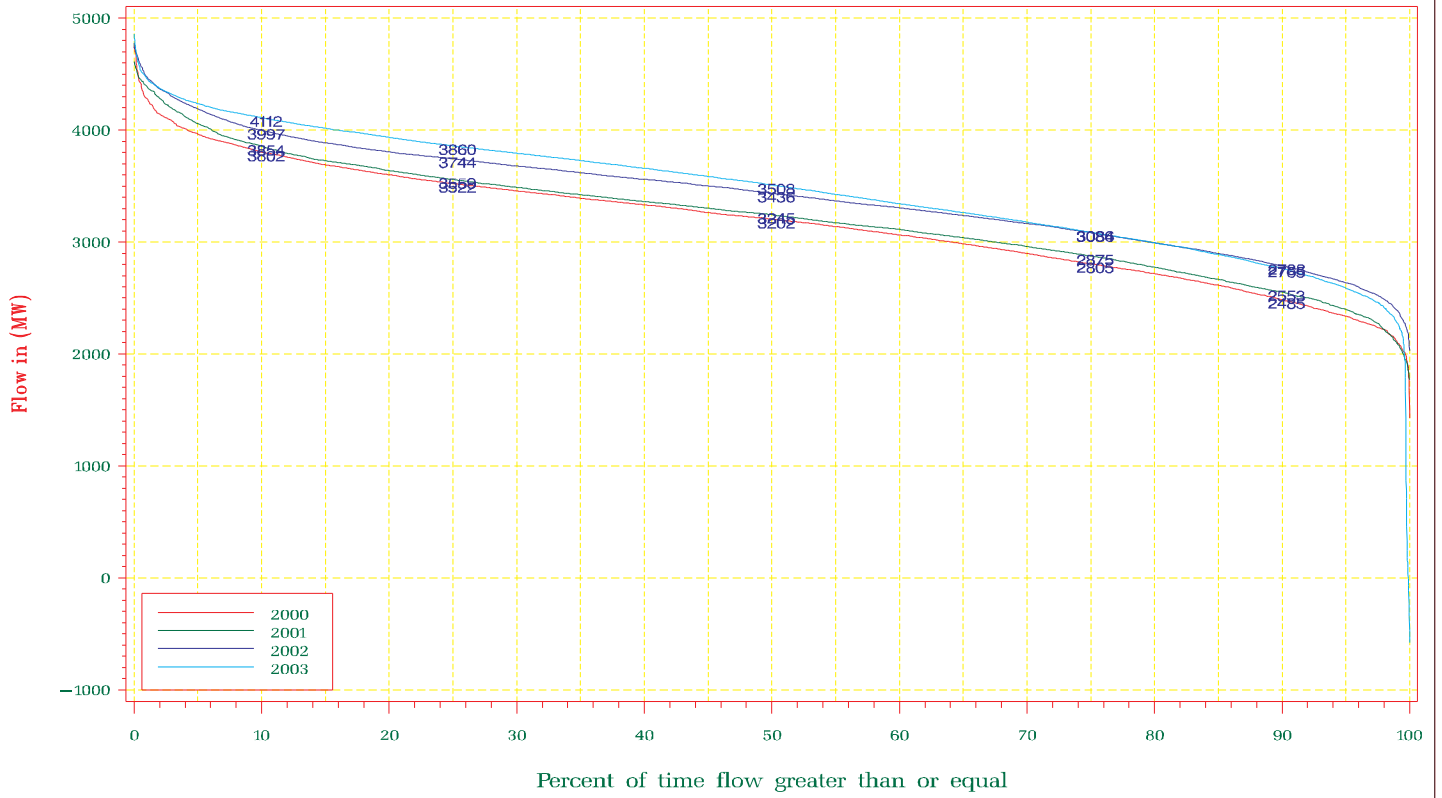
NYISO Frequency Interface Flow For January 2000 – December 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



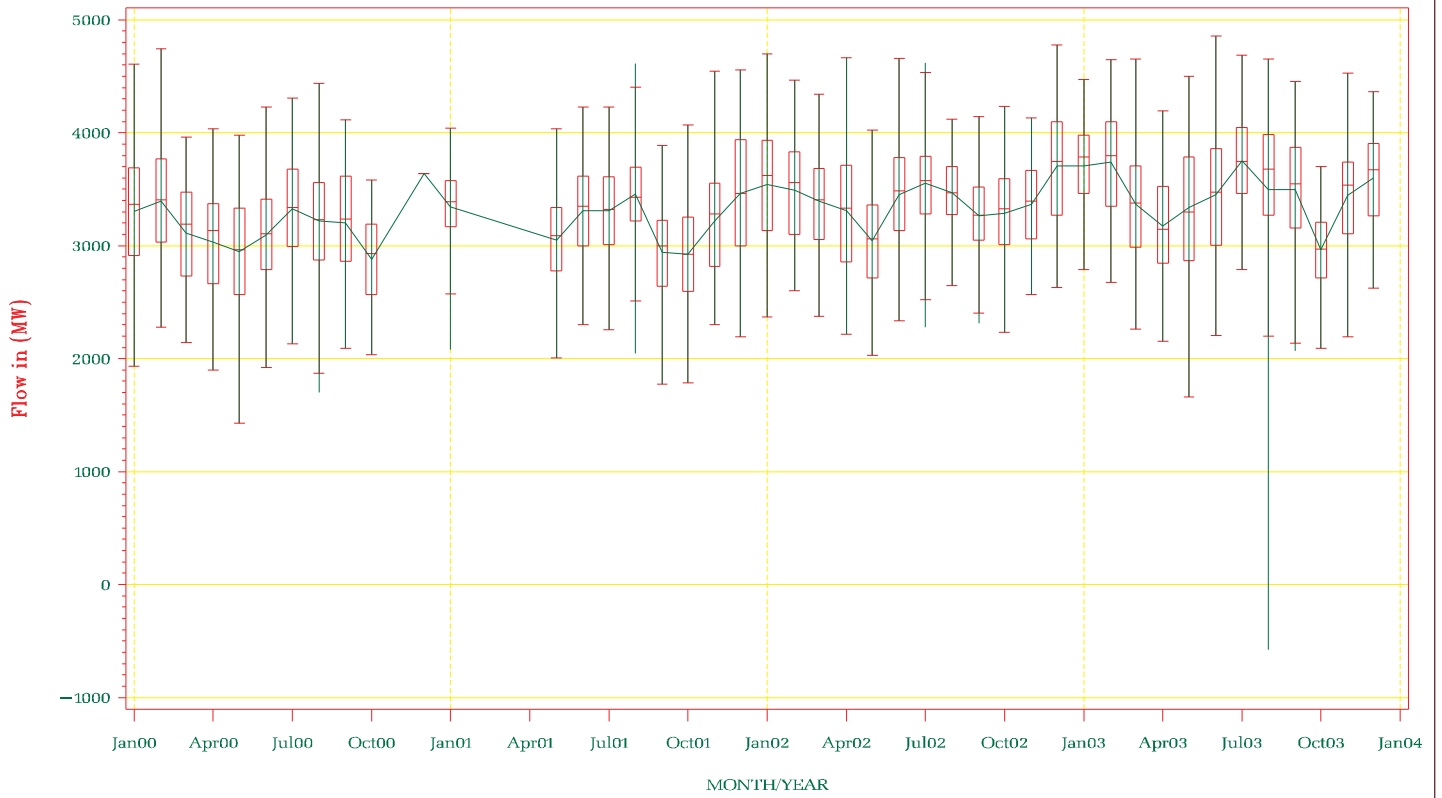
NYISO Percent of time Interface Flow For January 2000 – December 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



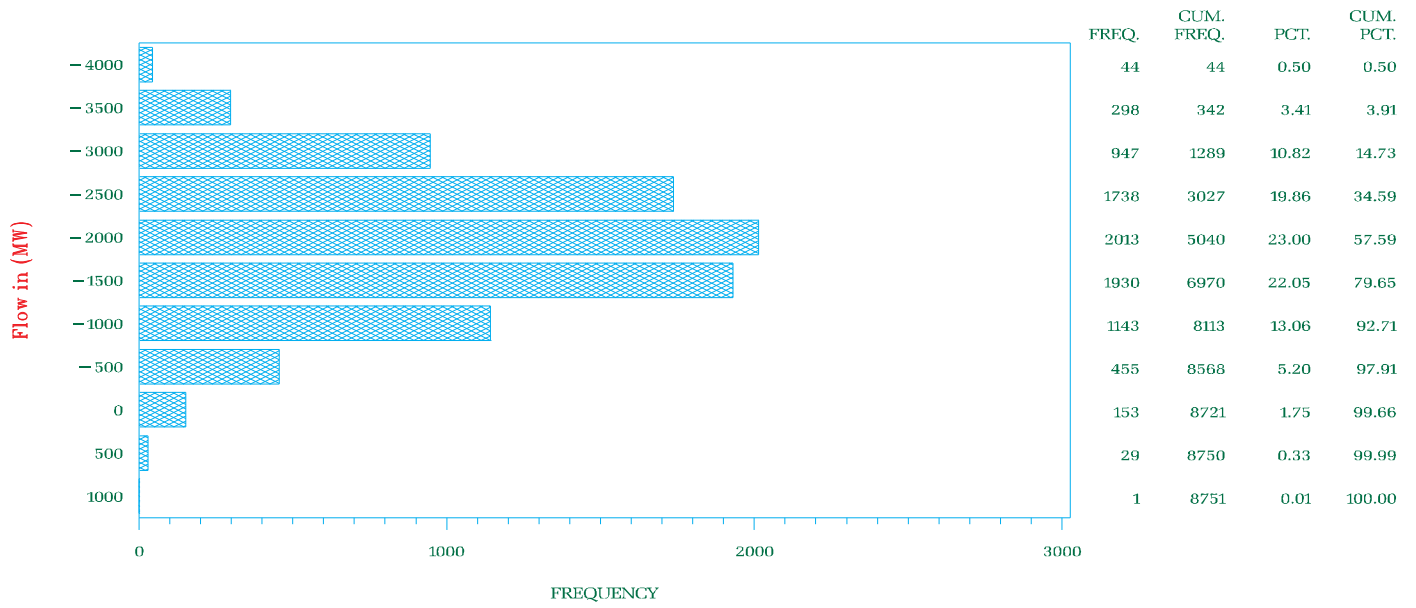
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



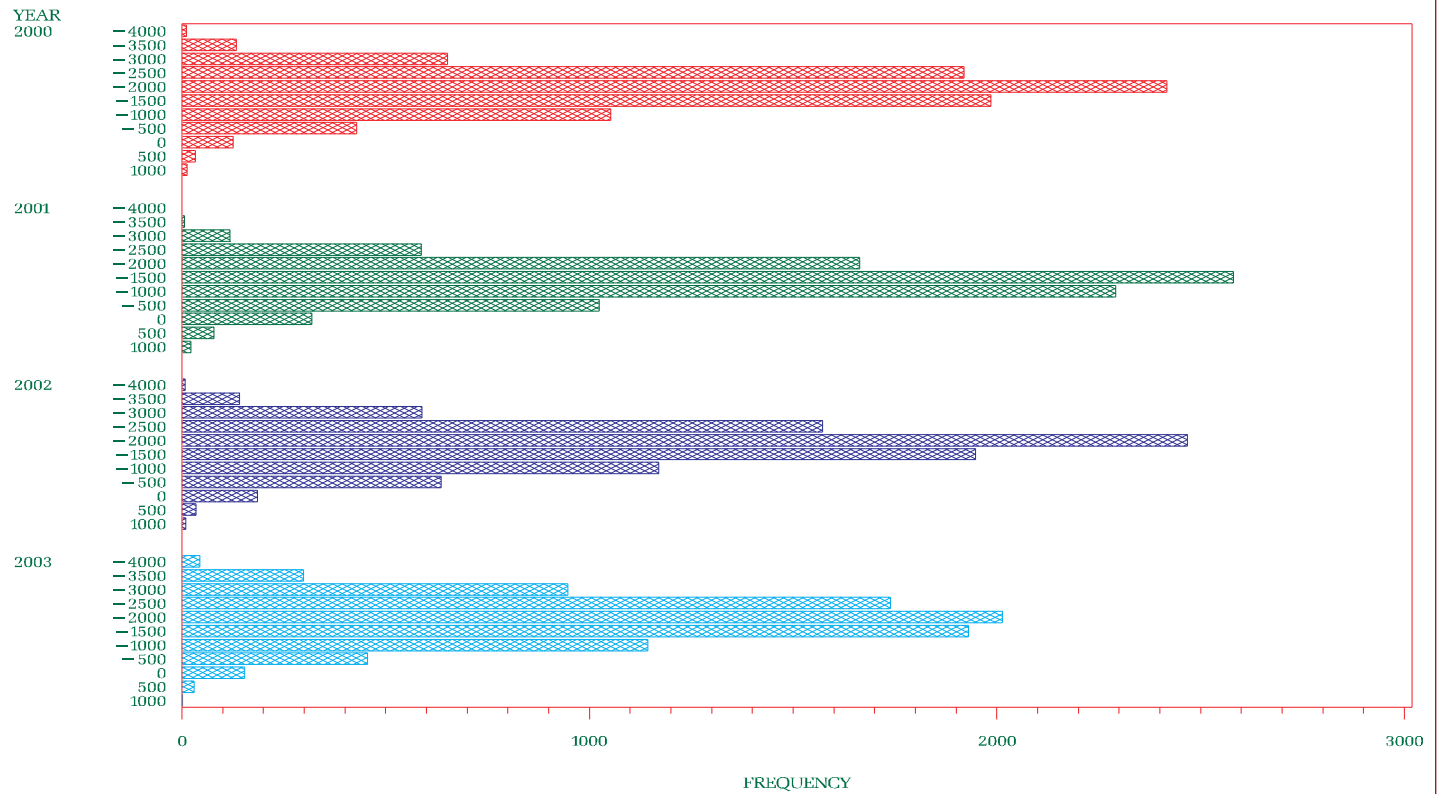
NYISO Frequency Interface Flow For January – December 2003

NY EXPORT

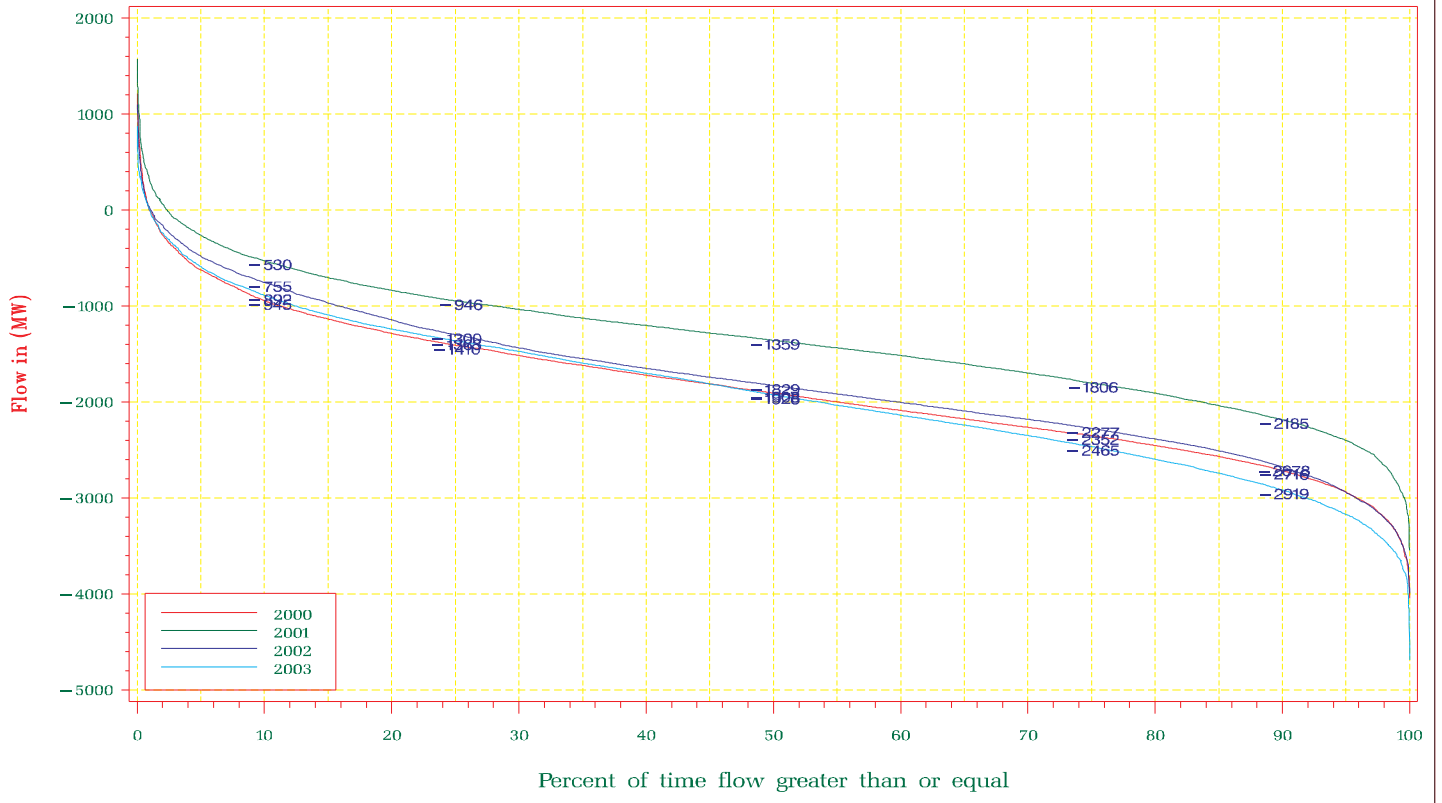


NYISO Frequency Interface Flow For January 2000 – December 2003

NY EXPORT



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**NY EXPORT**

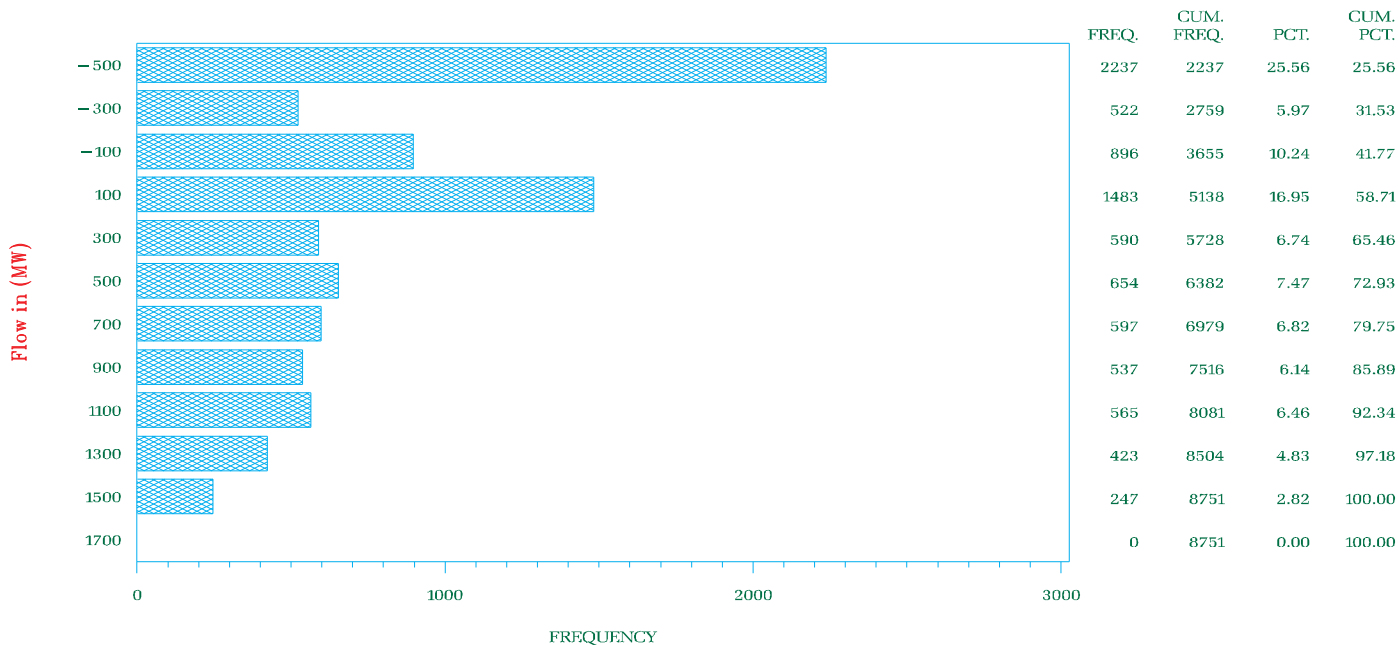


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**NY EXPORT**



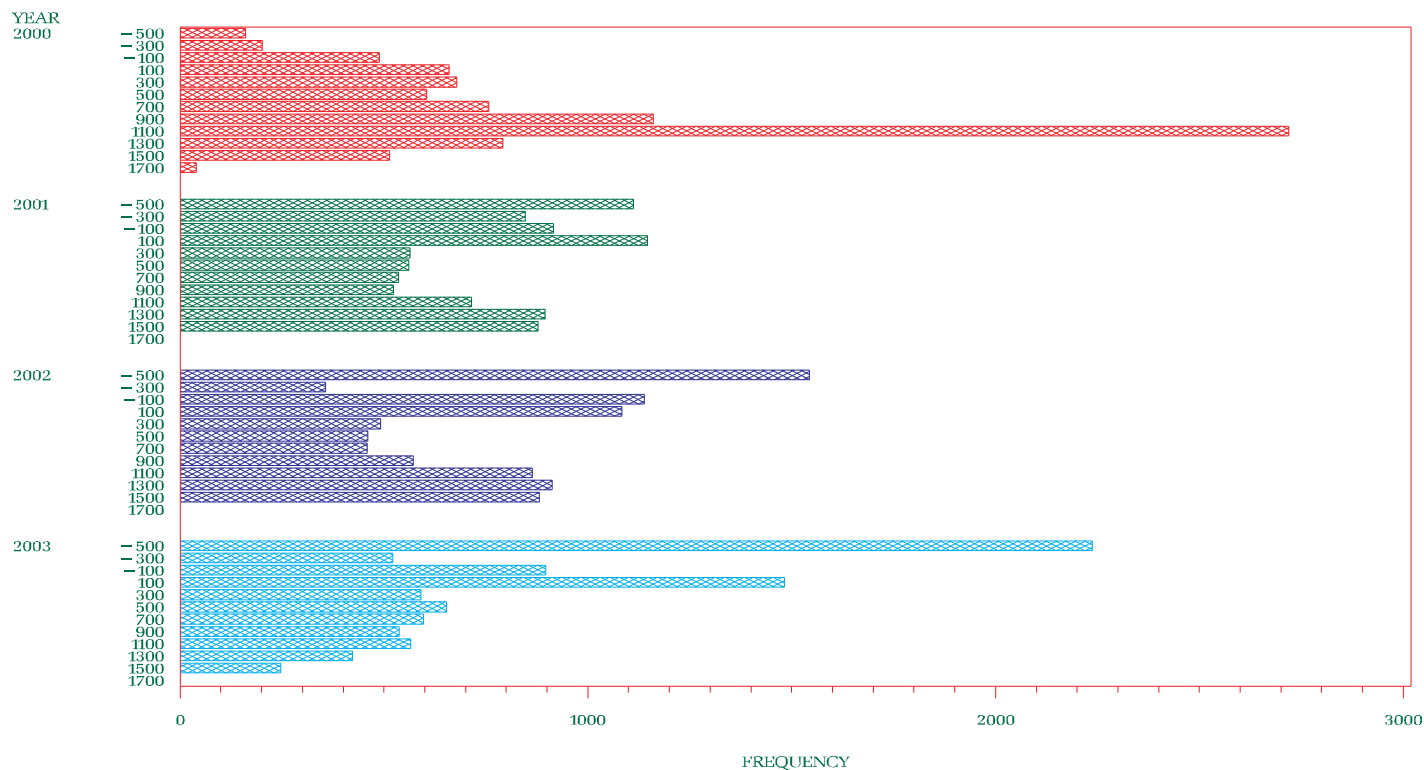
NYISO Frequency Interface Flow For January – December 2003

TE – NY SCHEDULE  
Chateauguay – Massena



NYISO Frequency Interface Flow For January 2000 – December 2003

TE – NY SCHEDULE  
Chateauguay – Massena

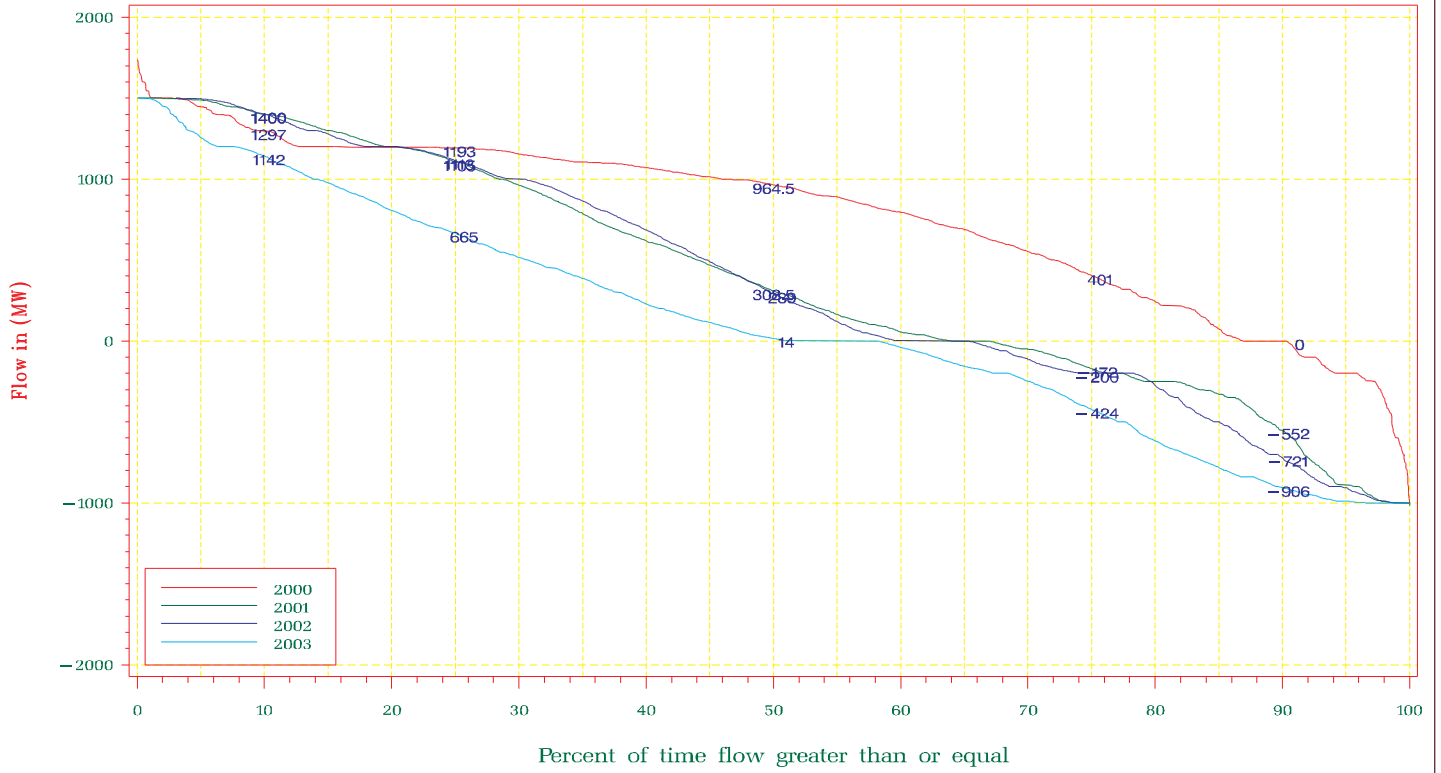




NYISO Percent of time Interface Flow For January 2000 – December 2003

TE – NY SCHEDULE

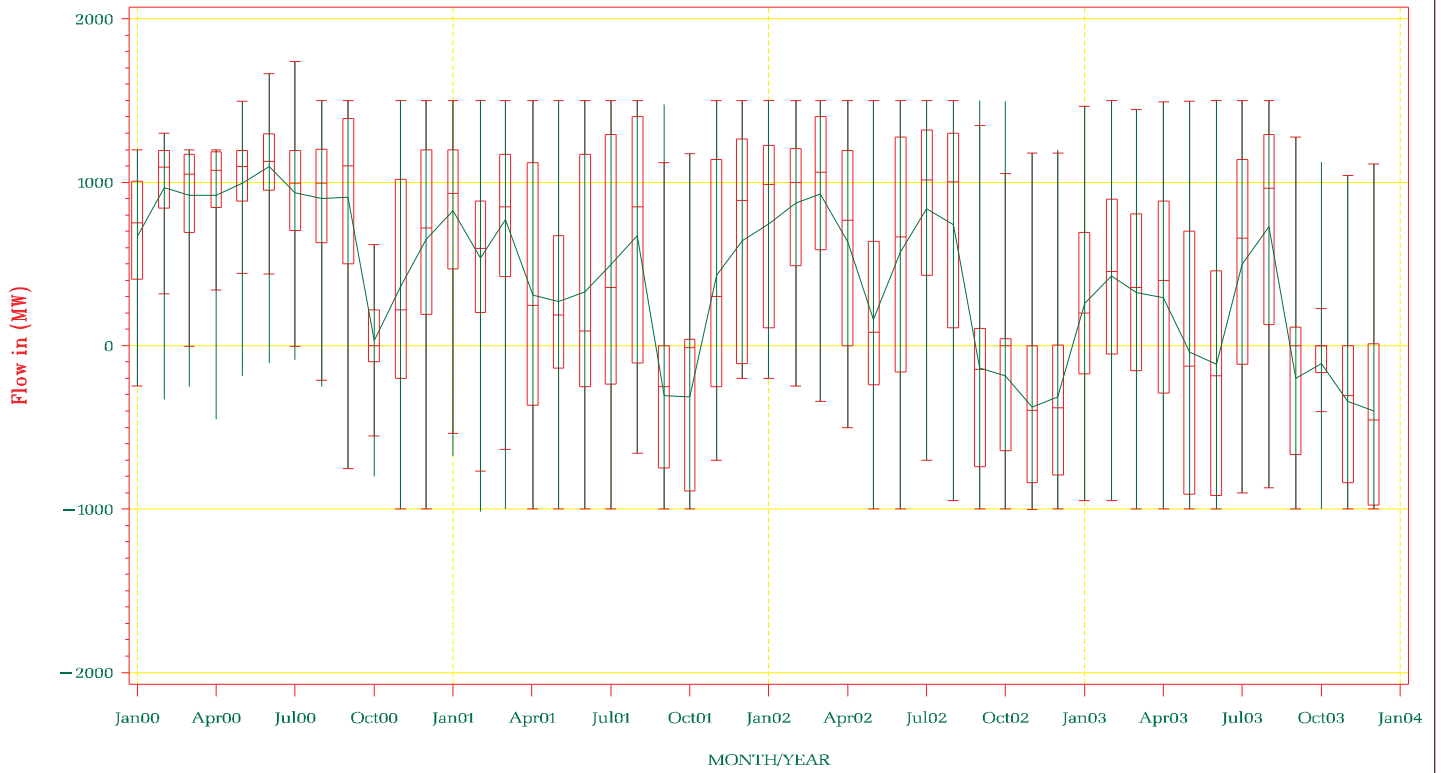
Chateauguay – Massena



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

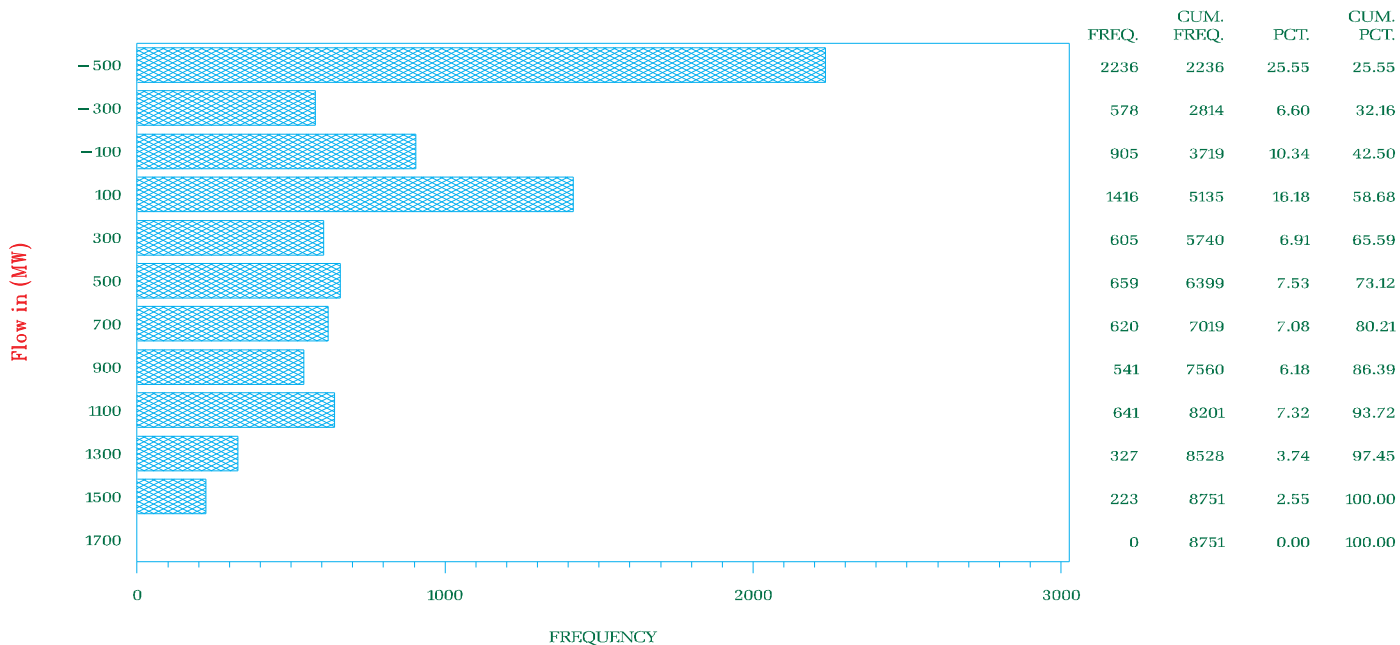
TE – NY SCHEDULE

Chateauguay – Massena



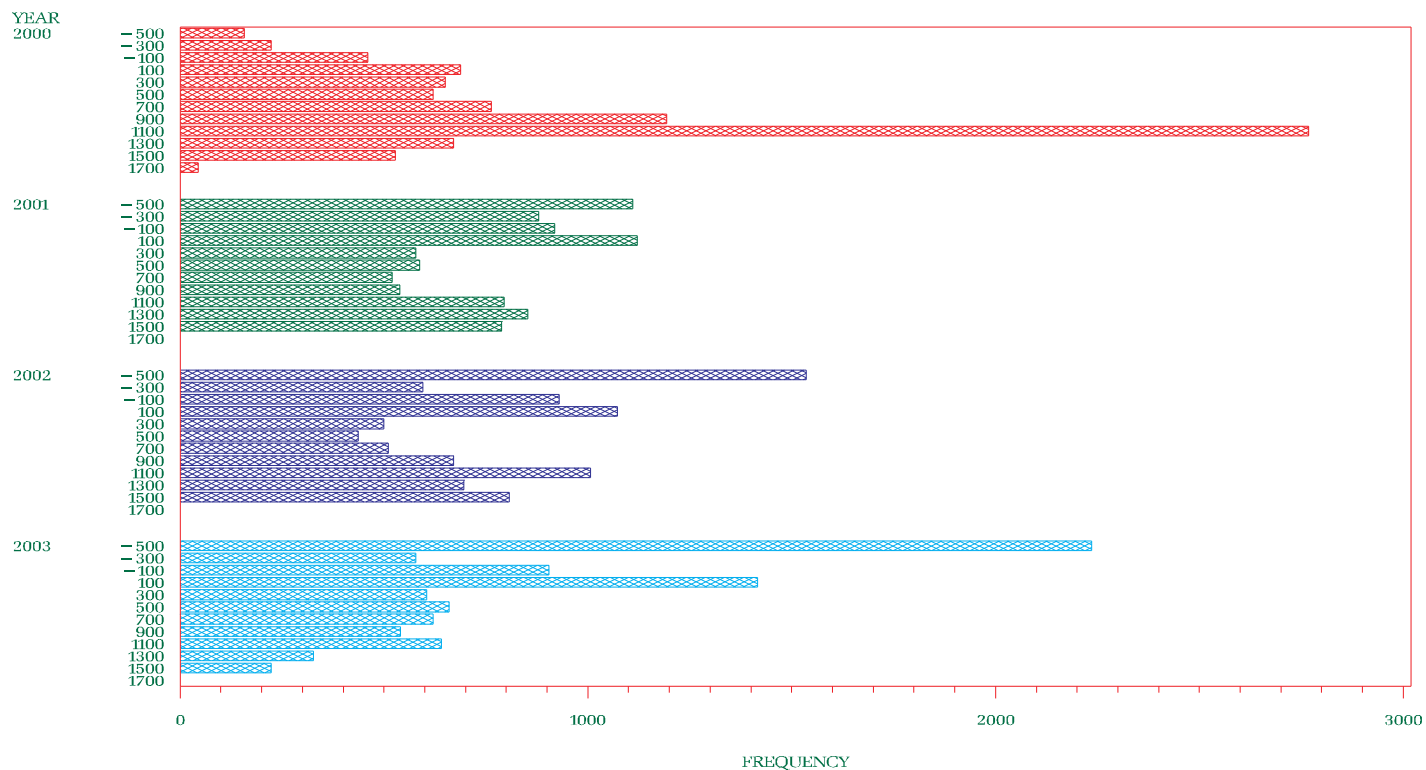
NYISO Frequency Interface Flow For January – December 2003

TE – NY  
Chateauguay – Massena



NYISO Frequency Interface Flow For January 2000 – December 2003

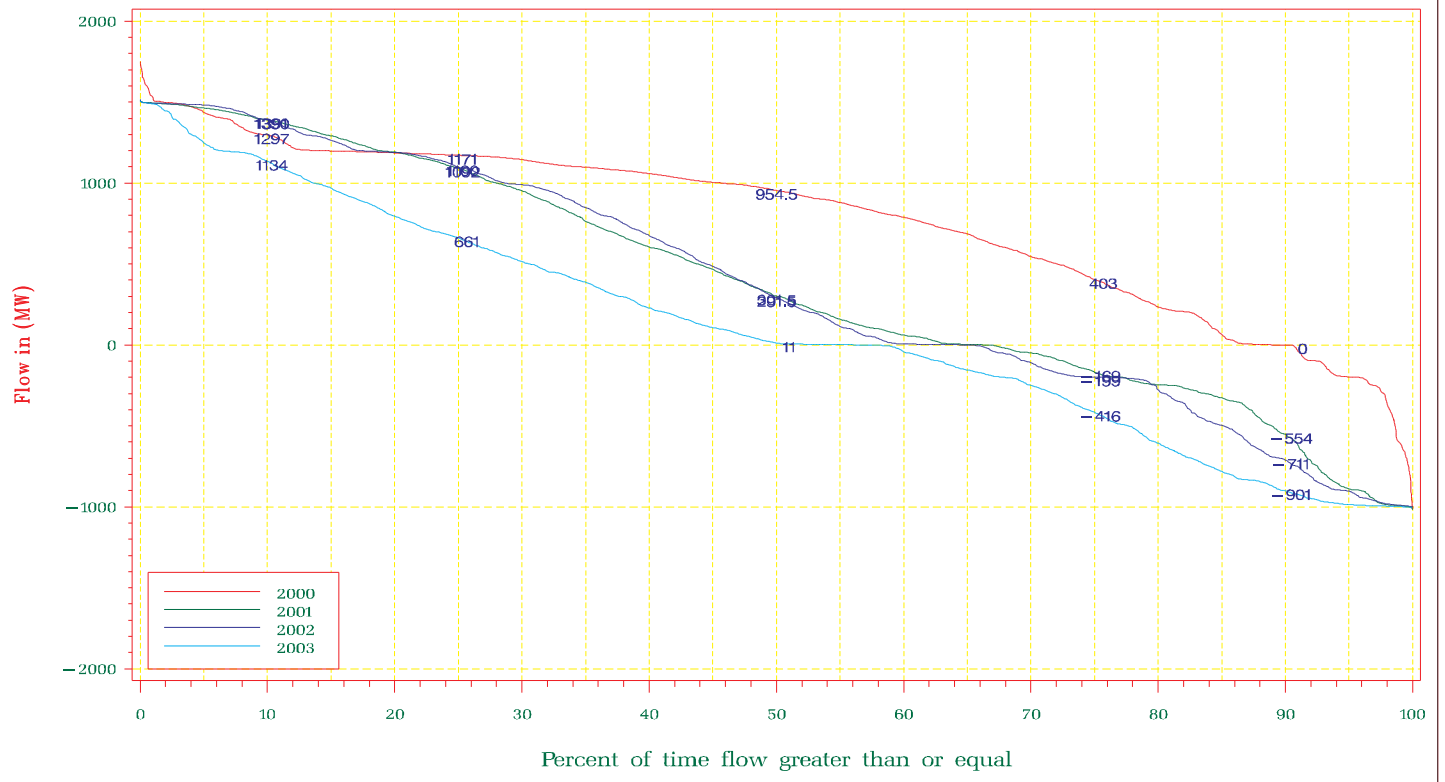
TE – NY  
Chateauguay – Massena



NYISO Percent of time Interface Flow For January 2000 – December 2003

TE – NY

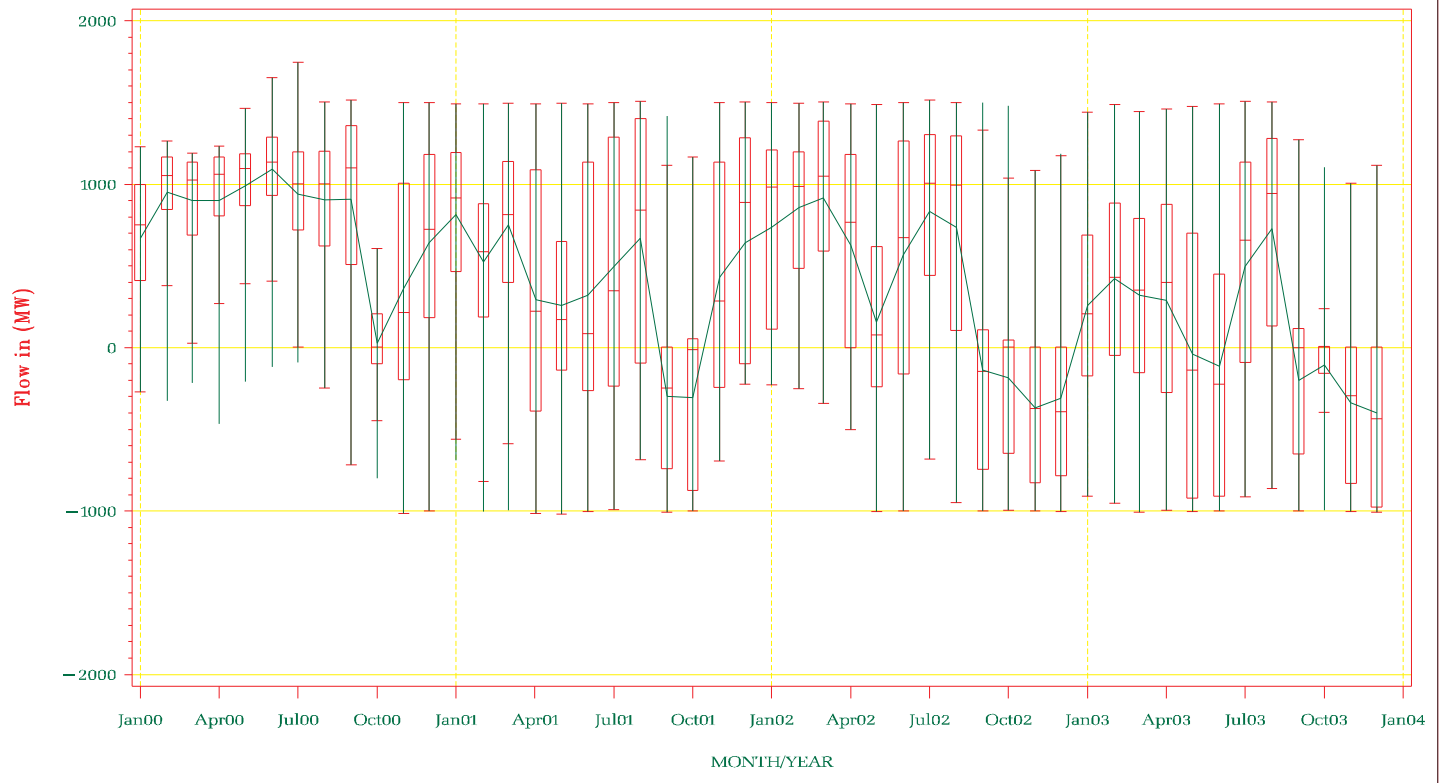
Chateauguay – Massena



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

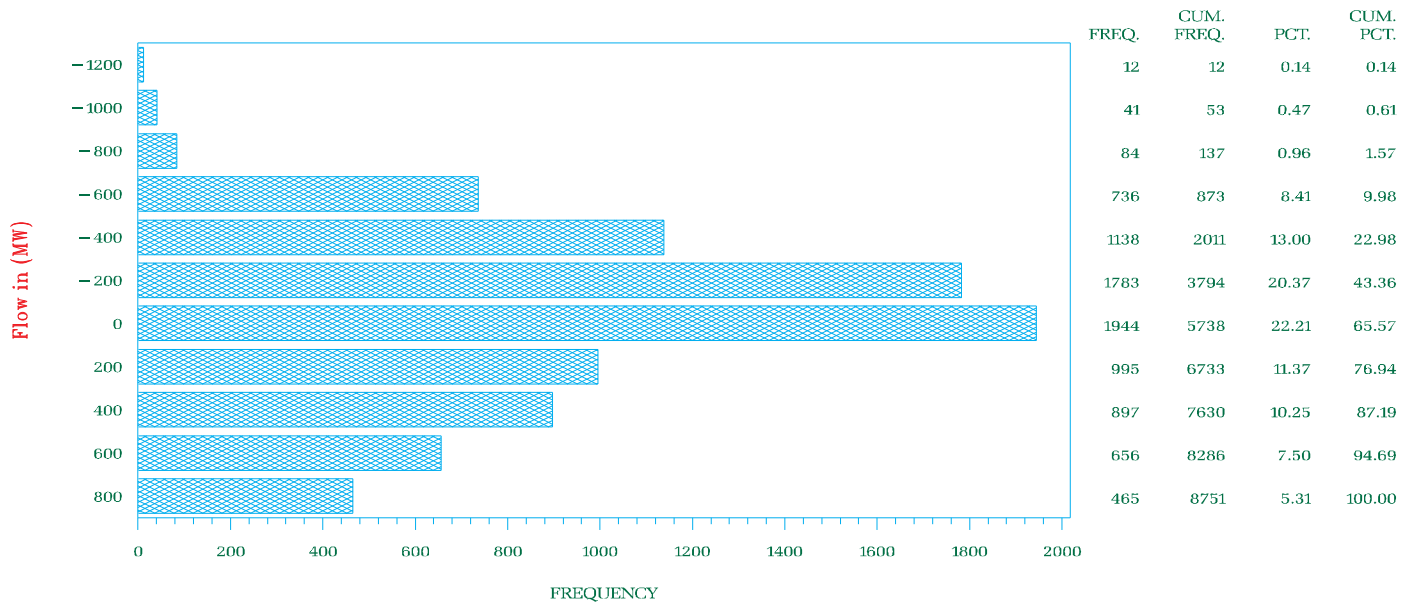
TE – NY

Chateauguay – Massena



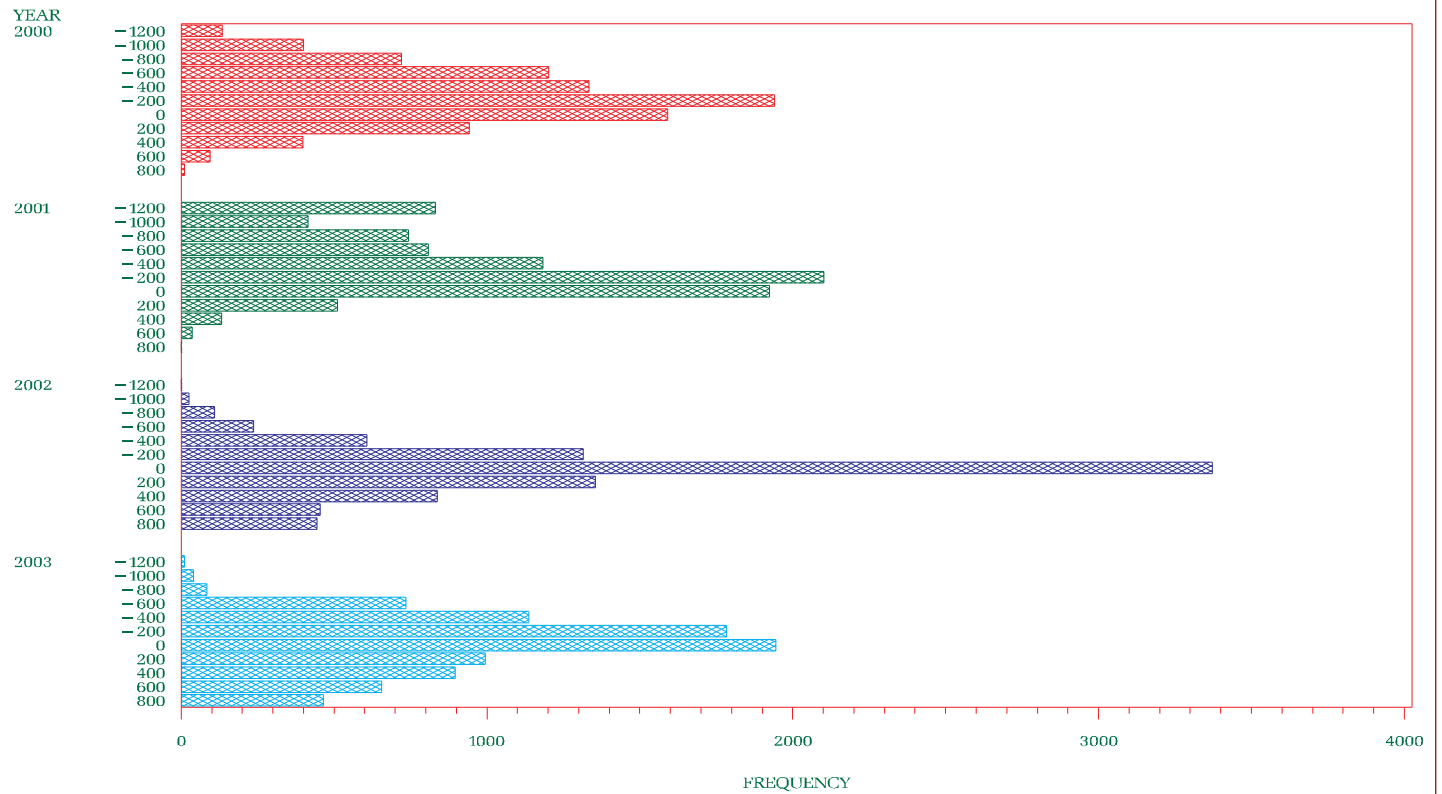
NYISO Frequency Interface Flow For January – December 2003

New England – NY SCHEDULE



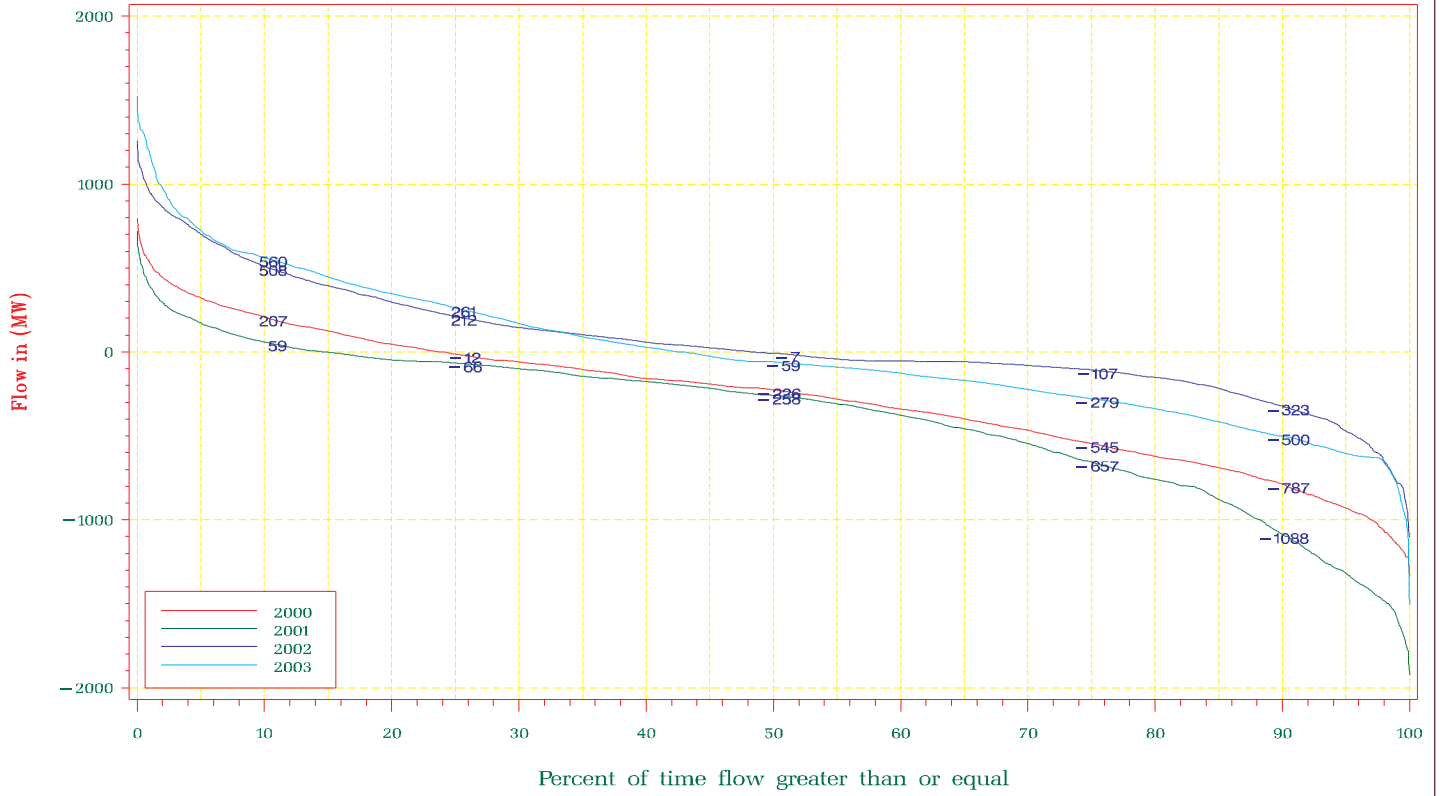
NYISO Frequency Interface Flow For January 2000 – December 2003

New England – NY SCHEDULE



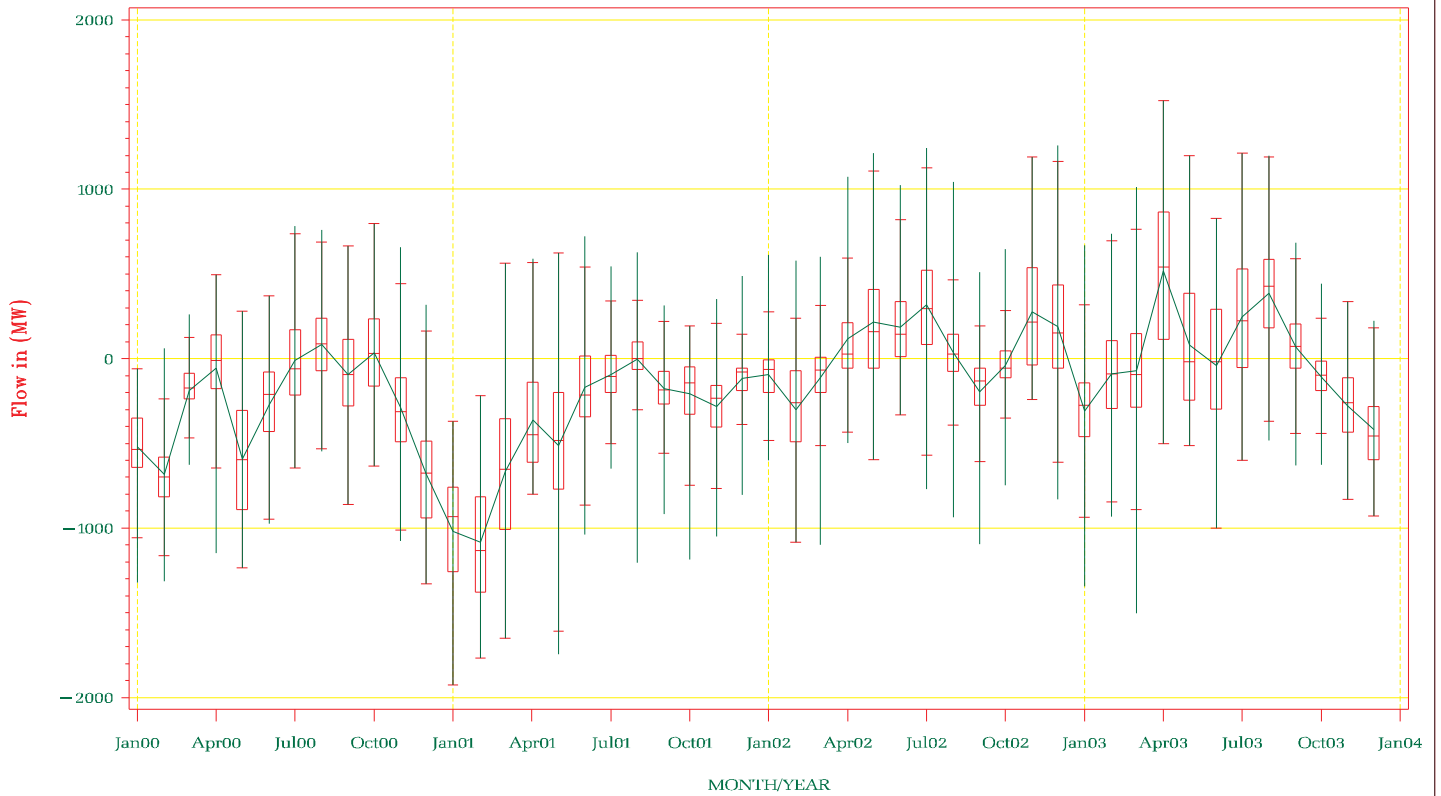
NYISO Percent of time Interface Flow For January 2000 – December 2003

New England – NY SCHEDULE



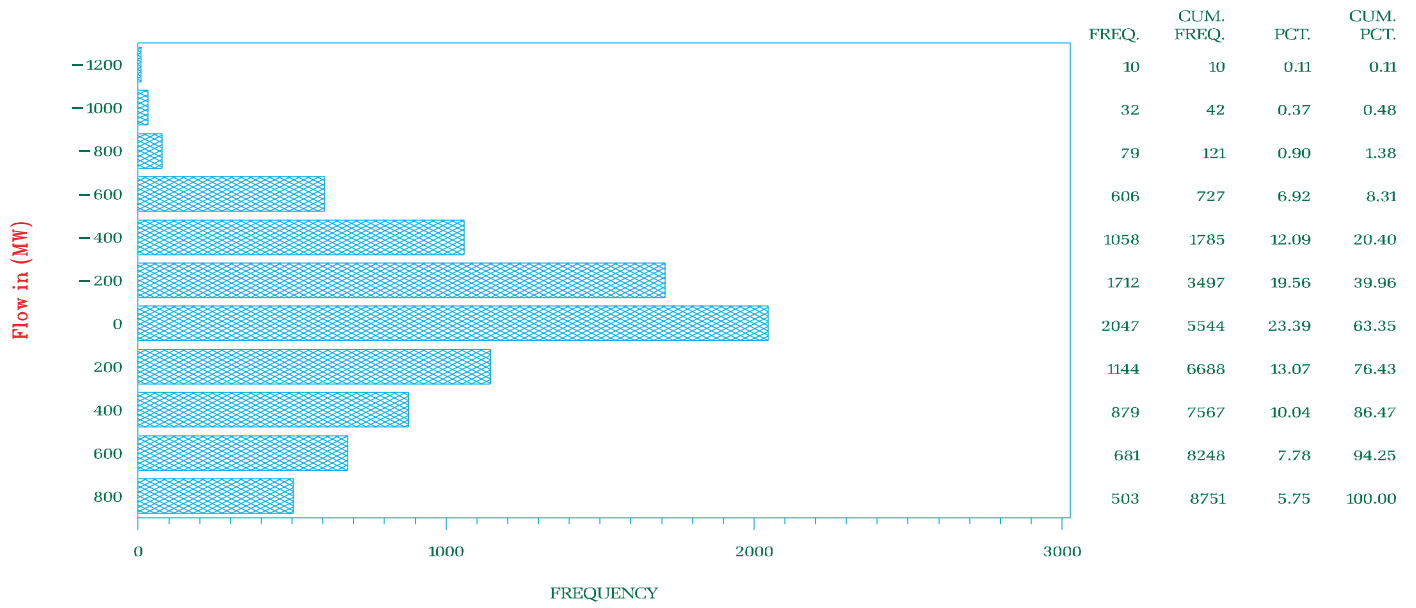
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

New England – NY SCHEDULE



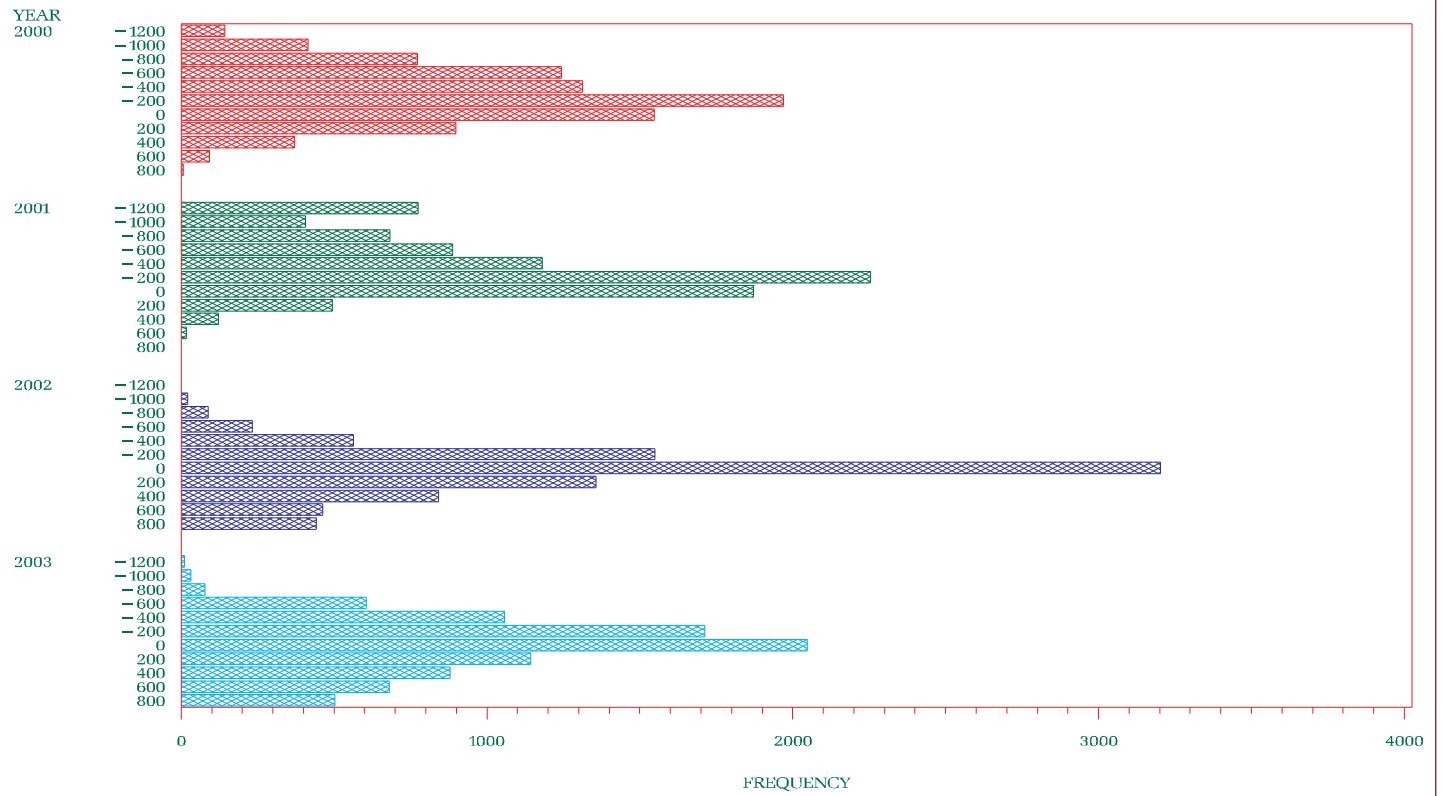
NYISO Frequency Interface Flow For January – December 2003

New England – NY

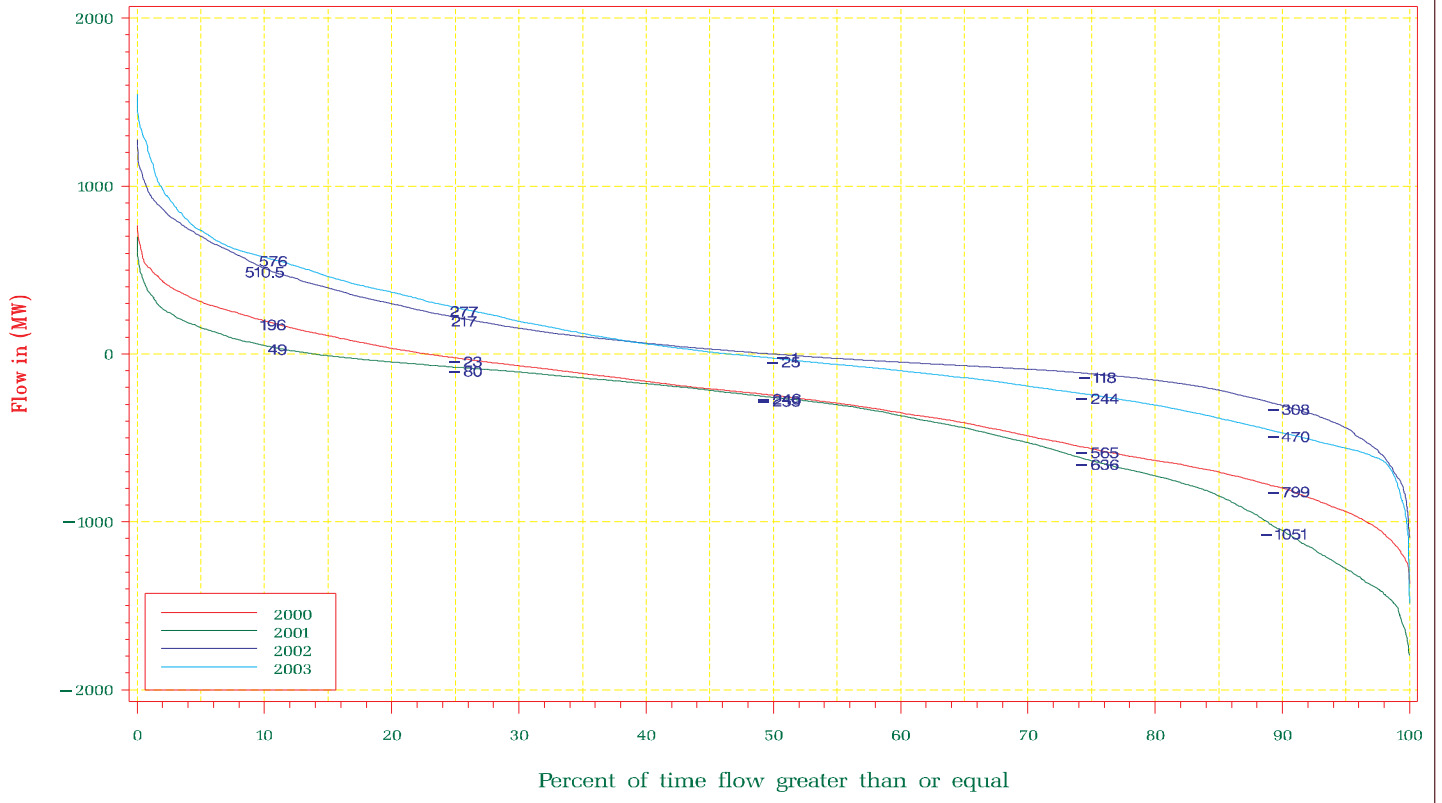


NYISO Frequency Interface Flow For January 2000 – December 2003

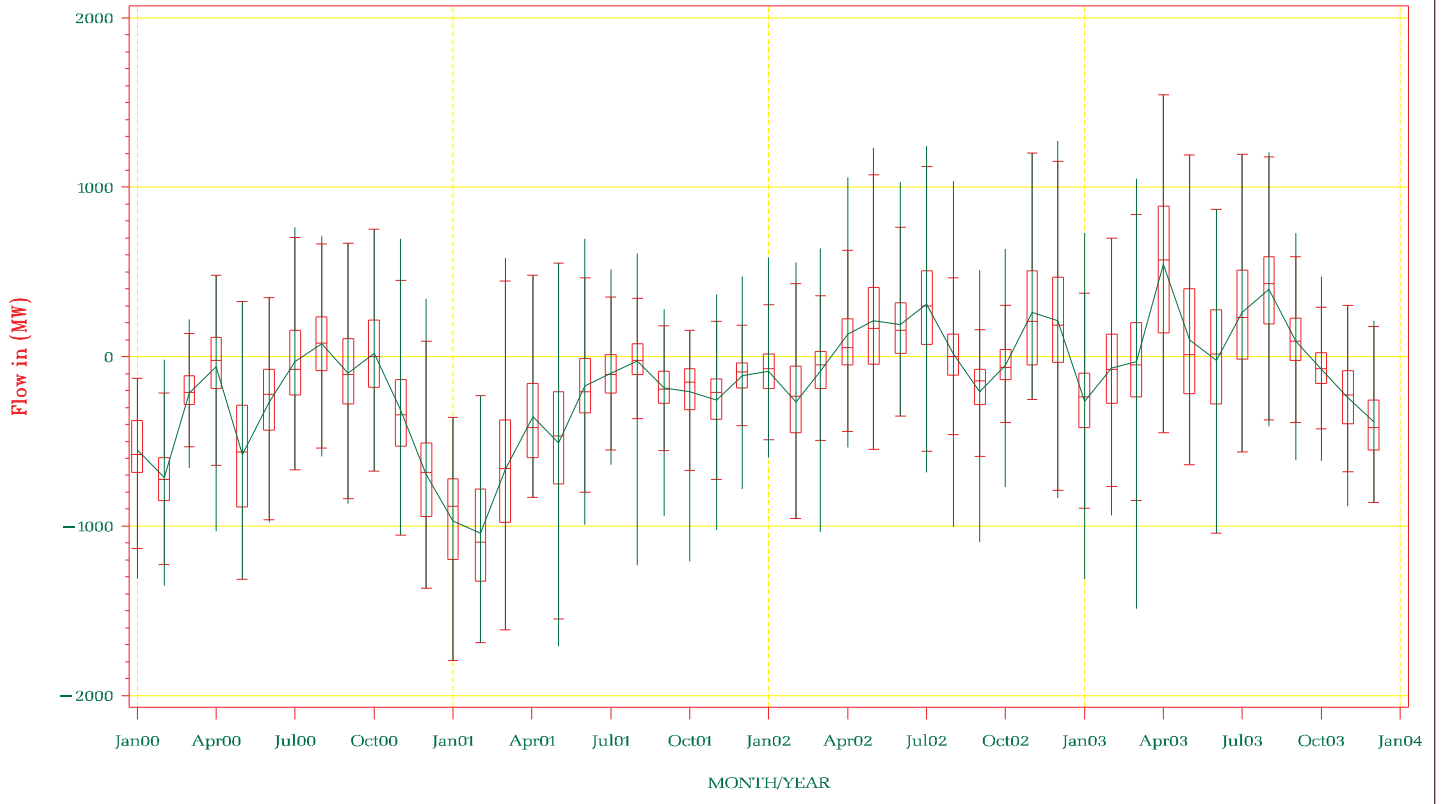
New England – NY



NYISO Percent of time Interface Flow For January 2000 – December 2003  
 New England – NY

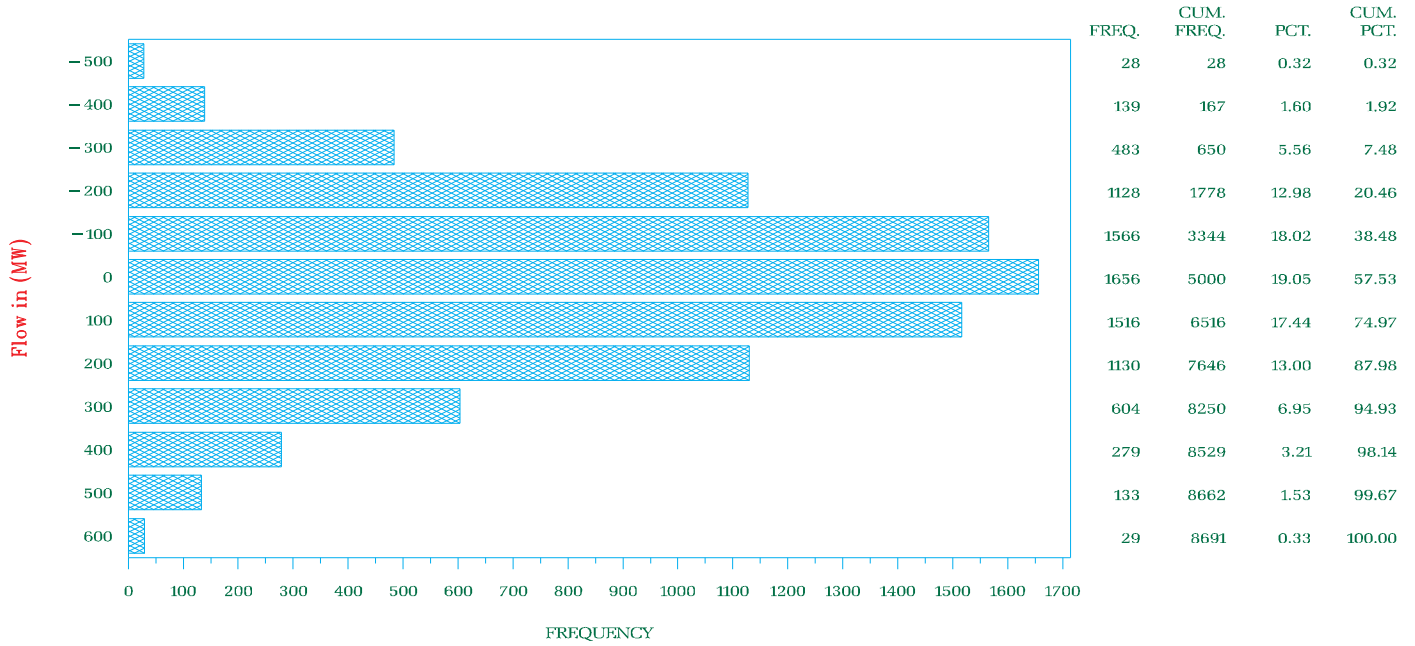


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
 New England – NY



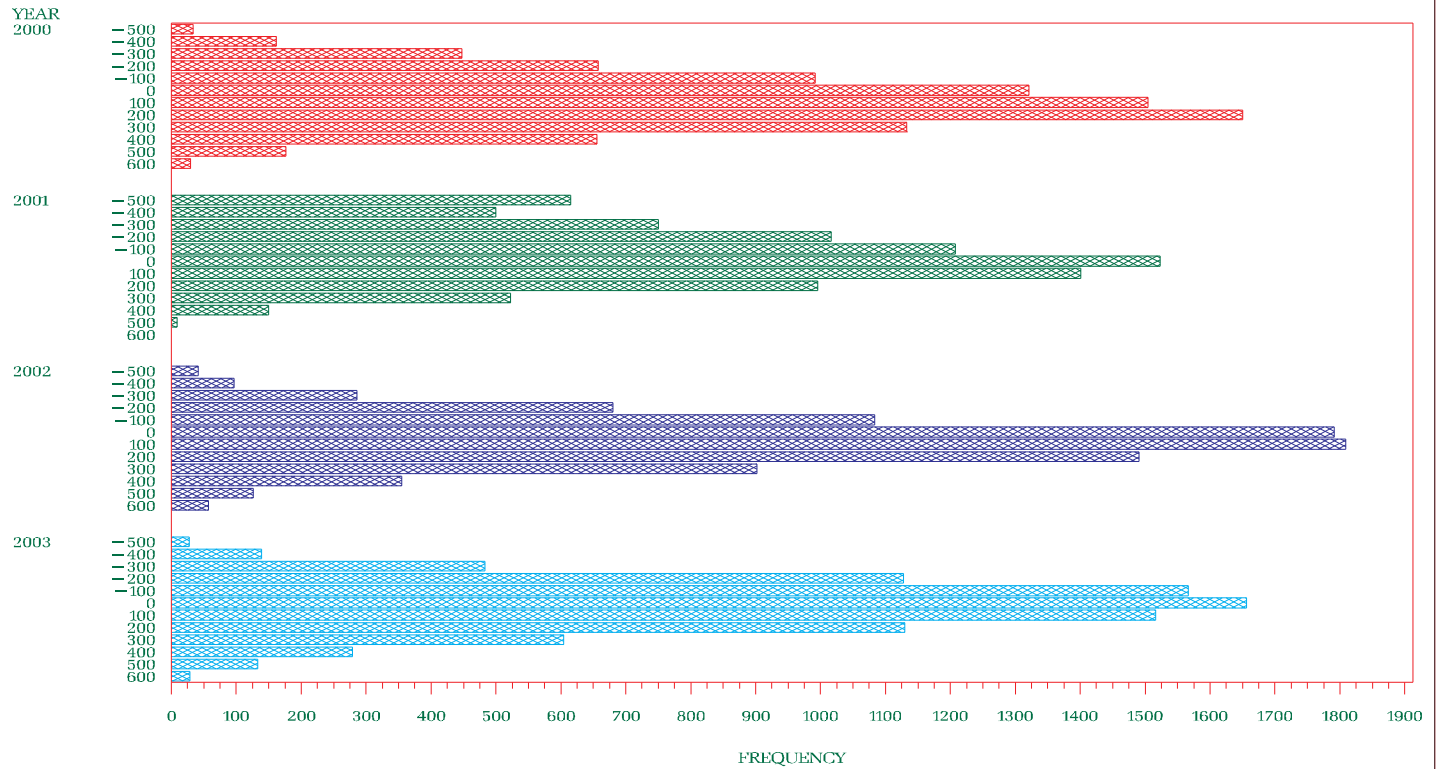
NYISO Frequency Interface Flow For January – December 2003

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



NYISO Frequency Interface Flow For January 2000 – December 2003

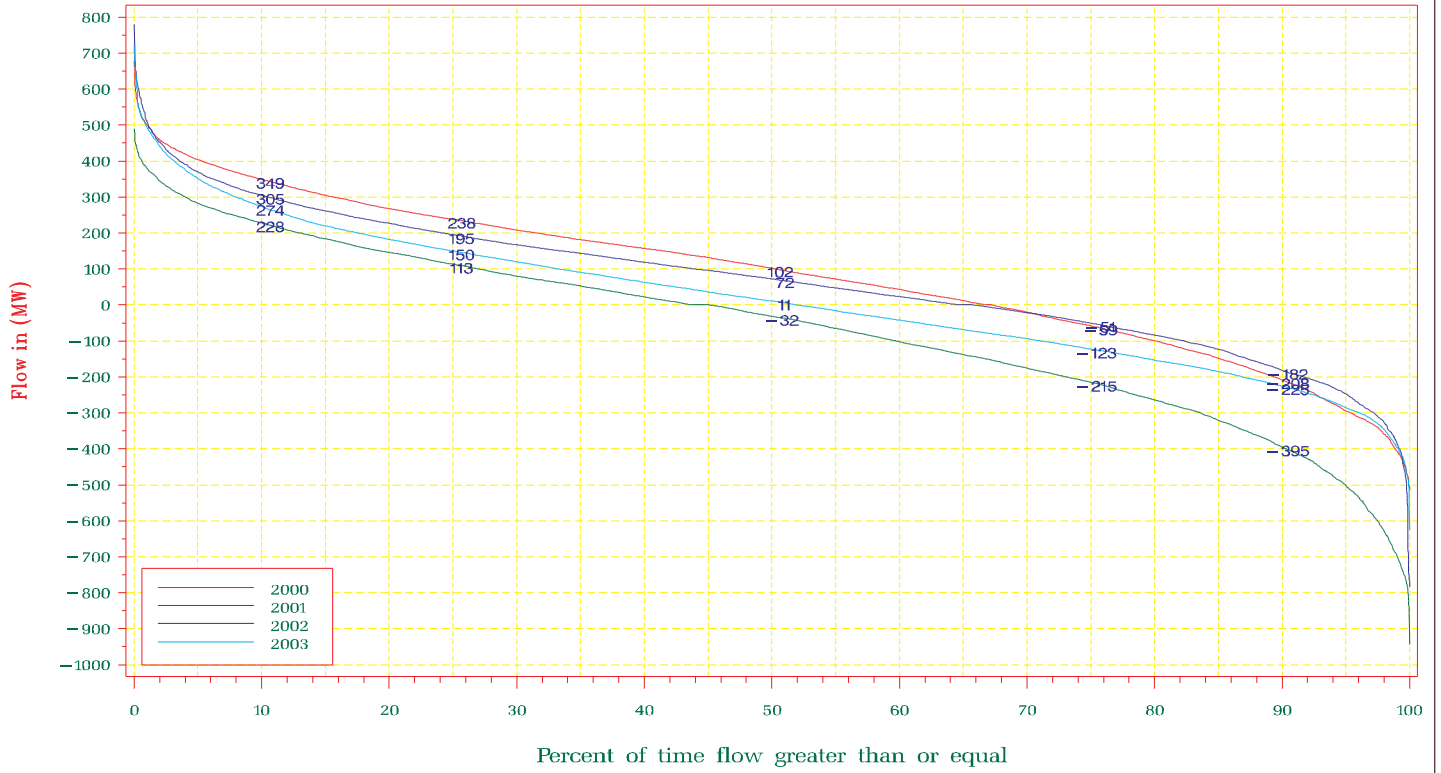
New England/NU South – Capital/Mid Hudson  
398 Long Mt. – Pleasant Valley





NYISO Percent of time Interface Flow For January 2000 – December 2003

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



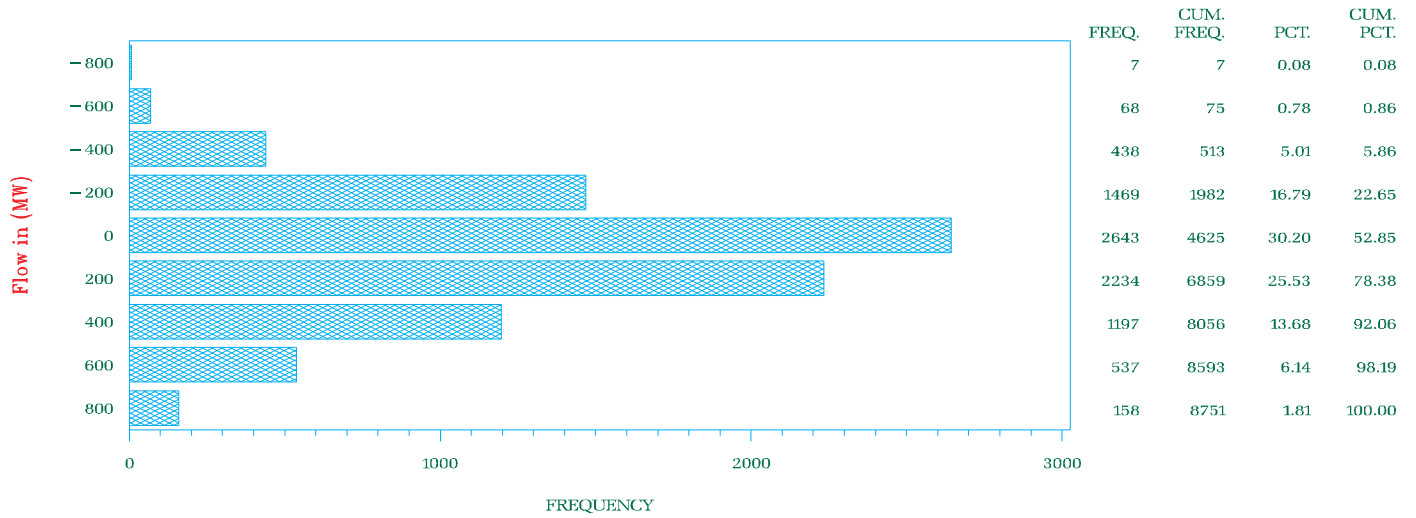
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

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



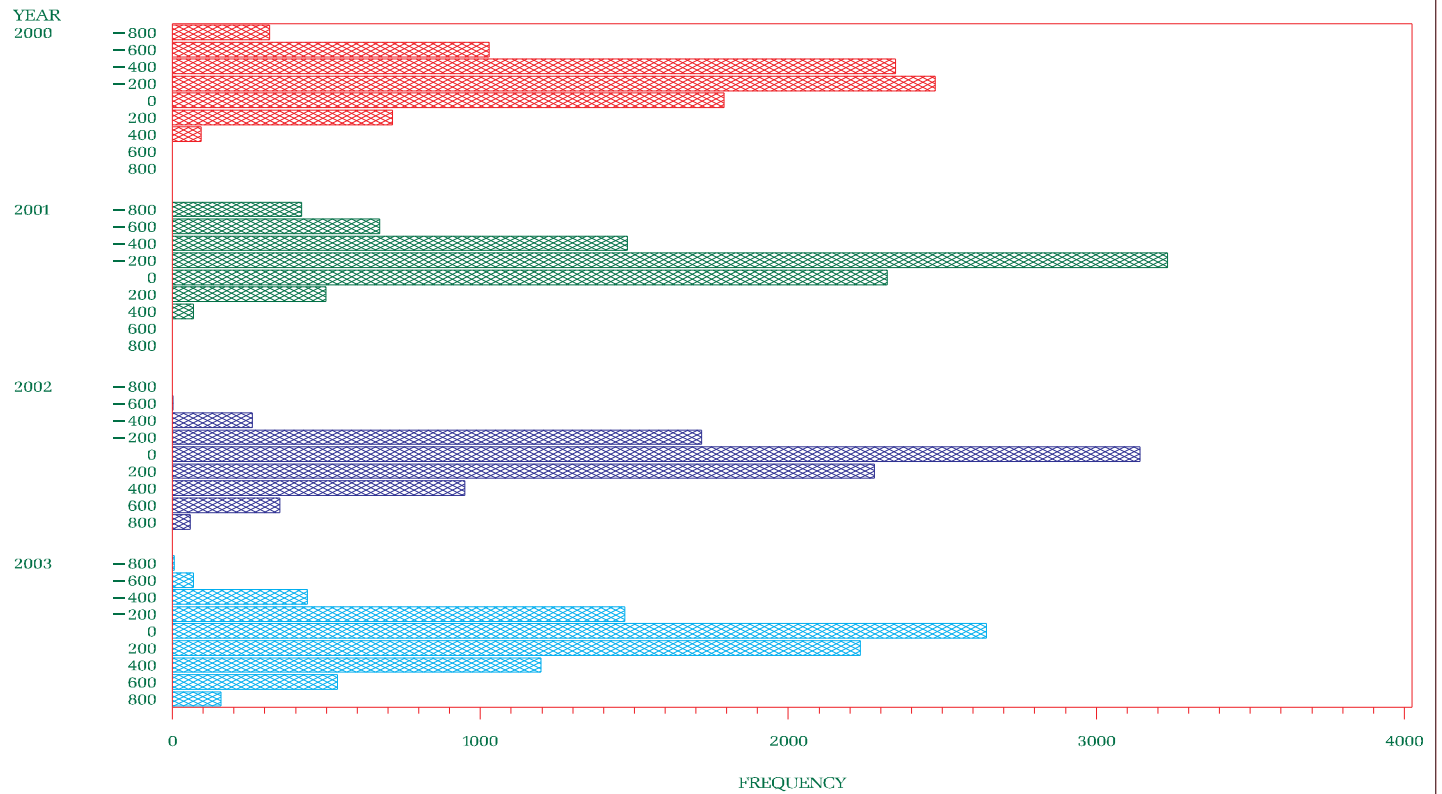
NYISO Frequency Interface Flow For January – December 2003

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



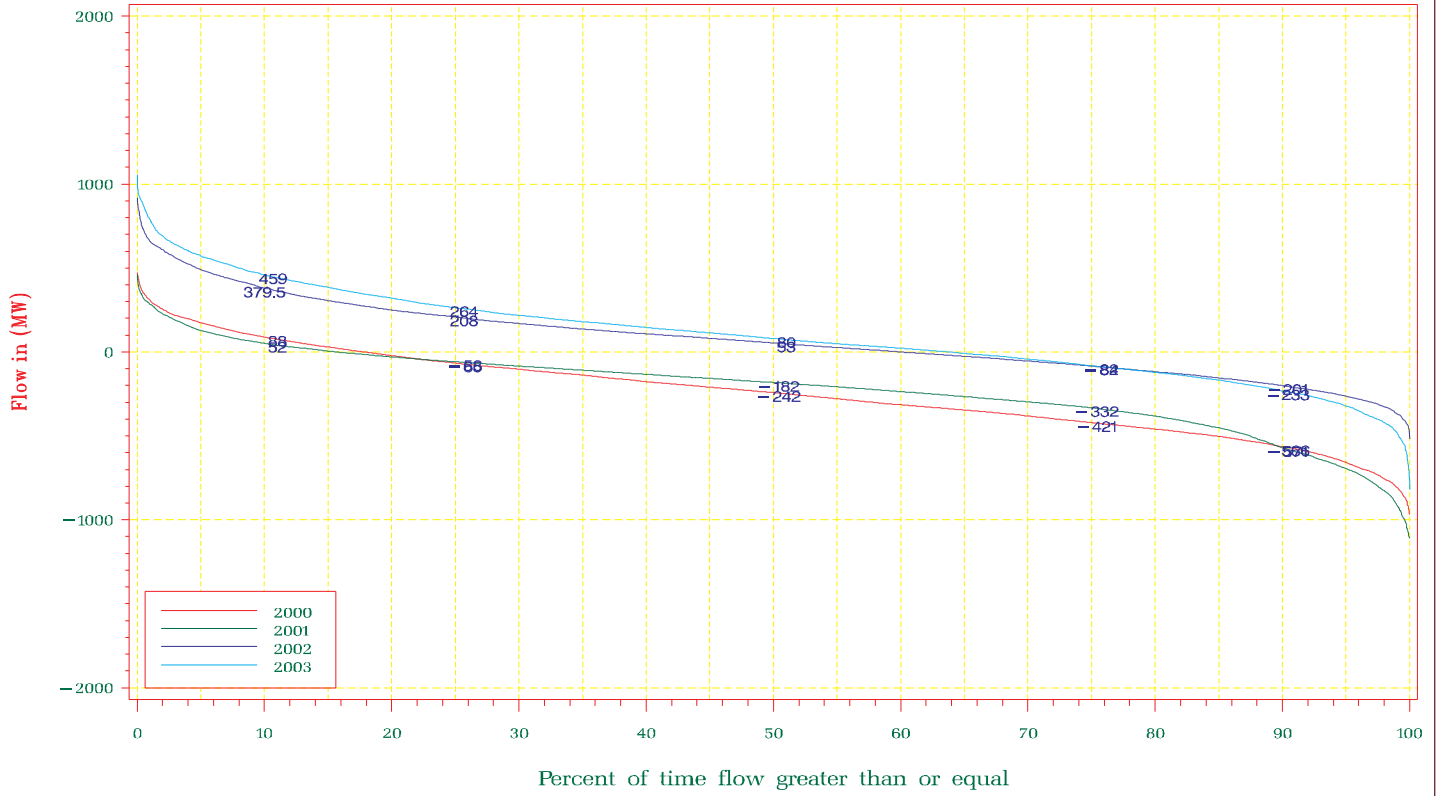
NYISO Frequency Interface Flow For January 2000 – December 2003

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



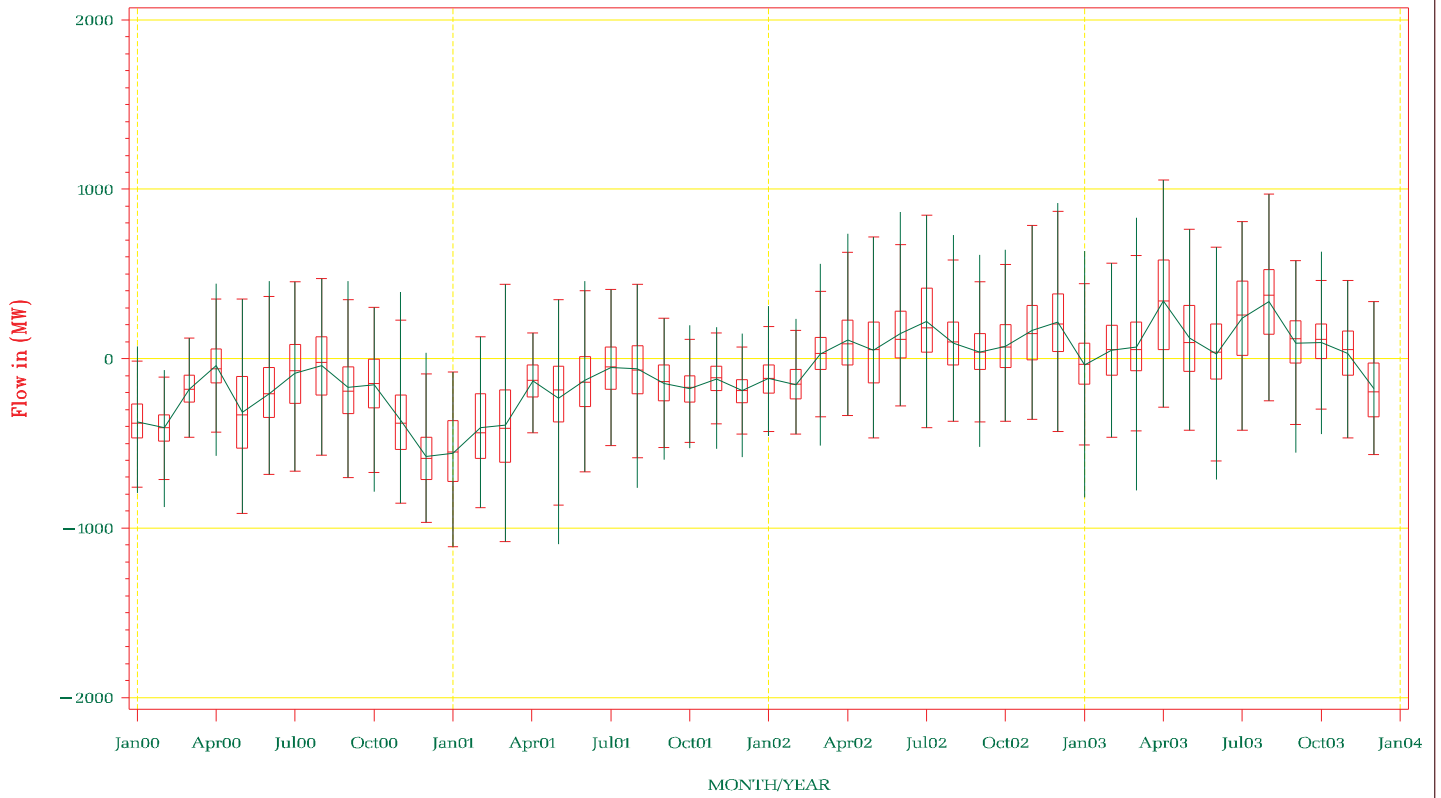
NYISO Percent of time Interface Flow For January 2000 – December 2003

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



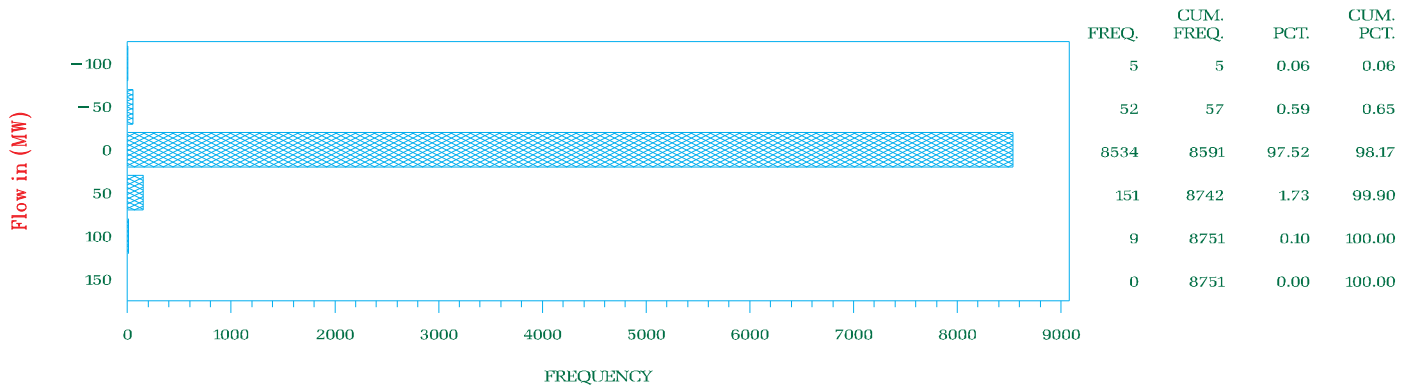
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

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



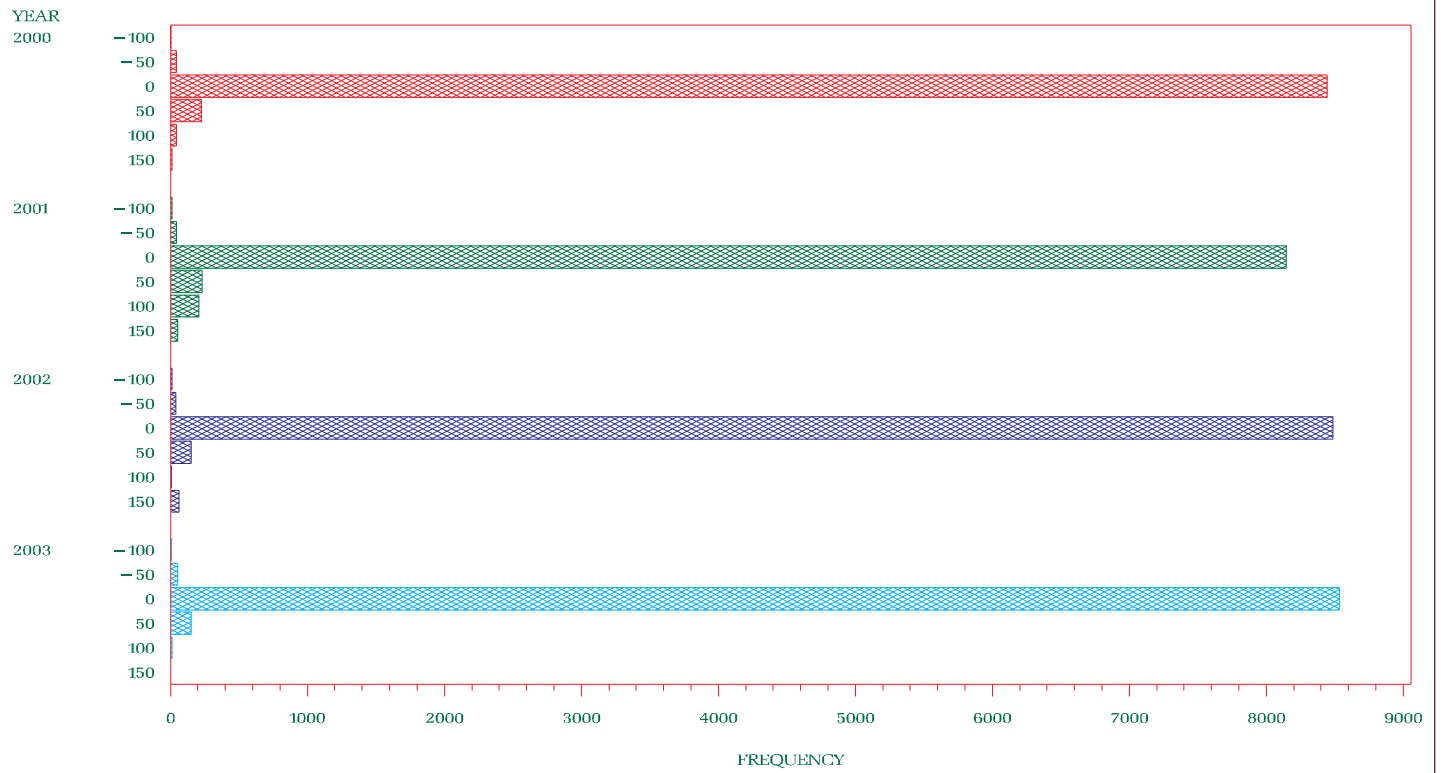
NYISO Frequency Interface Flow For January – December 2003

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



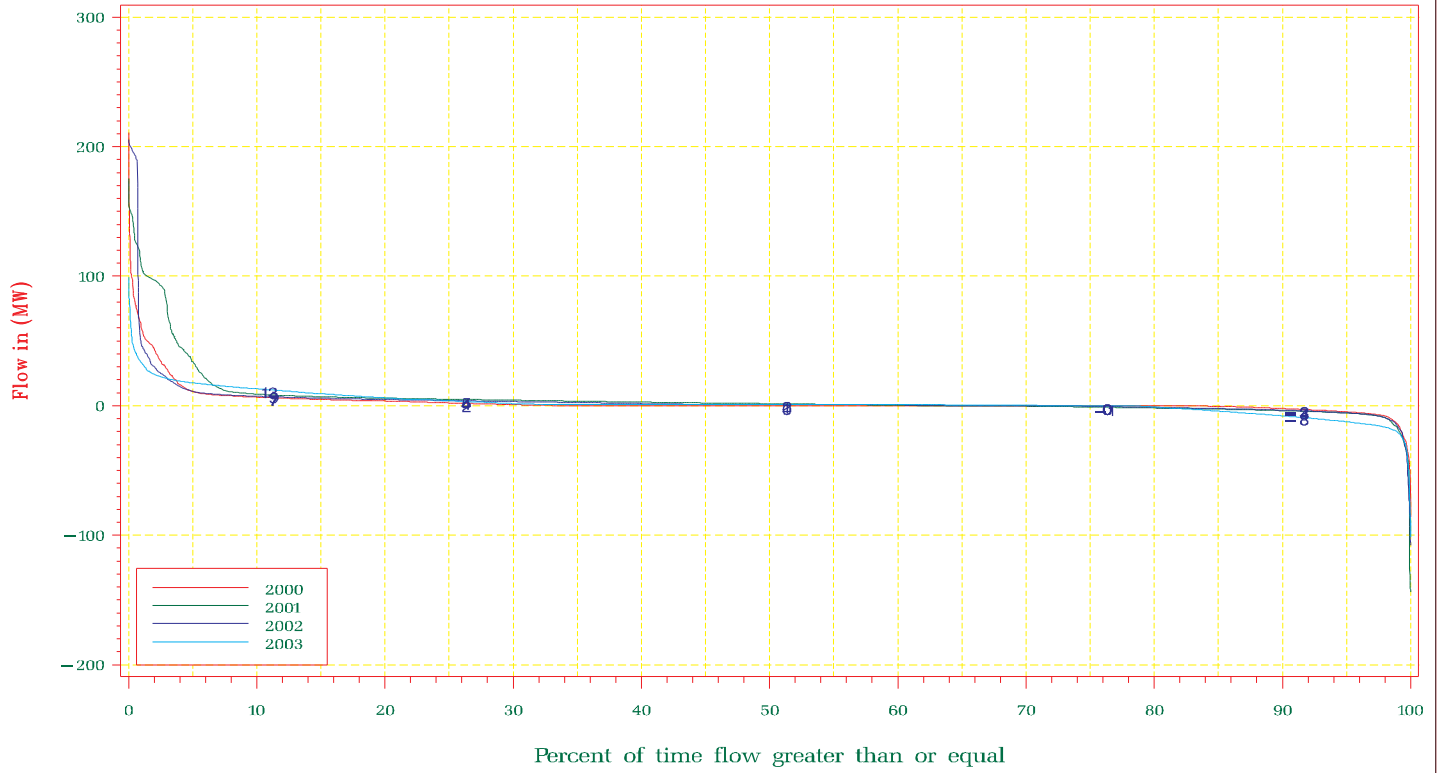
NYISO Frequency Interface Flow For January 2000 – December 2003

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



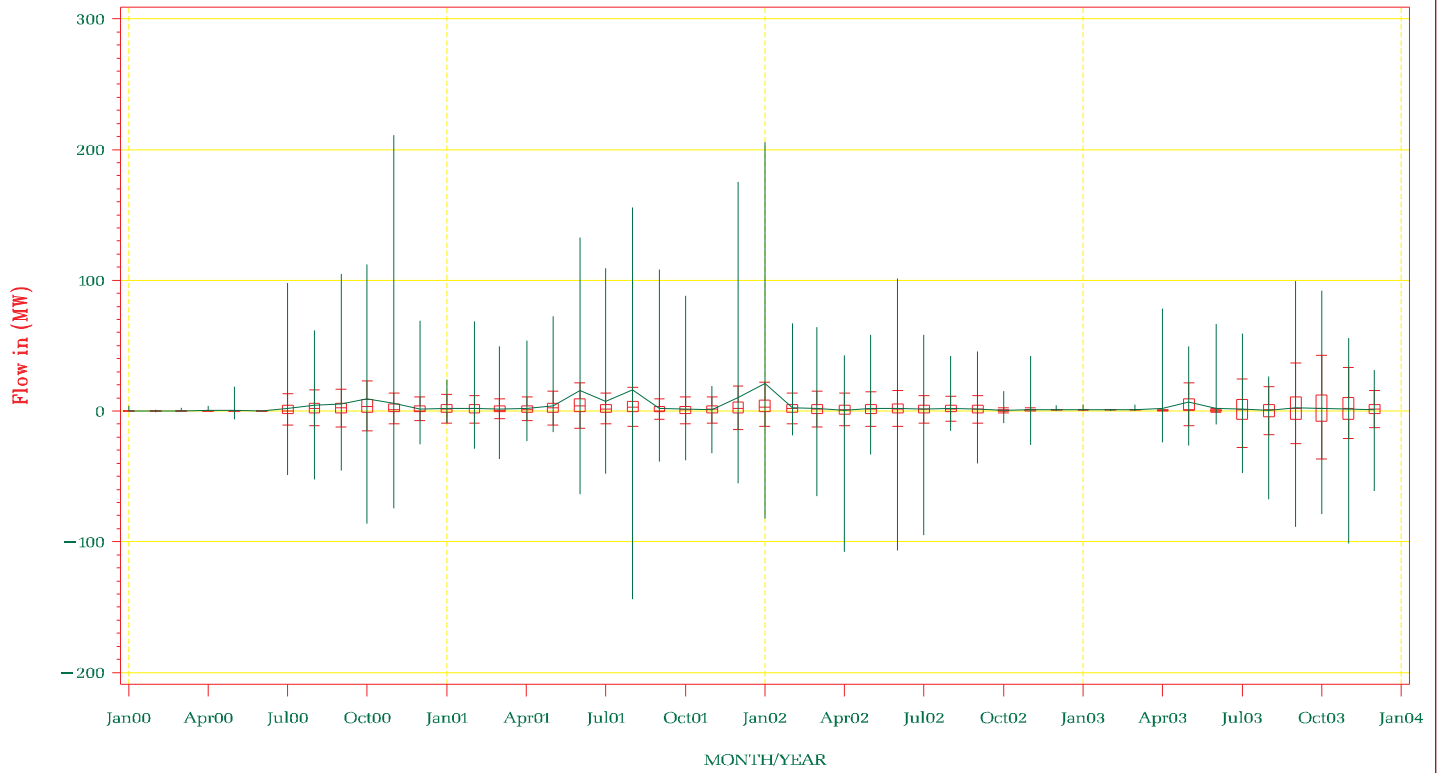
NYISO Percent of time Interface Flow For January 2000 – December 2003

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



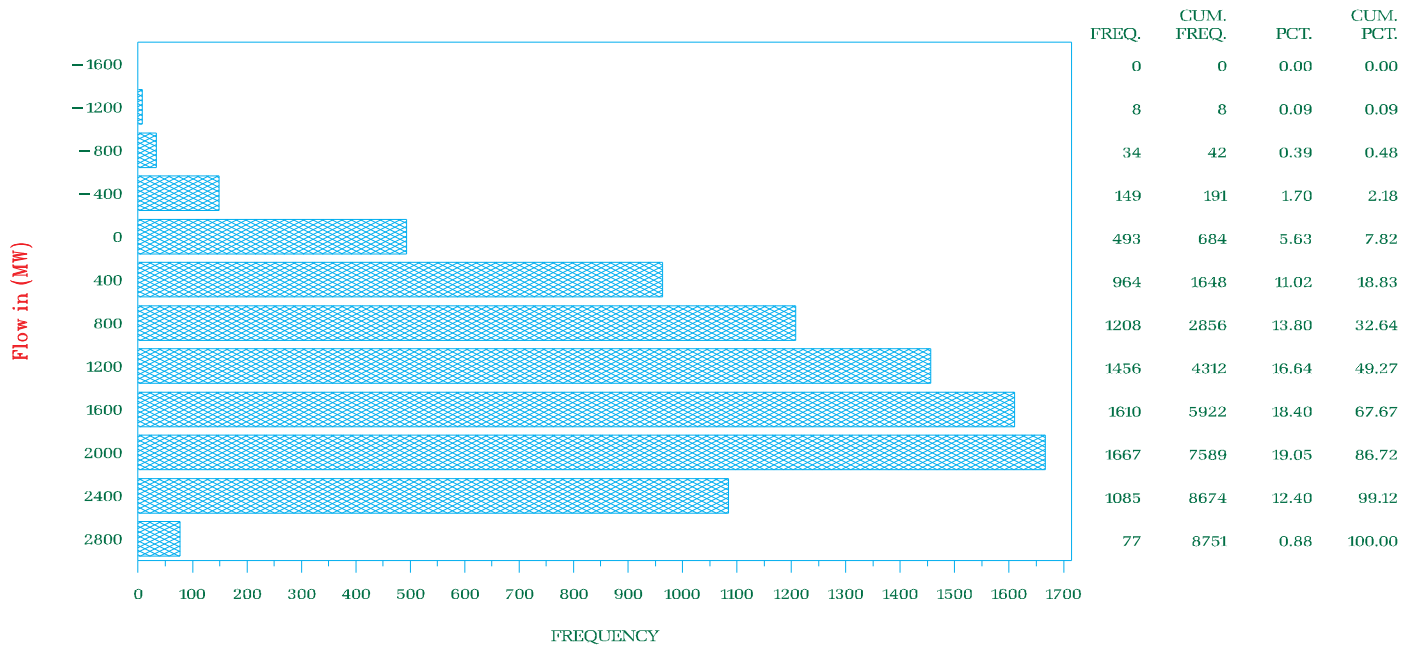
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

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



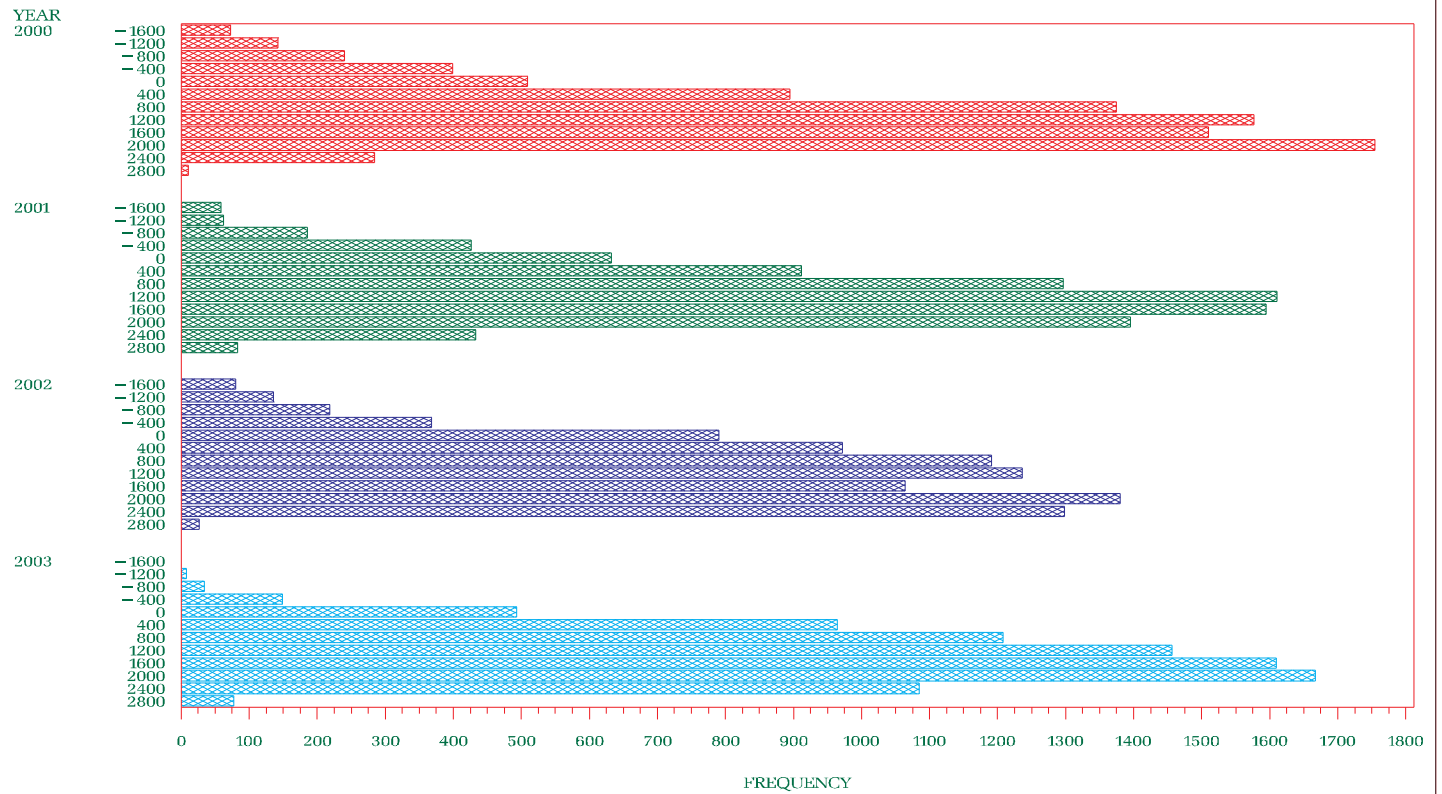
NYISO Frequency Interface Flow For January – December 2003

PJM – NY SCHEDULE



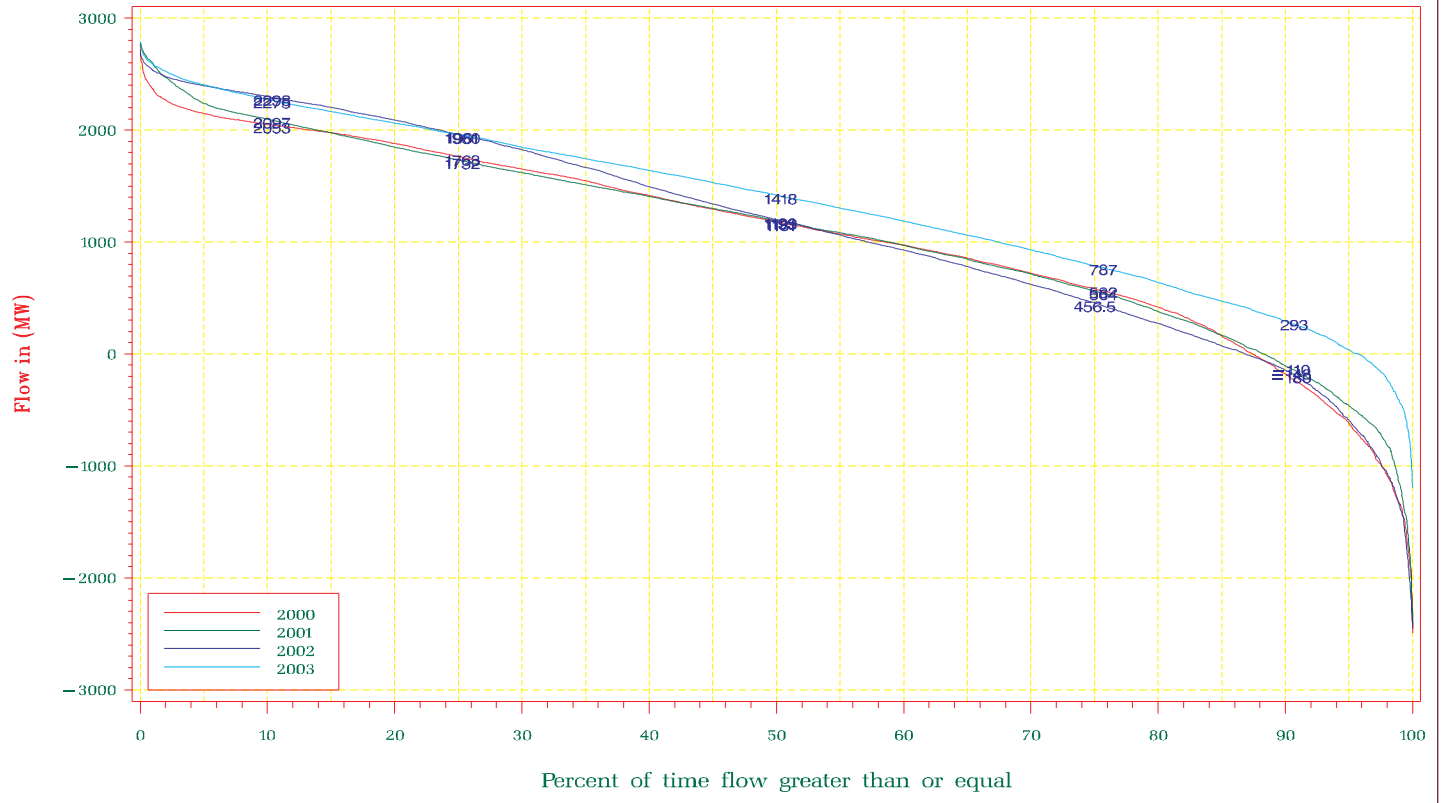
NYISO Frequency Interface Flow For January 2000 – December 2003

PJM – NY SCHEDULE



NYISO Percent of time Interface Flow For January 2000 – December 2003

PJM-NY SCHEDULE



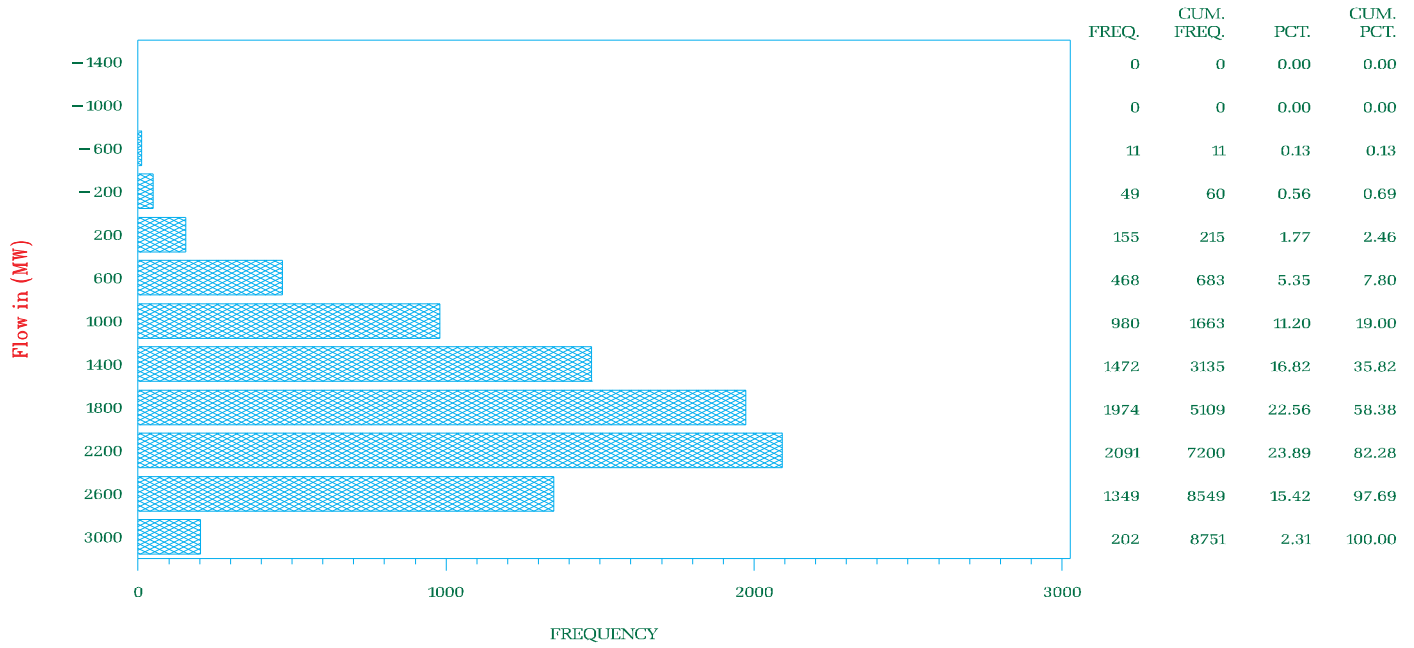
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

PJM-NY SCHEDULE



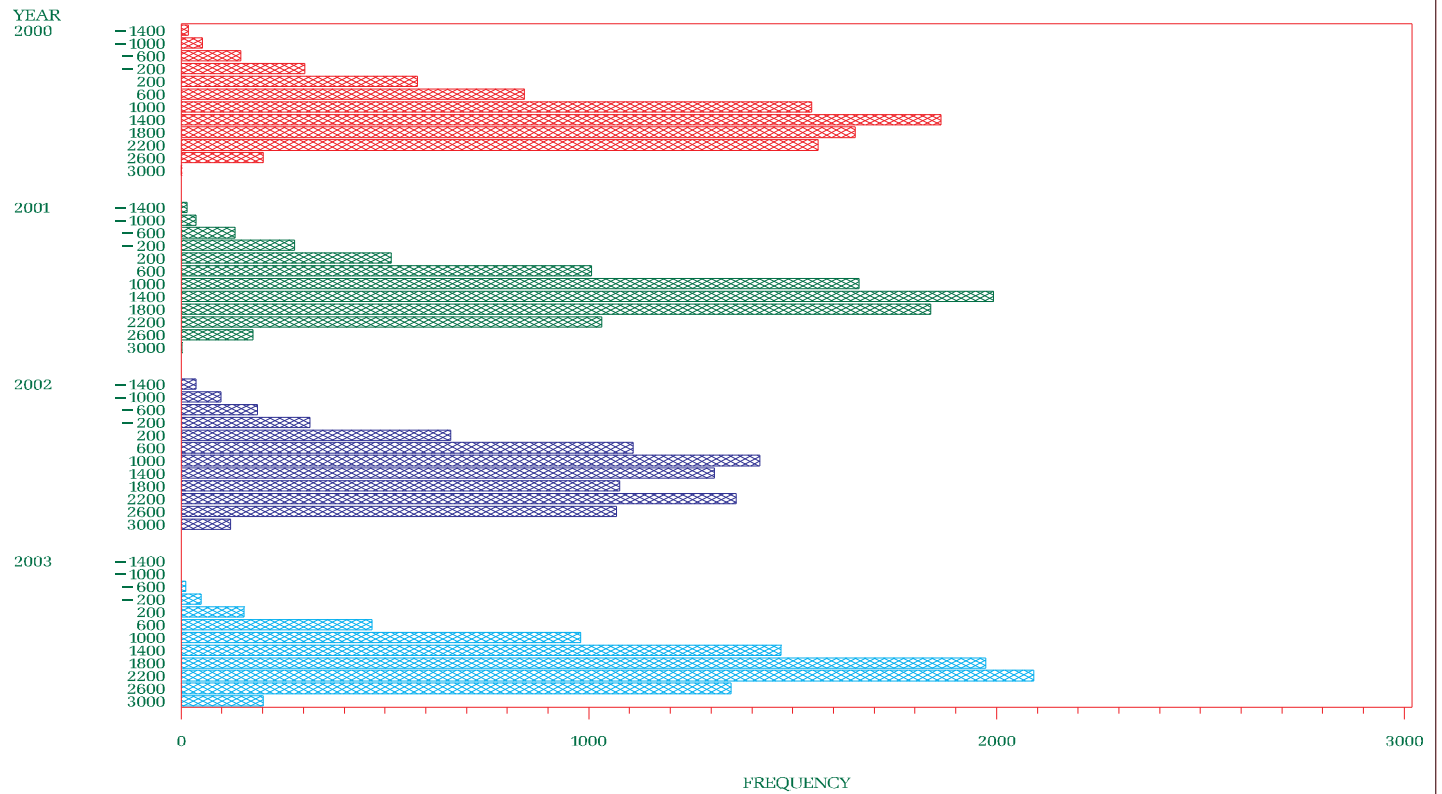
NYISO Frequency Interface Flow For January – December 2003

PJM – NY



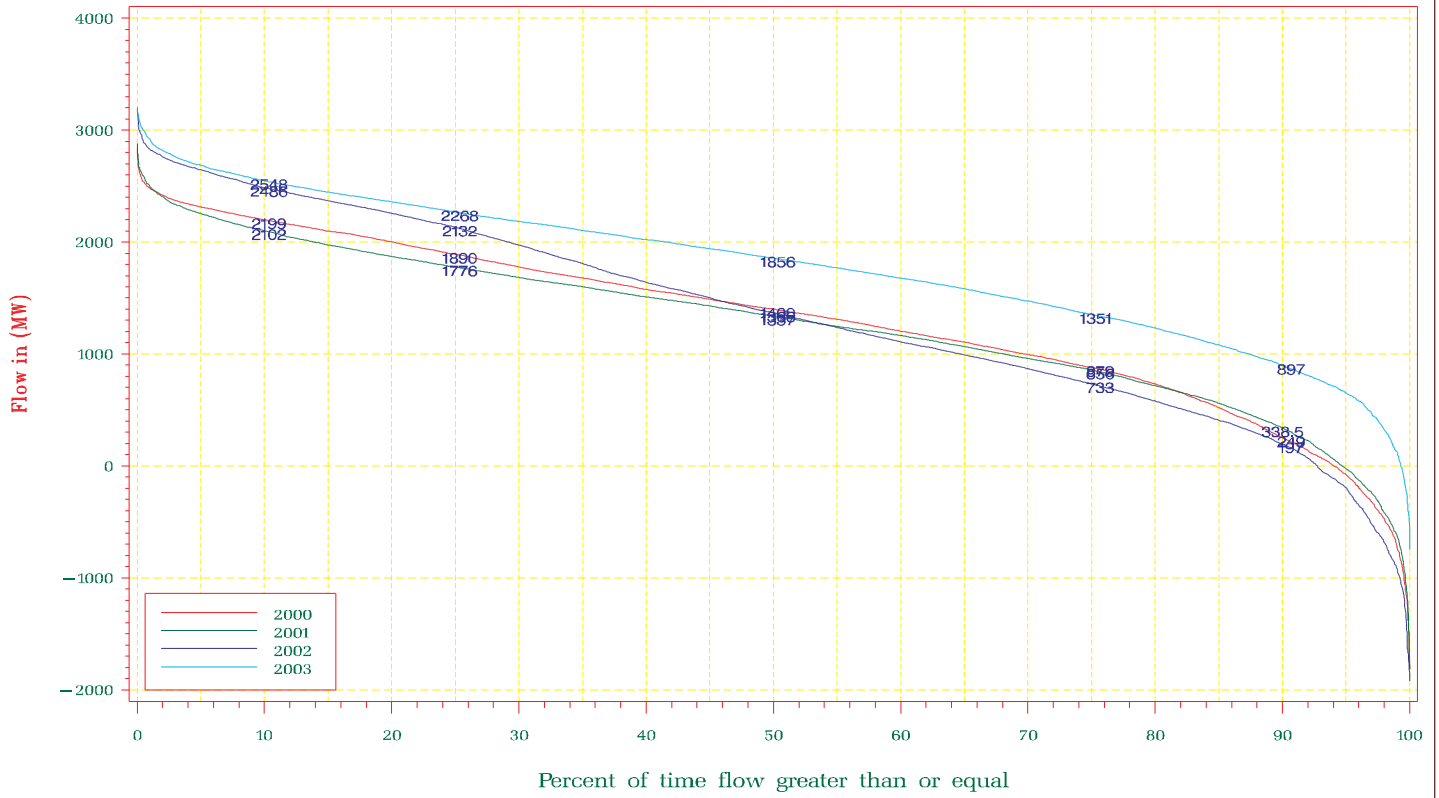
NYISO Frequency Interface Flow For January 2000 – December 2003

PJM – NY

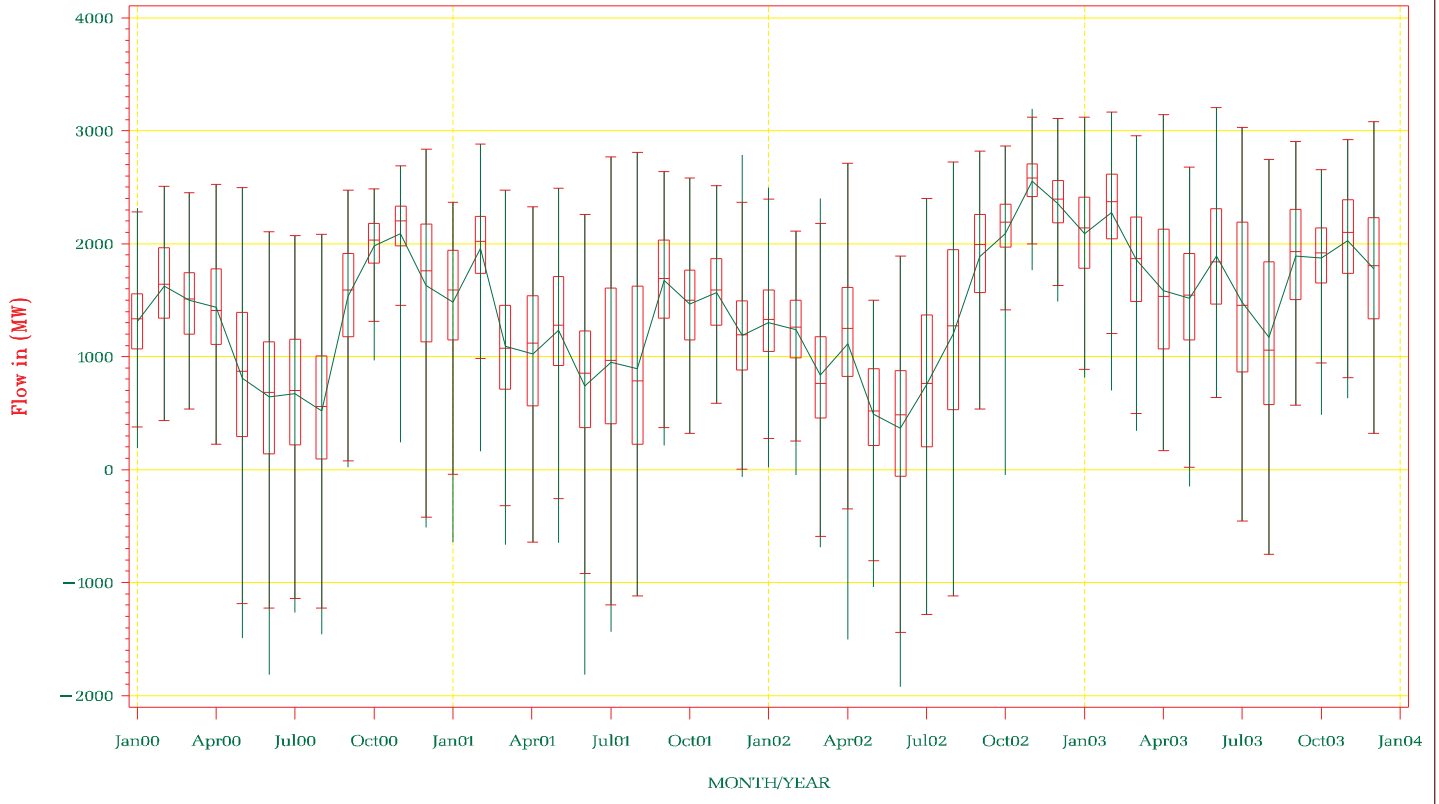




NYISO Percent of time Interface Flow For January 2000 – December 2003  
**PJM – NY**

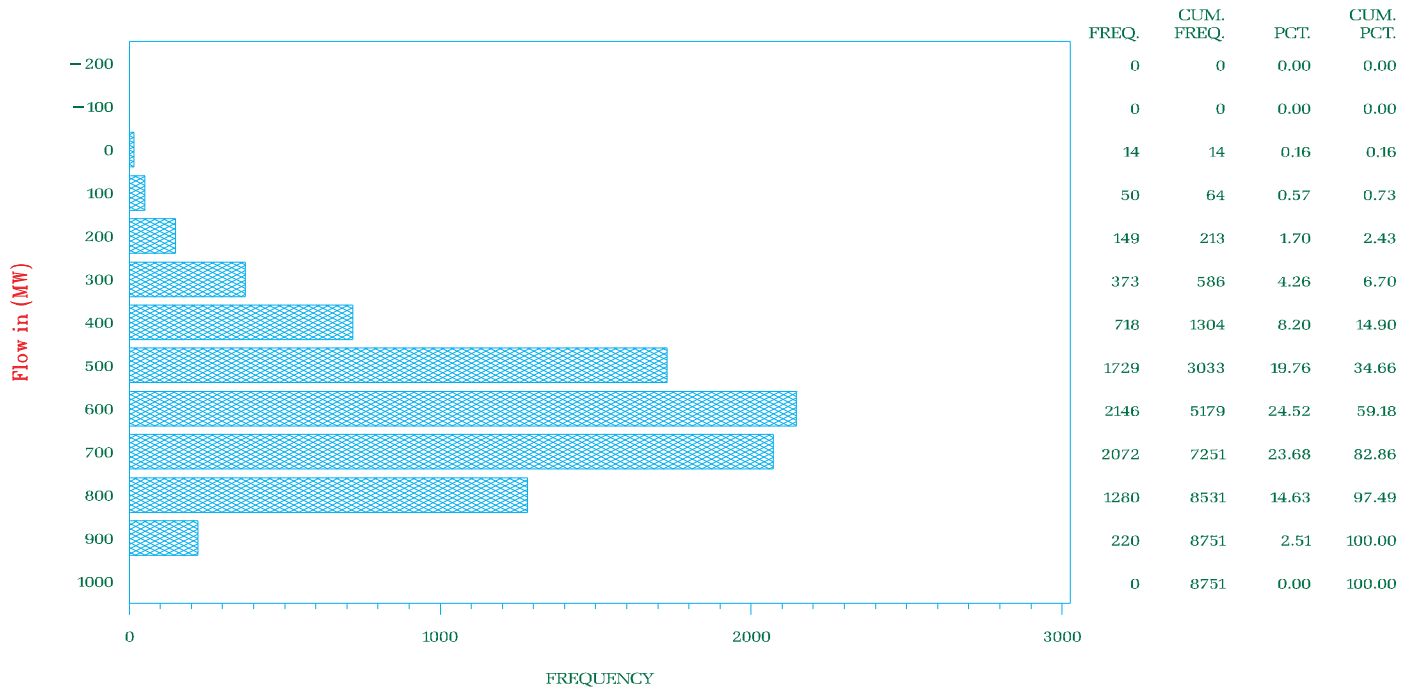


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**PJM – NY**



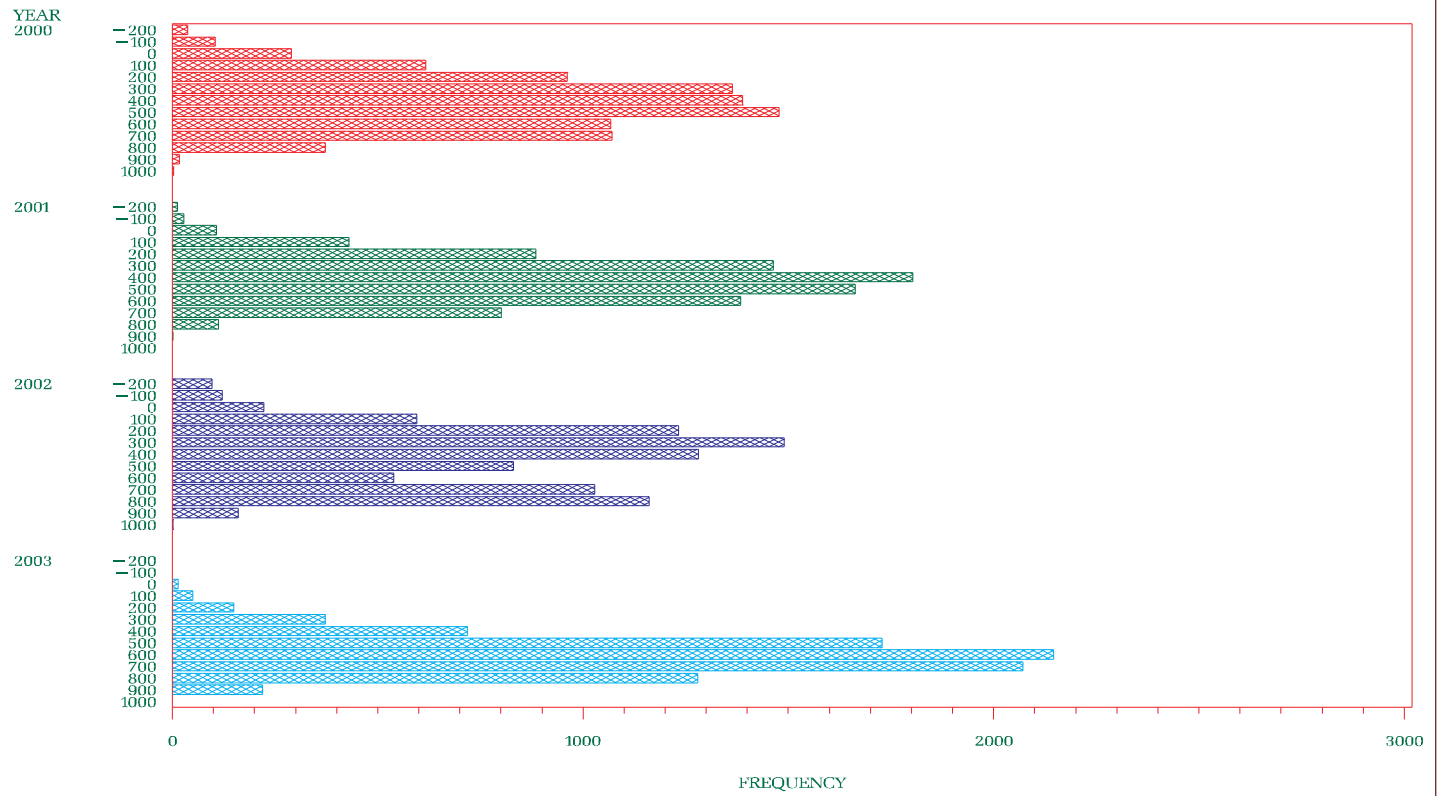
NYISO Frequency Interface Flow For January – December 2003

PJM West – Central

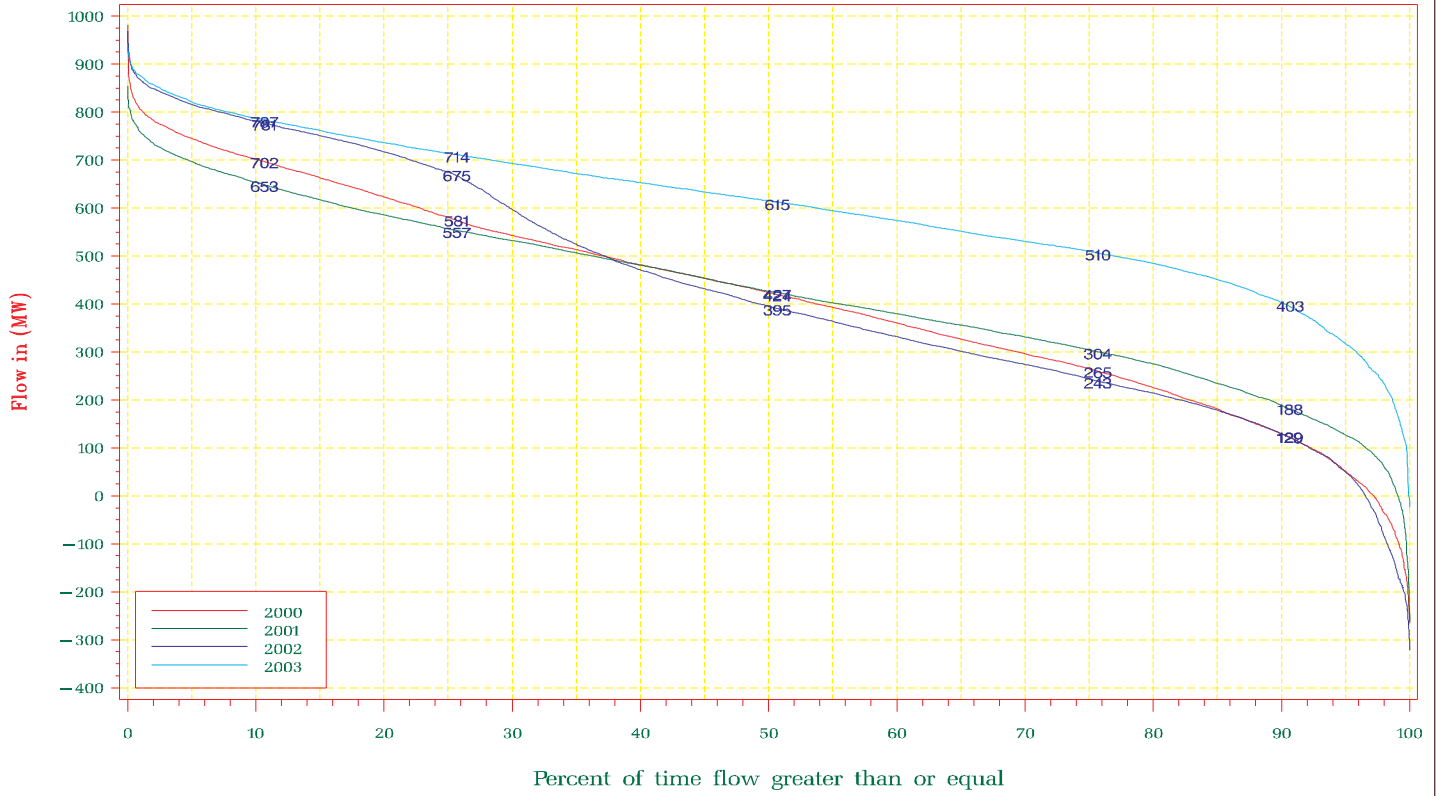


NYISO Frequency Interface Flow For January 2000 – December 2003

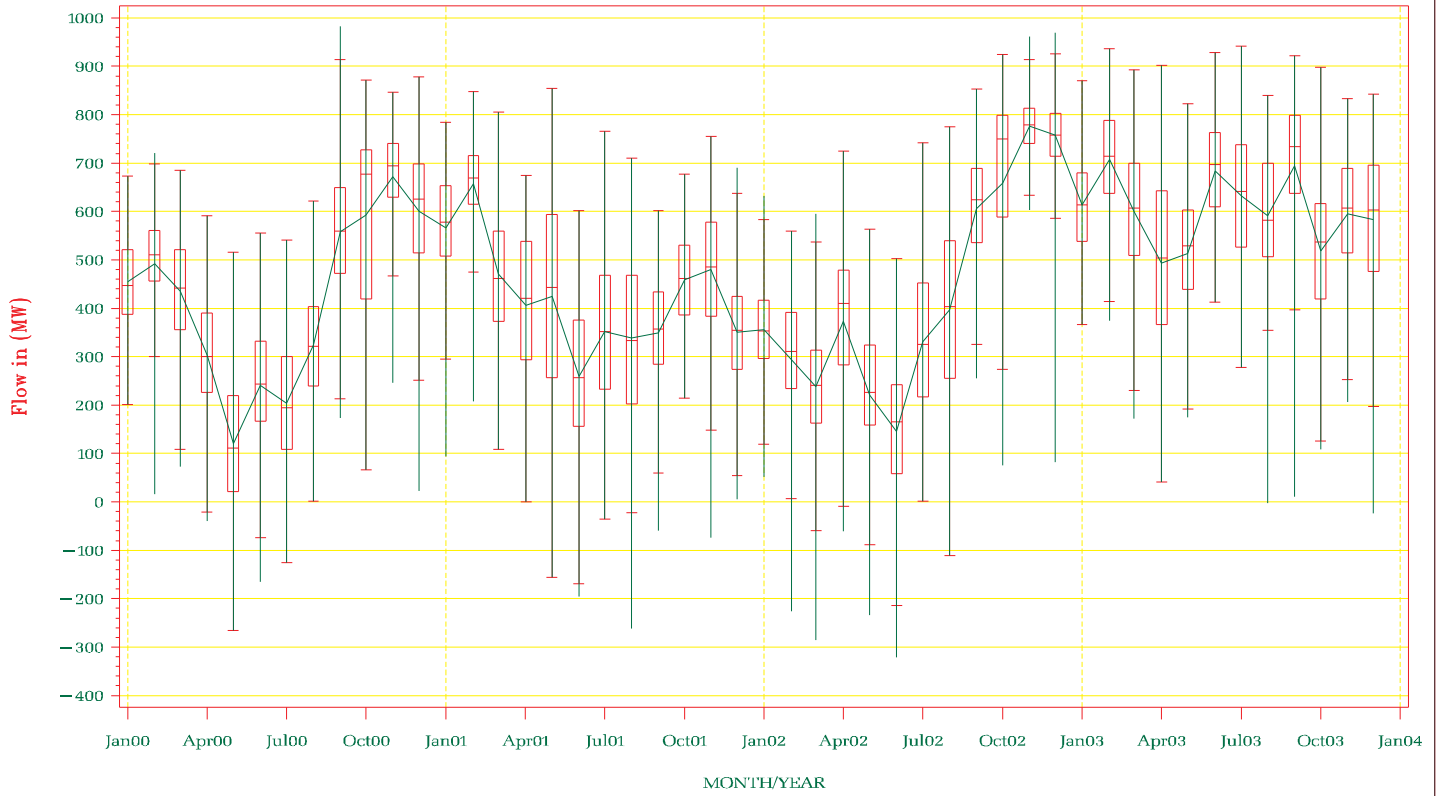
PJM West – Central



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**PJM West – Central**

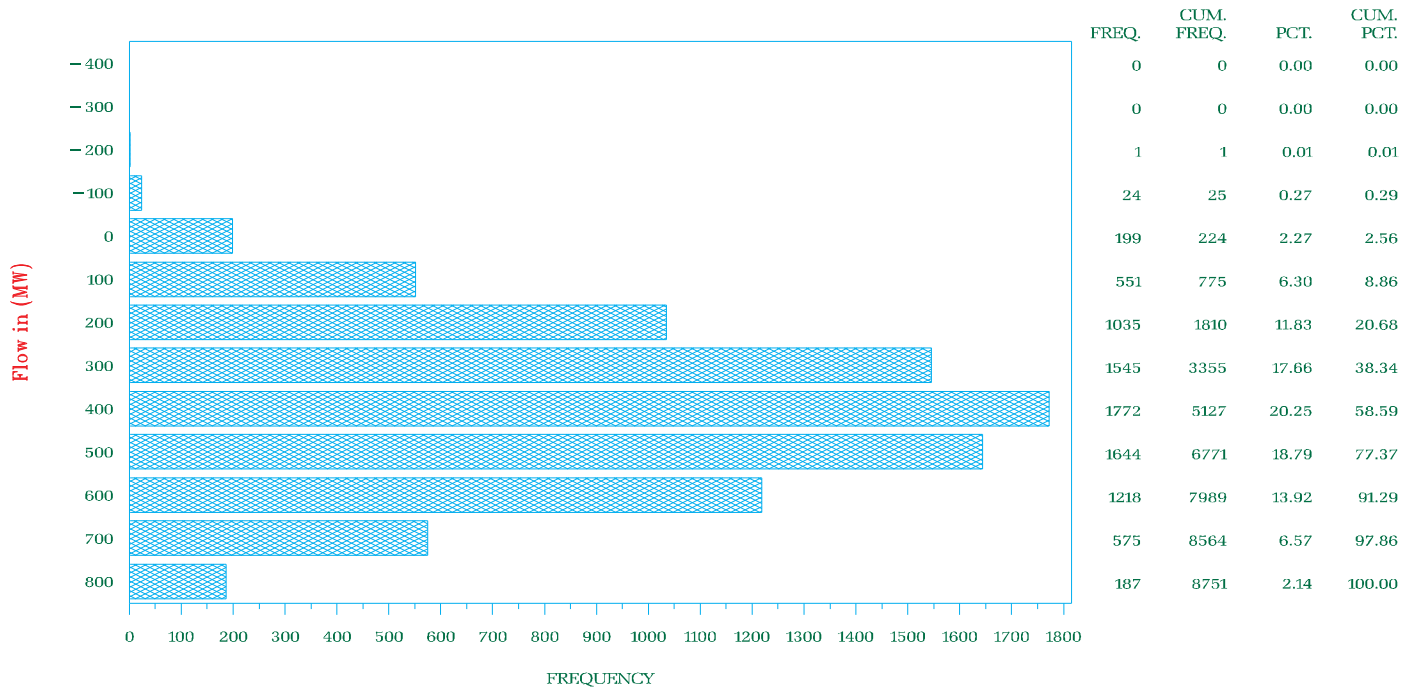


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**PJM West – Central**



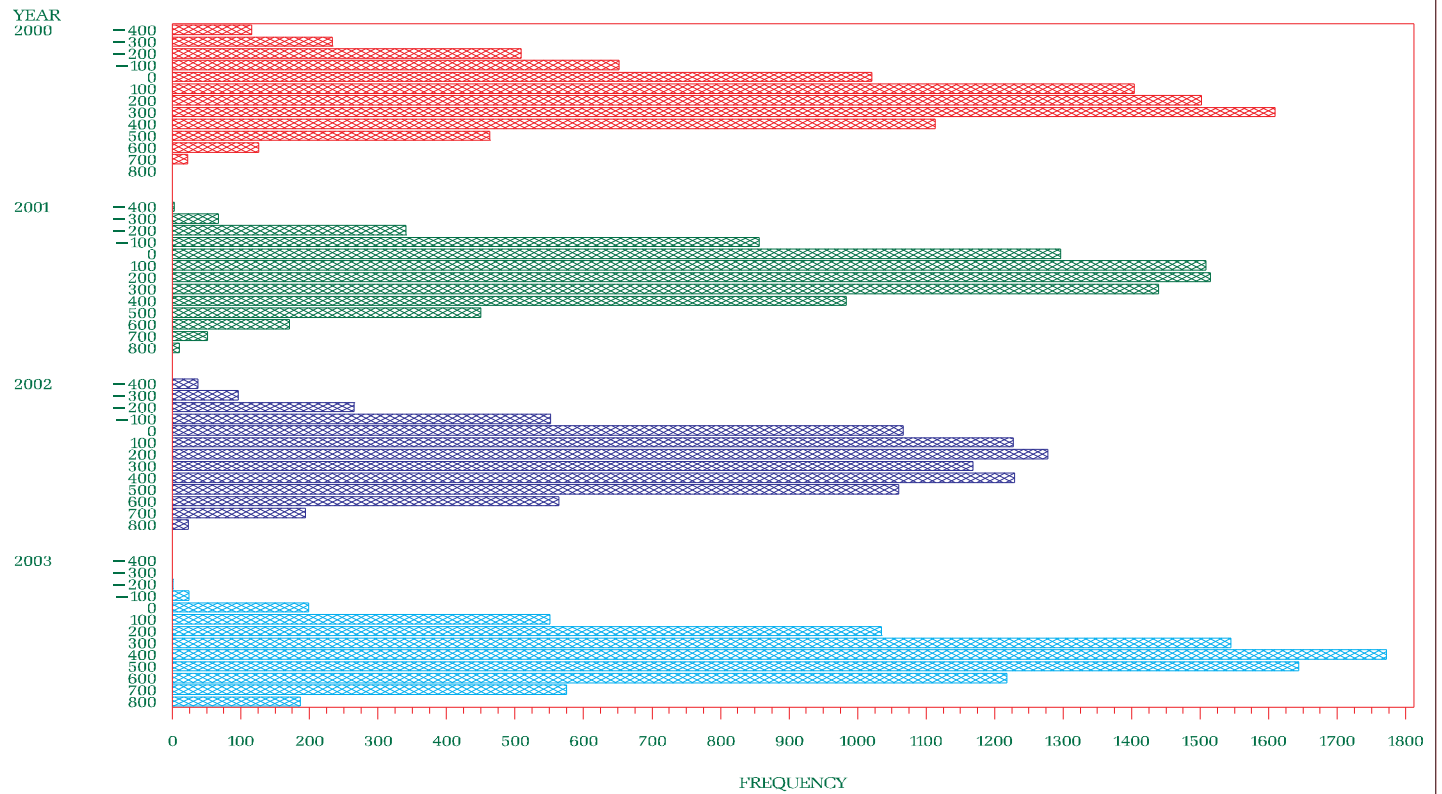
NYISO Frequency Interface Flow For January – December 2003

PJM West – Frontier

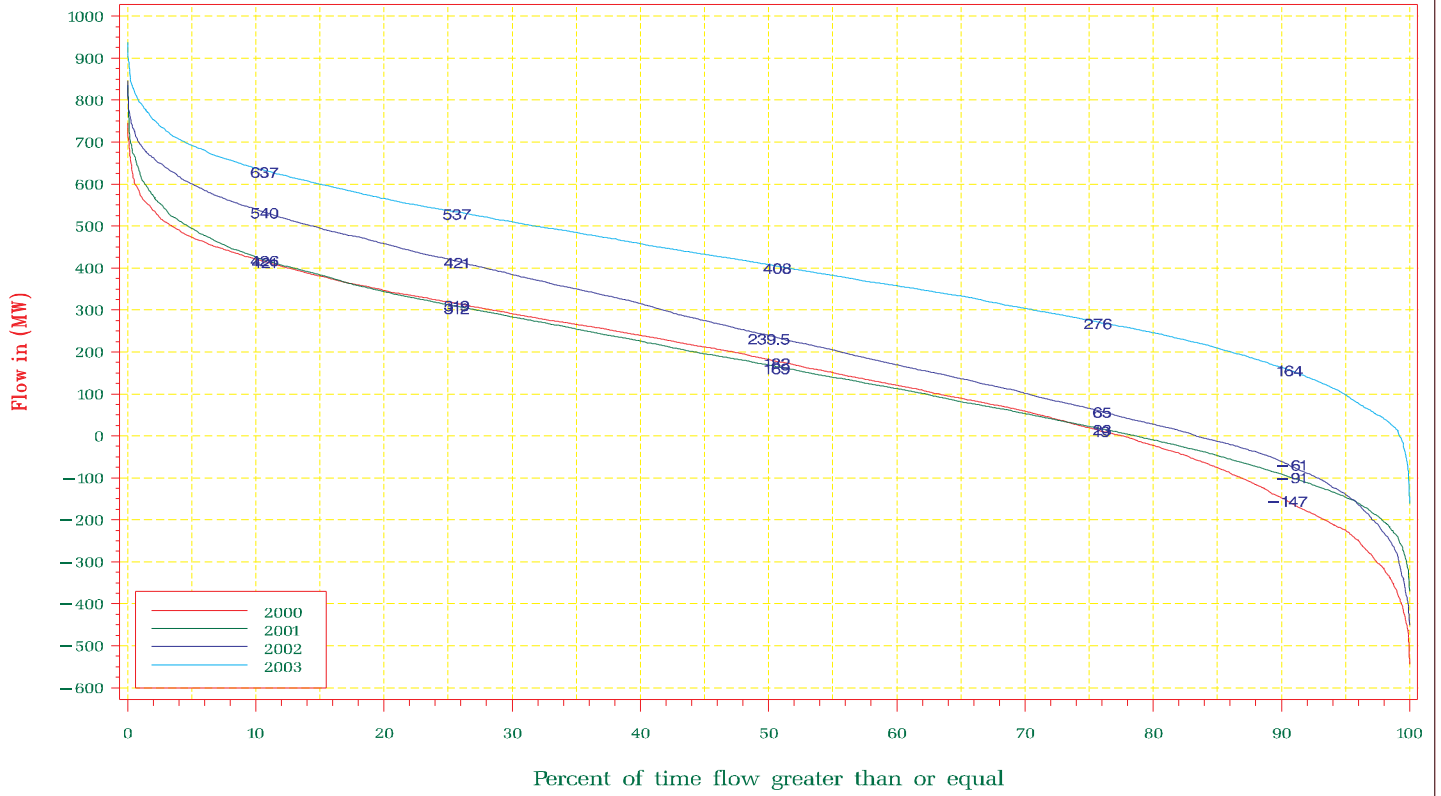


NYISO Frequency Interface Flow For January 2000 – December 2003

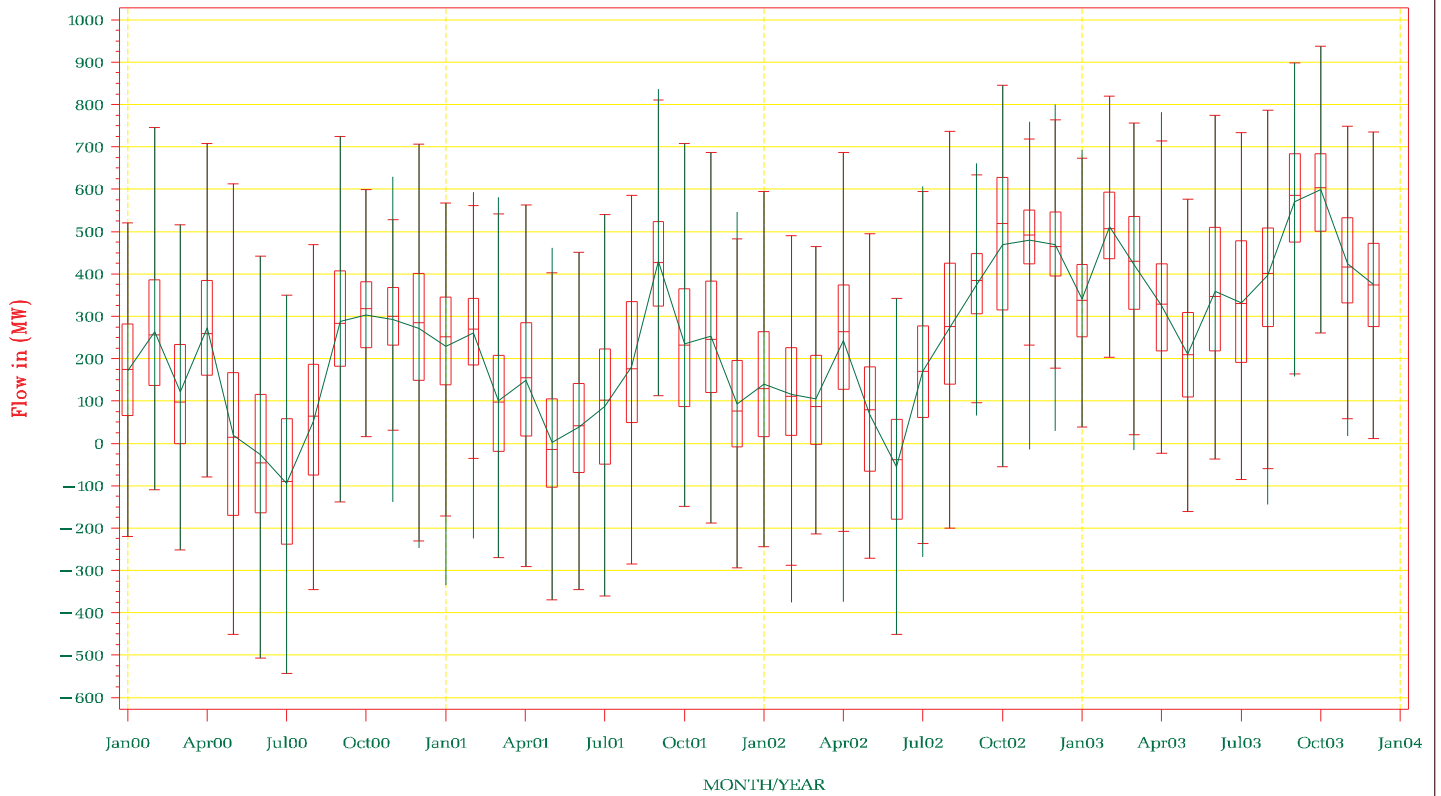
PJM West – Frontier



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**PJM West – Frontier**

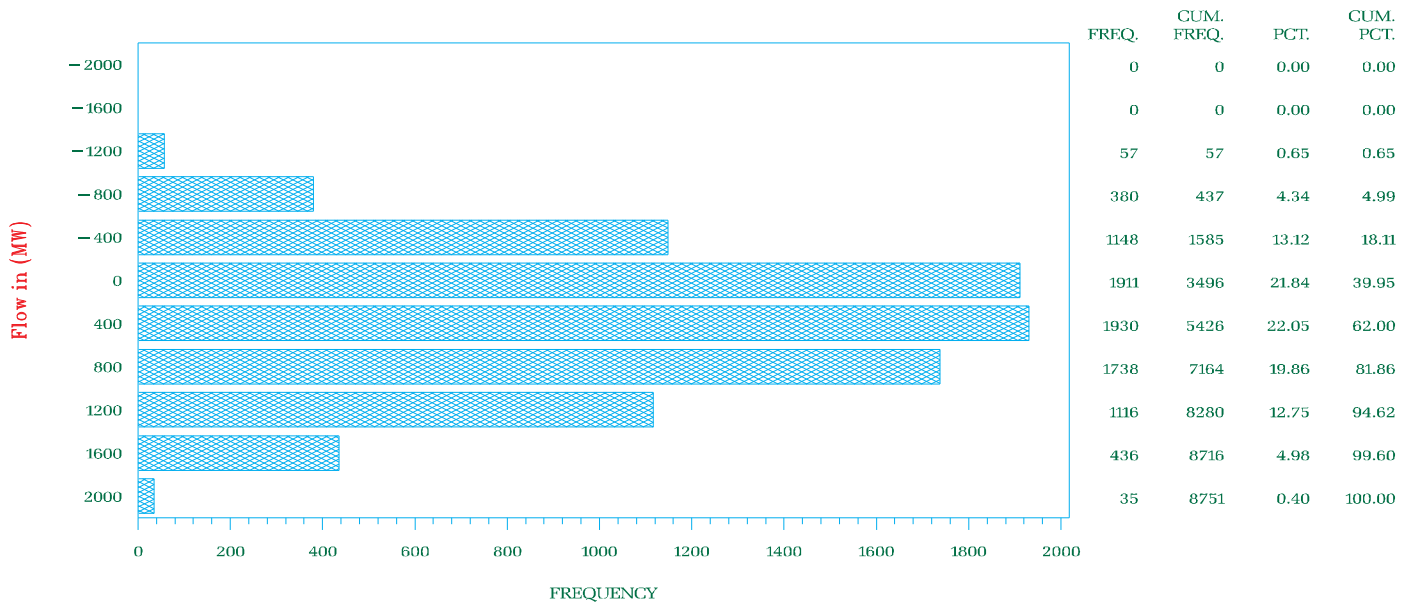


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**PJM West – Frontier**



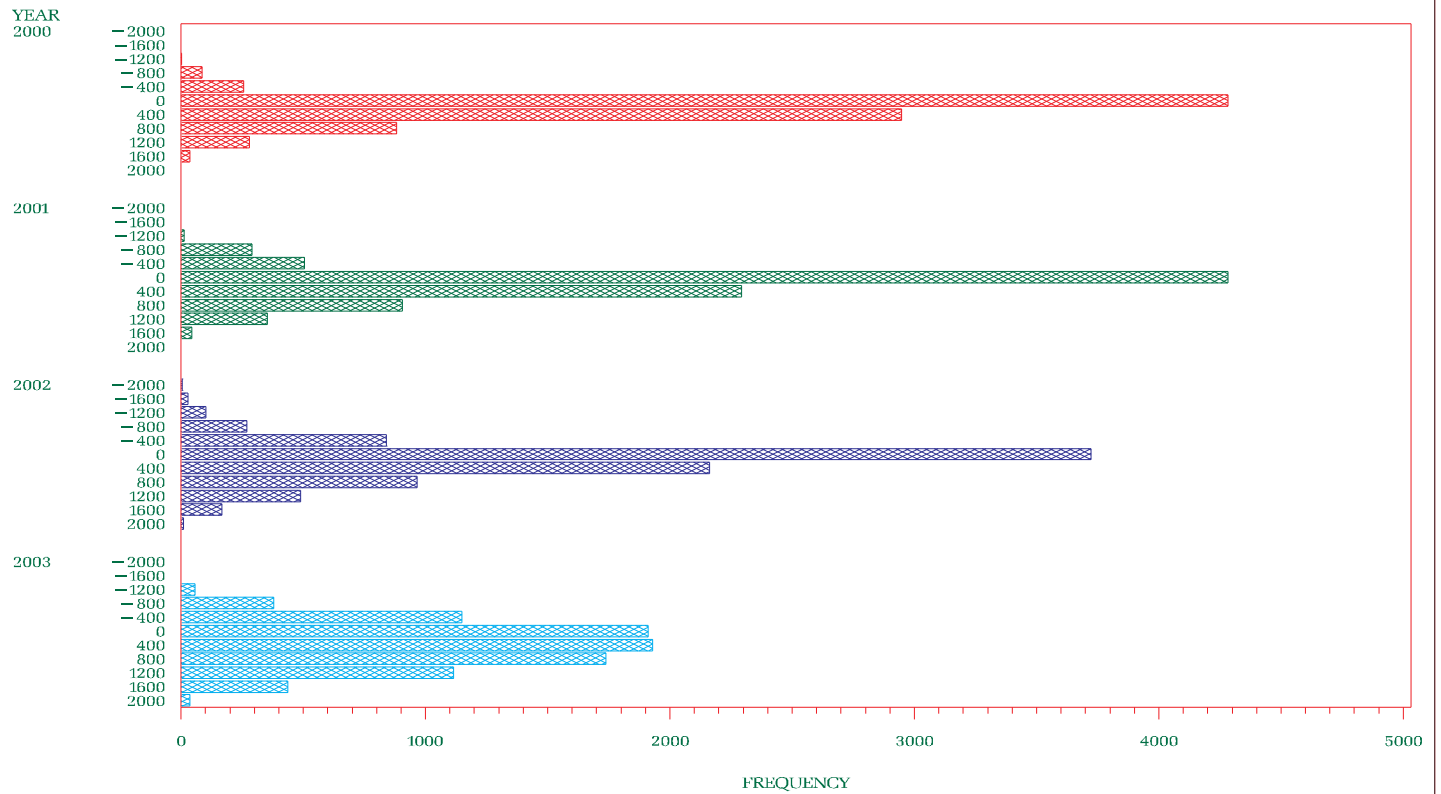
NYISO Frequency Interface Flow For January – December 2003

ONTARIO–NY SCHEDULE



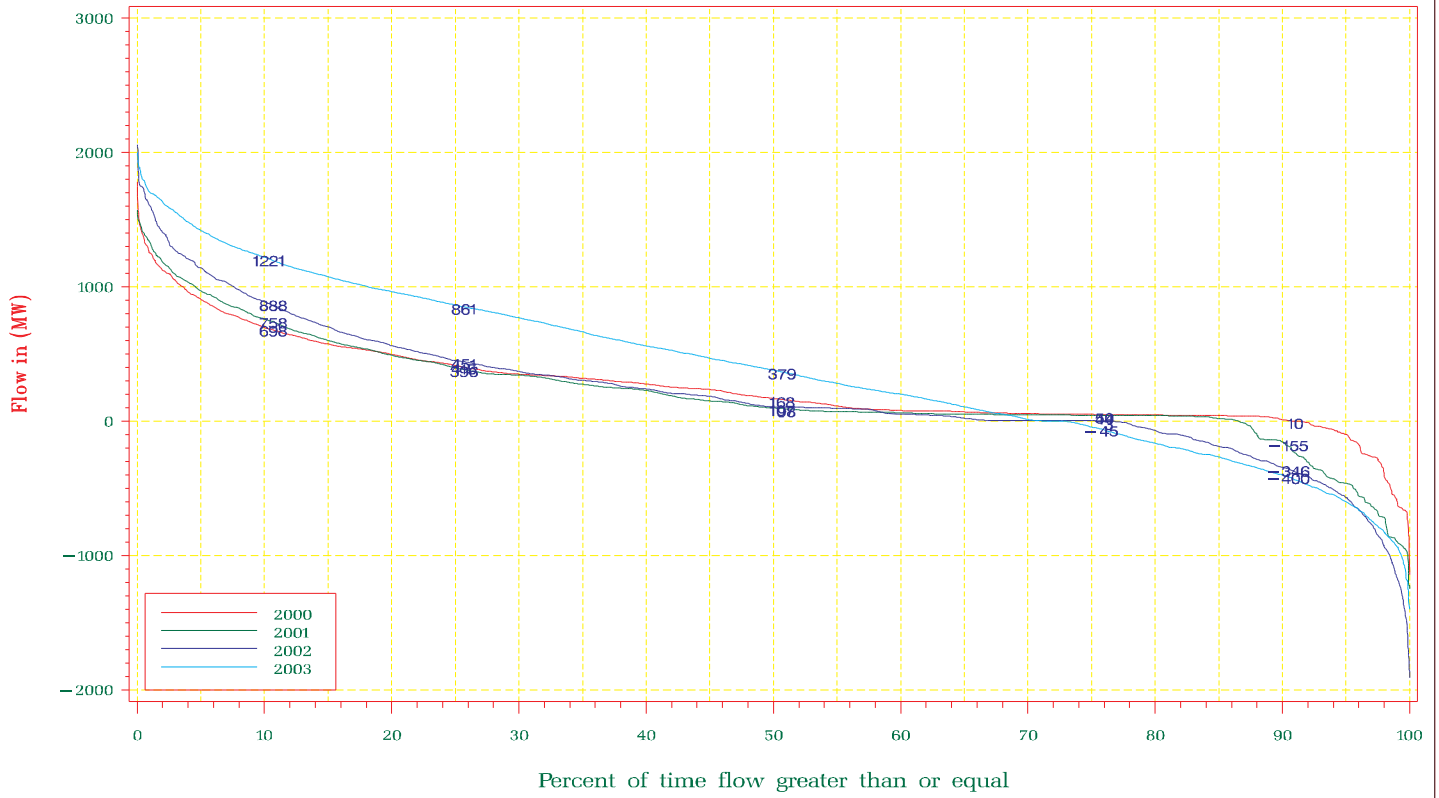
NYISO Frequency Interface Flow For January 2000 – December 2003

ONTARIO–NY SCHEDULE



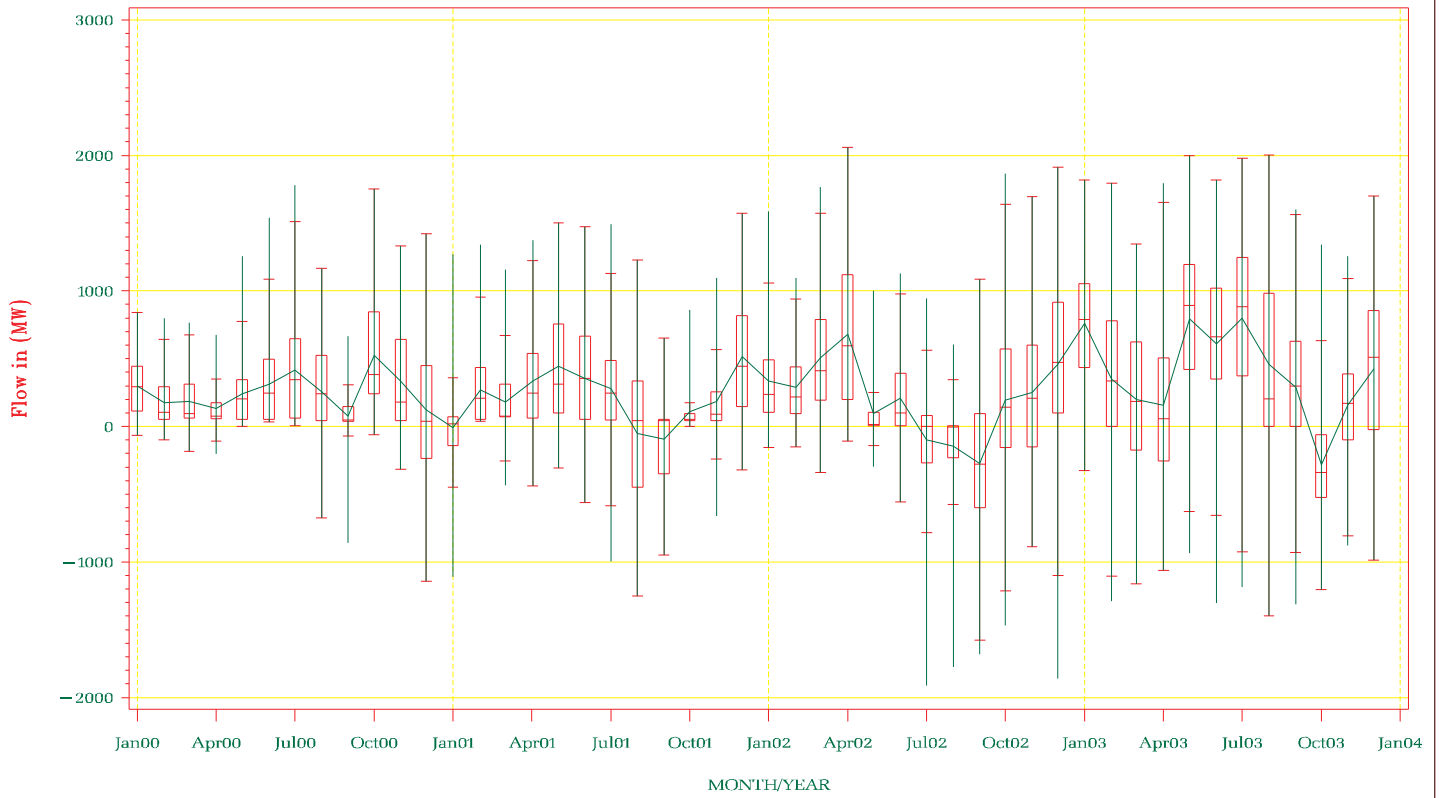
NYISO Percent of time Interface Flow For January 2000 – December 2003

ONTARIO-NY SCHEDULE



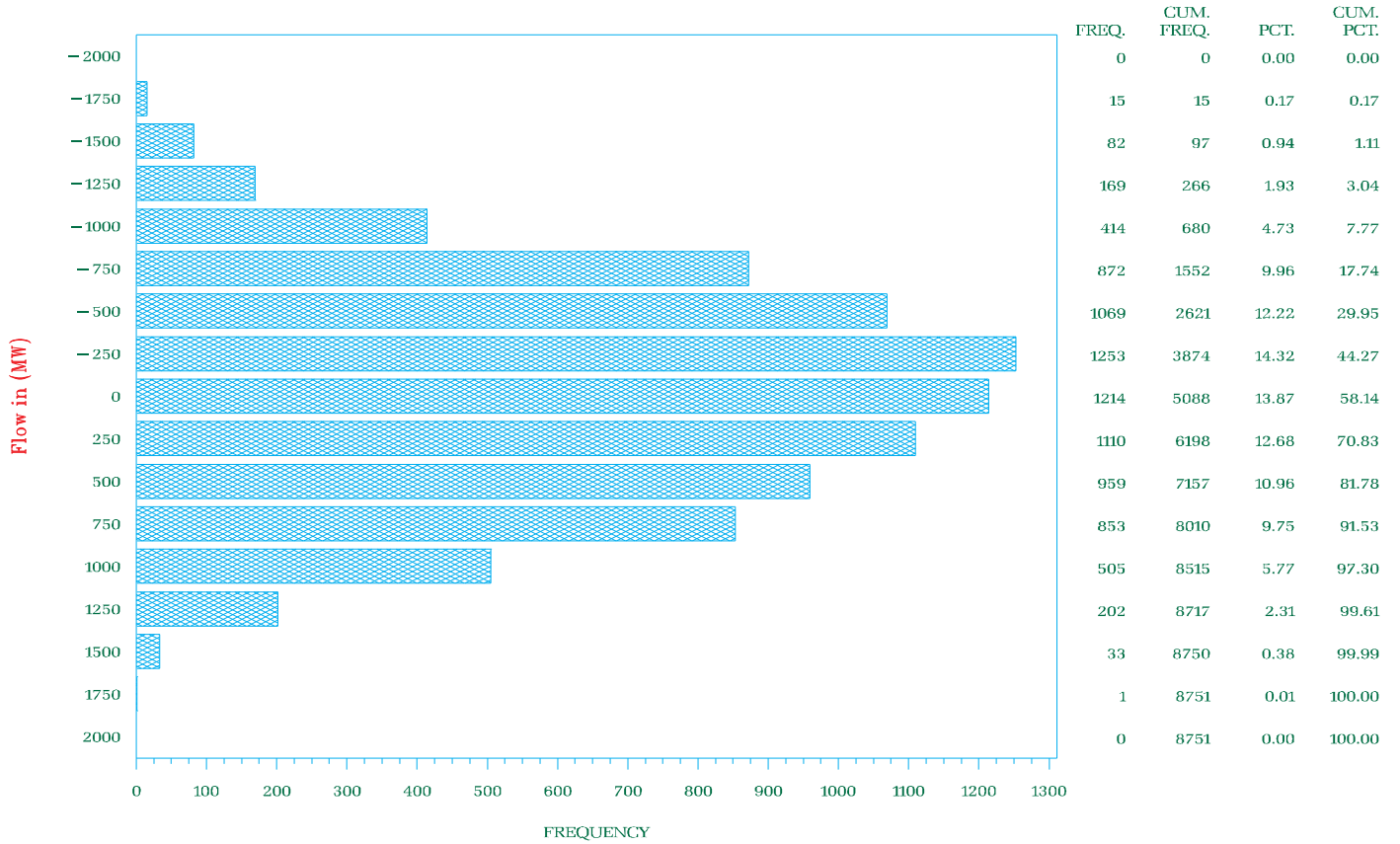
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

ONTARIO-NY SCHEDULE



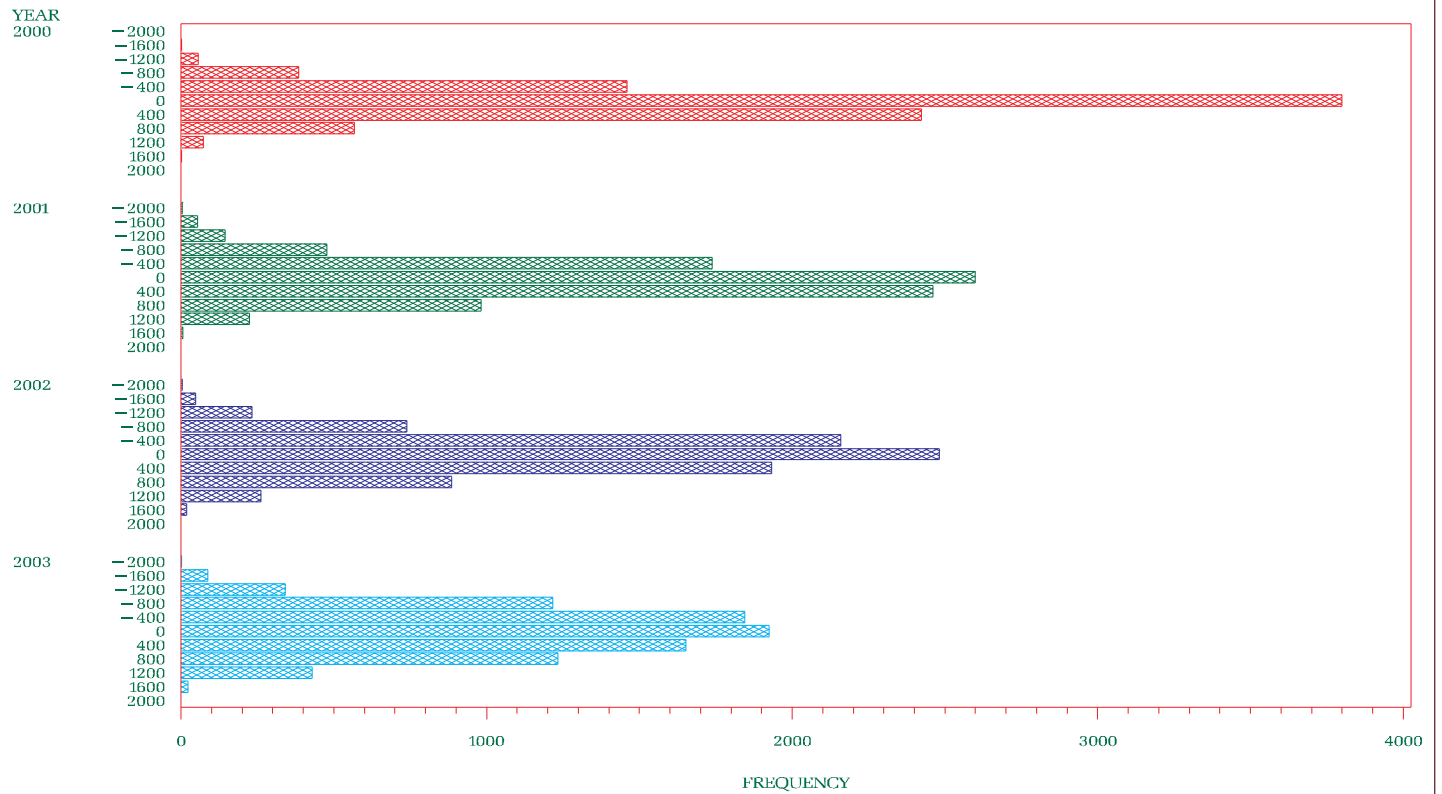
NYISO Frequency Interface Flow For January – December 2003

ONTARIO – NY



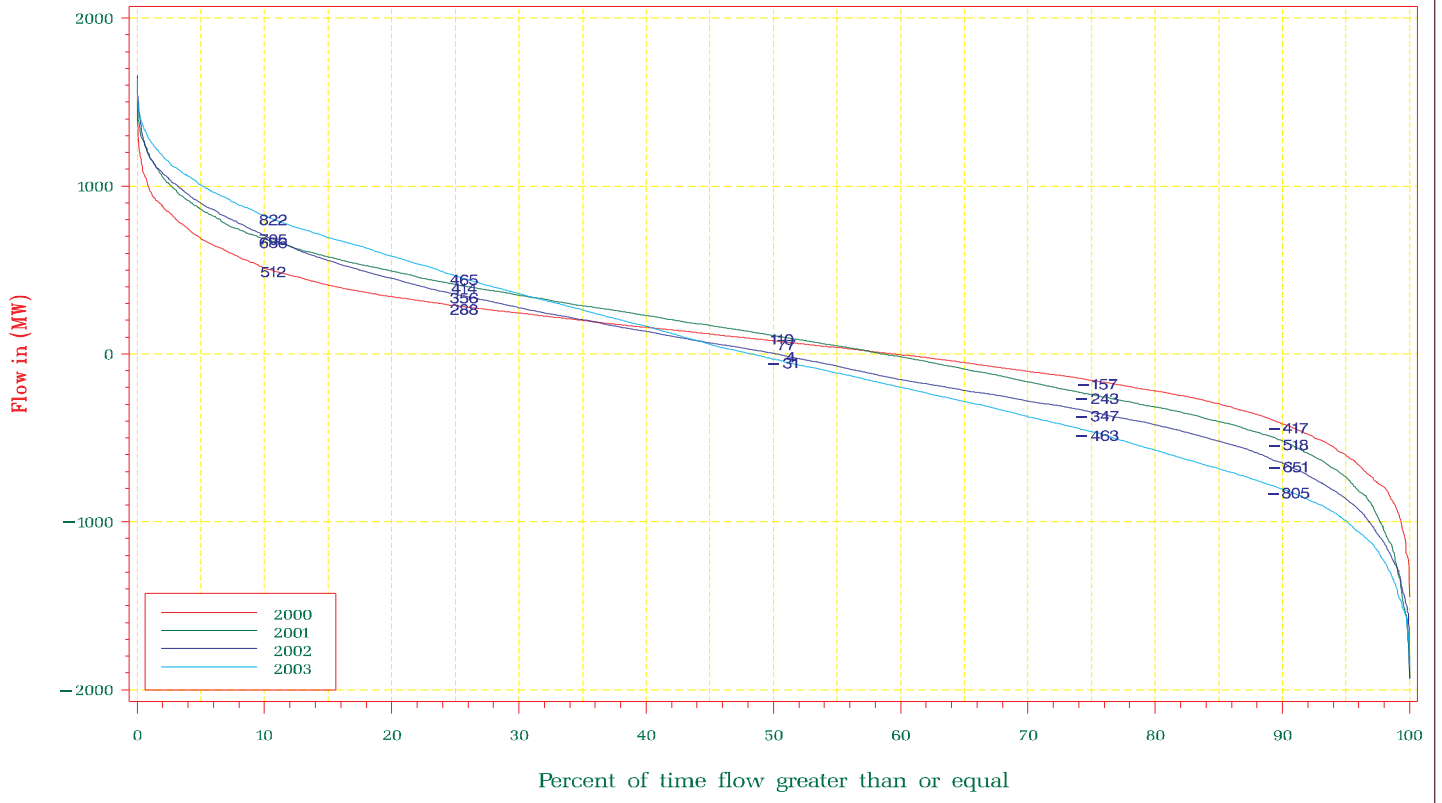
NYISO Frequency Interface Flow For January 2000 – December 2003

ONTARIO – NY

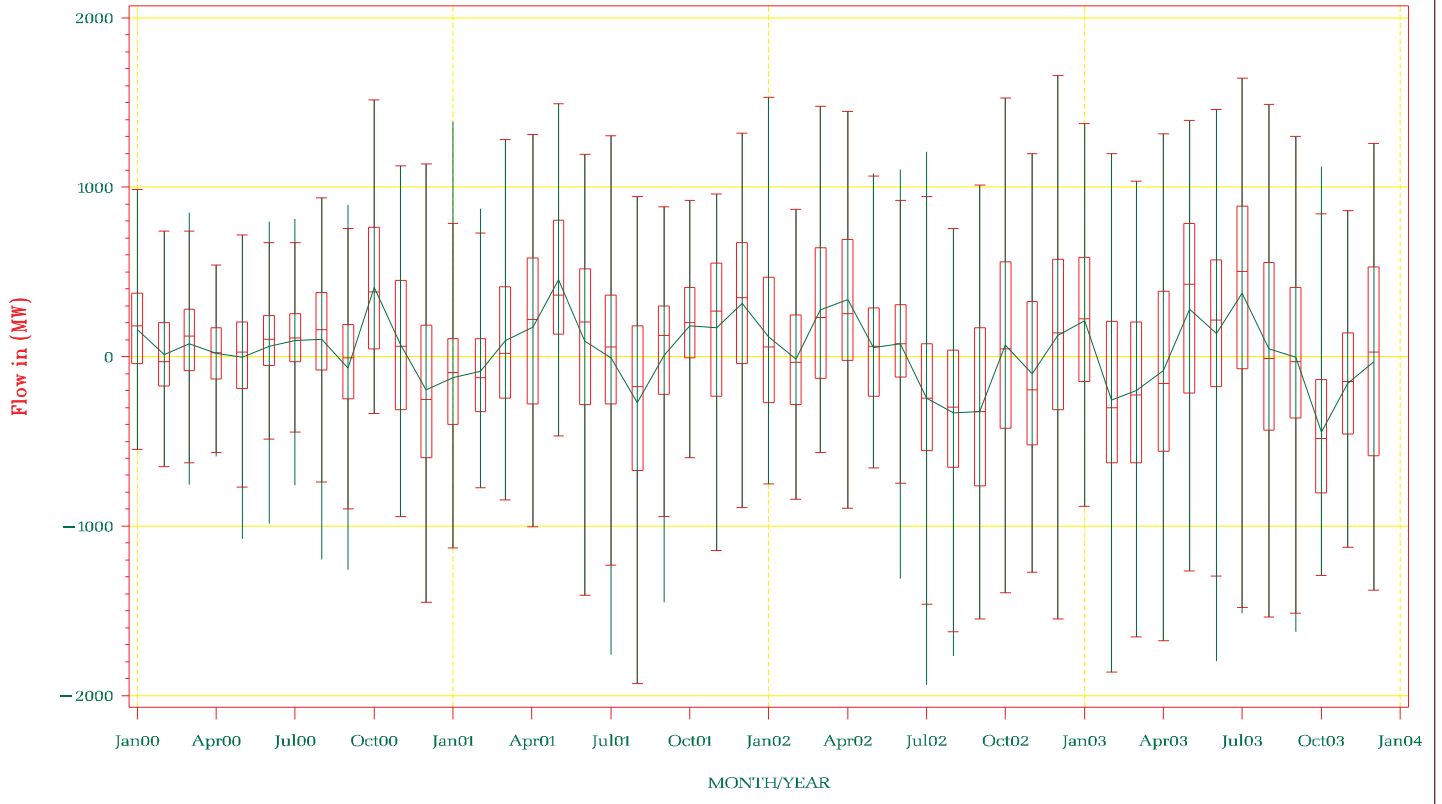




NYISO Percent of time Interface Flow For January 2000 – December 2003  
**ONTARIO – NY**

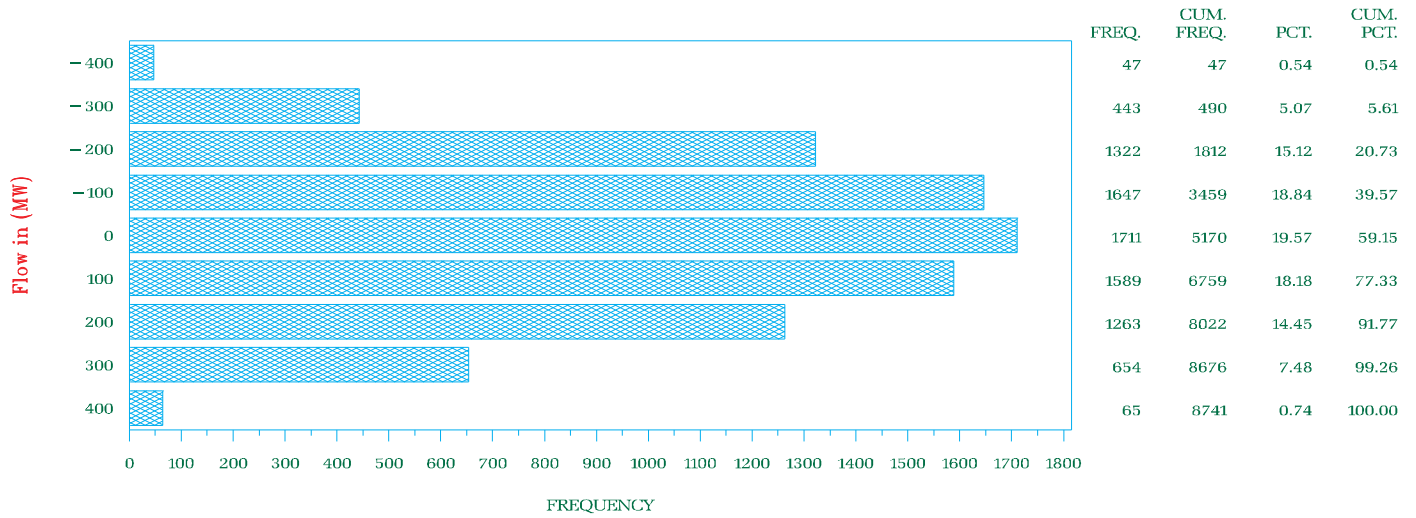


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**ONTARIO – NY**



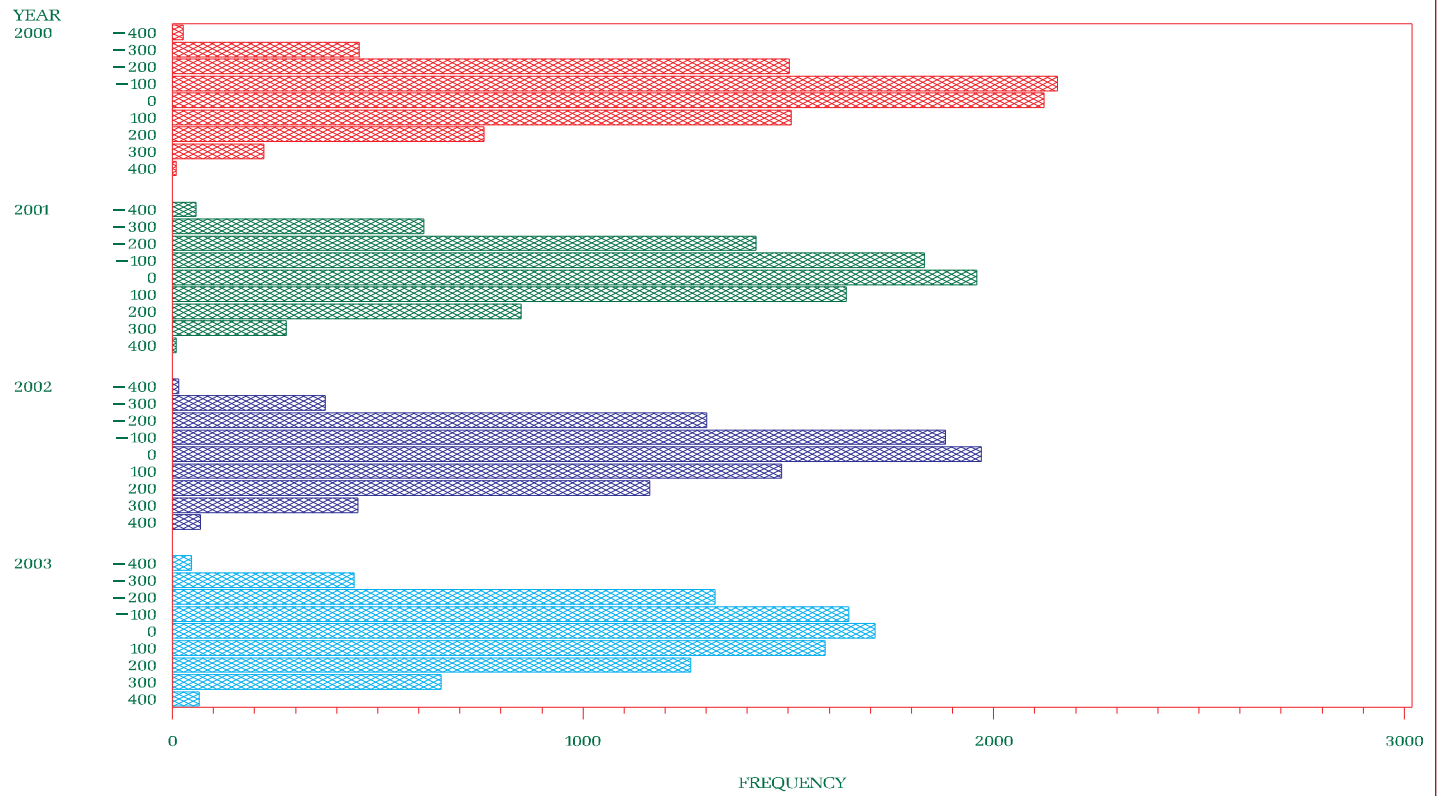
NYISO Frequency Interface Flow For January – December 2003

Ontario East – Adirondack



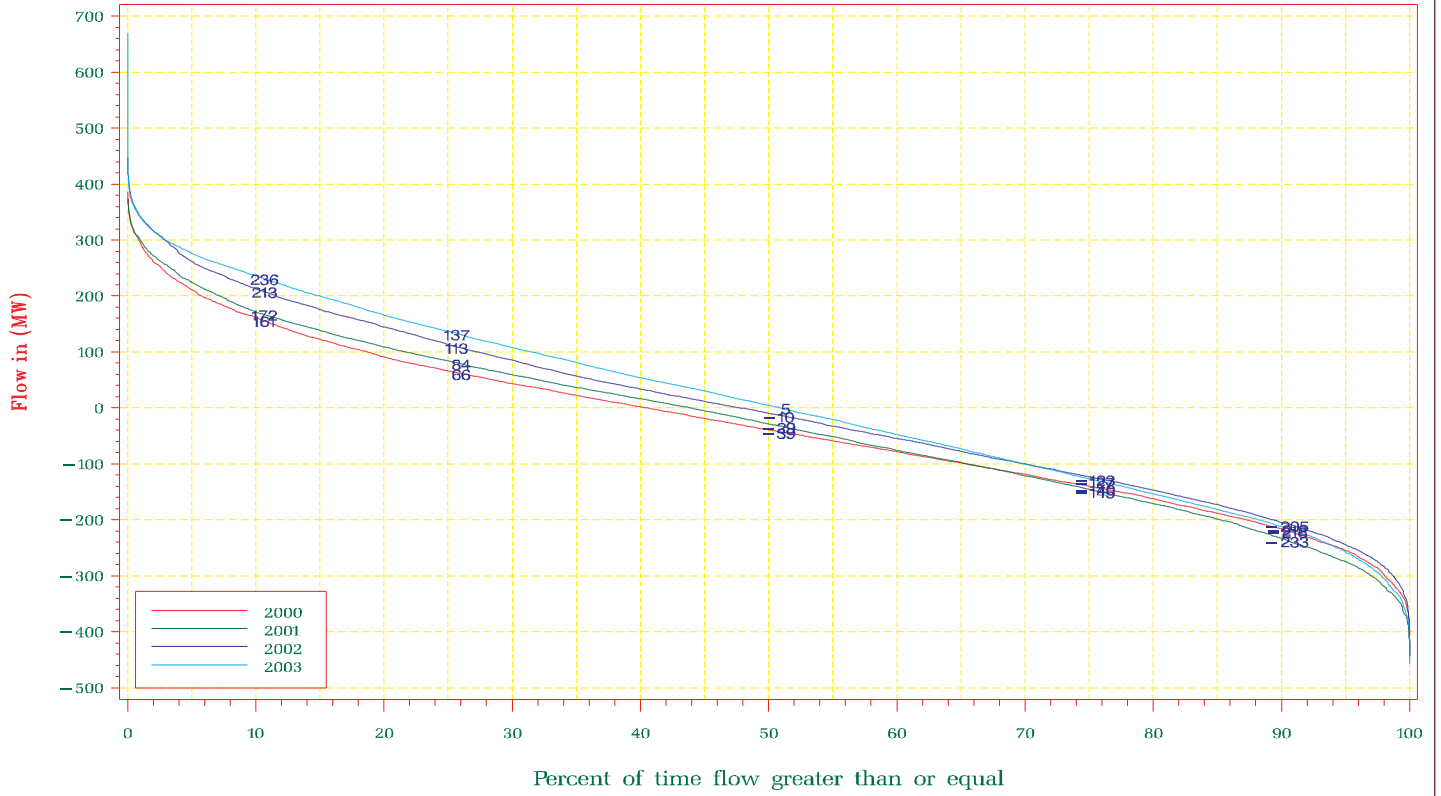
NYISO Frequency Interface Flow For January 2000 – December 2003

Ontario East – Adirondack



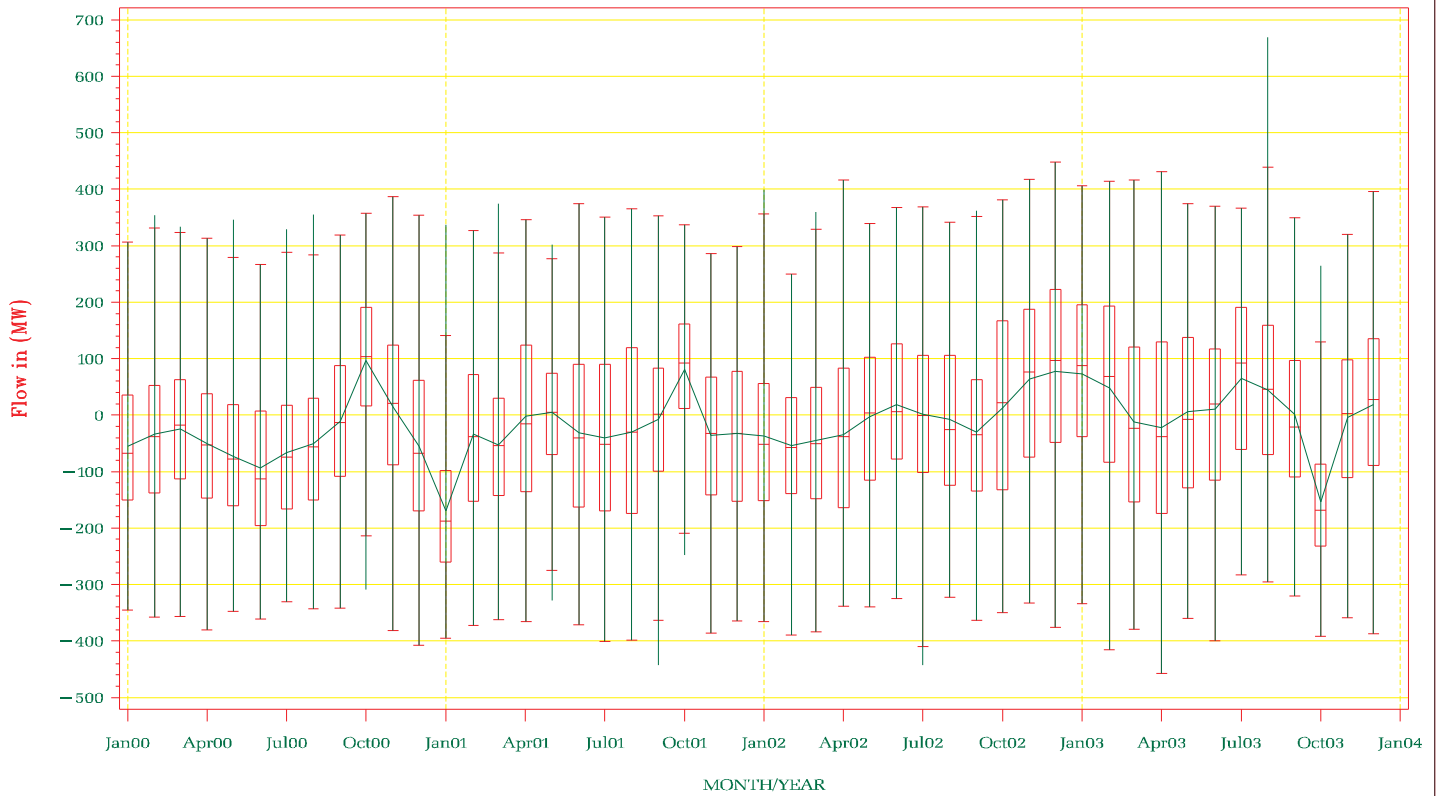
NYISO Percent of time Interface Flow For January 2000 – December 2003

Ontario East – Adirondack



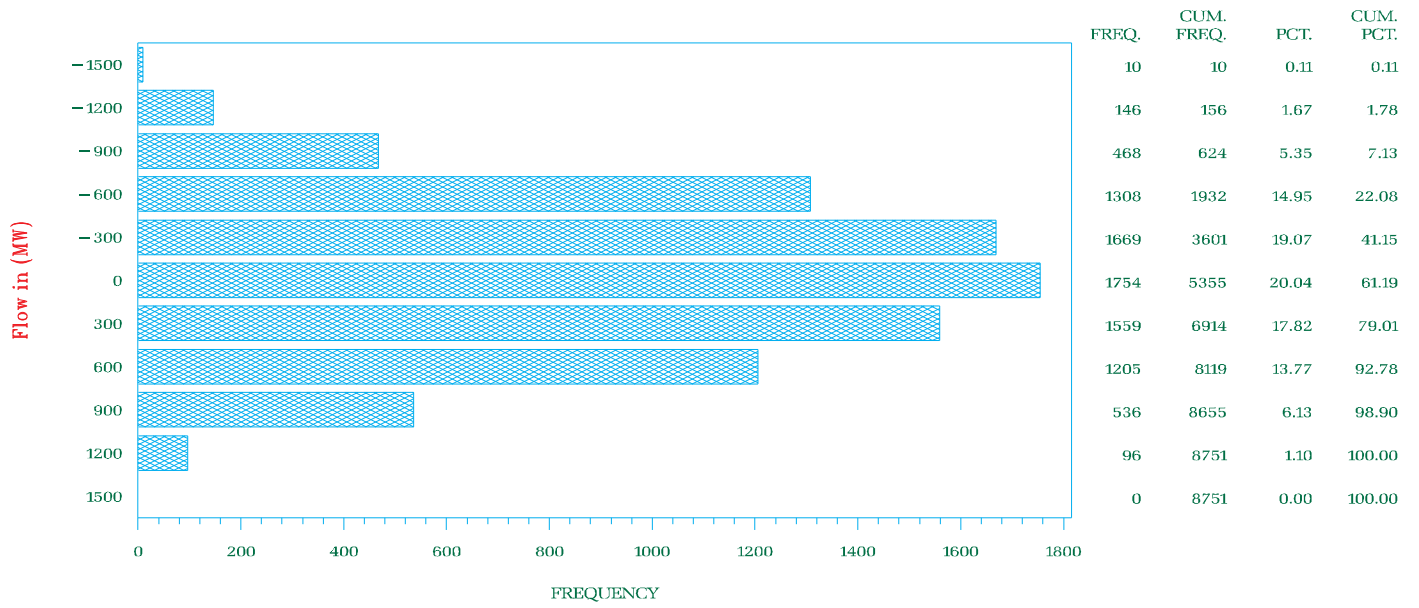
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Ontario East – Adirondack



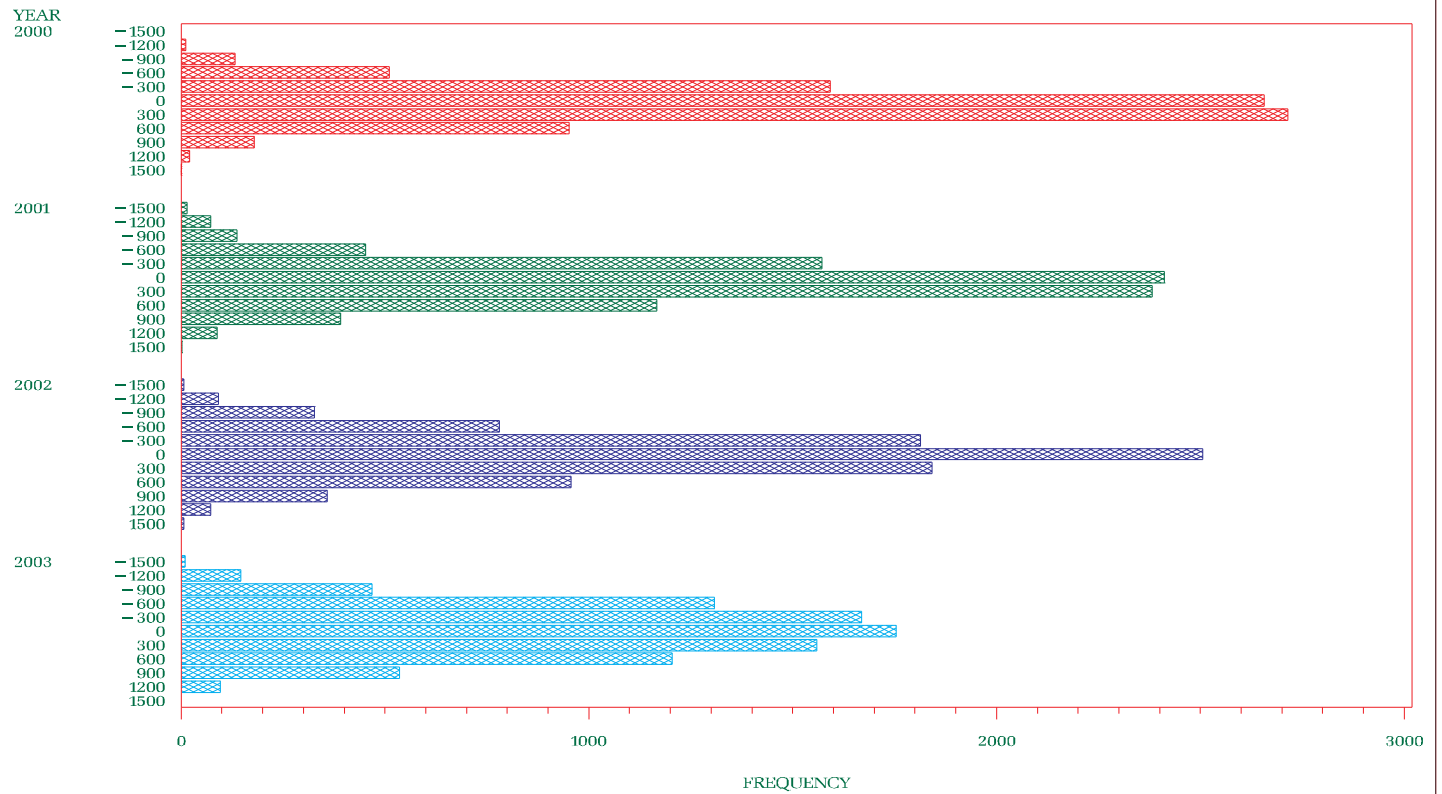
NYISO Frequency Interface Flow For January – December 2003

Ontario South – Frontier



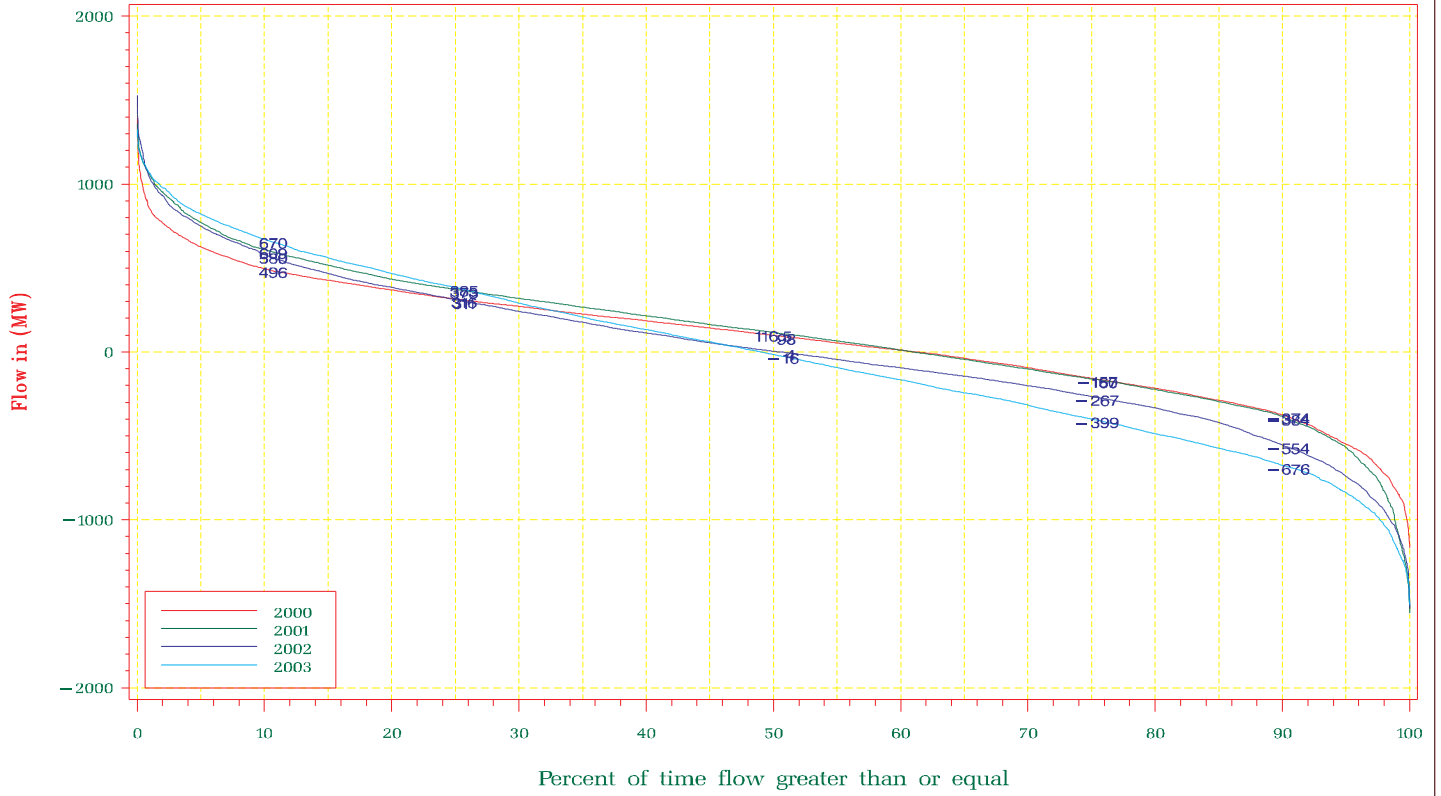
NYISO Frequency Interface Flow For January 2000 – December 2003

Ontario South – Frontier



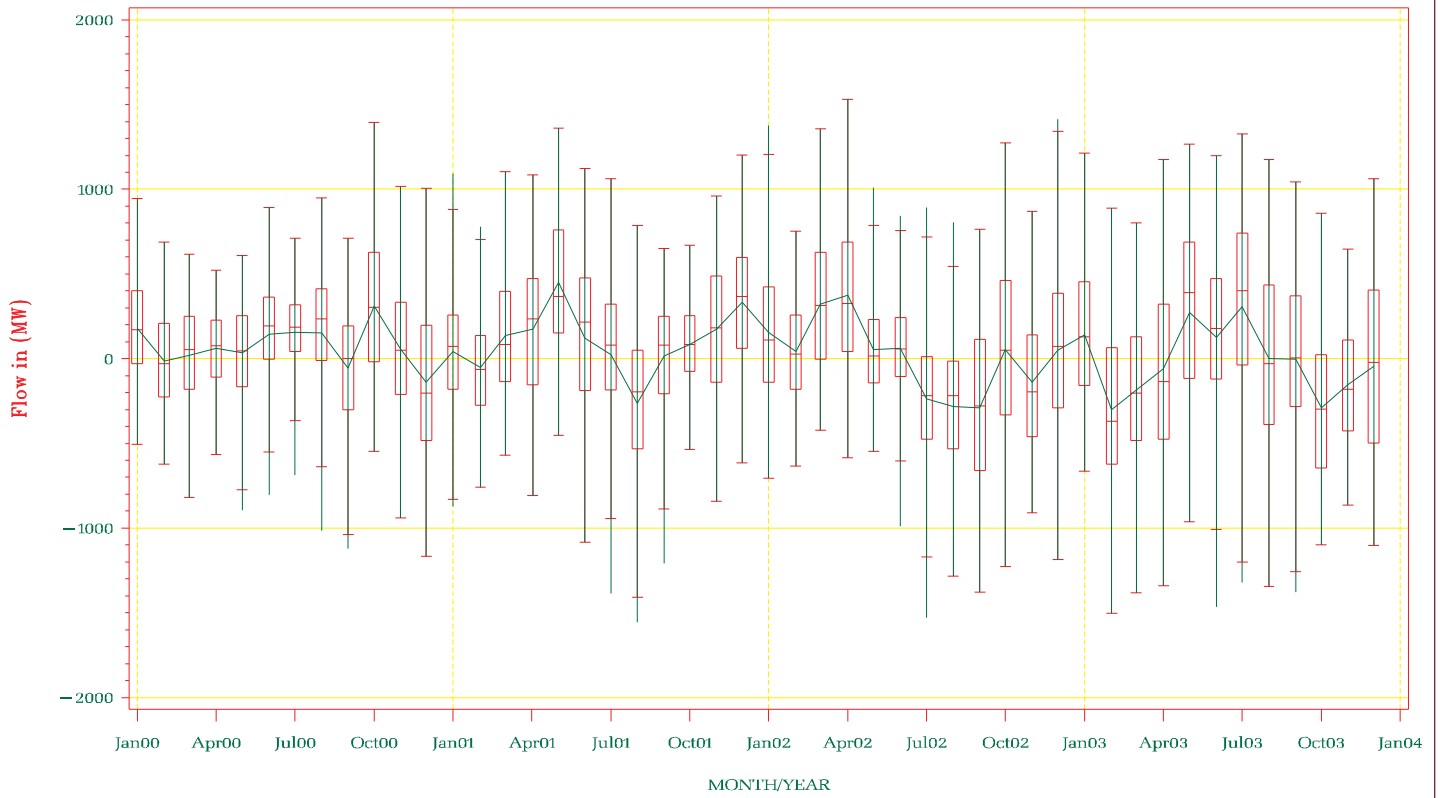
NYISO Percent of time Interface Flow For January 2000 – December 2003

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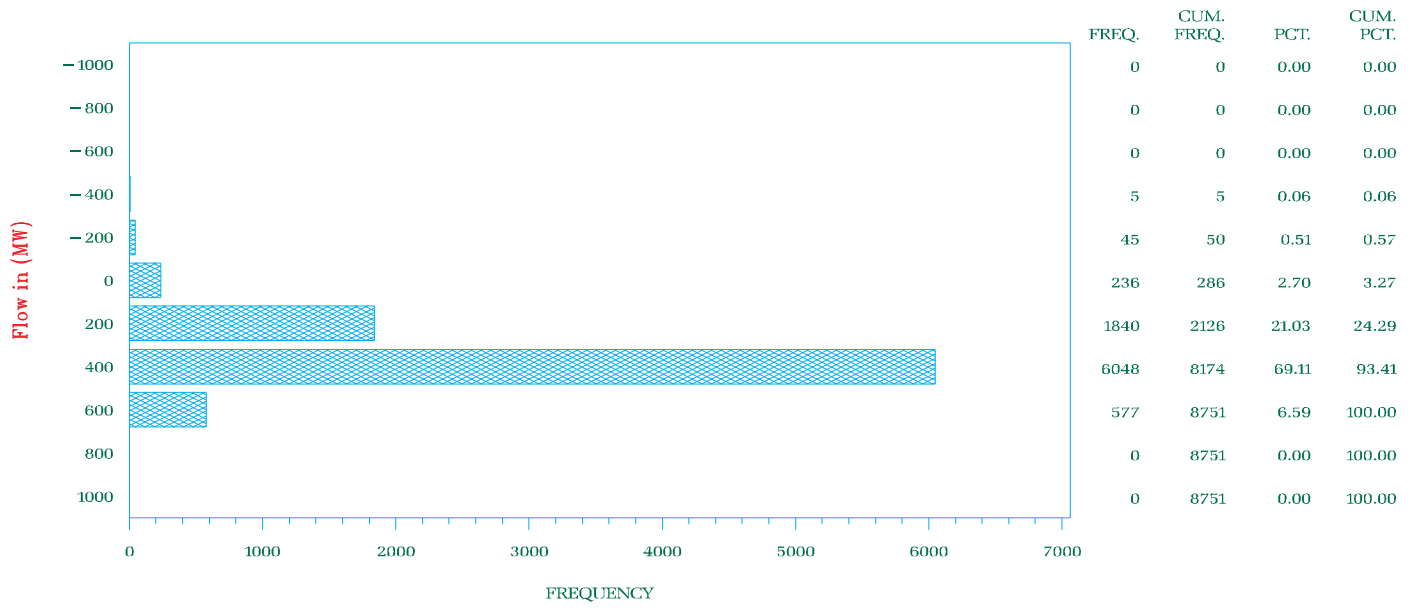
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Ontario South – Frontier



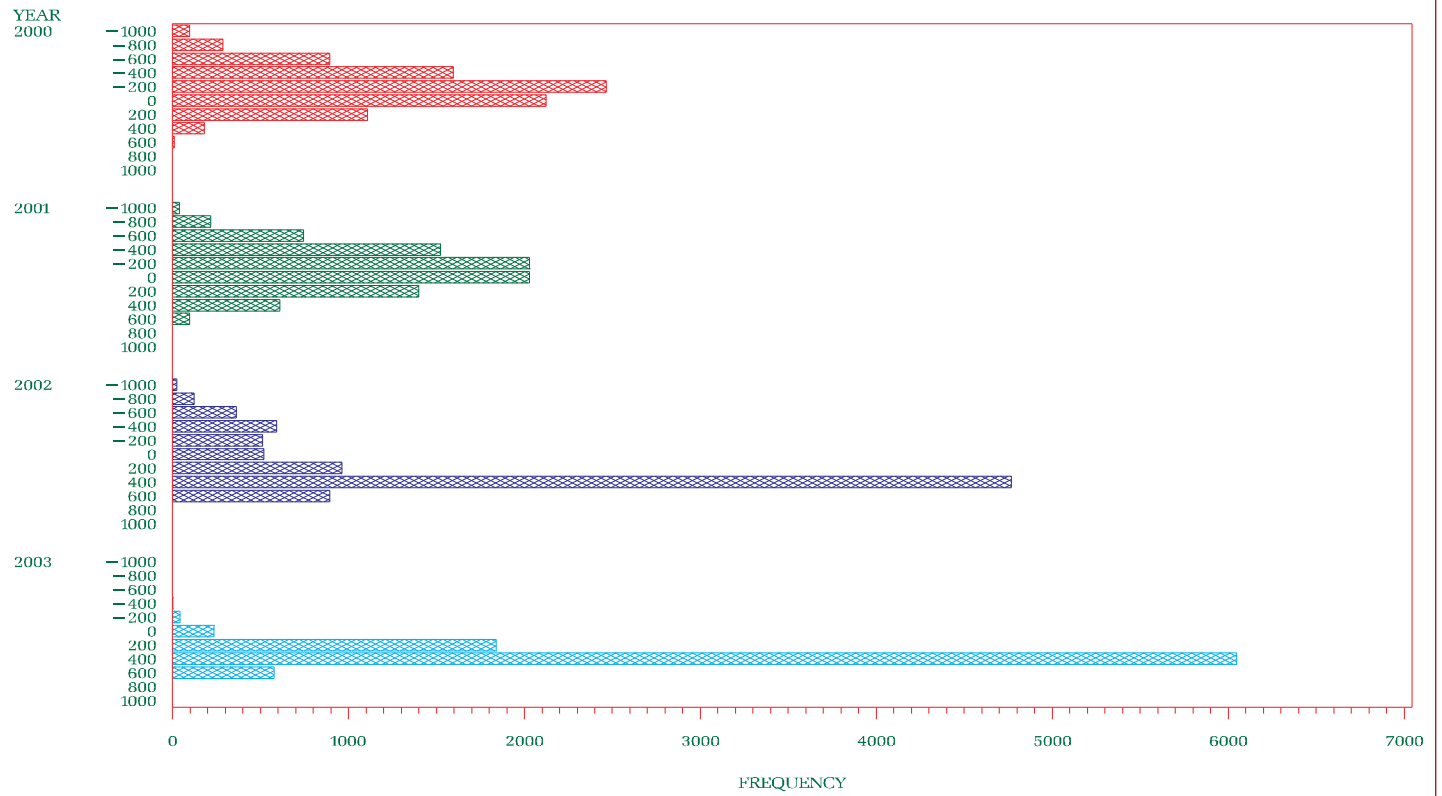
NYISO Frequency Interface Flow For January – December 2003

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



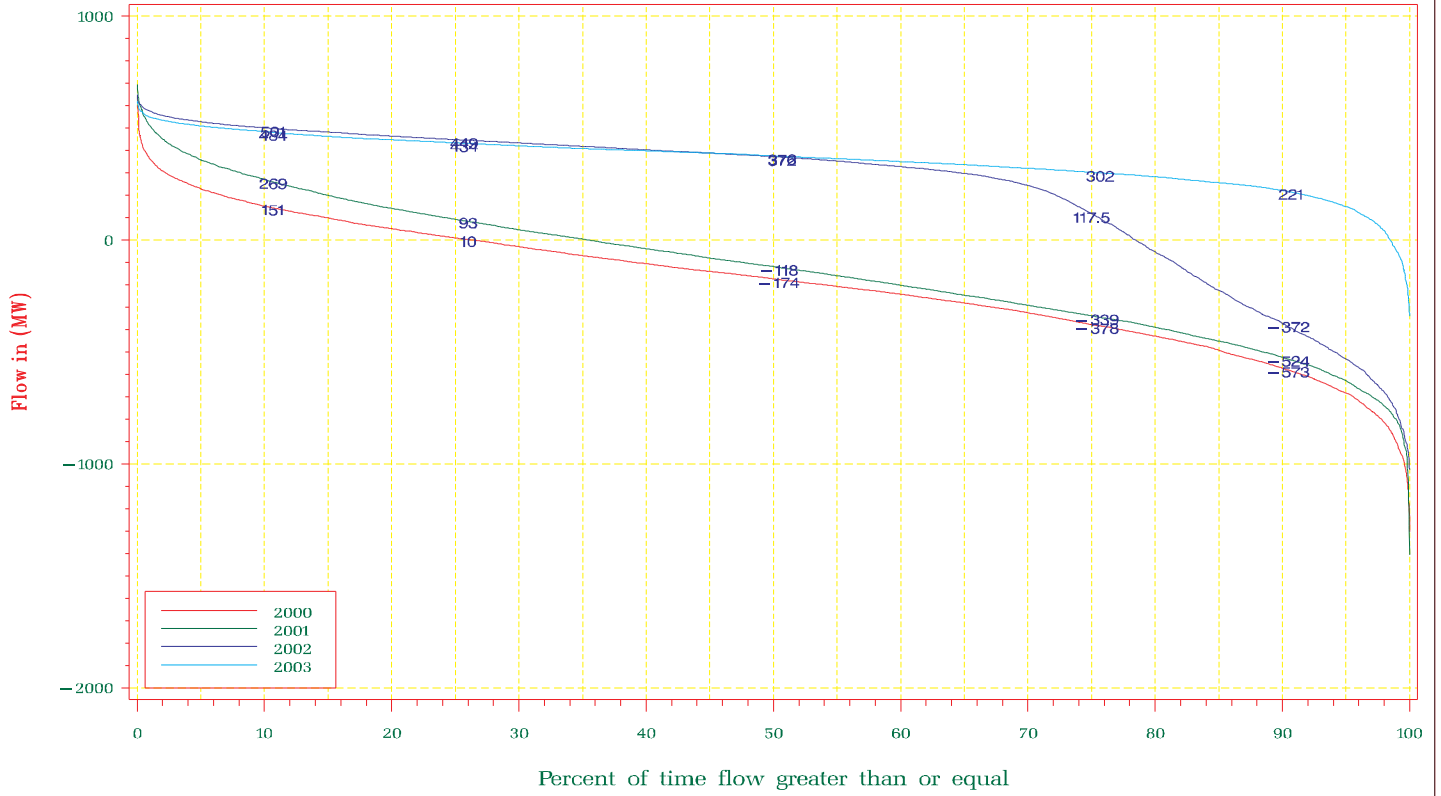
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NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



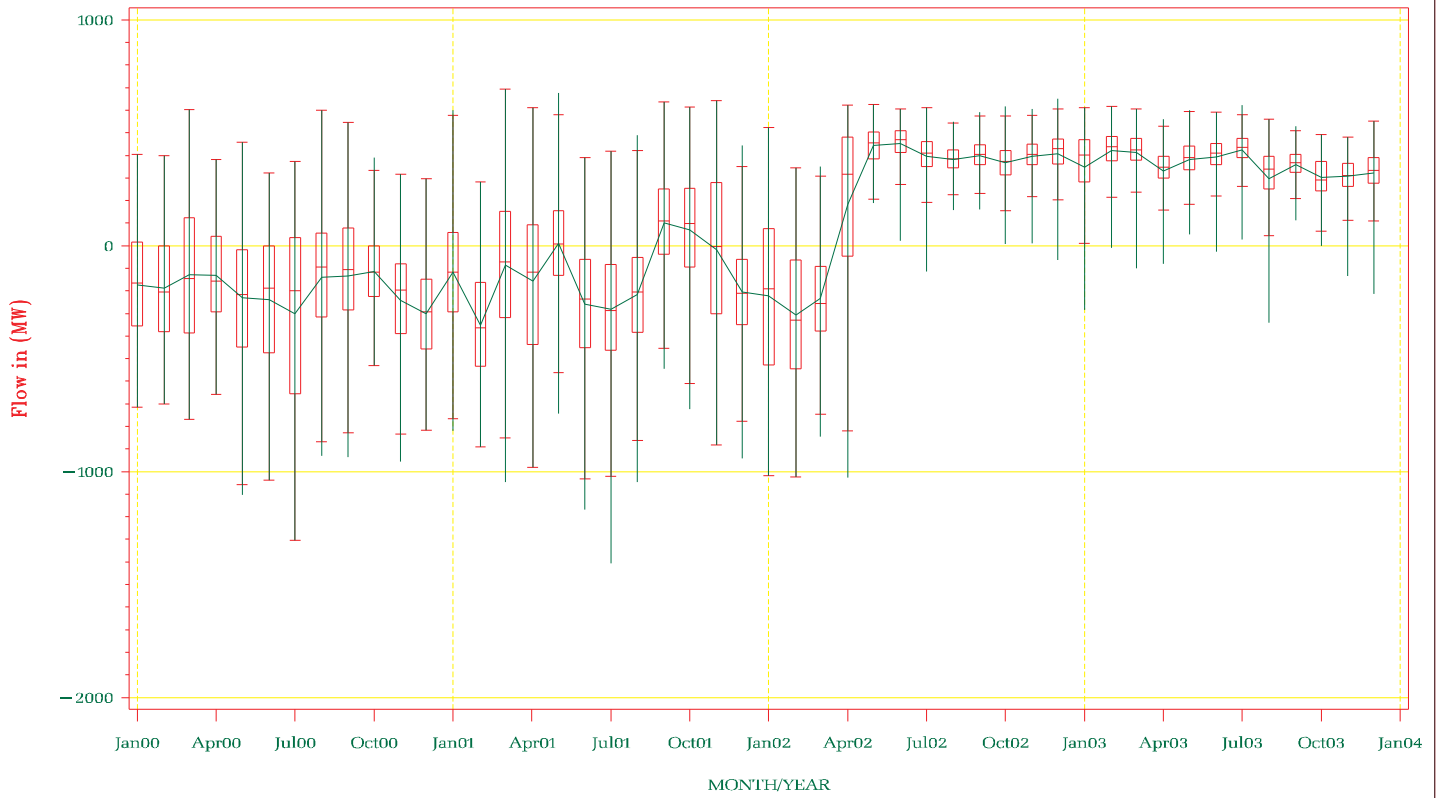
NYISO Percent of time Interface Flow For January 2000 – December 2003

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



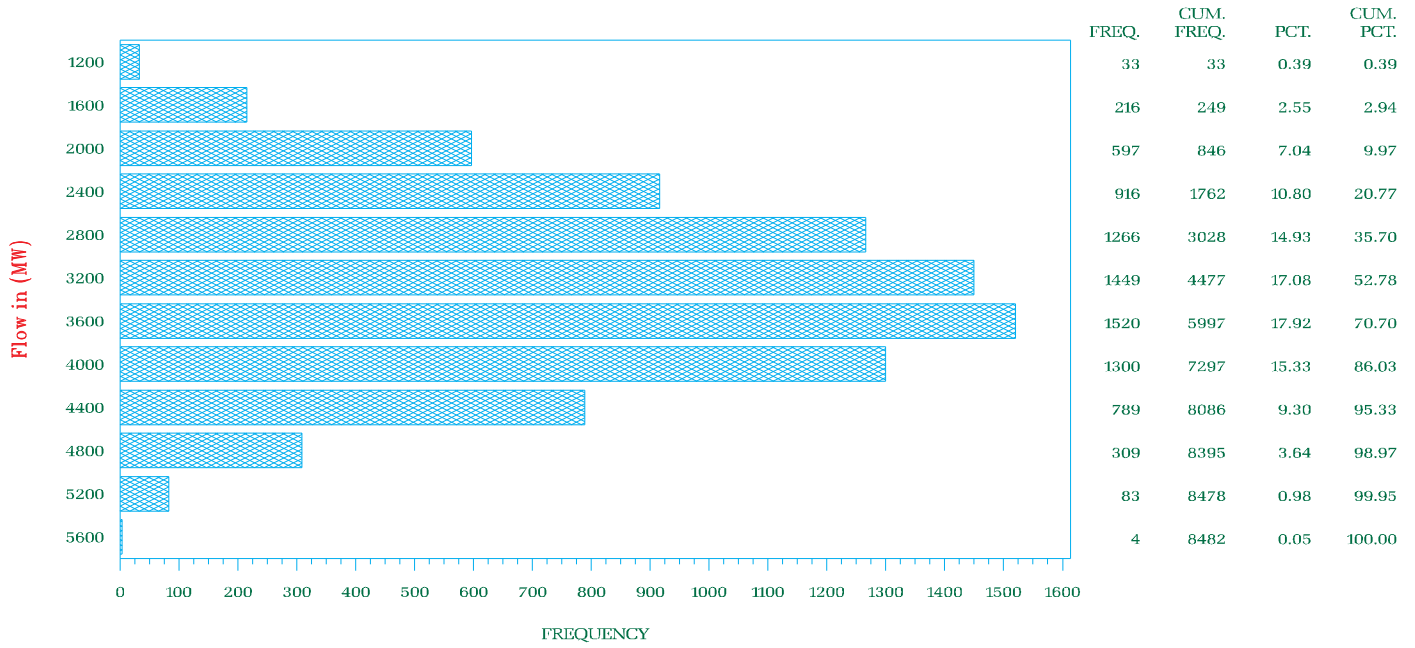
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION



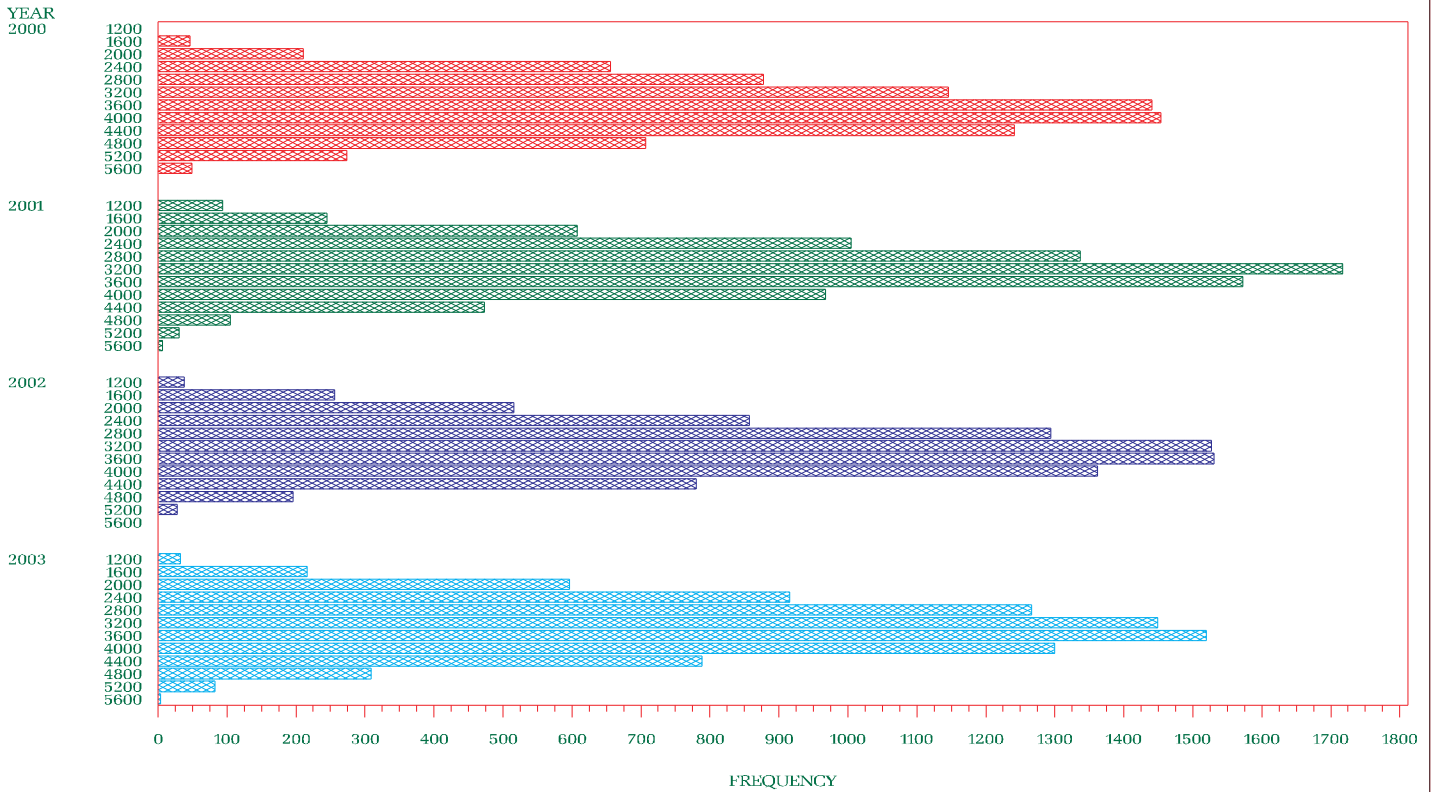
NYISO Frequency Interface Flow For January – December 2003

UPNY – SENY (OPEN)



NYISO Frequency Interface Flow For January 2000 – December 2003

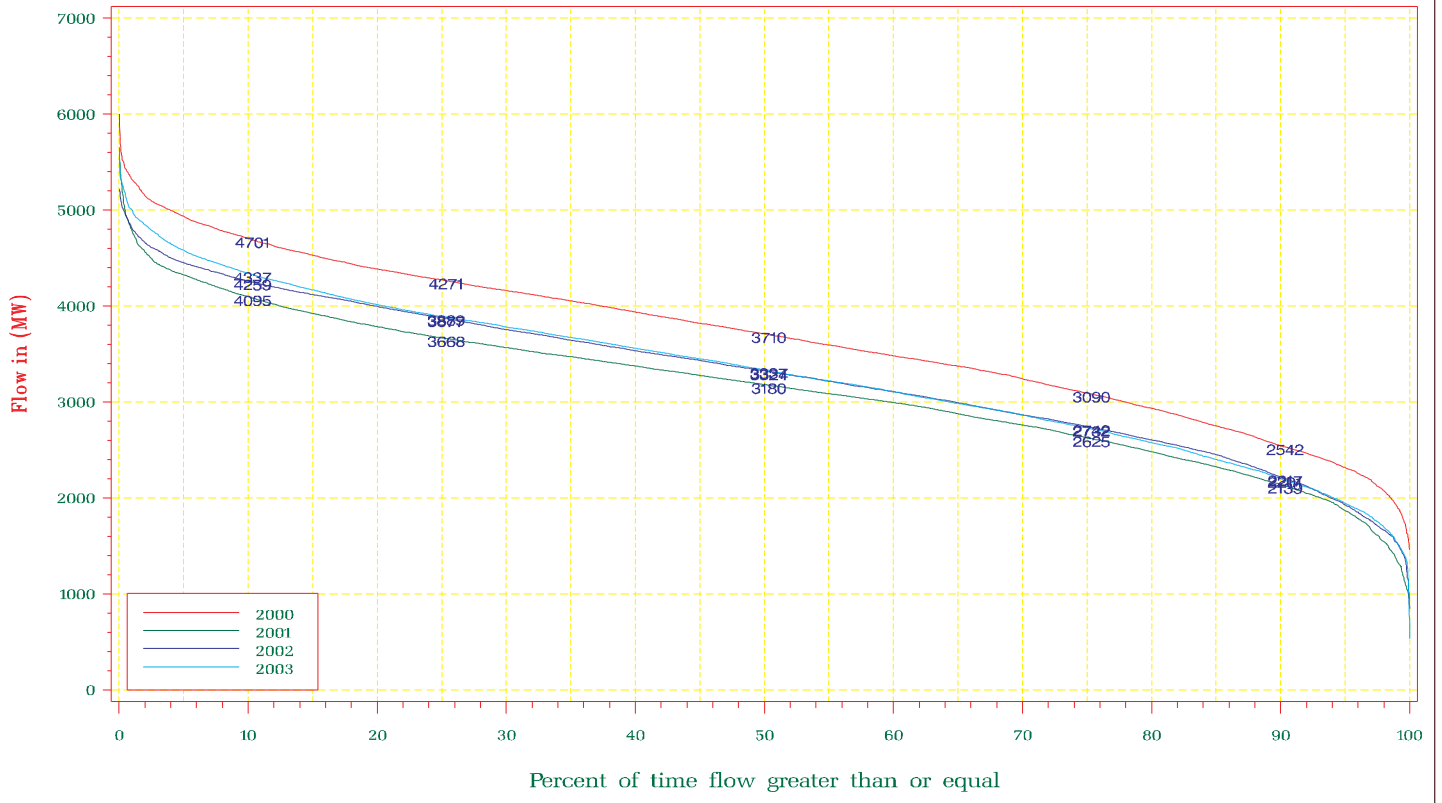
UPNY – SENY (OPEN)





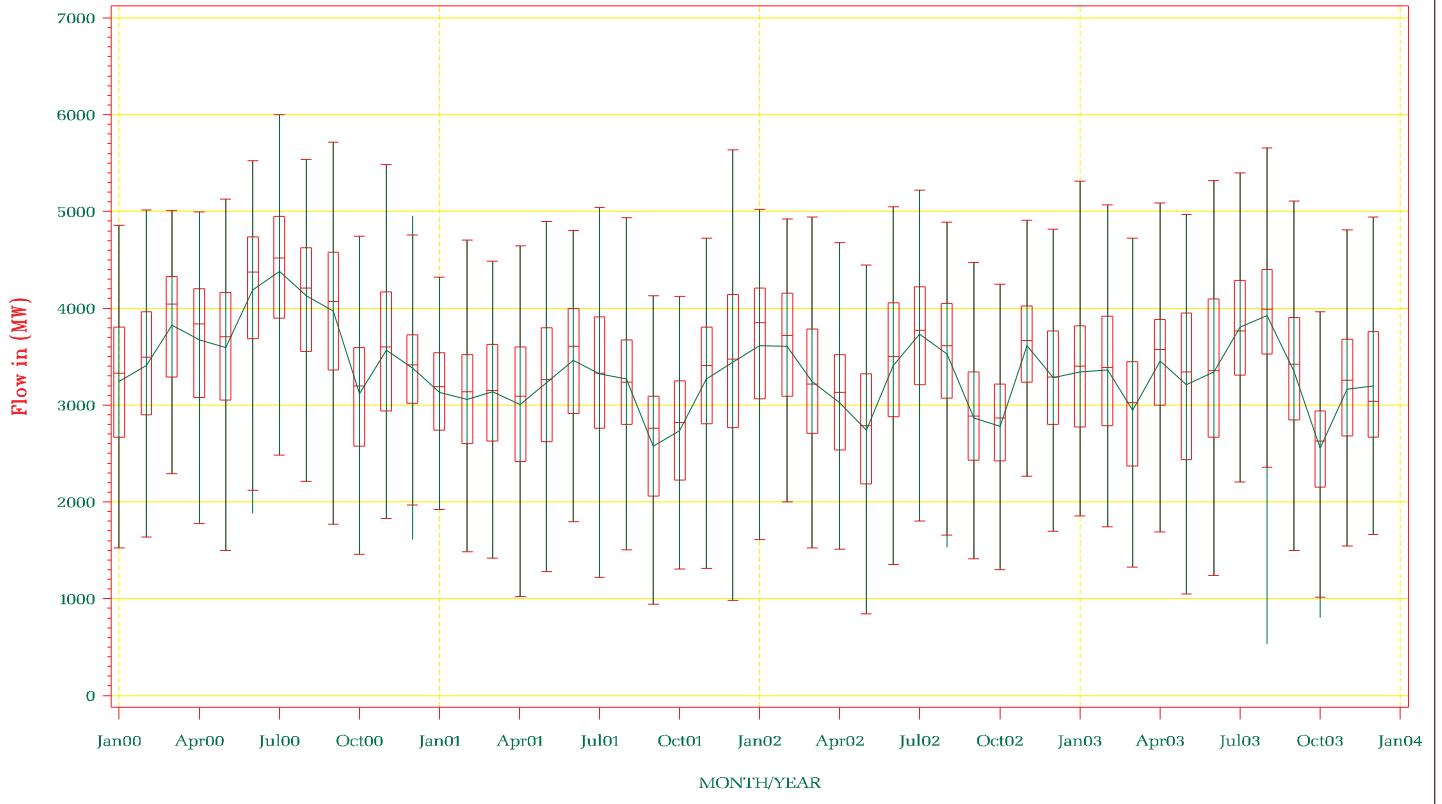
NYISO Percent of time Interface Flow For January 2000 – December 2003

UPNY – SENY (OPEN)



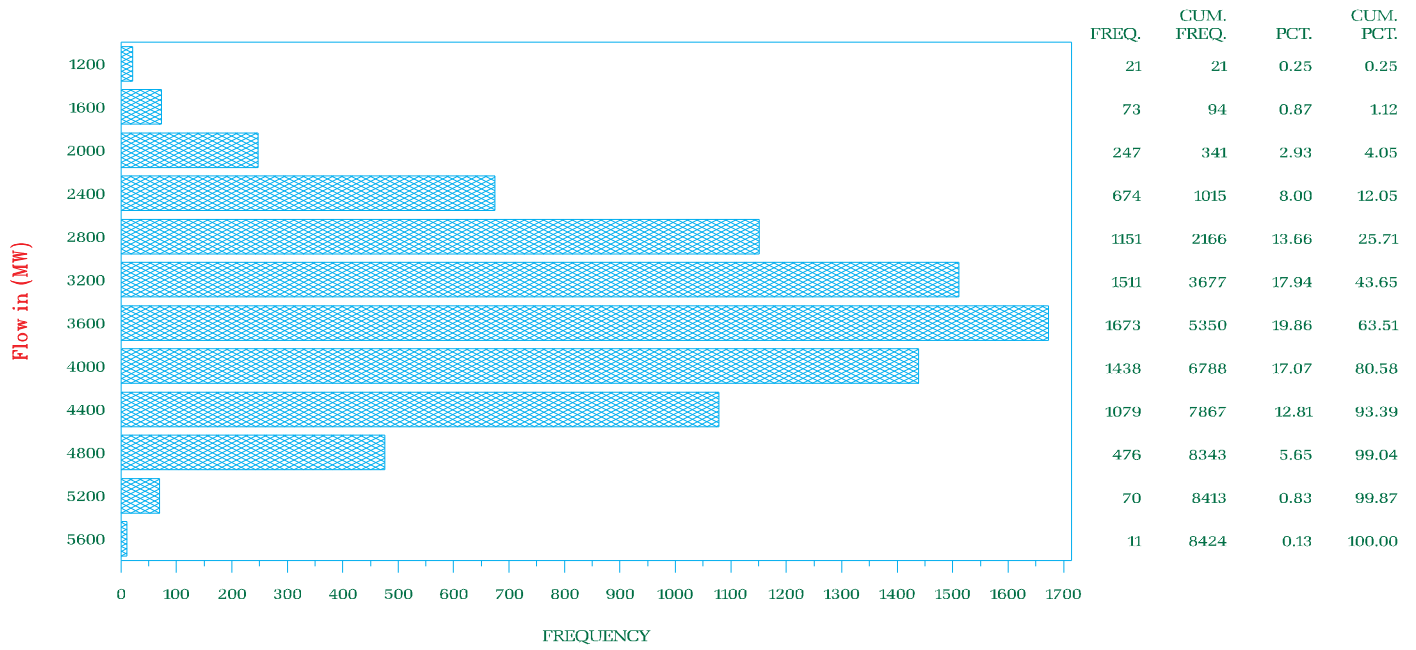
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

UPNY – SENY (OPEN)



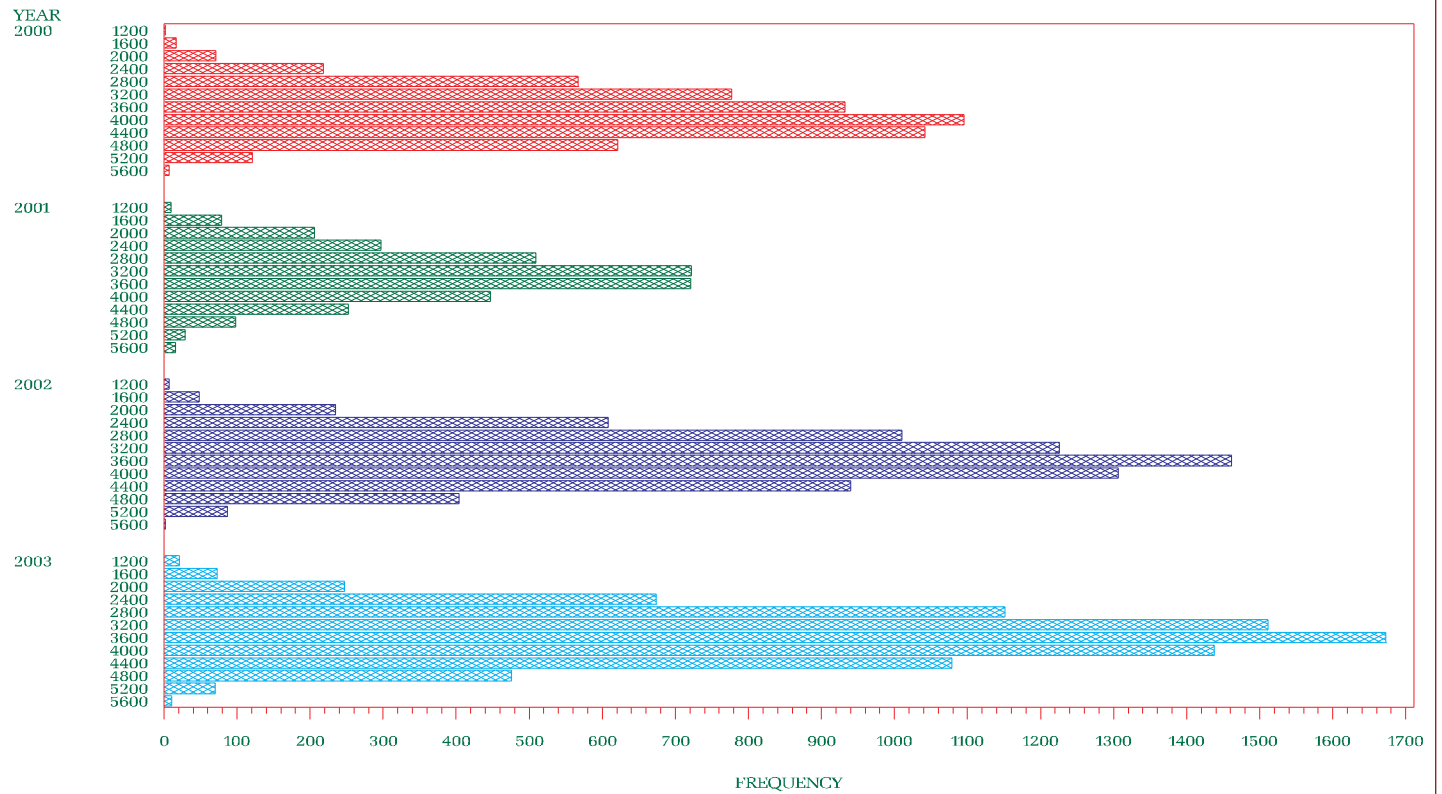
NYISO Frequency Interface Flow For January – December 2003

UPNY – SENY (CLOSED)



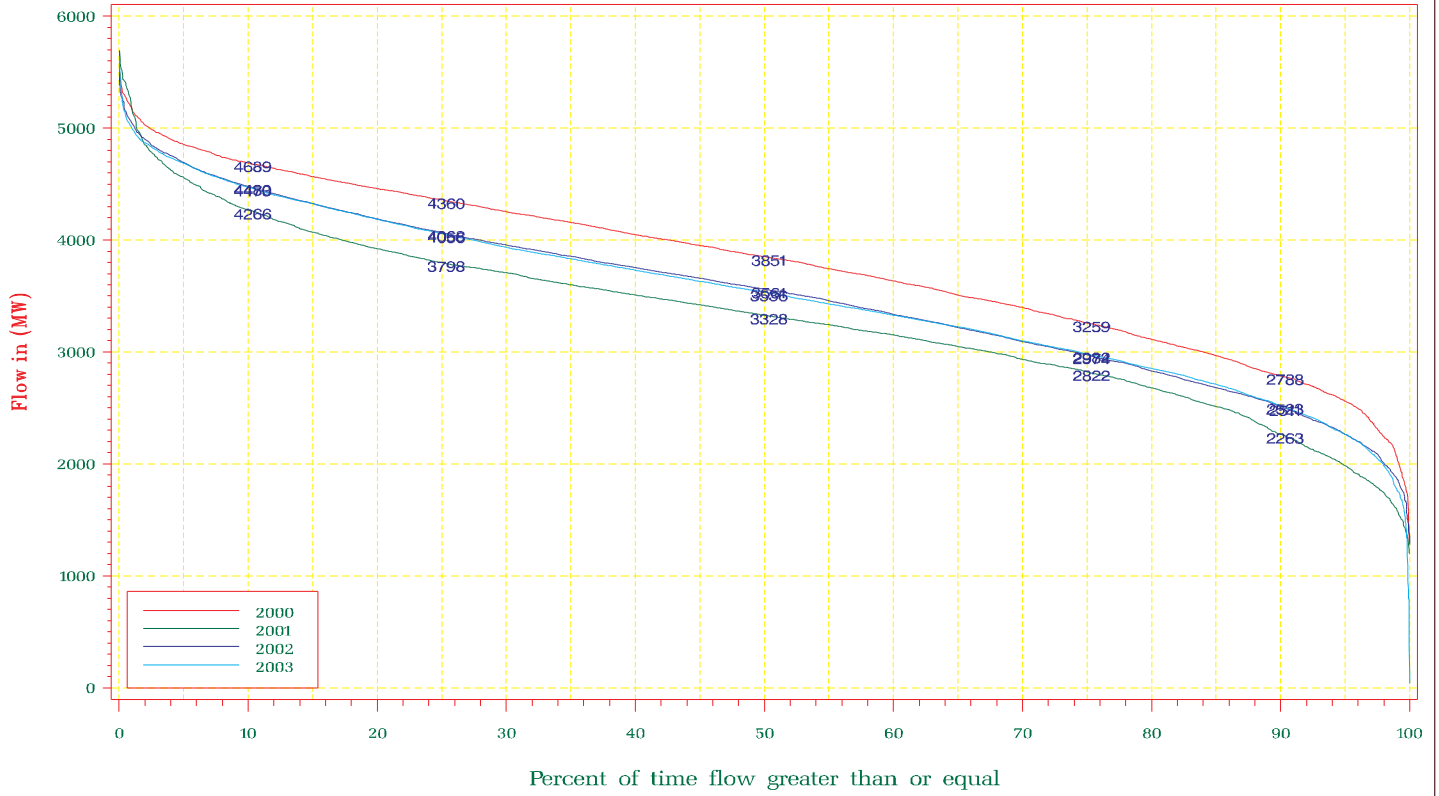
NYISO Frequency Interface Flow For January 2000 – December 2003

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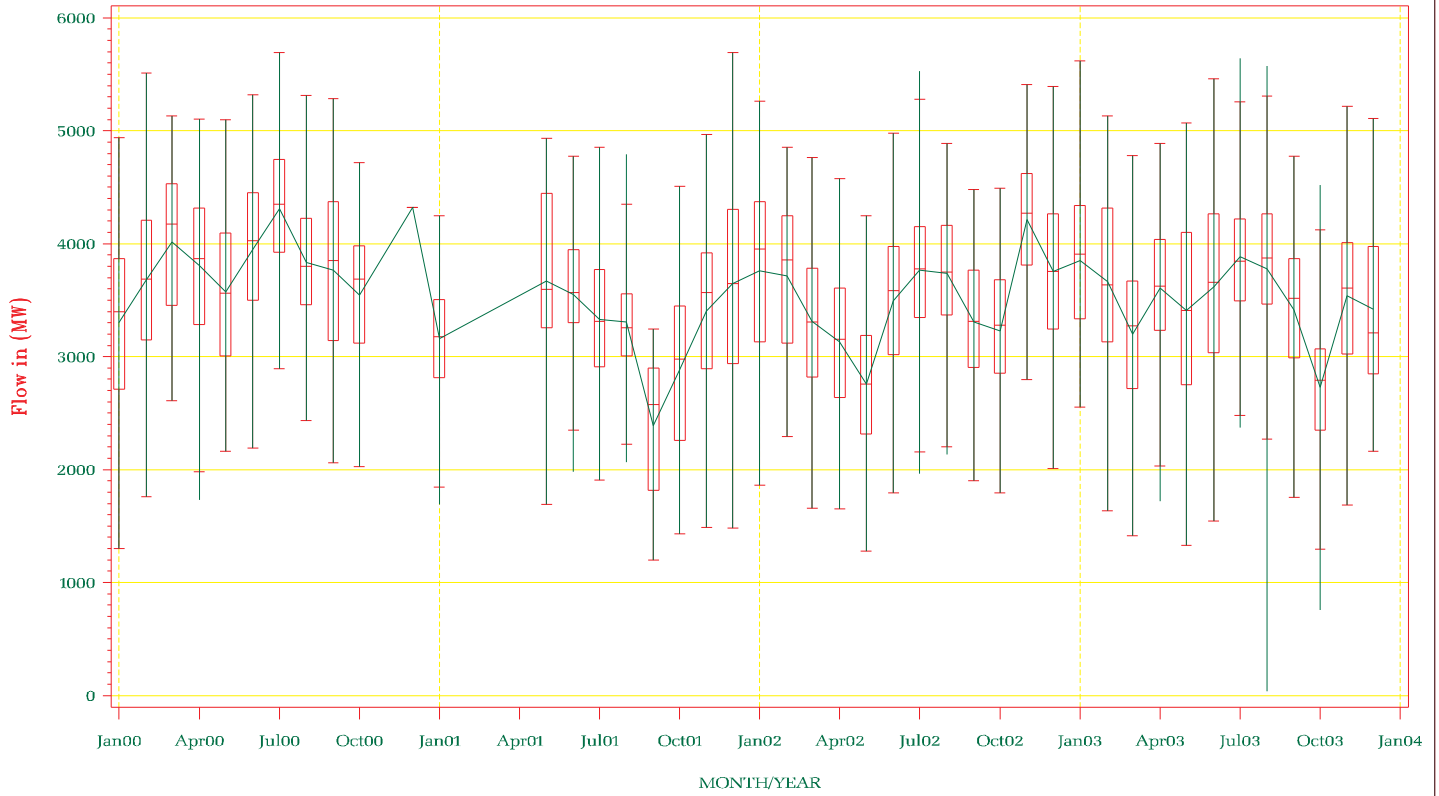
NYISO Percent of time Interface Flow For January 2000 – December 2003

UPNY – SENY (CLOSED)



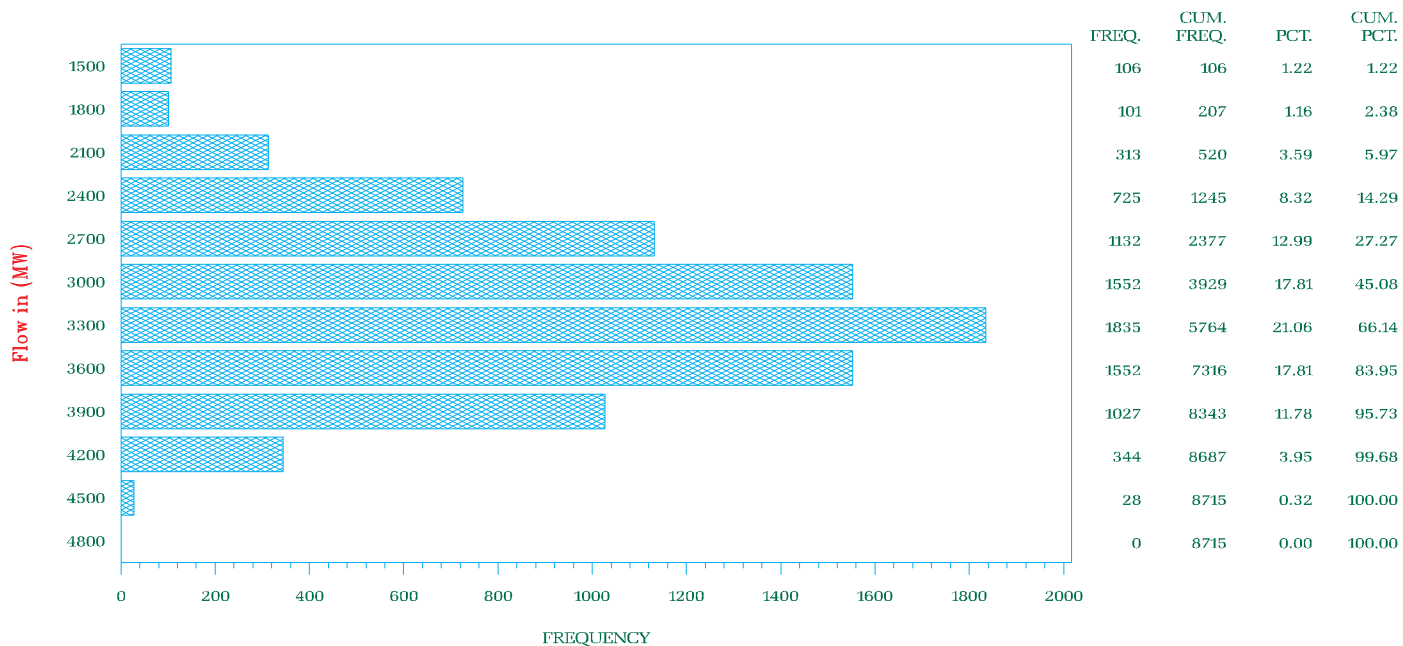
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

UPNY – SENY (CLOSED)



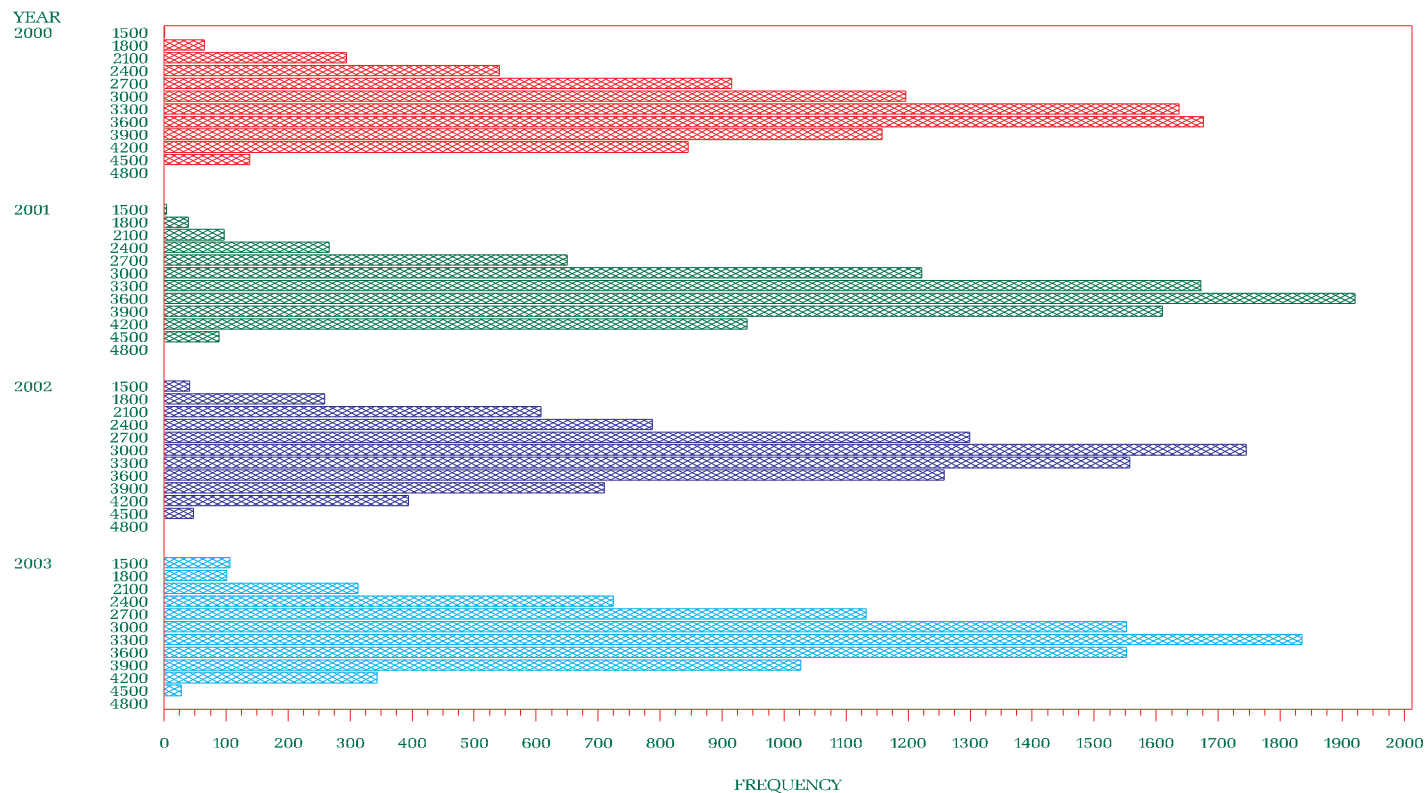
NYISO Frequency Interface Flow For January – December 2003

Volney – East (OPEN)



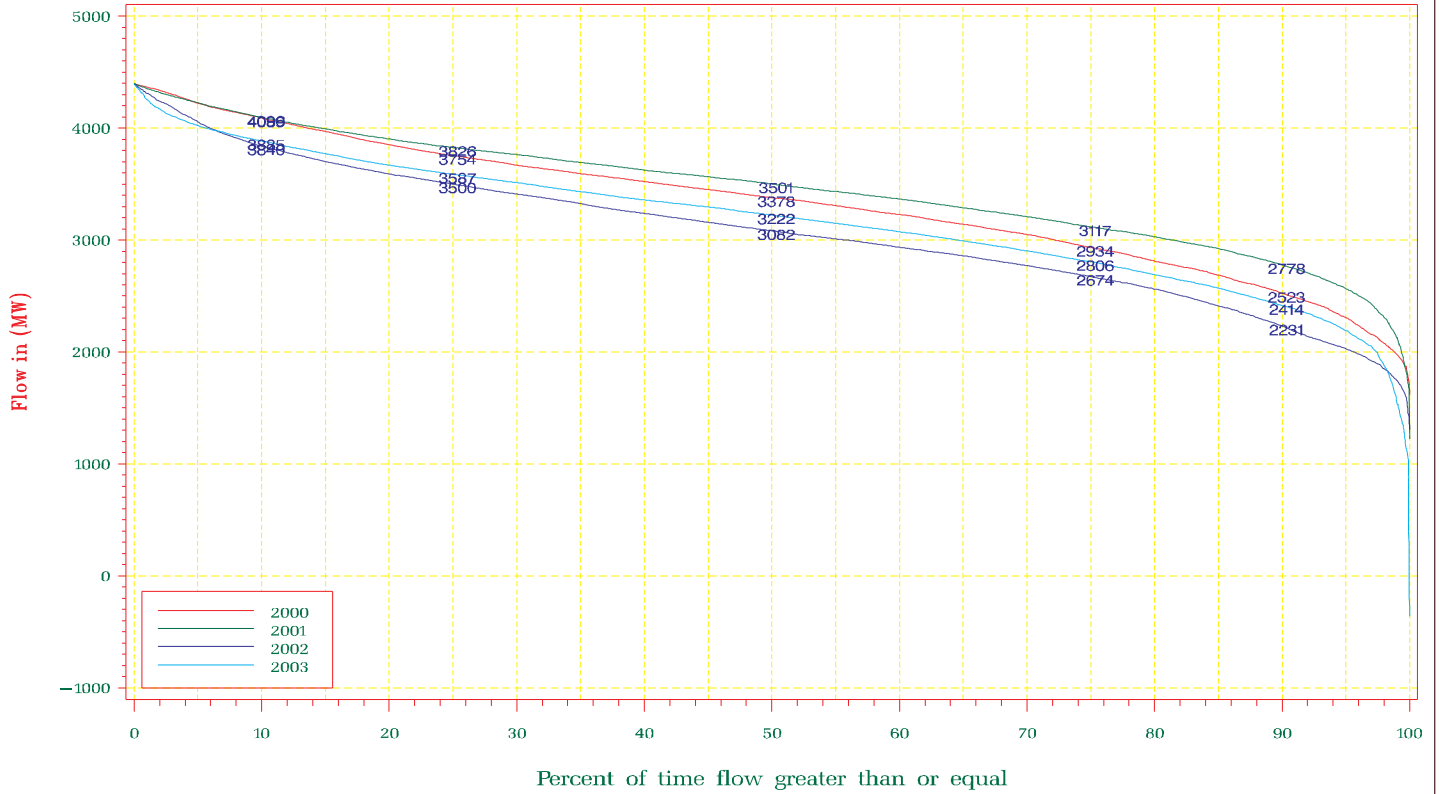
NYISO Frequency Interface Flow For January 2000 – December 2003

Volney – East (OPEN)



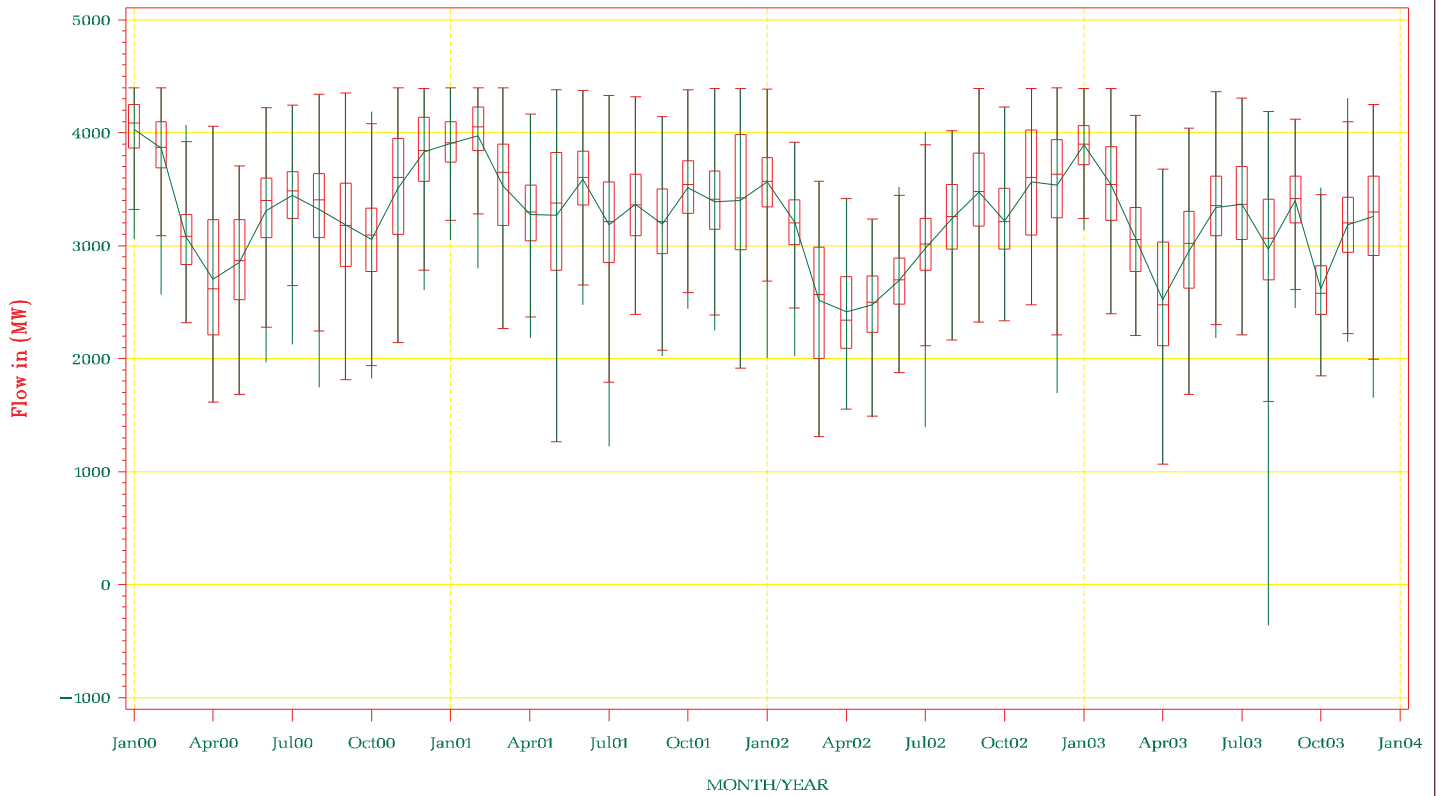
NYISO Percent of time Interface Flow For January 2000 – December 2003

Volney – East (OPEN)



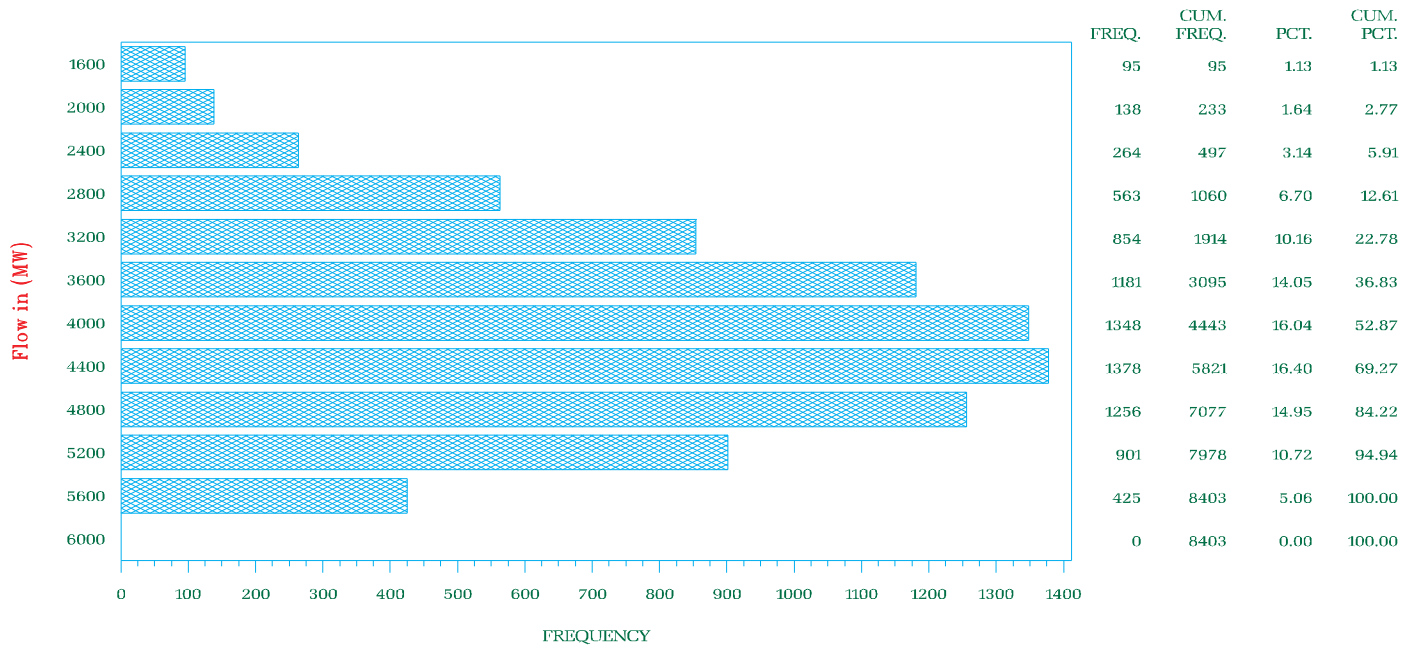
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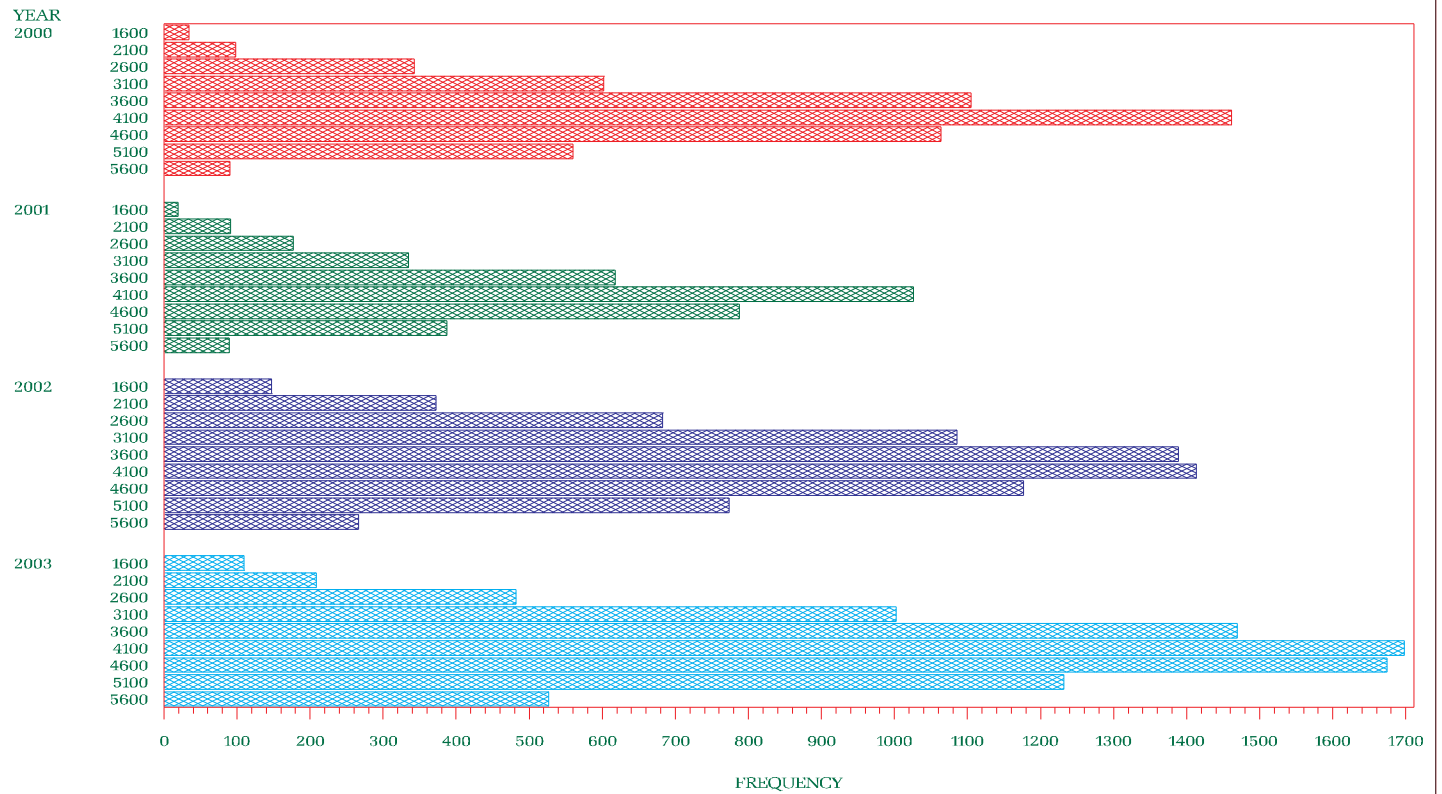
NYISO Frequency Interface Flow For January – December 2003

Volney – East (CLOSED)



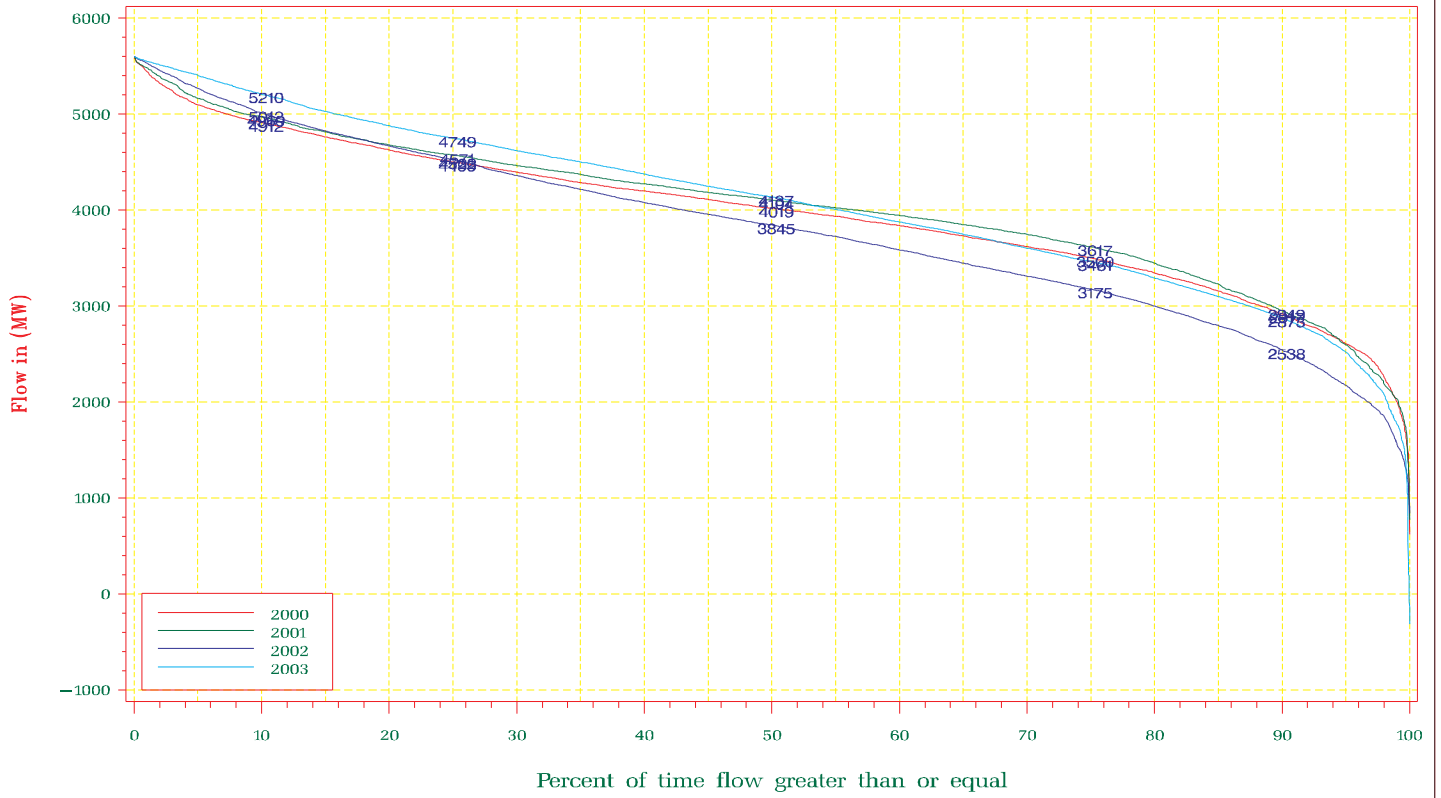
NYISO Frequency Interface Flow For January 2000 – December 2003

Volney – East (CLOSED)



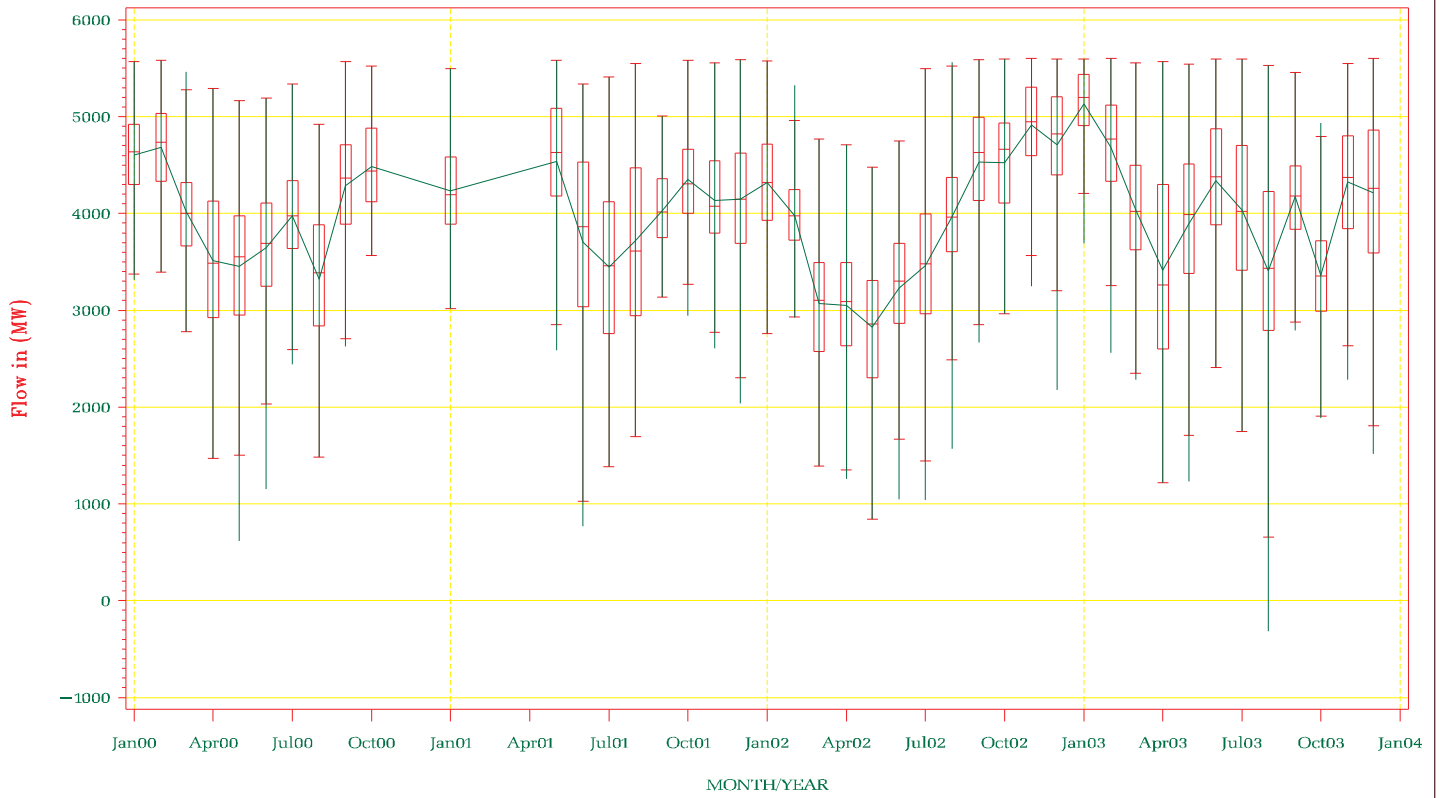
NYISO Percent of time Interface Flow For January 2000 – December 2003

Volney – East (CLOSED)



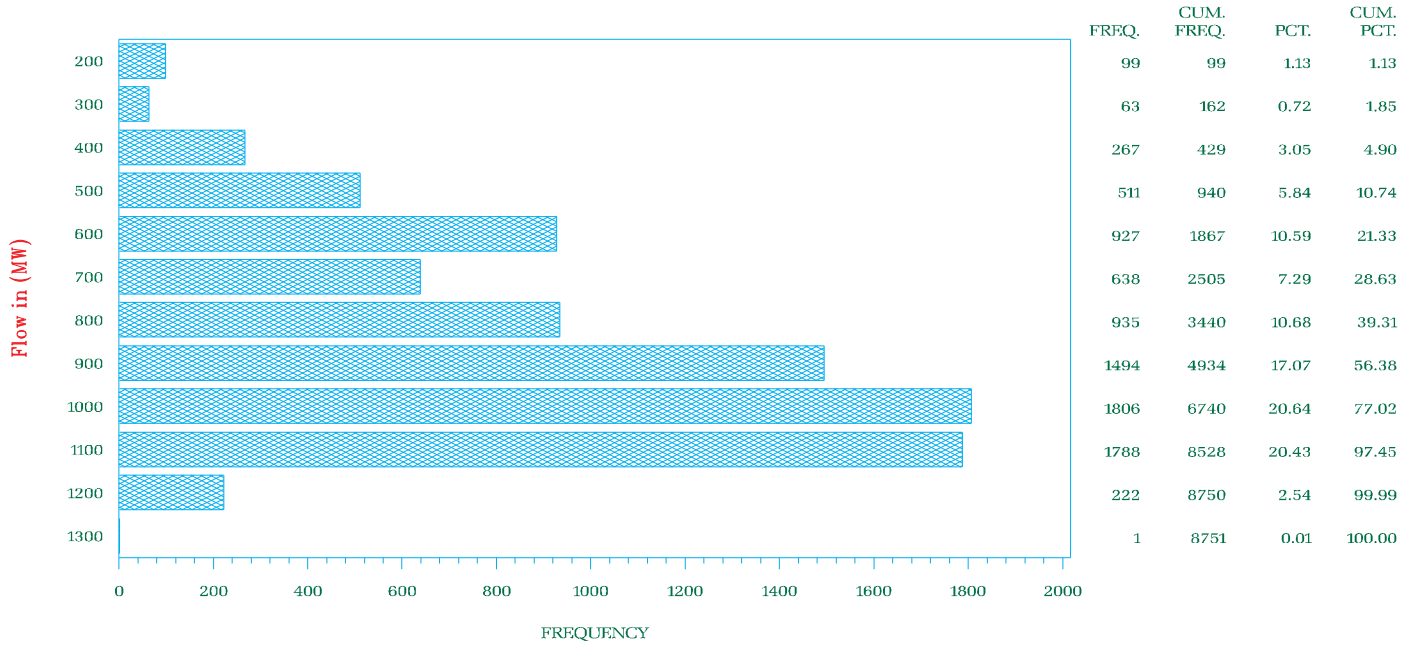
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Volney – East (CLOSED)



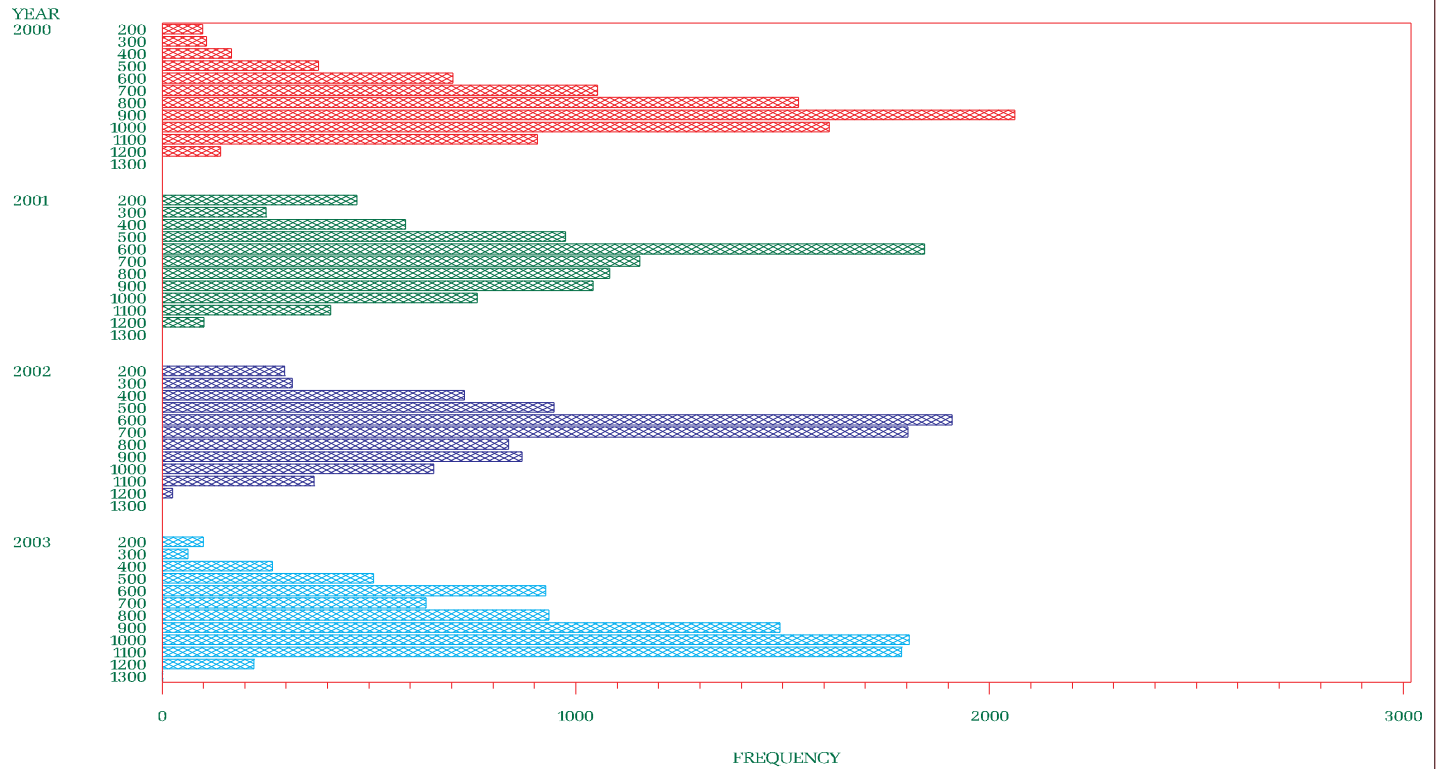
NYISO Frequency Interface Flow For January – December 2003

Westchester – Long Island  
Y49 + Y50



NYISO Frequency Interface Flow For January 2000 – December 2003

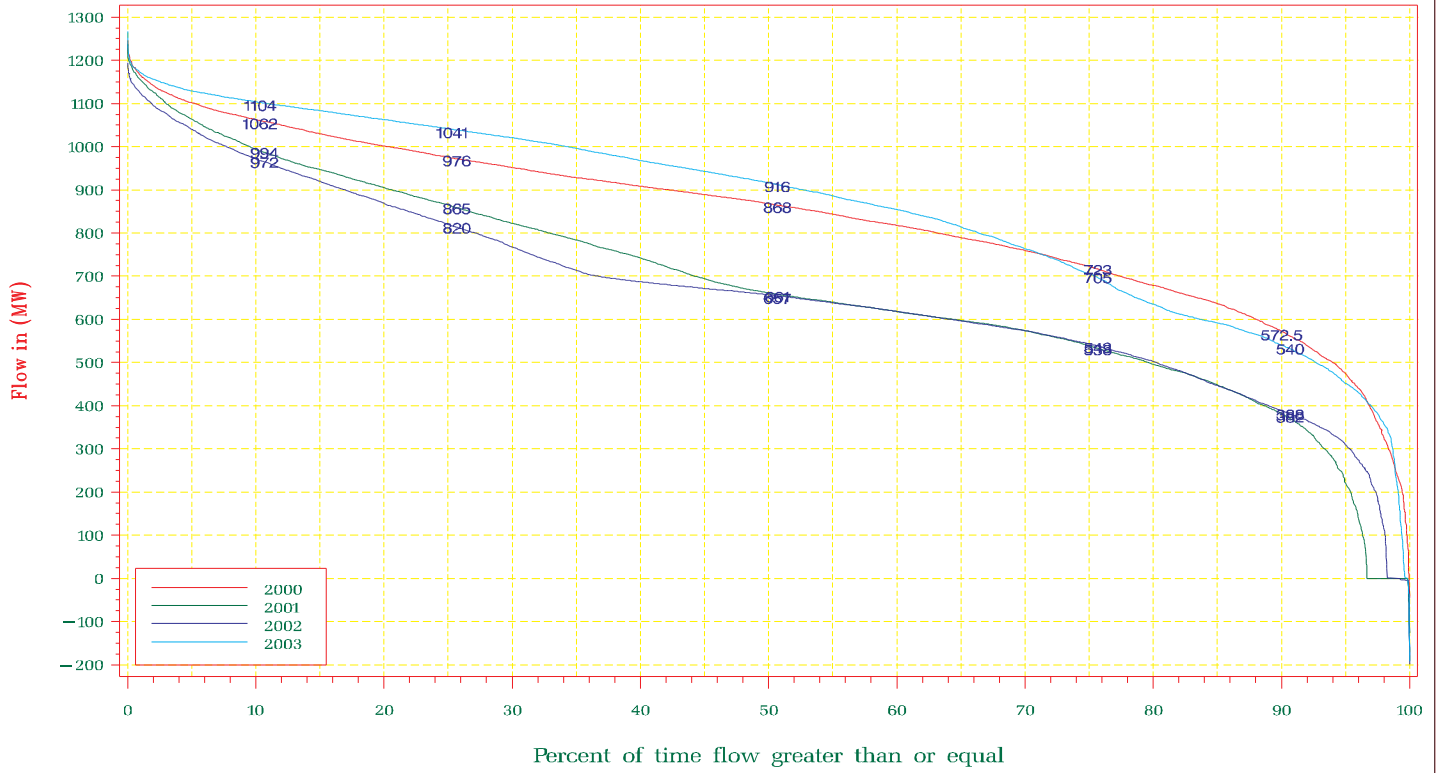
Westchester – Long Island  
Y49 + Y50





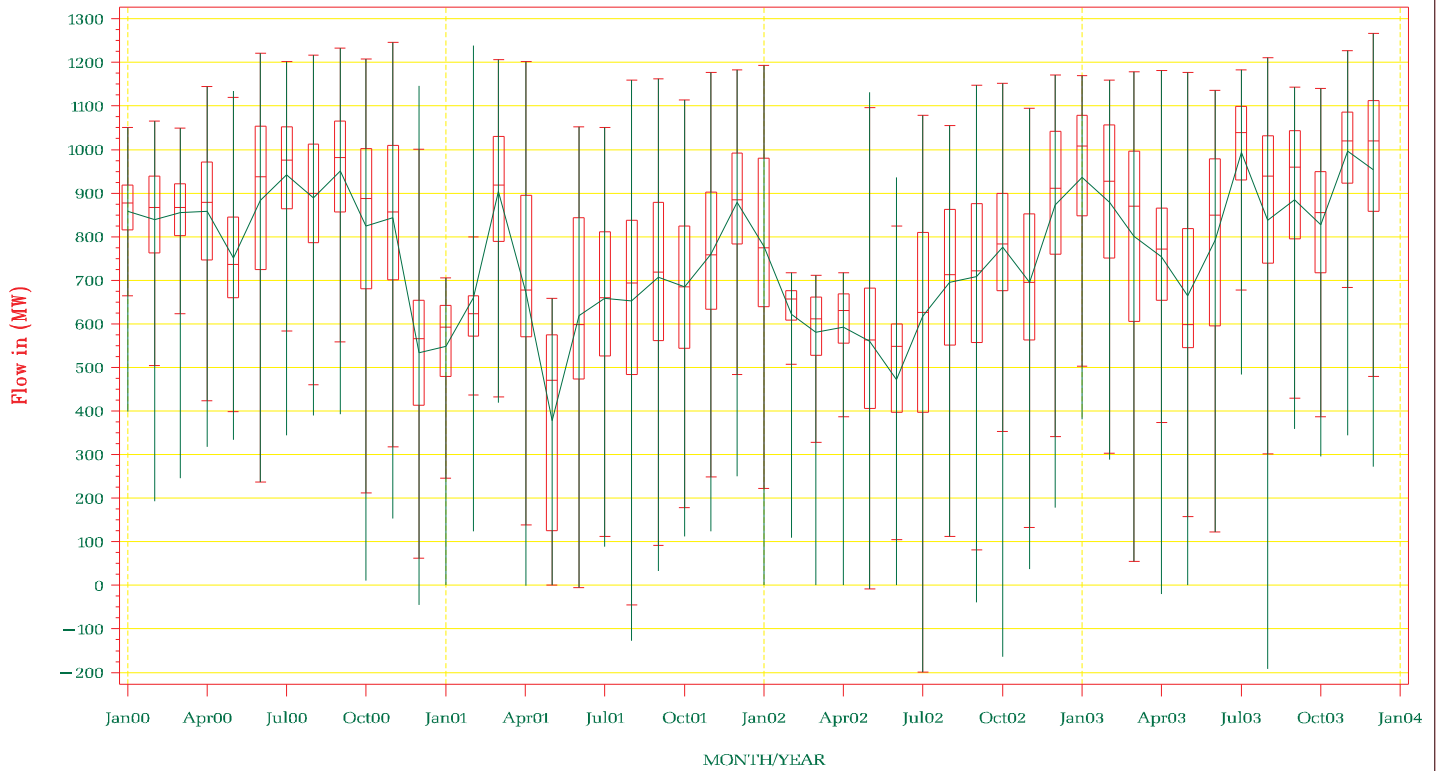
NYISO Percent of time Interface Flow For January 2000 – December 2003

Westchester – Long Island  
Y49 + Y50



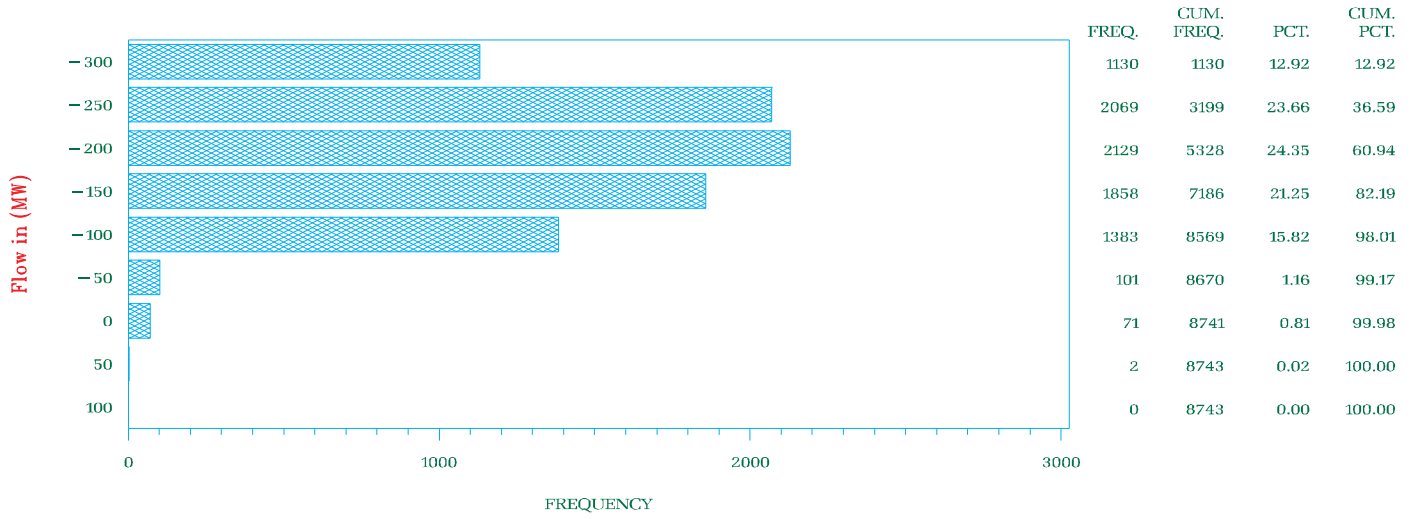
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Westchester – Long Island  
Y49 + Y50



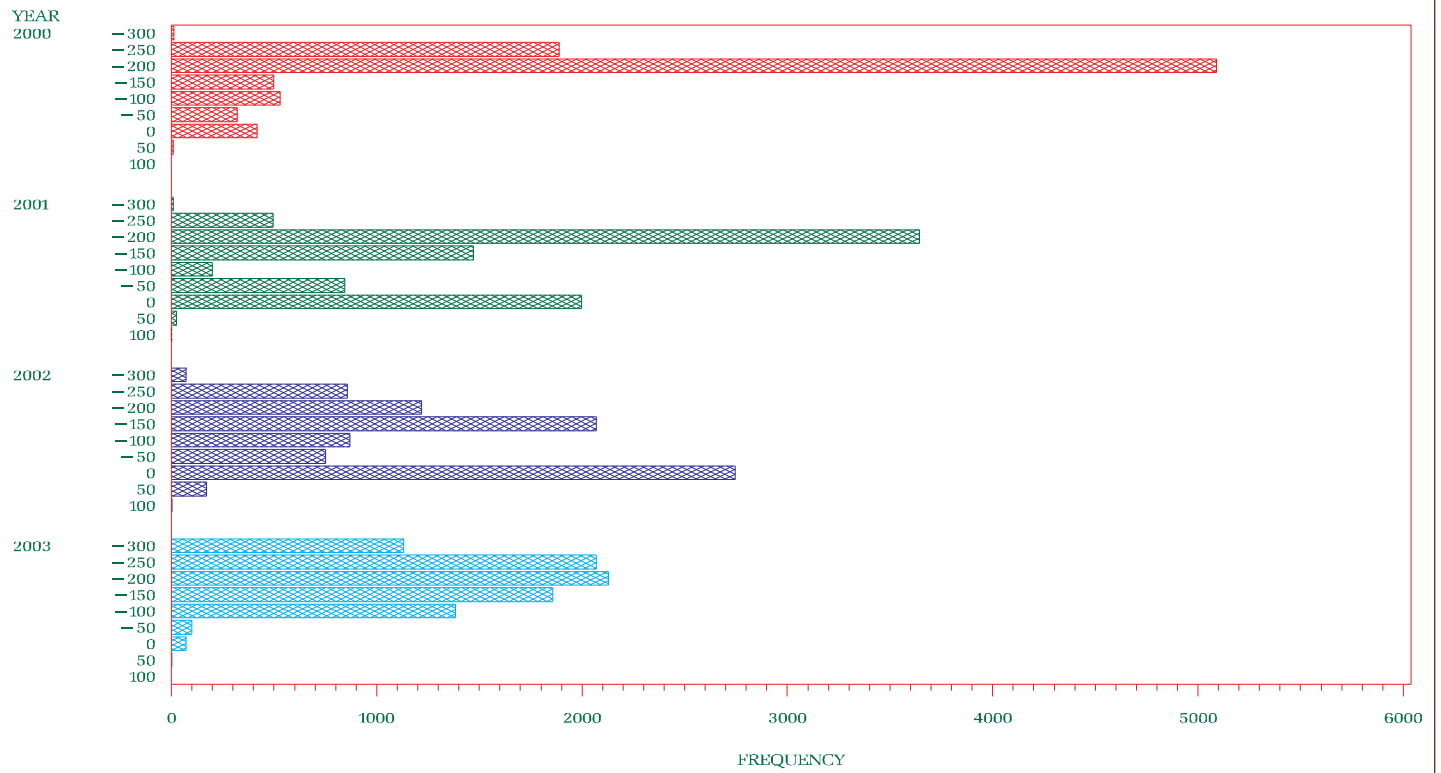
NYISO Frequency Interface Flow For January – December 2003

New York City – Long Island  
901+903



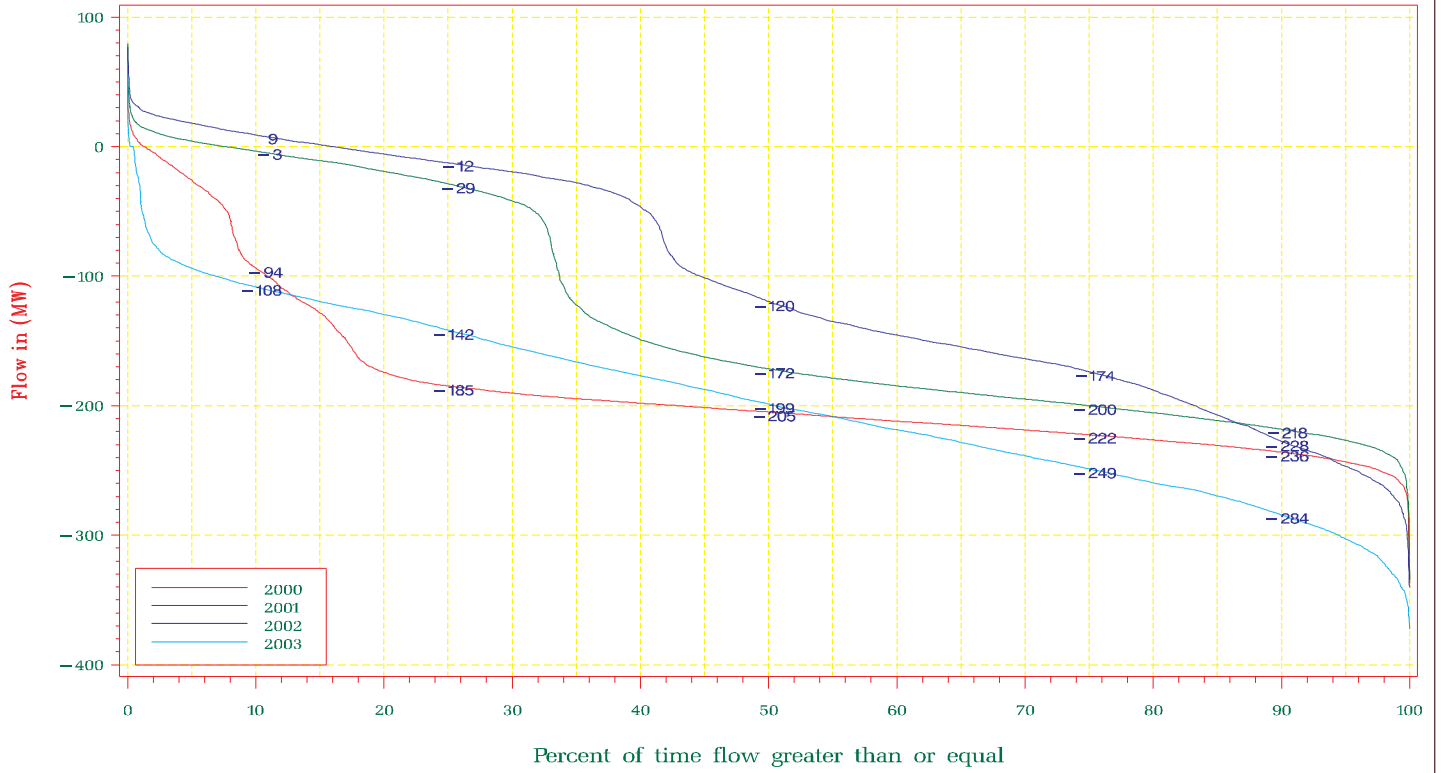
NYISO Frequency Interface Flow For January 2000 – December 2003

New York City – Long Island  
901+903



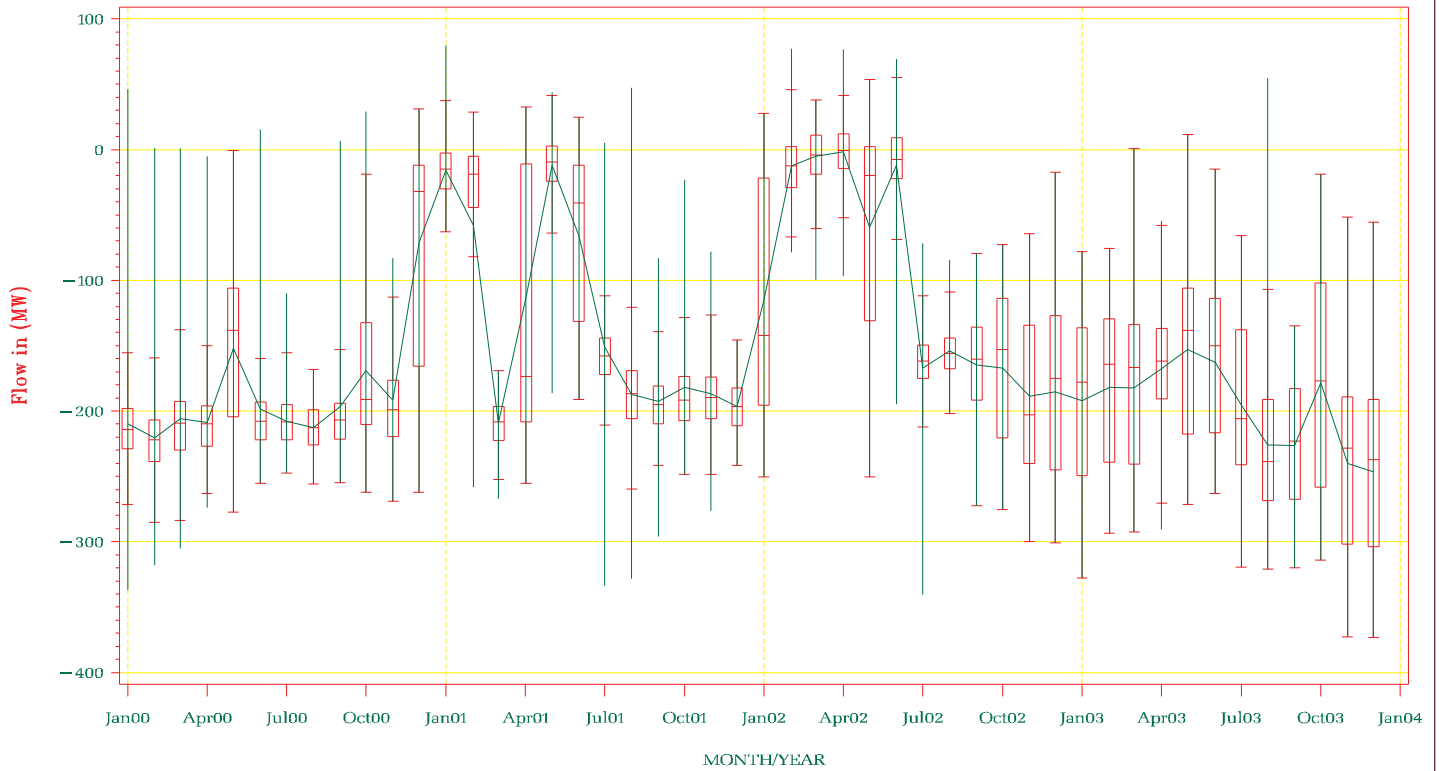
NYISO Percent of time Interface Flow For January 2000 – December 2003

New York City – Long Island  
901+903



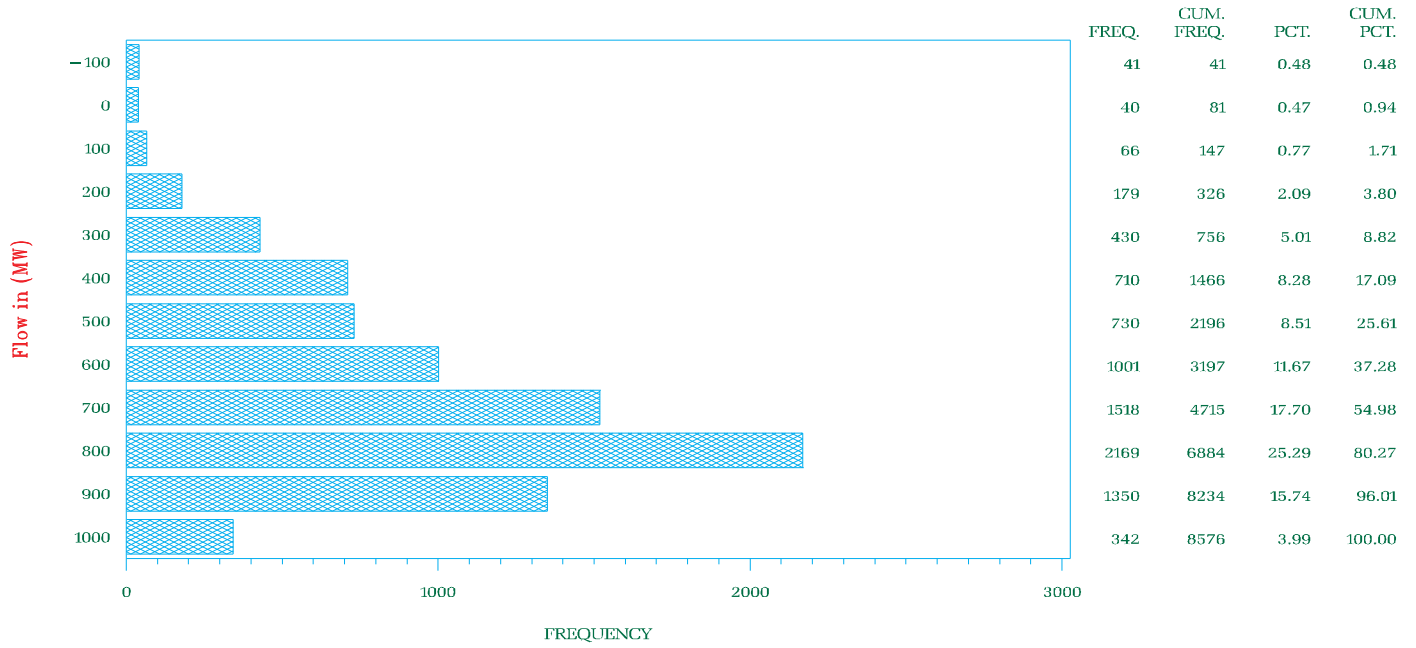
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

New York City – Long Island  
901+903



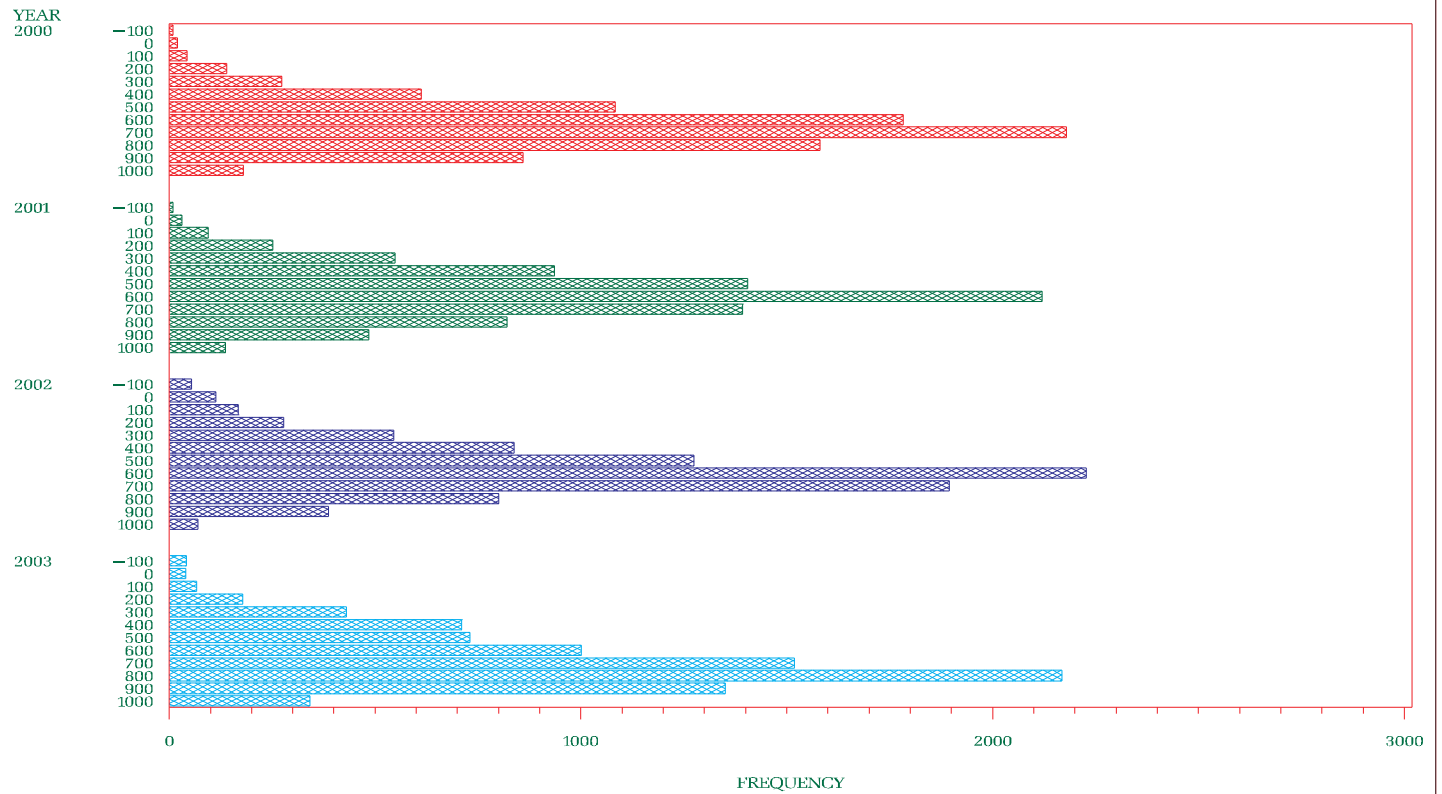
NYISO Frequency Interface Flow For January – December 2003

LIPA Import



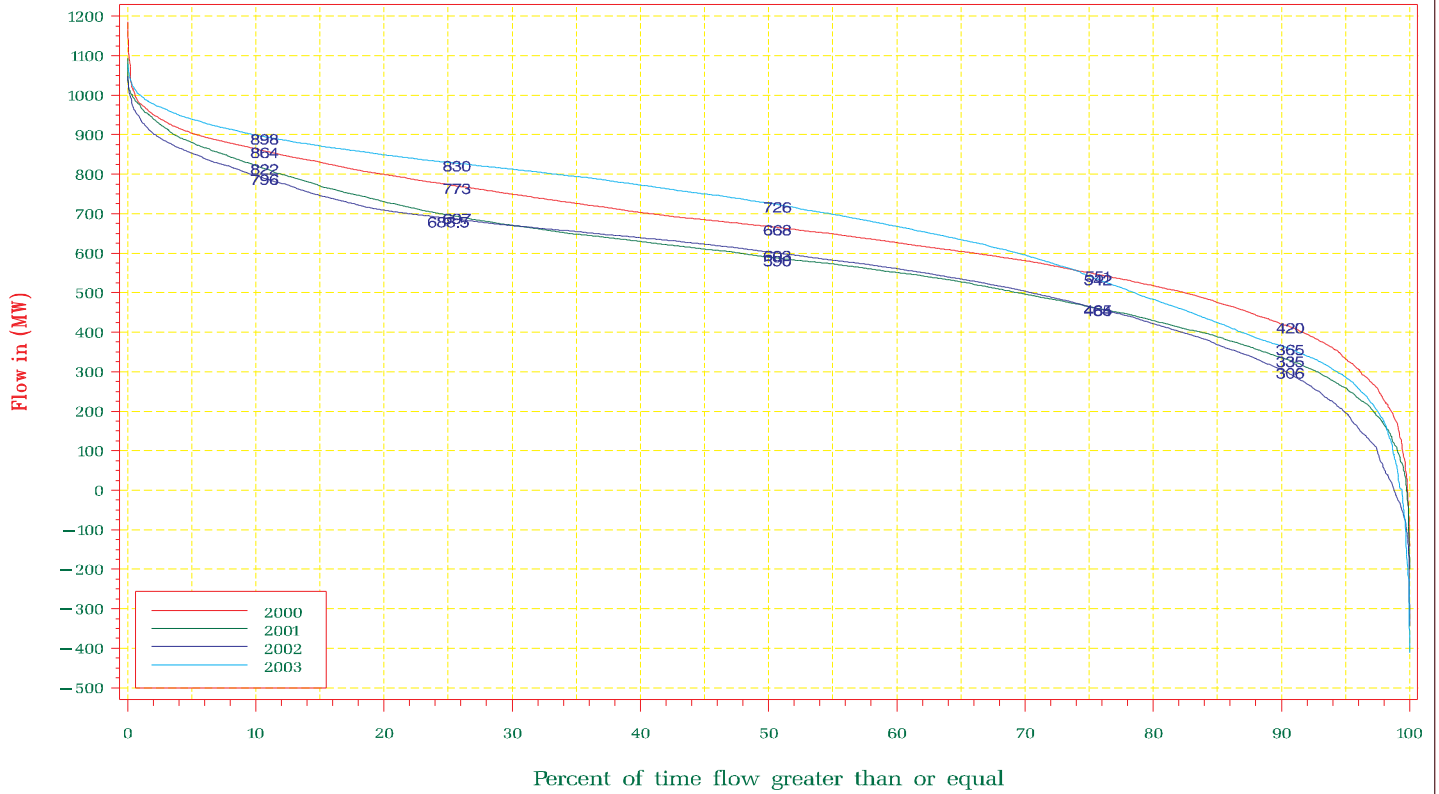
NYISO Frequency Interface Flow For January 2000 – December 2003

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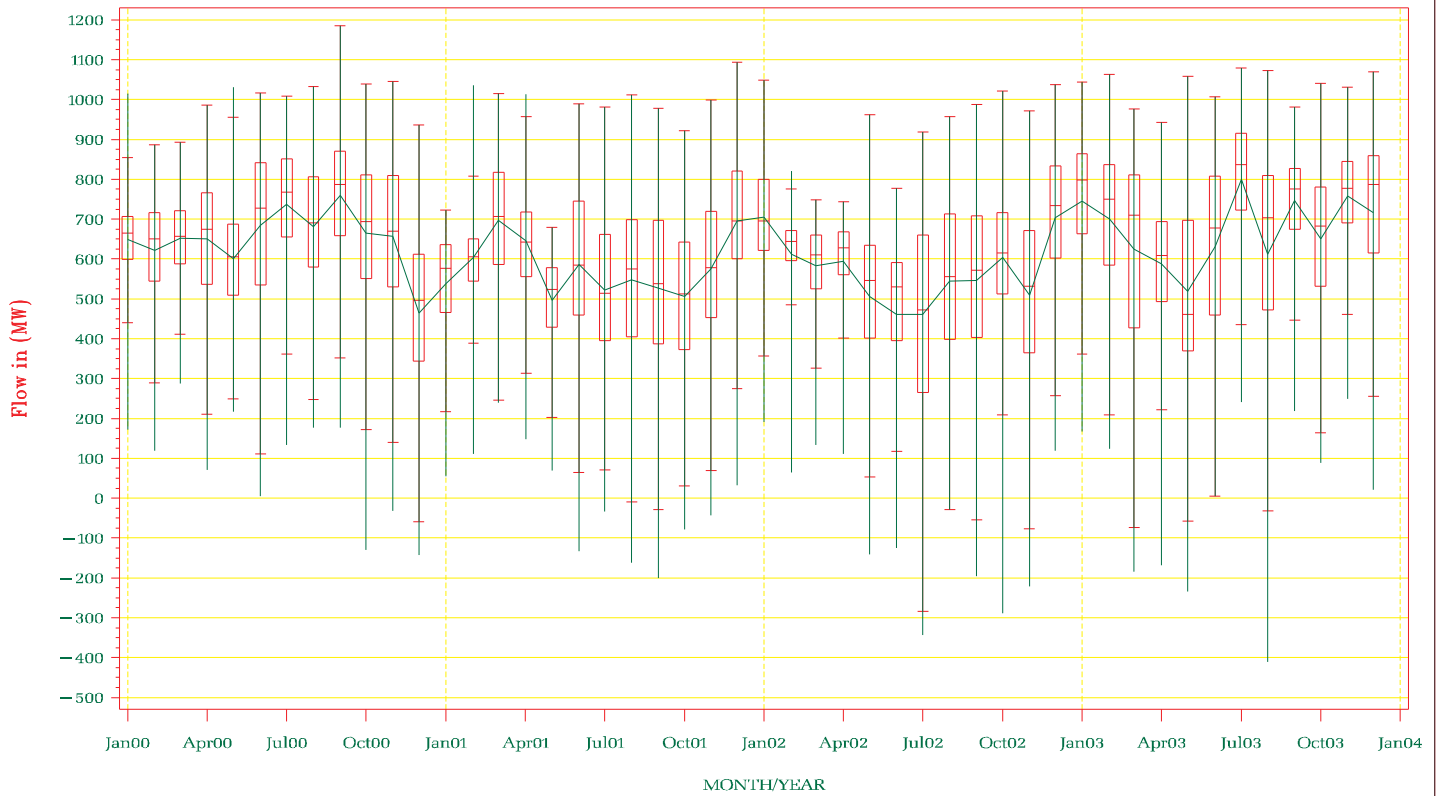
NYISO Percent of time Interface Flow For January 2000 – December 2003

LIPA Import



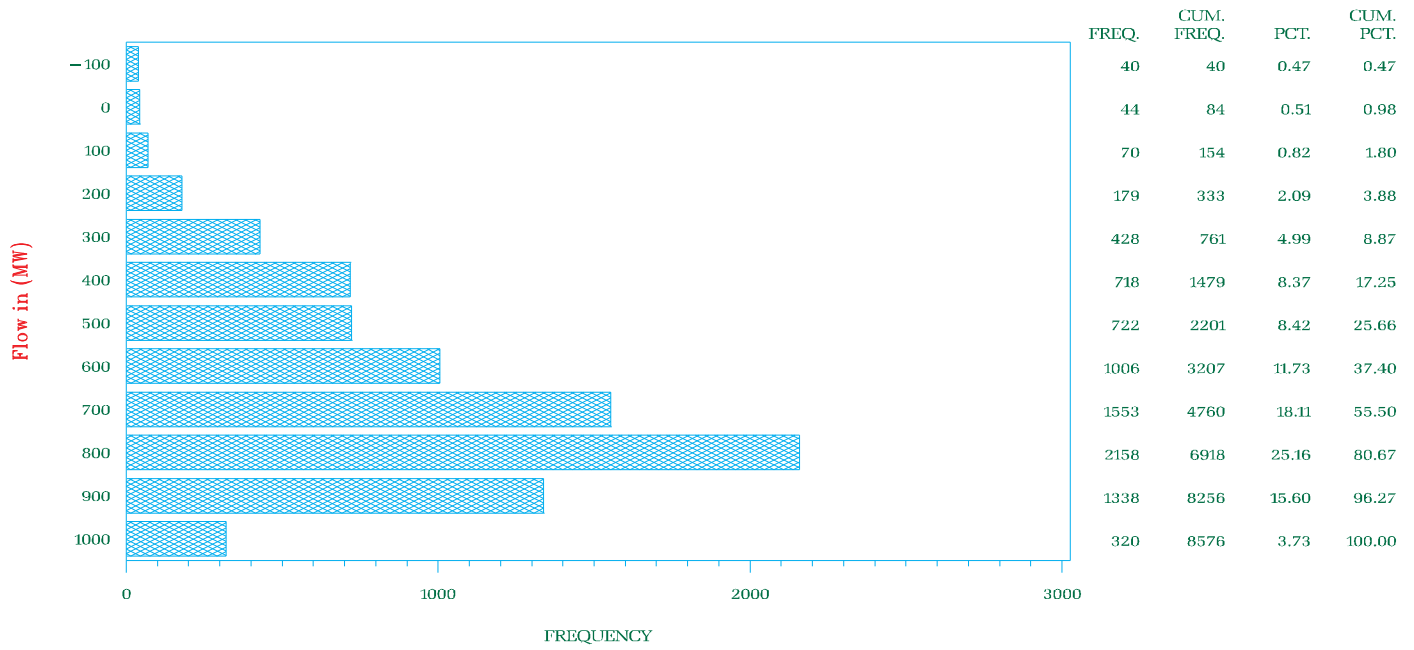
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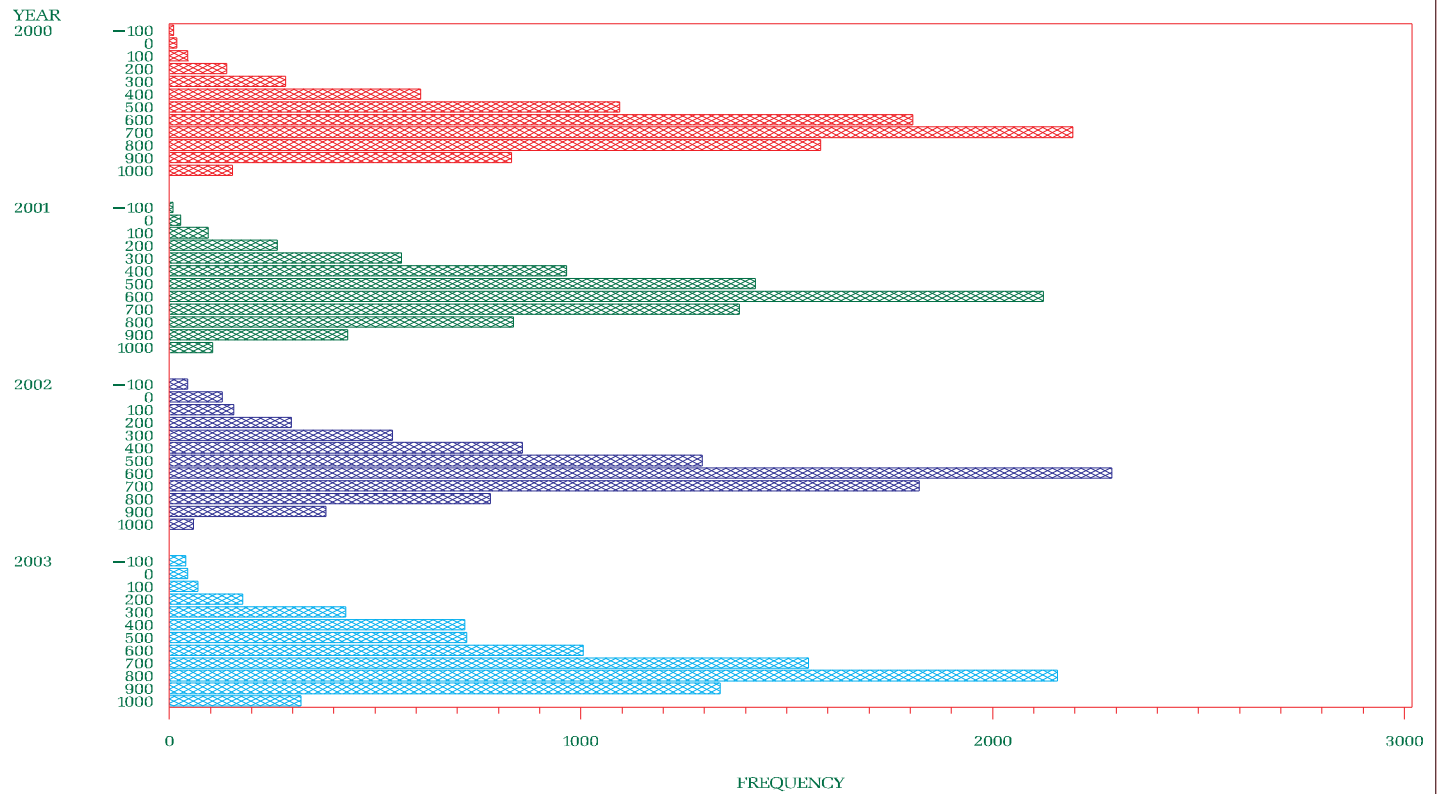
NYISO Frequency Interface Flow For January – December 2003

Con Ed – LIPA

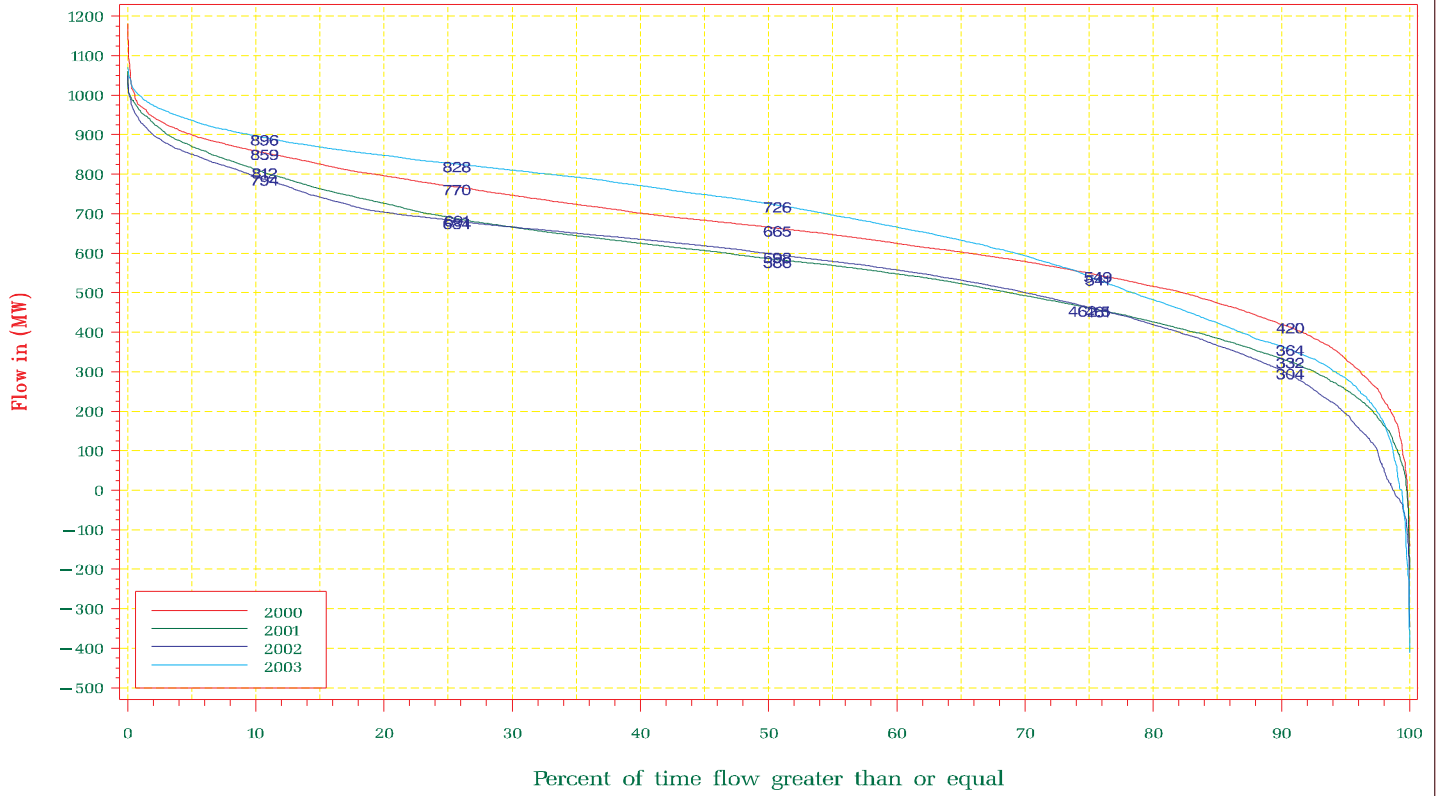


NYISO Frequency Interface Flow For January 2000 – December 2003

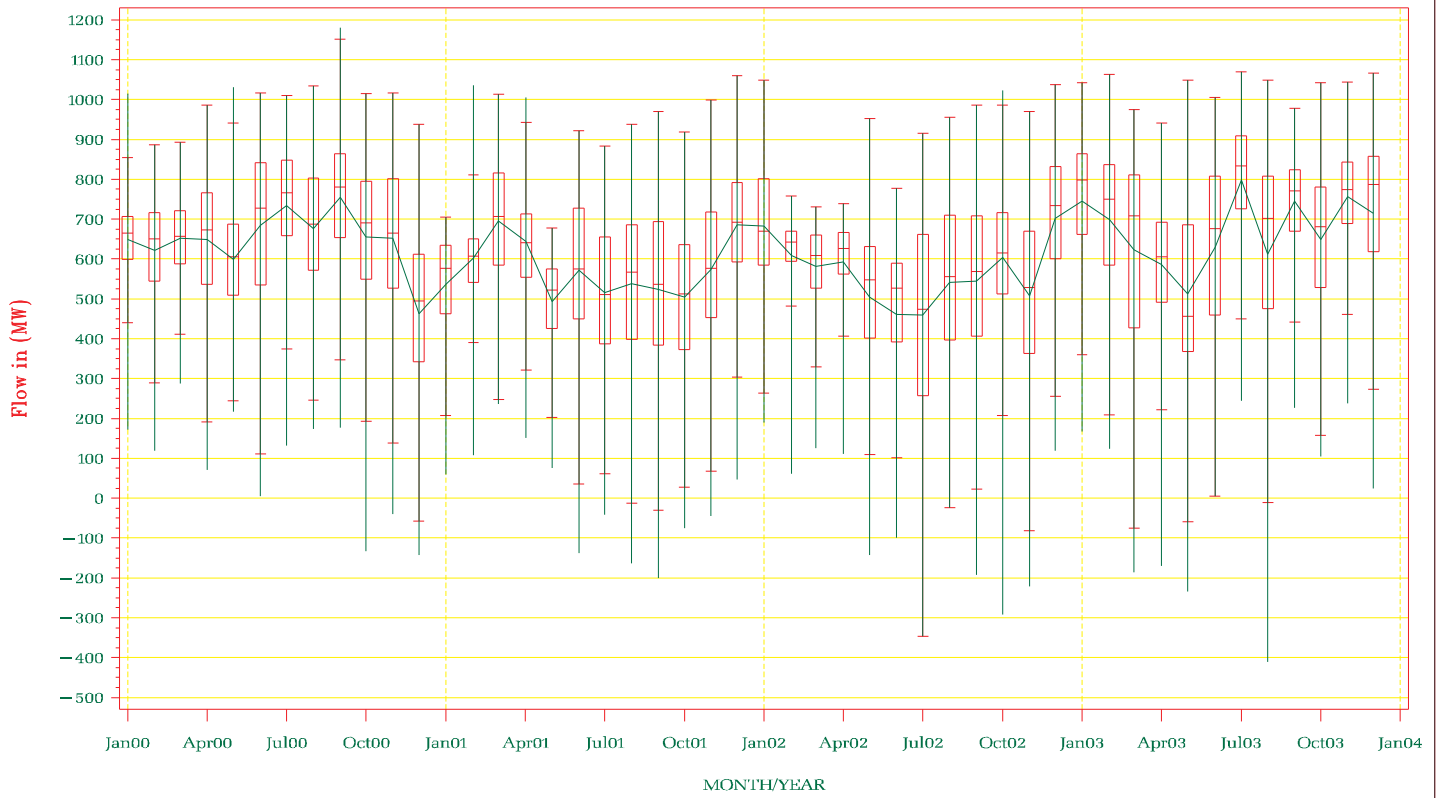
Con Ed – LIPA



NYISO Percent of time Interface Flow For January 2000 – December 2003  
 Con Ed – LIPA

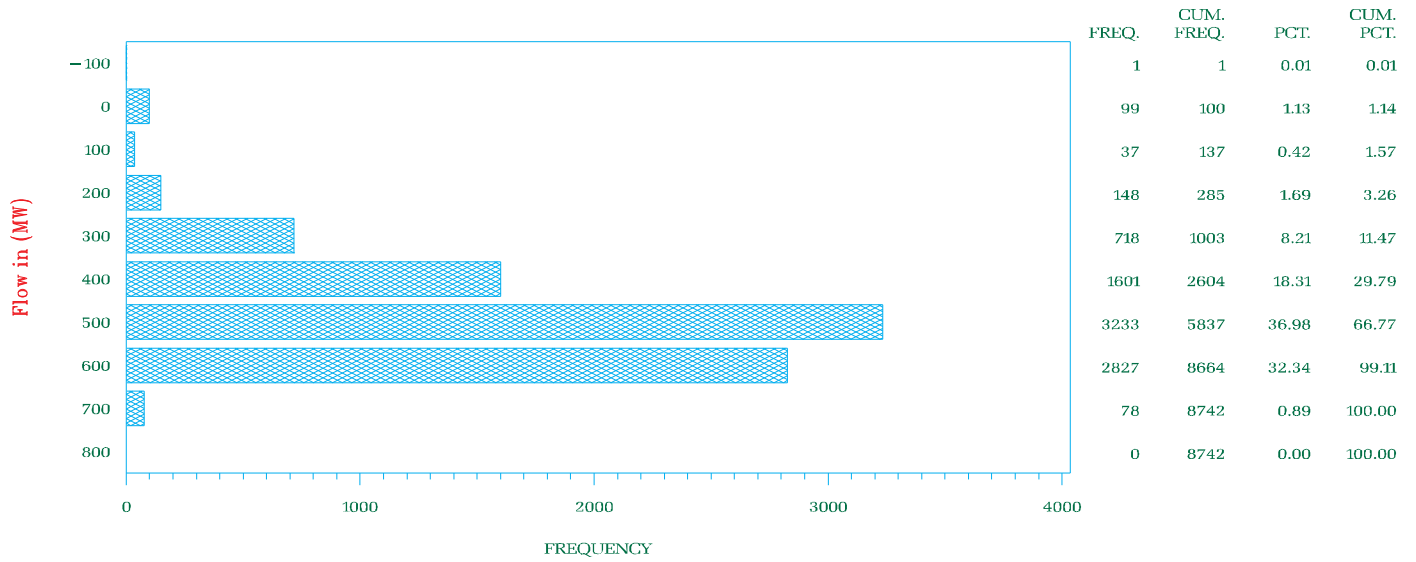


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
 Con Ed – LIPA



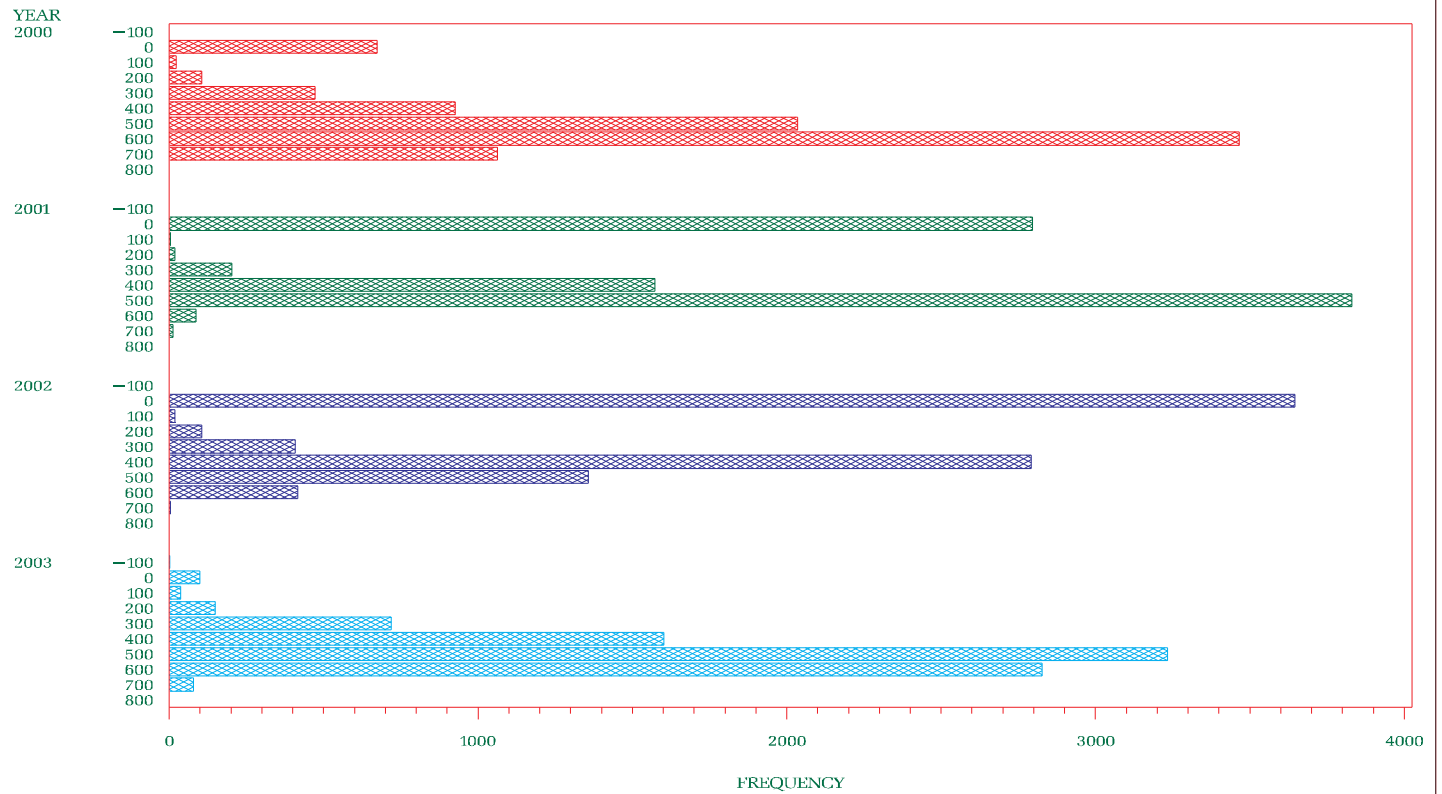
NYISO Frequency Interface Flow For January – December 2003

Y50:Dunwoodie – Shore Rd.



NYISO Frequency Interface Flow For January 2000 – December 2003

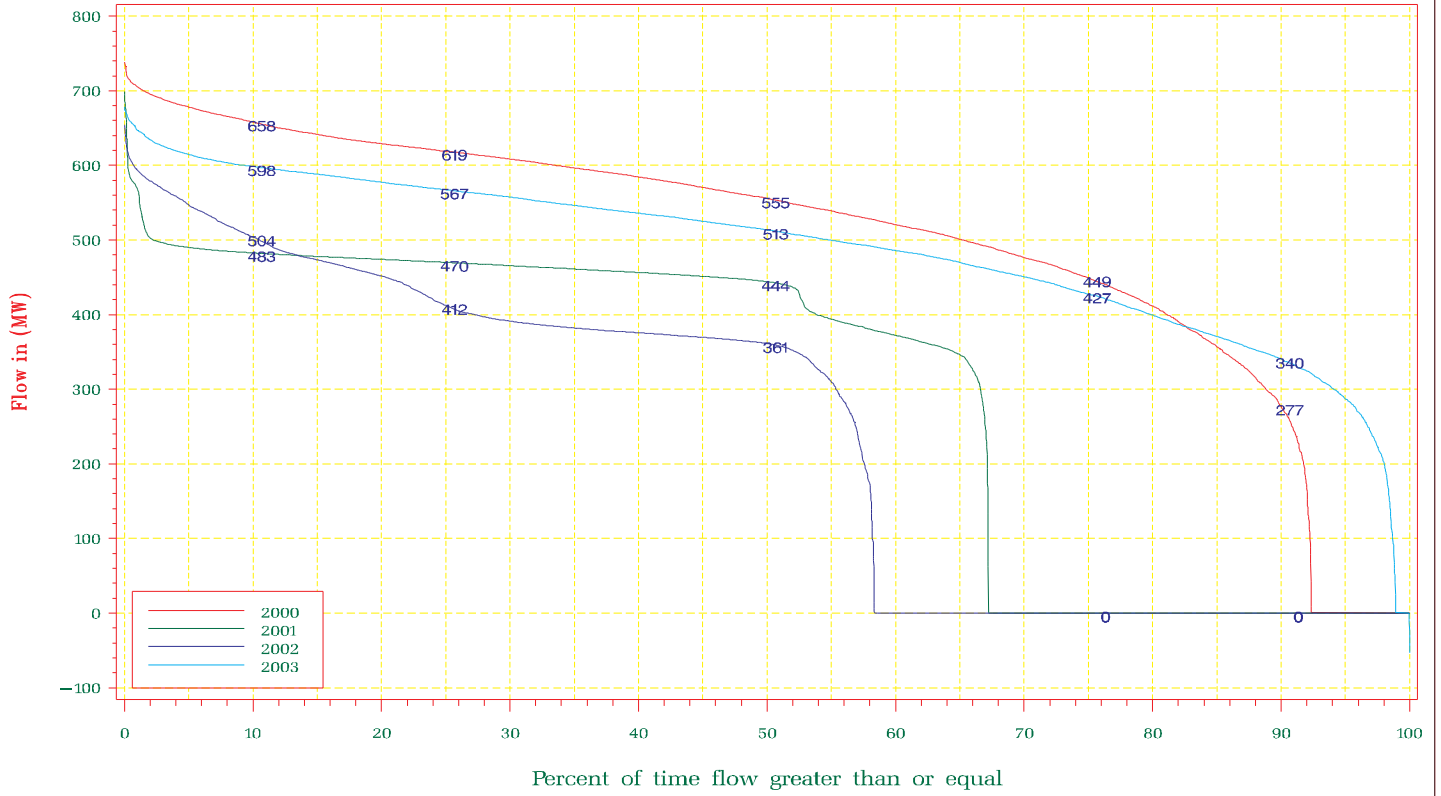
Y50:Dunwoodie – Shore Rd.





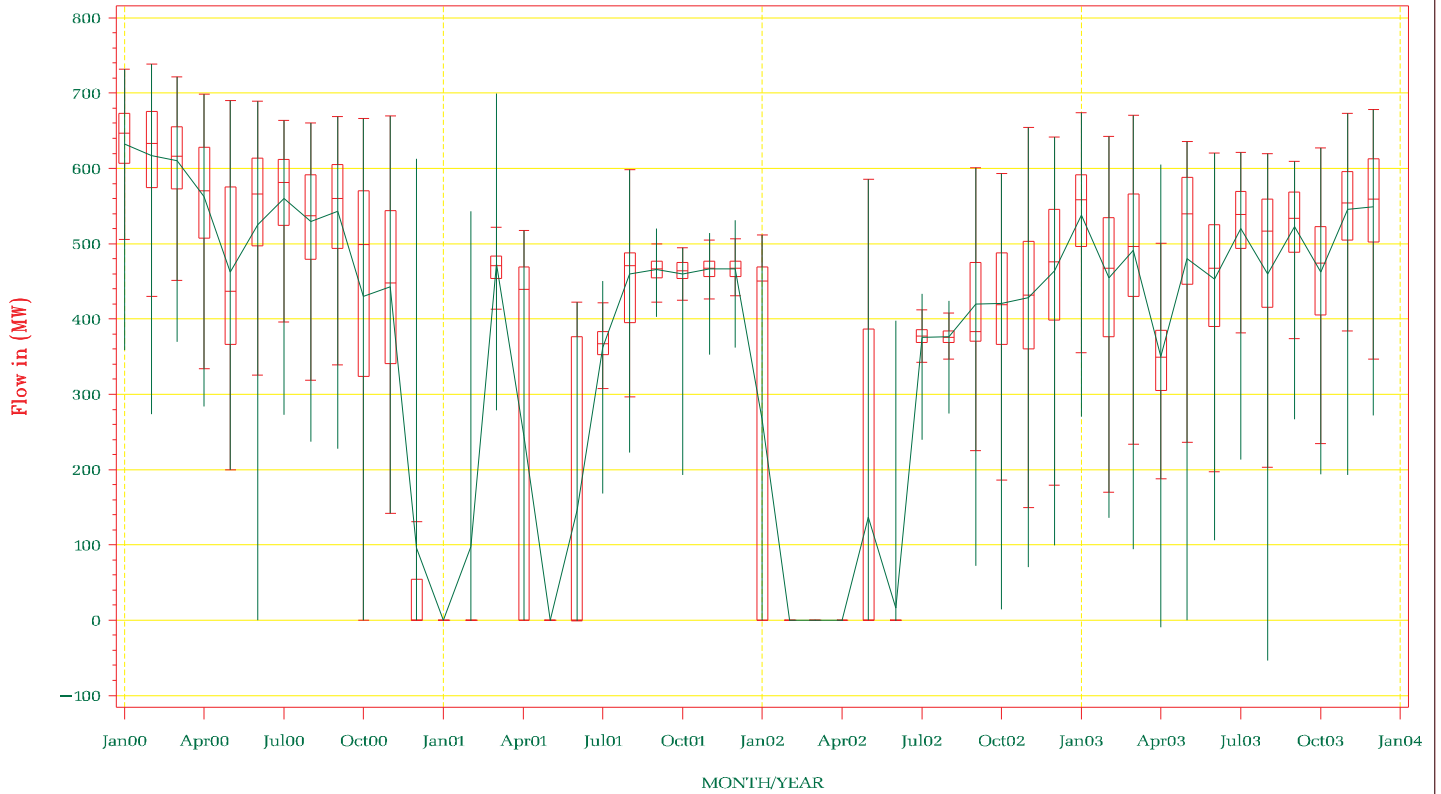
NYISO Percent of time Interface Flow For January 2000 – December 2003

Y50:Dunwoodie – Shore Rd.



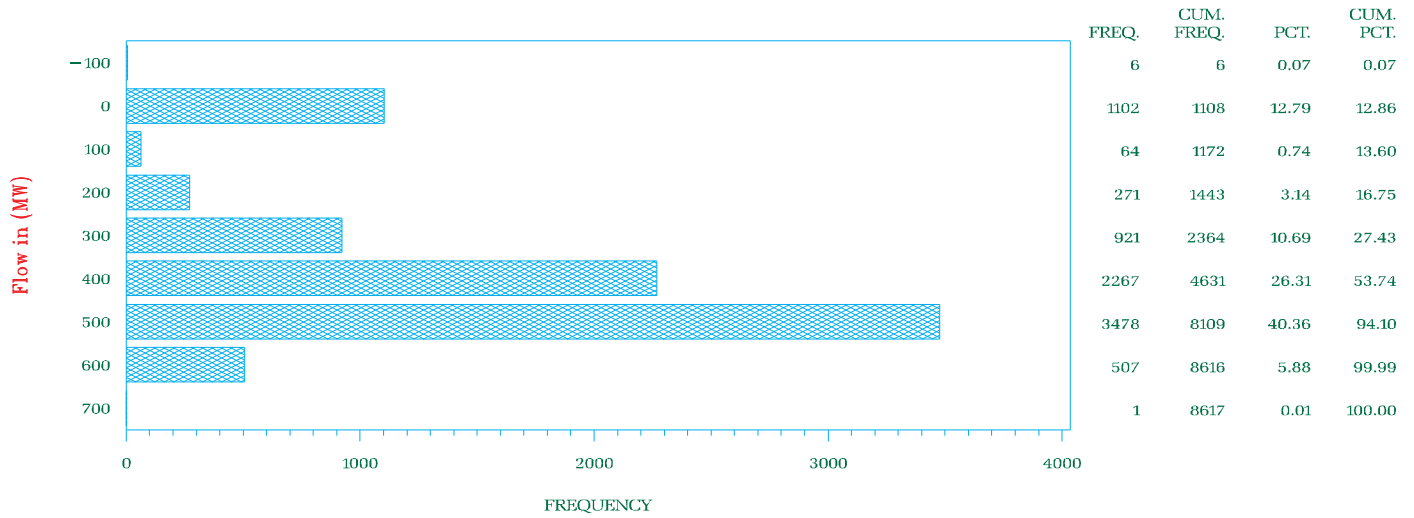
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Y50:Dunwoodie – Shore Rd.



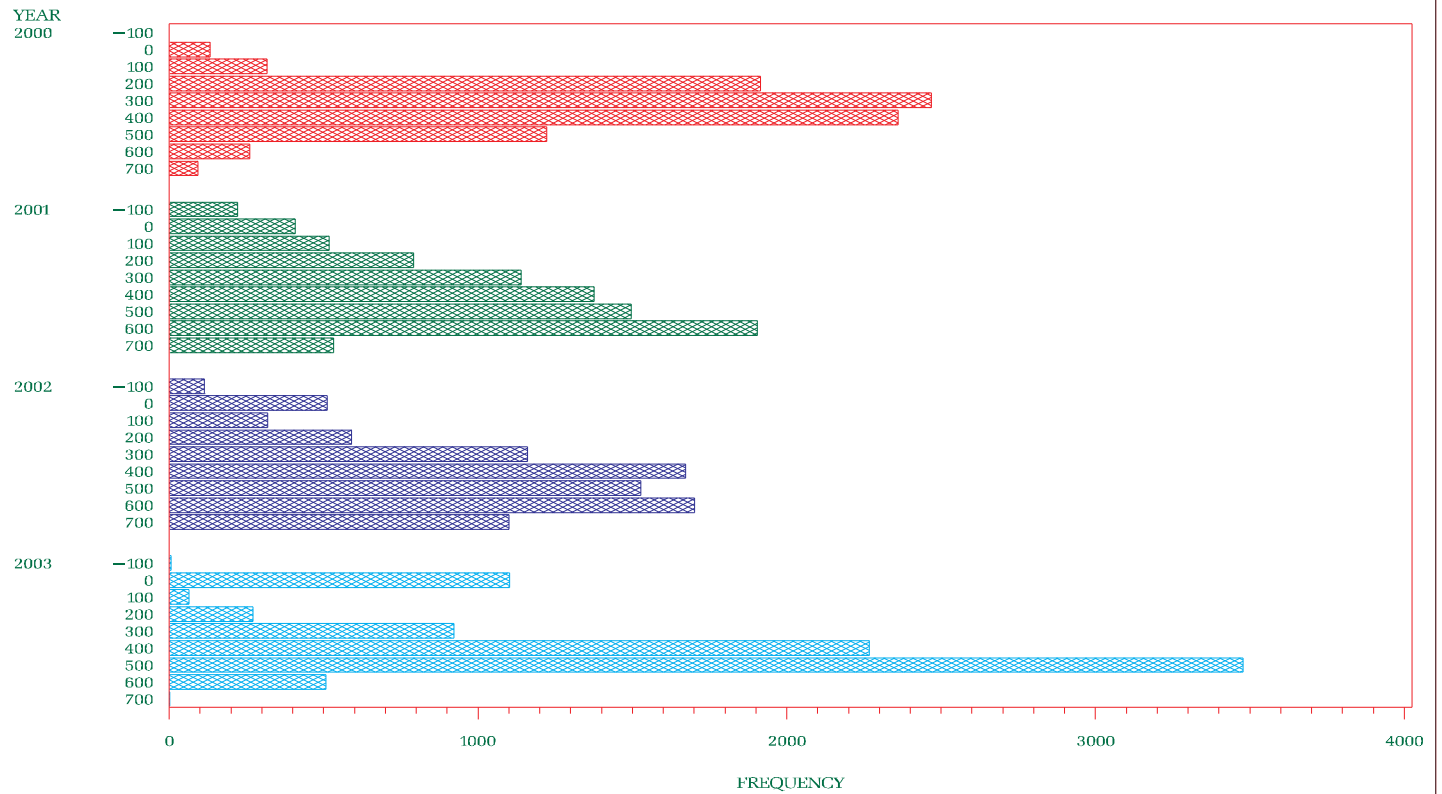
NYISO Frequency Interface Flow For January – December 2003

Y49:Sprainbrook – E.Garden City



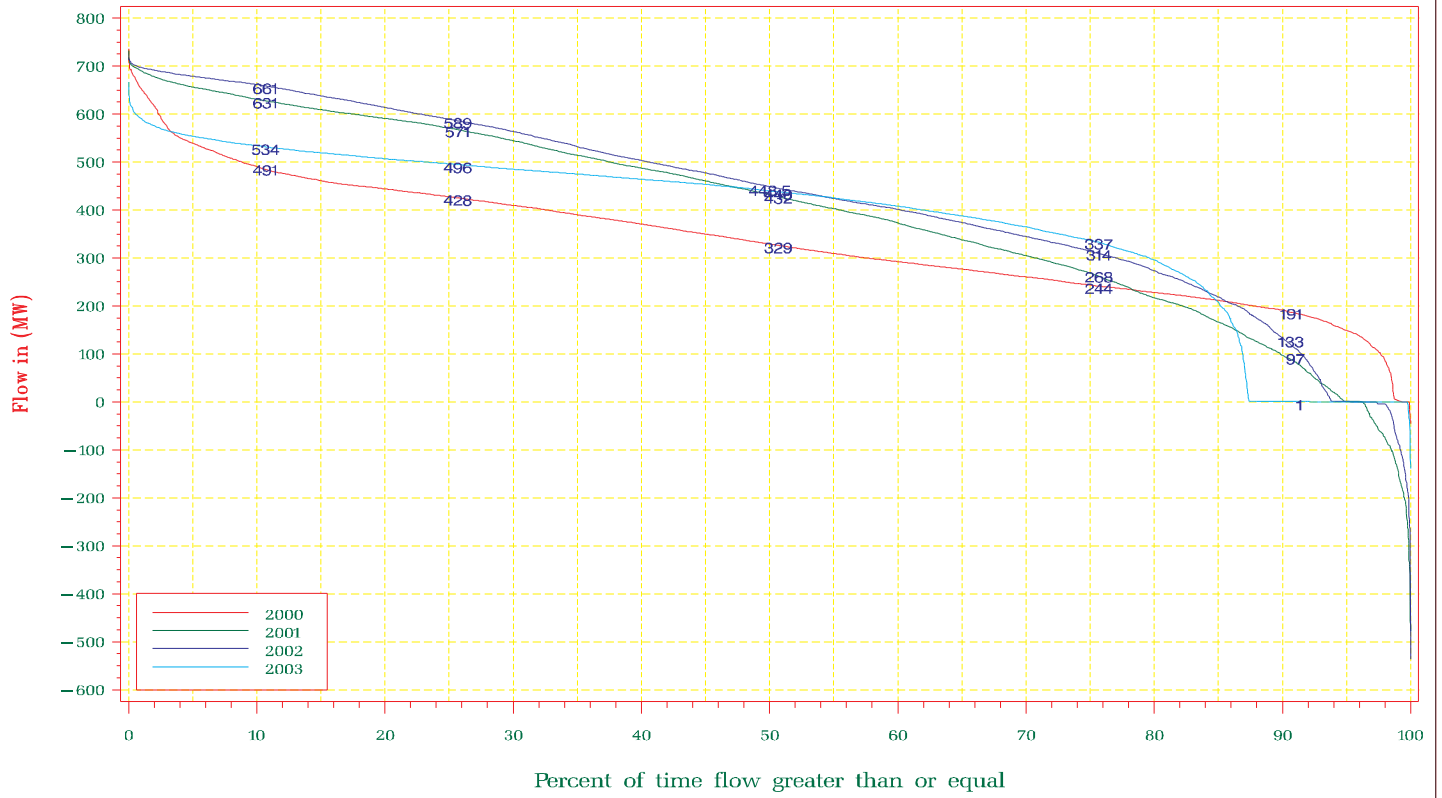
NYISO Frequency Interface Flow For January 2000 – December 2003

Y49:Sprainbrook – E.Garden City



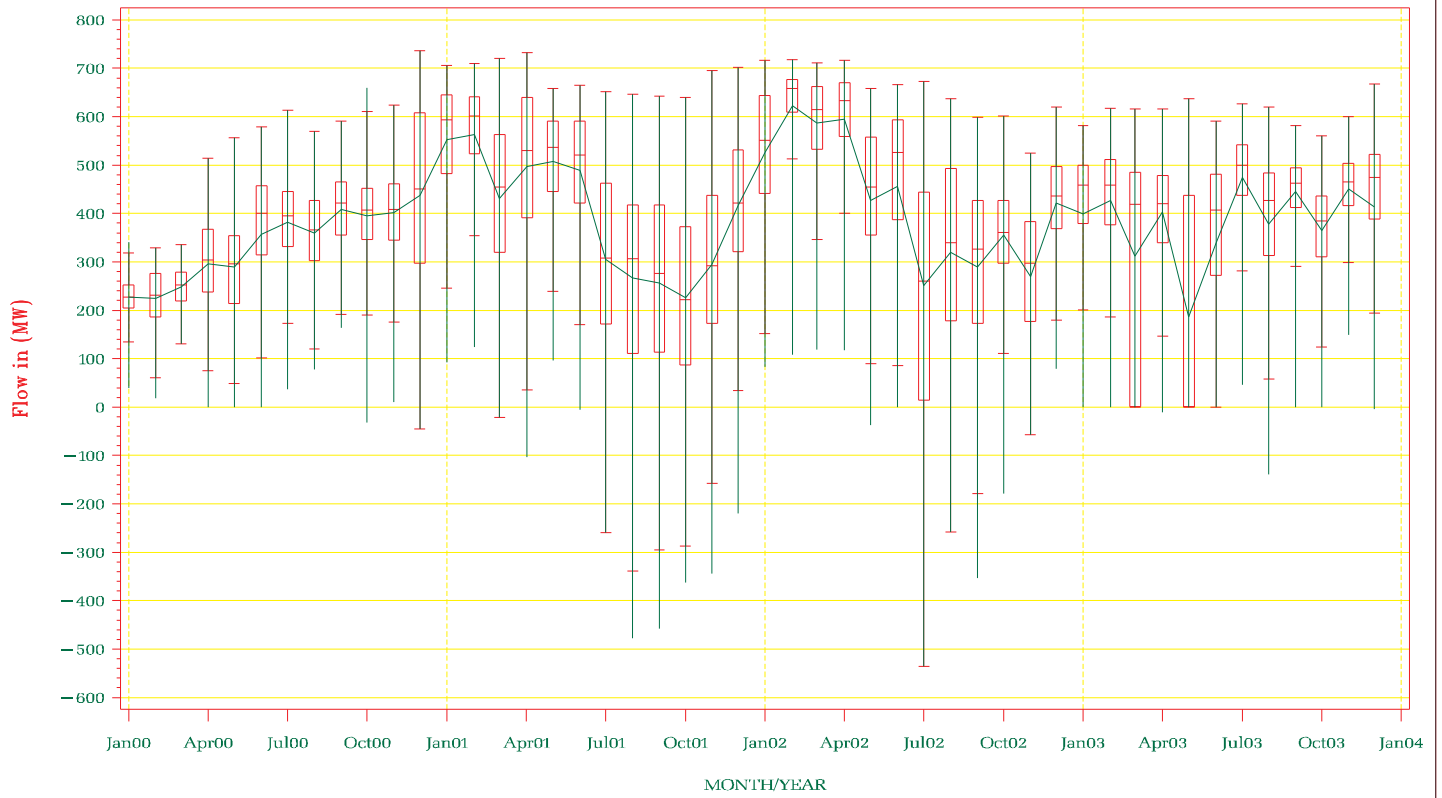
NYISO Percent of time Interface Flow For January 2000 – December 2003

Y49:Sprainbrook – E.Garden City



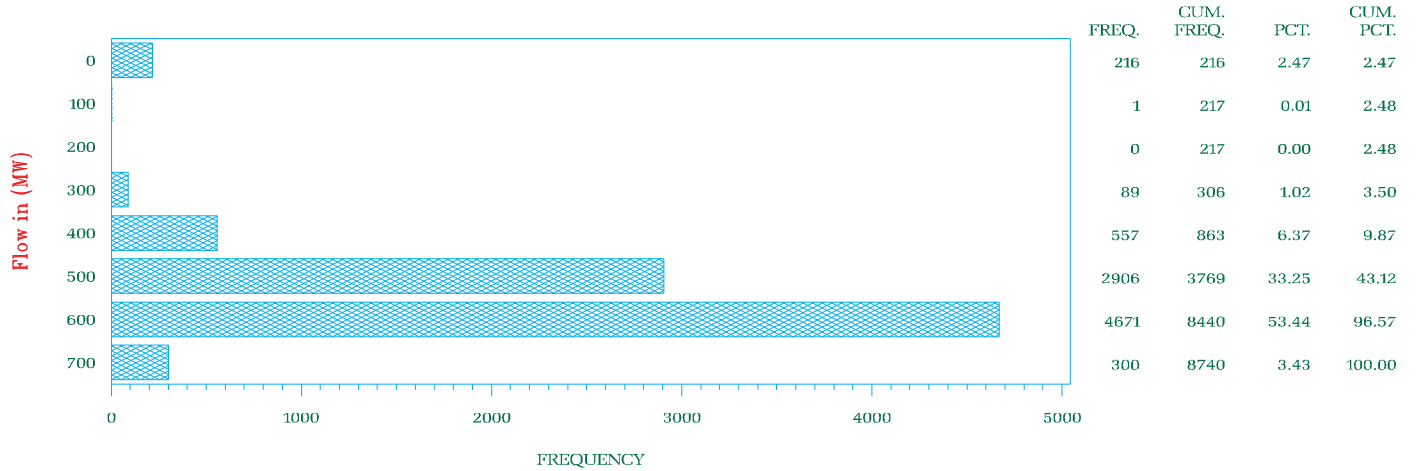
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Y49:Sprainbrook – E.Garden City



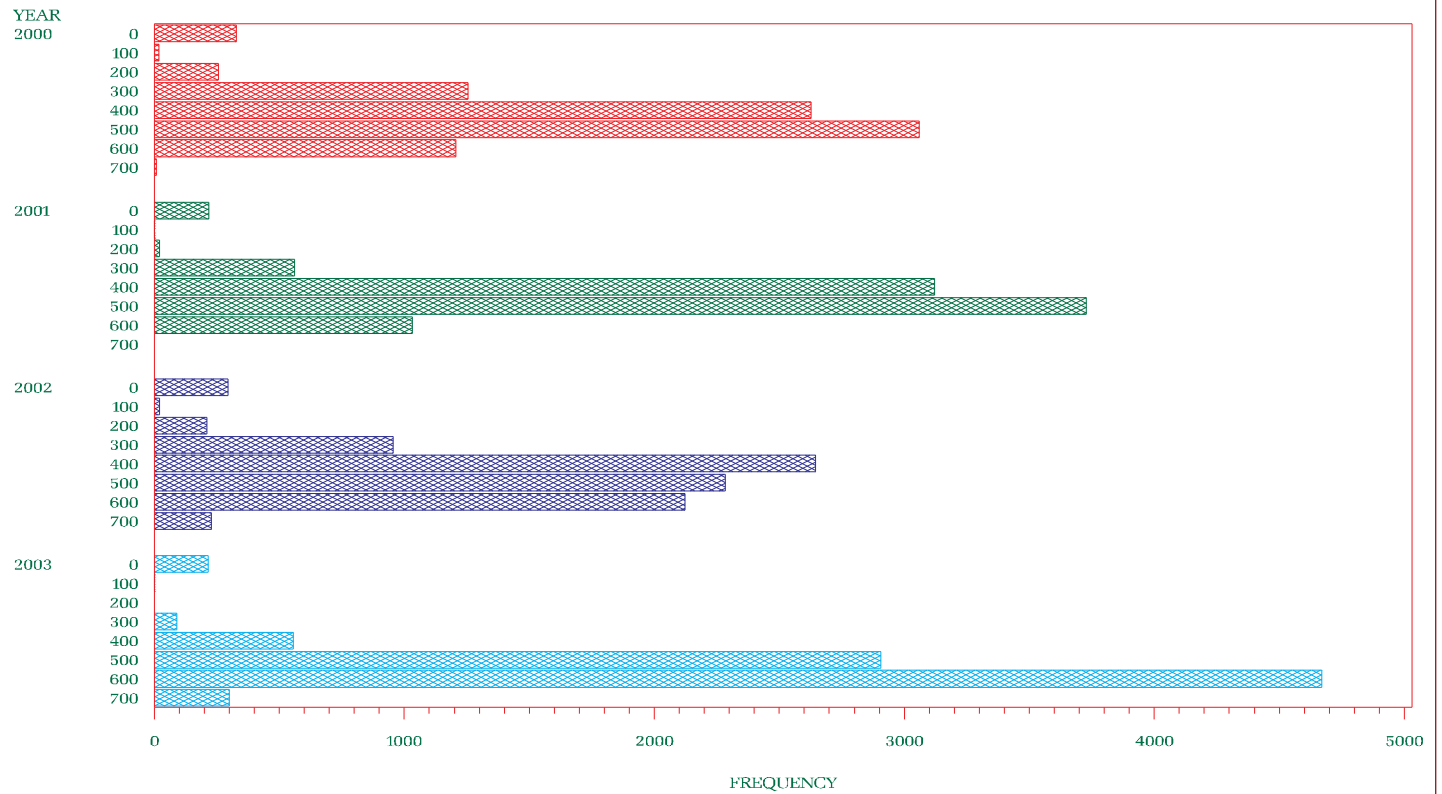
NYISO Frequency Interface Flow For January – December 2003

HOMER CITY – WATERCURE



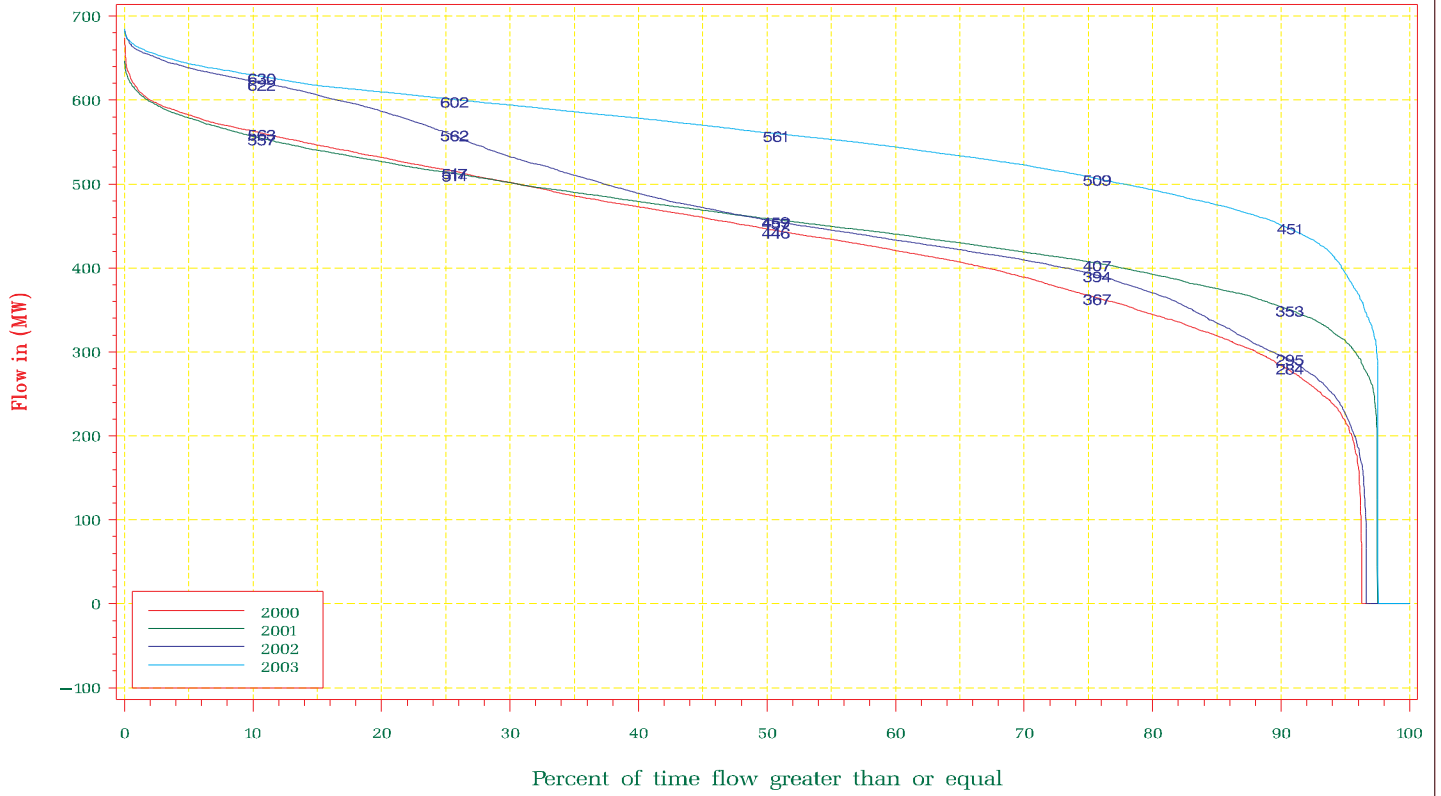
NYISO Frequency Interface Flow For January 2000 – December 2003

HOMER CITY – WATERCURE



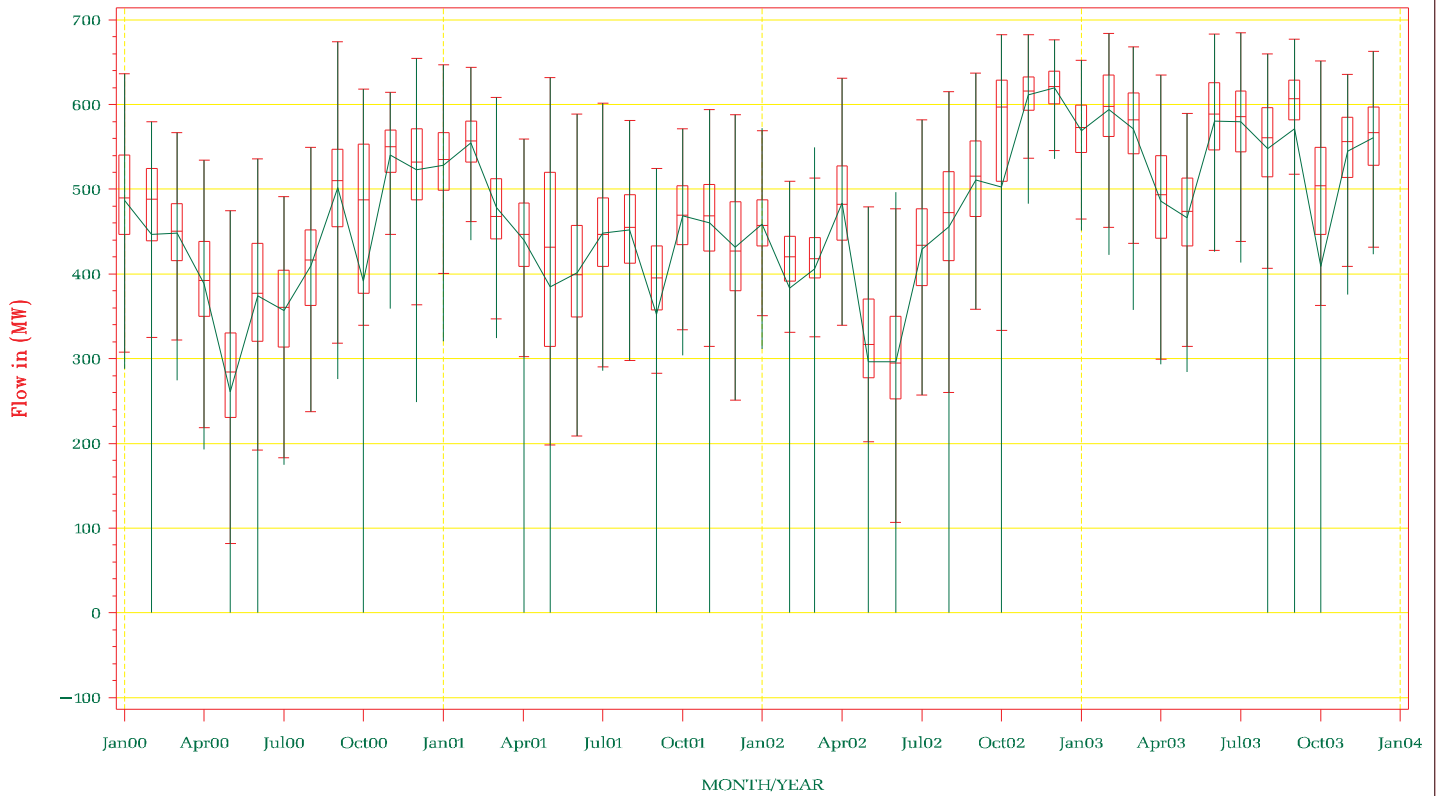
NYISO Percent of time Interface Flow For January 2000 – December 2003

HOMER CITY – WATERCURE



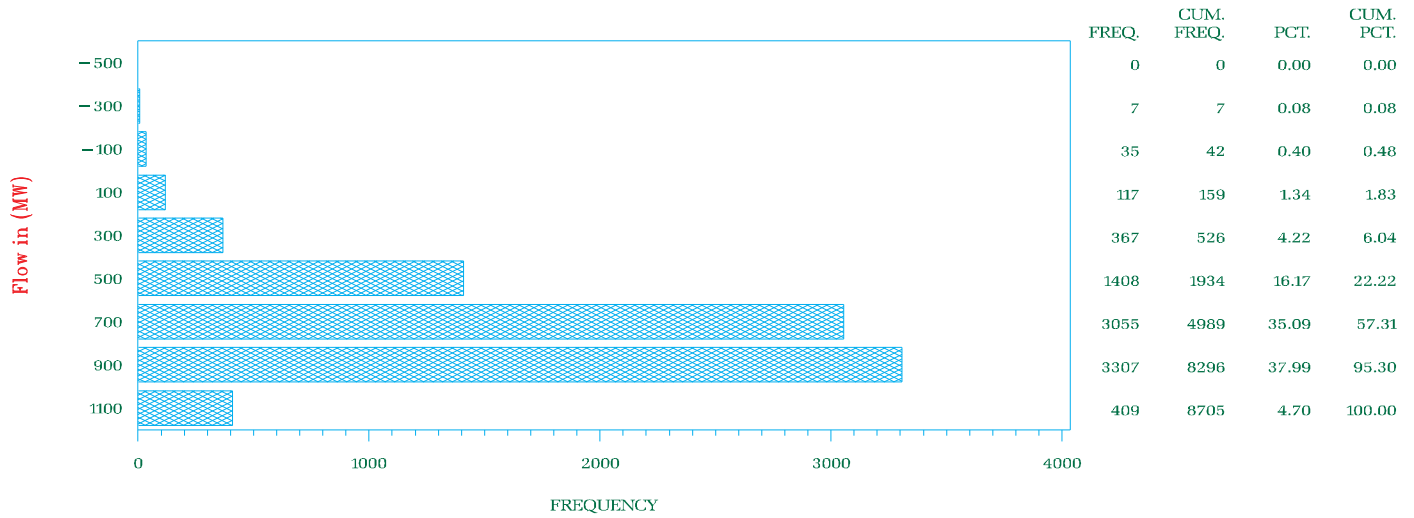
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

HOMER CITY – WATERCURE



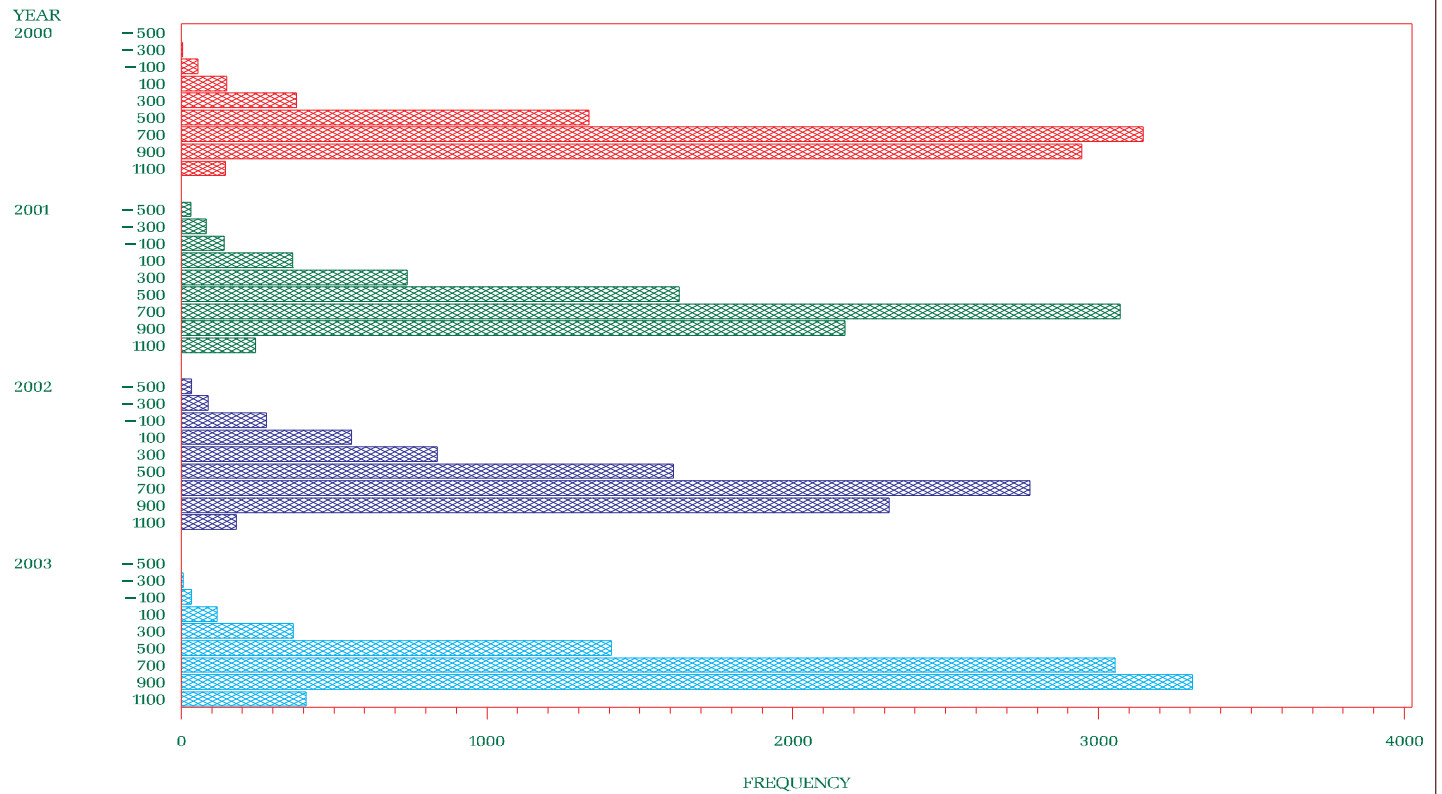
NYISO Frequency Interface Flow For January – December 2003

5018:BRANCHBURG – RAMAPO



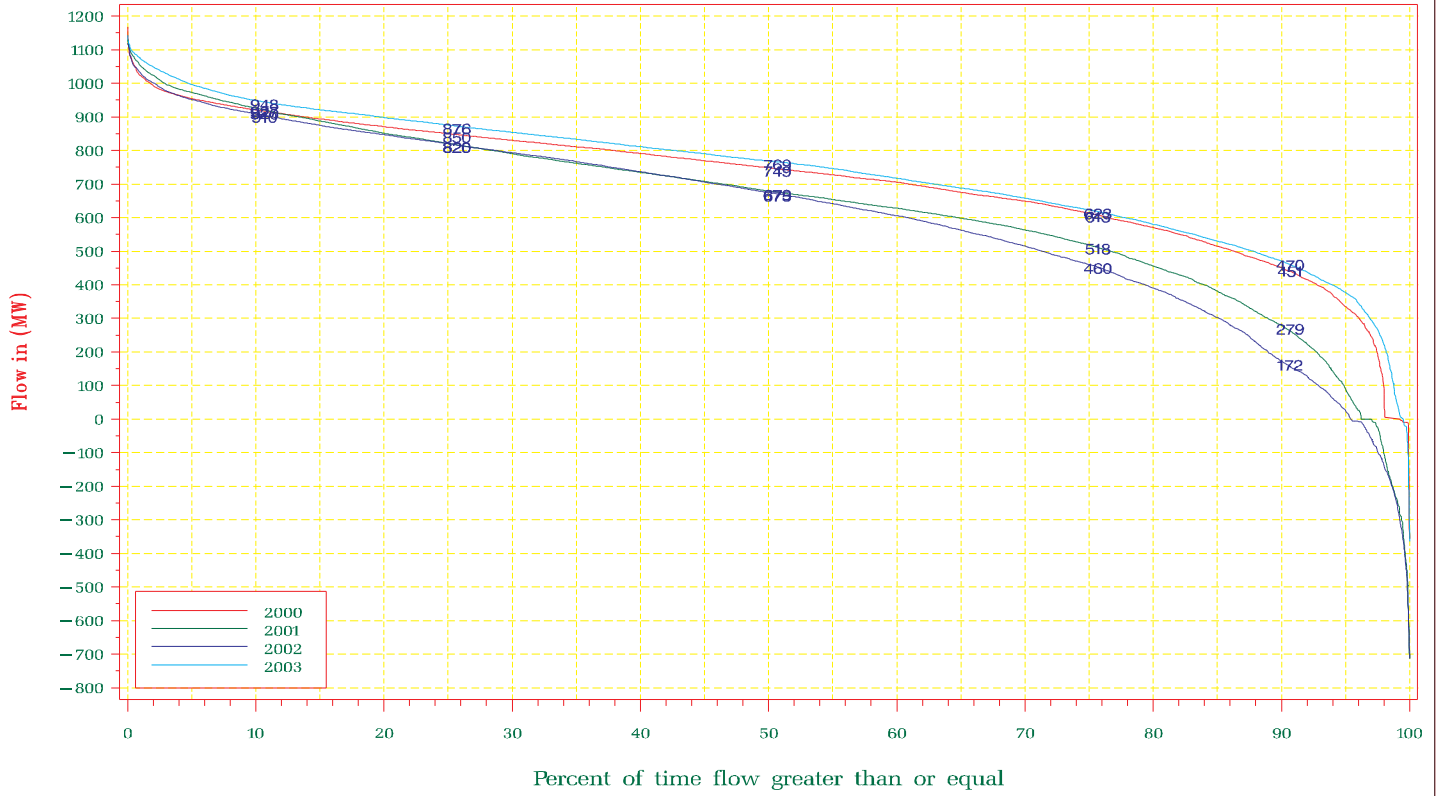
NYISO Frequency Interface Flow For January 2000 – December 2003

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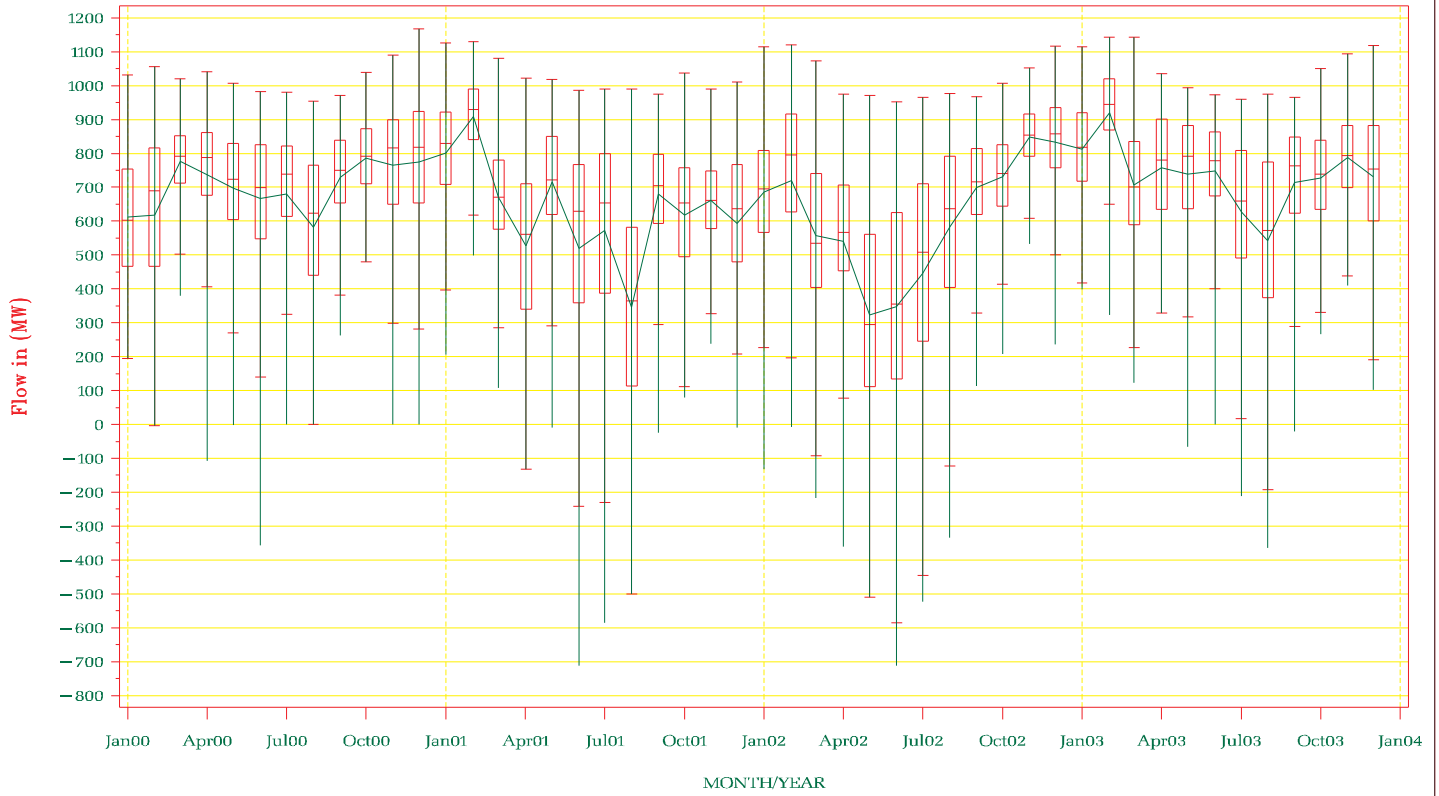
NYISO Percent of time Interface Flow For January 2000 – December 2003

5018:BRANCHBURG – RAMAPO



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

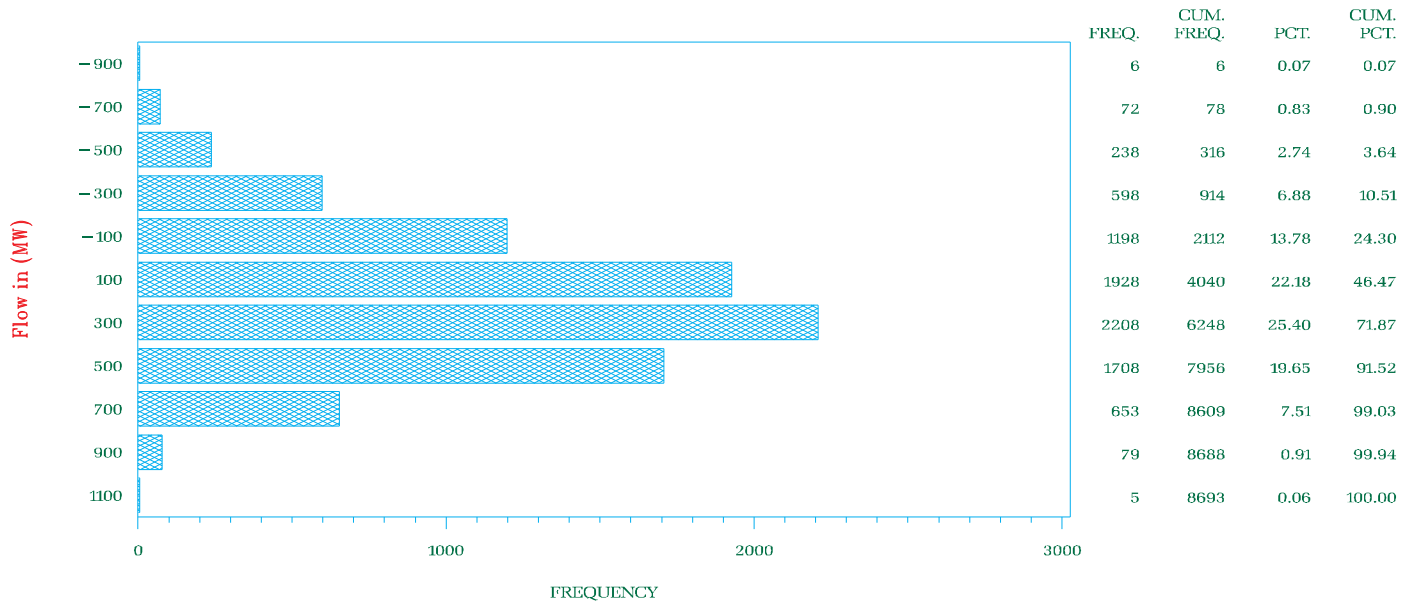
5018:BRANCHBURG – RAMAPO



NYISO Frequency Interface Flow For January – December 2003

Con Ed/PSEG PAR (JK/ABC) Imbalance

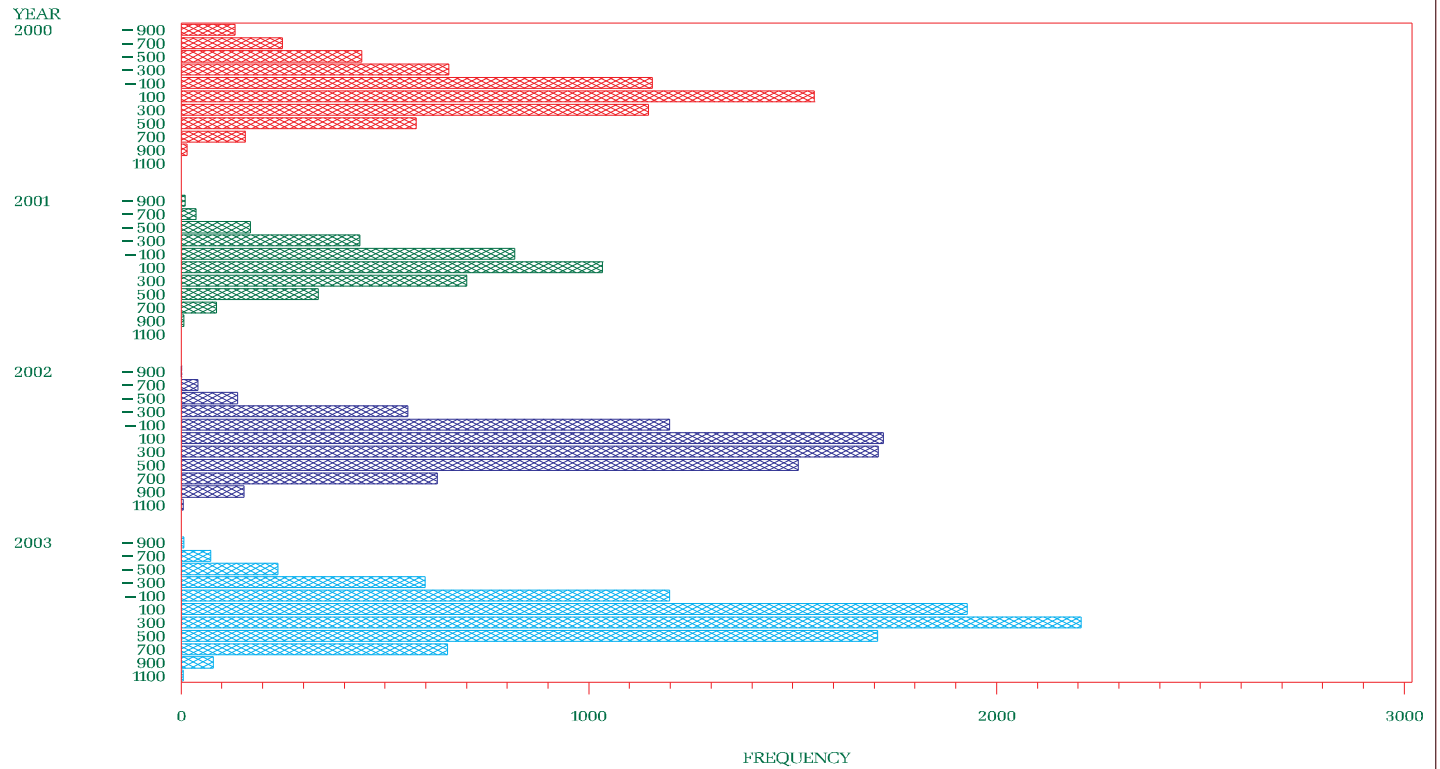
+ is toward PSEG



NYISO Frequency Interface Flow For January 2000 – December 2003

Con Ed/PSEG PAR (JK/ABC) Imbalance

+ is toward PSEG

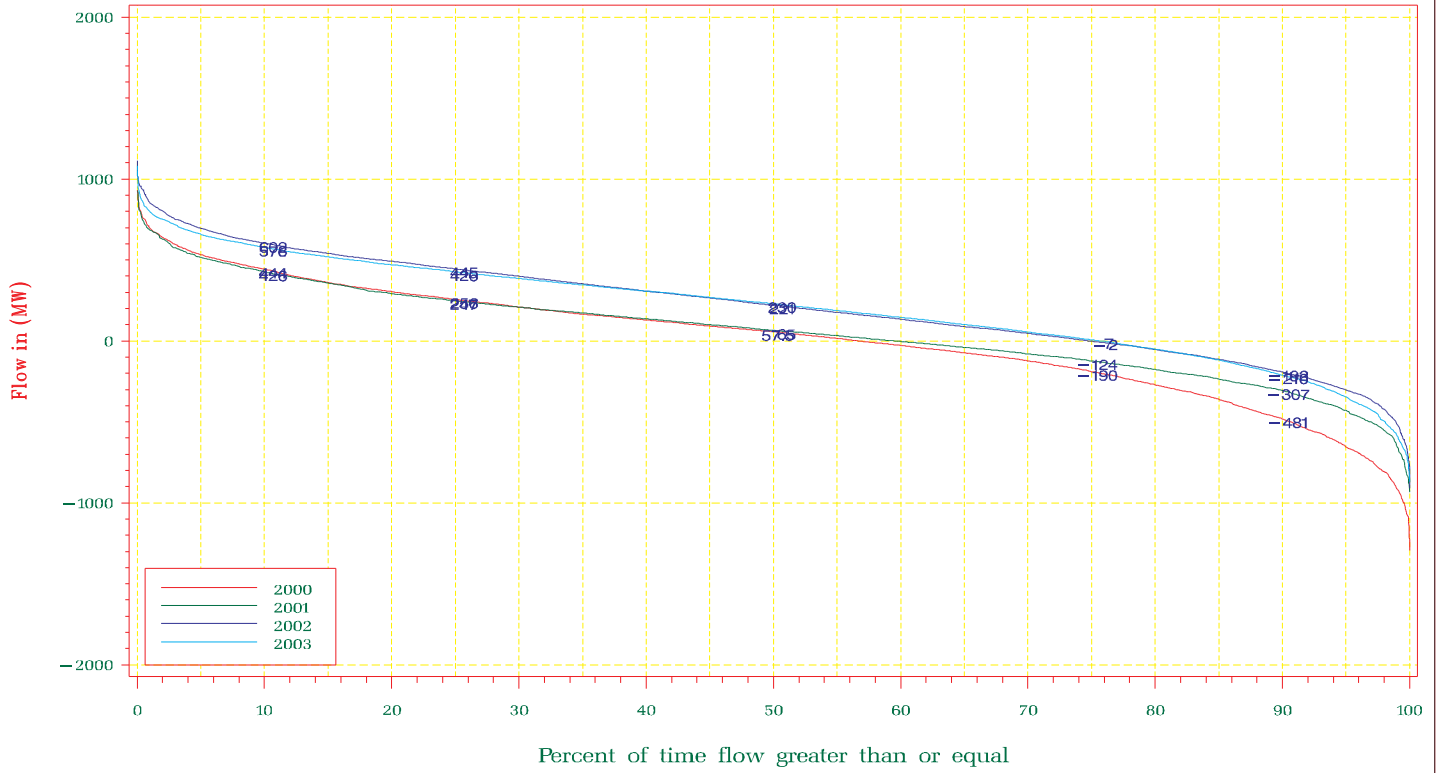




NYISO Percent of time Interface Flow For January 2000 – December 2003

Con Ed/PSEG PAR (JK/ABC) Imbalance

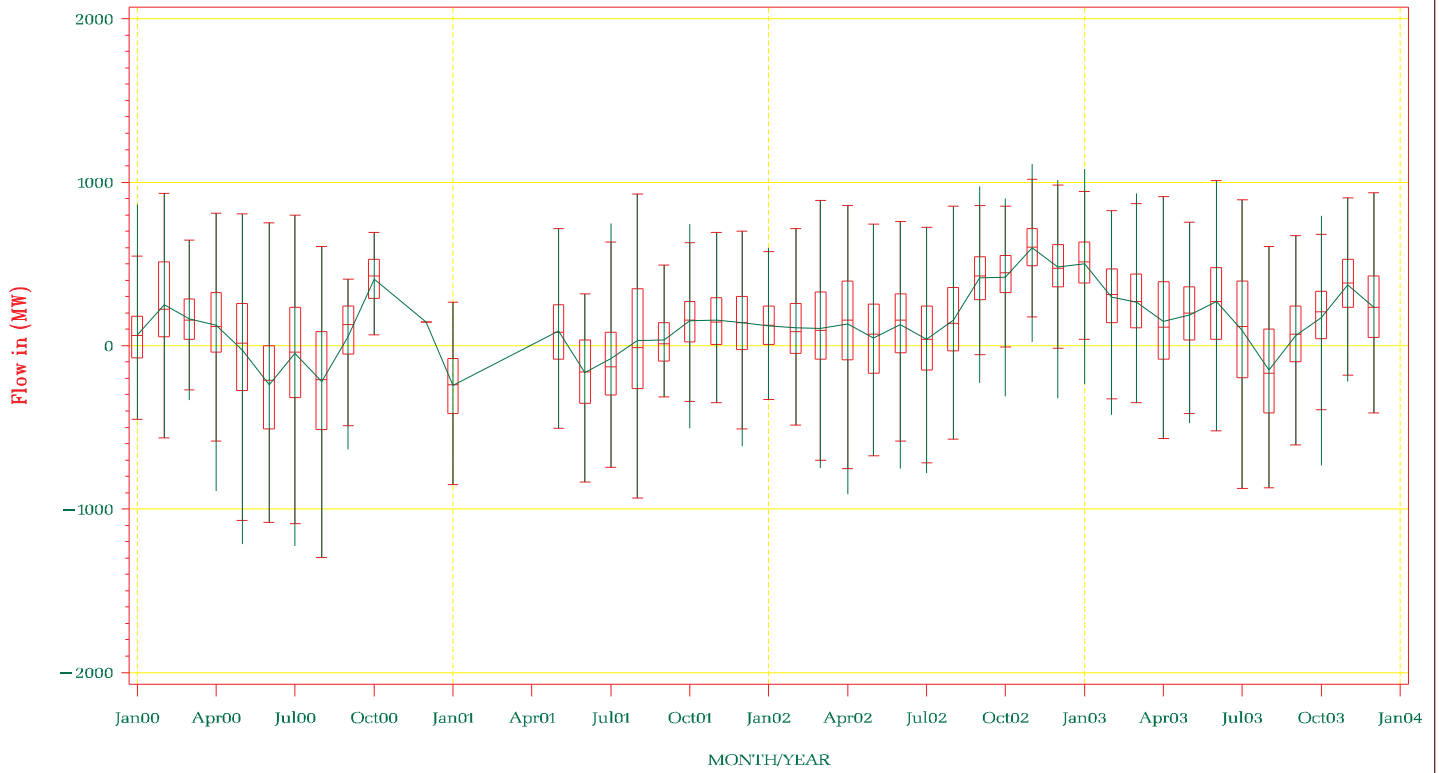
+ is toward PSEG



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

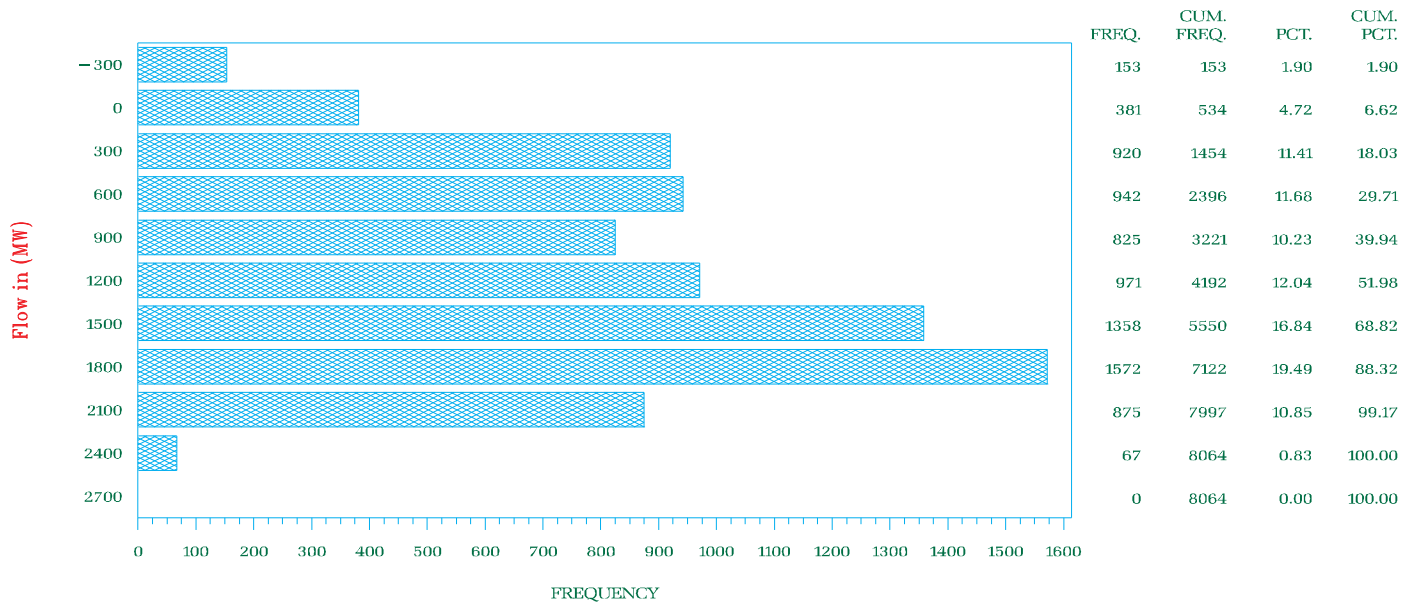
Con Ed/PSEG PAR (JK/ABC) Imbalance

+ is toward PSEG



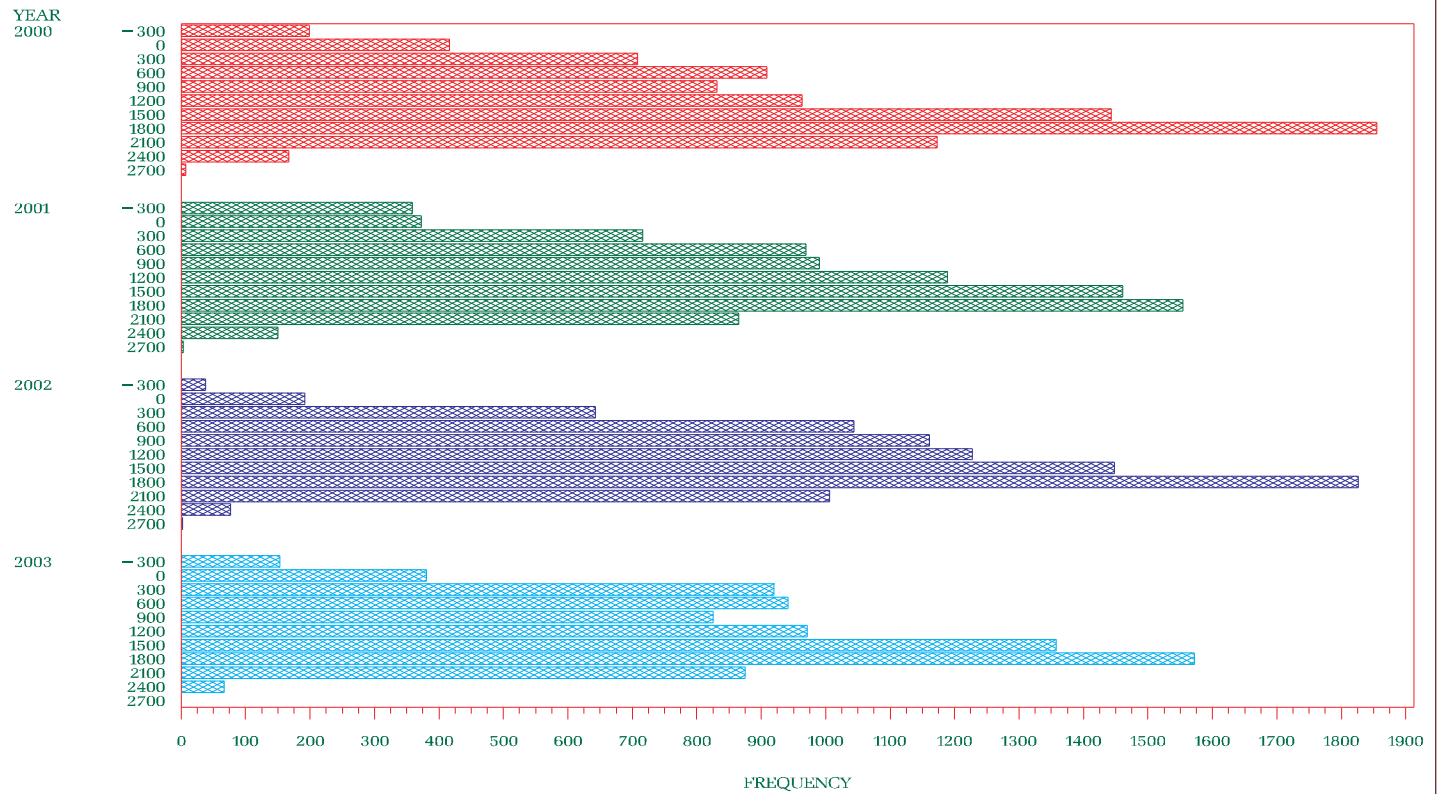
NYISO Frequency Interface Flow For January – December 2003

West NY Gen Export

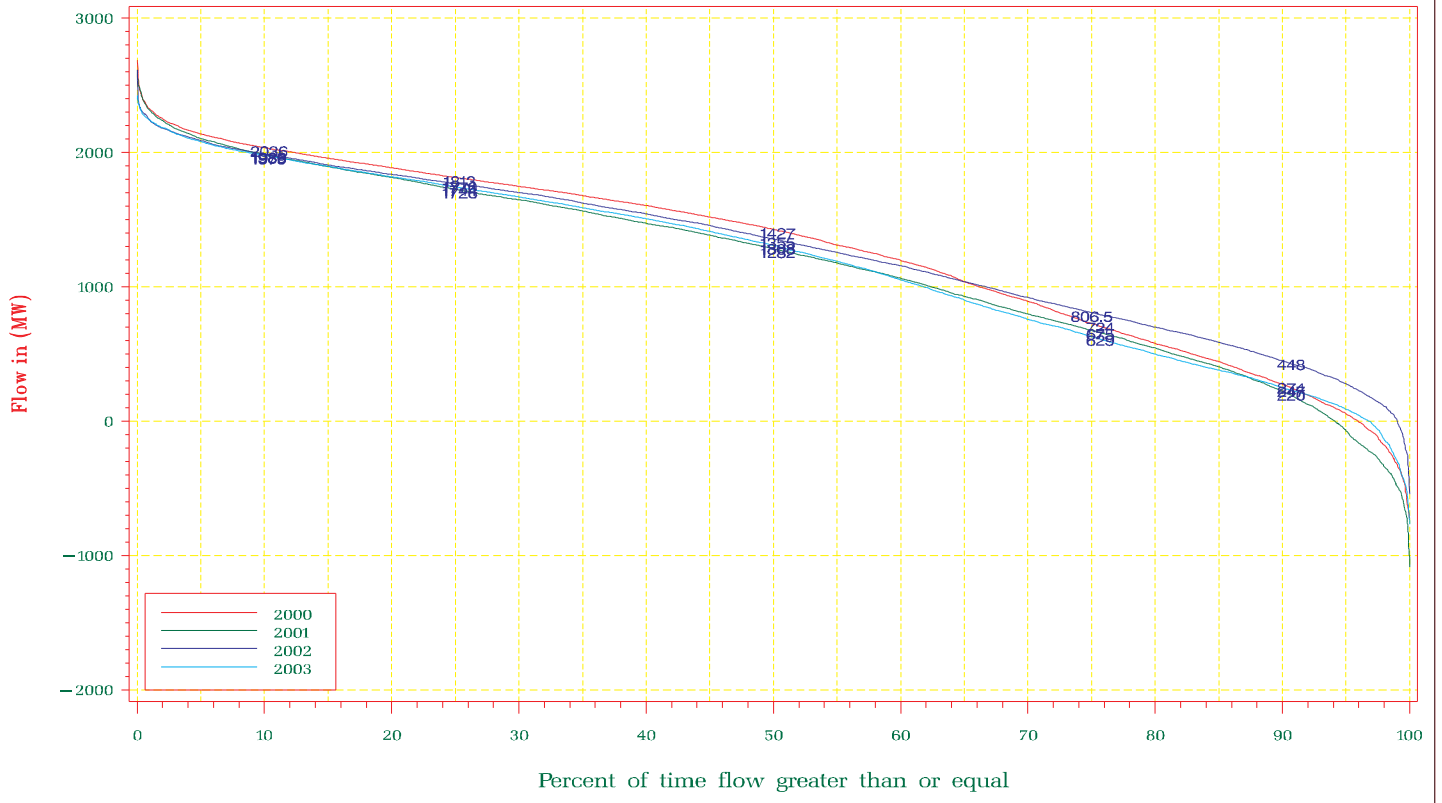


NYISO Frequency Interface Flow For January 2000 – December 2003

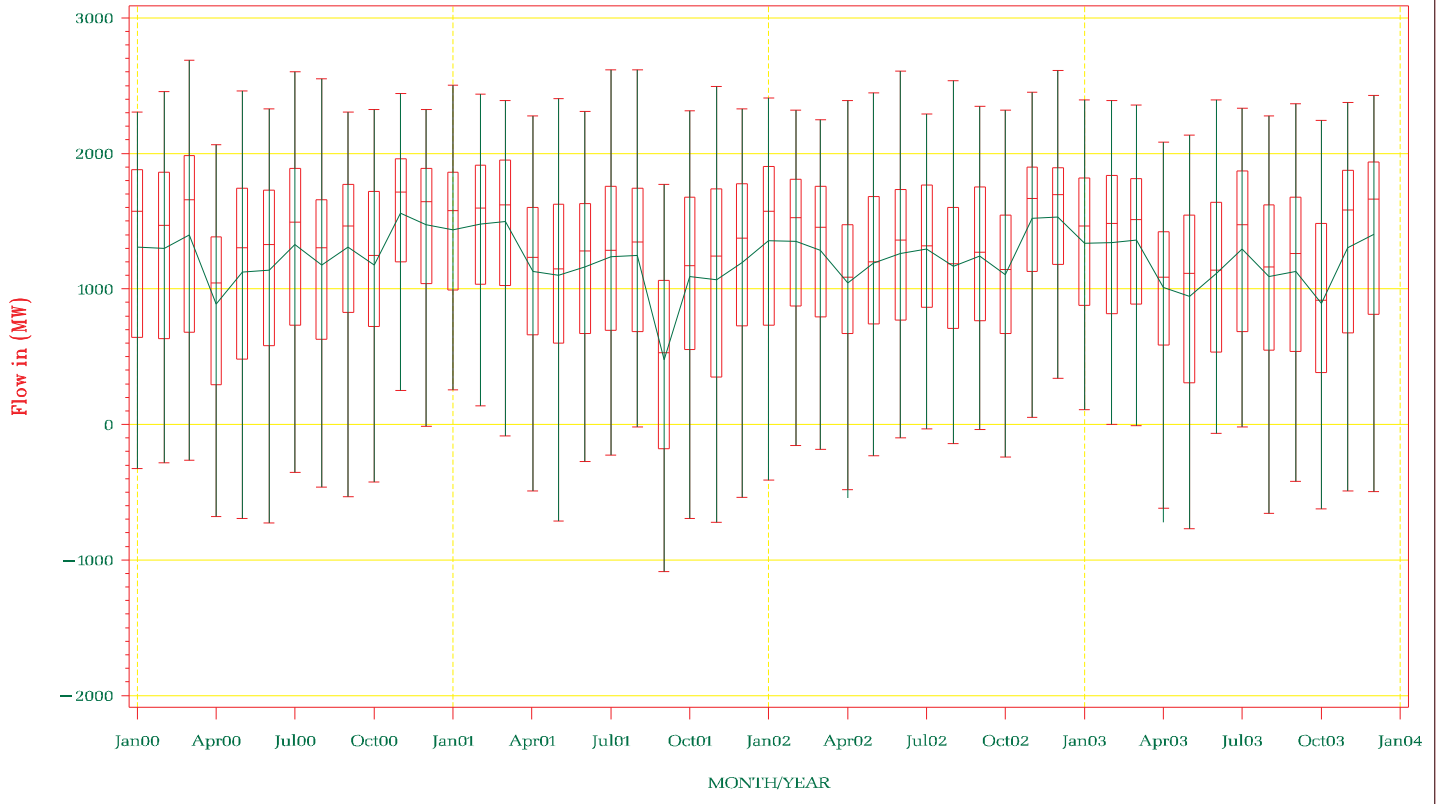
West NY Gen Export



NYISO Percent of time Interface Flow For January 2000 – December 2003  
 West NY Gen Export



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
 West NY Gen Export



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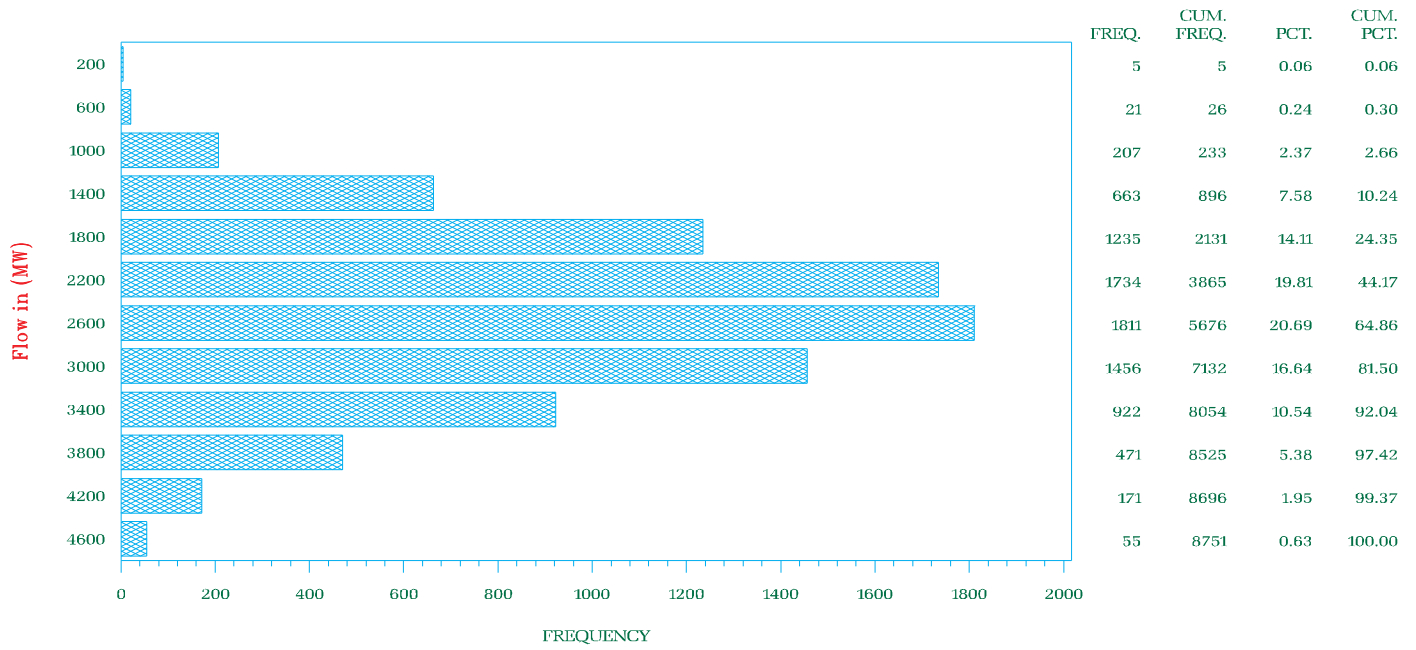
## Appendix B – Margins to Limits

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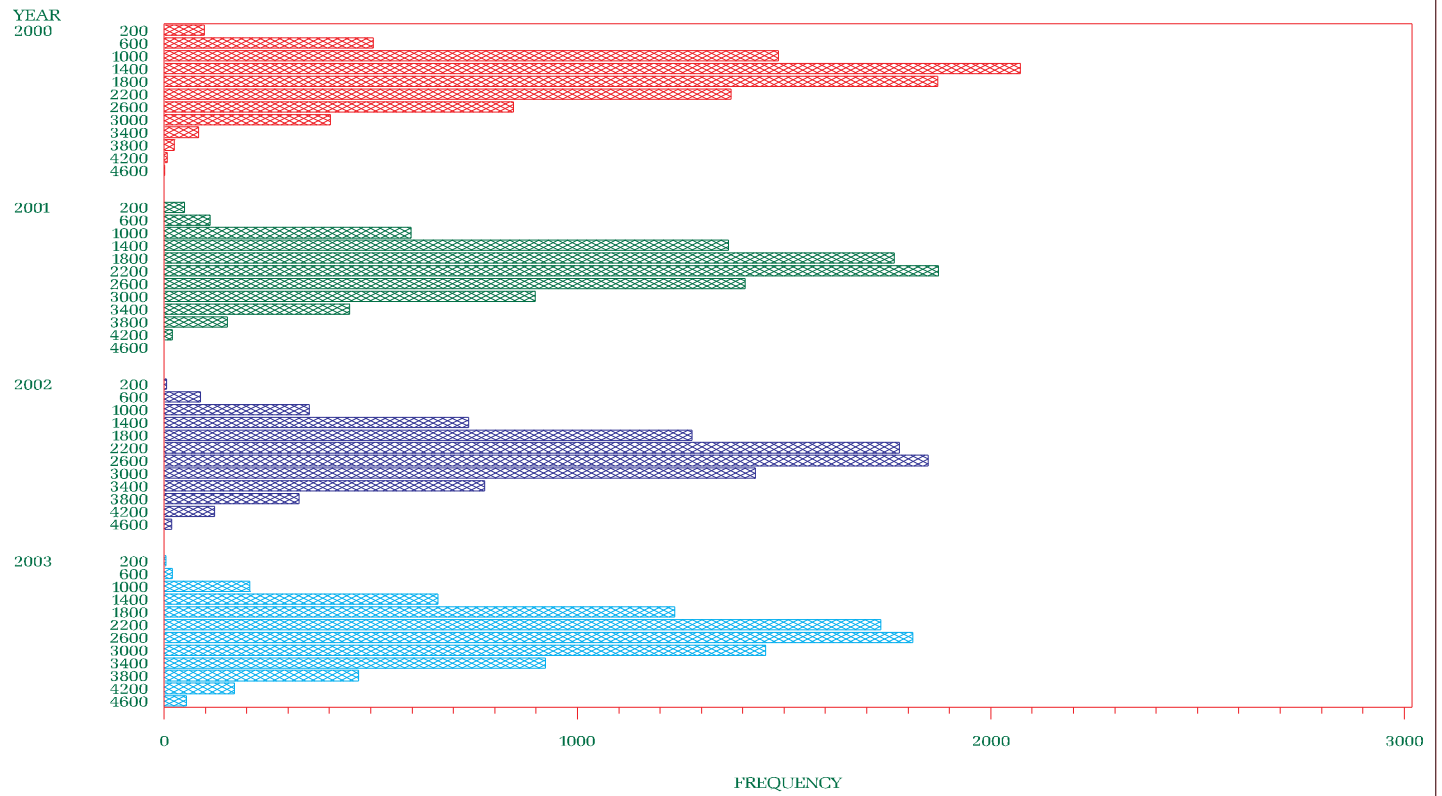
NYISO Frequency Interface Flow For January – December 2003

Margin to Total East Limit



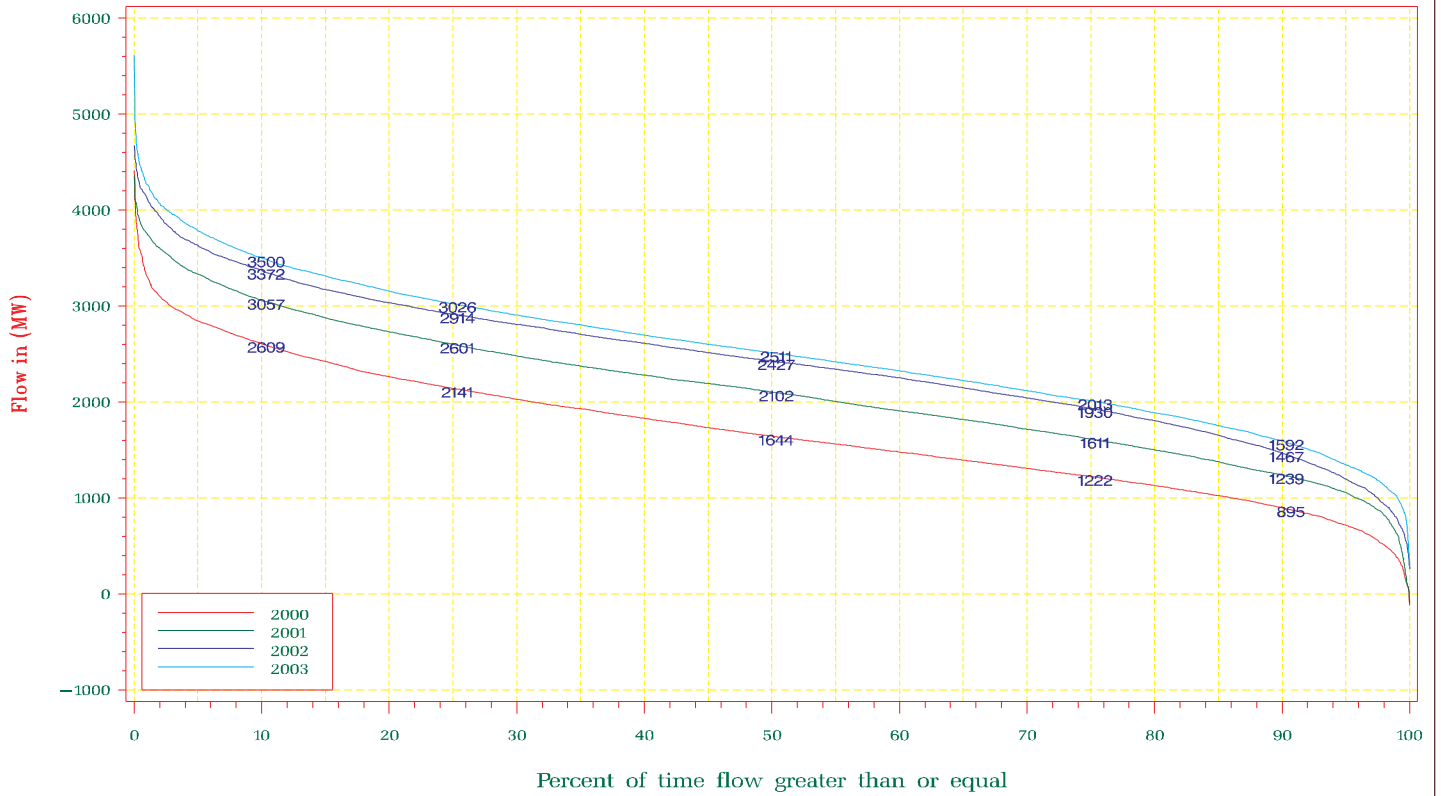
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to Total East Limit



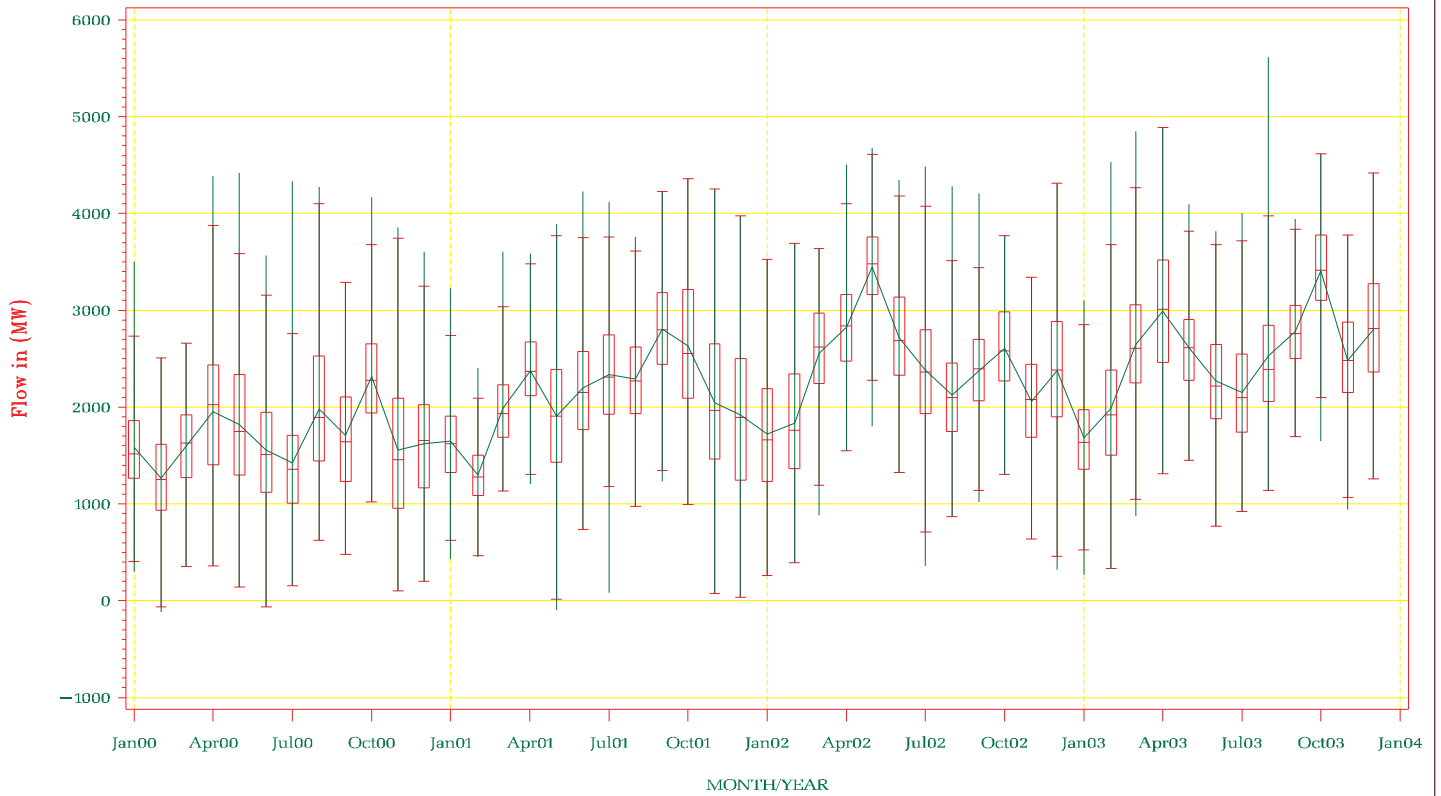
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to Total East Limit



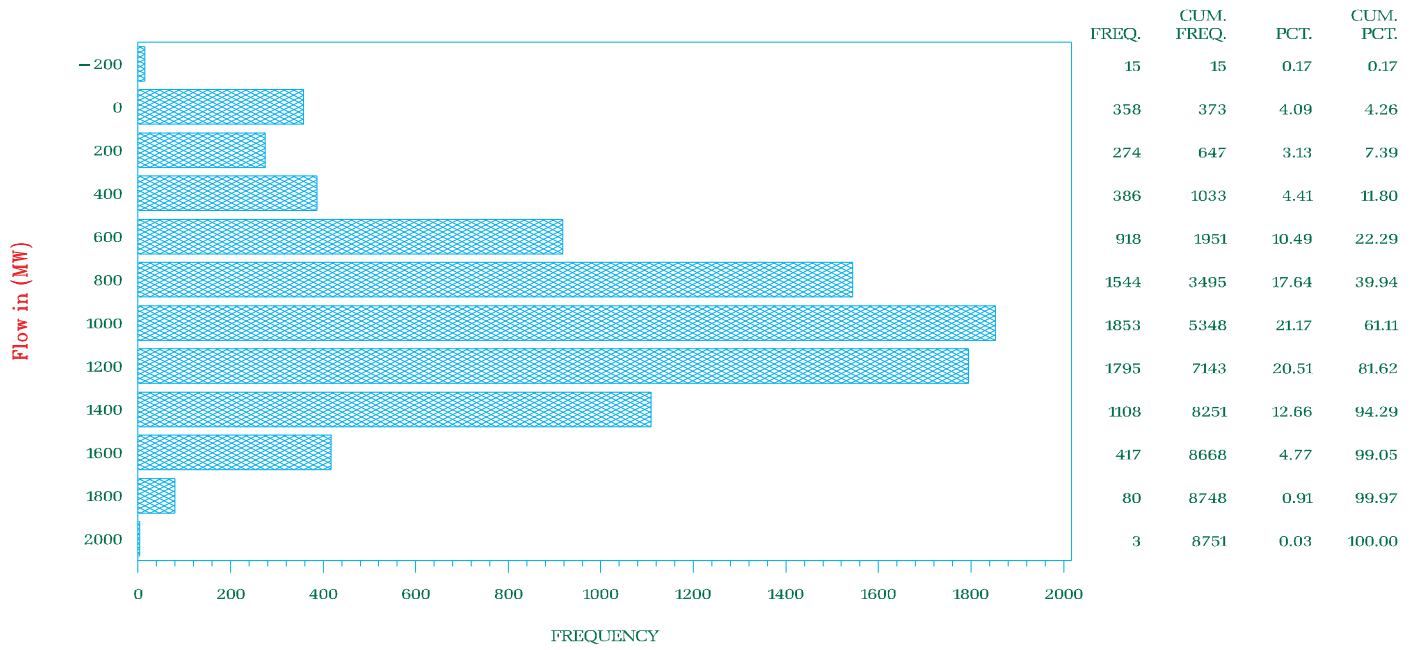
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to Total East Limit



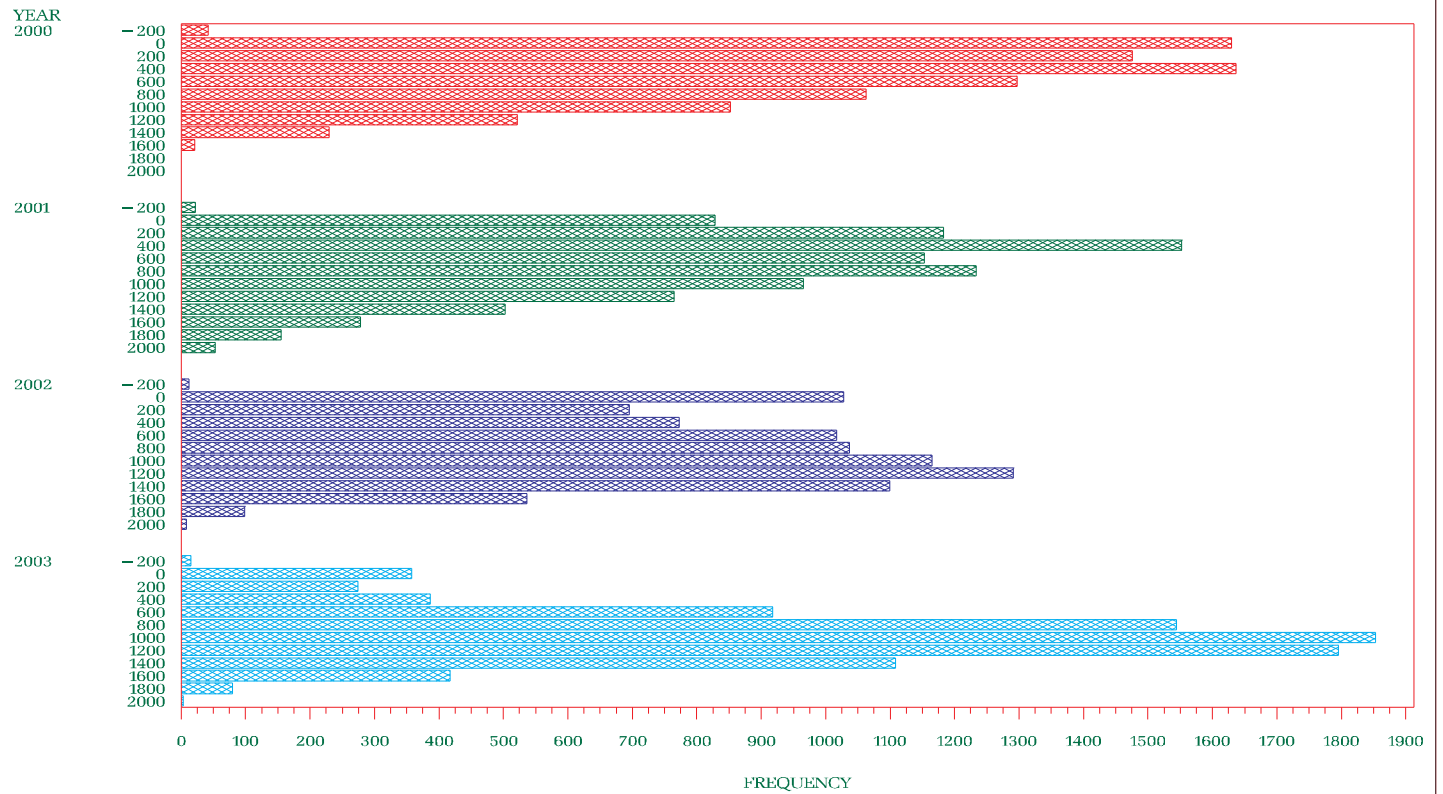
NYISO Frequency Interface Flow For January – December 2003

Margin to Central East Stability Limit



NYISO Frequency Interface Flow For January 2000 – December 2003

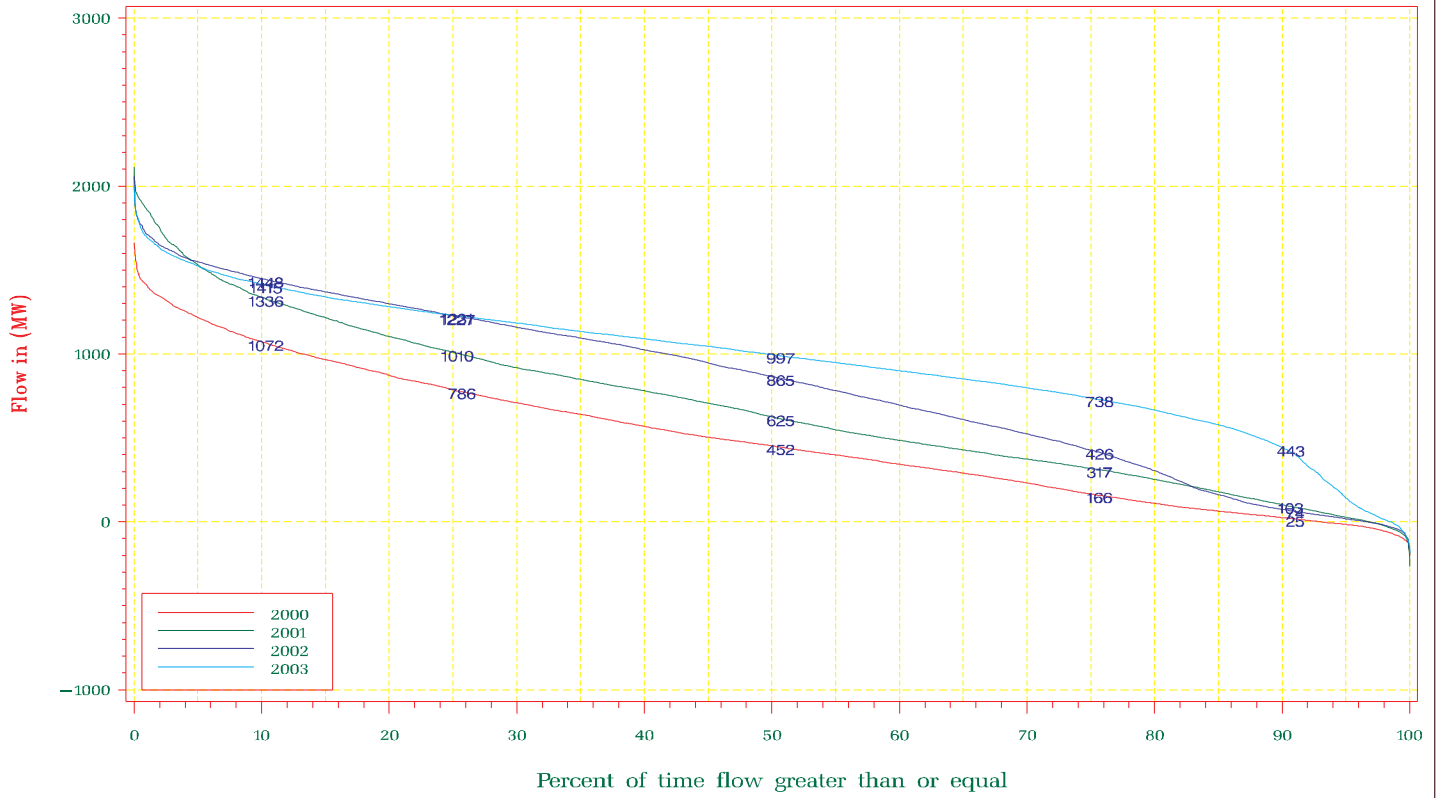
Margin to Central East Stability Limit





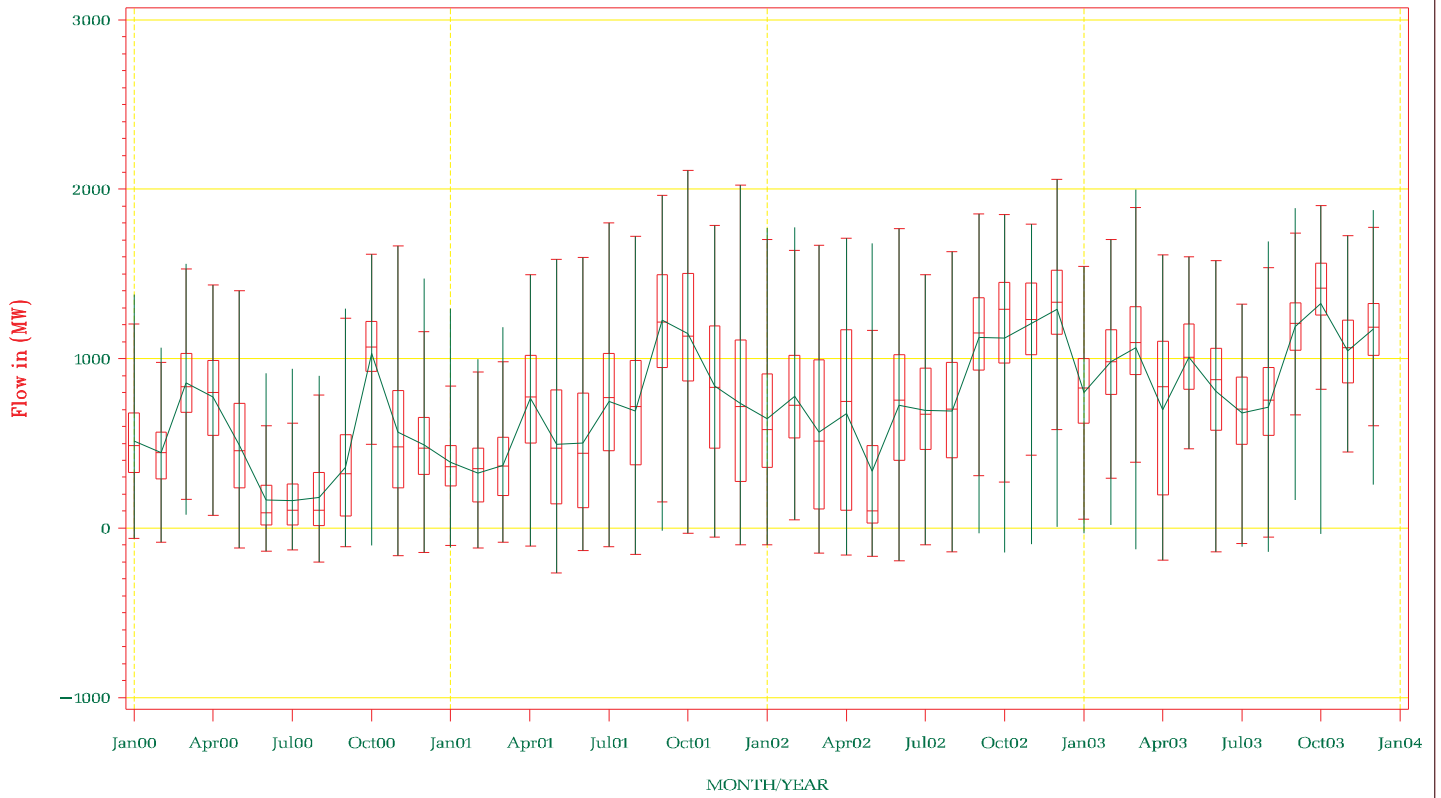
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to Central East Stability Limit



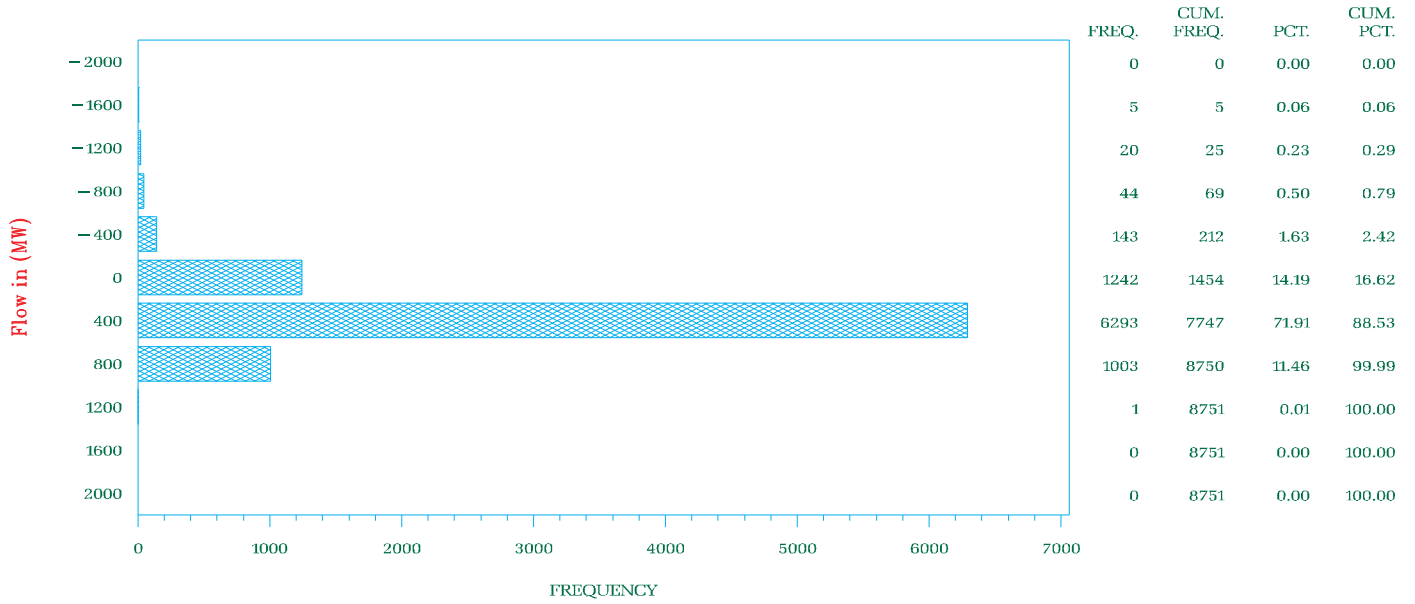
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to Central East Stability Limit



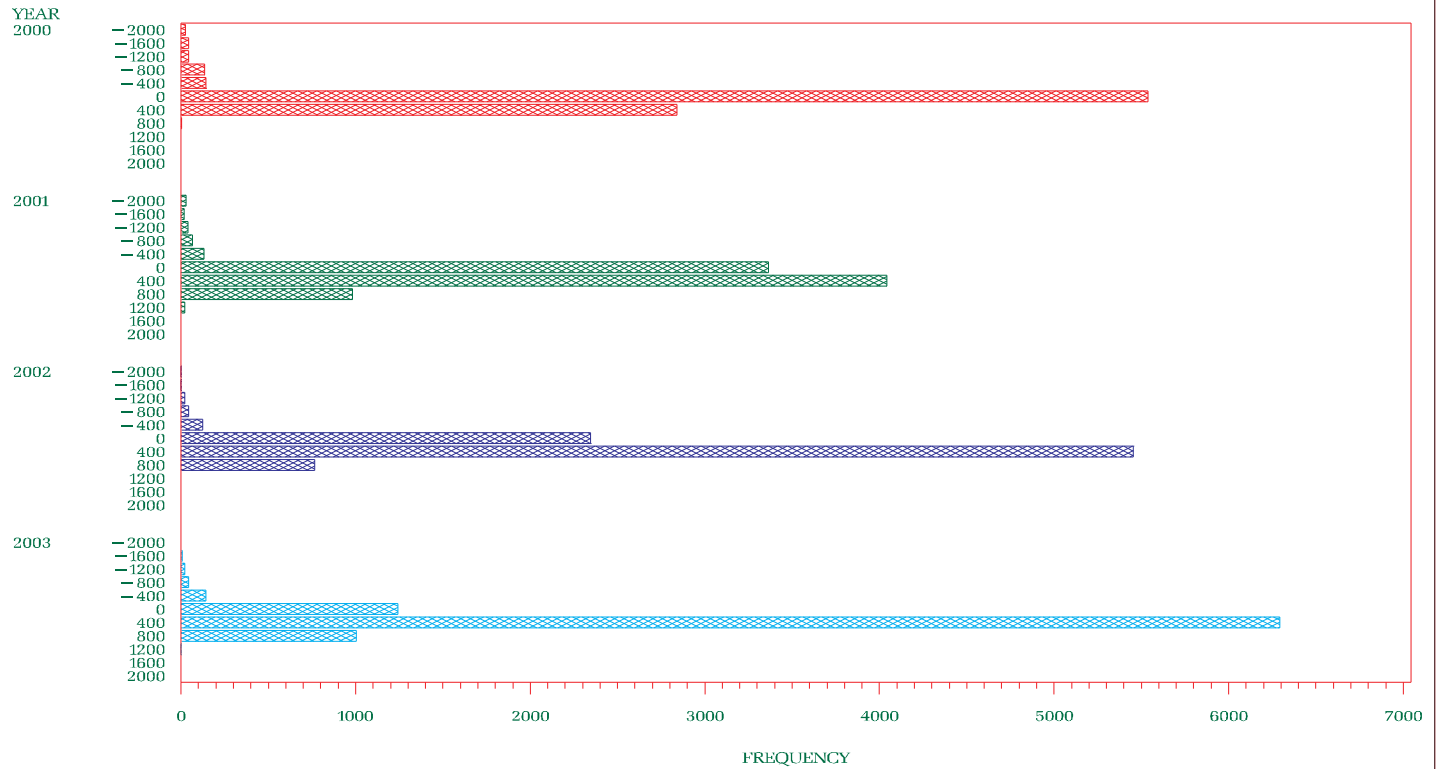
NYISO Frequency Interface Flow For January – December 2003

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



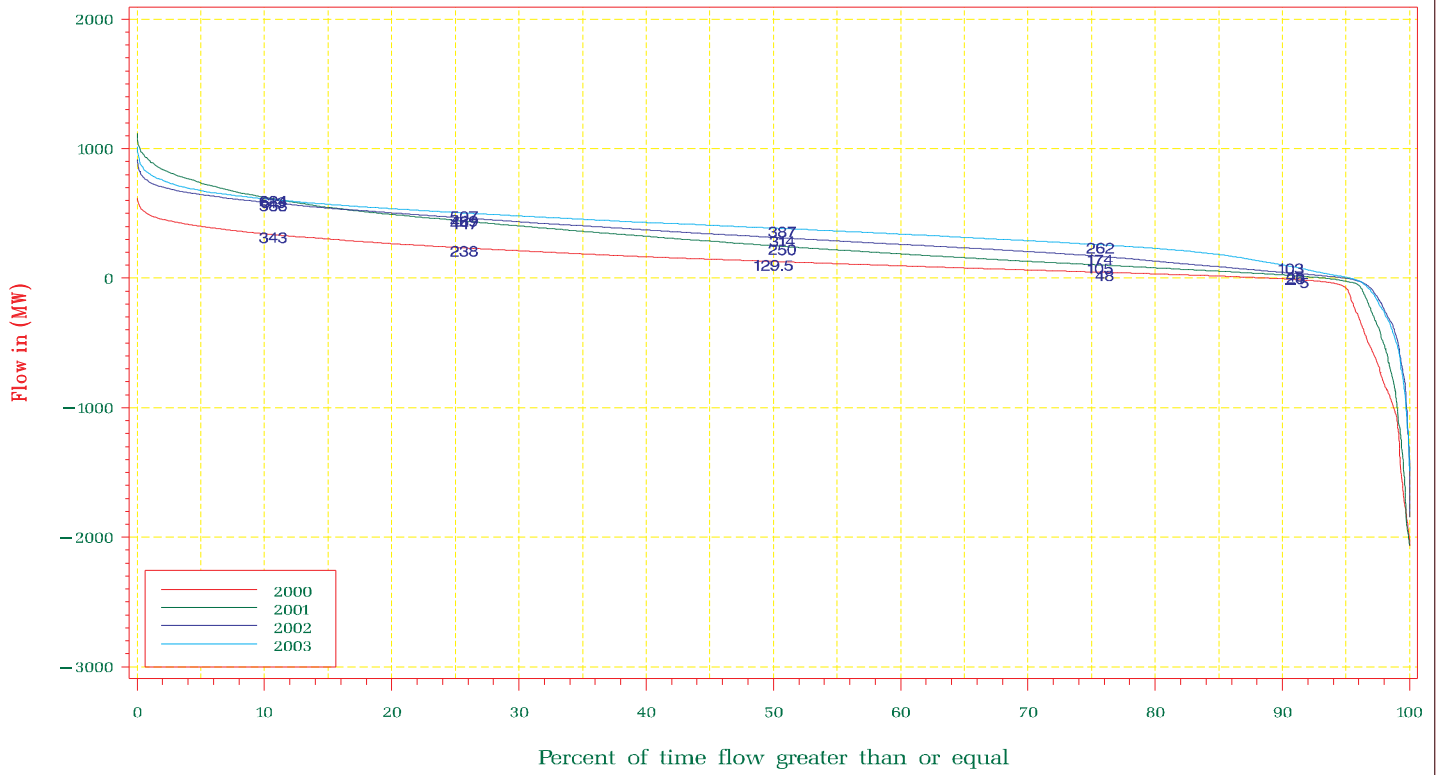
NYISO Frequency Interface Flow For January 2000 – December 2003

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



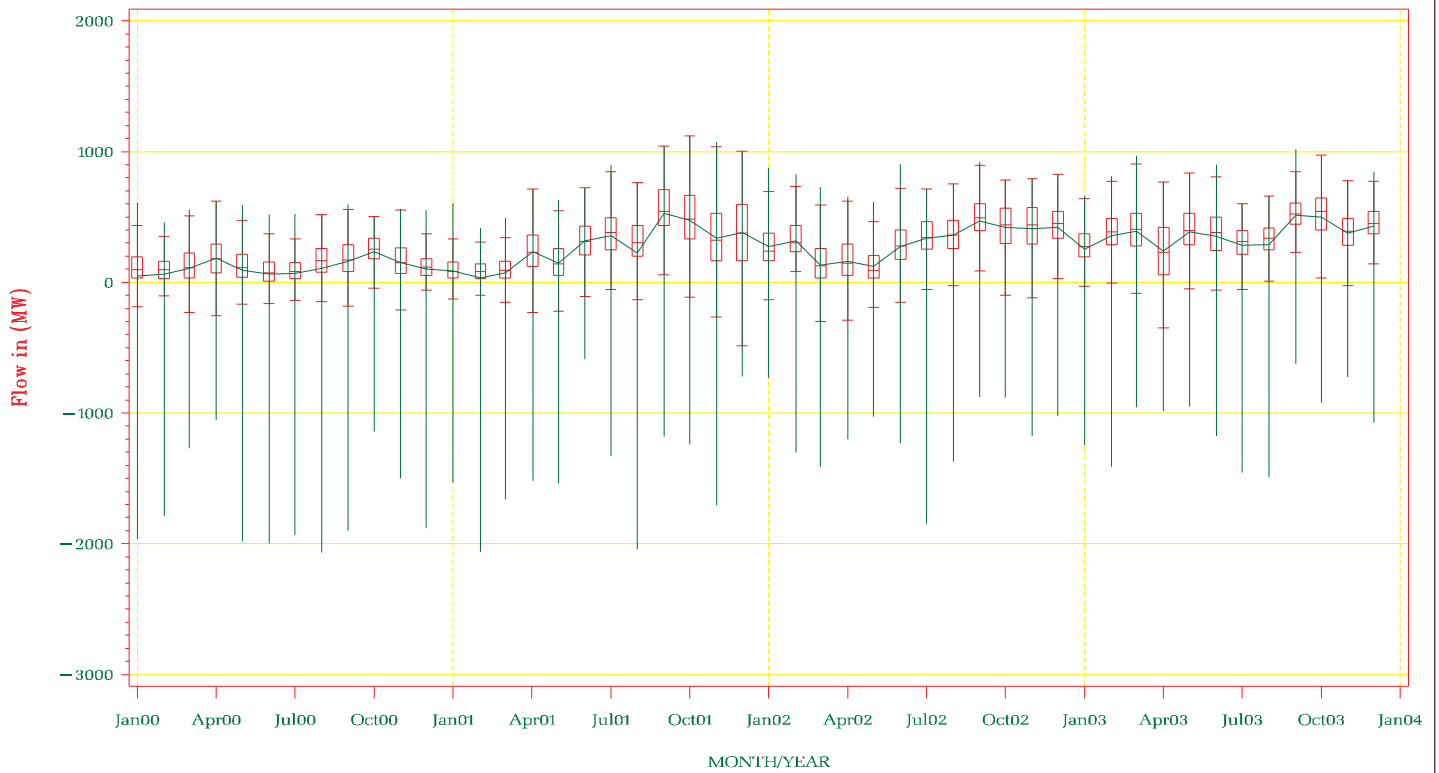
NYISO Percent of time Interface Flow For January 2000 – December 2003

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



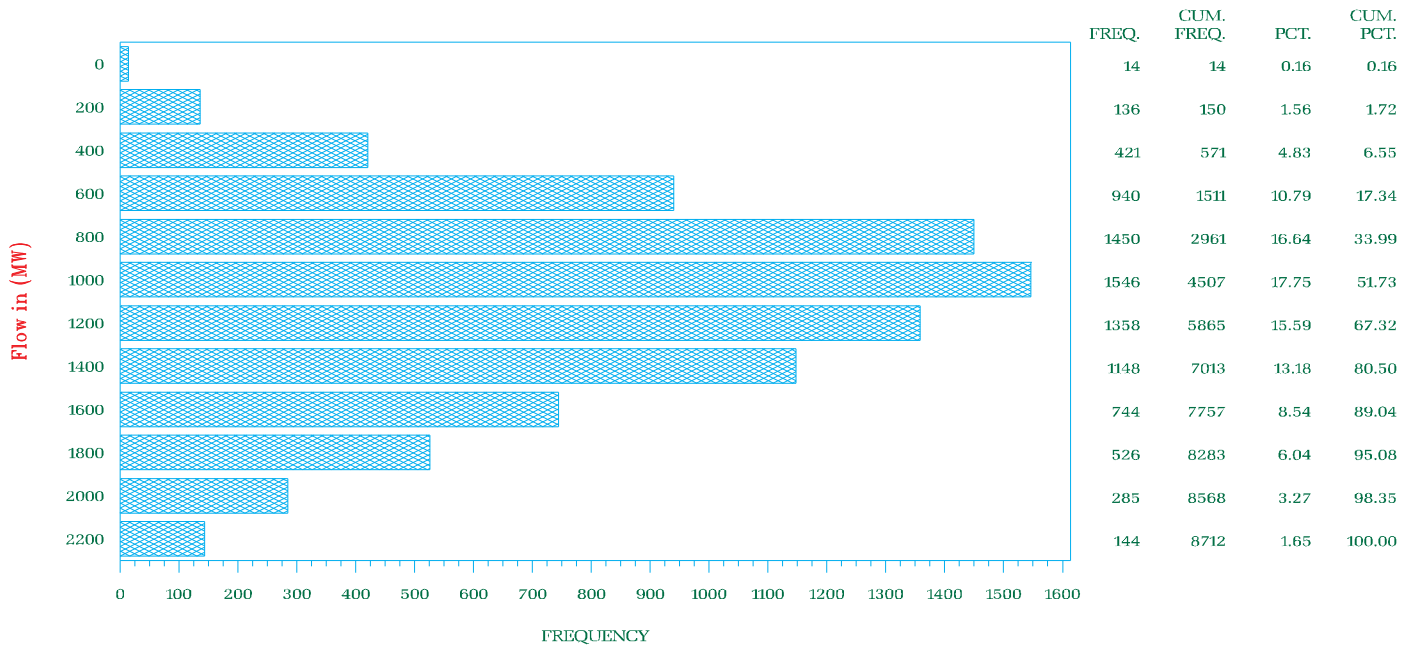
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

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



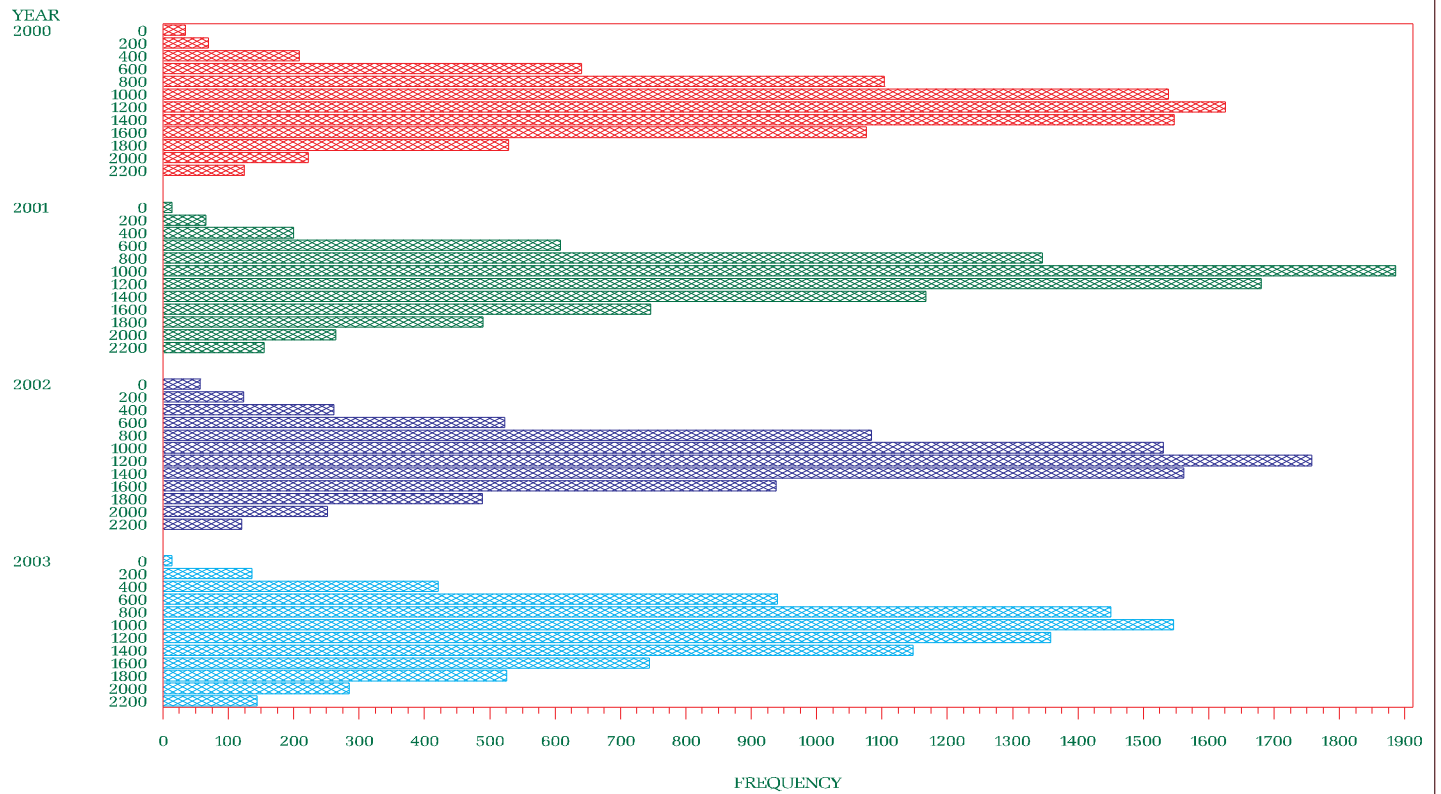
NYISO Frequency Interface Flow For January – December 2003

Margin to West Central Limit



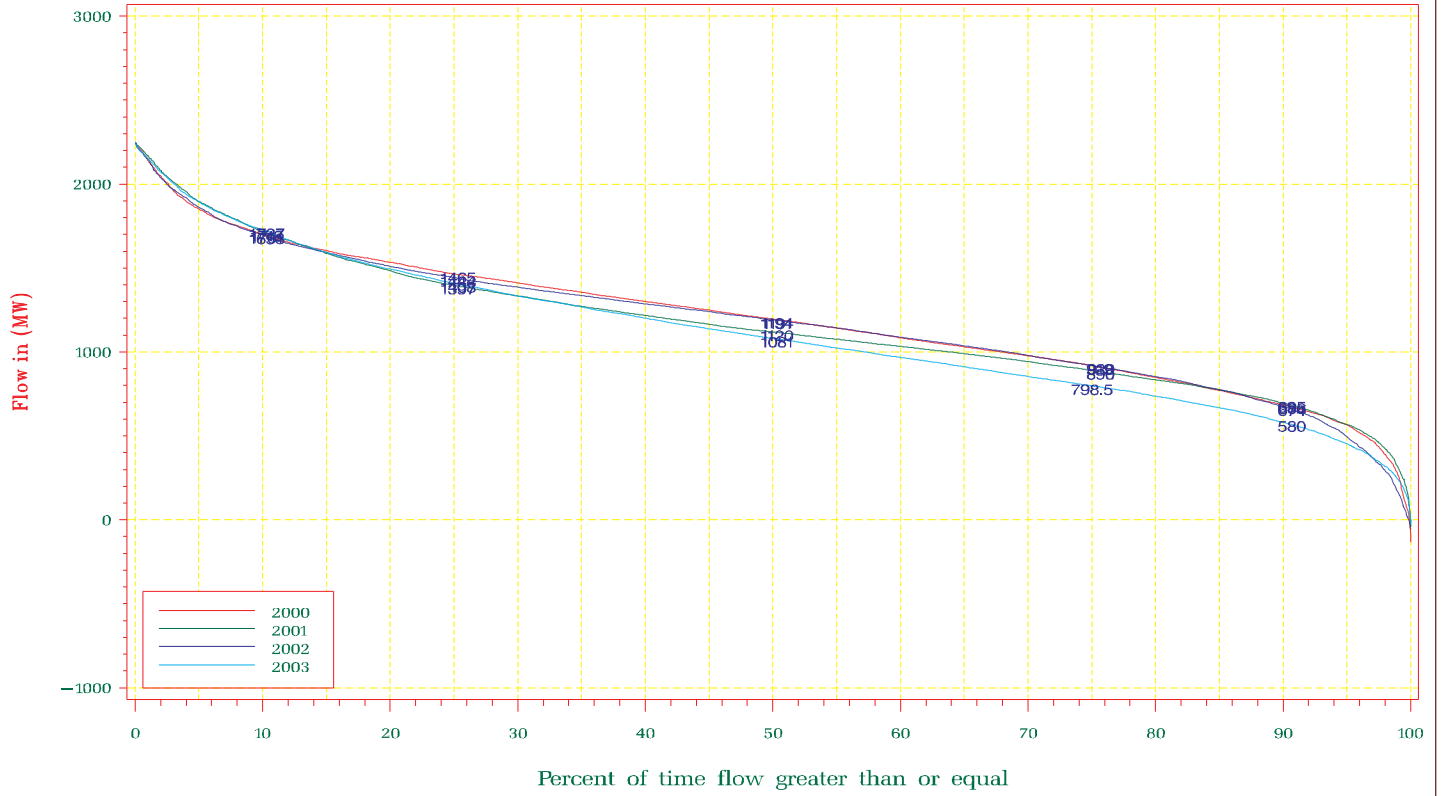
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to West Central Limit



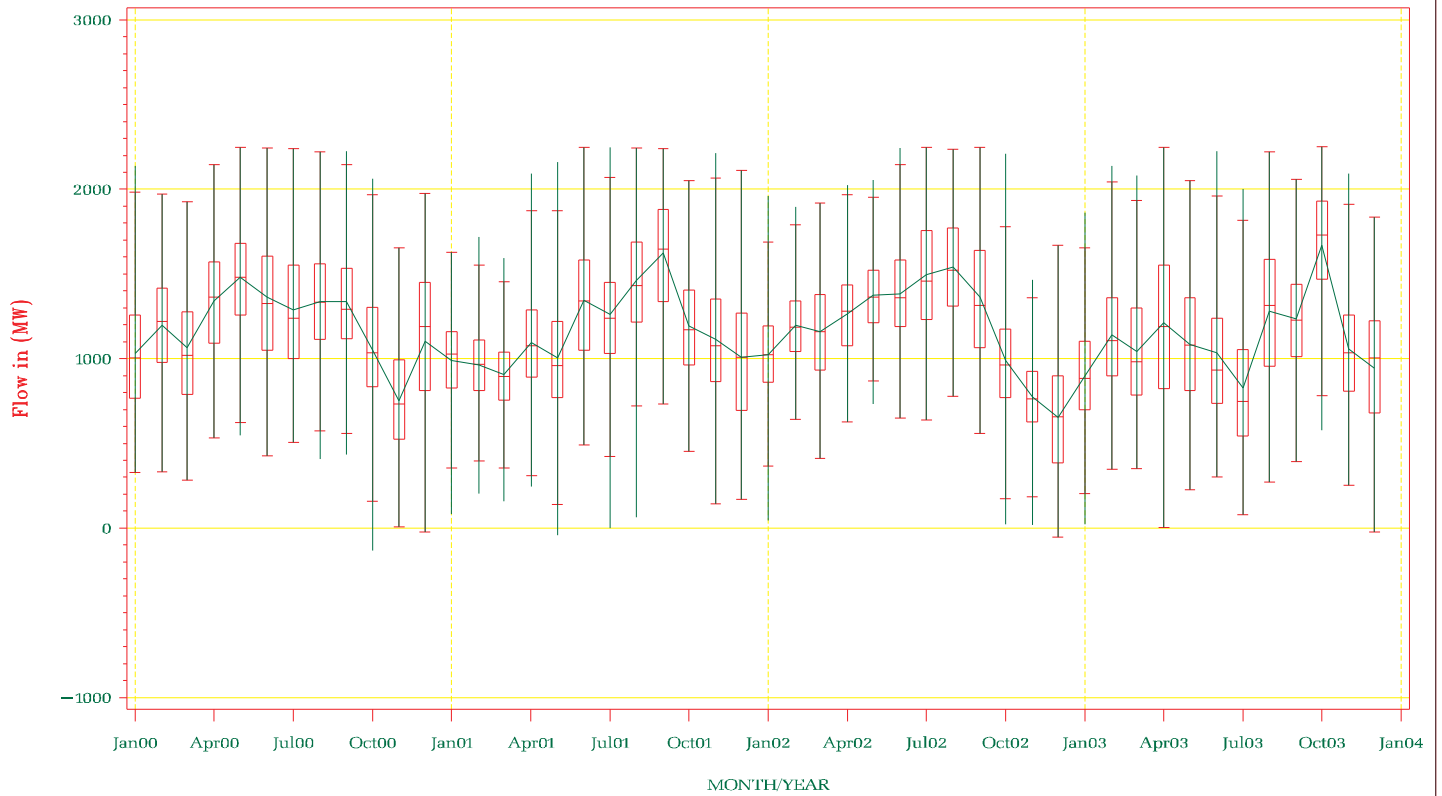
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to West Central Limit



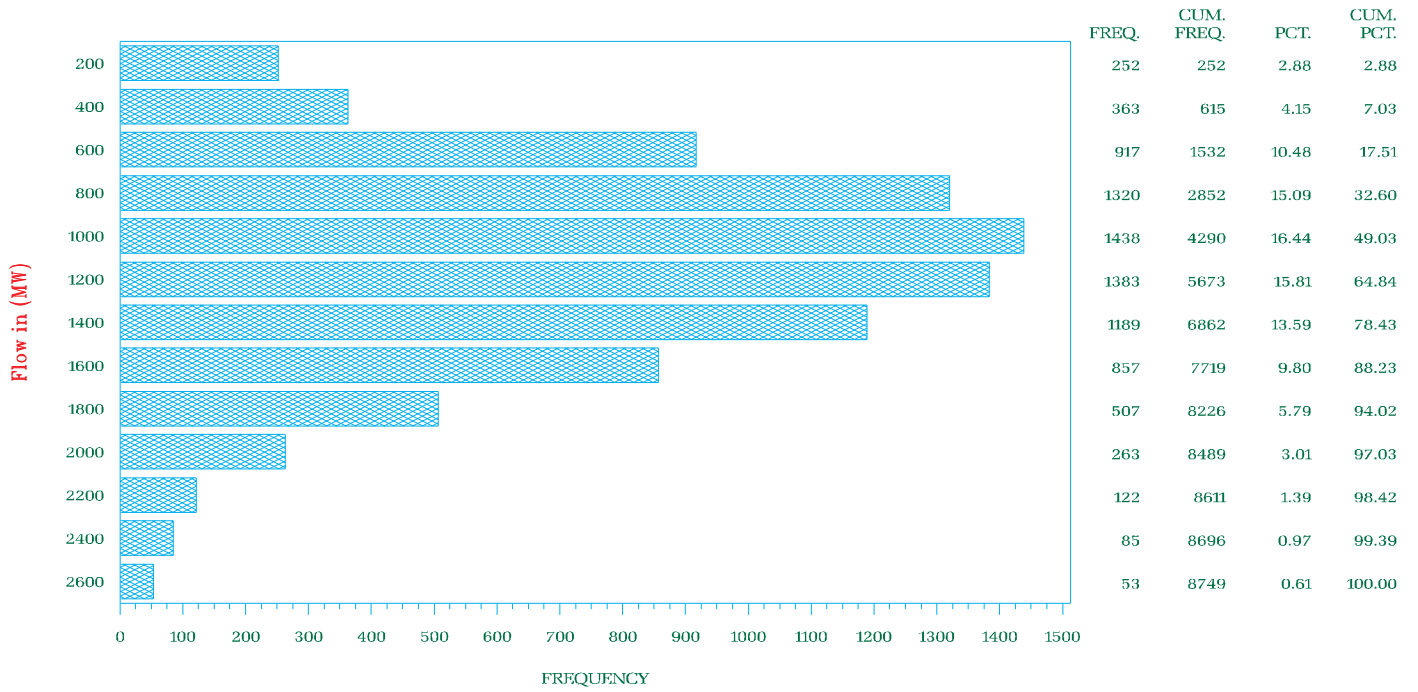
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to West Central Limit



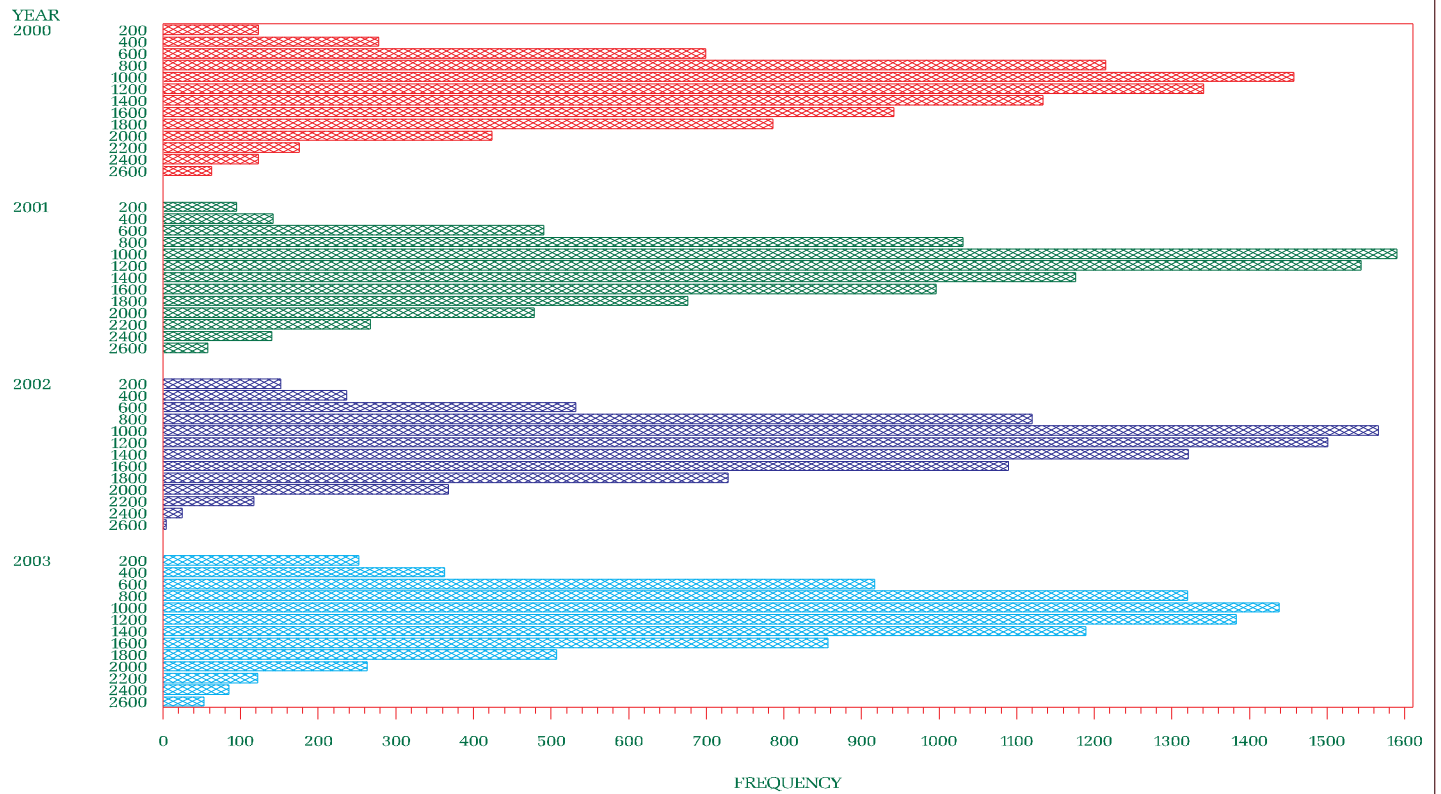
NYISO Frequency Interface Flow For January – December 2003

Margin to Dysinger East Limit



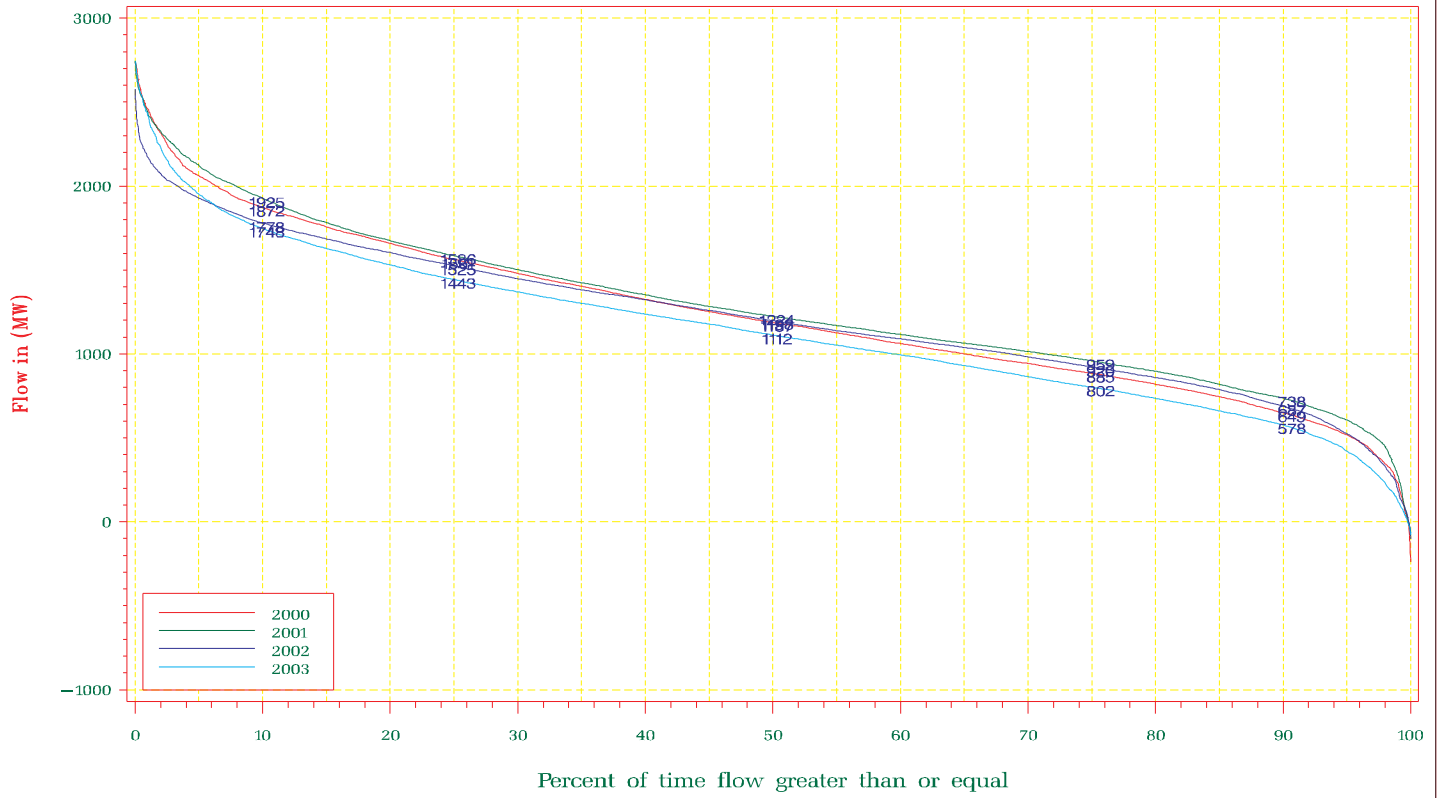
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to Dysinger East Limit



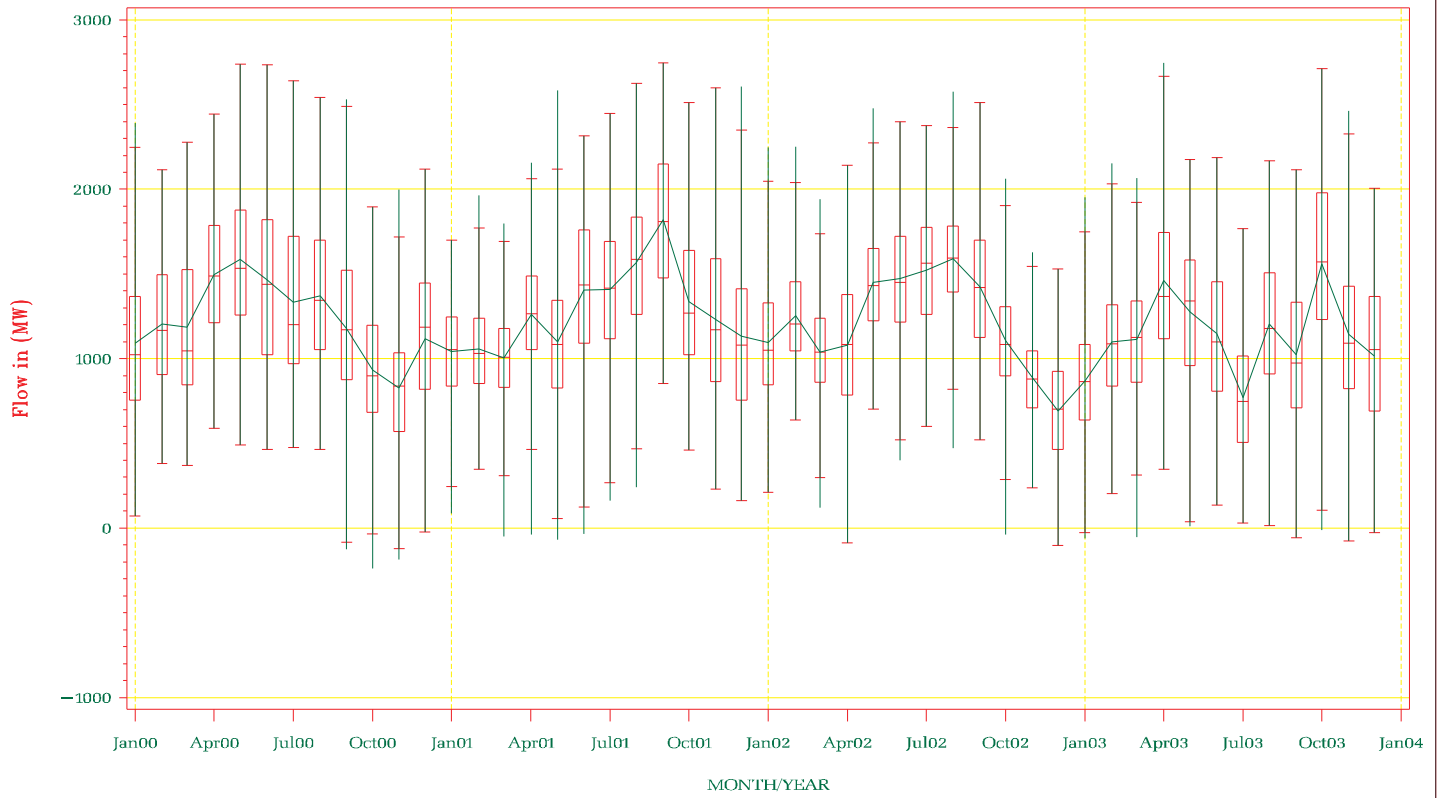
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to Dysinger East Limit



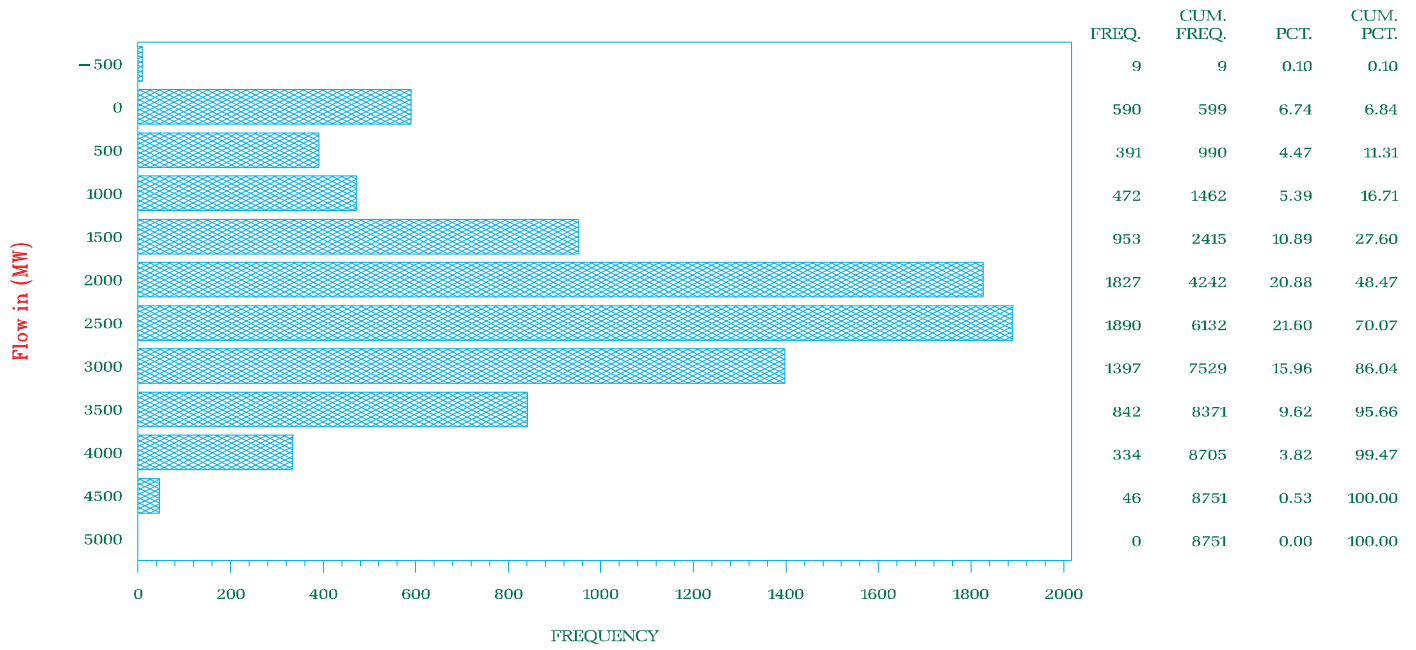
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Margin to Dysinger East Limit



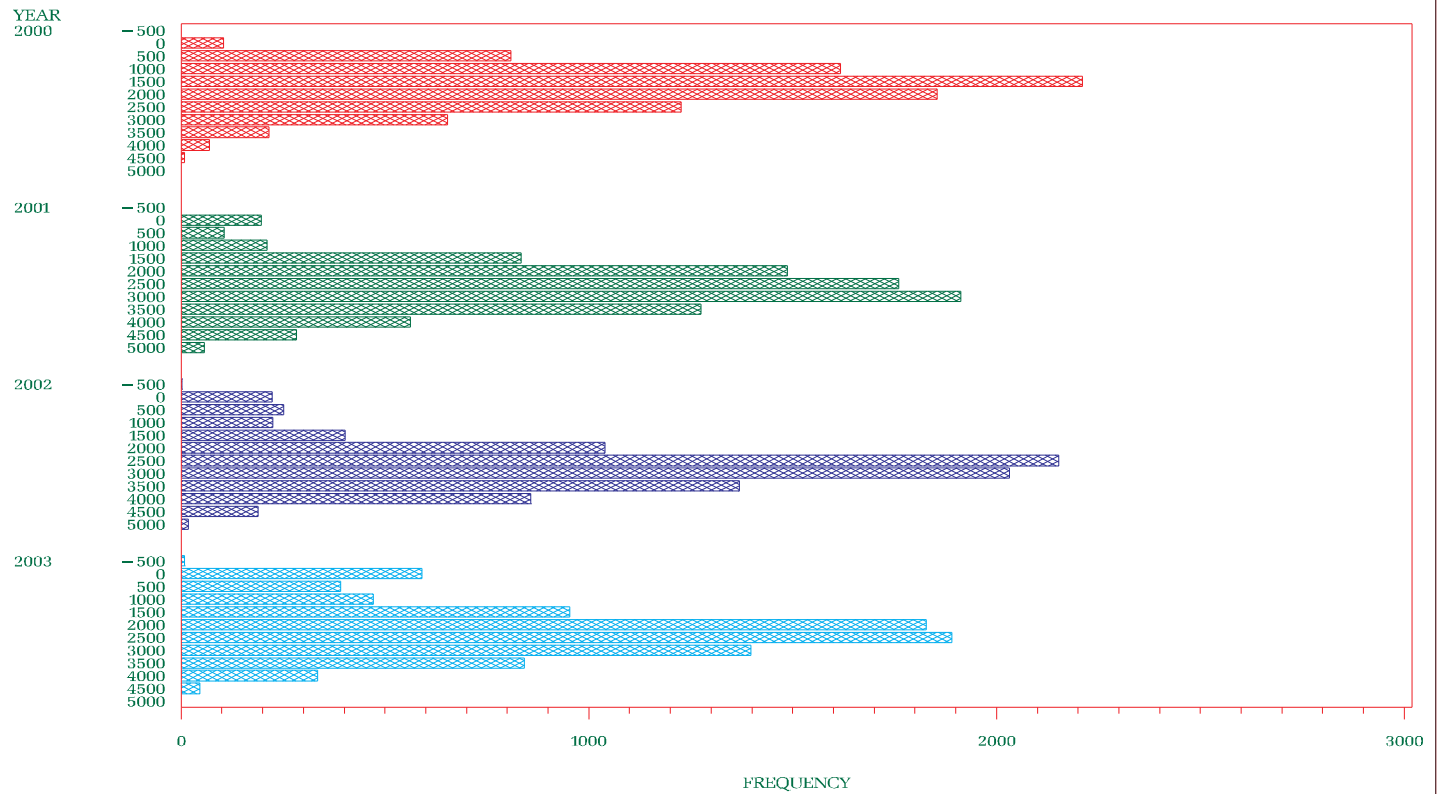
NYISO Frequency Interface Flow For January – December 2003

Margin to UPNY Con Ed Limit



NYISO Frequency Interface Flow For January 2000 – December 2003

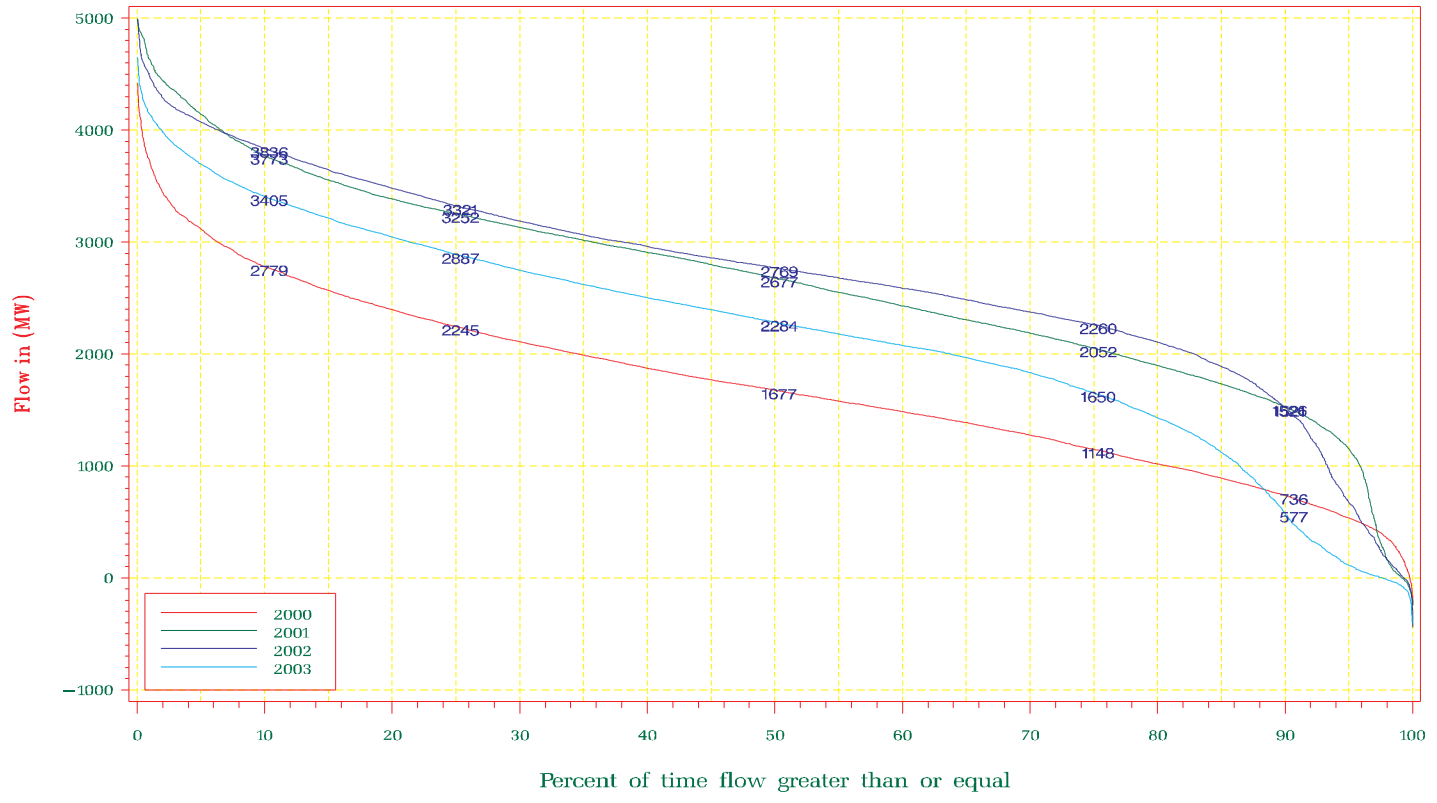
Margin to UPNY Con Ed Limit





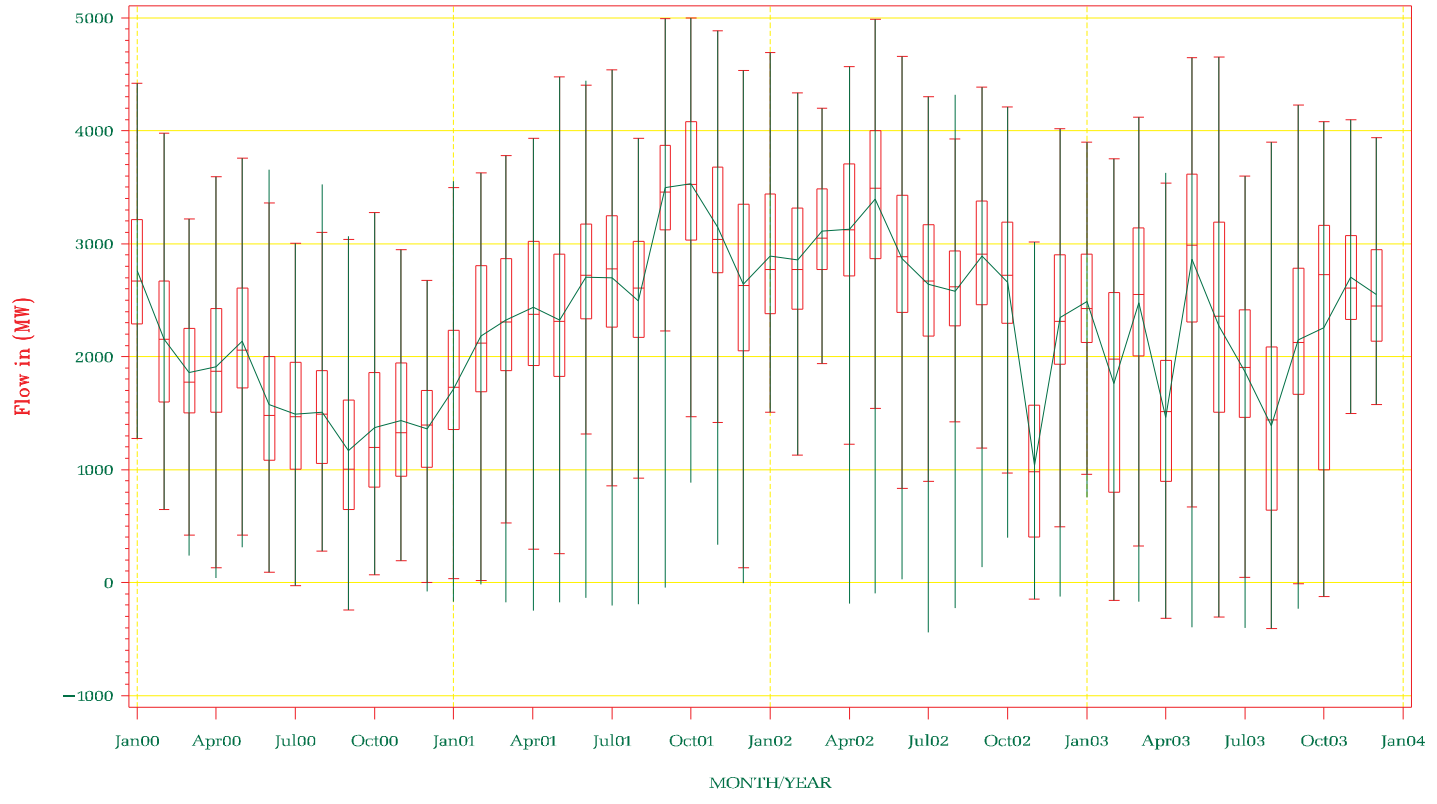
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to UPNY Con Ed Limit



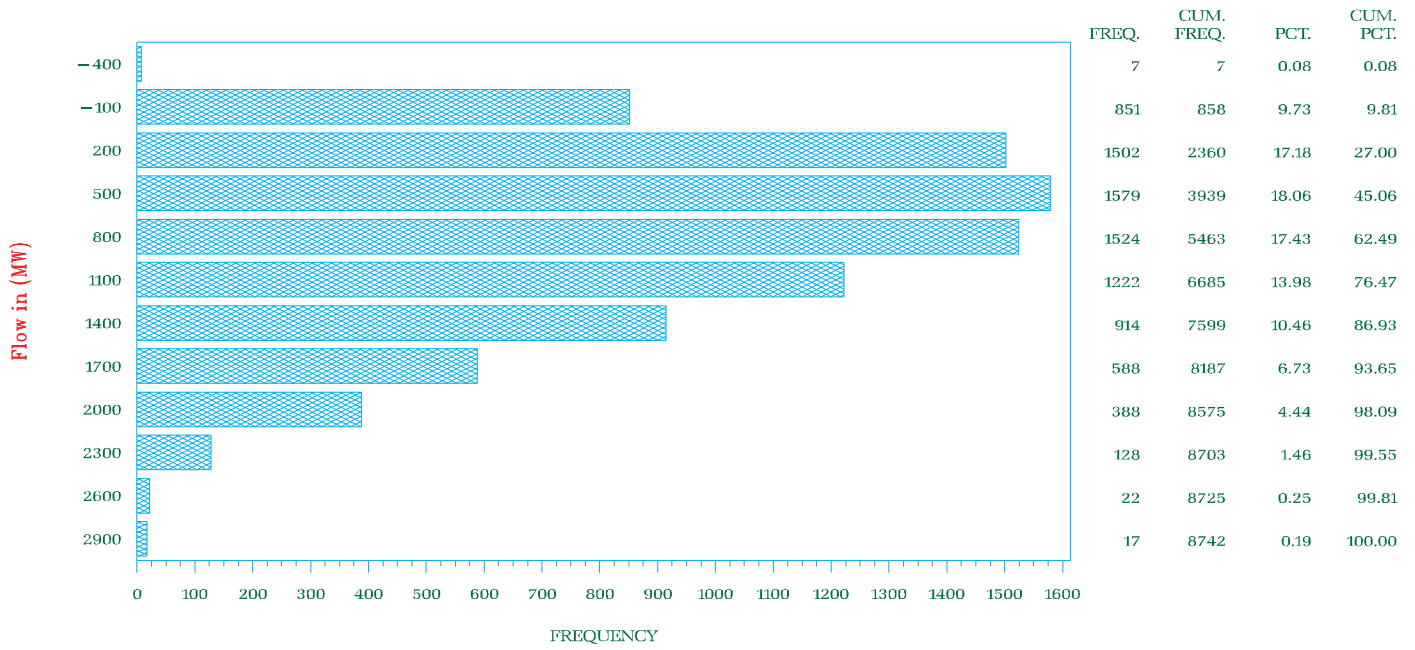
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to UPNY Con Ed Limit



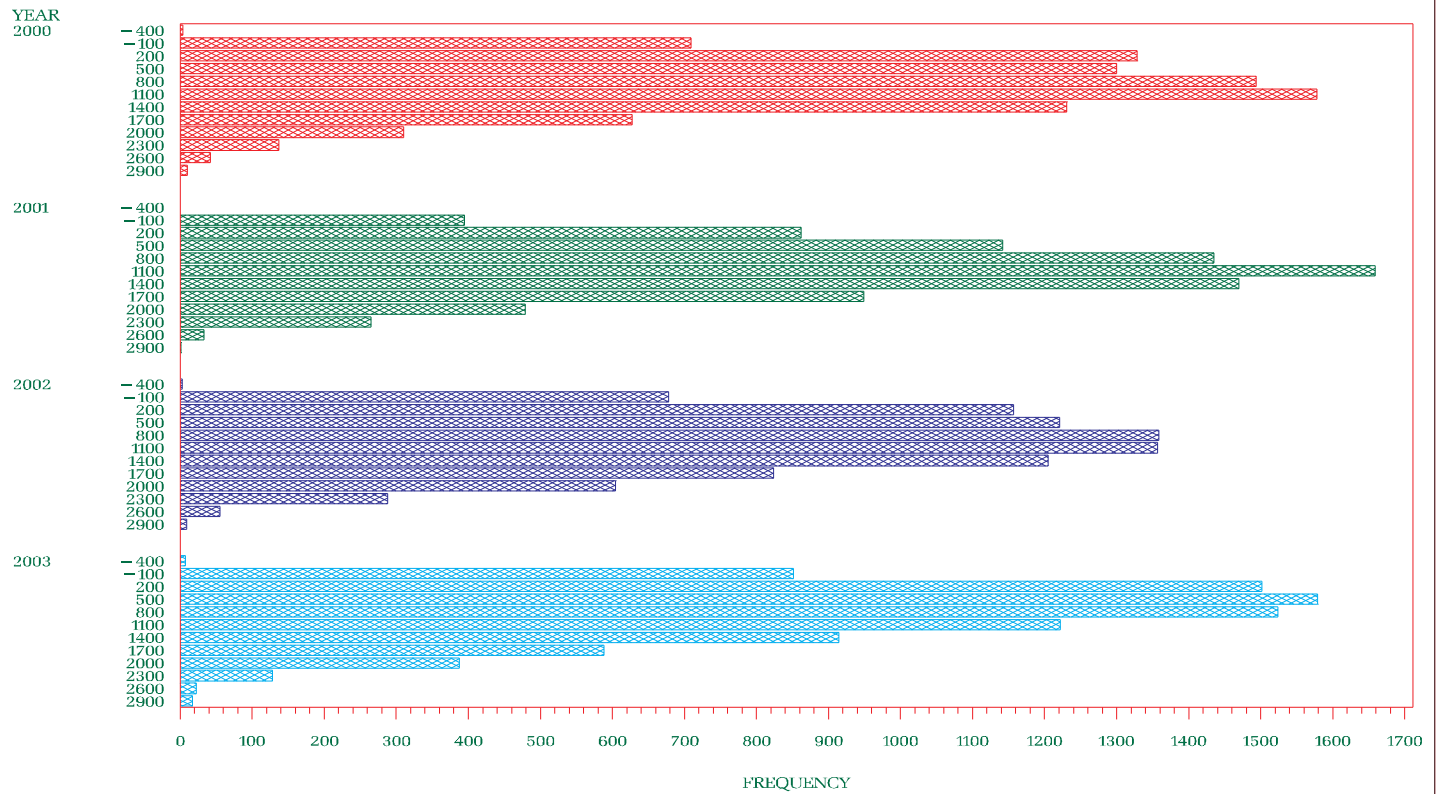
NYISO Frequency Interface Flow For January – December 2003

Margin to Sprainbrook/Dunwoodie Limit



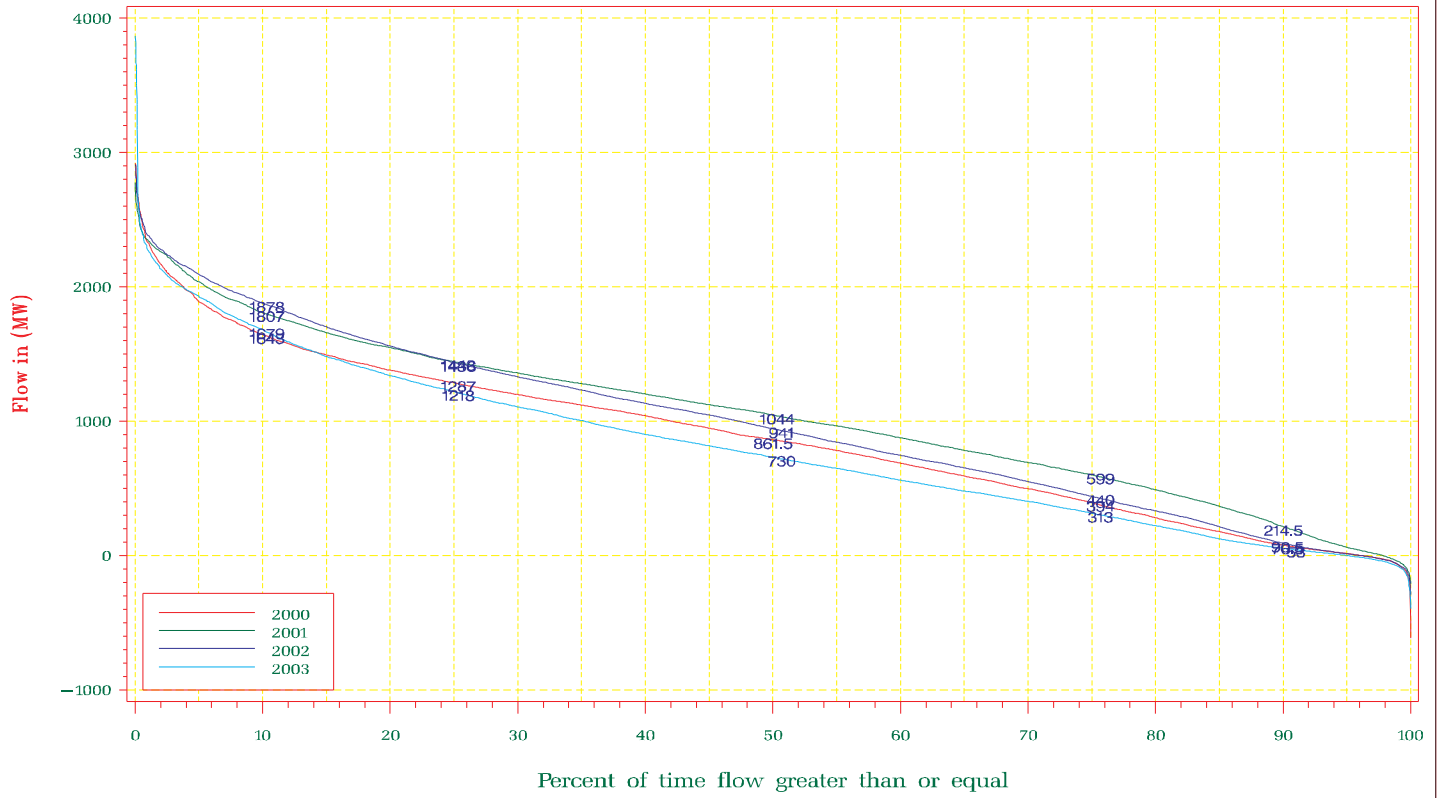
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to Sprainbrook/Dunwoodie Limit



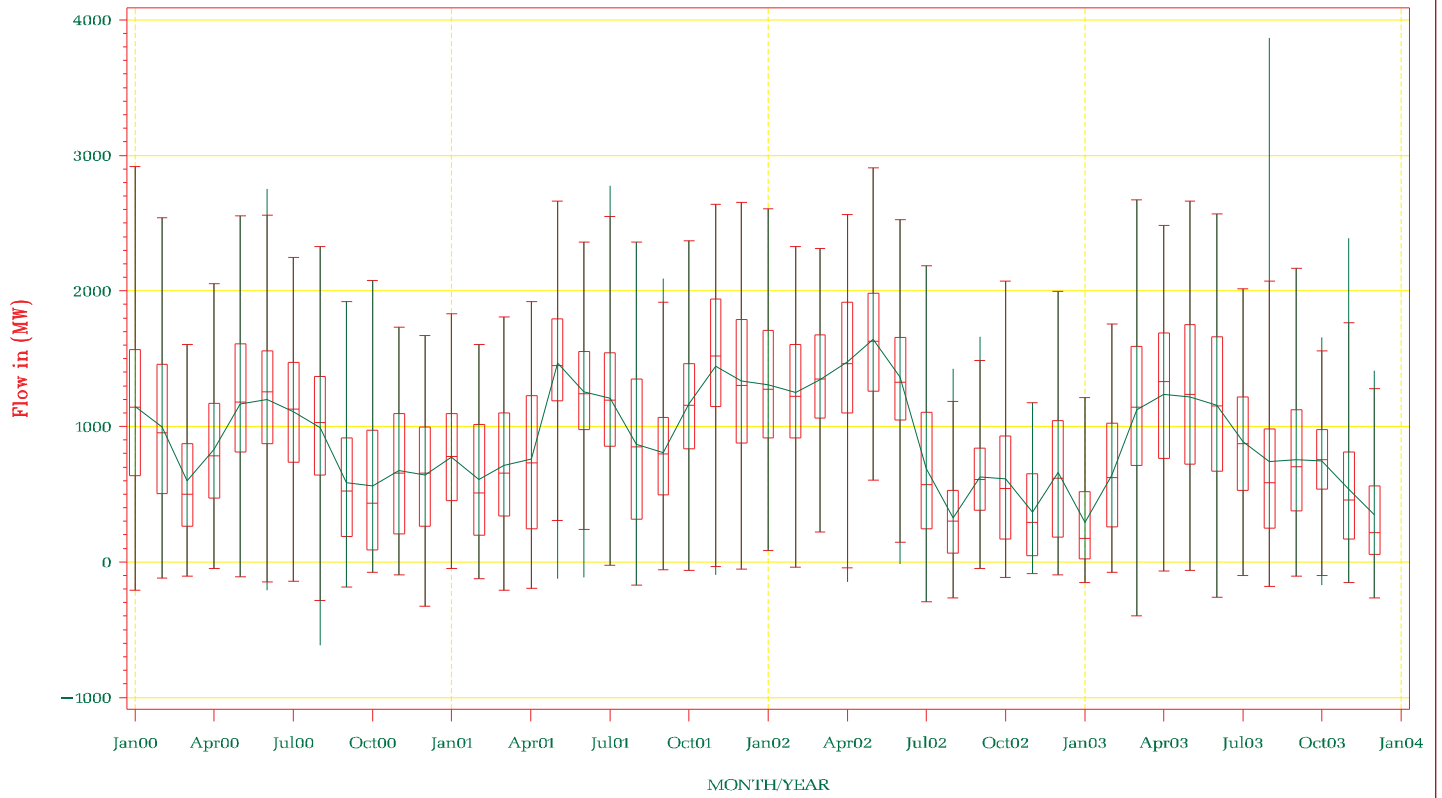
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to Sprainbrook/Dunwoodie Limit



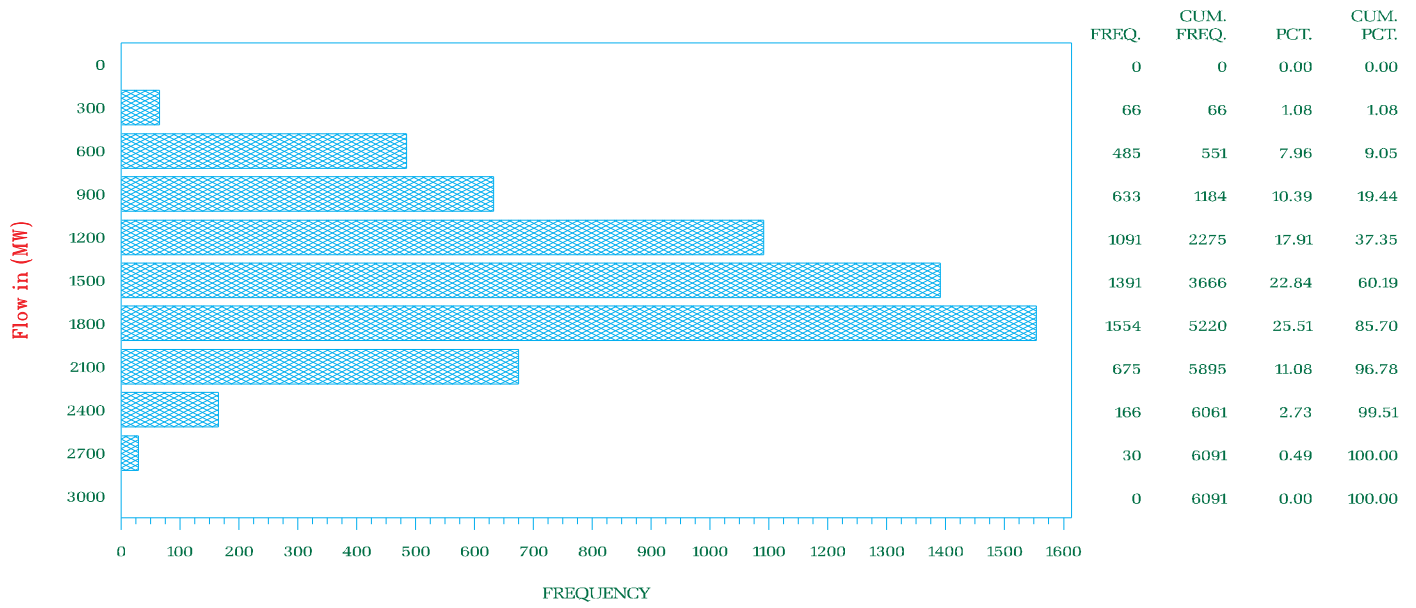
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Margin to Sprainbrook/Dunwoodie Limit



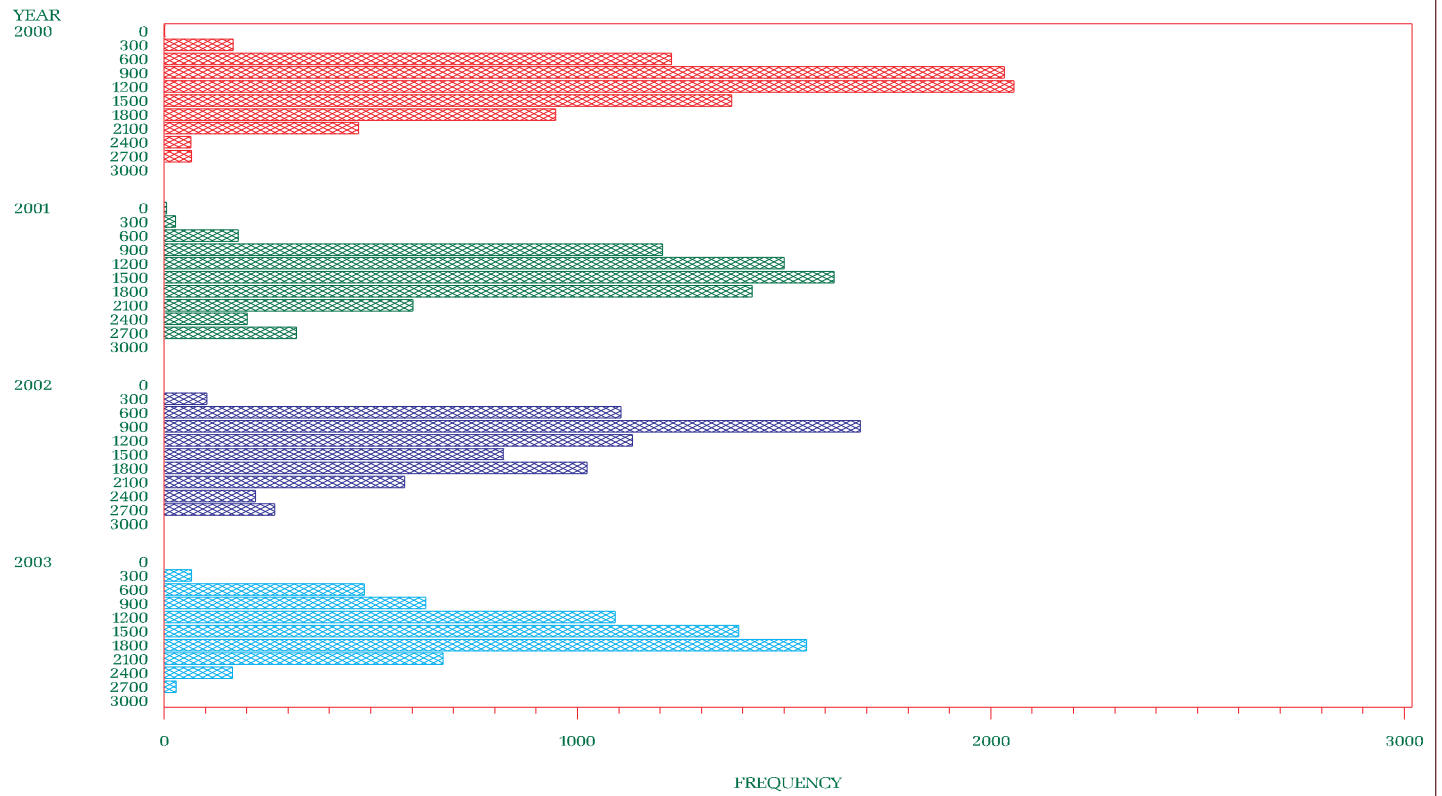
NYISO Frequency Interface Flow For January – December 2003

Margin to Moses South Limit



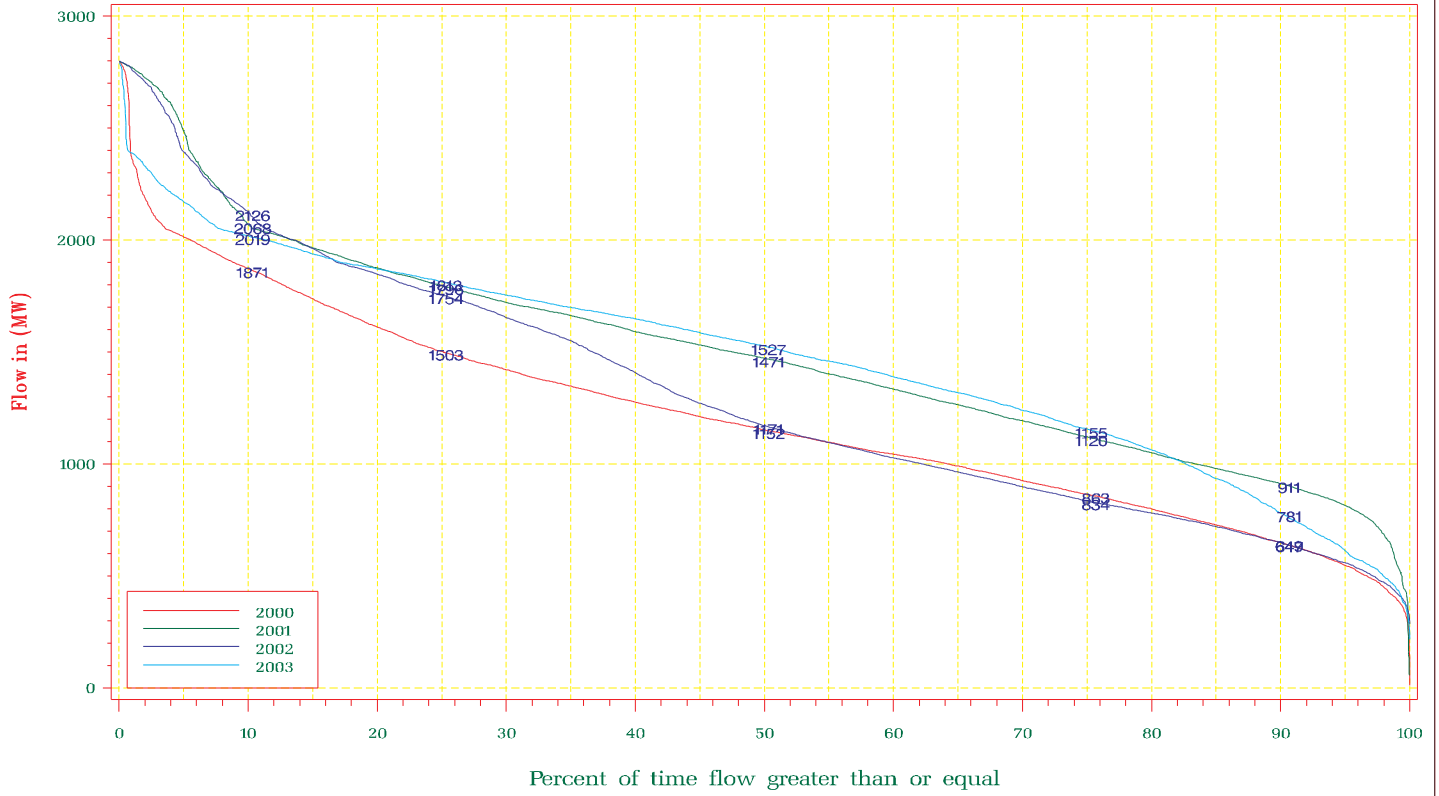
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to Moses South Limit



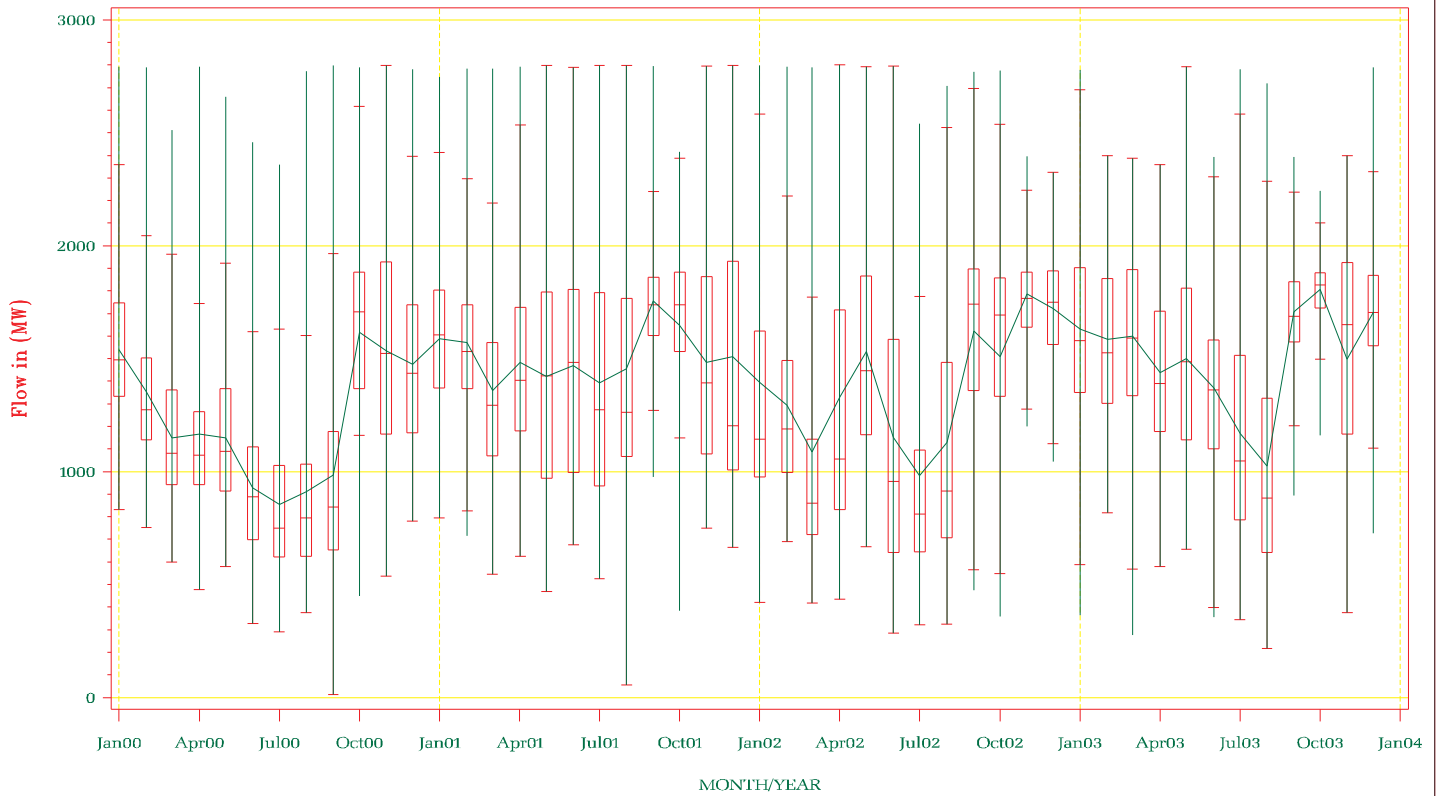
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to Moses South Limit



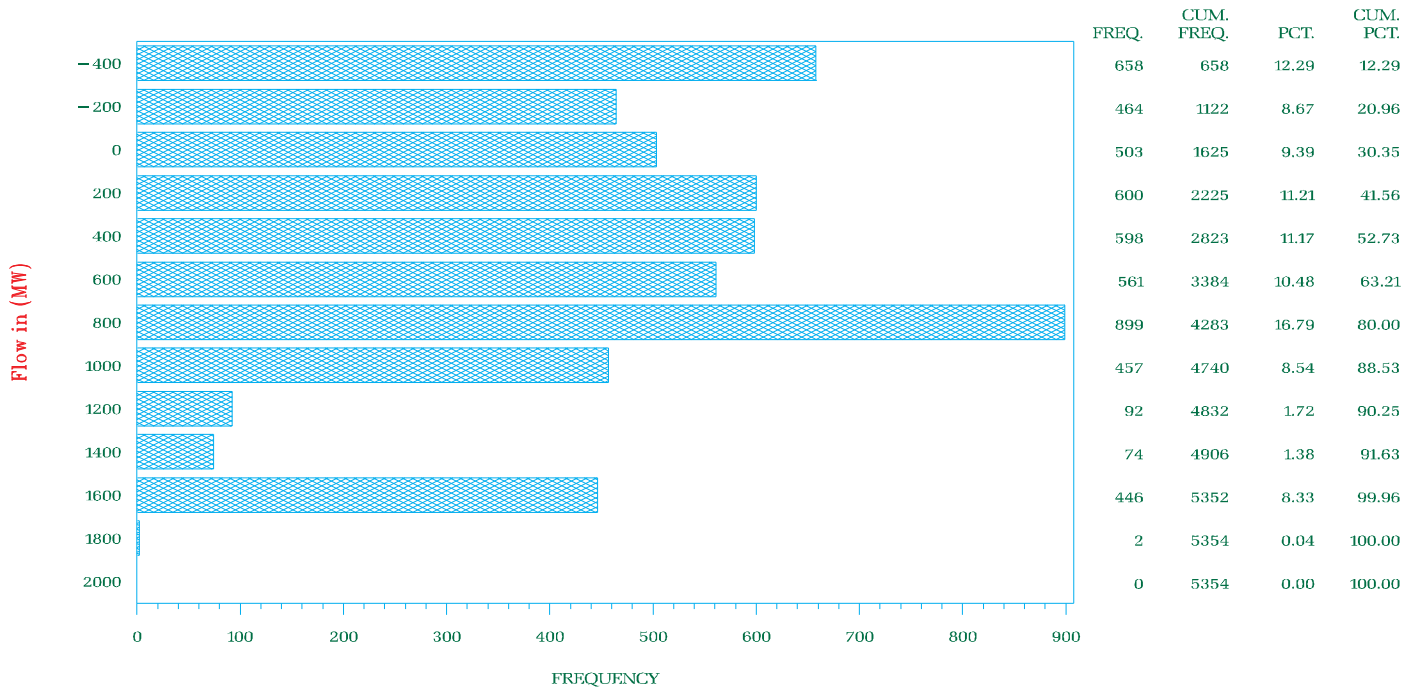
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Margin to Moses South Limit



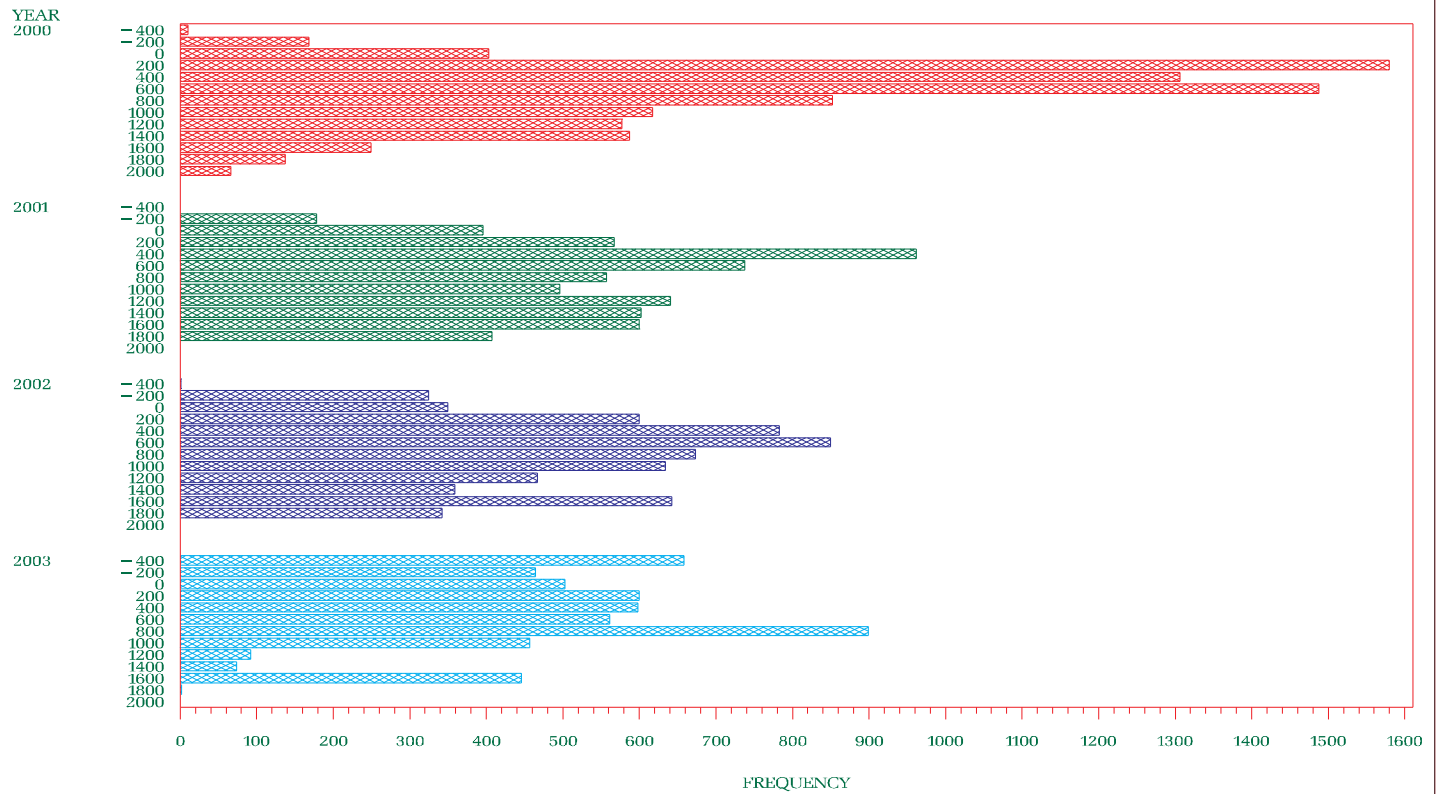
NYISO Frequency Interface Flow For January – December 2003

Margin to TE–NY Limit



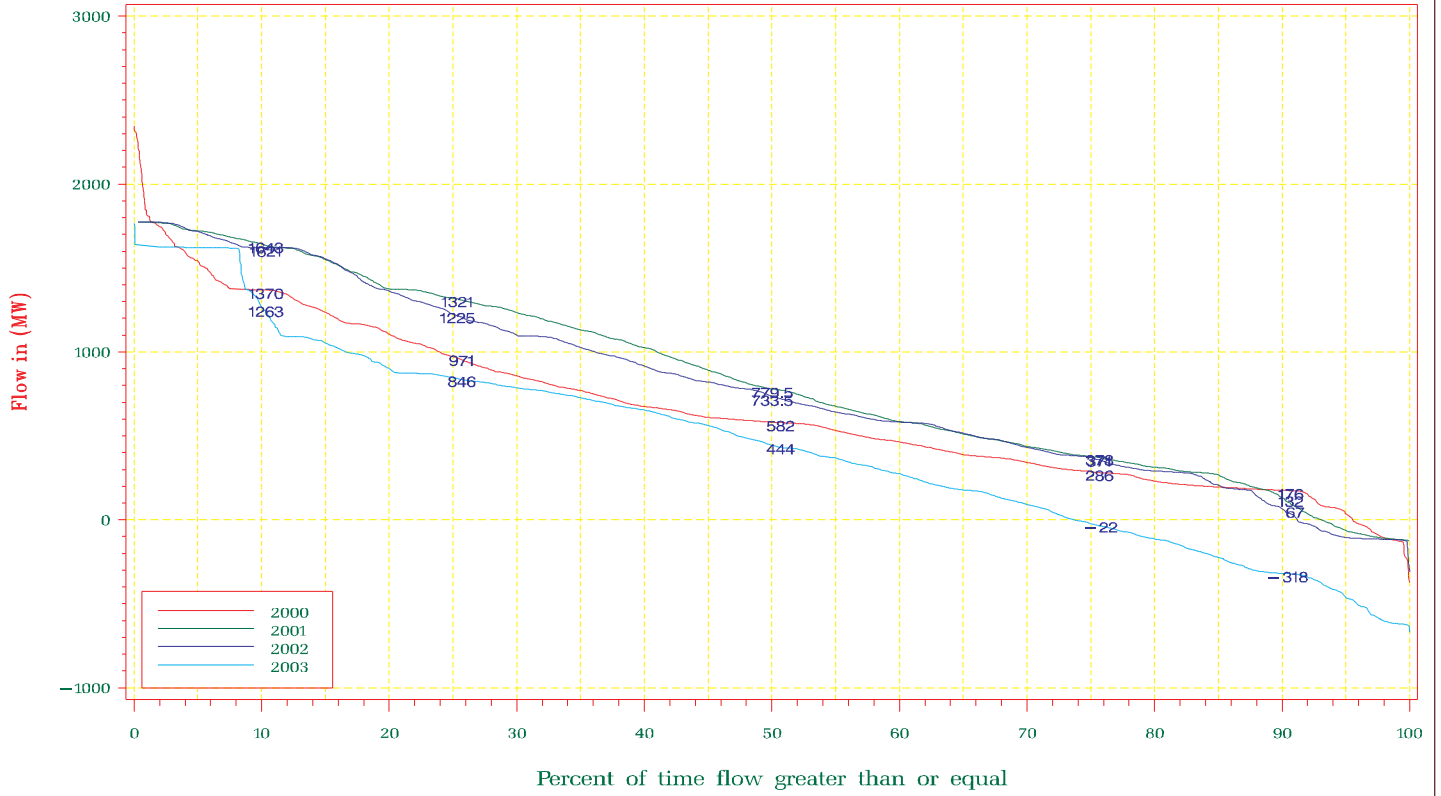
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to TE–NY Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to TE–NY Limit



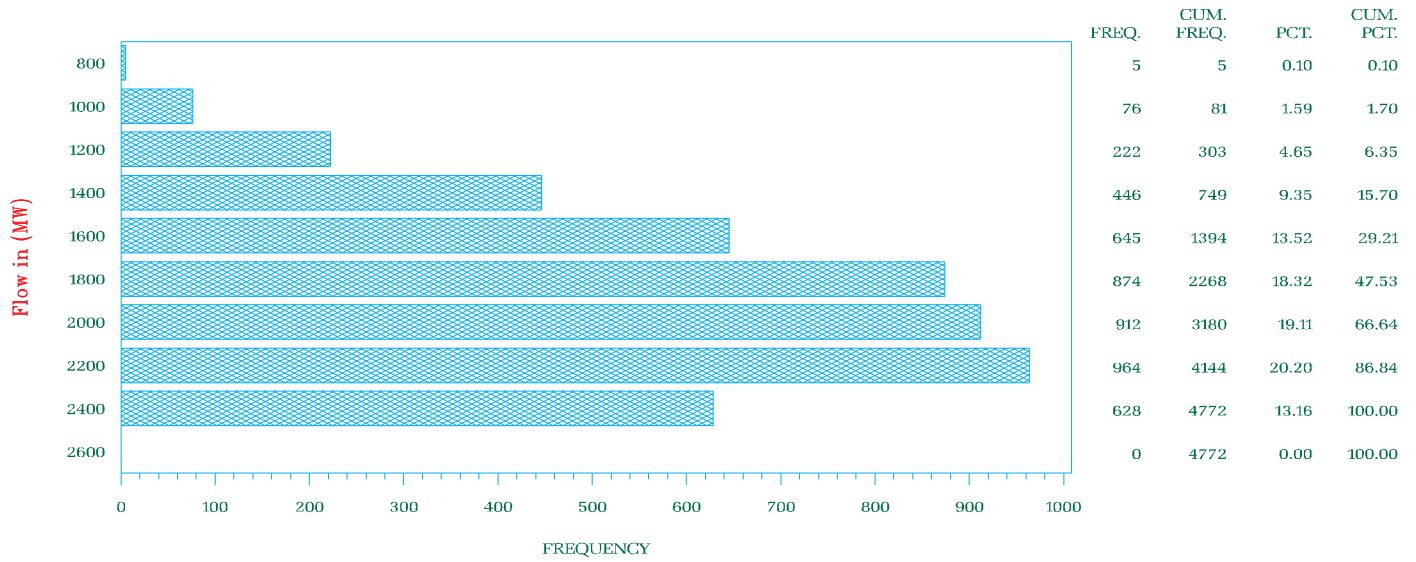
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to TE–NY Limit



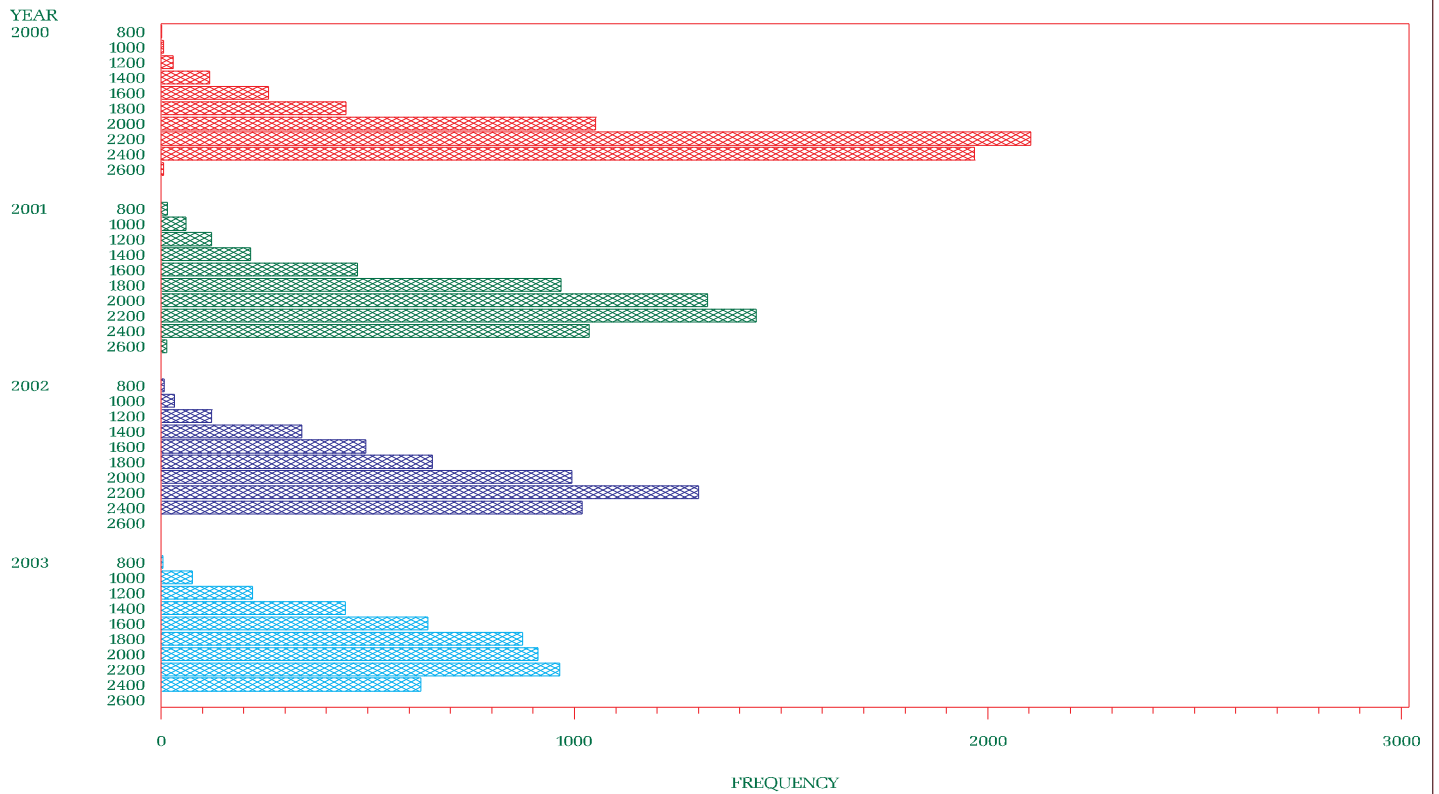
NYISO Frequency Interface Flow For January – December 2003

Margin to ONTARIO – NY Limit



NYISO Frequency Interface Flow For January 2000 – December 2003

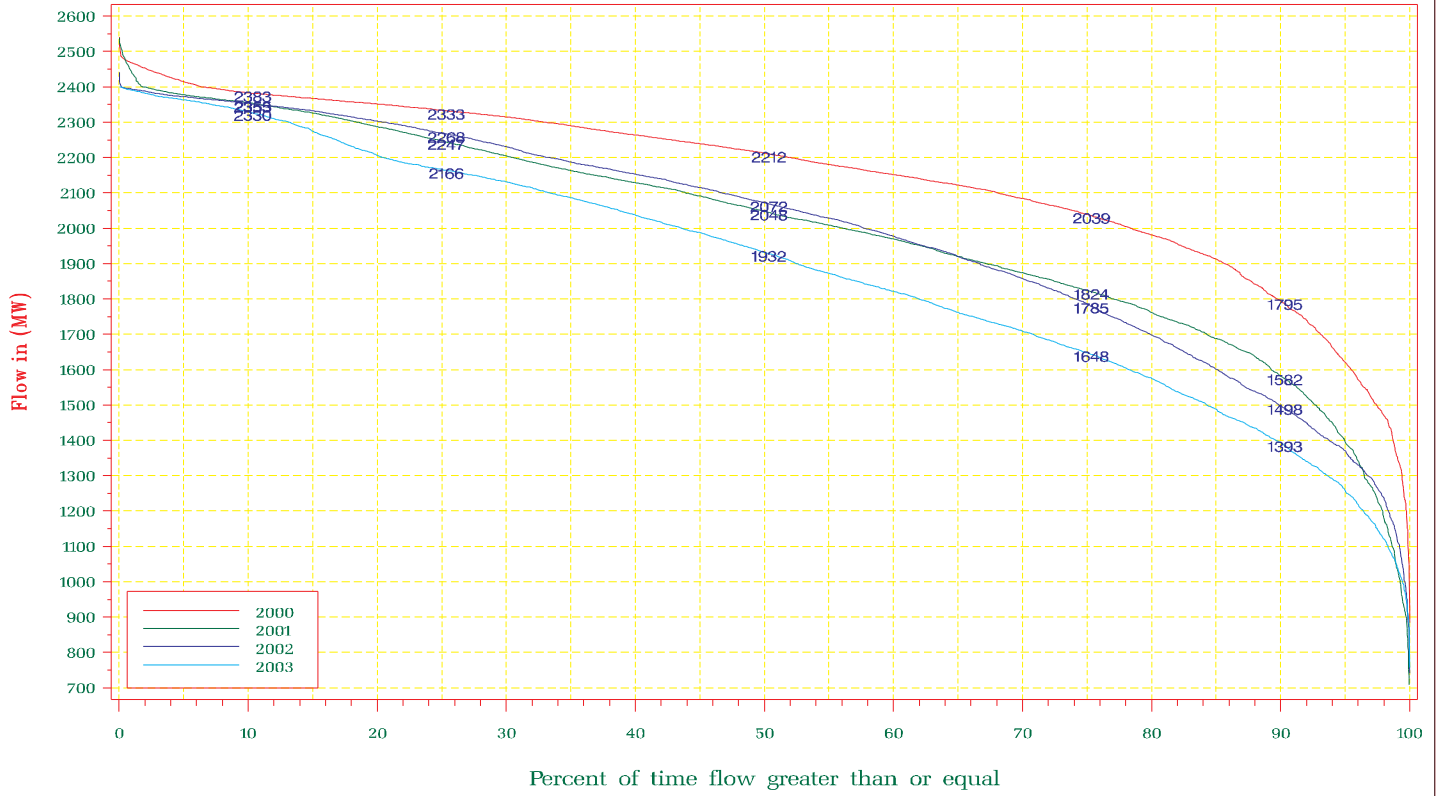
Margin to Ontario – NY Limit





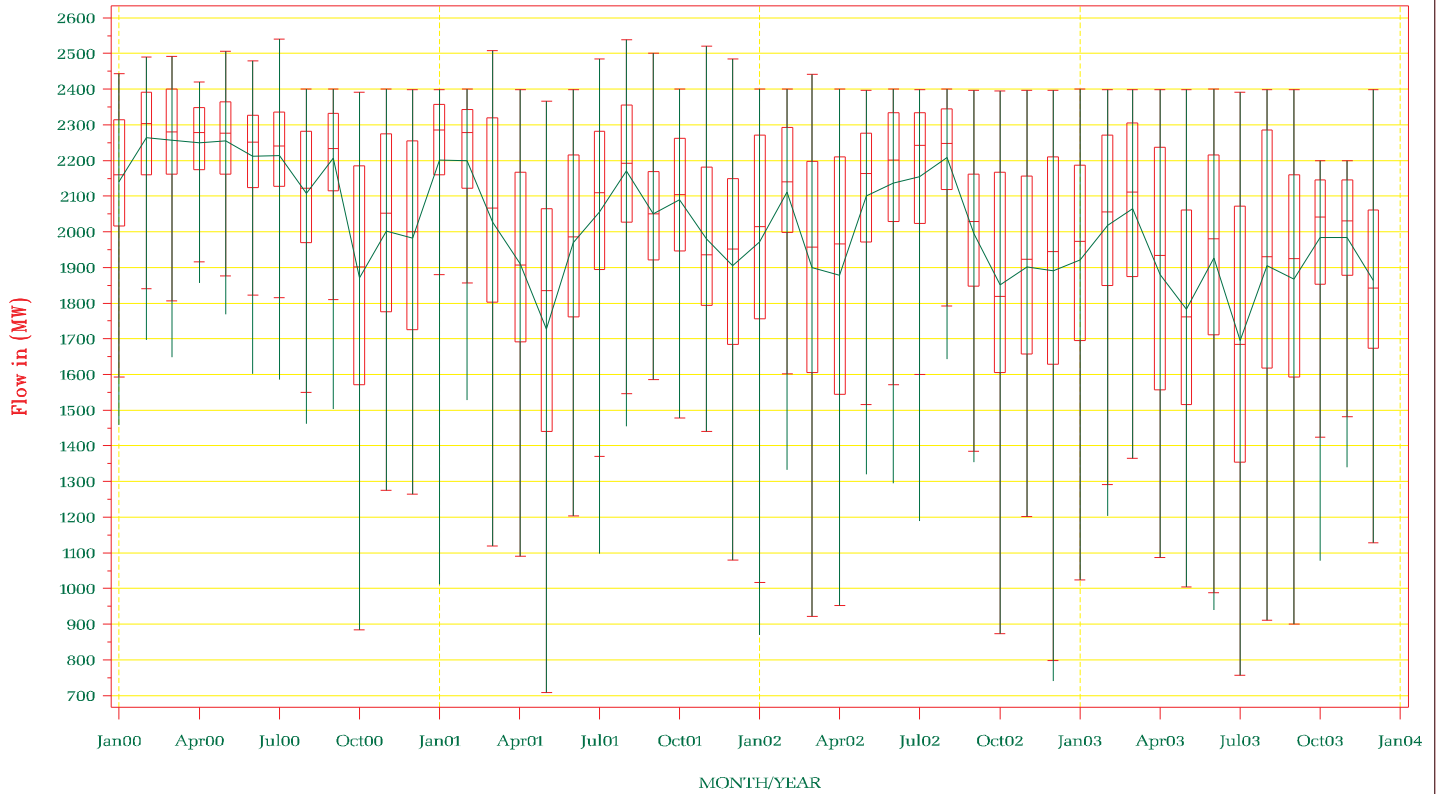
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to Ontario – NY Limit



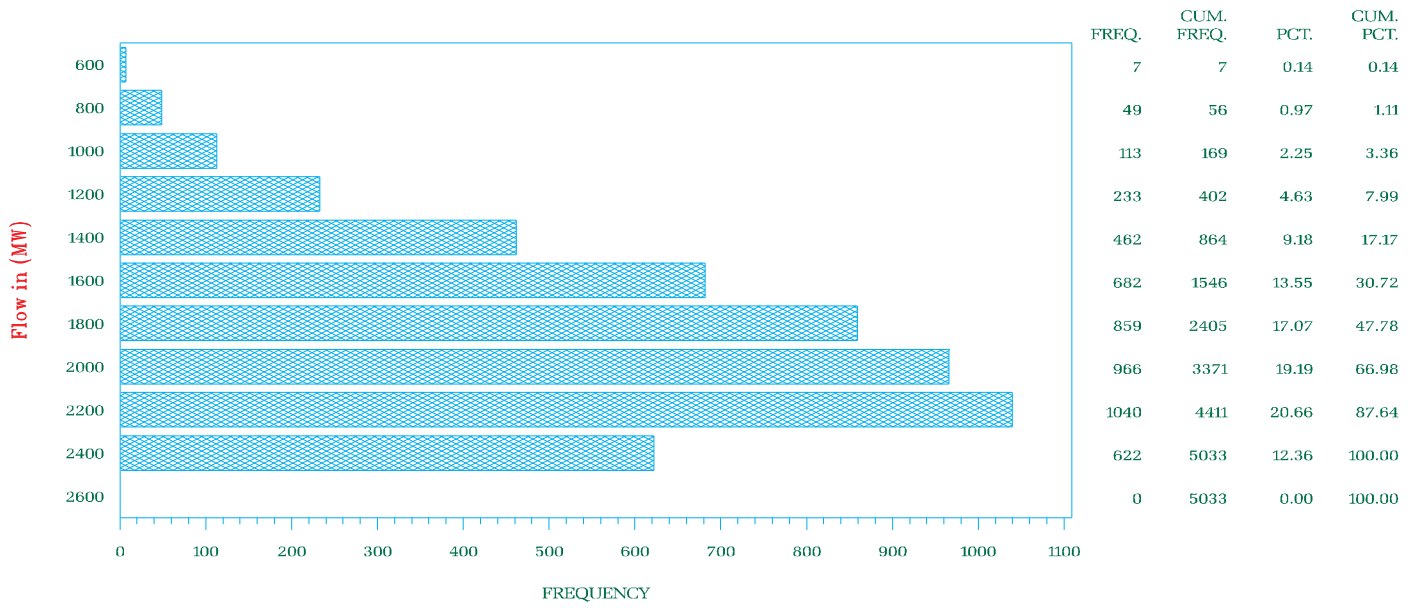
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to Ontario – NY Limit



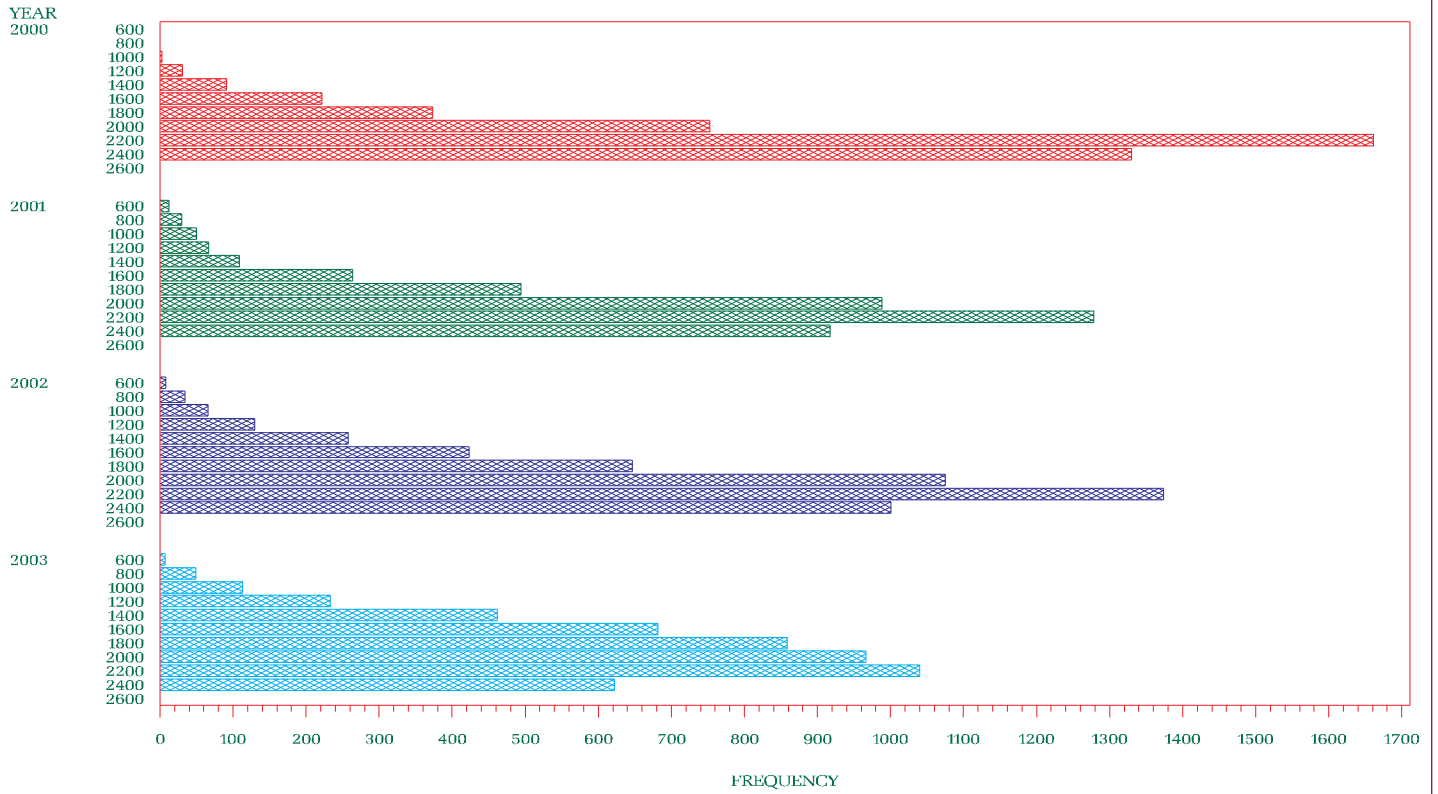
NYISO Frequency Interface Flow For January – December 2003

Margin to NY–ONTARIO Limit



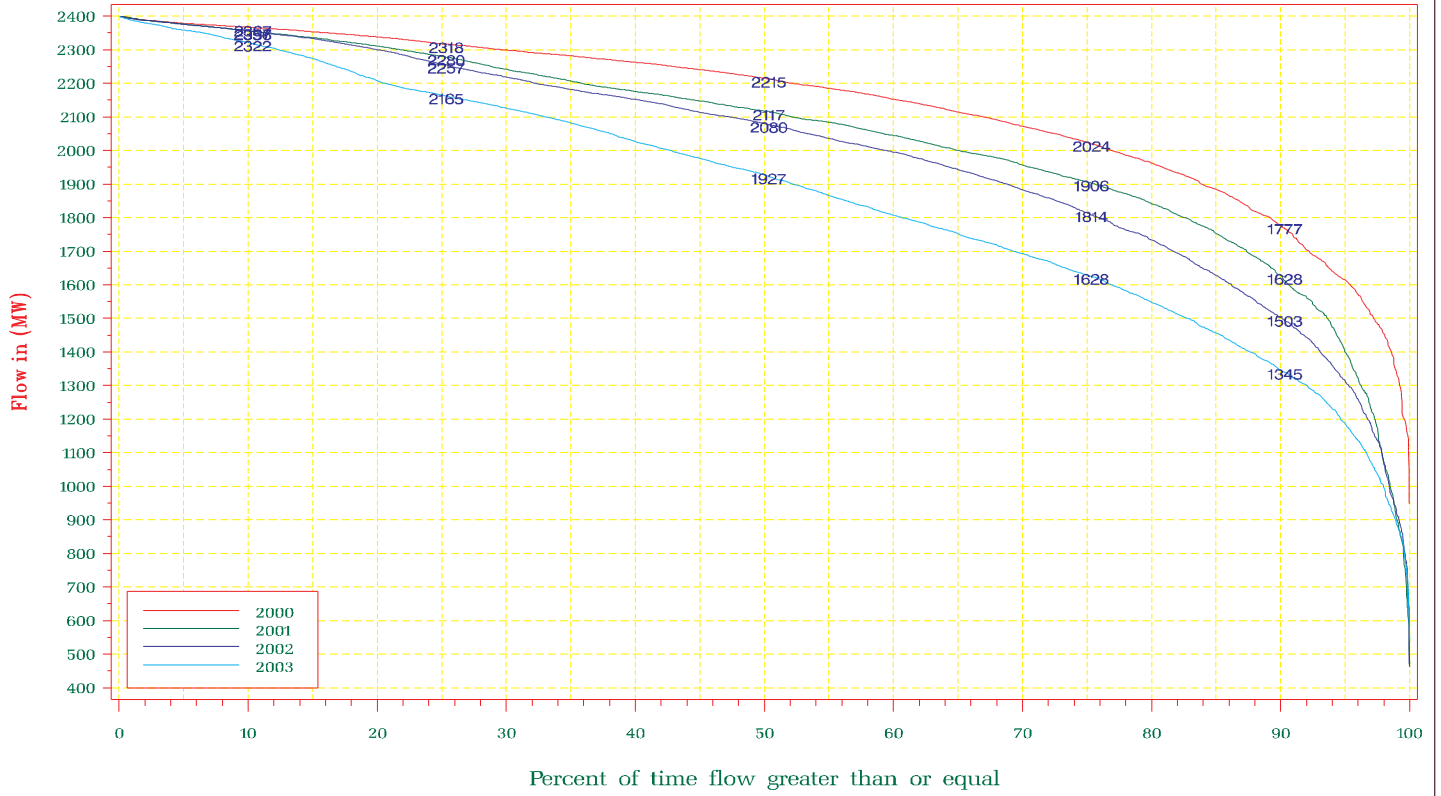
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to NY–Ontario Limit



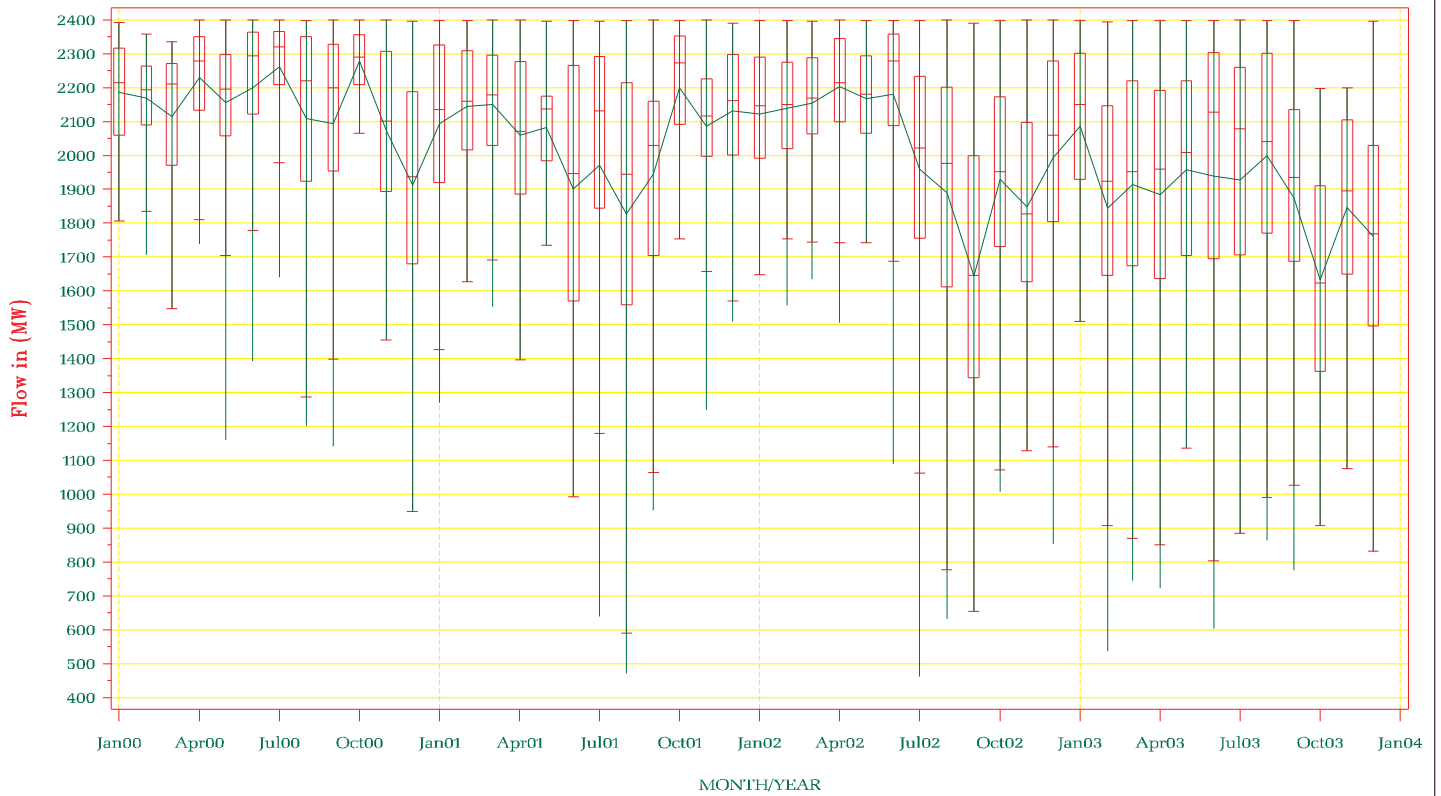
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to NY–Ontario Limit



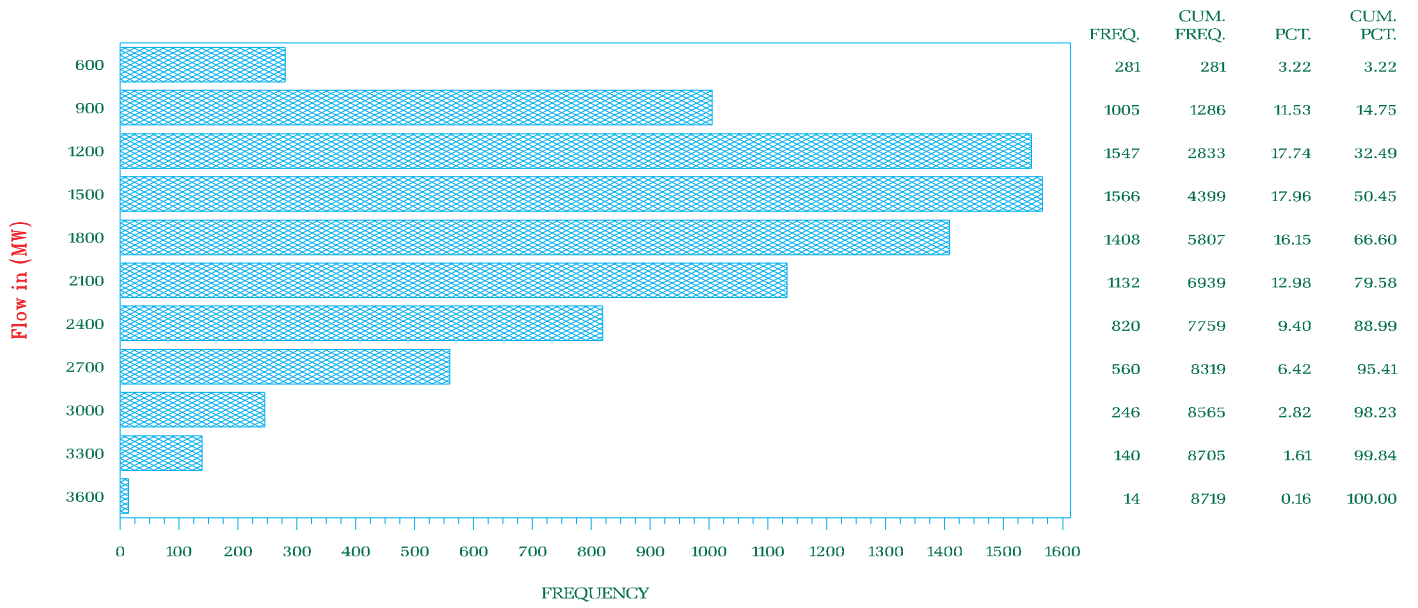
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to NY–Ontario Limit



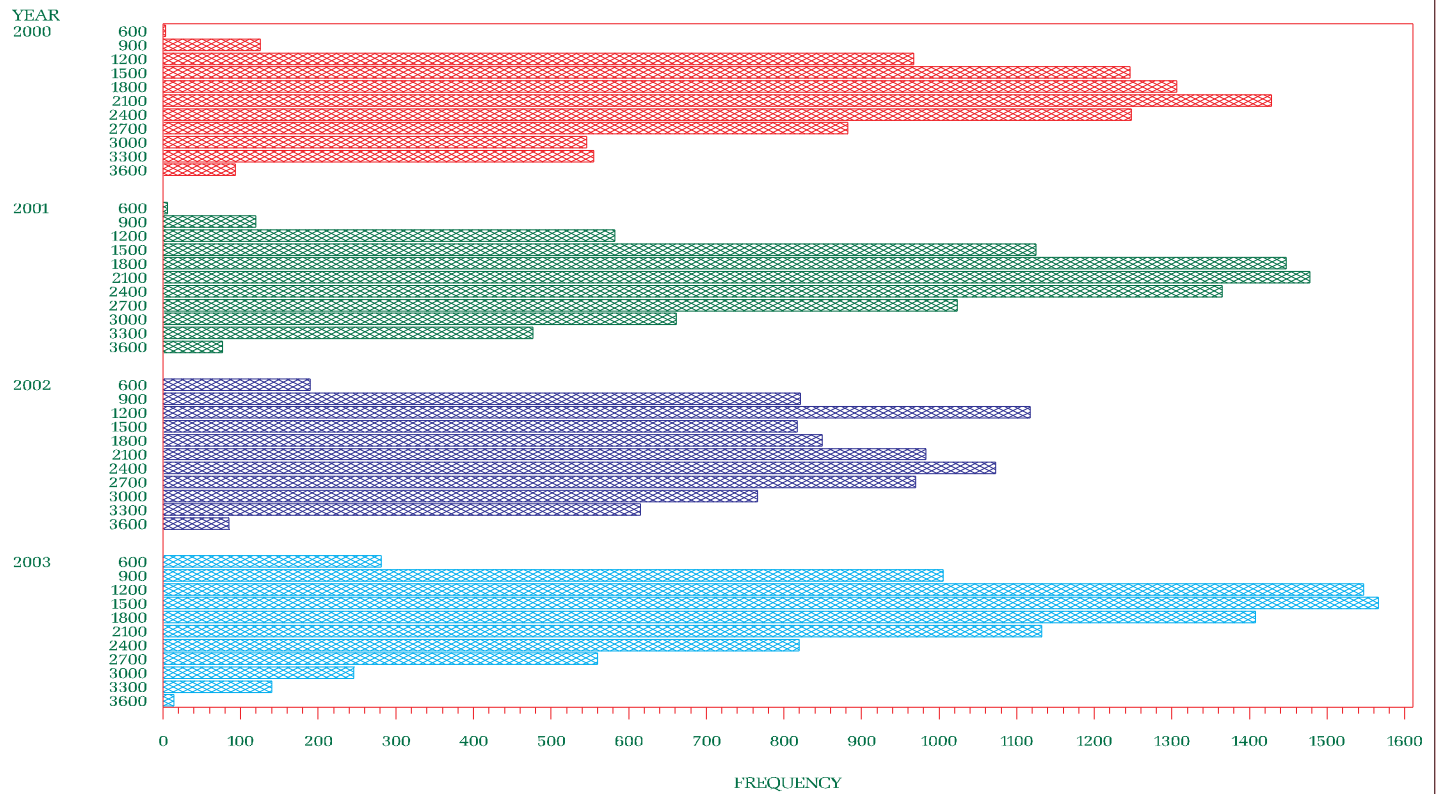
NYISO Frequency Interface Flow For January – December 2003

Margin to PJM – NY Limit



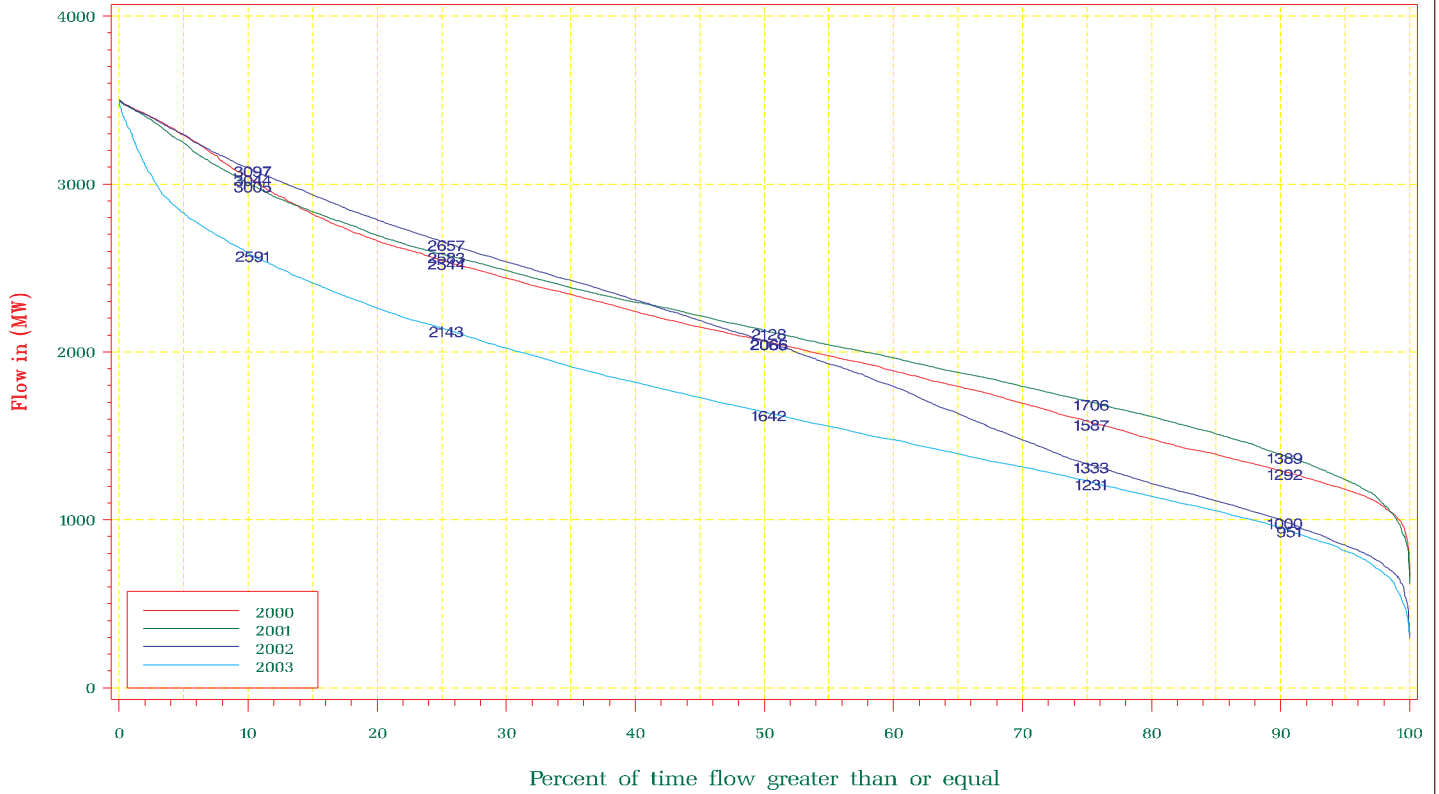
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to PJM – NY Limit



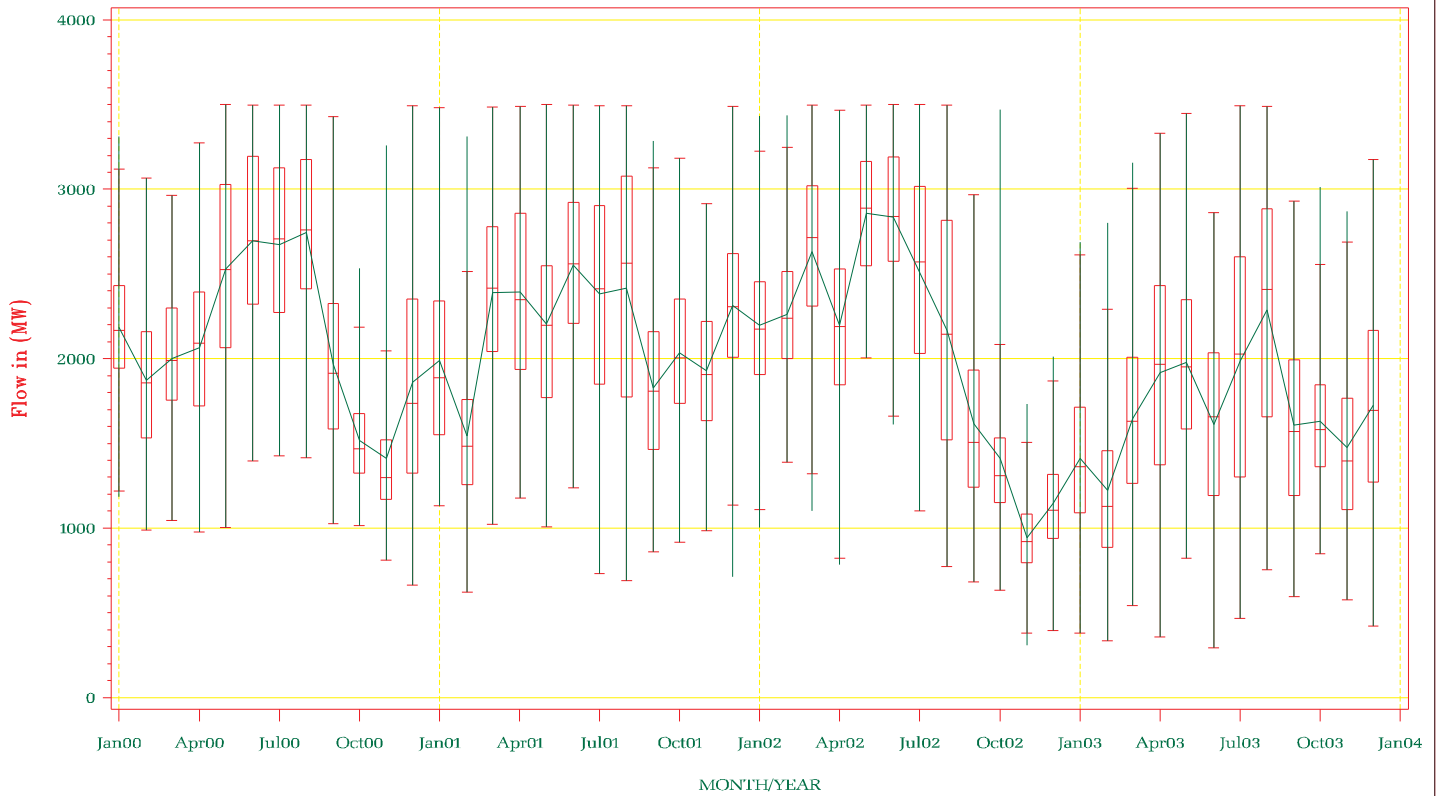
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to PJM – NY Limit



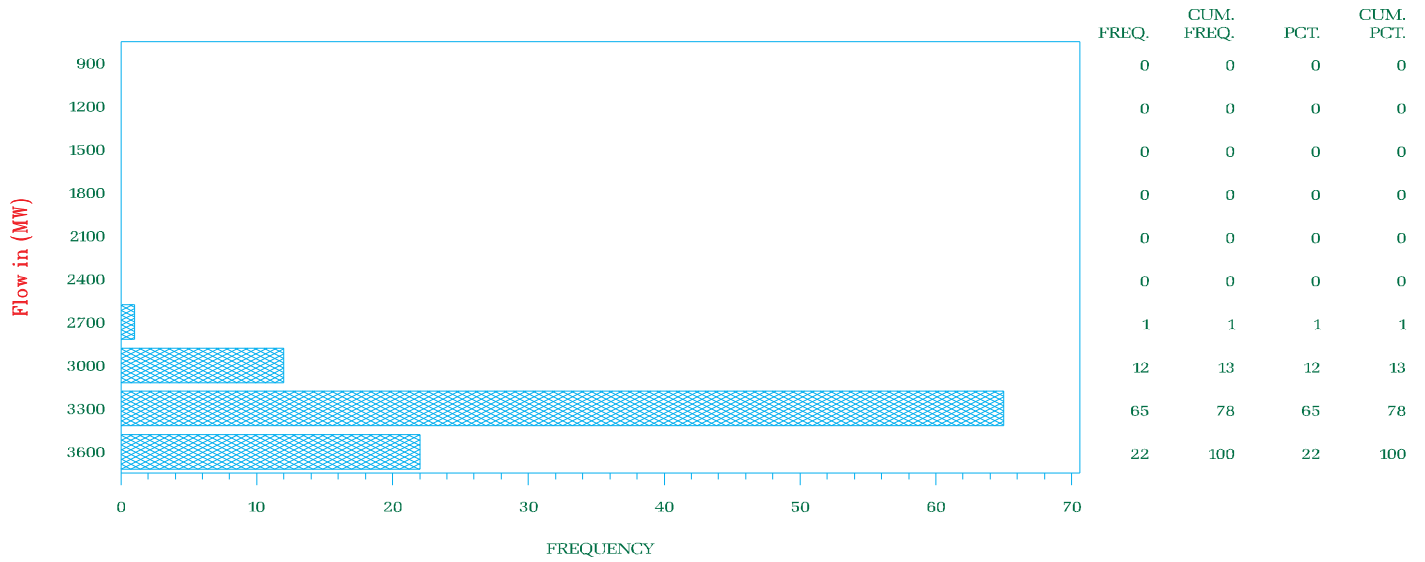
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to PJM – NY Limit



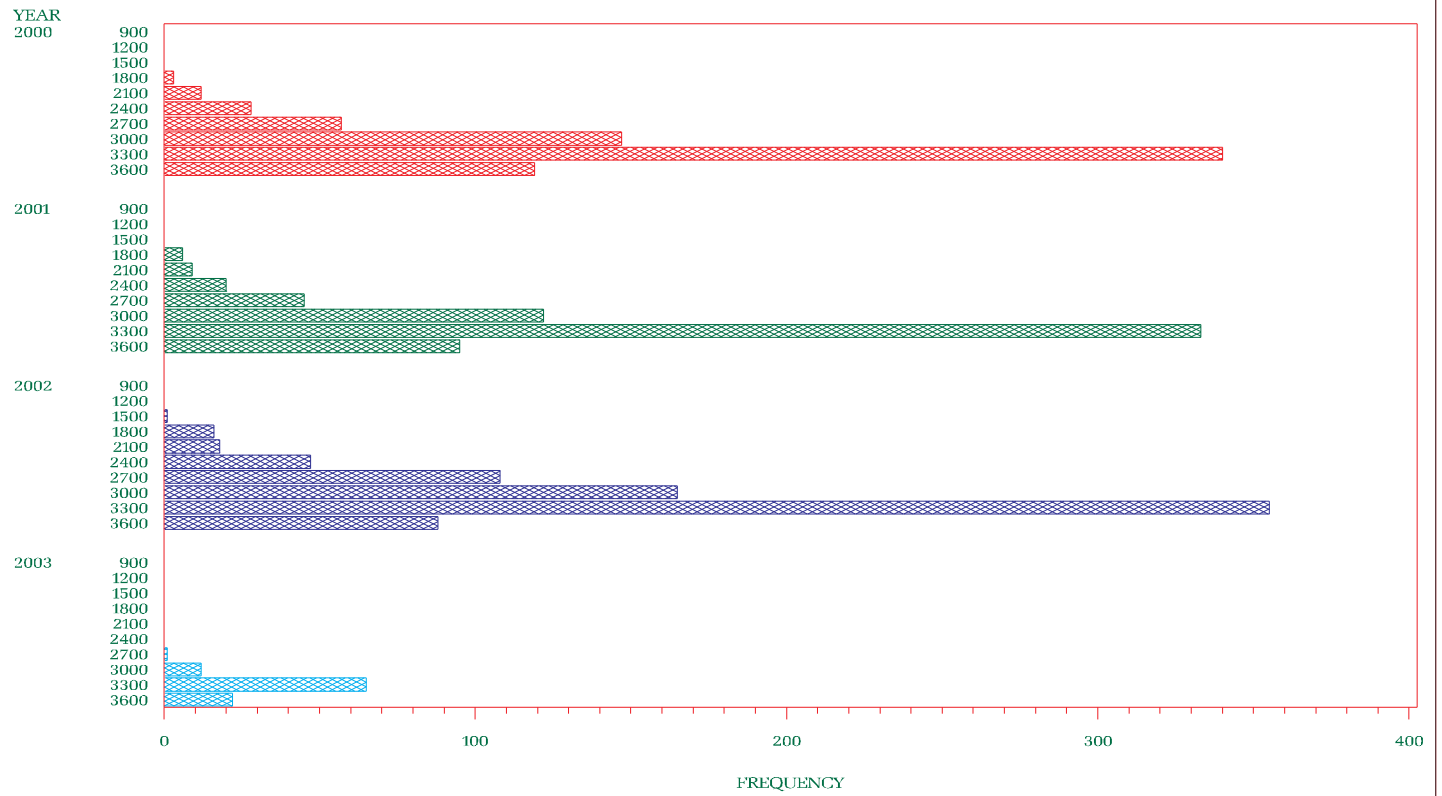
NYISO Frequency Interface Flow For January – December 2003

Margin to NY – PJM Limit



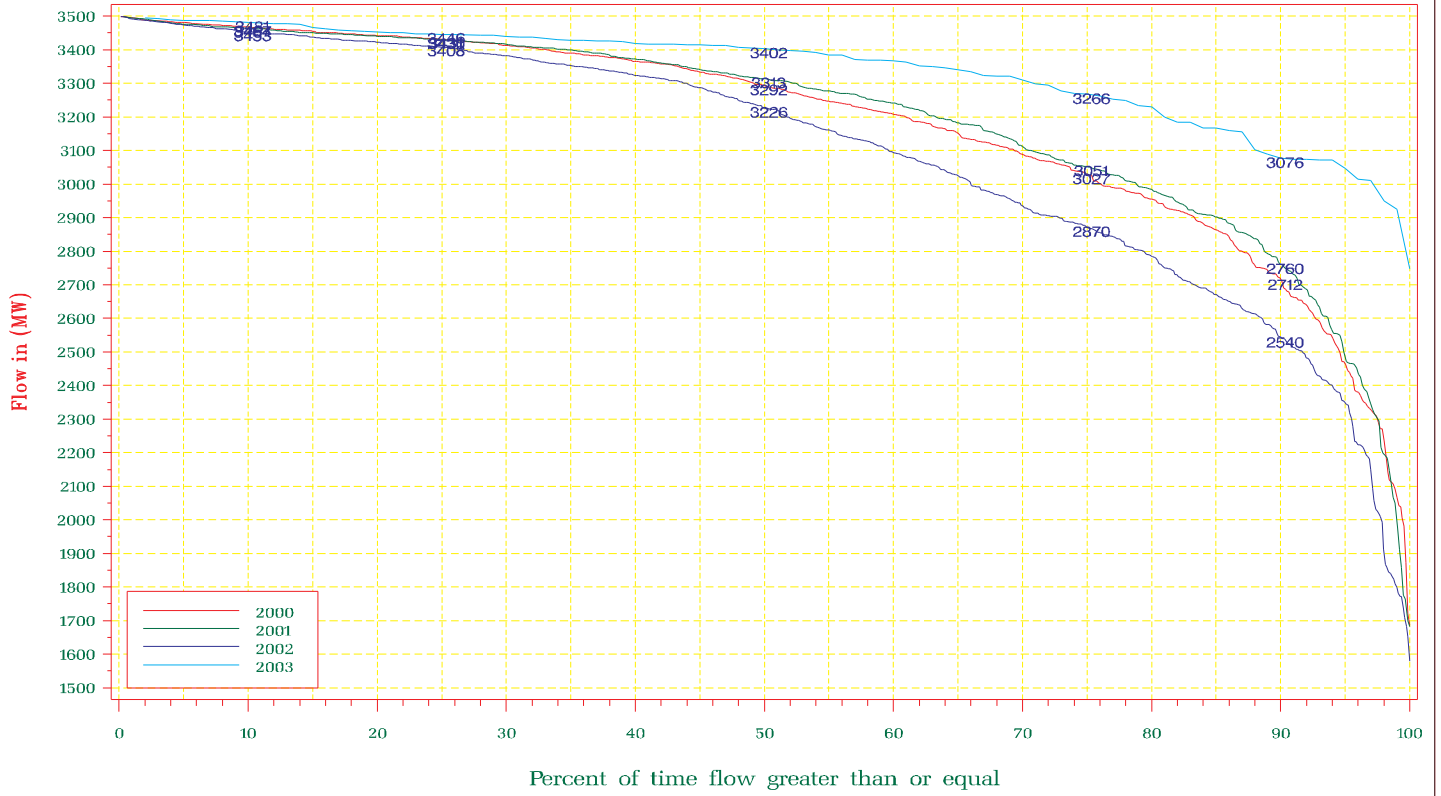
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to NY – PJM Limit



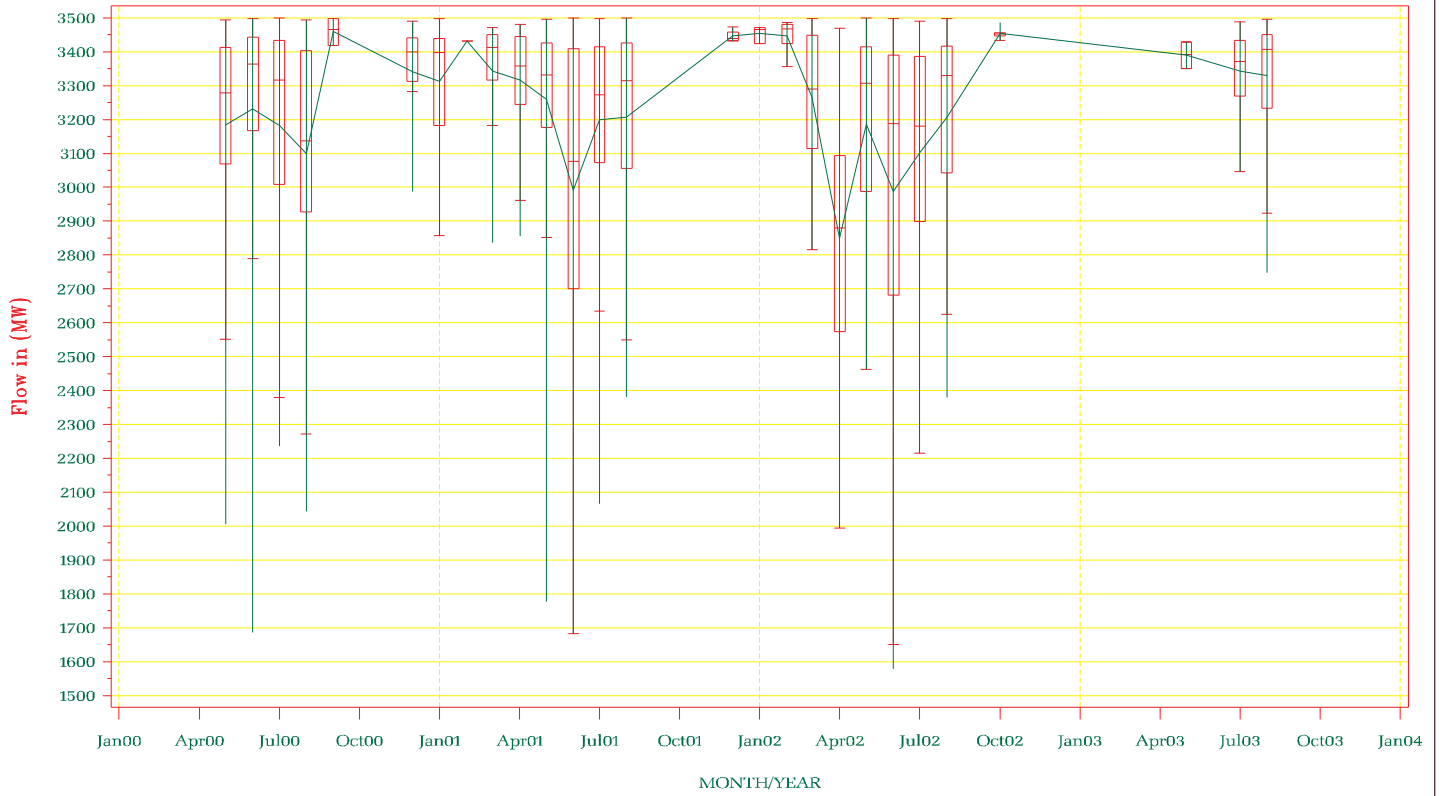
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to NY-PJM Limit



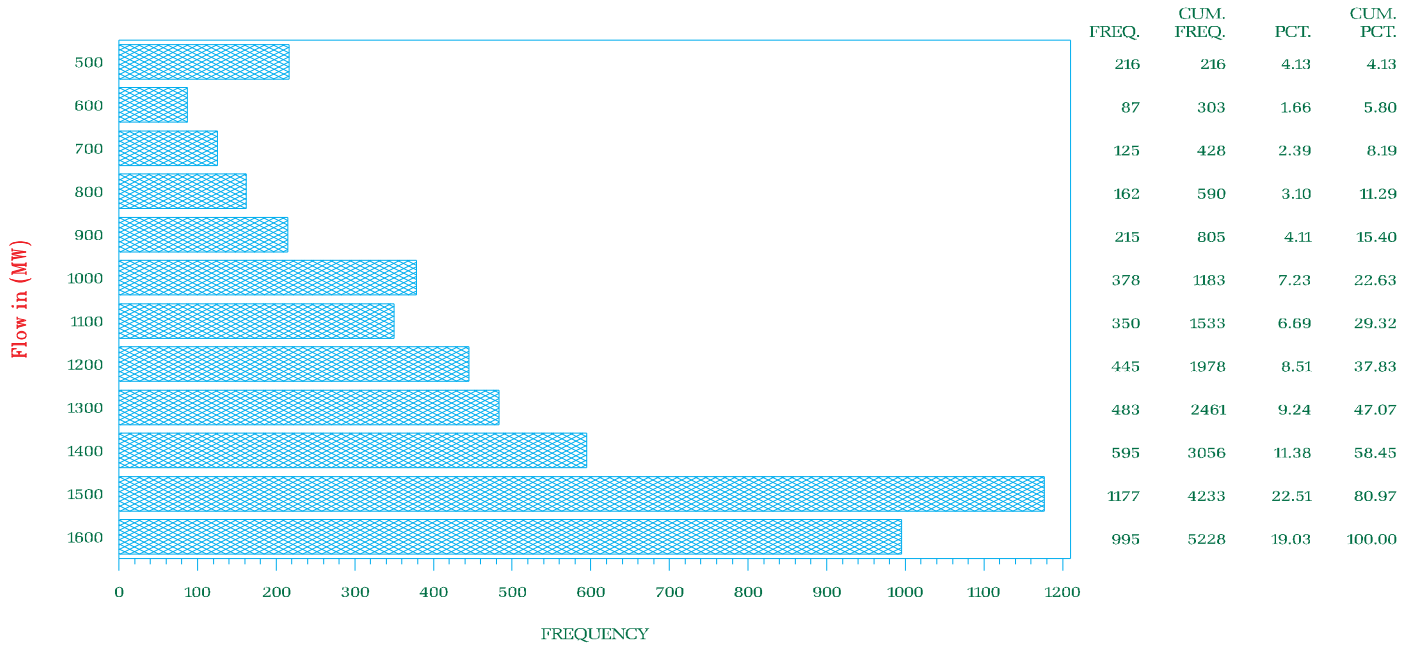
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Margin to NY-PJM Limit



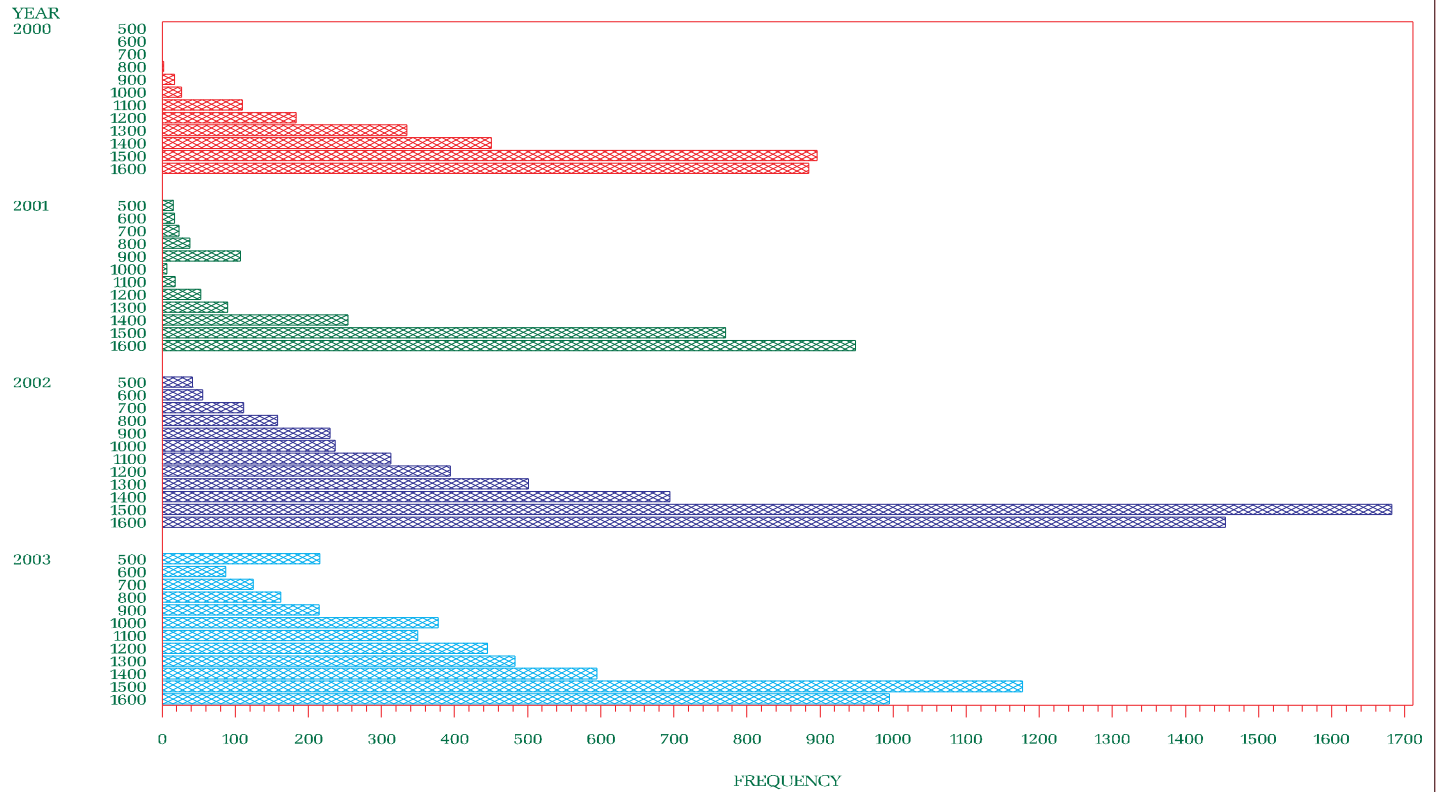
NYISO Frequency Interface Flow For January – December 2003

Margin to New England – NY Limit



NYISO Frequency Interface Flow For January 2000 – December 2003

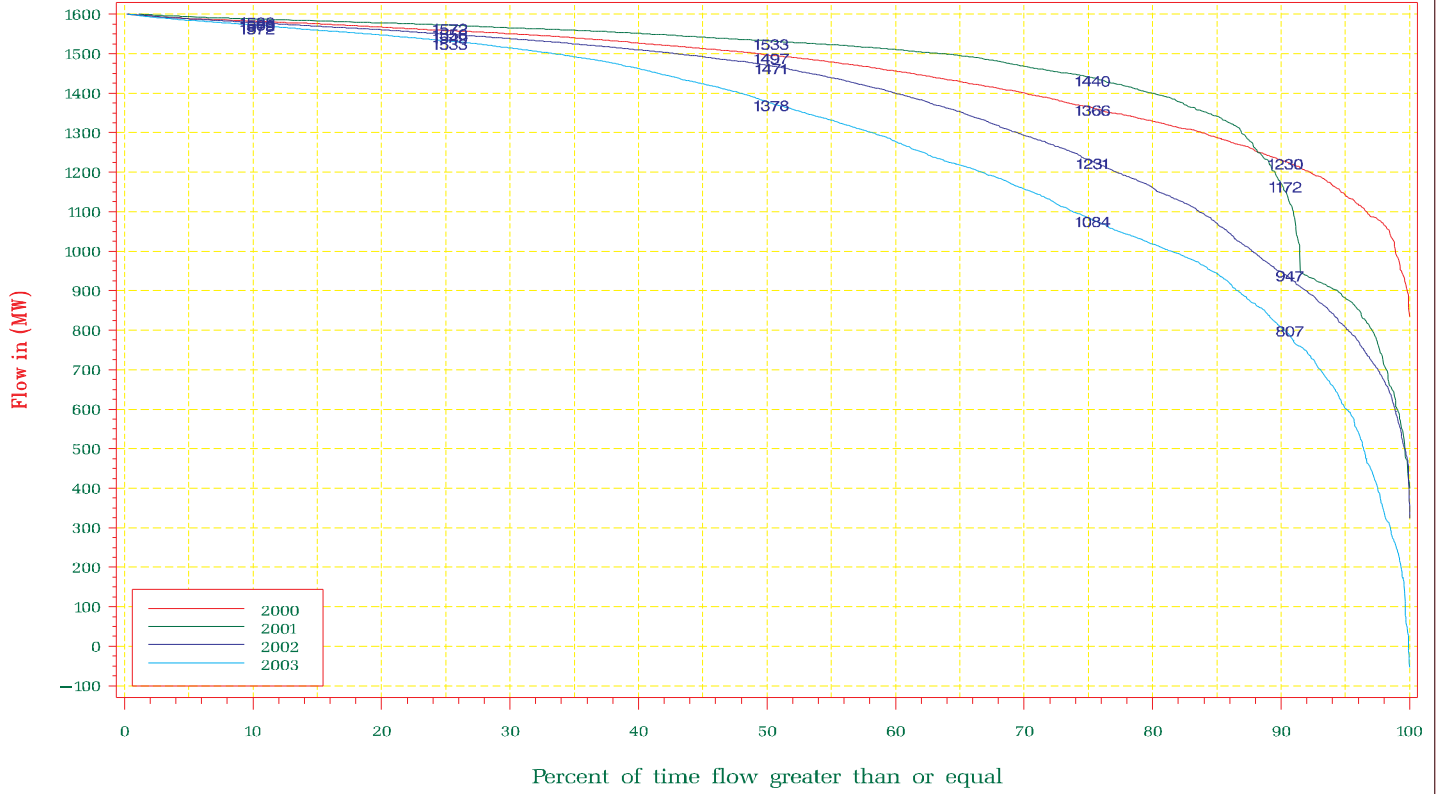
Margin to New England – NY Limit





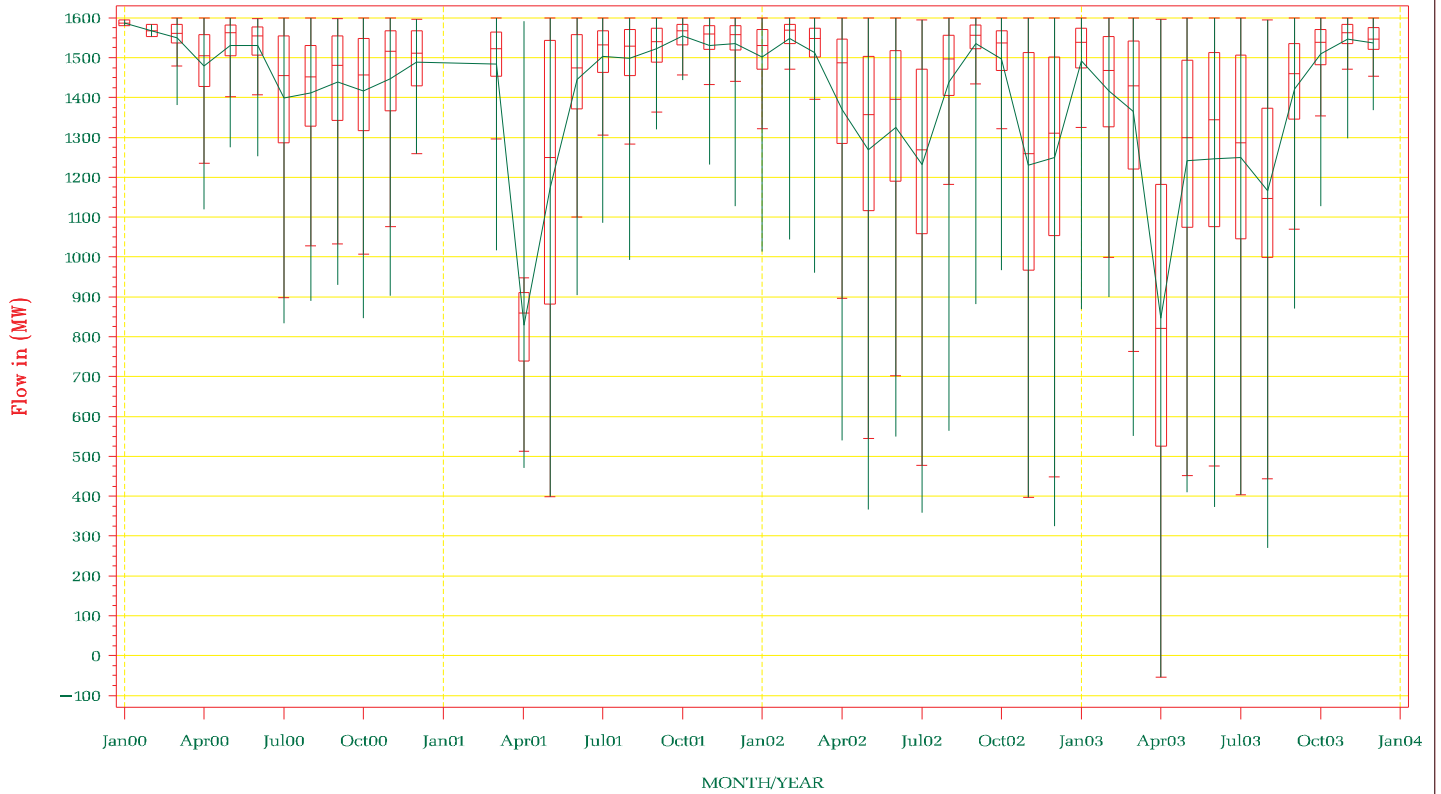
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to New England – NY Limit



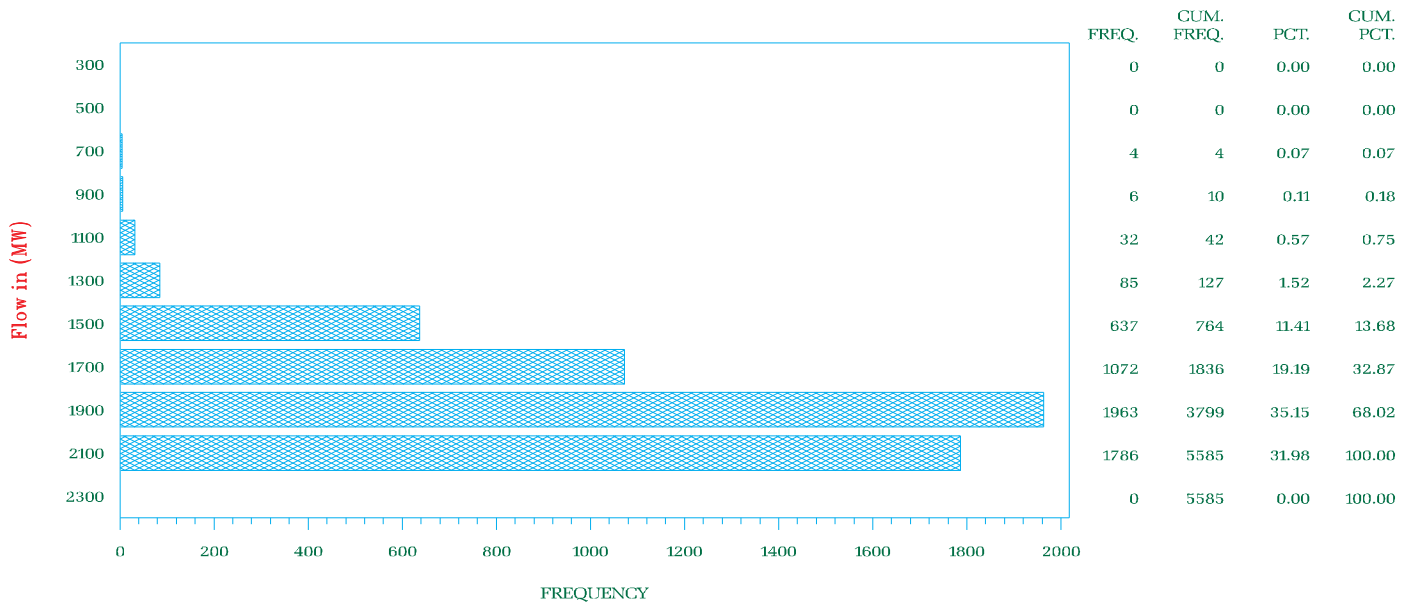
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to New England – NY Limit



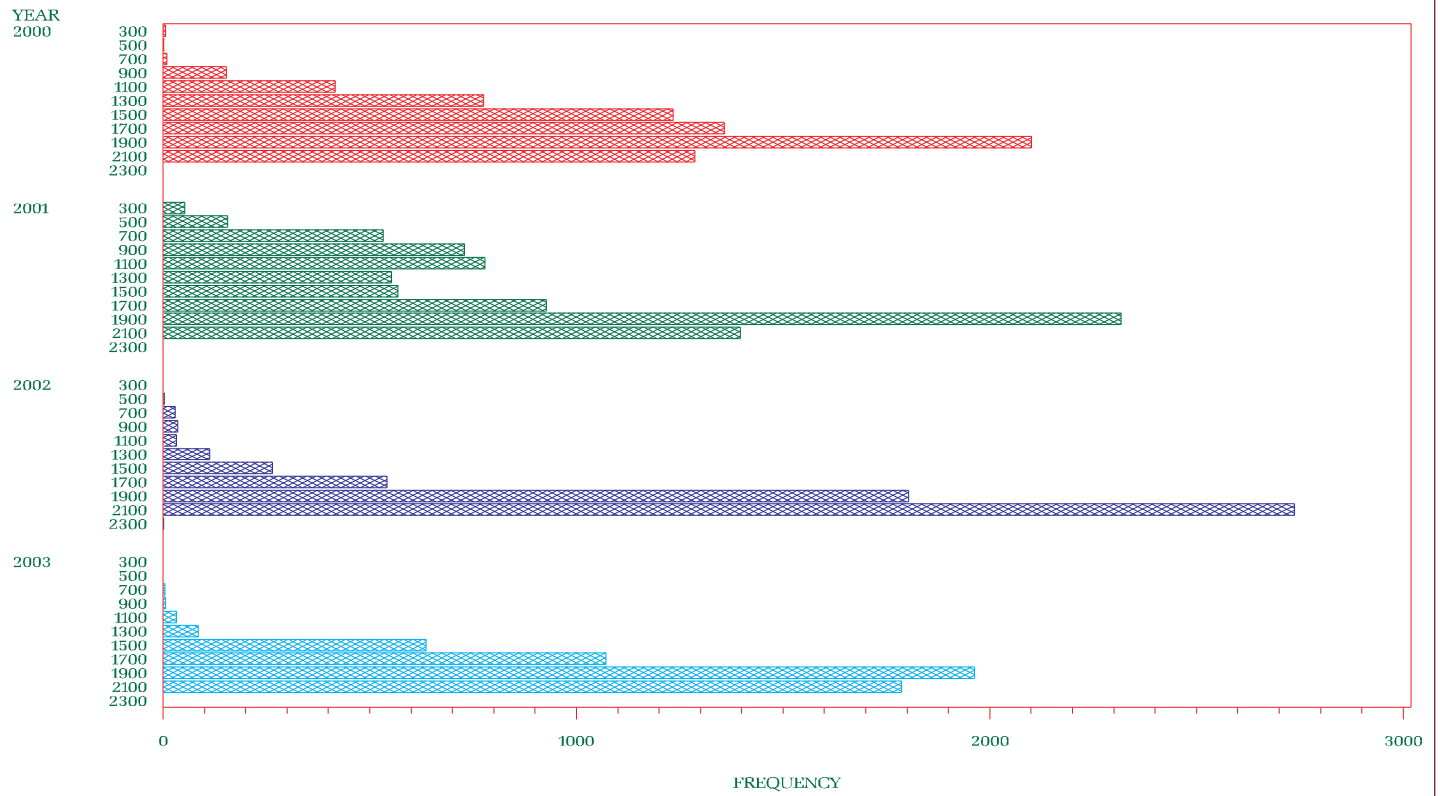
NYISO Frequency Interface Flow For January – December 2003

Margin to NY–New England Limit



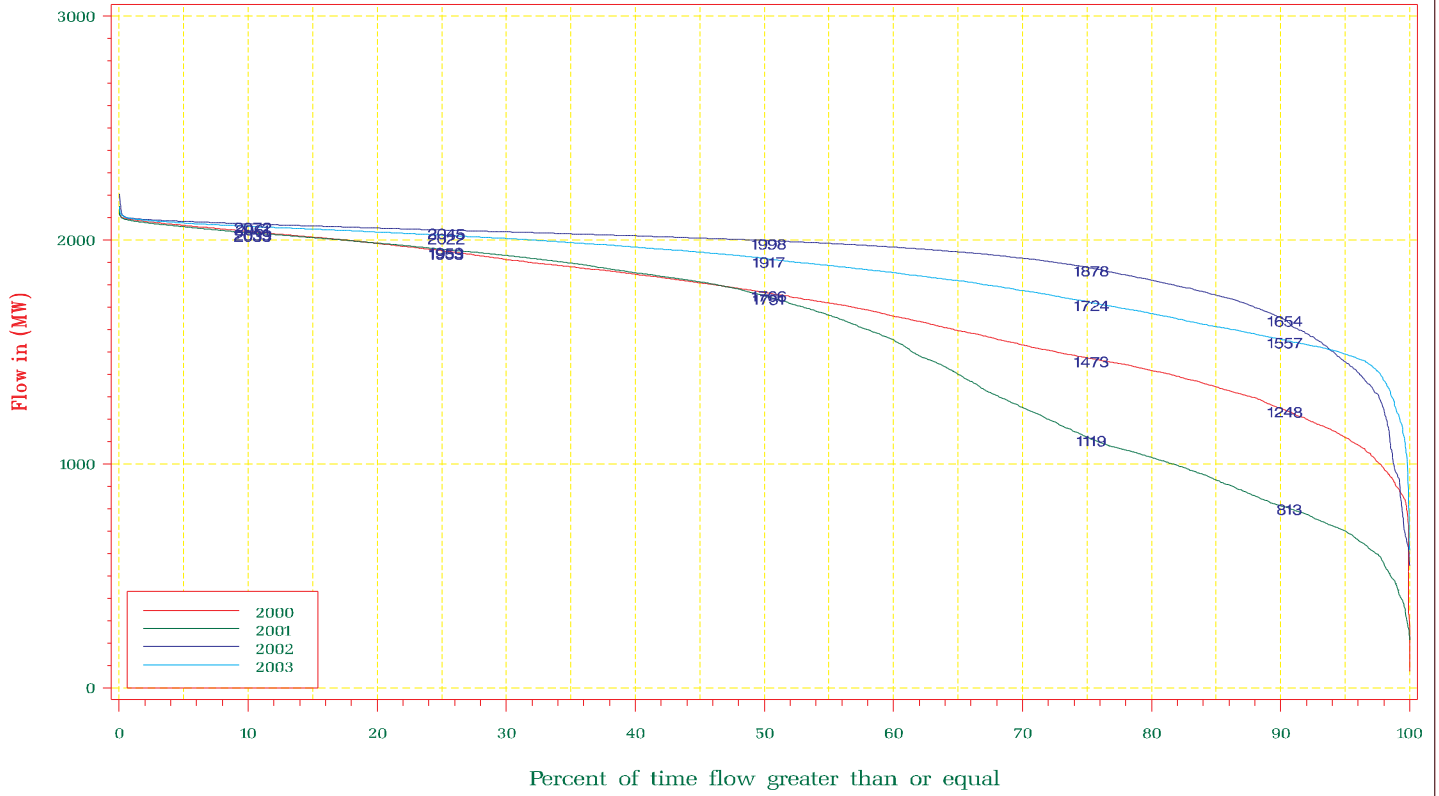
NYISO Frequency Interface Flow For January 2000 – December 2003

Margin to NY–New England Limit



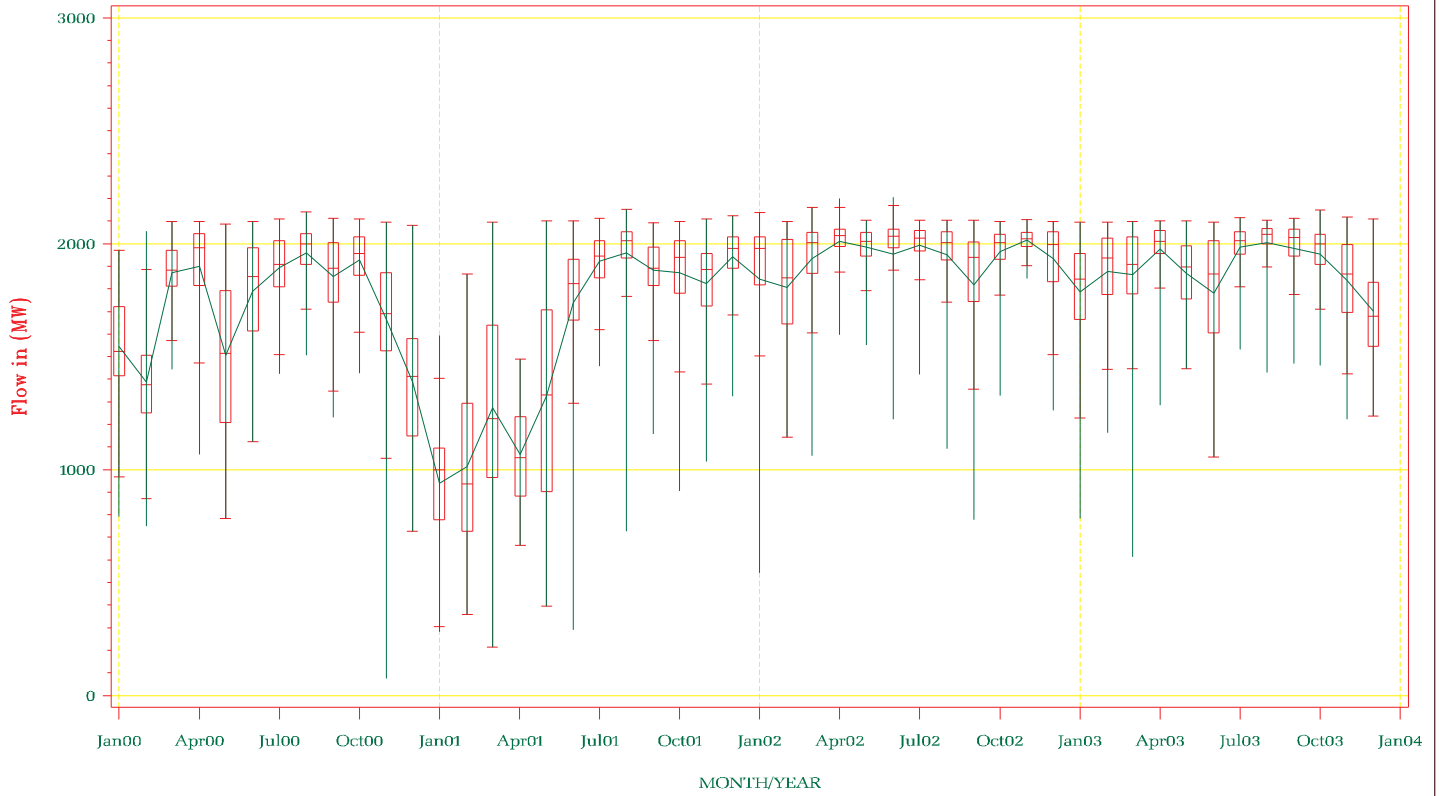
NYISO Percent of time Interface Flow For January 2000 – December 2003

Margin to NY–New England Limit



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Margin to NY–New England Limit



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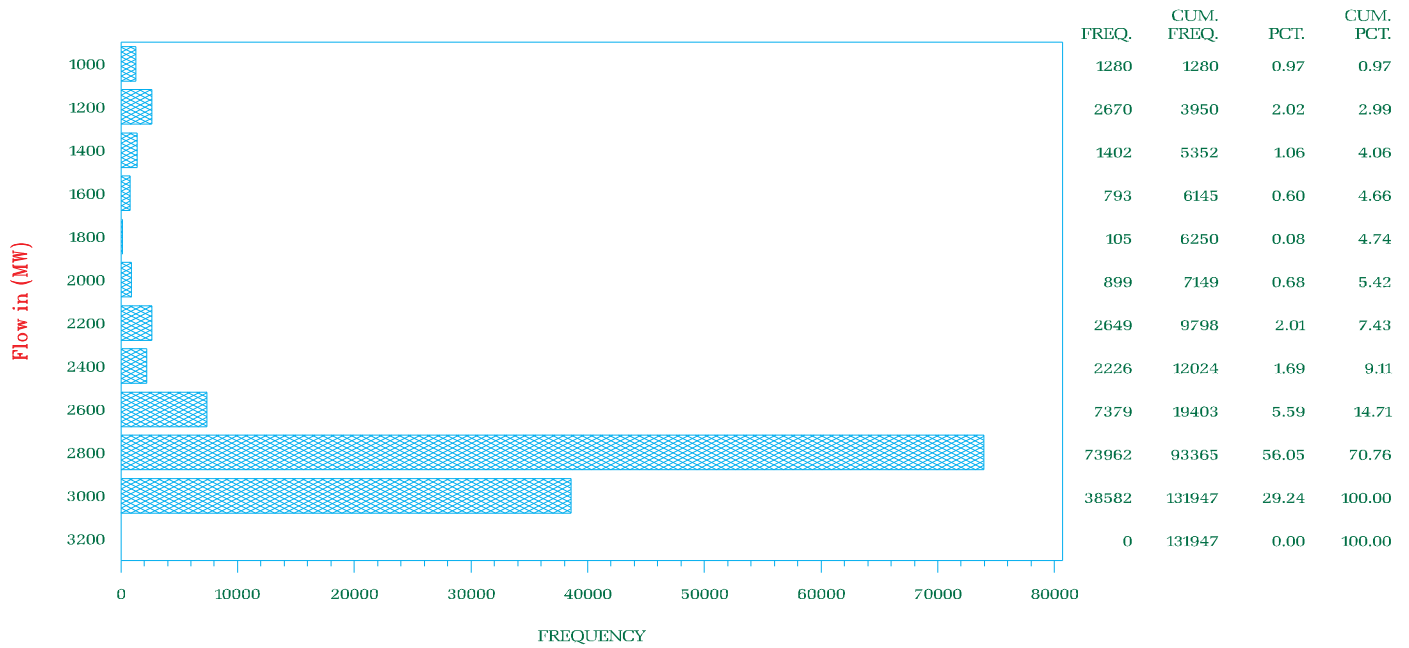
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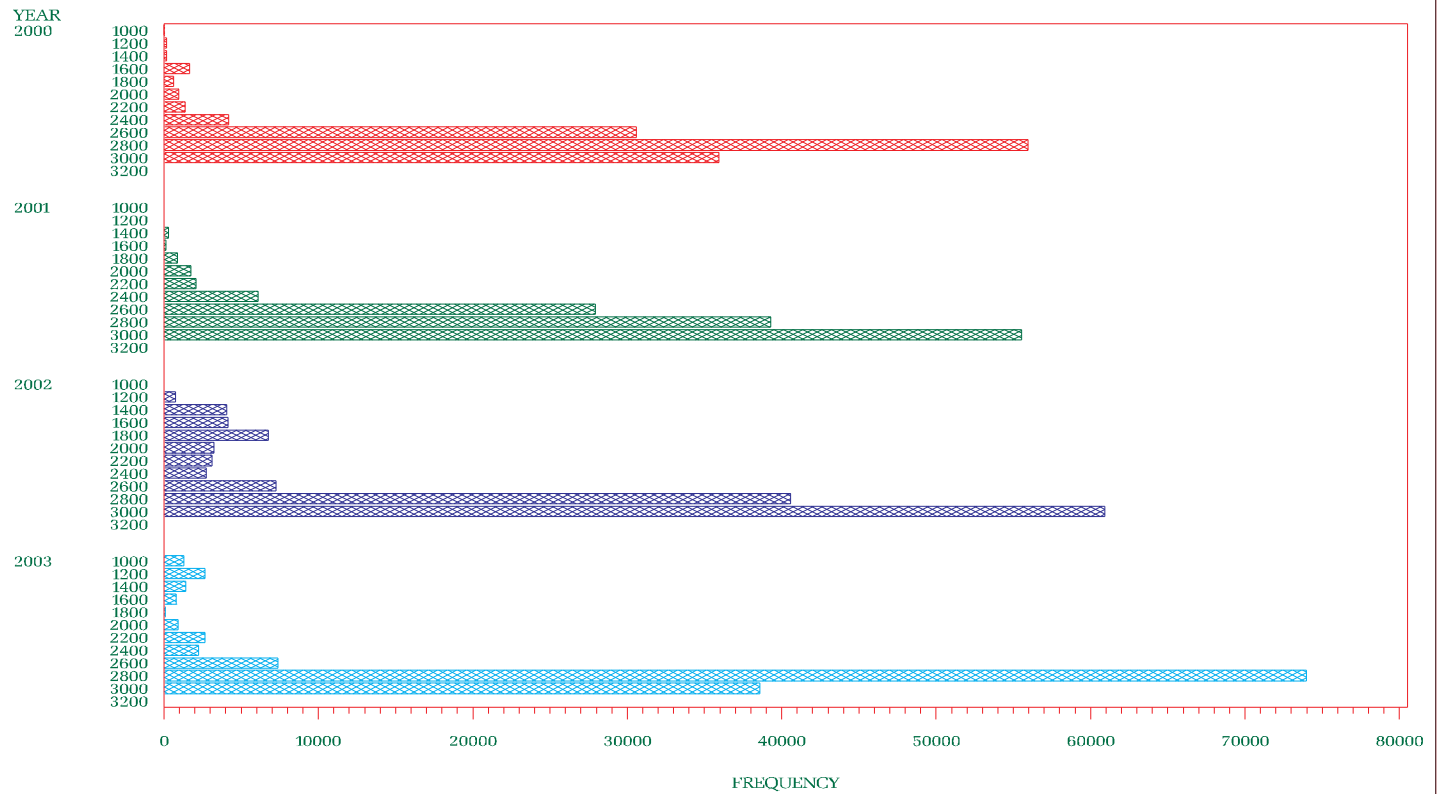
NYISO Frequency Interface Flow For January – December 2003

Central East Limit

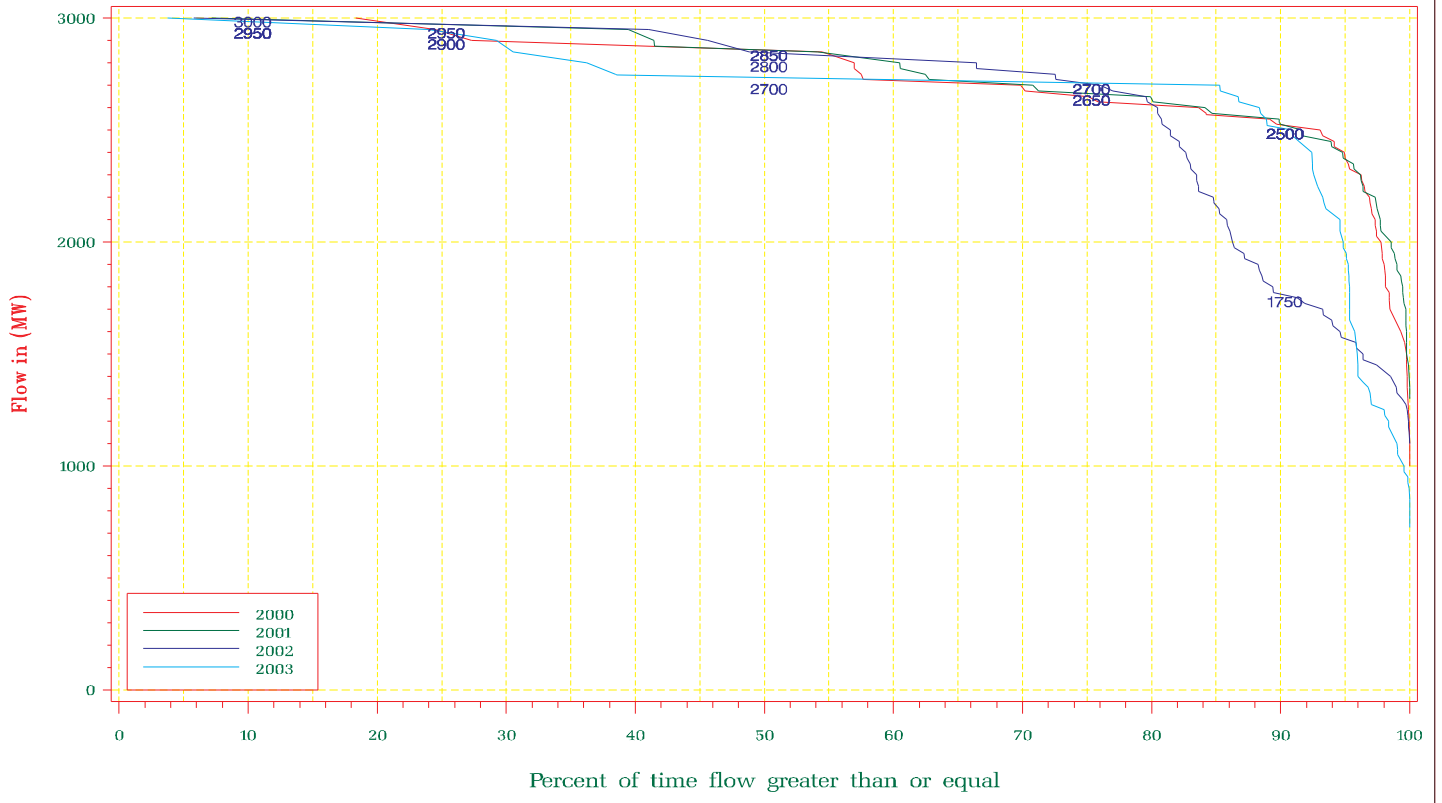


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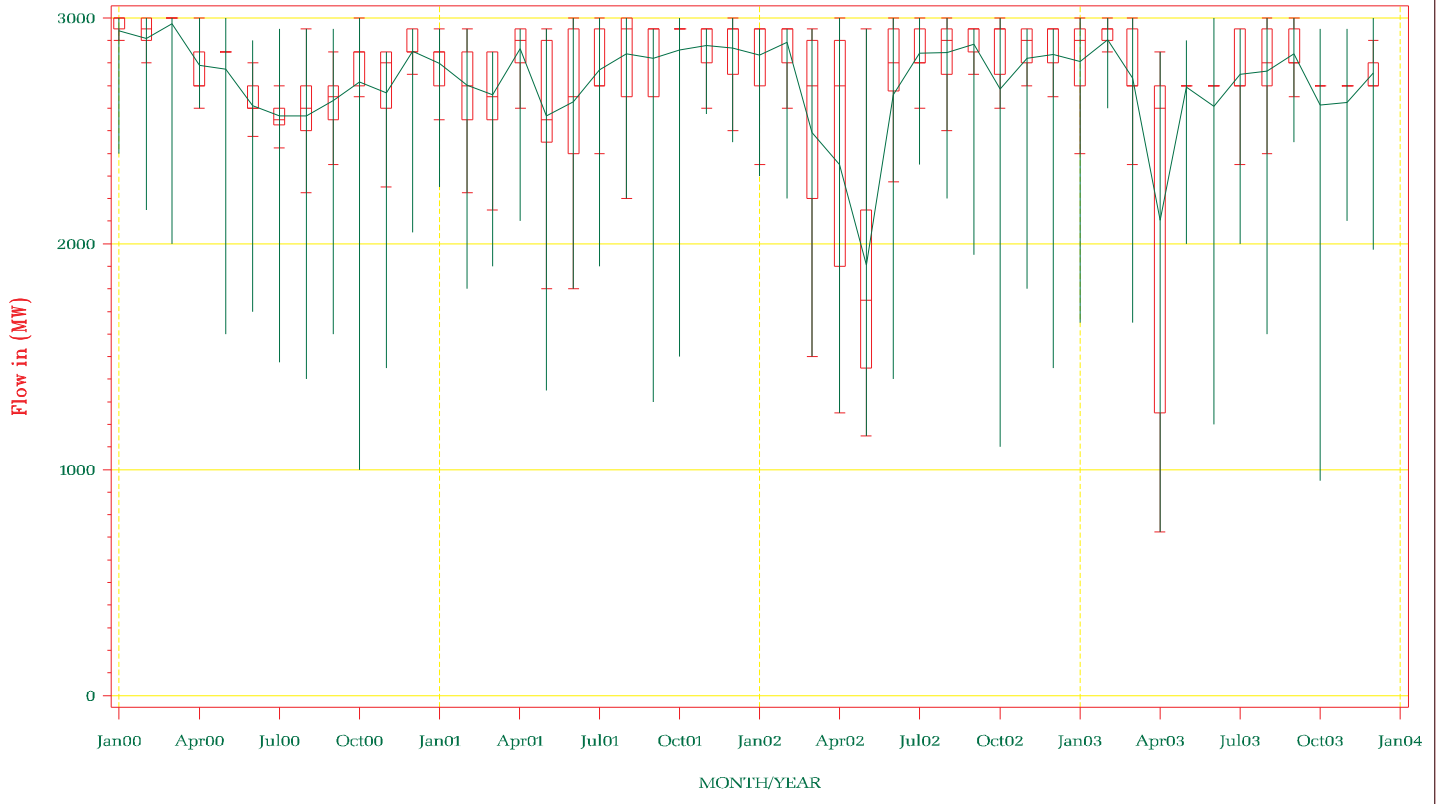
Central East Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**Central East Limit**

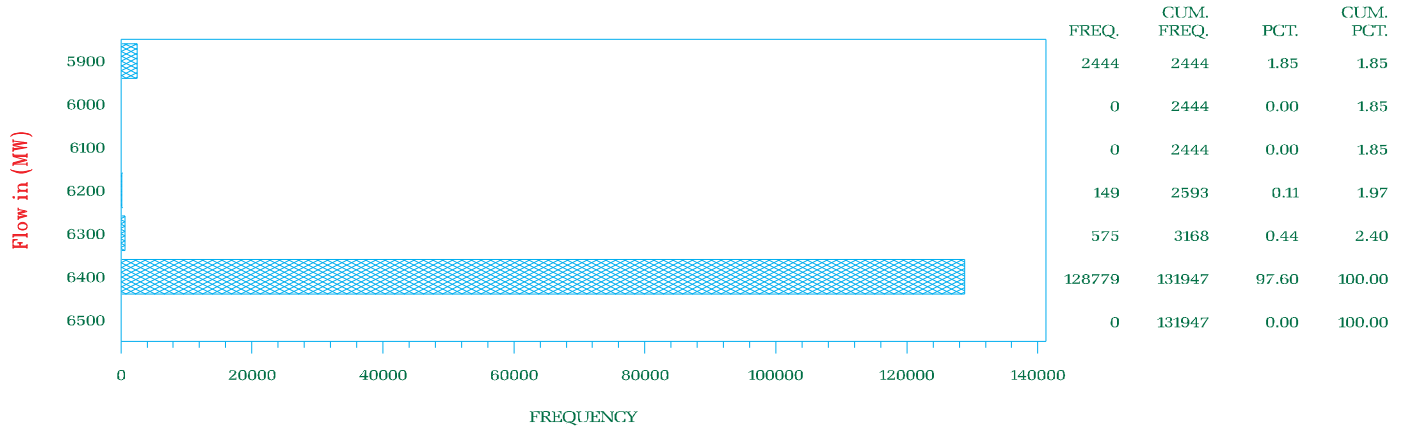


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**Central East Limit**



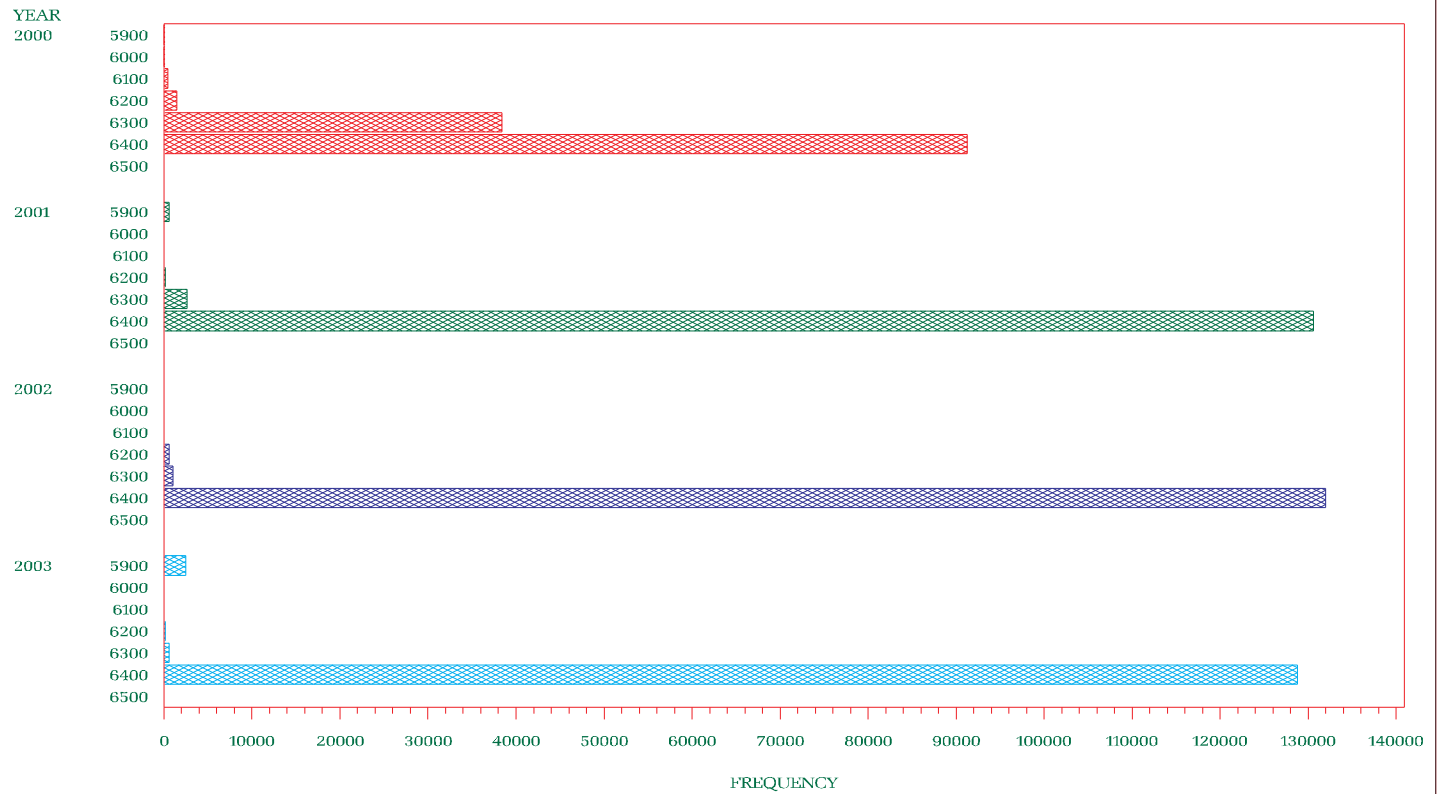
NYISO Frequency Interface Flow For January – December 2003

Total East Limit



NYISO Frequency Interface Flow For January 2000 – December 2003

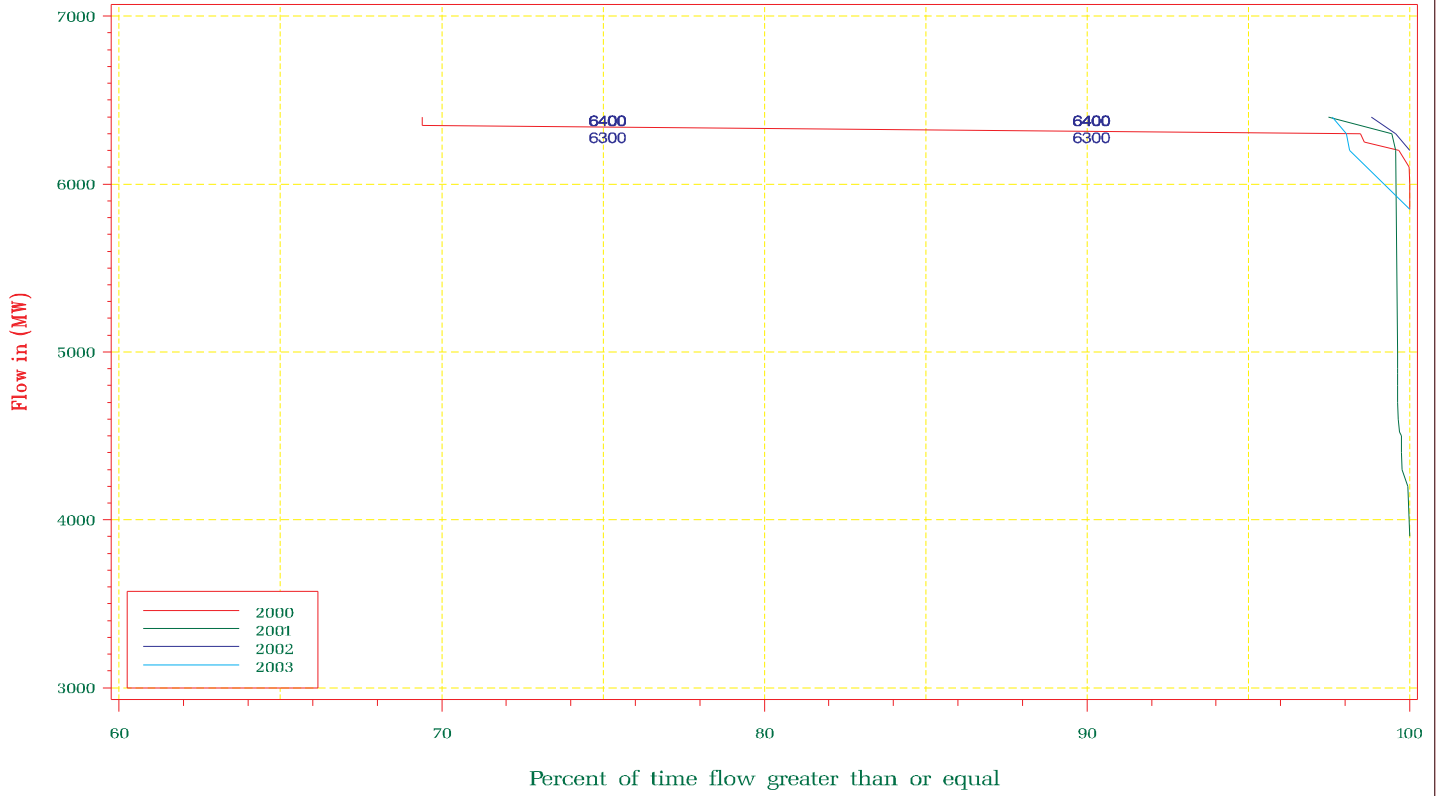
Total East Limit





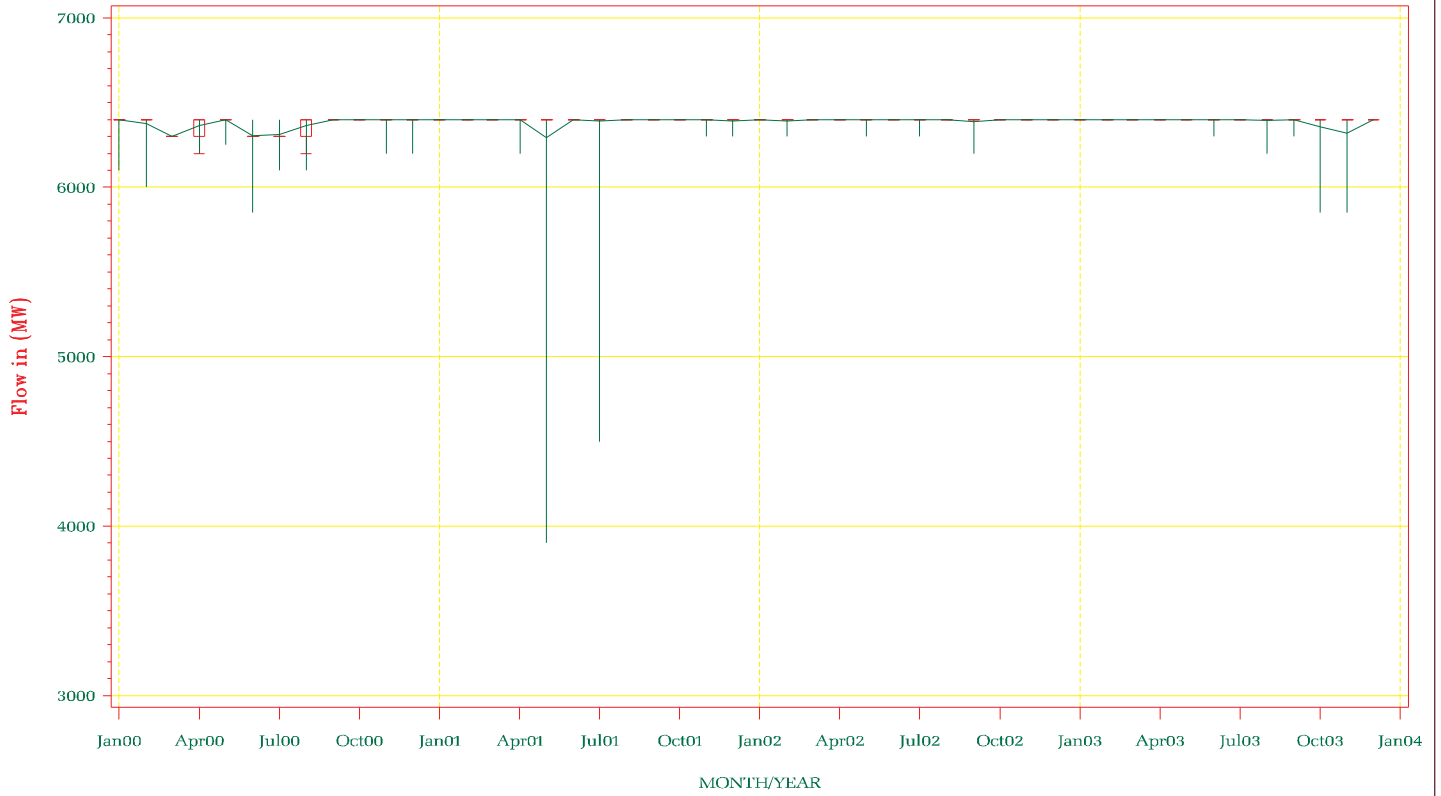
NYISO Percent of time Interface Flow For January 2000 – December 2003

Total East Limit



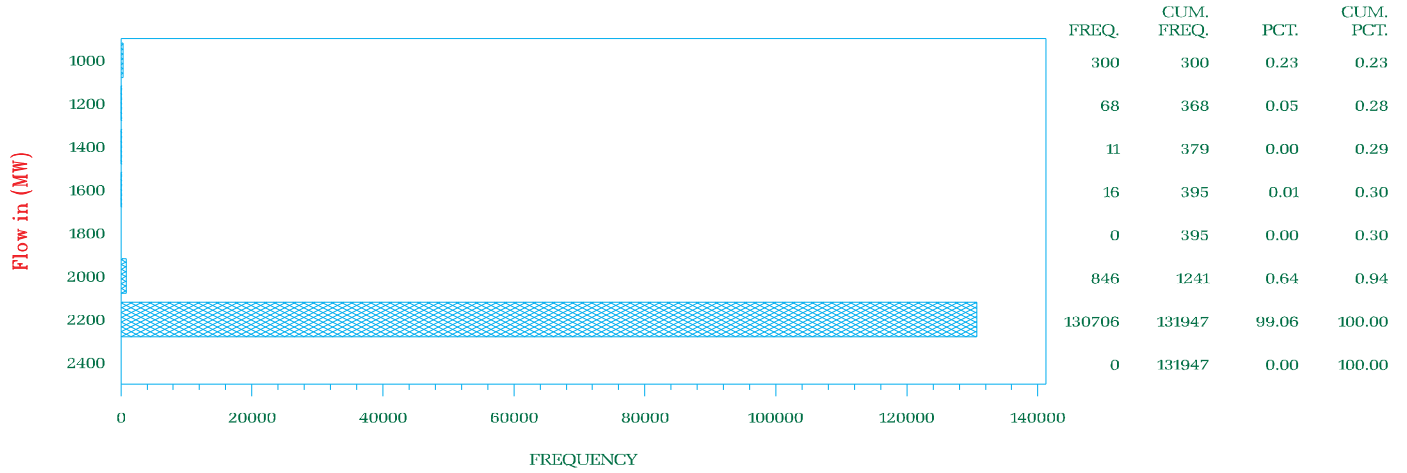
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Total East Limit



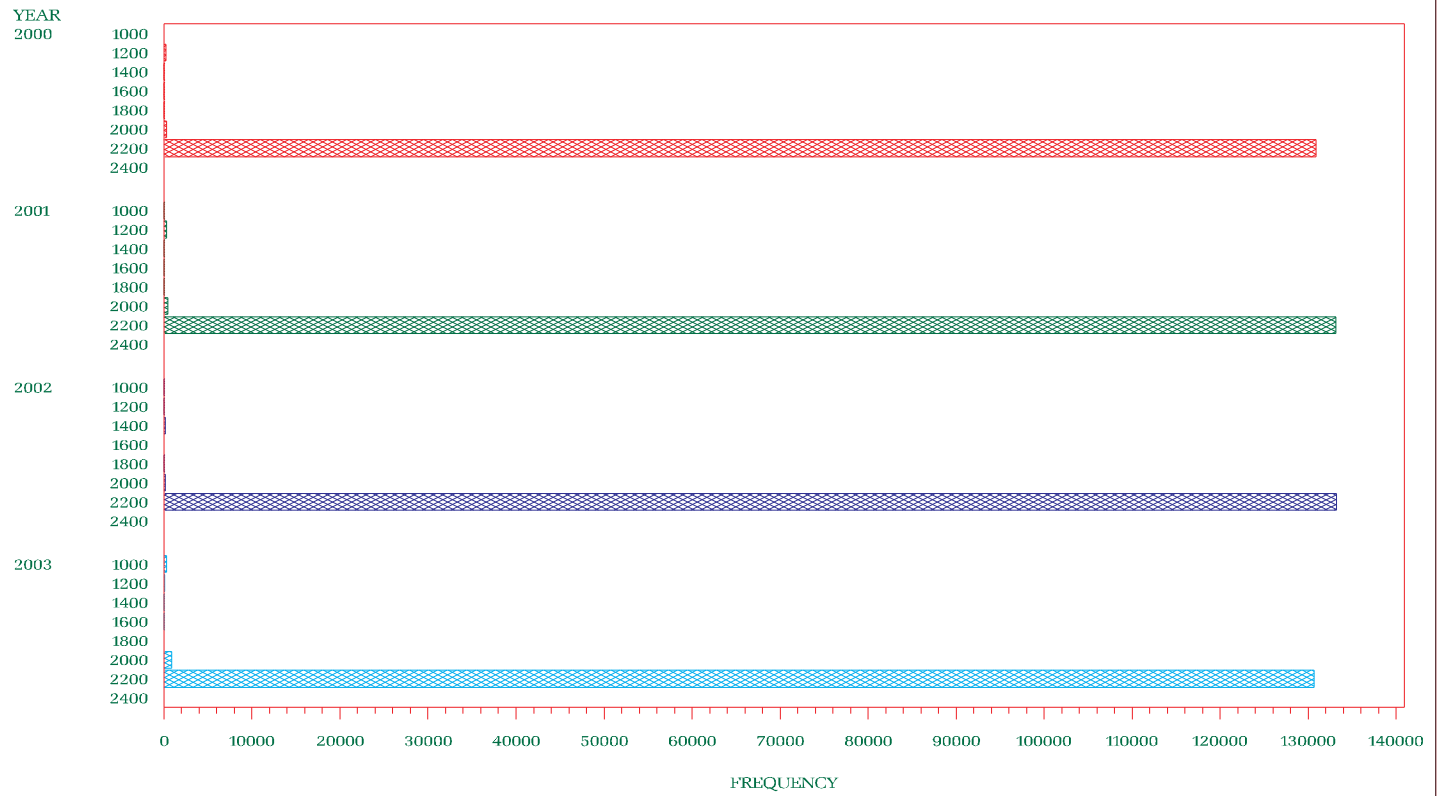
NYISO Frequency Interface Flow For January – December 2003

West Central Limit

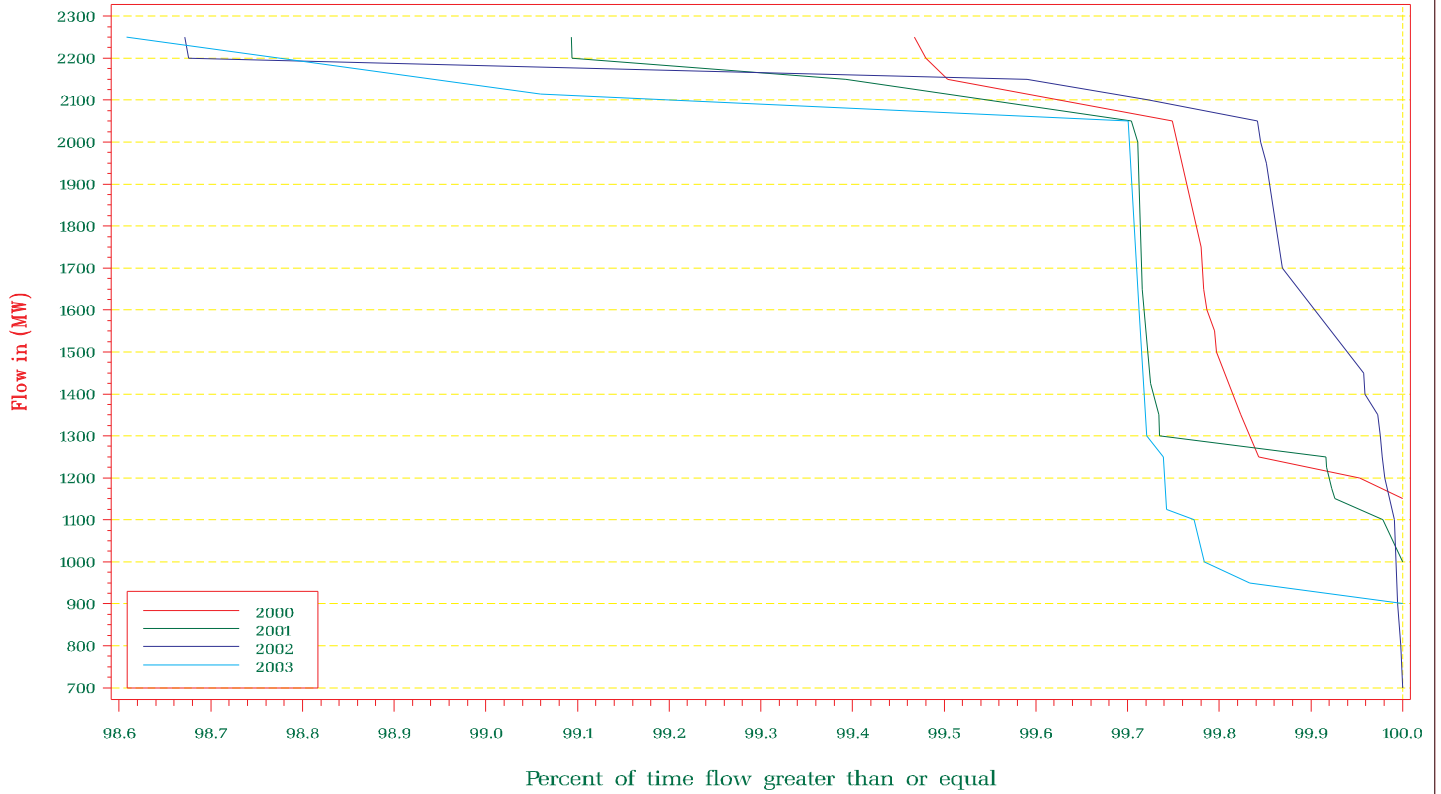


NYISO Frequency Interface Flow For January 2000 – December 2003

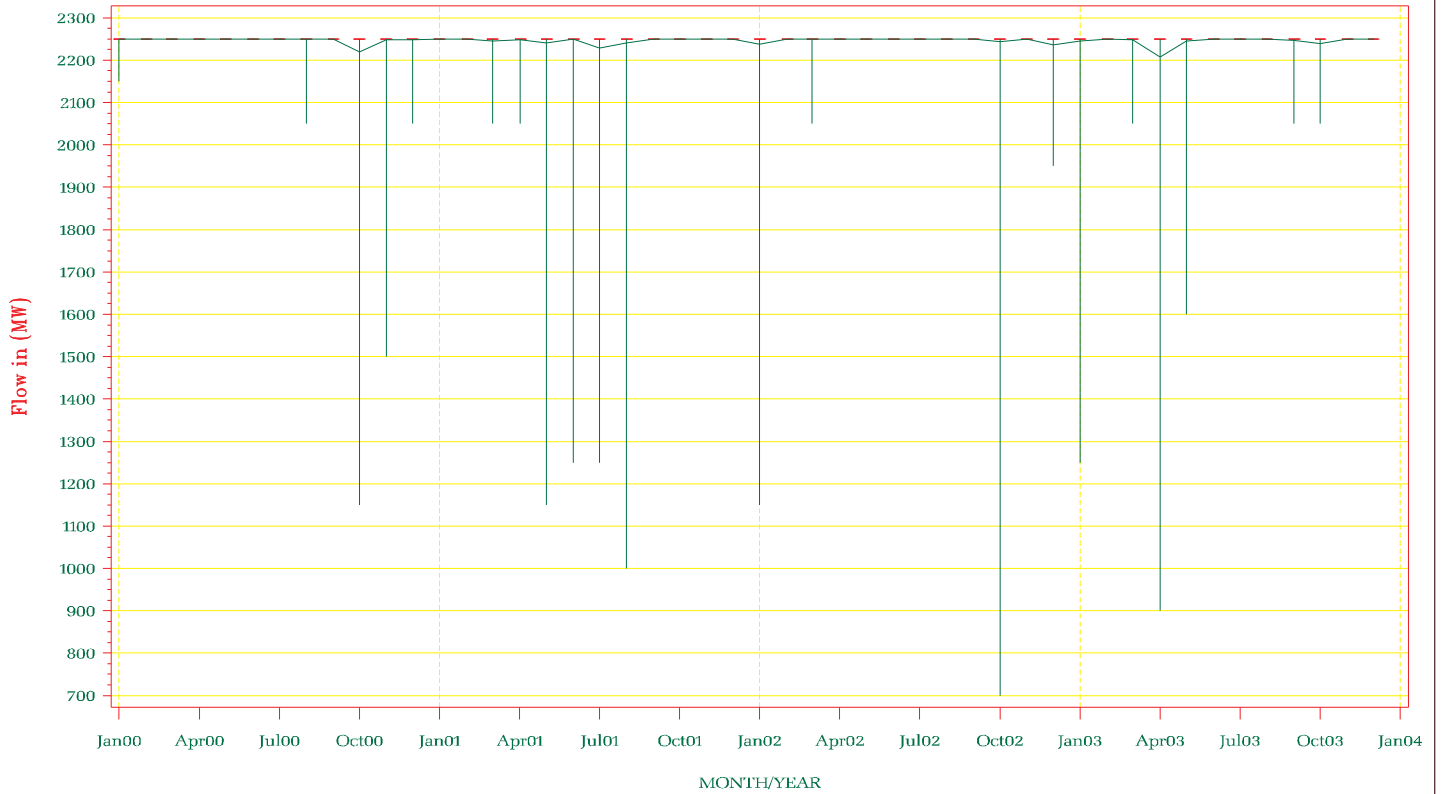
West Central Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
West Central Limit

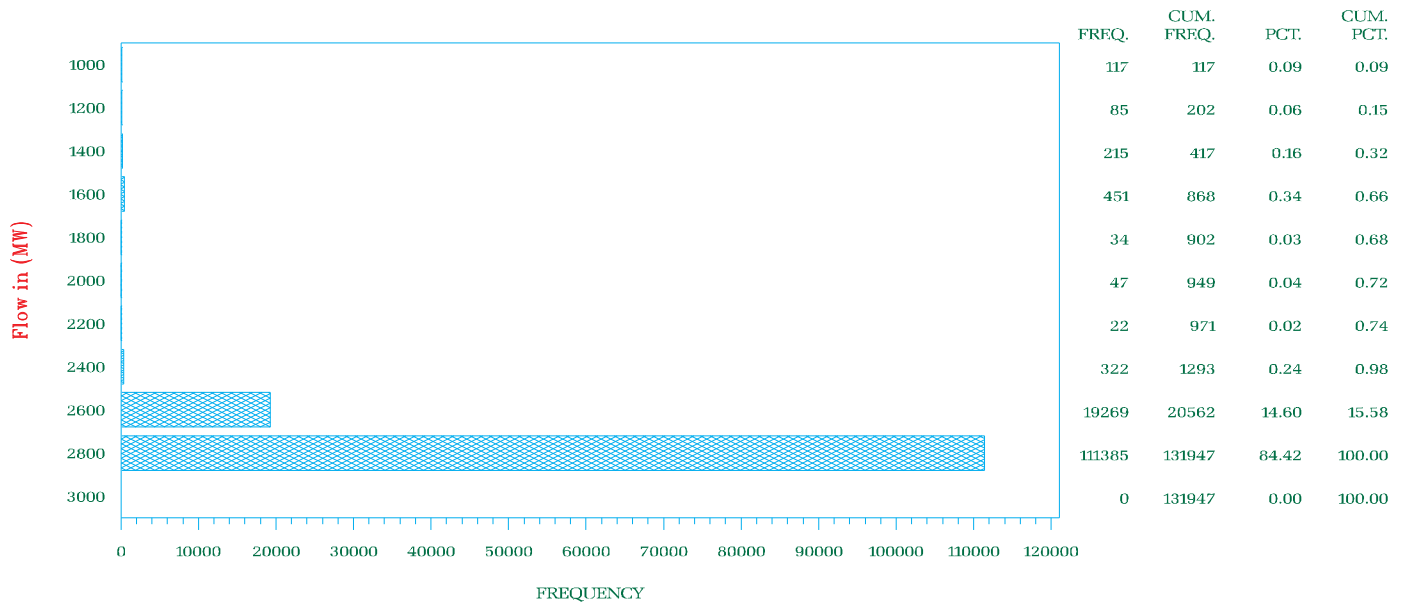


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
West Central Limit



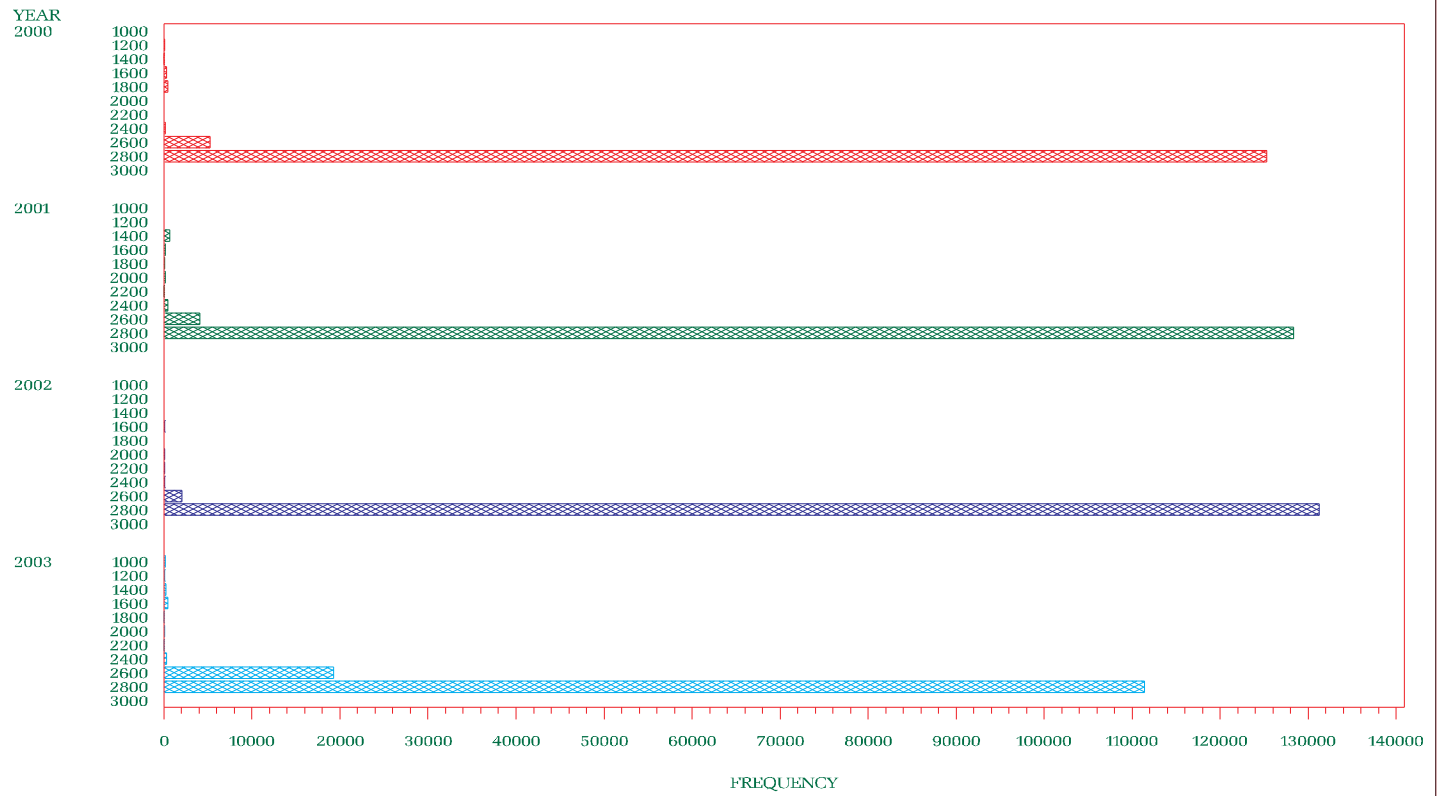
NYISO Frequency Interface Flow For January – December 2003

Dysinger East Limit

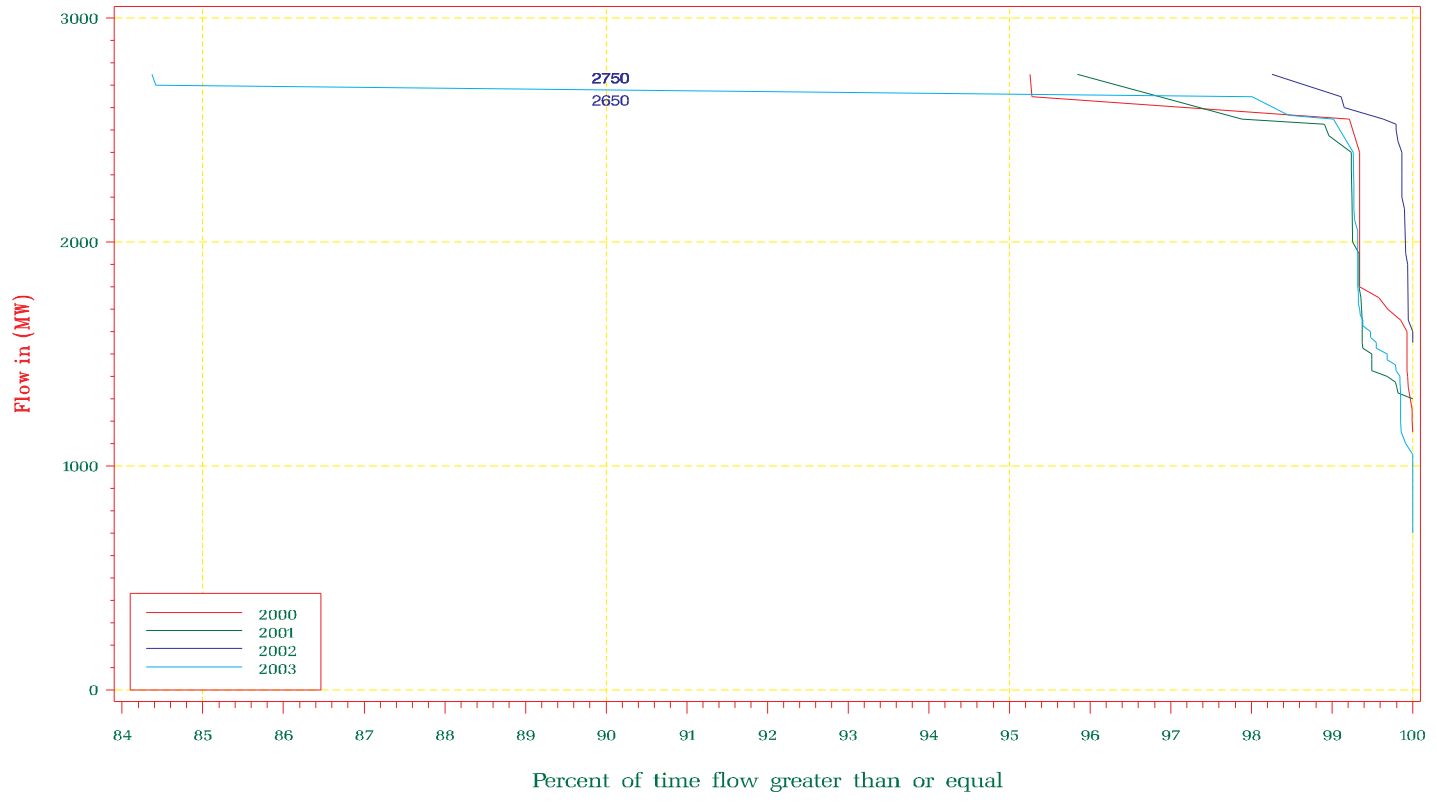


NYISO Frequency Interface Flow For January 2000 – December 2003

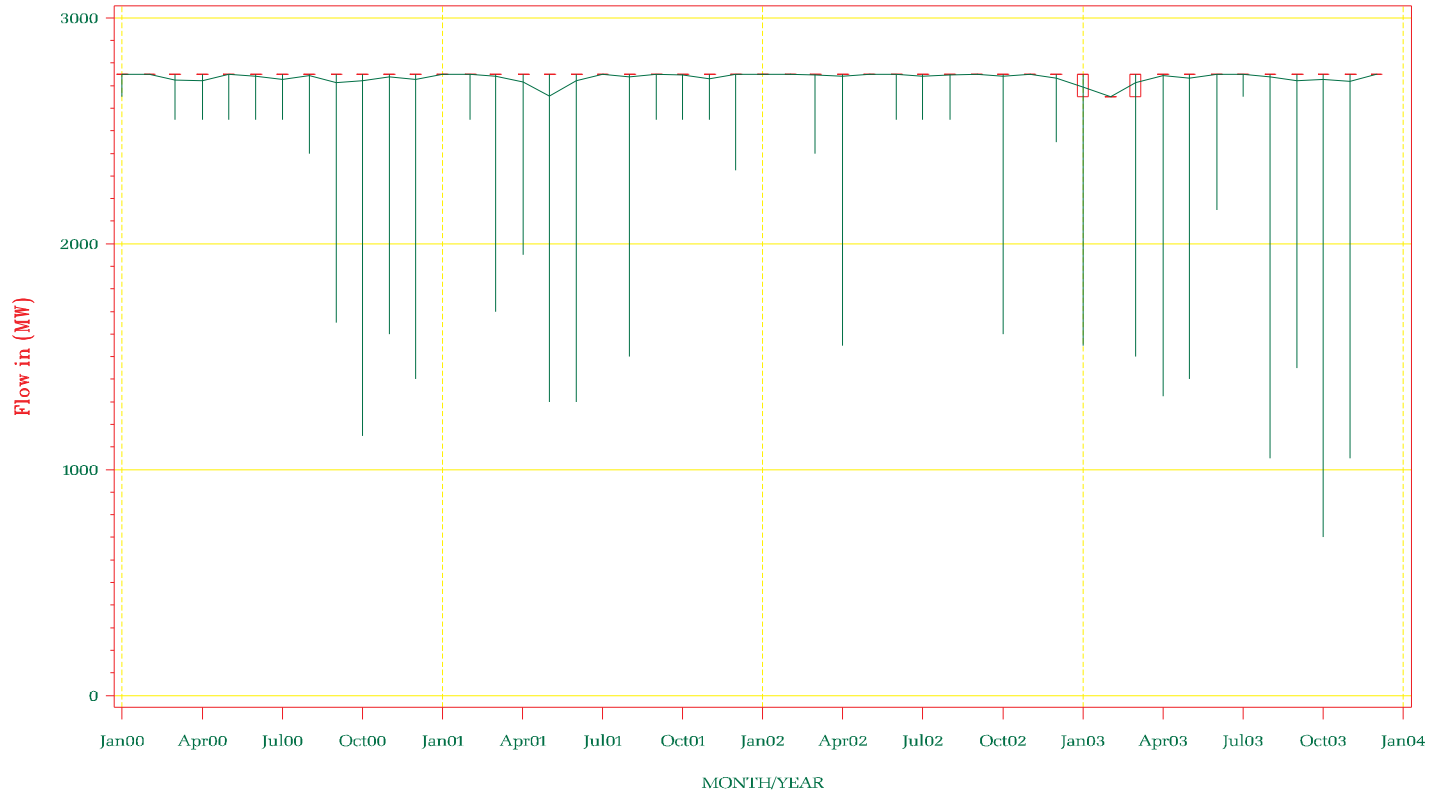
Dysinger East Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**Dysinger East Limit**

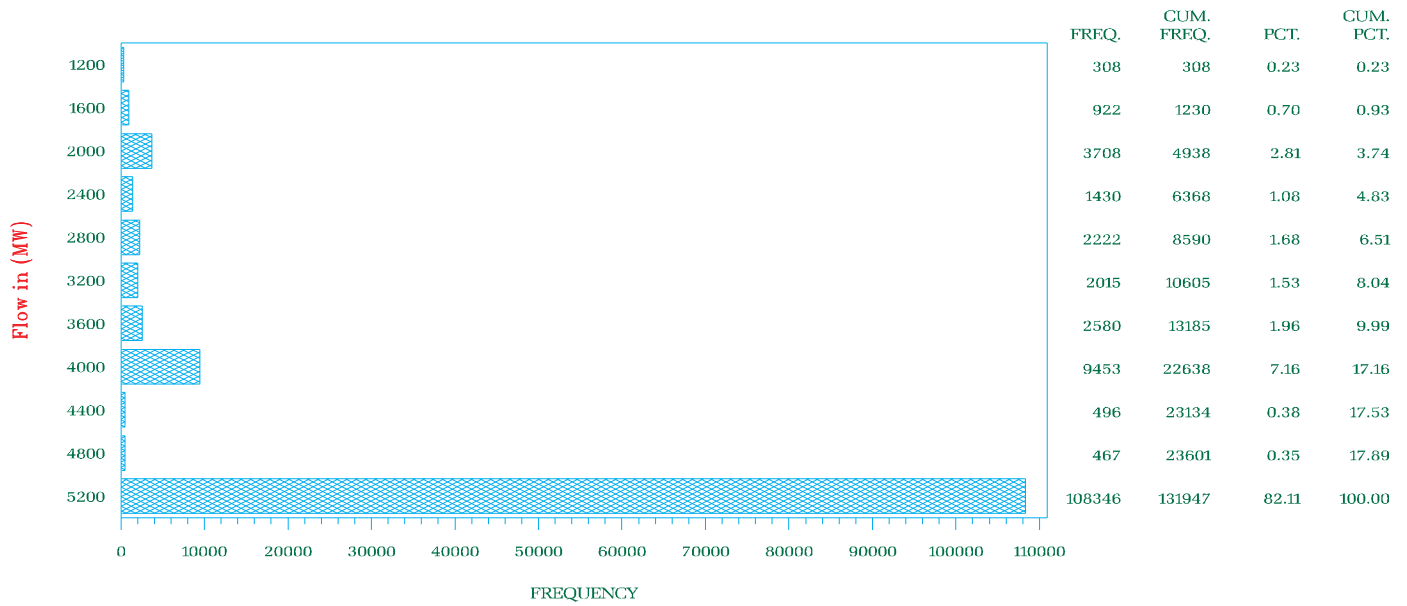


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**Dysinger East Limit**



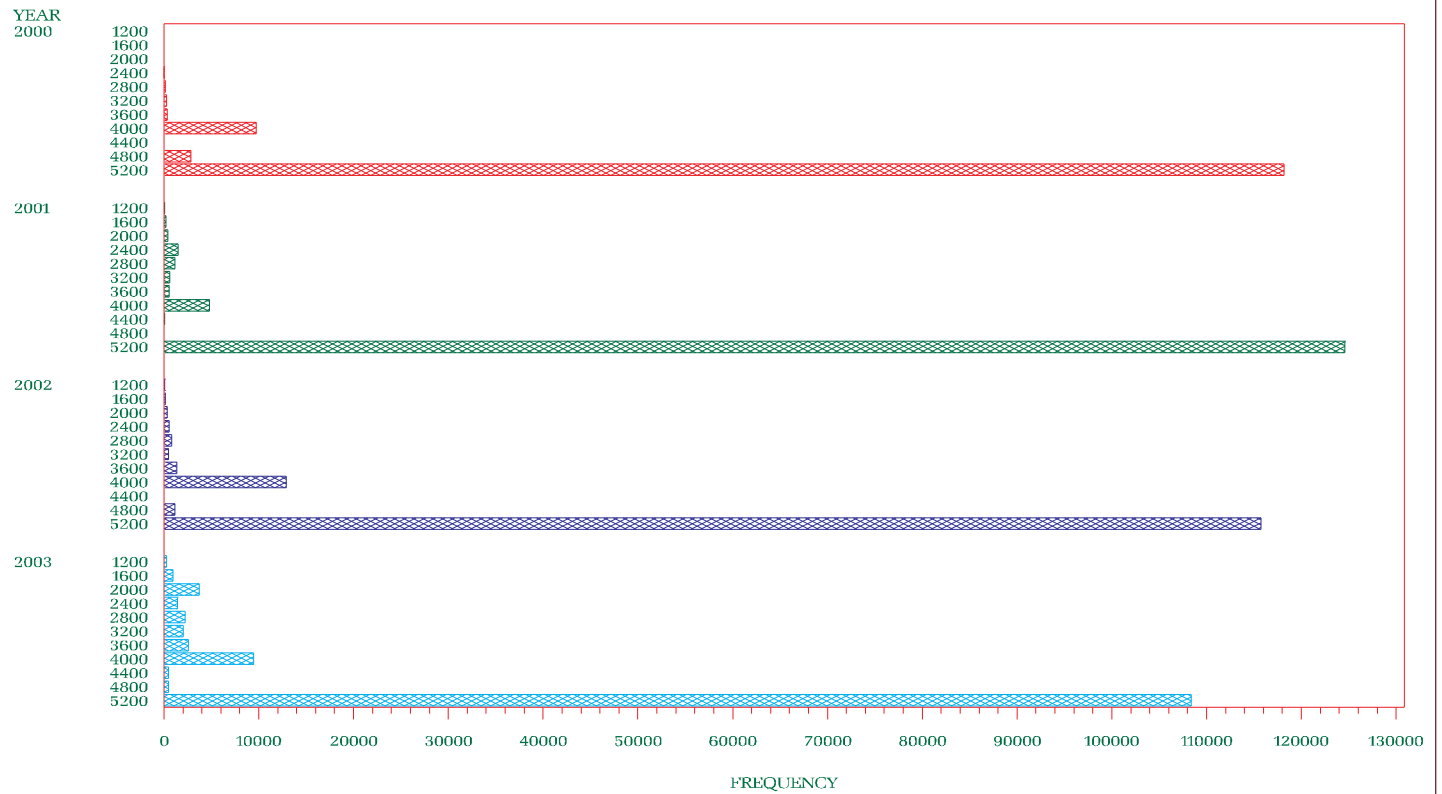
NYISO Frequency Interface Flow For January – December 2003

UPNY Con Ed Limit

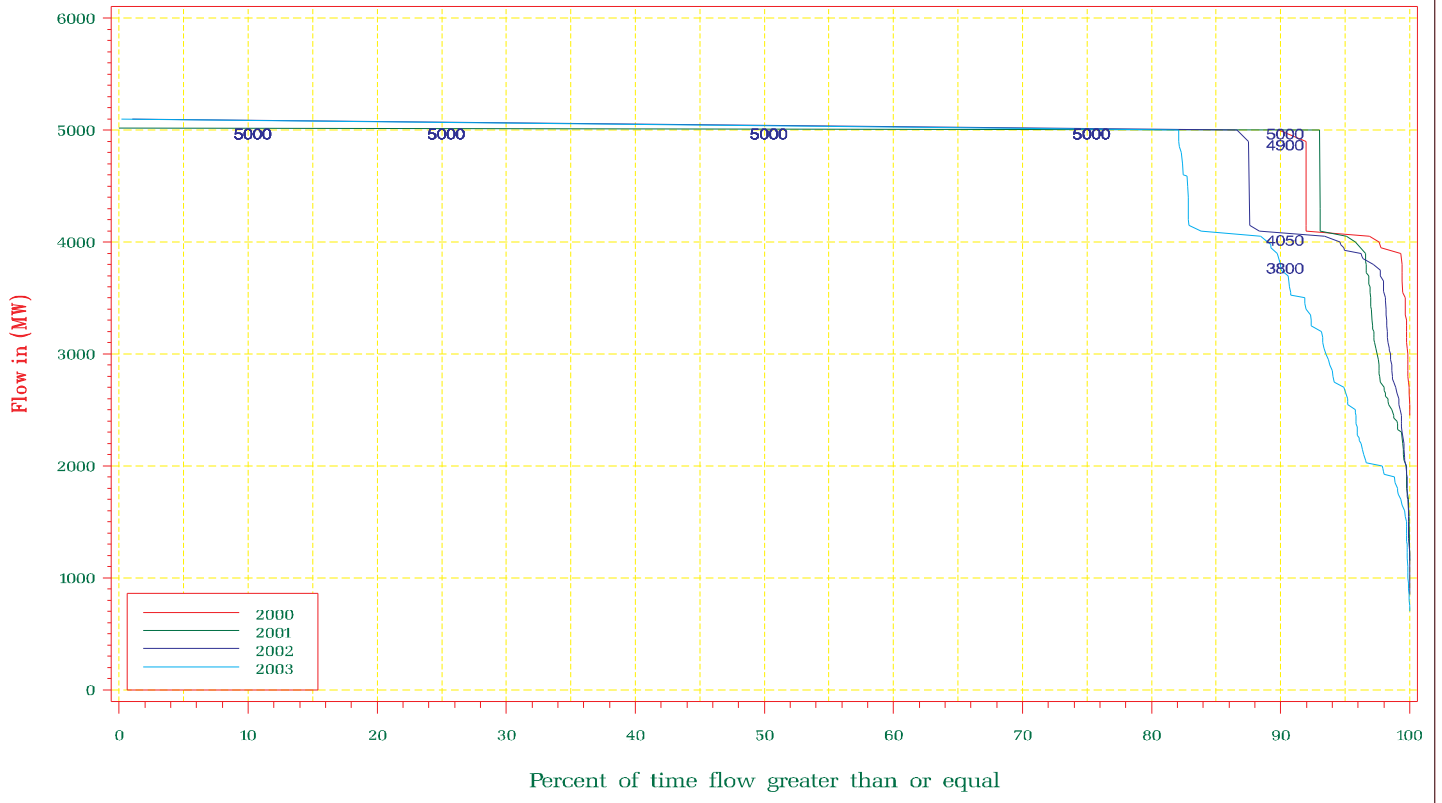


NYISO Frequency Interface Flow For January 2000 – December 2003

UPNY Con Ed Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
 UPNY Con Ed Limit

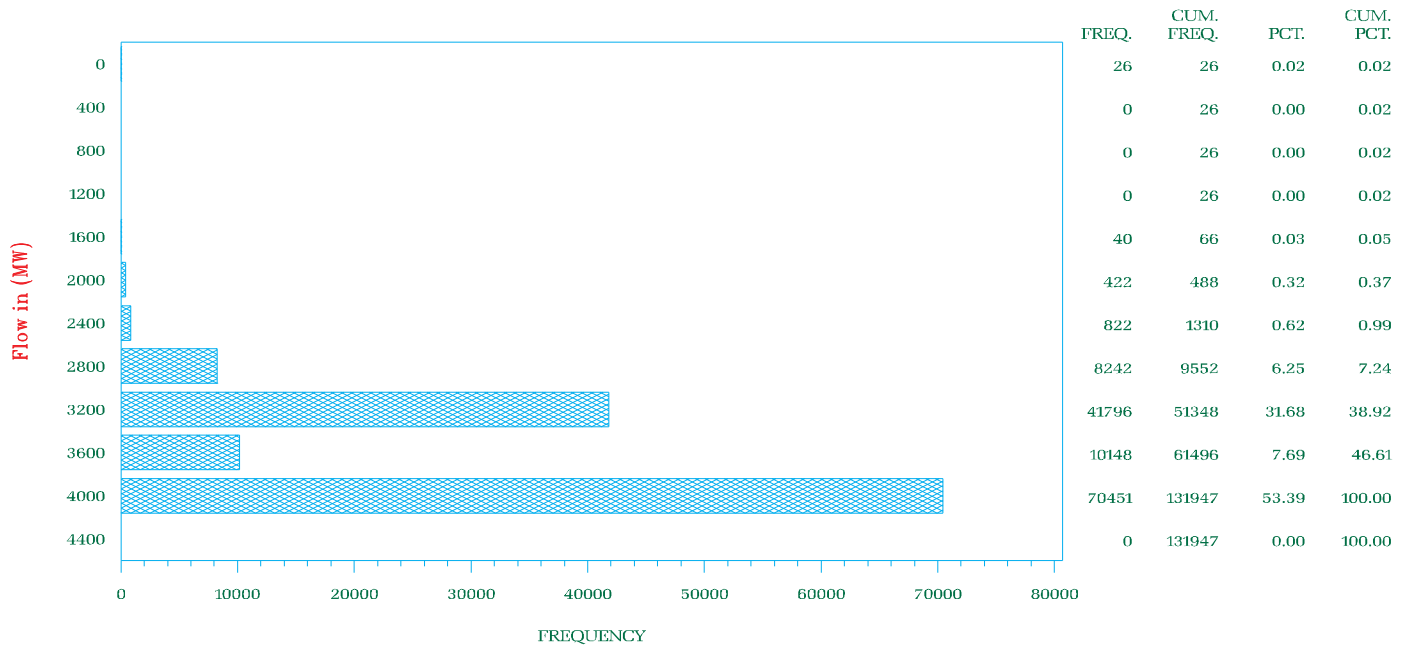


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
 UPNY Con Ed Limit



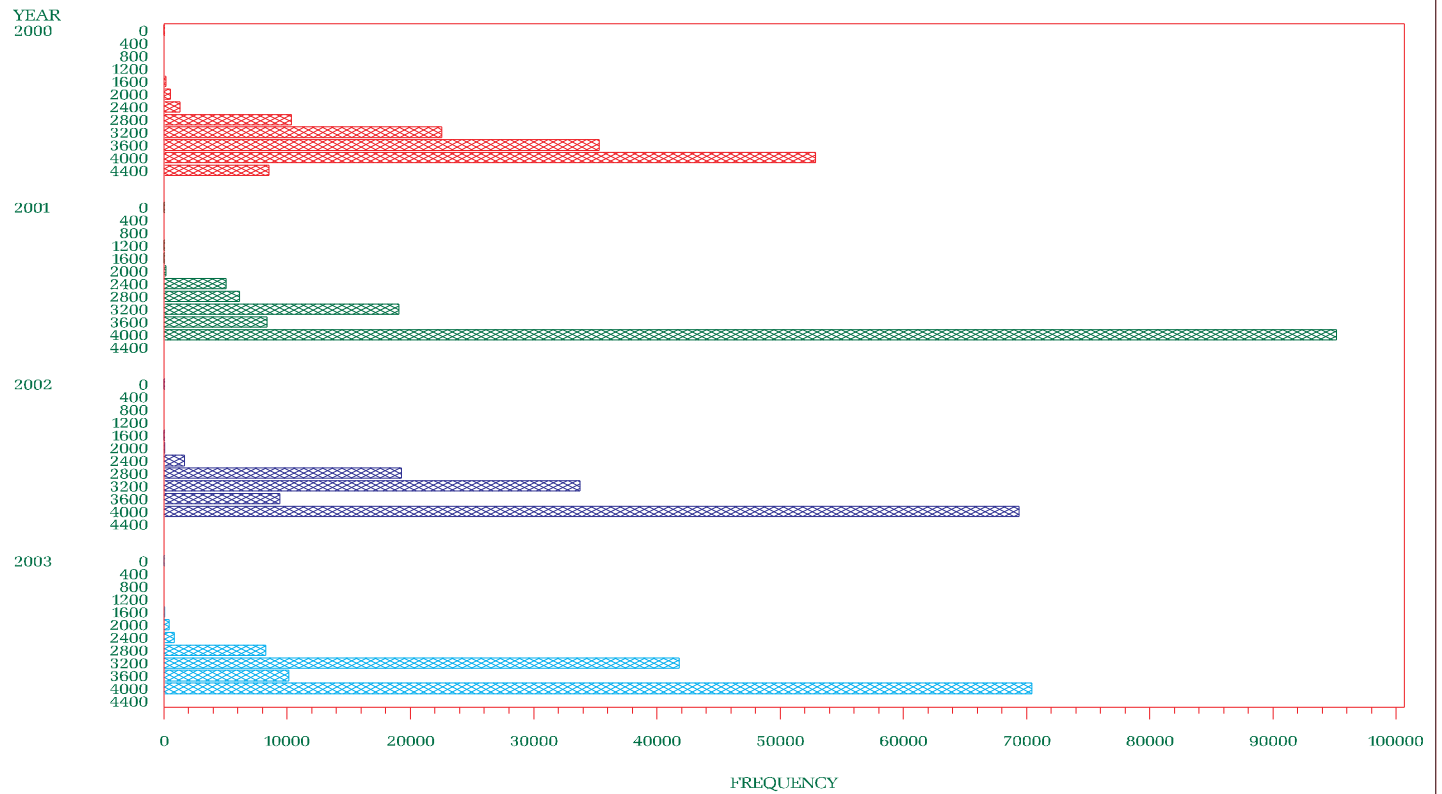
NYISO Frequency Interface Flow For January – December 2003

Dunwoodie South Limit



NYISO Frequency Interface Flow For January 2000 – December 2003

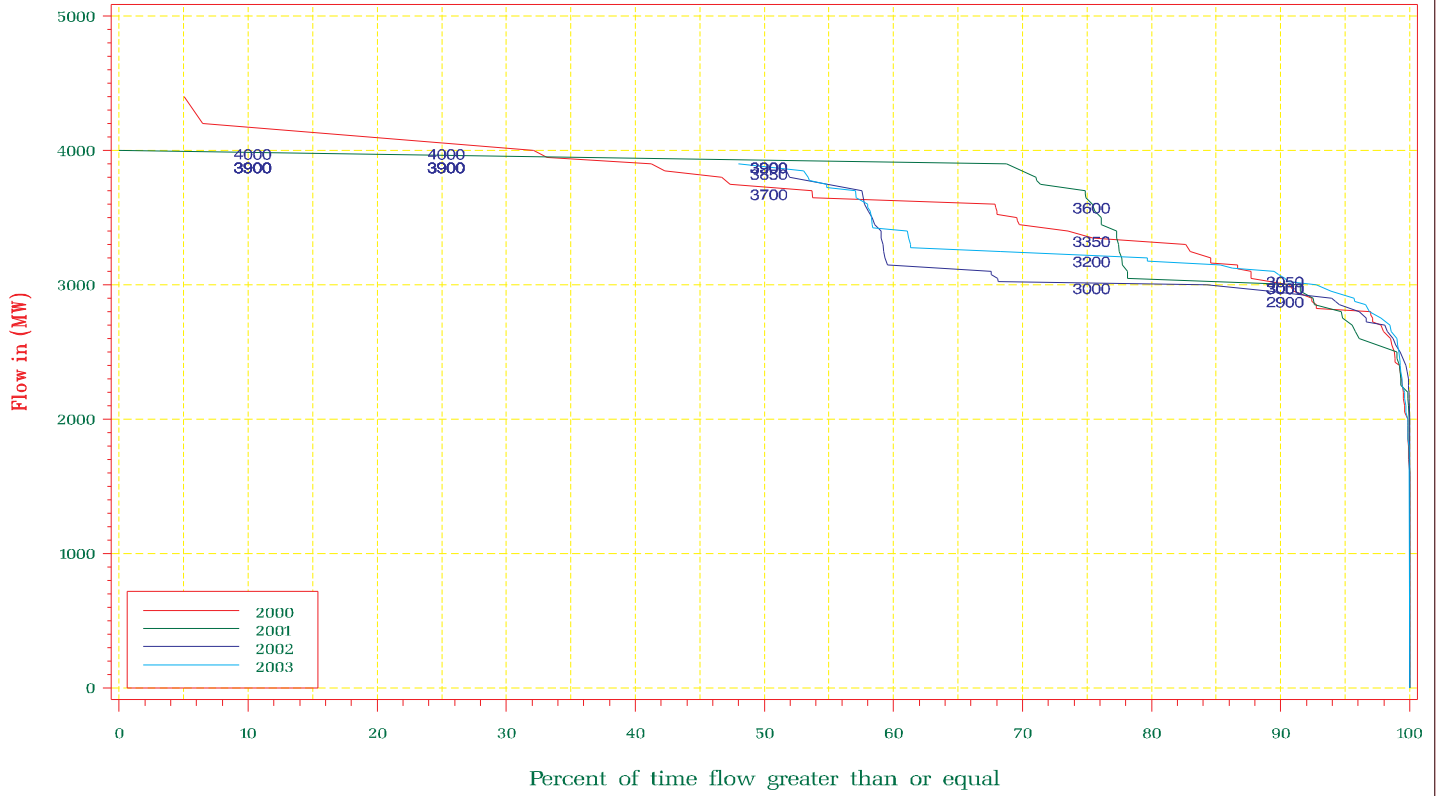
Dunwoodie South Limit





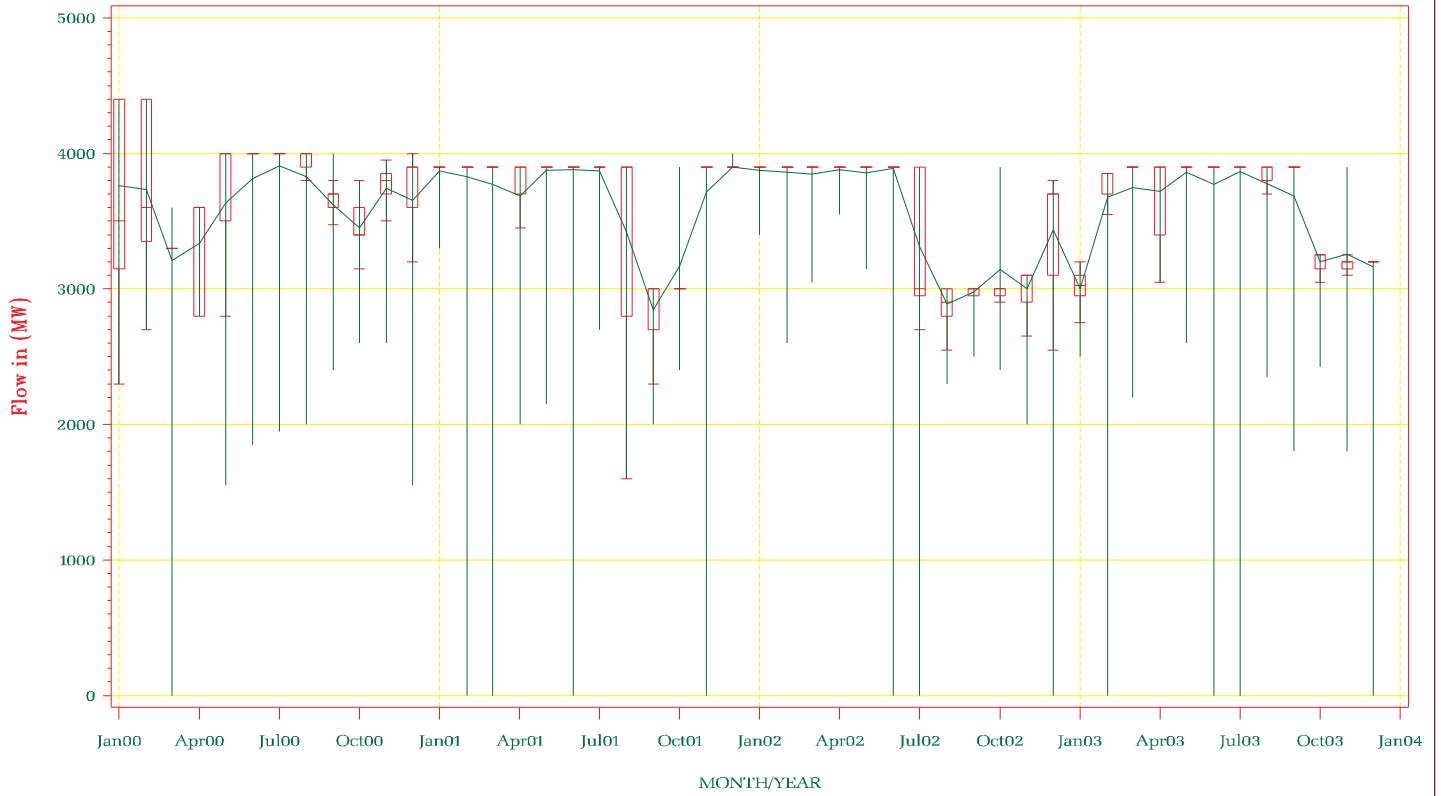
NYISO Percent of time Interface Flow For January 2000 – December 2003

Dunwoodie South Limit



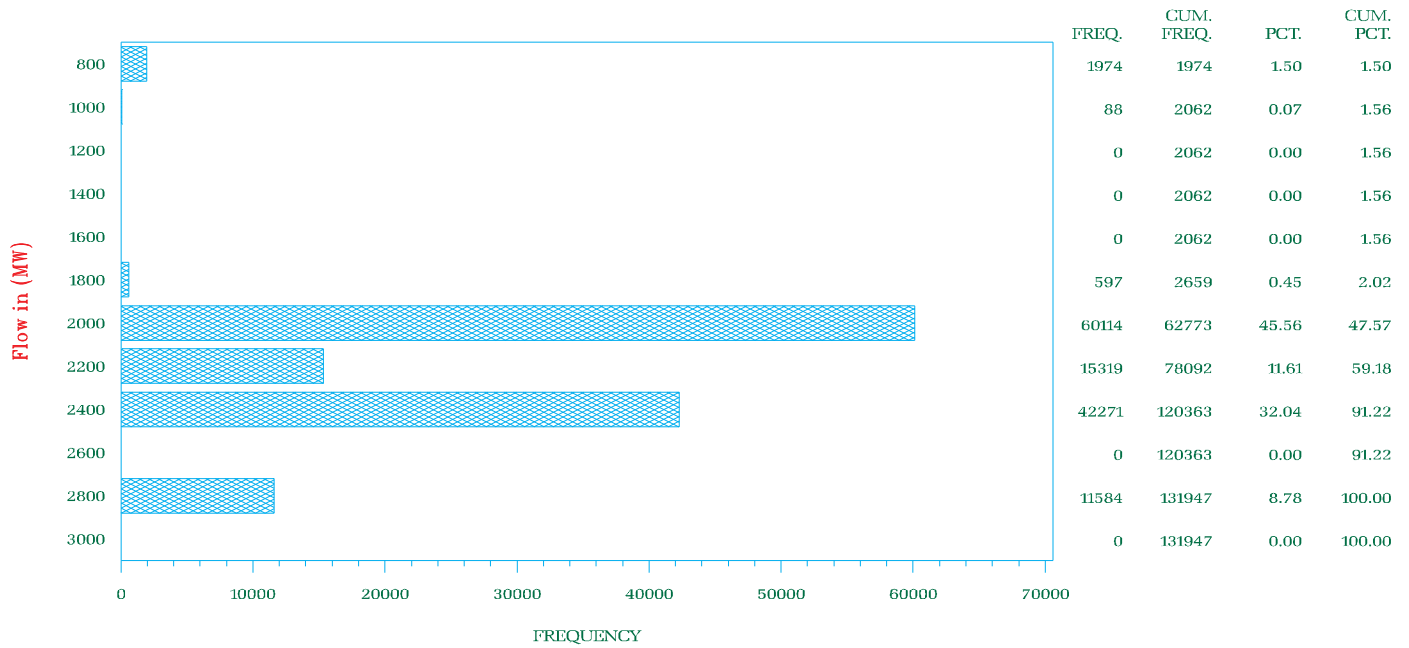
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Dunwoodie South Limit



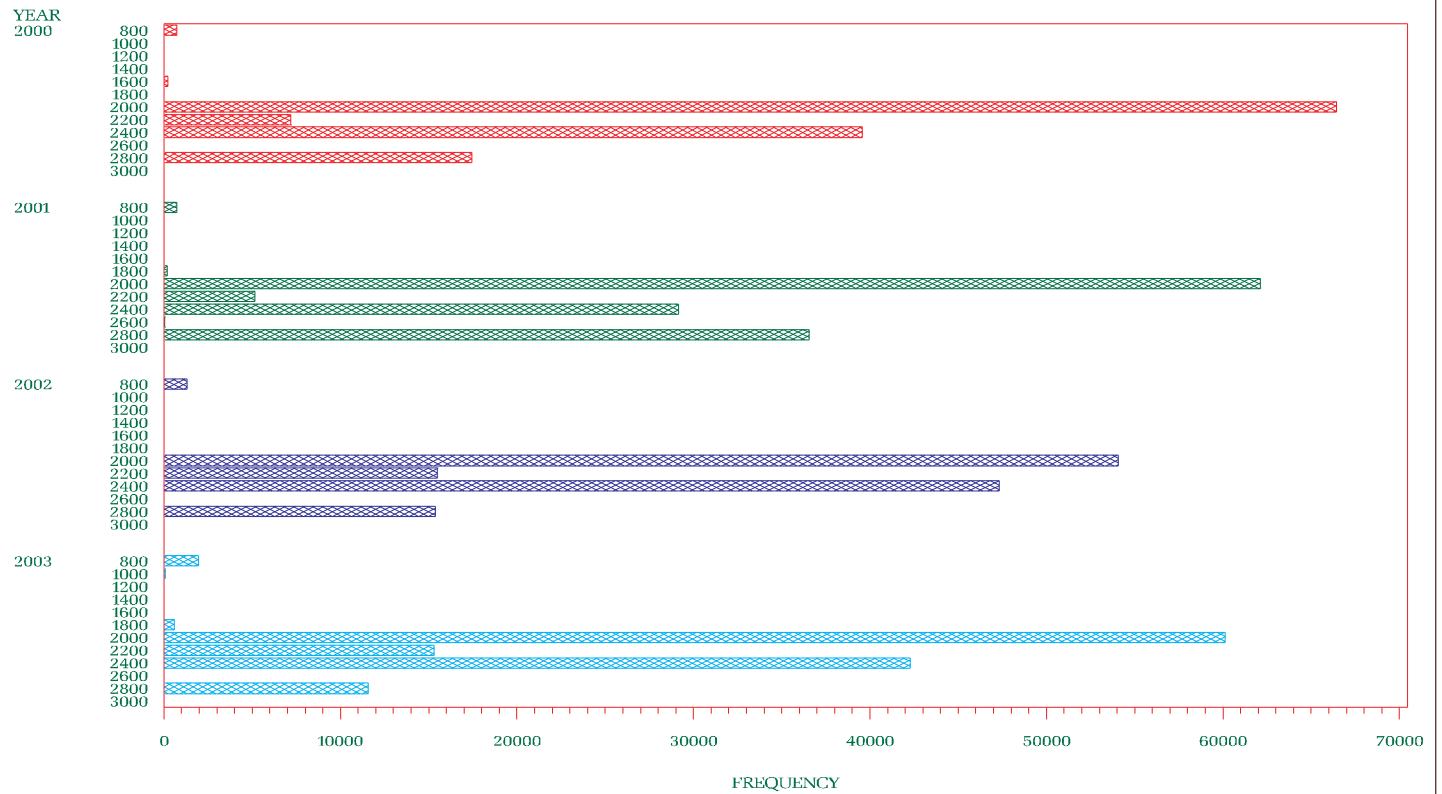
NYISO Frequency Interface Flow For January – December 2003

Moses South Limit

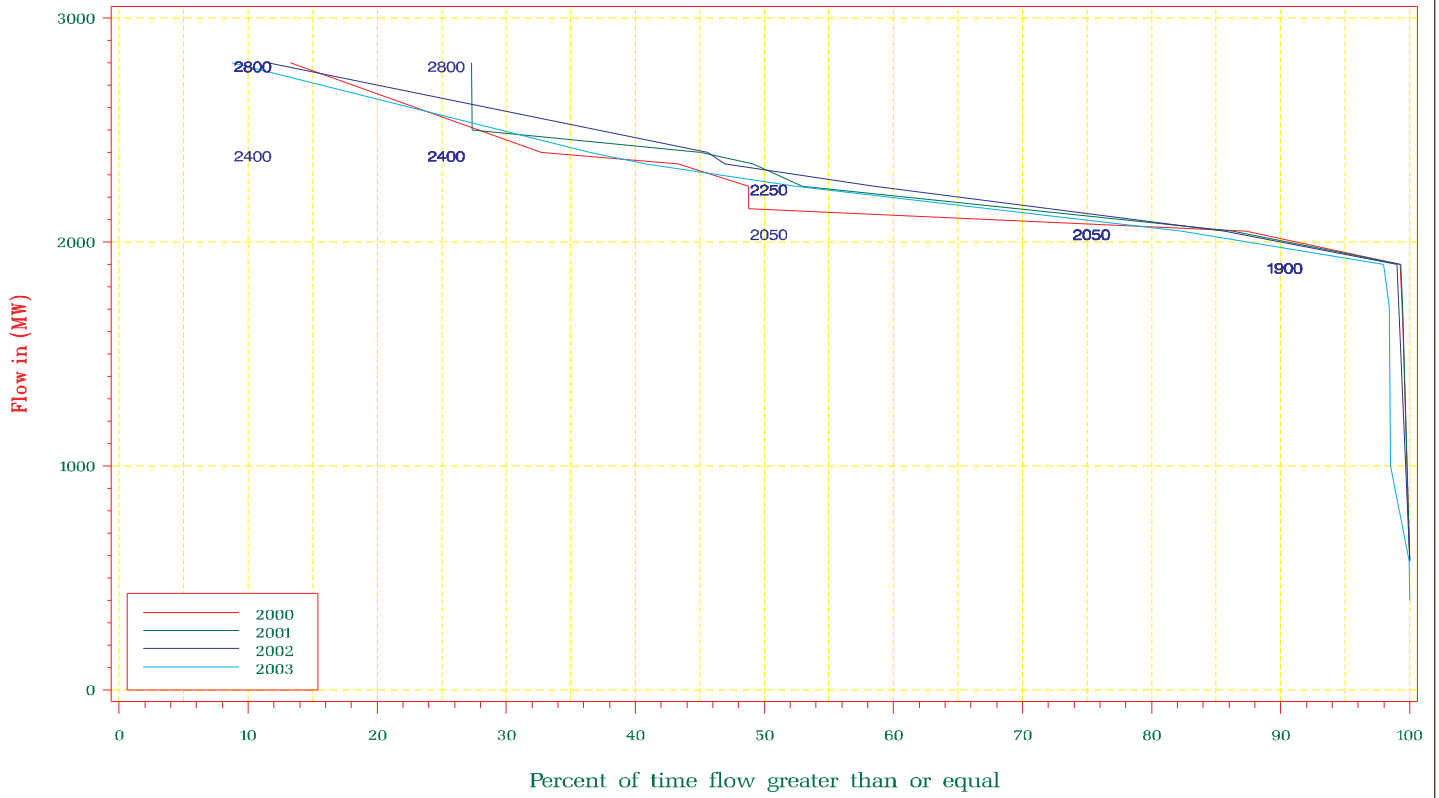


NYISO Frequency Interface Flow For January 2000 – December 2003

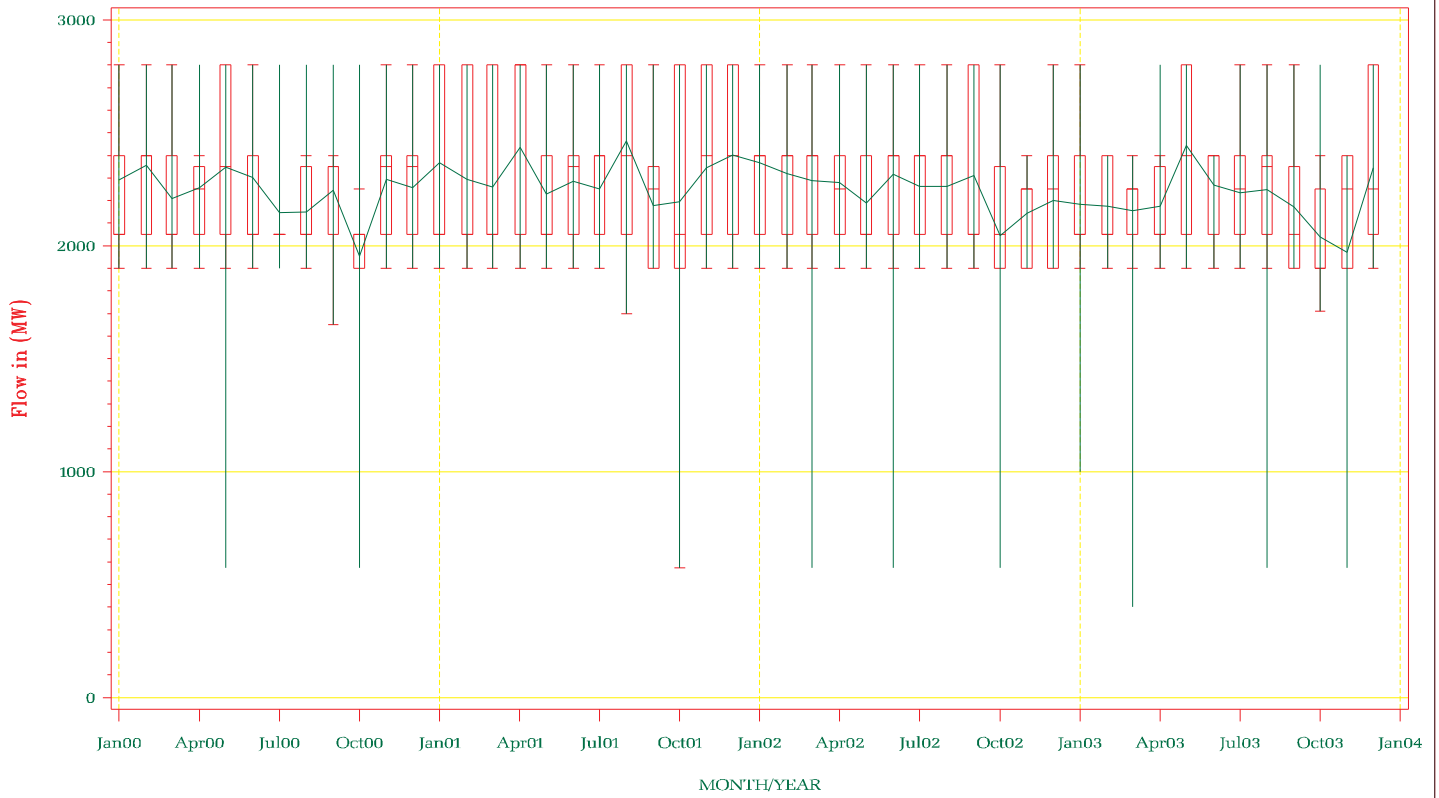
Moses South Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**Moses South Limit**

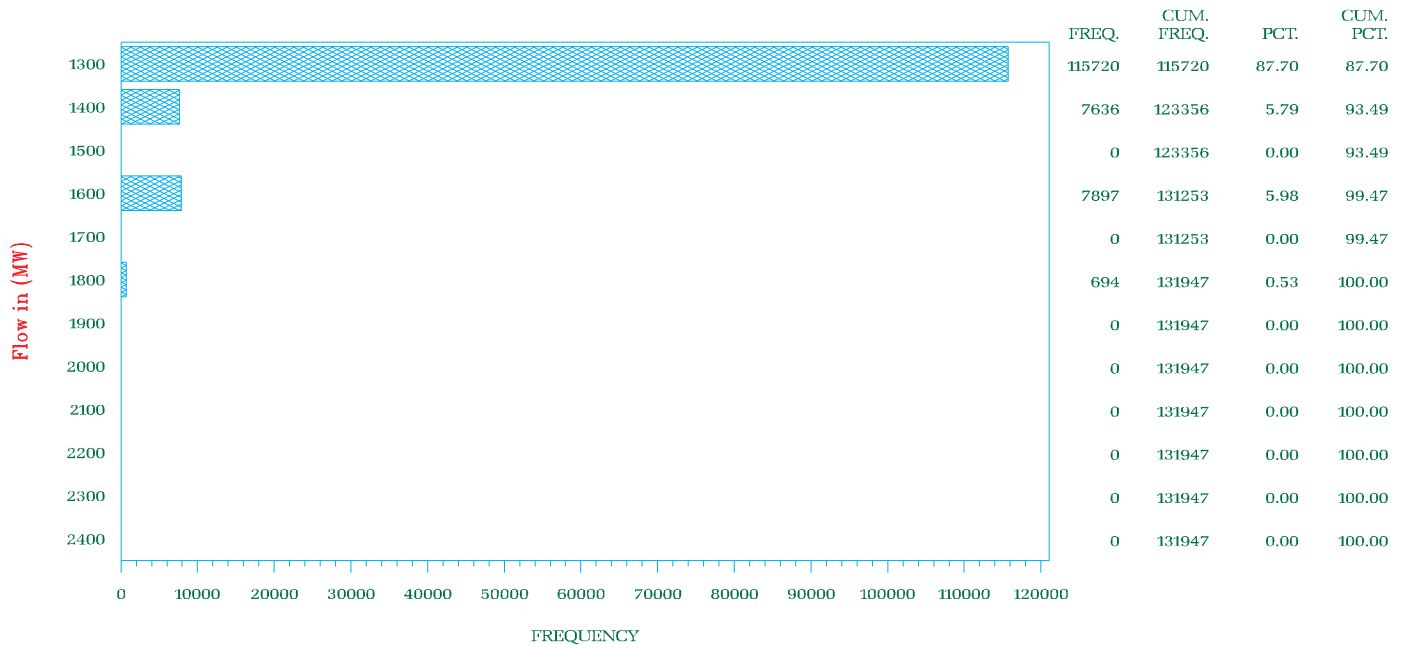


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**Moses South Limit**



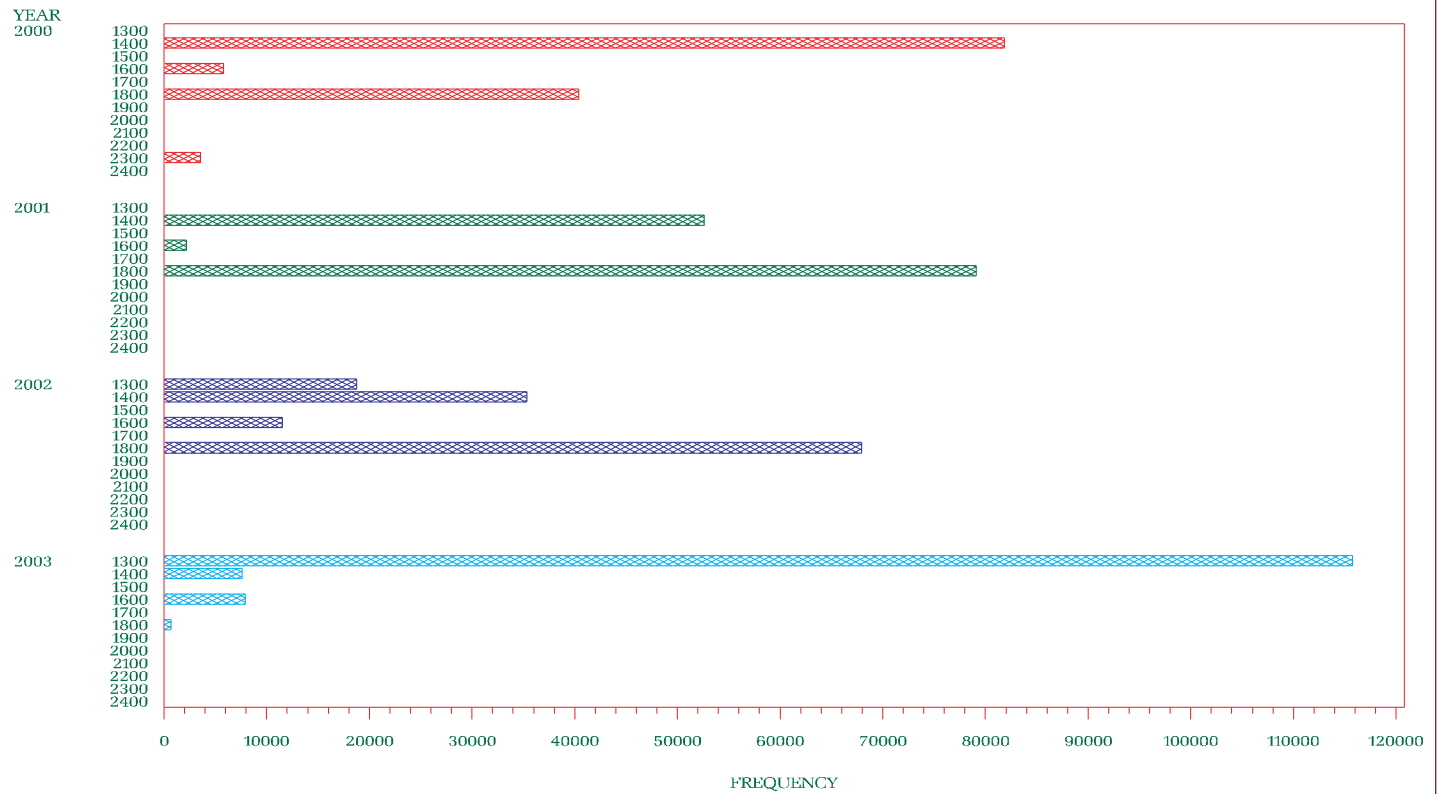
NYISO Frequency Interface Flow For January – December 2003

TE – NY Limit

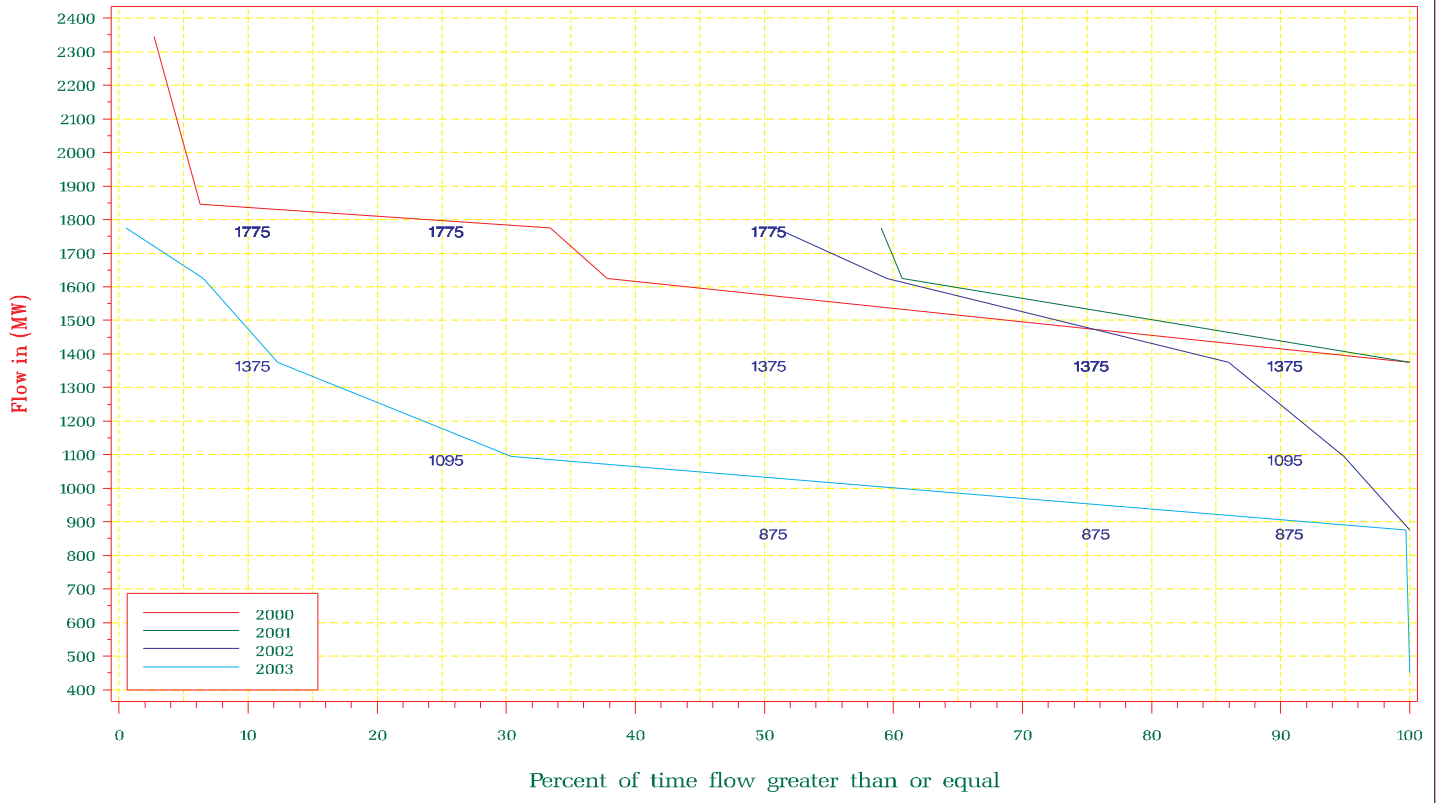


NYISO Frequency Interface Flow For January 2000 – December 2003

TE – NY Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**TE – NY Limit**

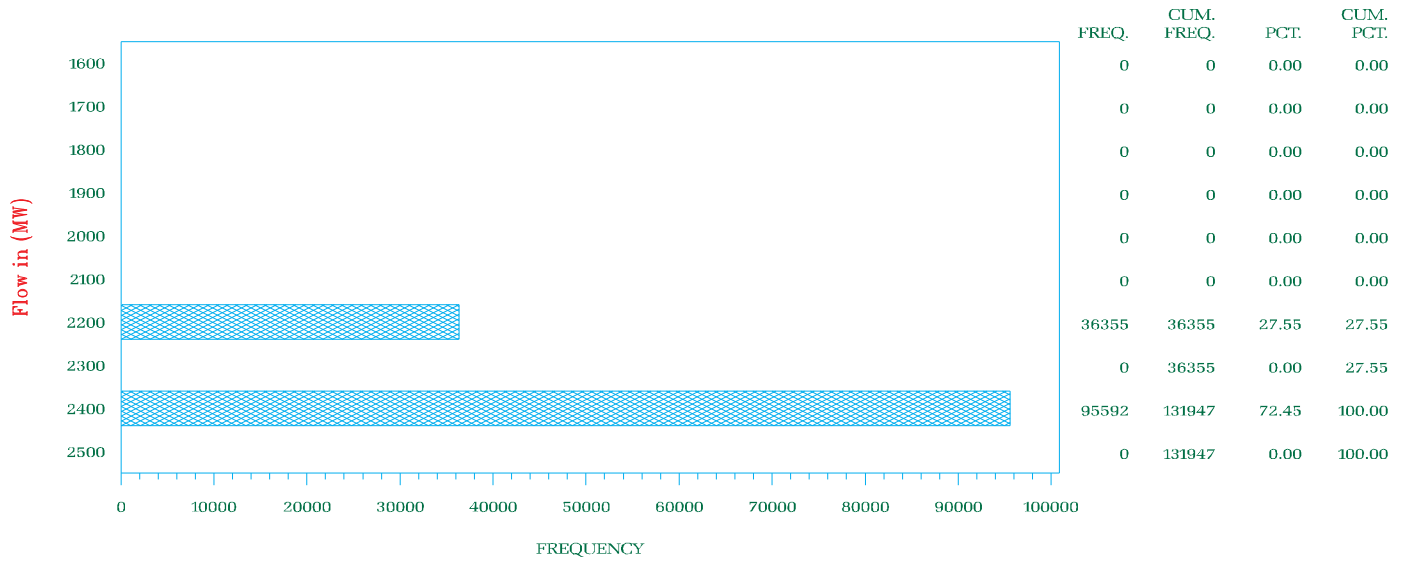


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**TE – NY Limit**



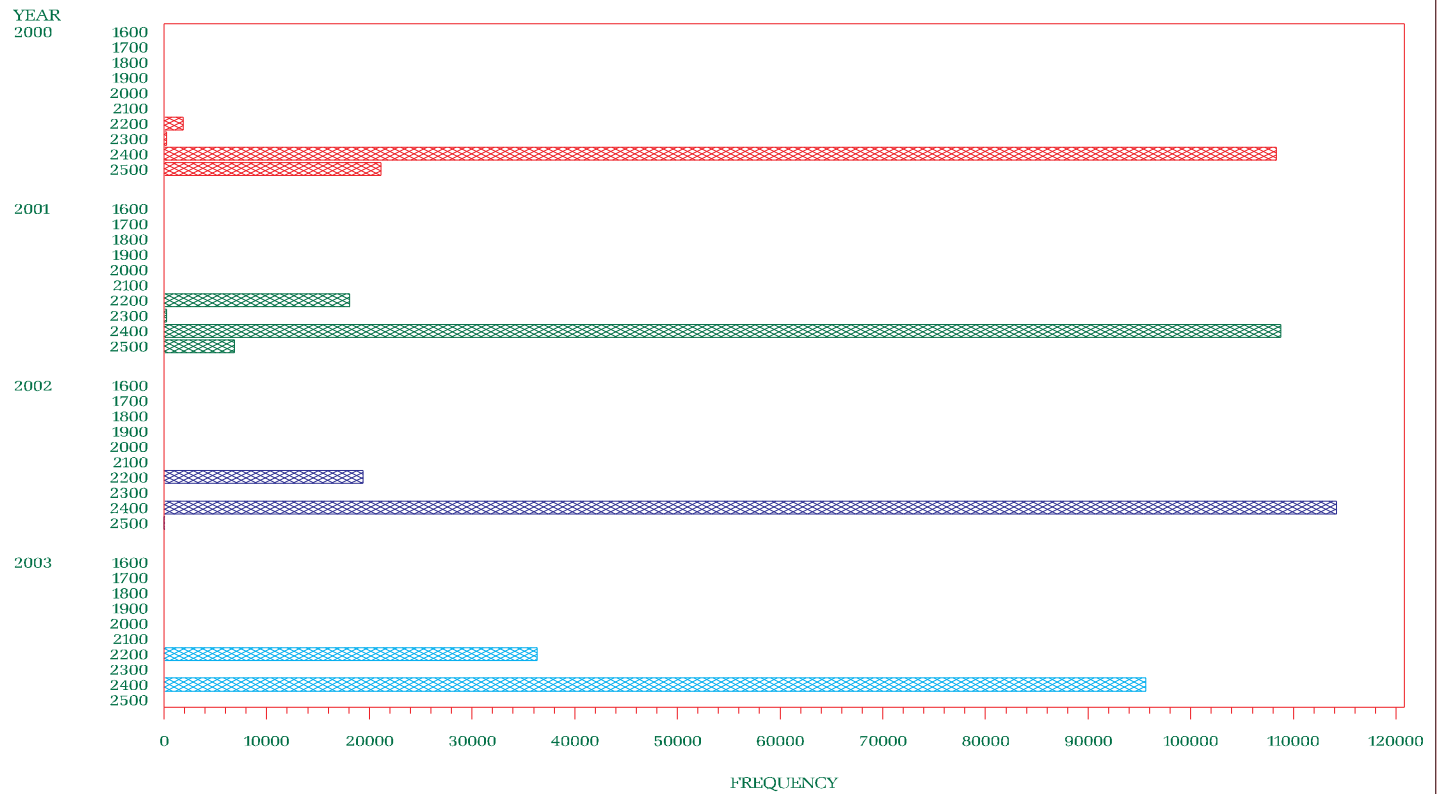
NYISO Frequency Interface Flow For January – December 2003

Ontario – NY Limit

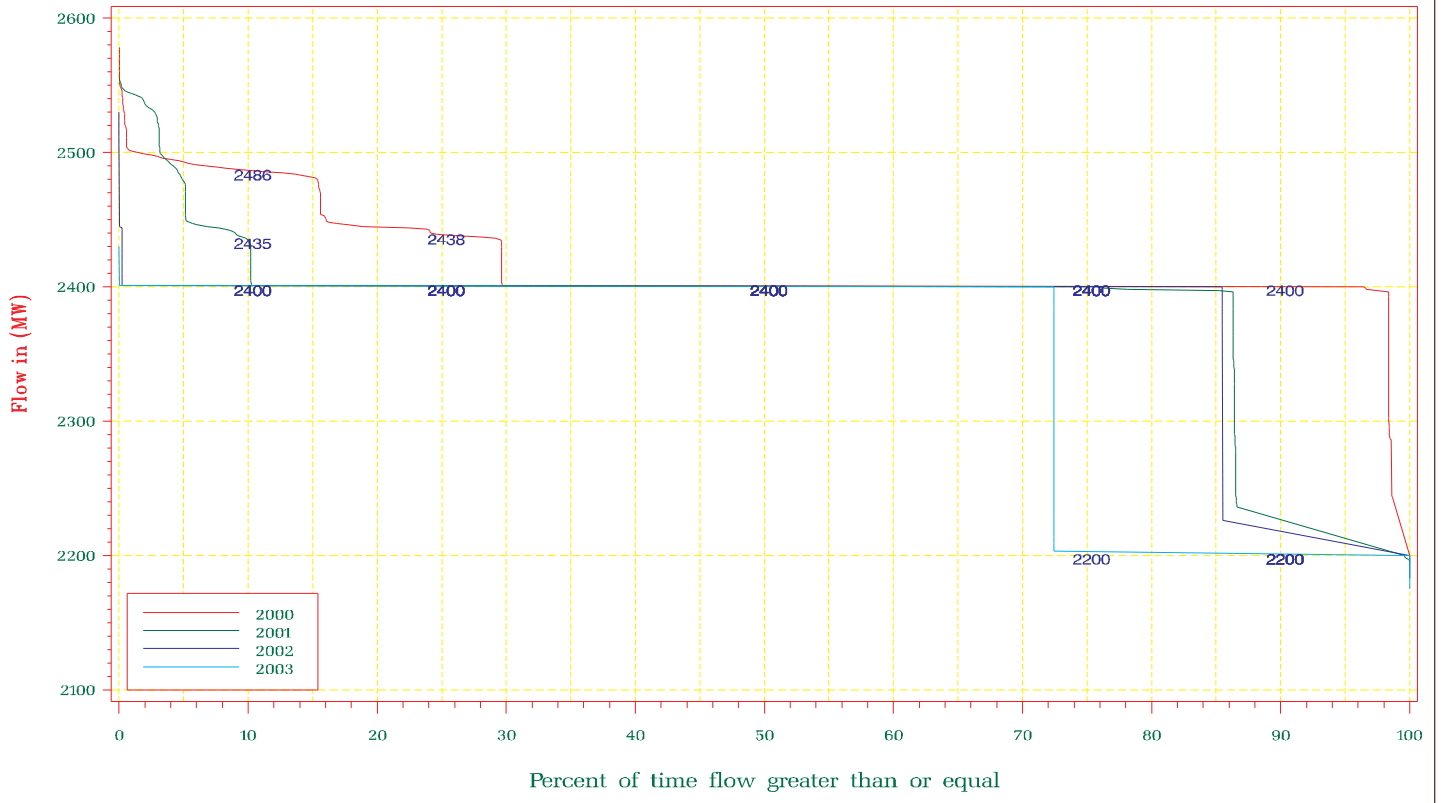


NYISO Frequency Interface Flow For January 2000 – December 2003

Ontario – NY Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**Ontario – NY Limit**

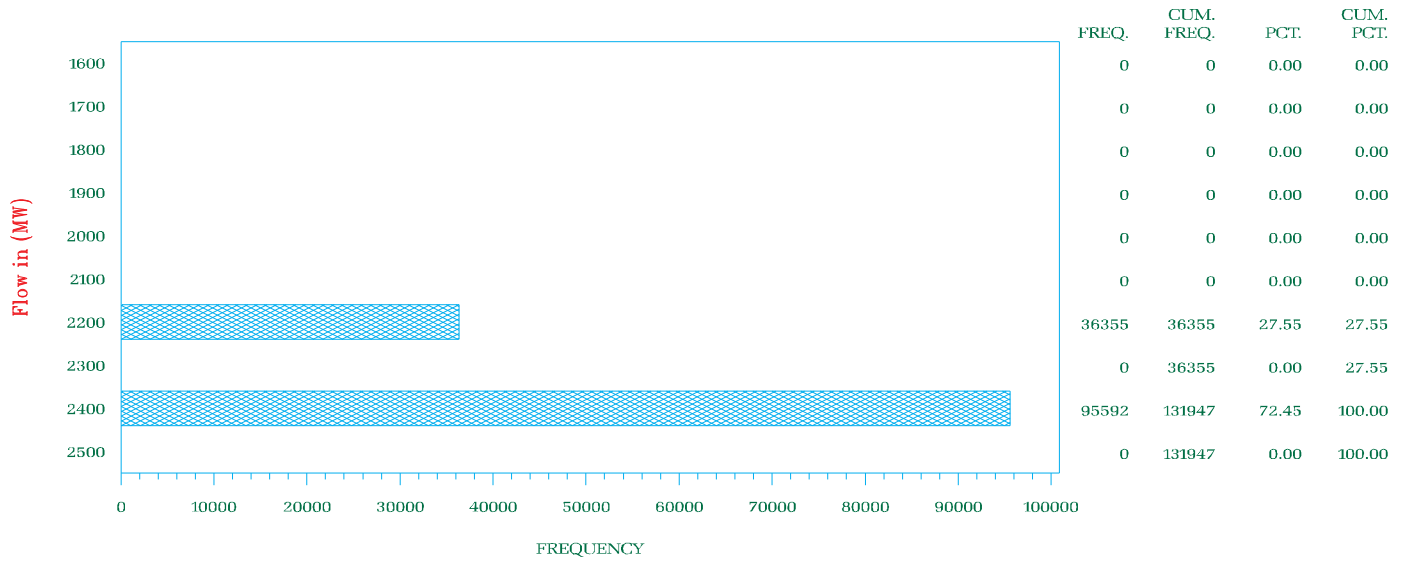


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**Ontario – NY Limit**



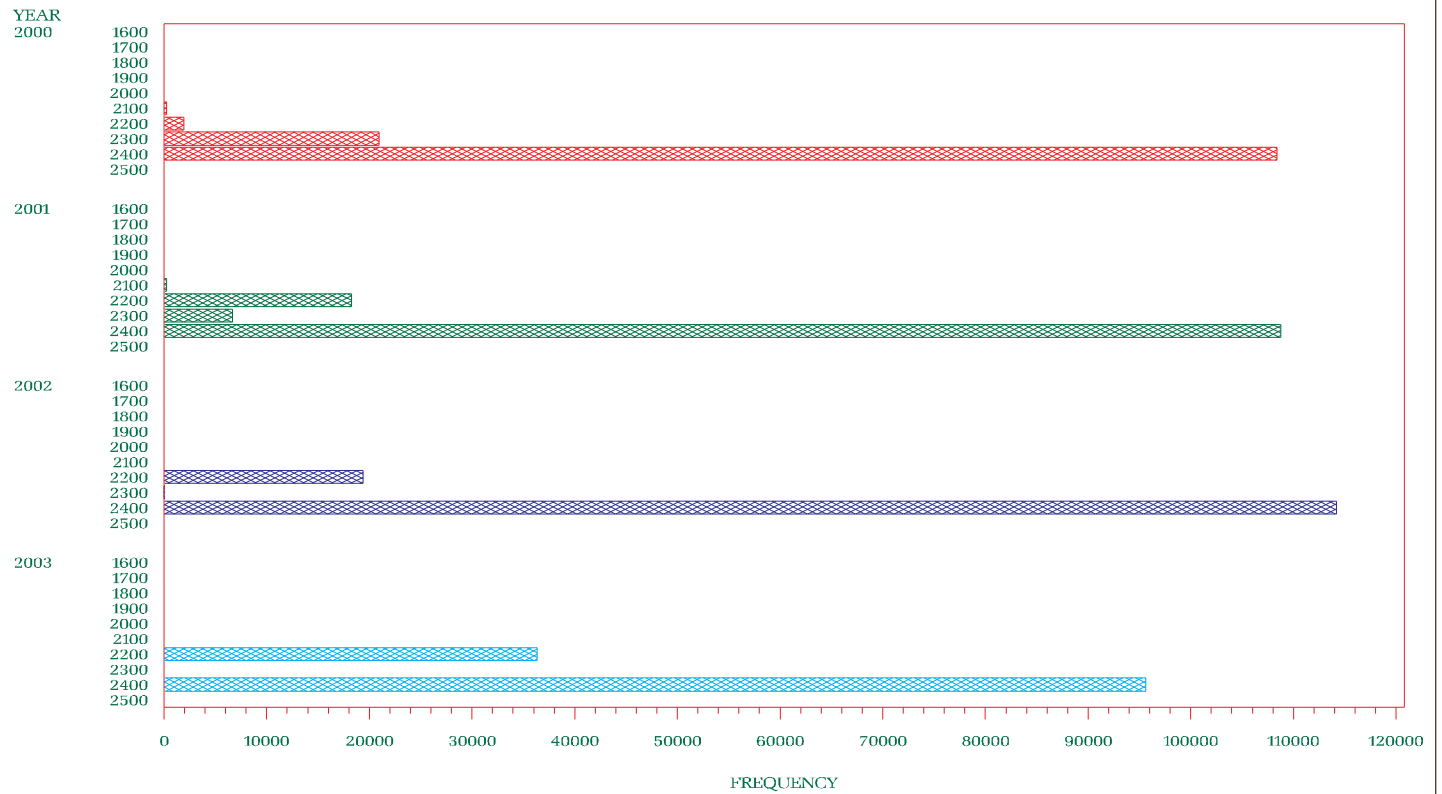
NYISO Frequency Interface Flow For January – December 2003

NY – Ontario Limit



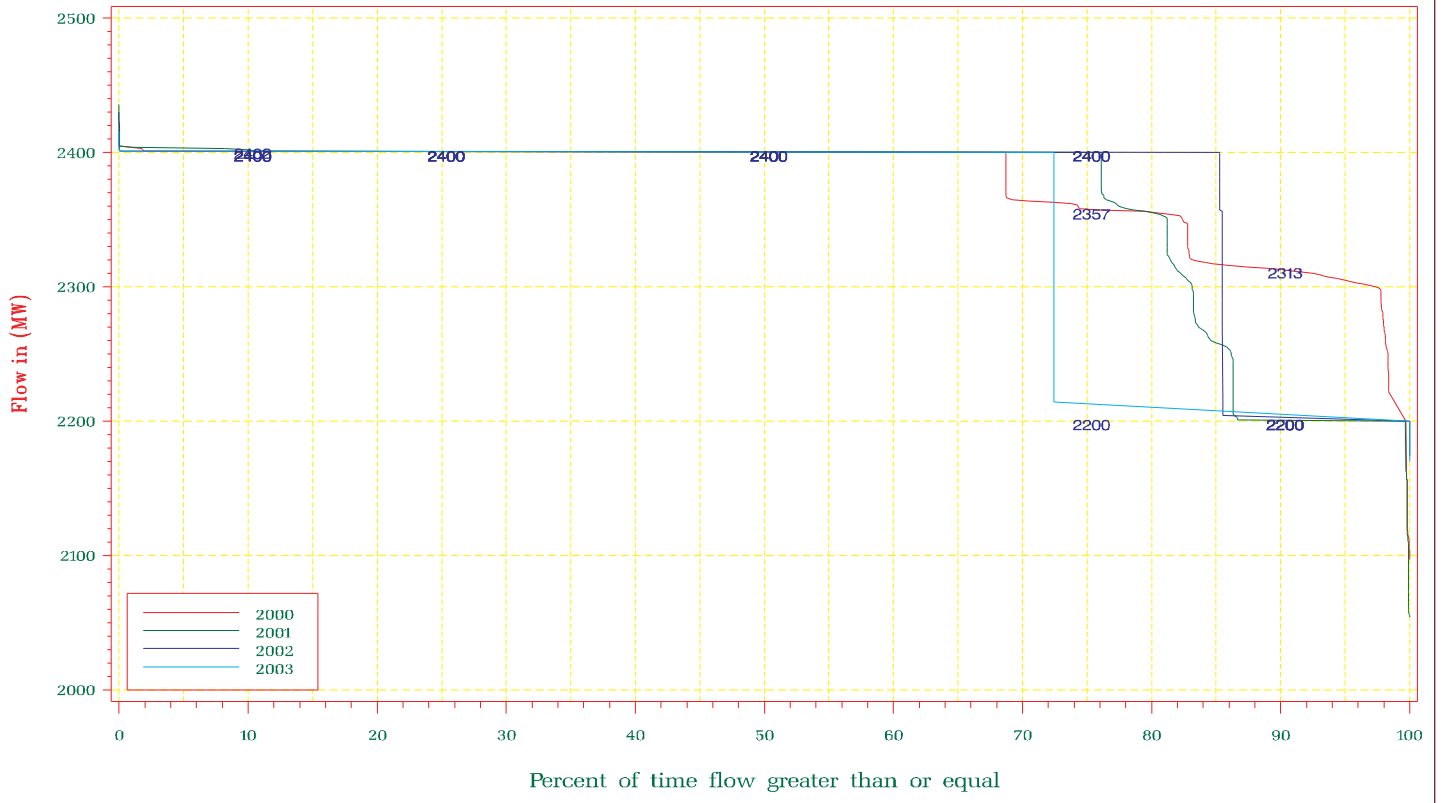
NYISO Frequency Interface Flow For January 2000 – December 2003

NY – Ontario Limit





NYISO Percent of time Interface Flow For January 2000 – December 2003  
 NY–Ontario Limit

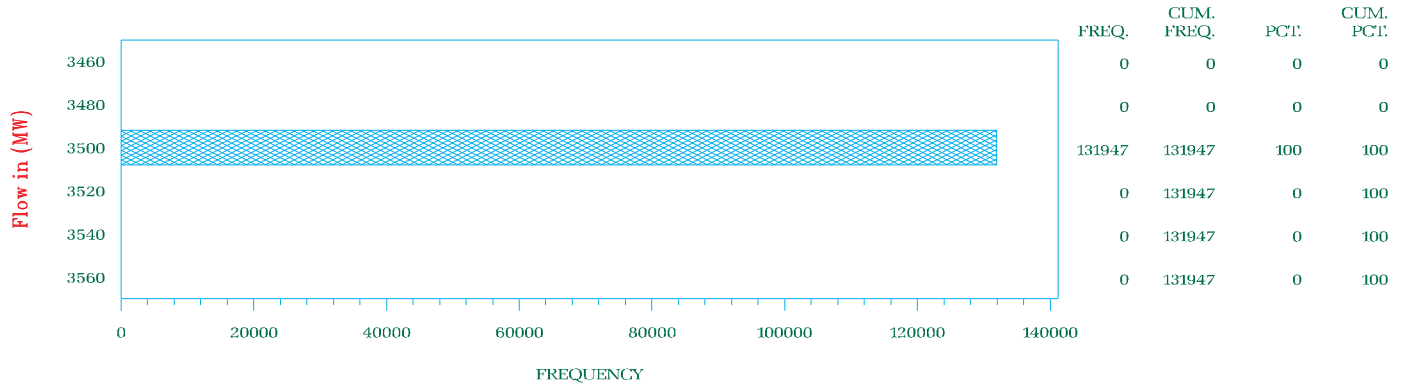


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
 NY–Ontario Limit



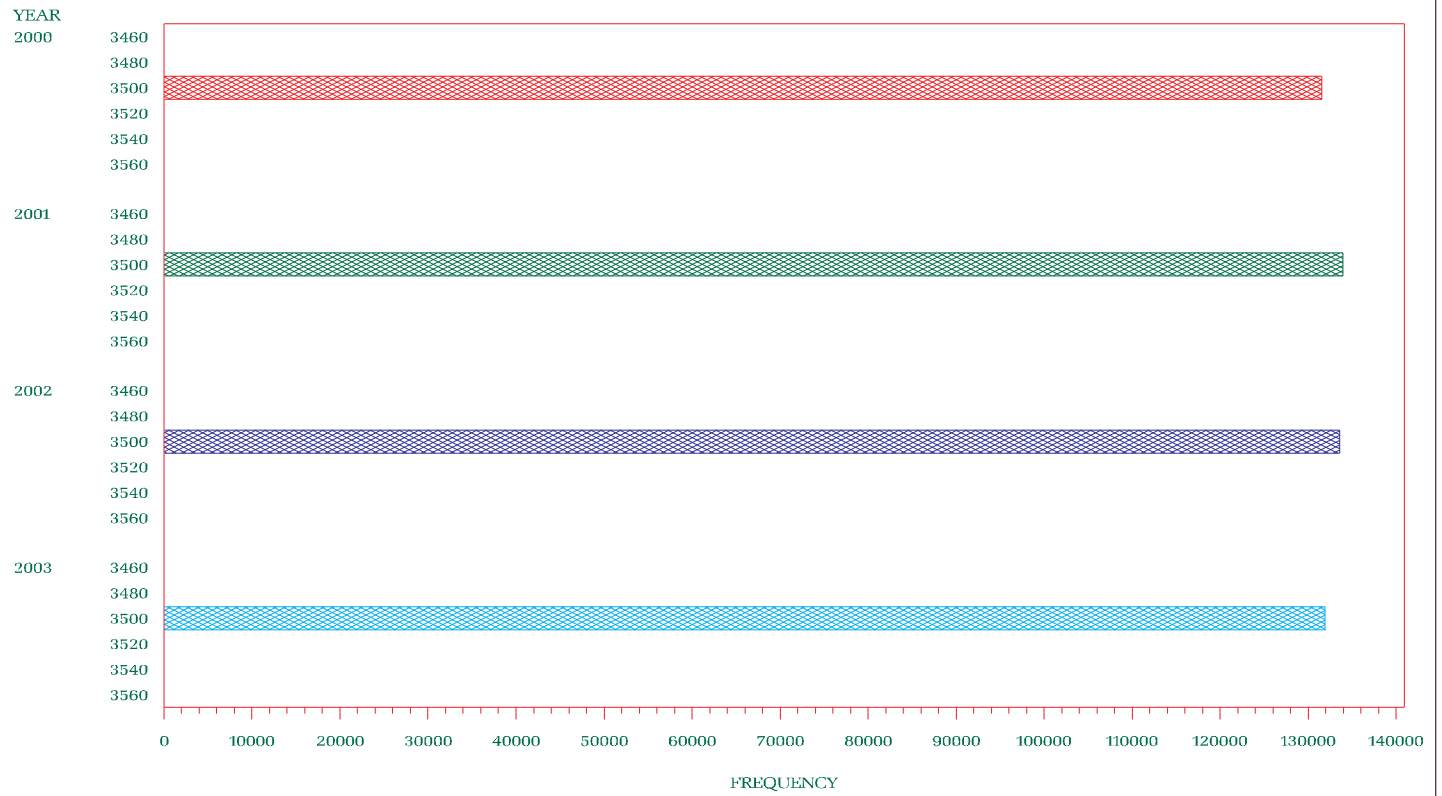
NYISO Frequency Interface Flow For January – December 2003

PJM – NY Limit



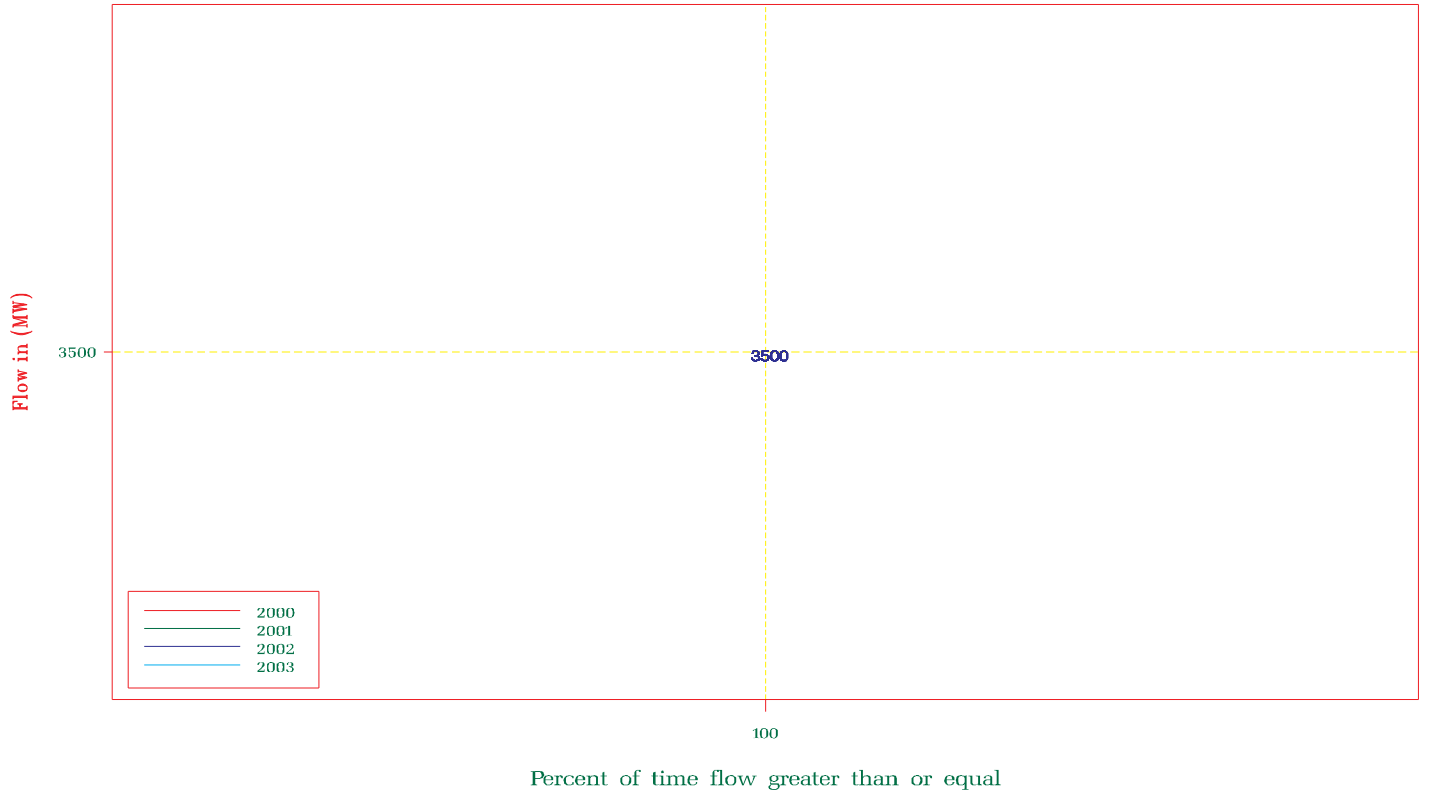
NYISO Frequency Interface Flow For January 2000 – December 2003

PJM – NY Limit



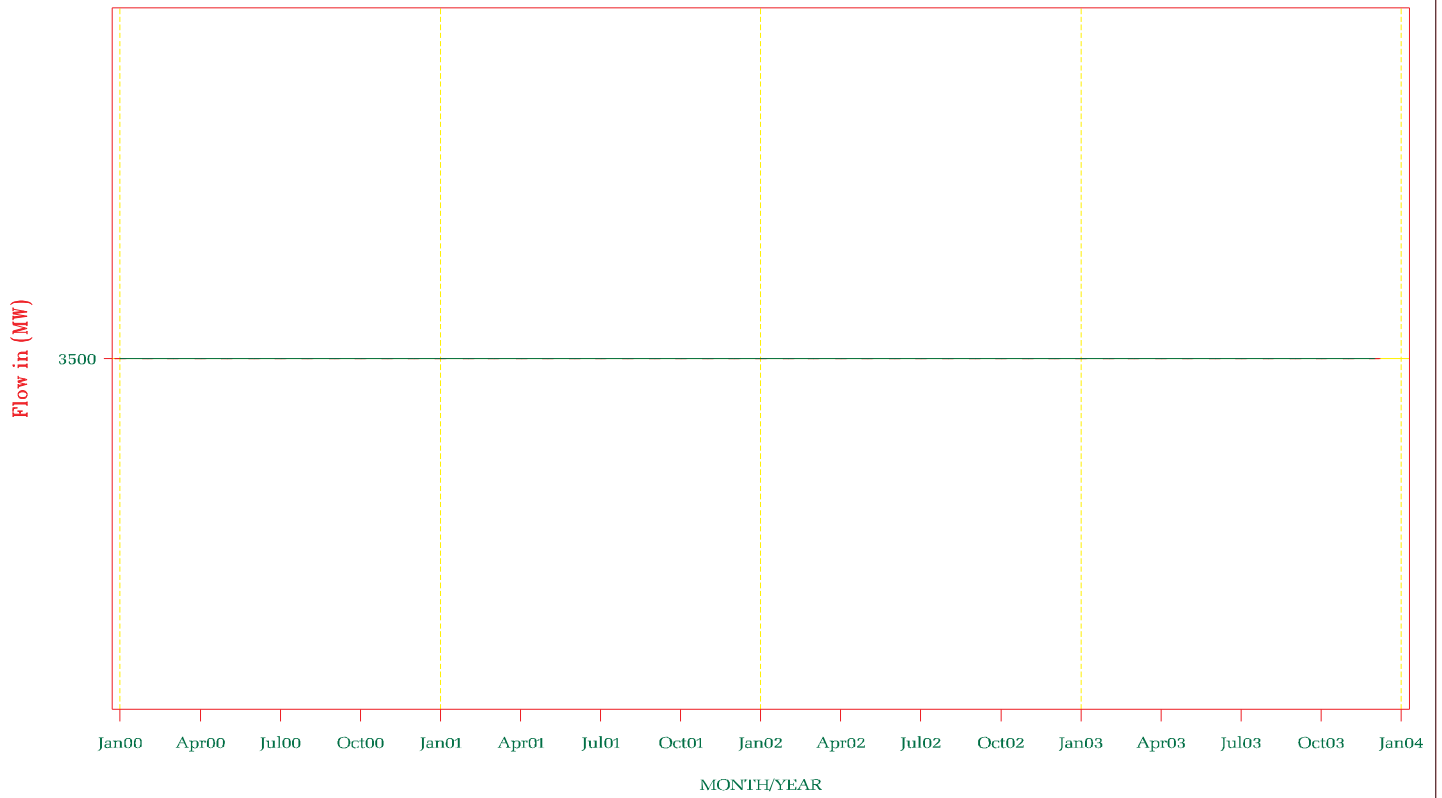
NYISO Percent of time Interface Flow For January 2000 – December 2003

PJM – NY Limit



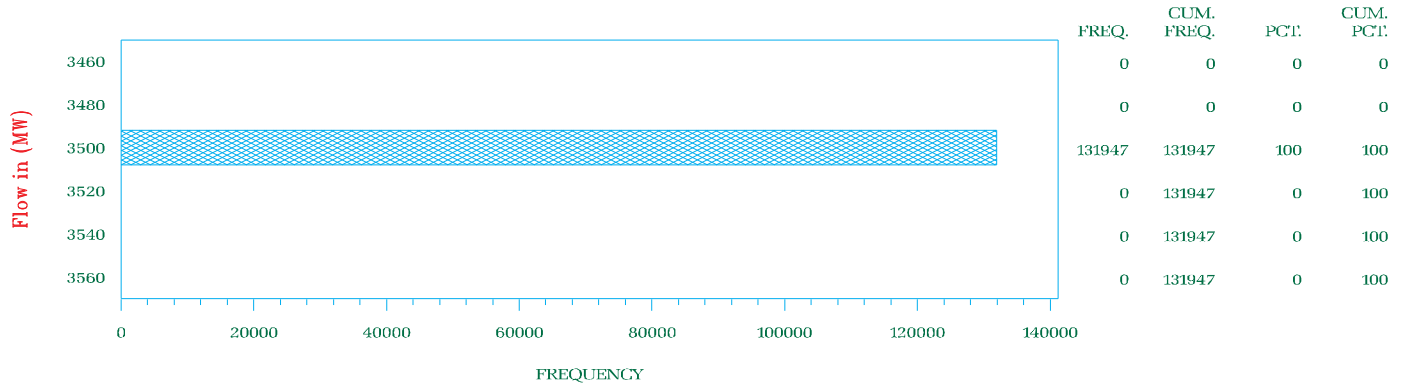
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

PJM – NY Limit



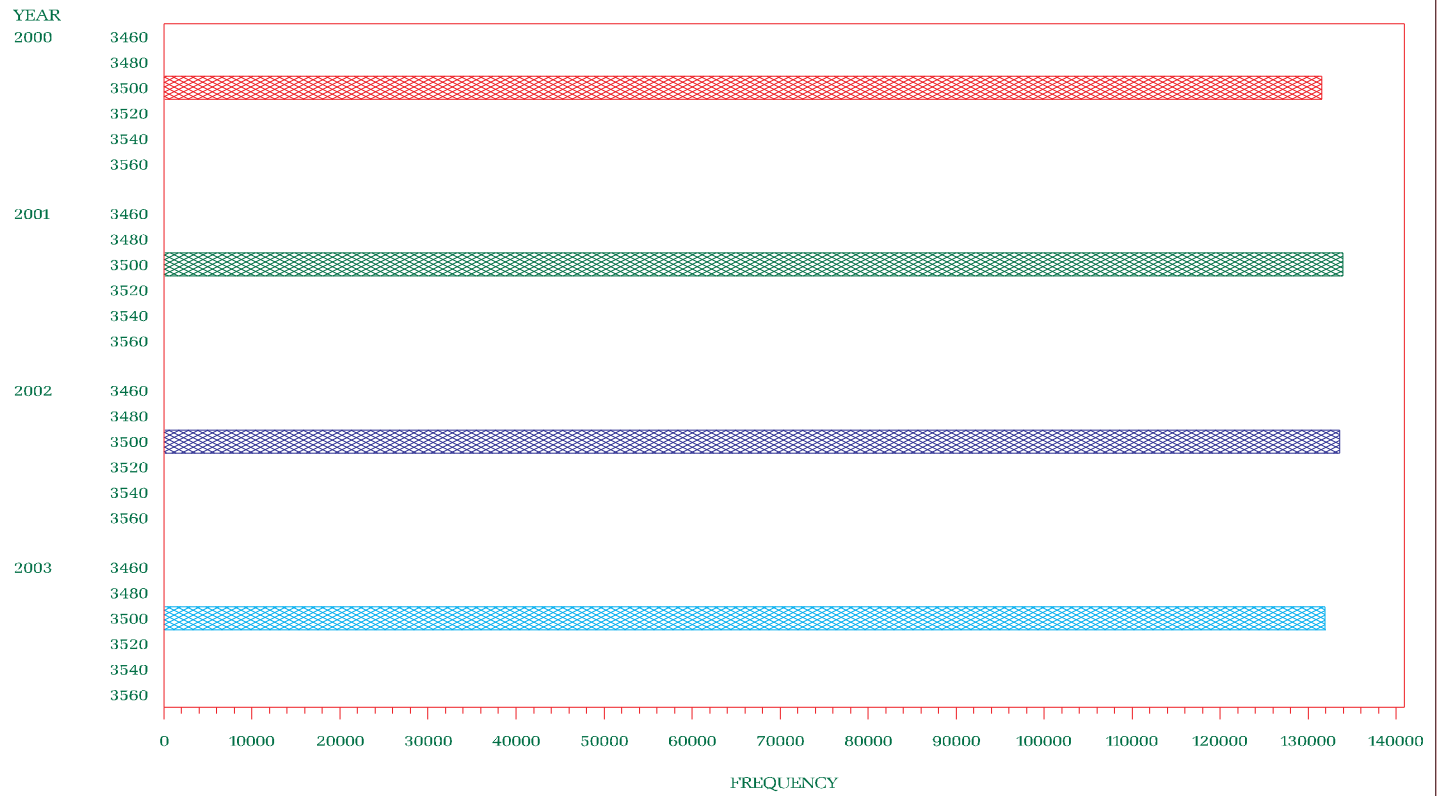
NYISO Frequency Interface Flow For January – December 2003

NY – PJM Limit



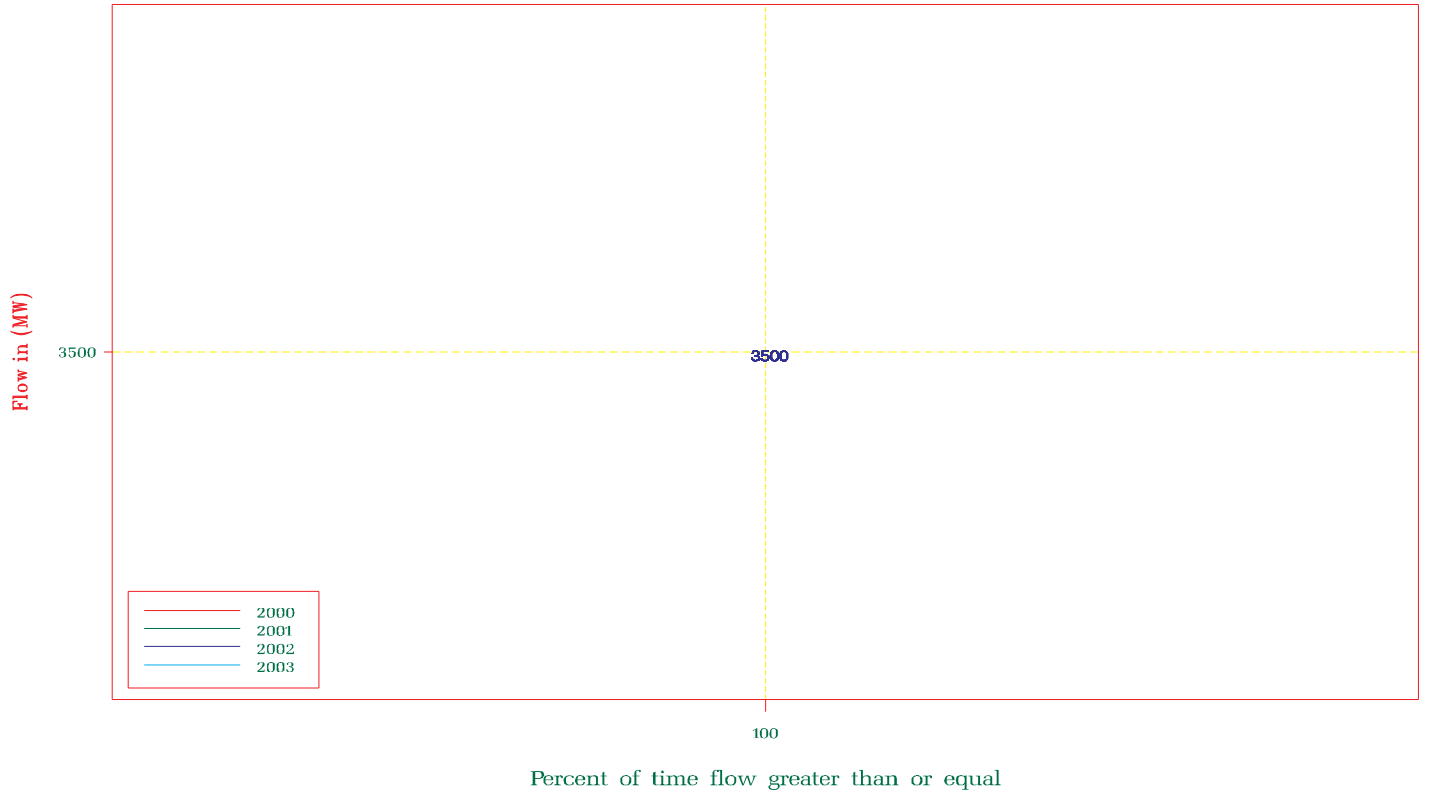
NYISO Frequency Interface Flow For January 2000 – December 2003

NY – PJM Limit



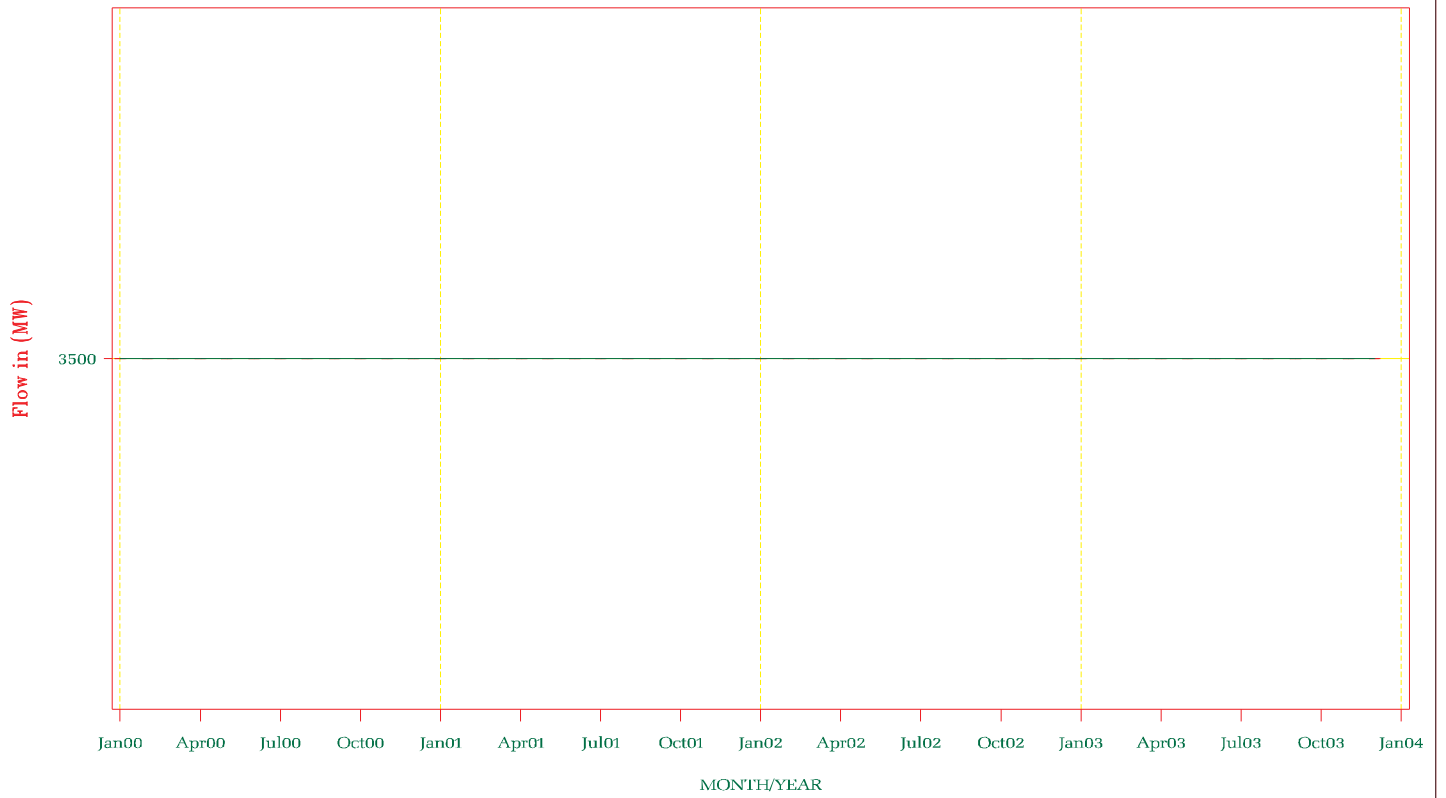
NYISO Percent of time Interface Flow For January 2000 – December 2003

NY – PJM Limit



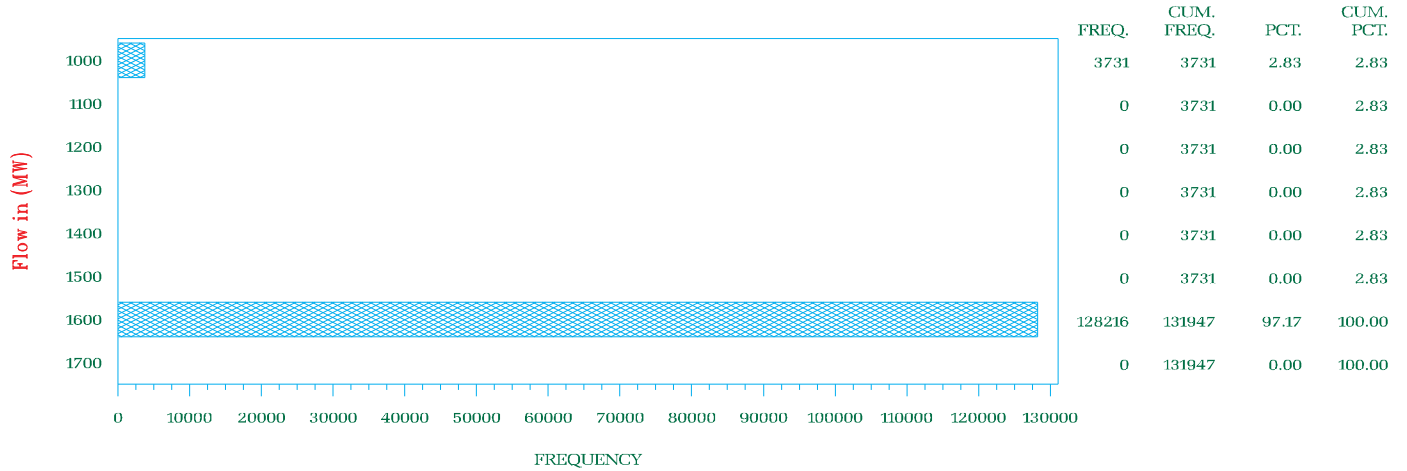
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

NY – PJM Limit



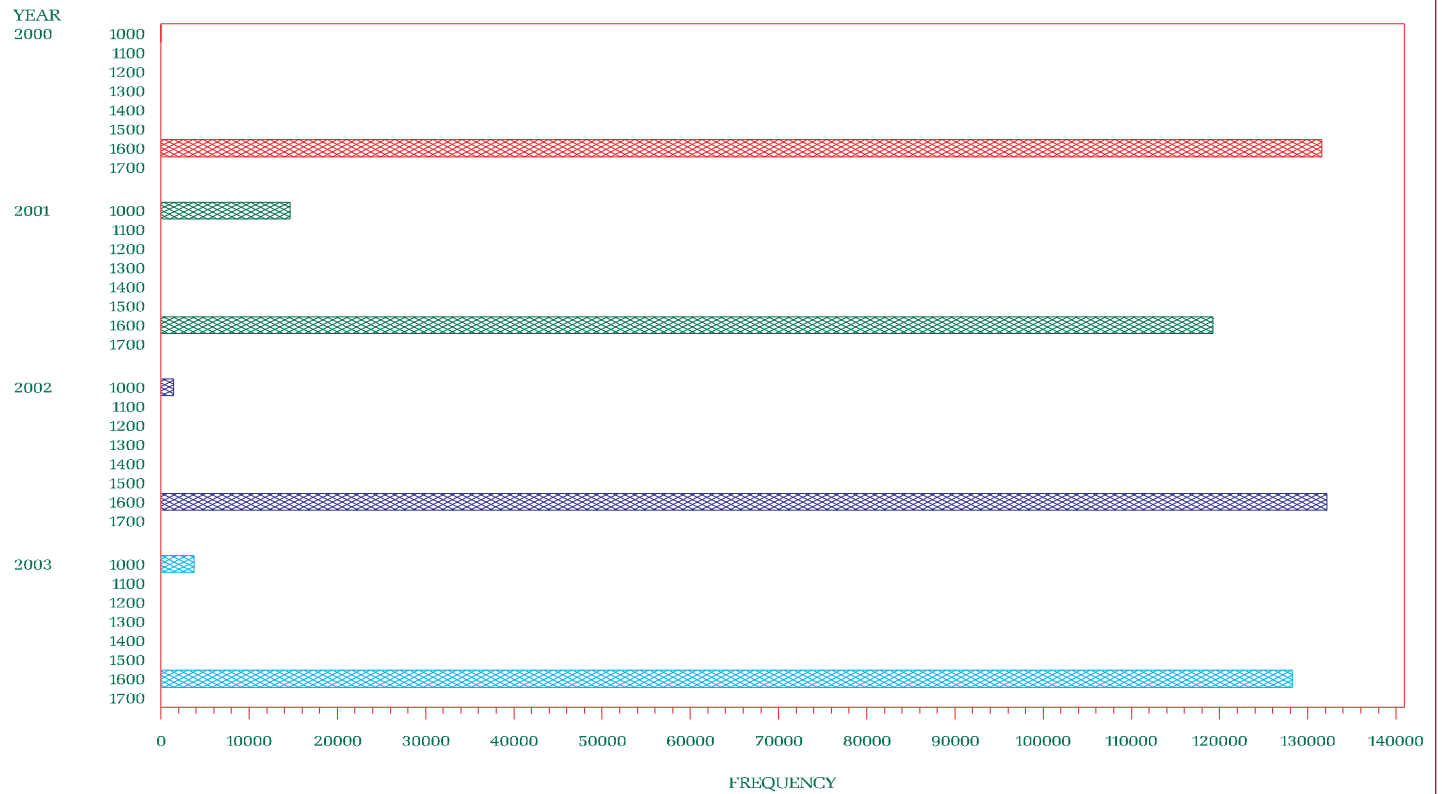
NYISO Frequency Interface Flow For January – December 2003

NE – NY Limit

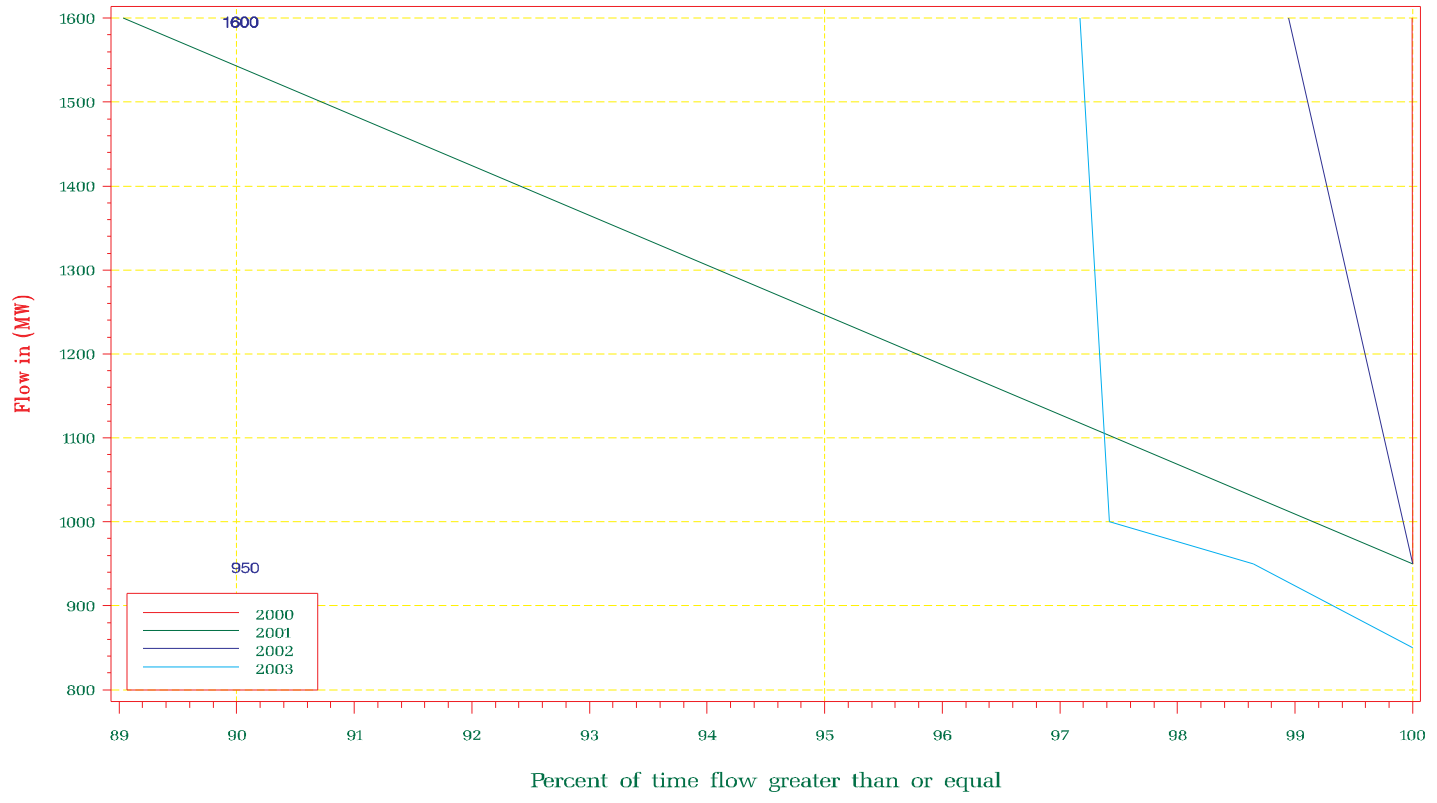


NYISO Frequency Interface Flow For January 2000 – December 2003

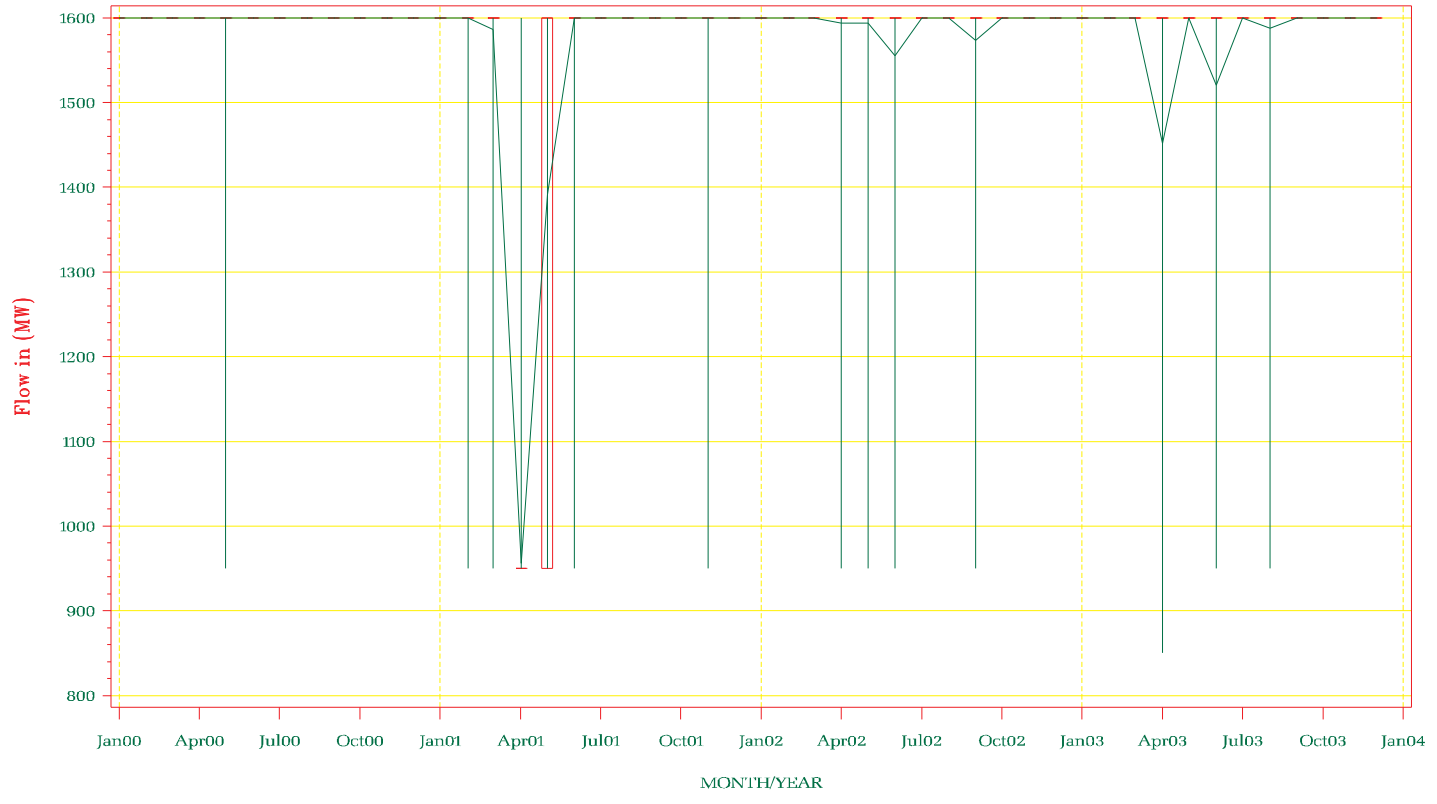
NE – NY Limit



NYISO Percent of time Interface Flow For January 2000 – December 2003  
**NE – NY Limit**

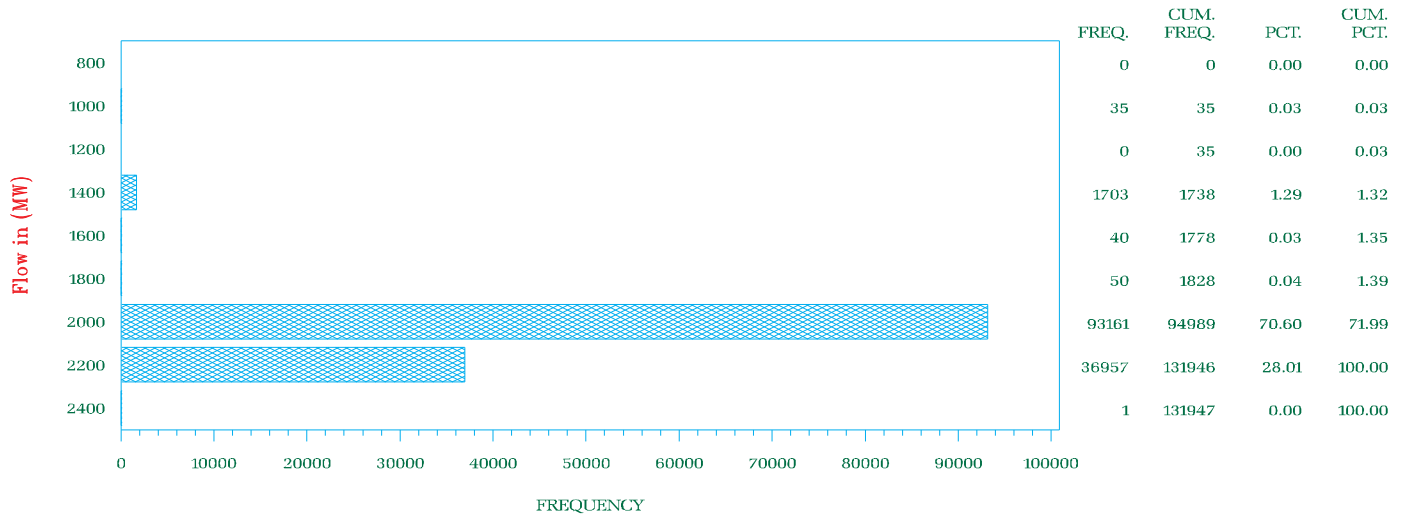


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
**NE – NY Limit**



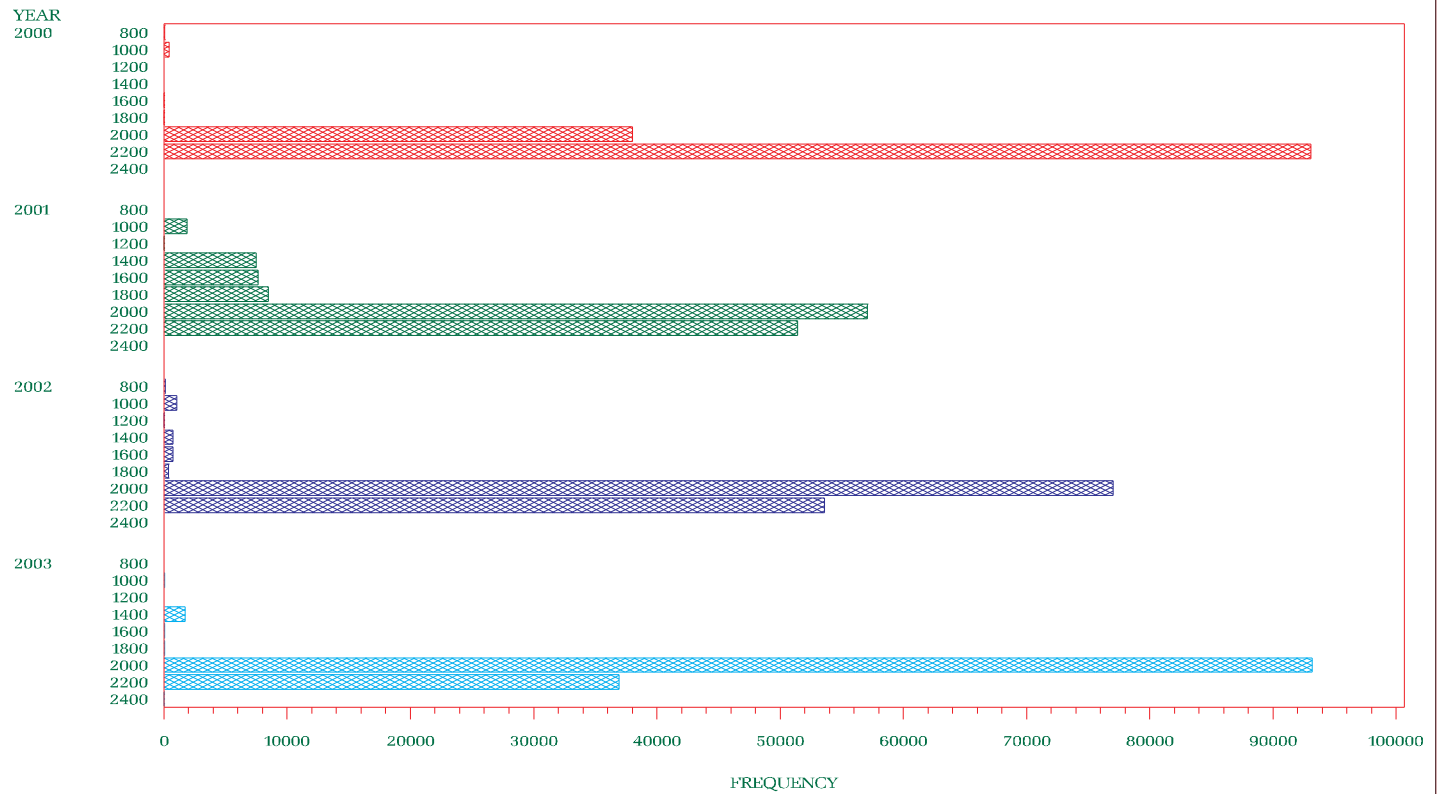
NYISO Frequency Interface Flow For January – December 2003

NY – NE Limit



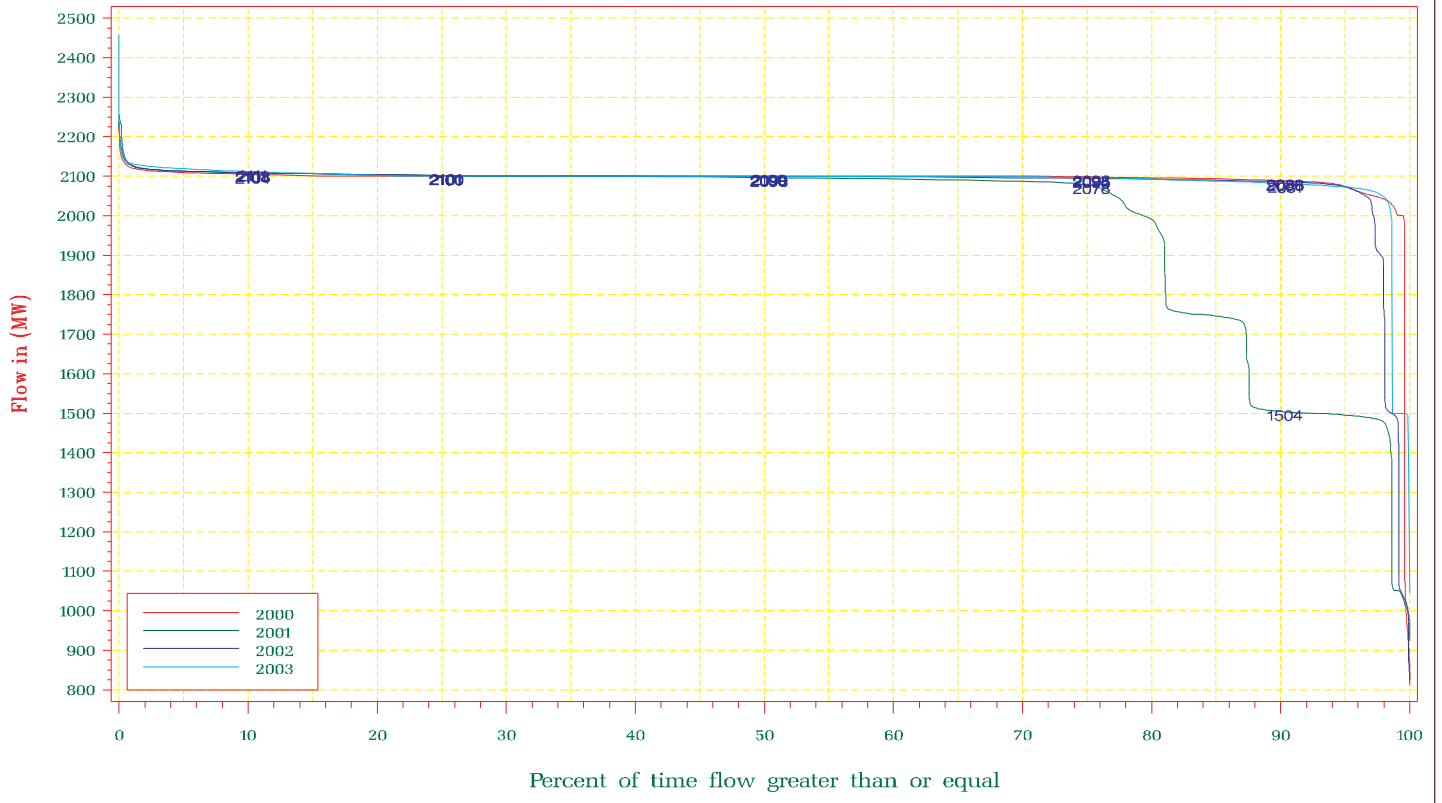
NYISO Frequency Interface Flow For January 2000 – December 2003

NY – NE Limit

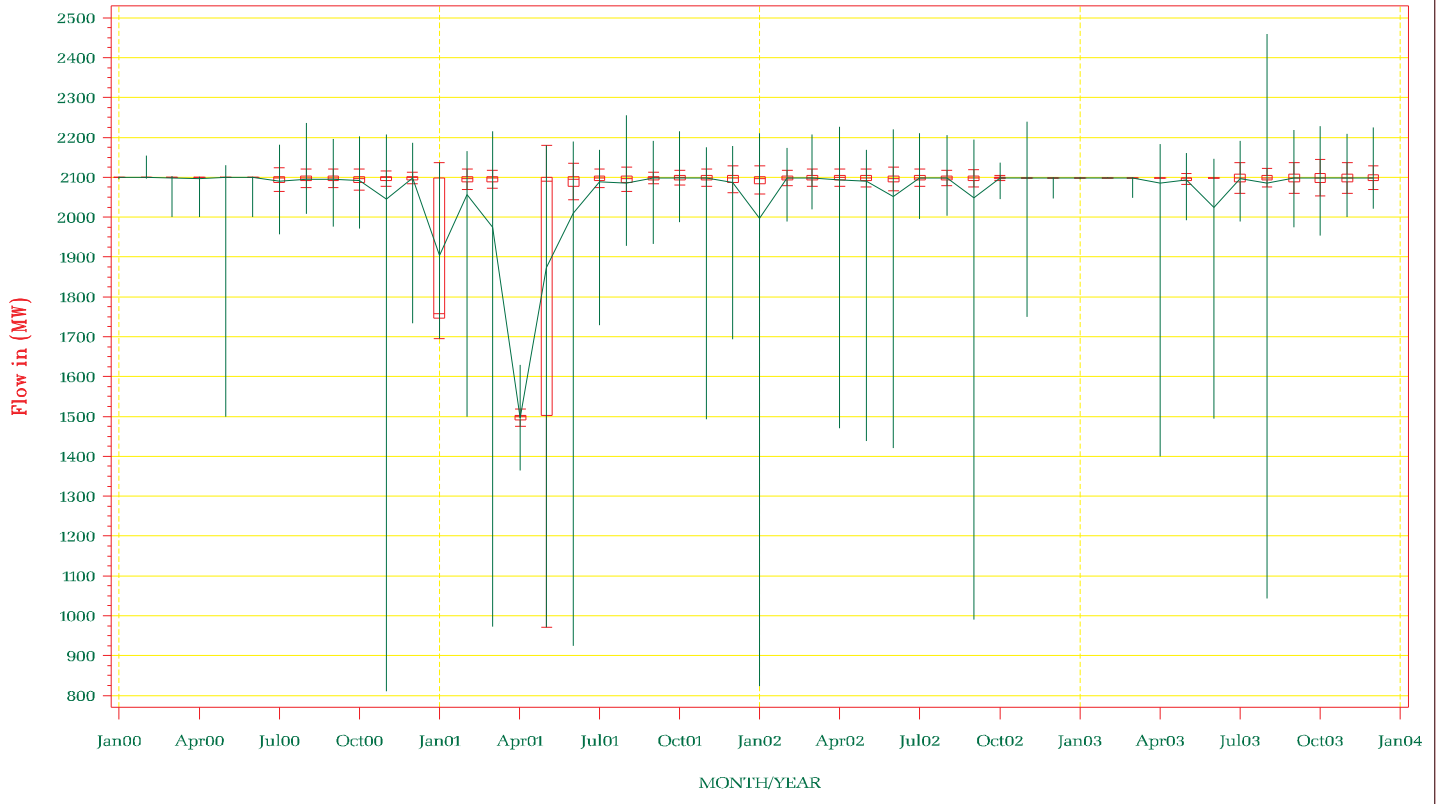




NYISO Percent of time Interface Flow For January 2000 – December 2003  
 NY – NE Limit

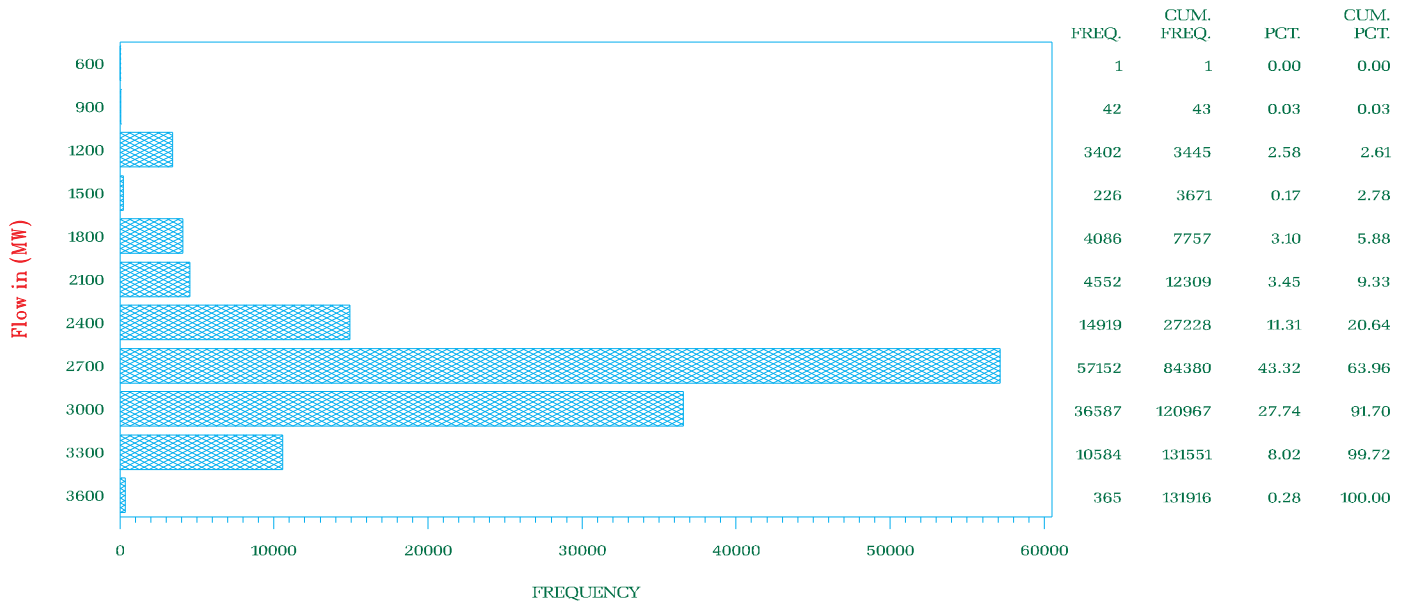


NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003  
 NY – NE Limit



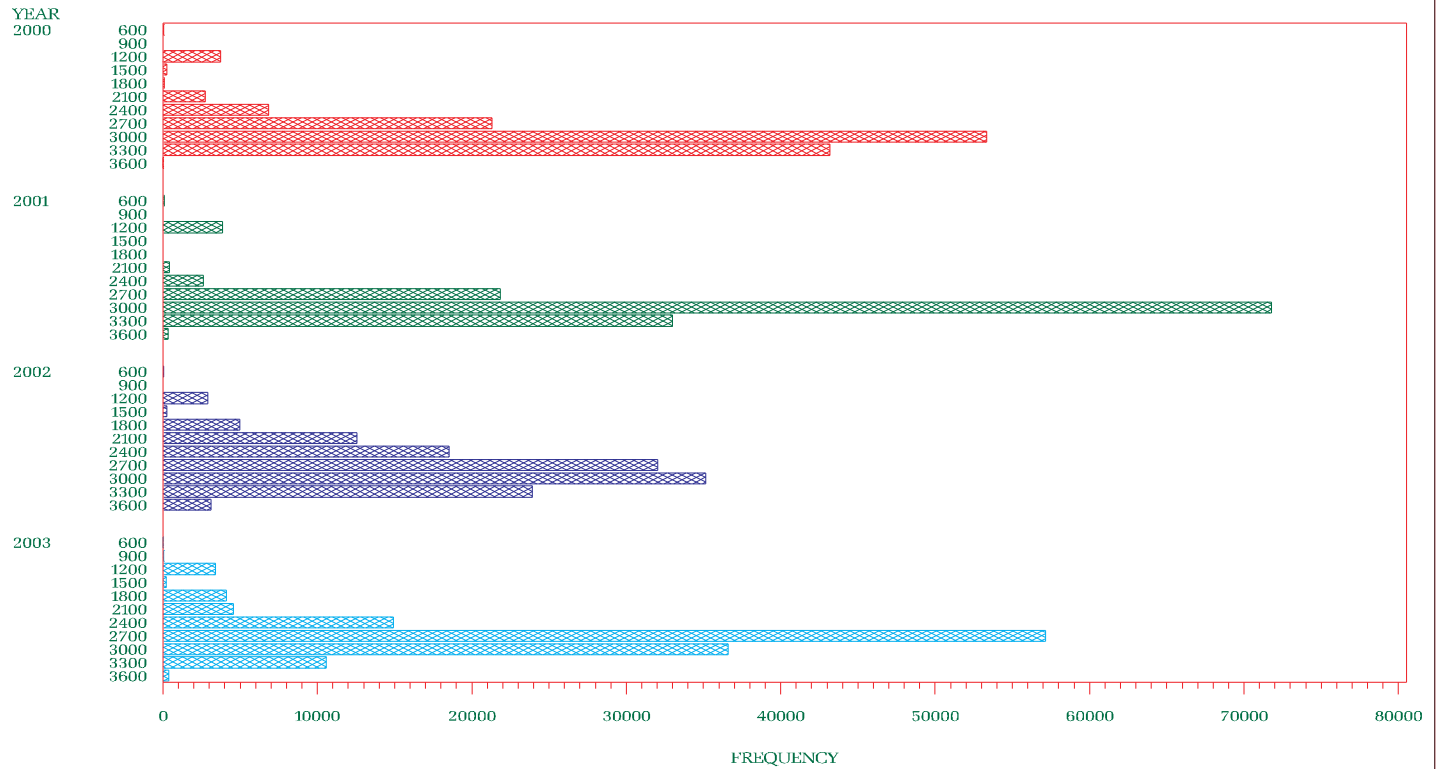
NYISO Frequency Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
I/o New England Generation



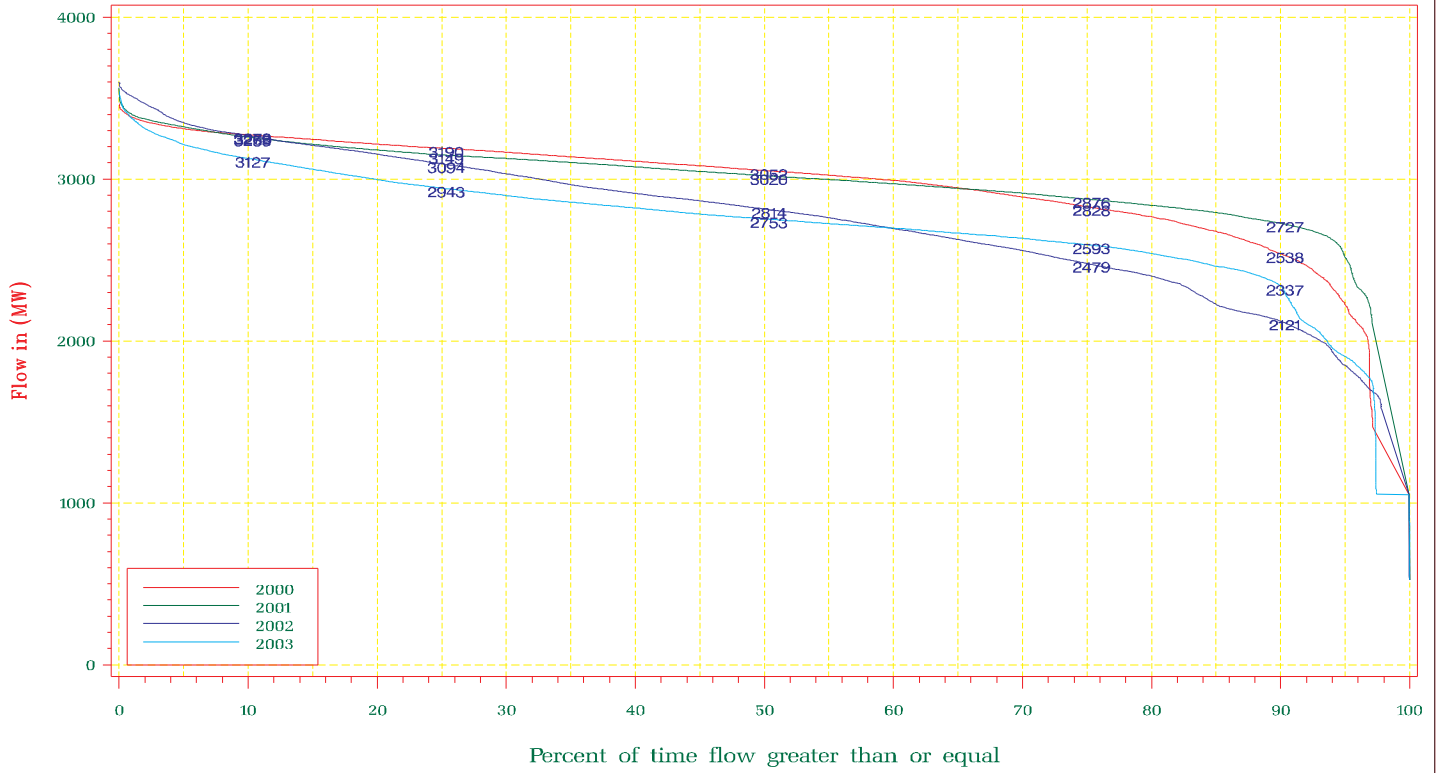
NYISO Frequency Interface Flow For January 2000 – December 2003

Central East Post – Contingency Voltage Collapse Limit  
I/o New England Generation



NYISO Percent of time Interface Flow For January 2000 – December 2003

Central East Post – Contingency Voltage Collapse Limit  
I/o New England Generation



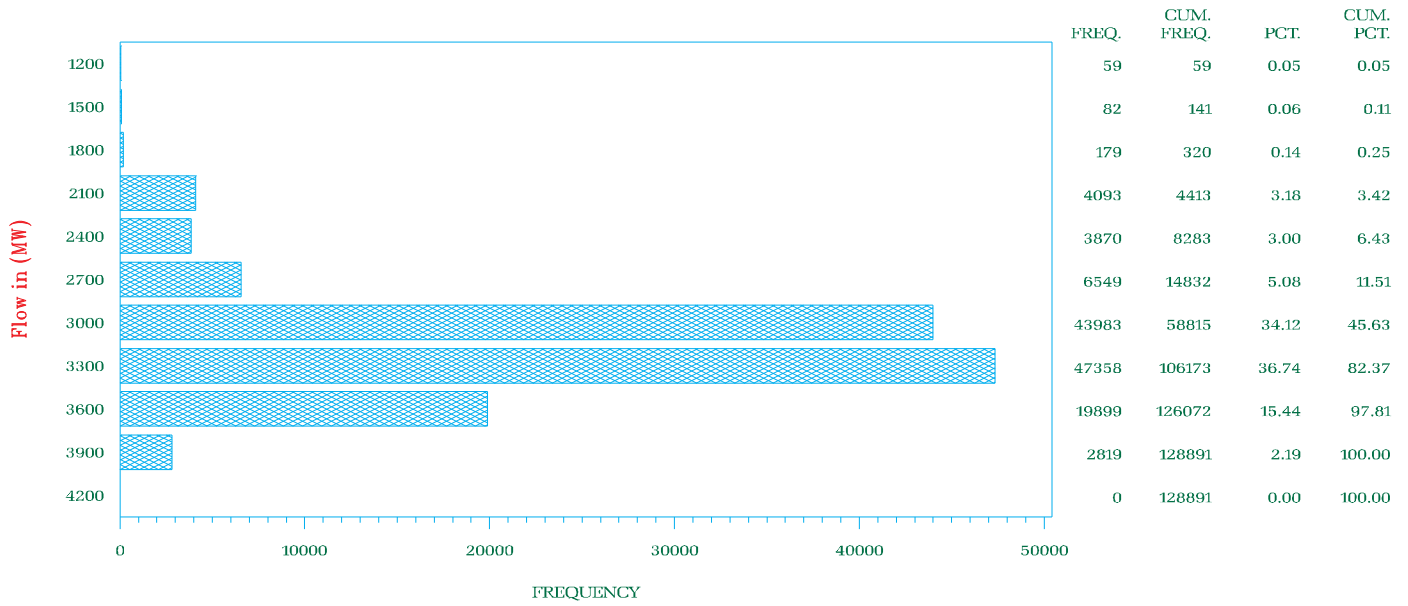
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Central East Post – Contingency Voltage Collapse Limit  
I/o New England Generation



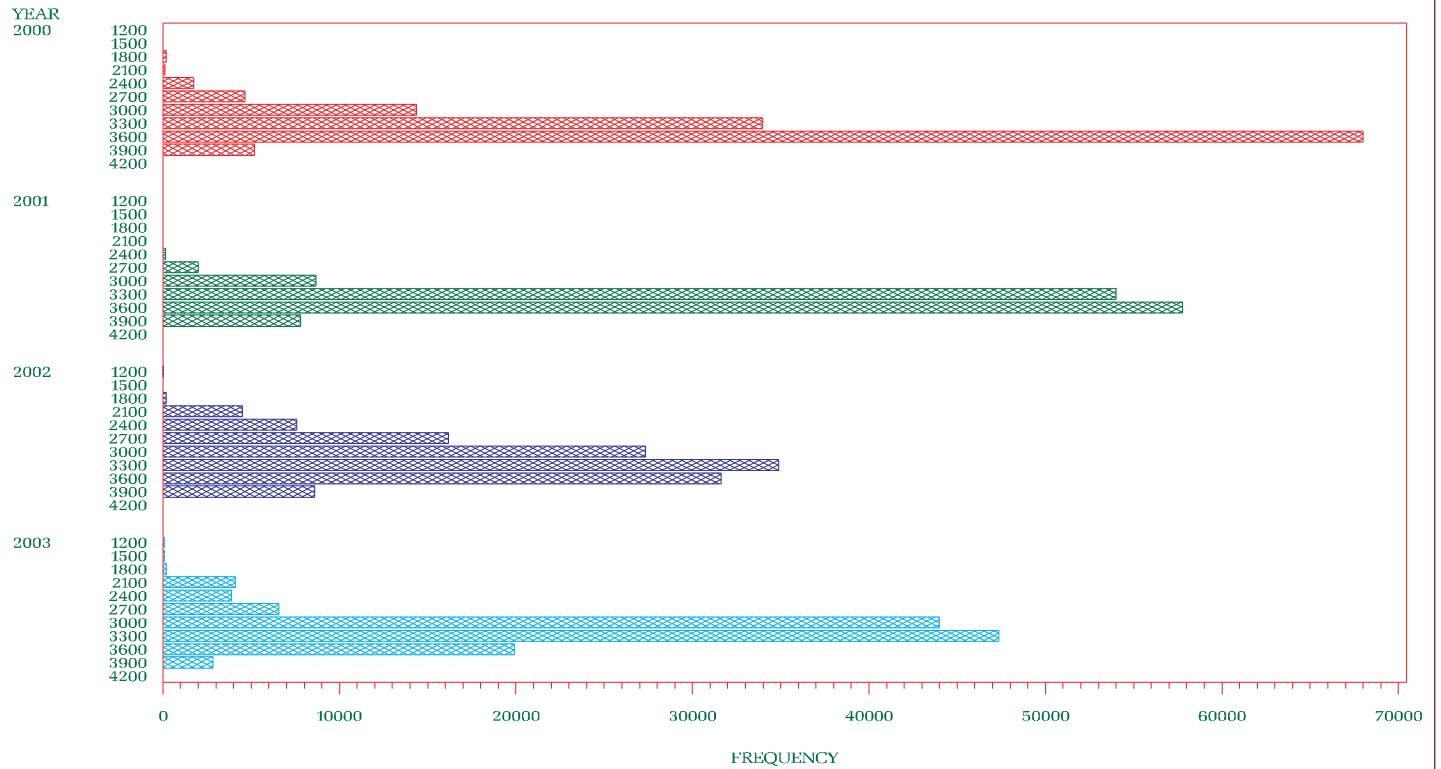
NYISO Frequency Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o Marcy South Tower



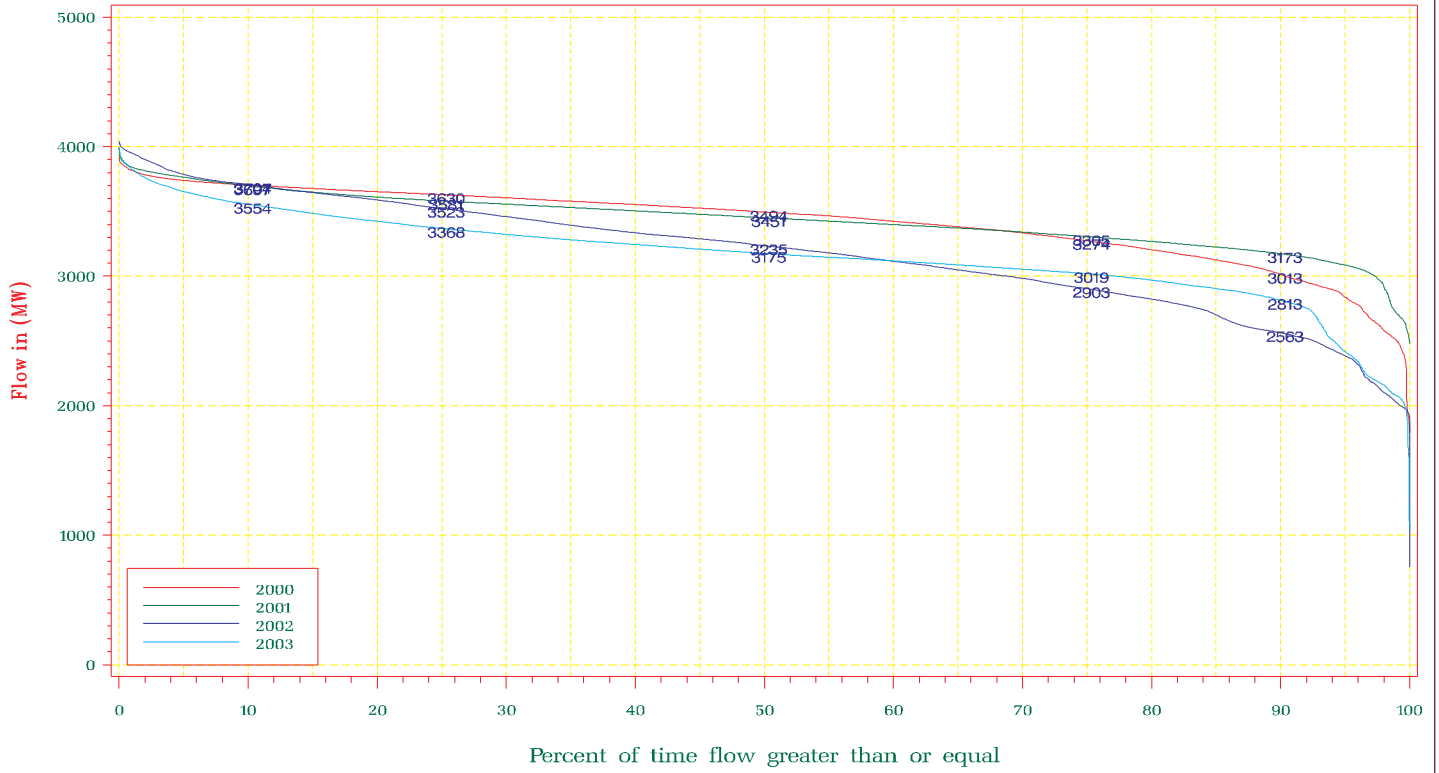
NYISO Frequency Interface Flow For January 2000 – December 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o Marcy South Tower



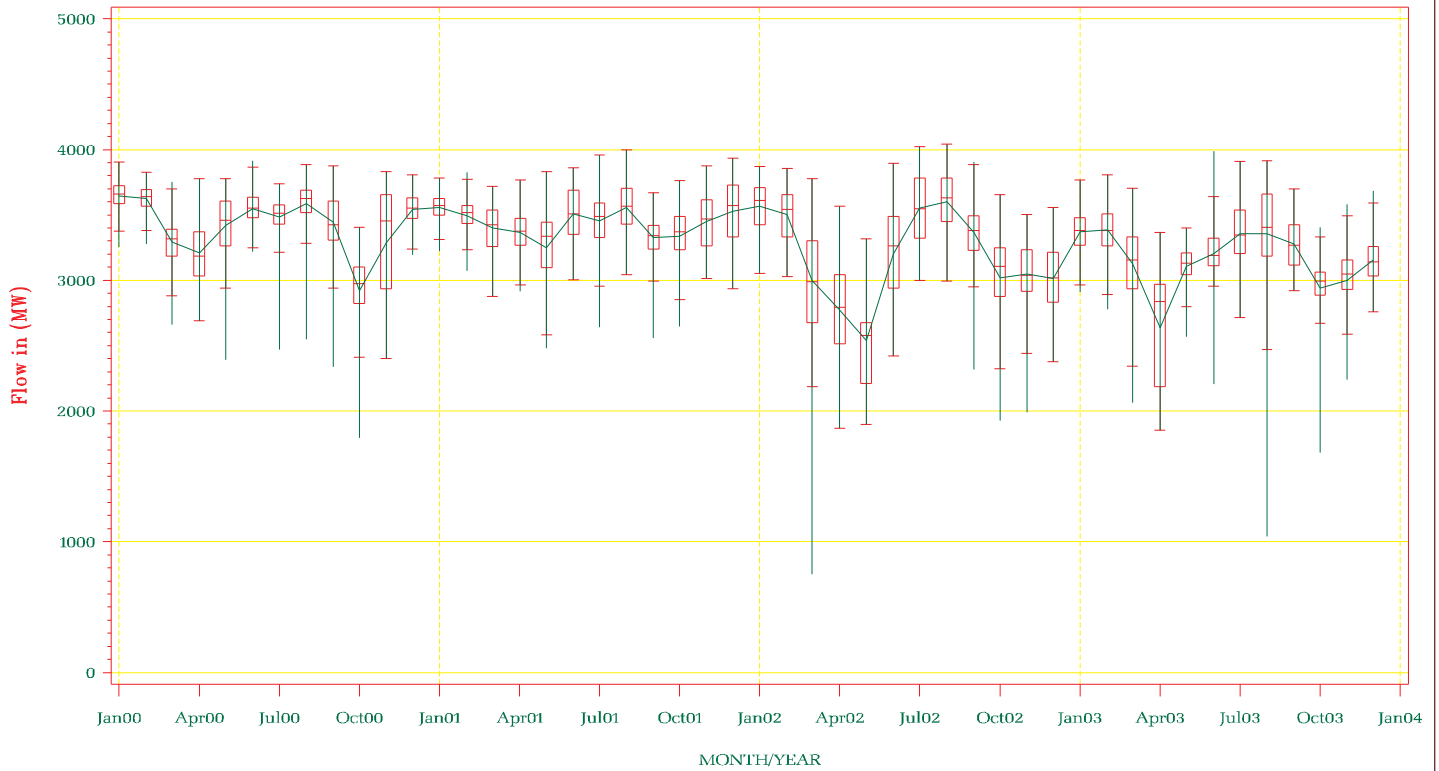
NYISO Percent of time Interface Flow For January 2000 – December 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o Marcy South Tower



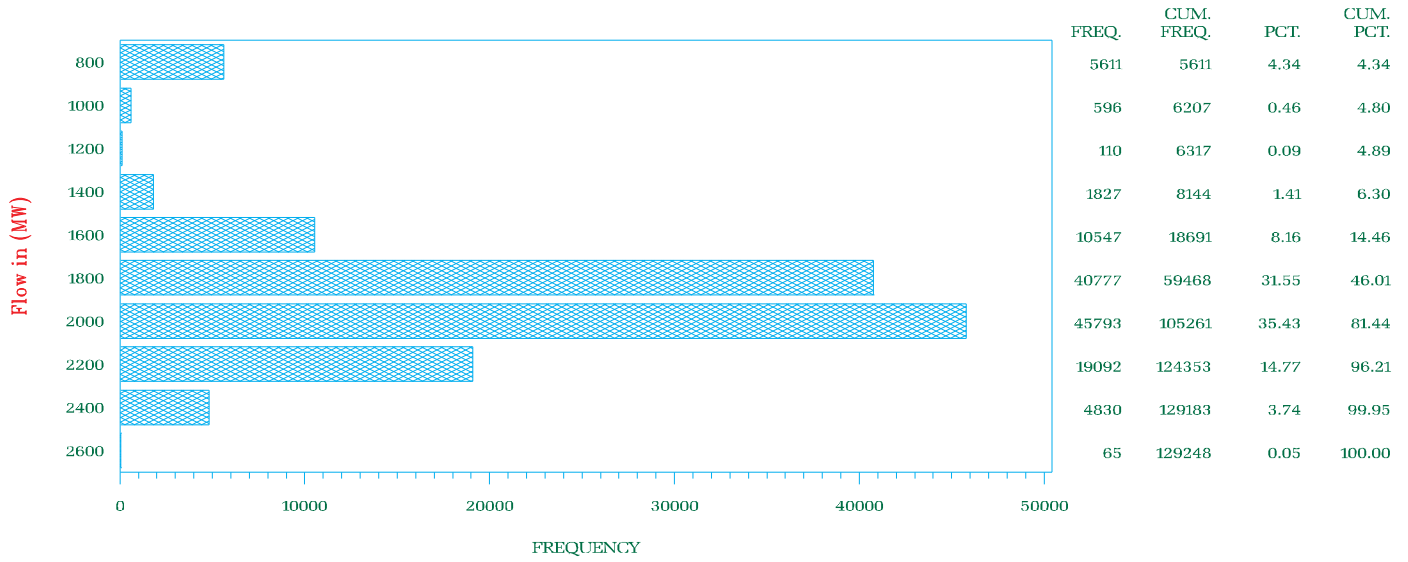
NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o Marcy South Tower



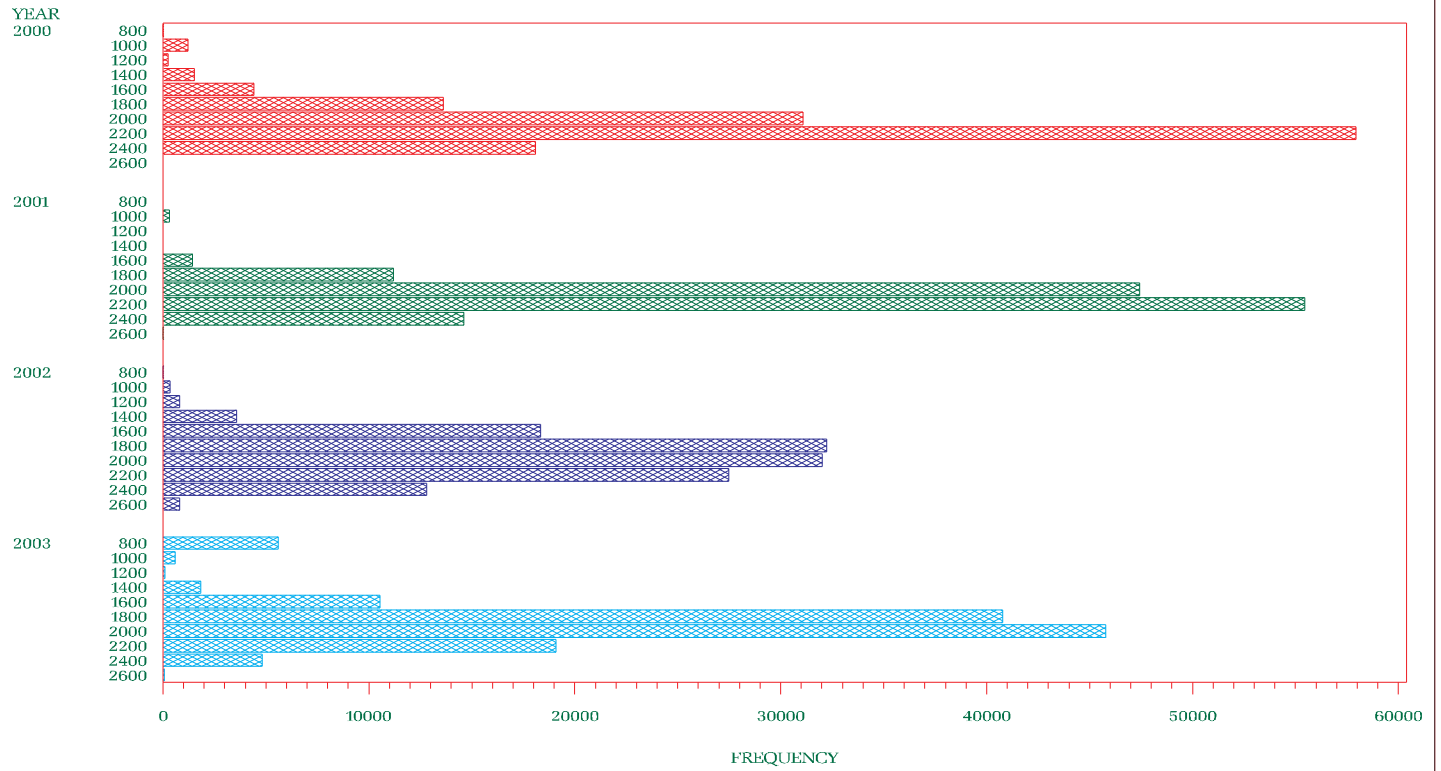
NYISO Frequency Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
 I/o New Scotland 99 Bus



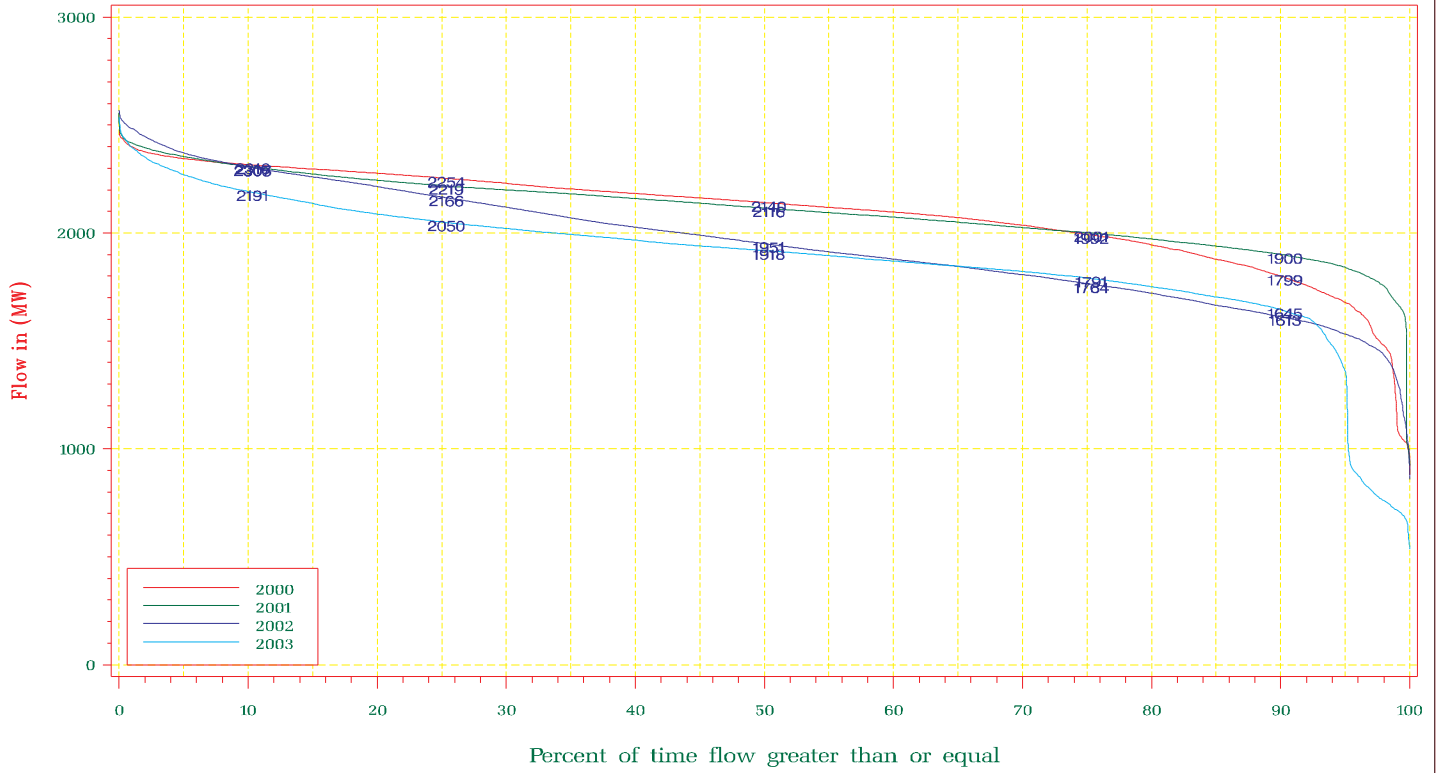
NYISO Frequency Interface Flow For January 2000 – December 2003

Central East Post – Contingency Voltage Collapse Limit  
 I/o New Scotland 99 Bus



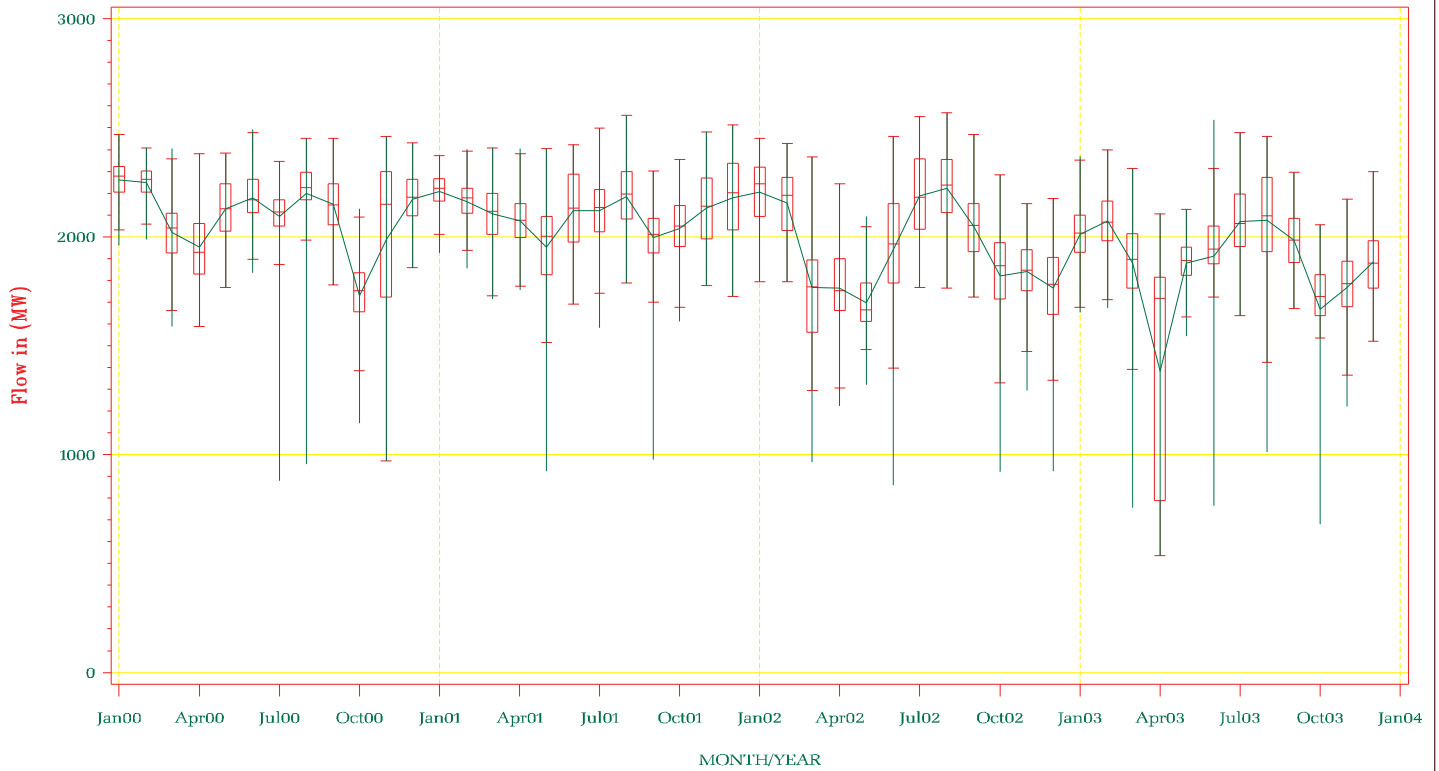
NYISO Percent of time Interface Flow For January 2000 – December 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o New Scotland 99 Bus



NYISO Average Monthly Interface Flow For January 01, 2000 – December 31, 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o New Scotland 99 Bus



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[Appendix D – Interfaces Simultaneously Constraining](#)





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

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**NYISO OPERATING INTERFACES & OASIS TRANSMISSION PATHS**

<b>CENTRAL EAST</b>		
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>
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>		
<b>Central-Capital/MidHudson</b>		
<b>Name</b>	<b>Line ID</b>	<b>Voltage (kV)</b>
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
<b>PJM East-Capital/MidHudson</b>		
Branchburg-Ramapo*	5018	500
*Waldwick- S.Mahwah	J3410	345
* Waldwick-S.Mahwah	K3411	345
<b>PJM East-New York City</b>		
Hudson-Farragut*	C3403	345
Hudson-Farragut*	B3402	345
Linden-Goethals*	A2253	230
<b>Adirondack-ISO-NE</b>		
*Plattsburgh-Grand Isle	PV-20	115
<b>PJM (Rockland Electric) - MidHudson</b>		
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



## NYISO Transmission Use Statistics for January-December 2003

<b>MOSES SOUTH</b>			
Adirondack-Central			
Name	Line ID	Voltage (kV)	
*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			
Name	Line ID	Voltage (kV)	
*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			
Name	Line ID	Voltage (kV)	
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





## NYISO Transmission Use Statistics for January-December 2003

<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



## NYISO Transmission Use Statistics for January-December 2003

<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> <small>note: TE-NYISO is MSC7040 line flow alone</small>			
<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



## NYISO Transmission Use Statistics for January-December 2003

<b>WEST-CENTRAL CLOSED- (not an operating interface)</b>		
<b>NAME</b>	<b>LINE ID</b>	<b>VOLTAGE (kV)</b>
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
<b>SPRAIN BROOK -DUNWOODIE SOUTH CLOSED -(not an operating interface)</b>		
<b>NAME</b>	<b>LINE ID</b>	<b>VOLTAGE (kV)</b>
All Sprain Brook-Dunwoodie South Ties plus the following:		
Hudson - Farragut	B3402	345
Hudson - Farragut	C3403	345
Linden - Goethals	A2253	230
<b>VOLNEY EAST OPEN</b>		
<b>NAME</b>	<b>LINE ID</b>	<b>VOLTAGE (kV)</b>
Oakdale - Fraser	32	345
Oakdale -Delhi	919	115
Willeys - 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



## NYISO Transmission Use Statistics for January-December 2003

### VOLNEY EAST CLOSED

NAME	LINE ID	VOLTAGE (kV)
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

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NYISO Frequency Interface Flow For January – December 2003

CENTRAL EAST

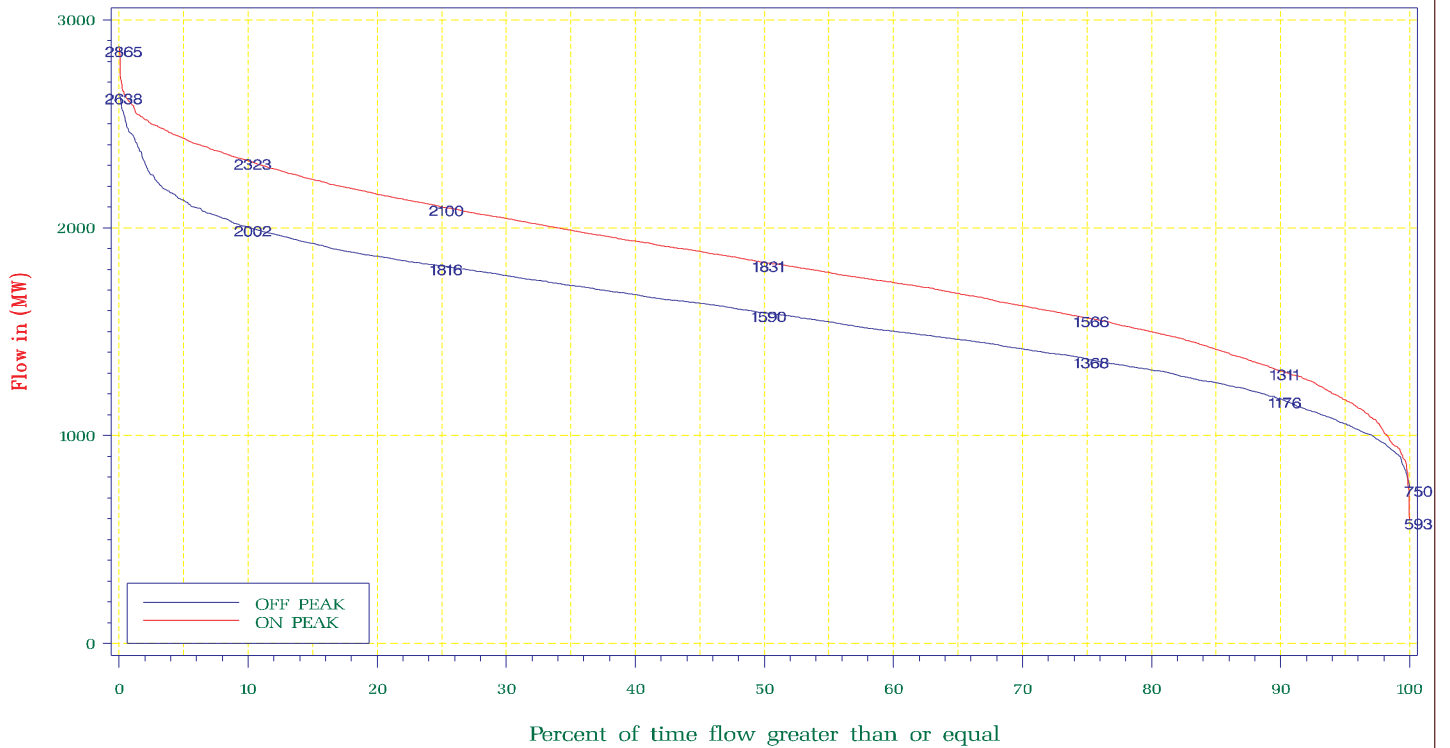


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

CENTRAL EAST

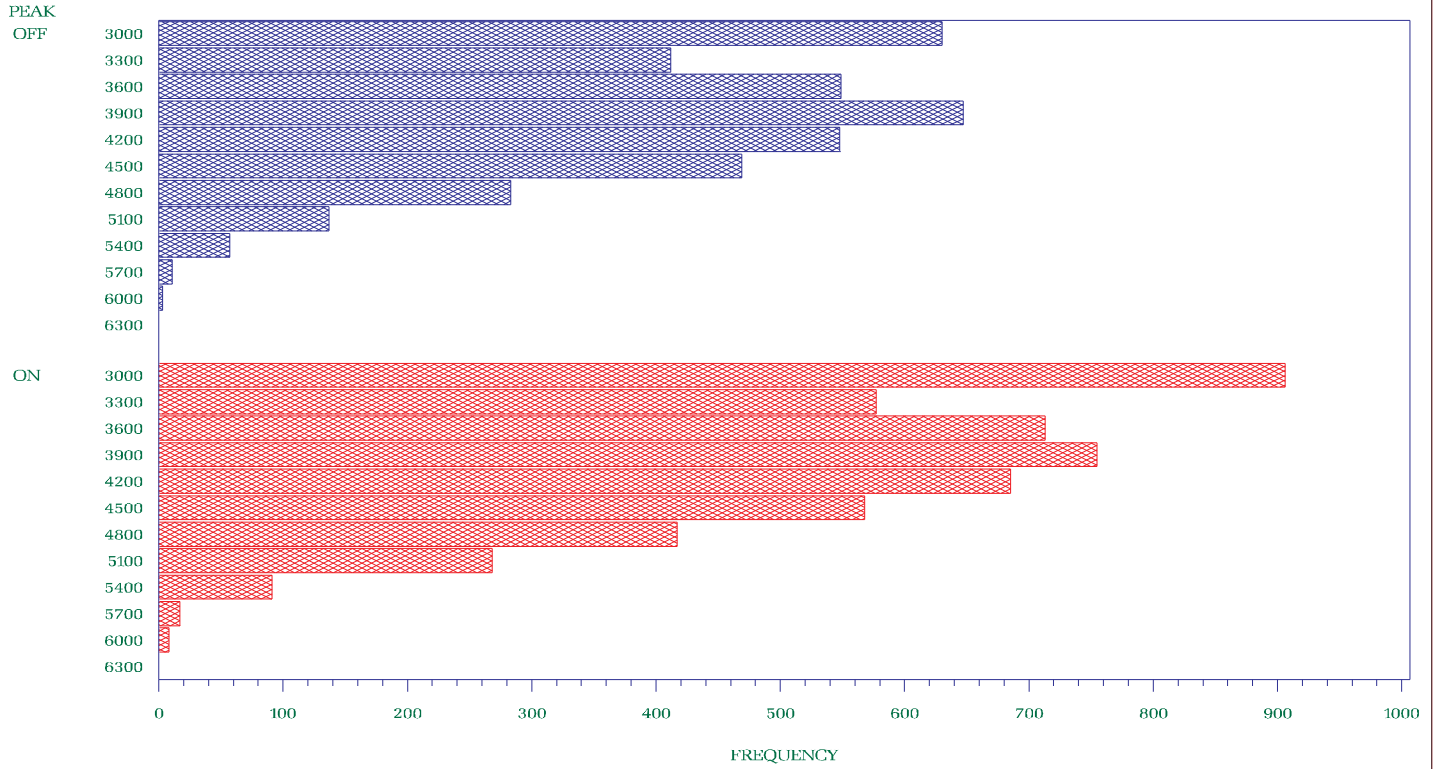


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

TOTAL EAST

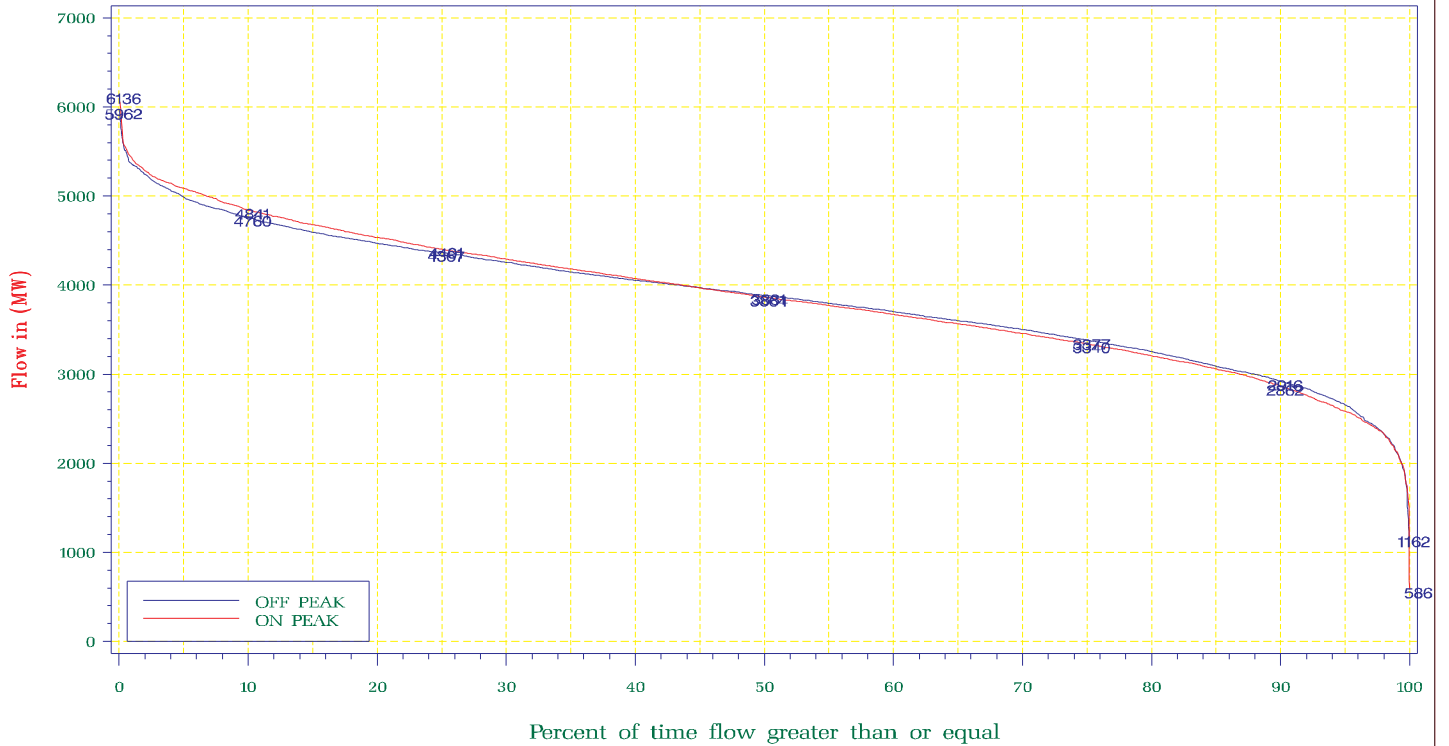


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

TOTAL EAST

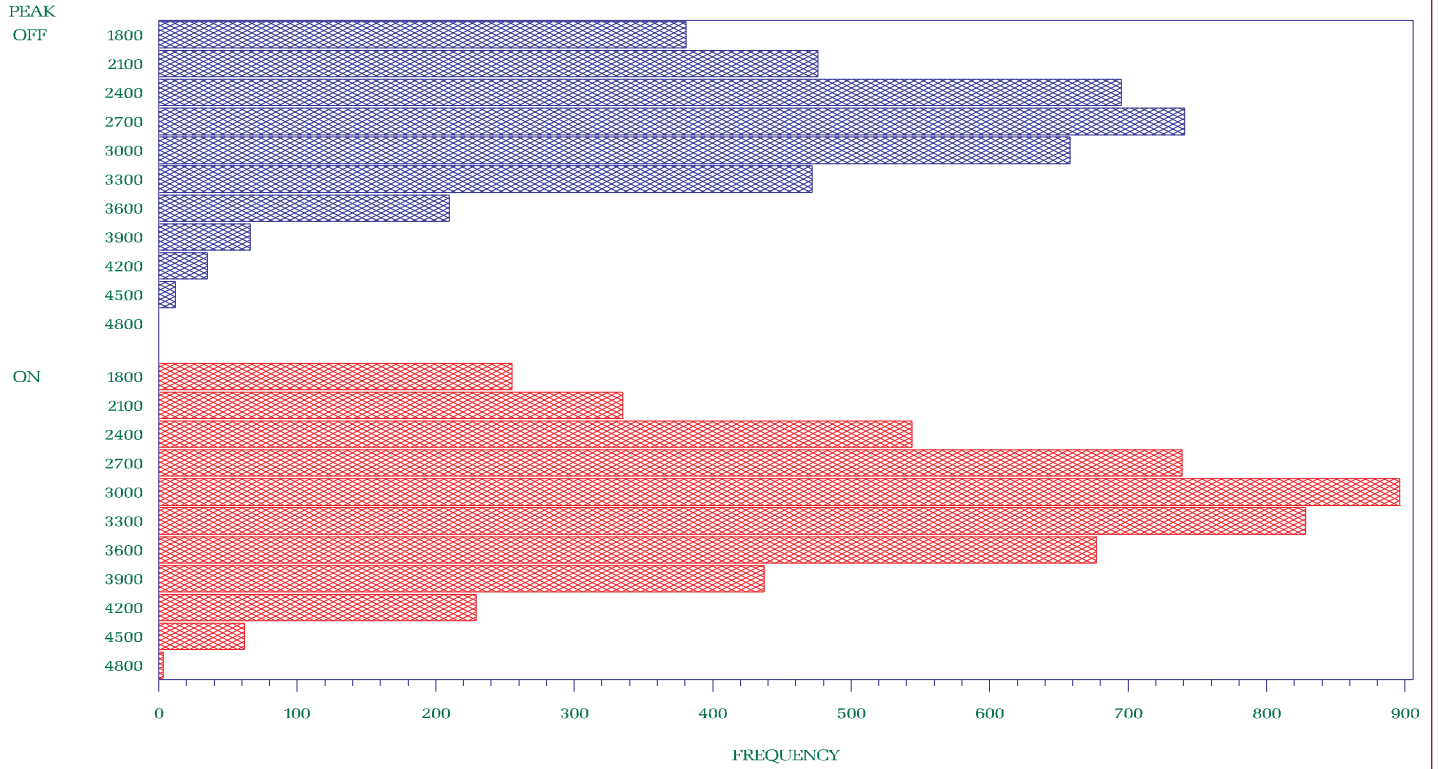


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Central – Capital/Mid Hudson

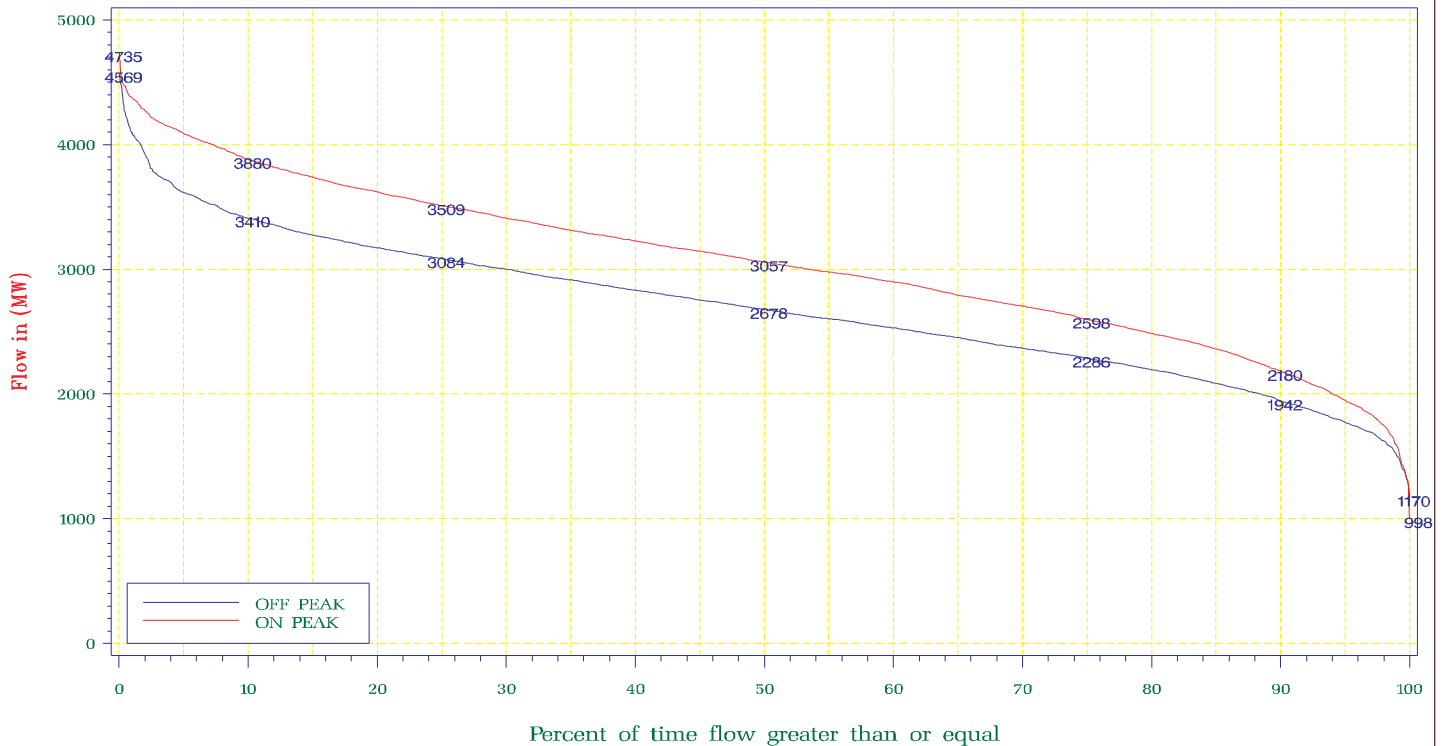


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Central – Capital/Mid Hudson

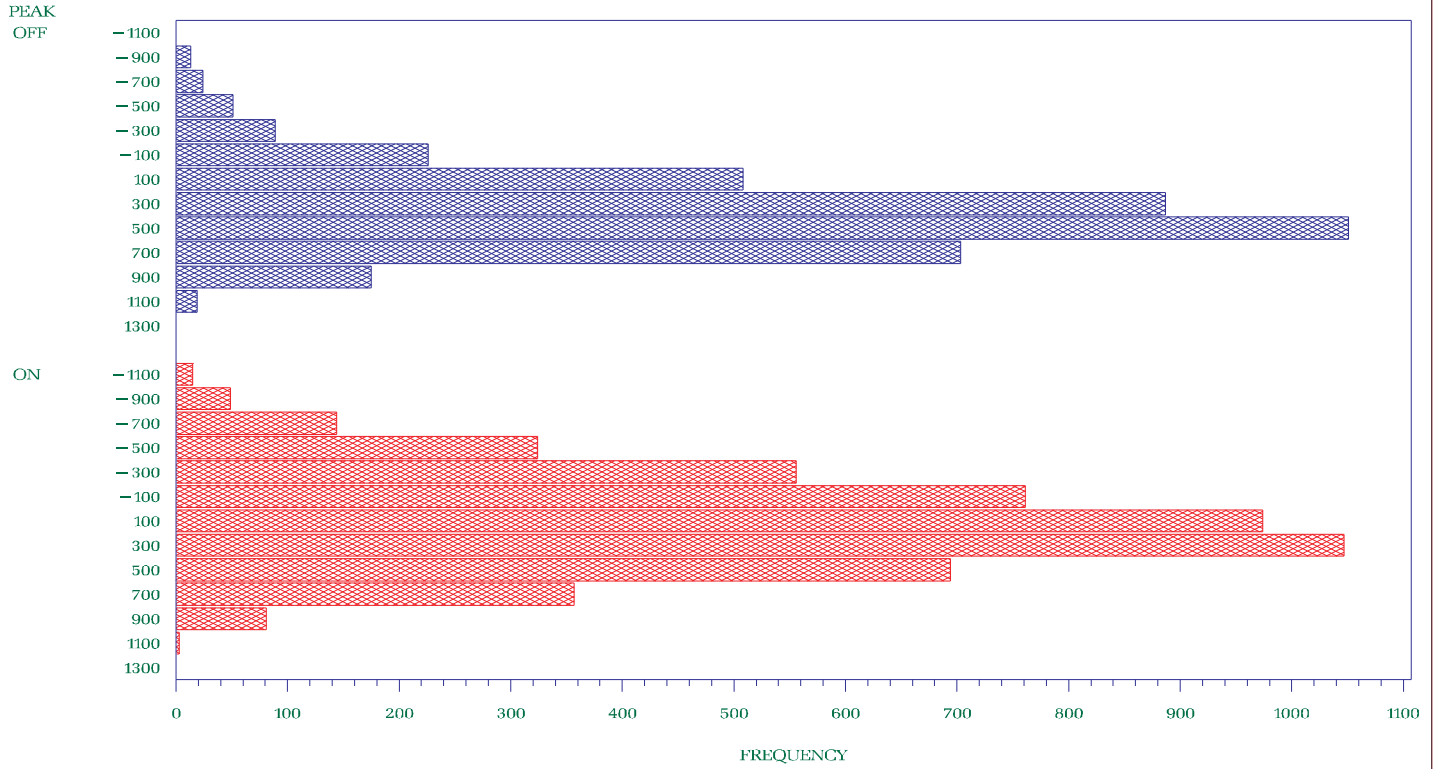


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

PJM East – Capital/Mid Hudson

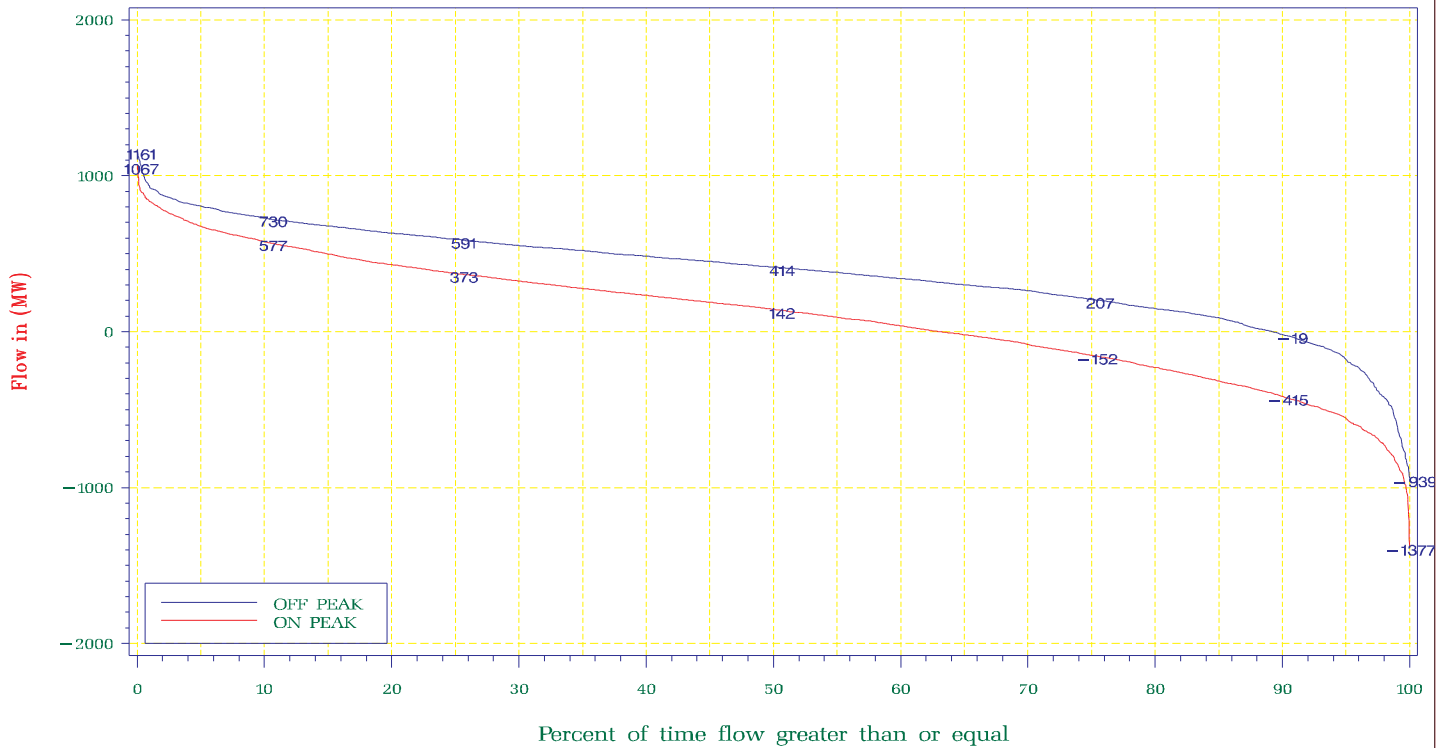


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO 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 2003

PJM East – New York City

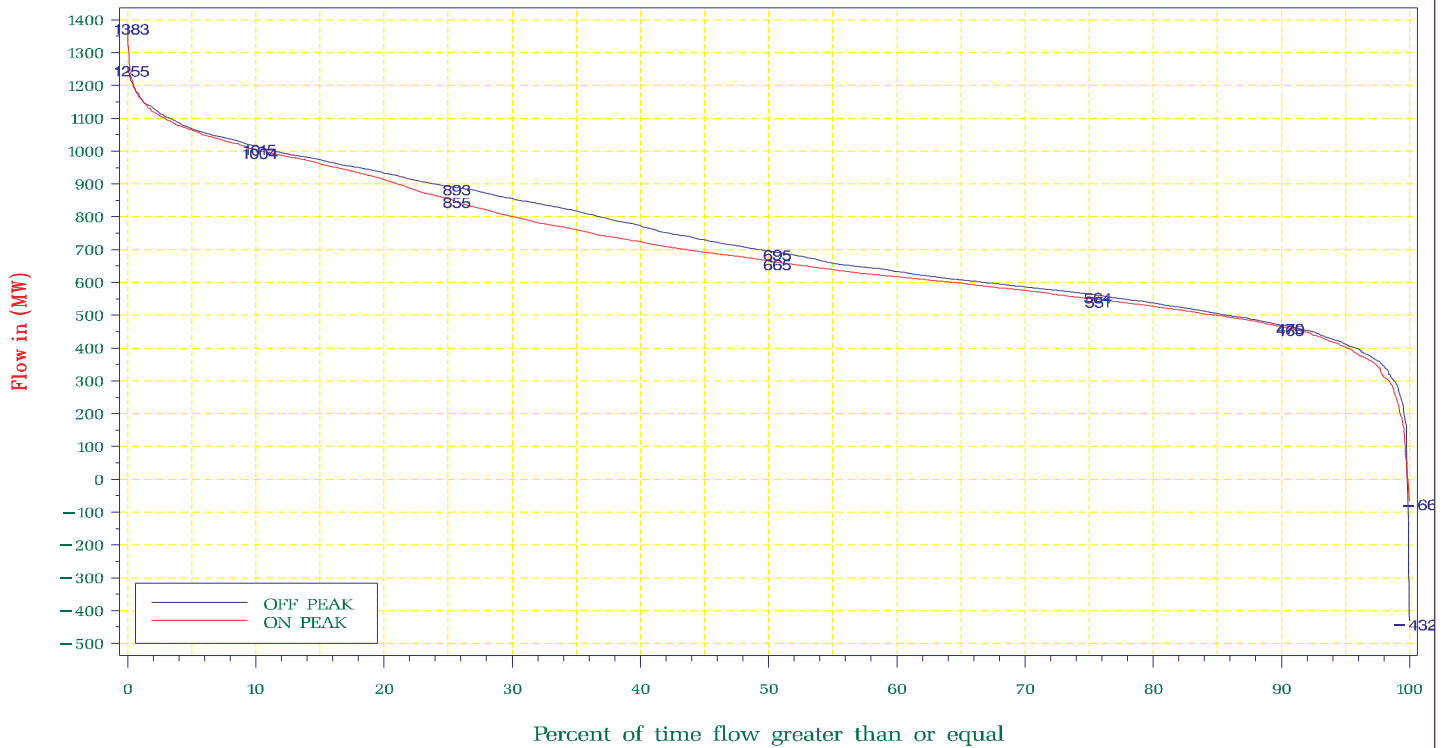


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

PJM East – New York City

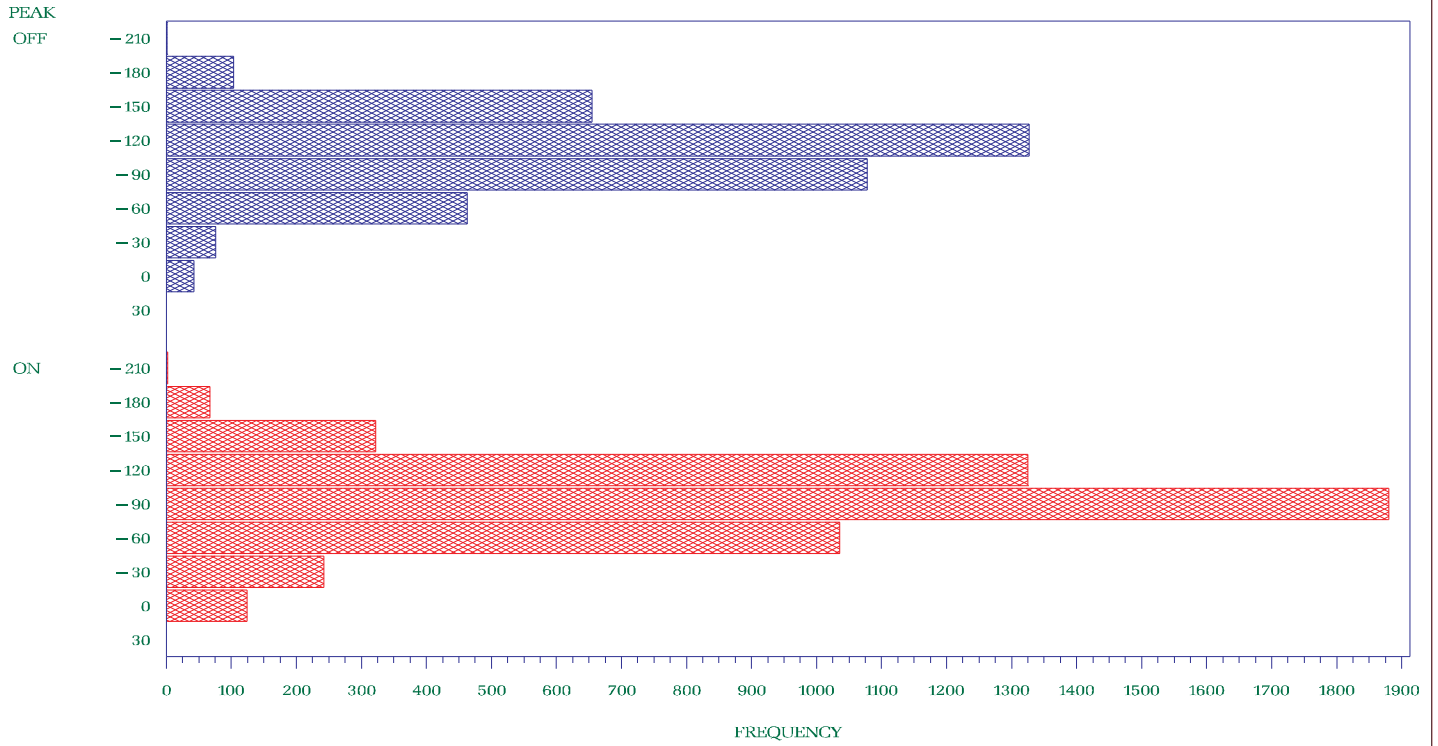


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

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

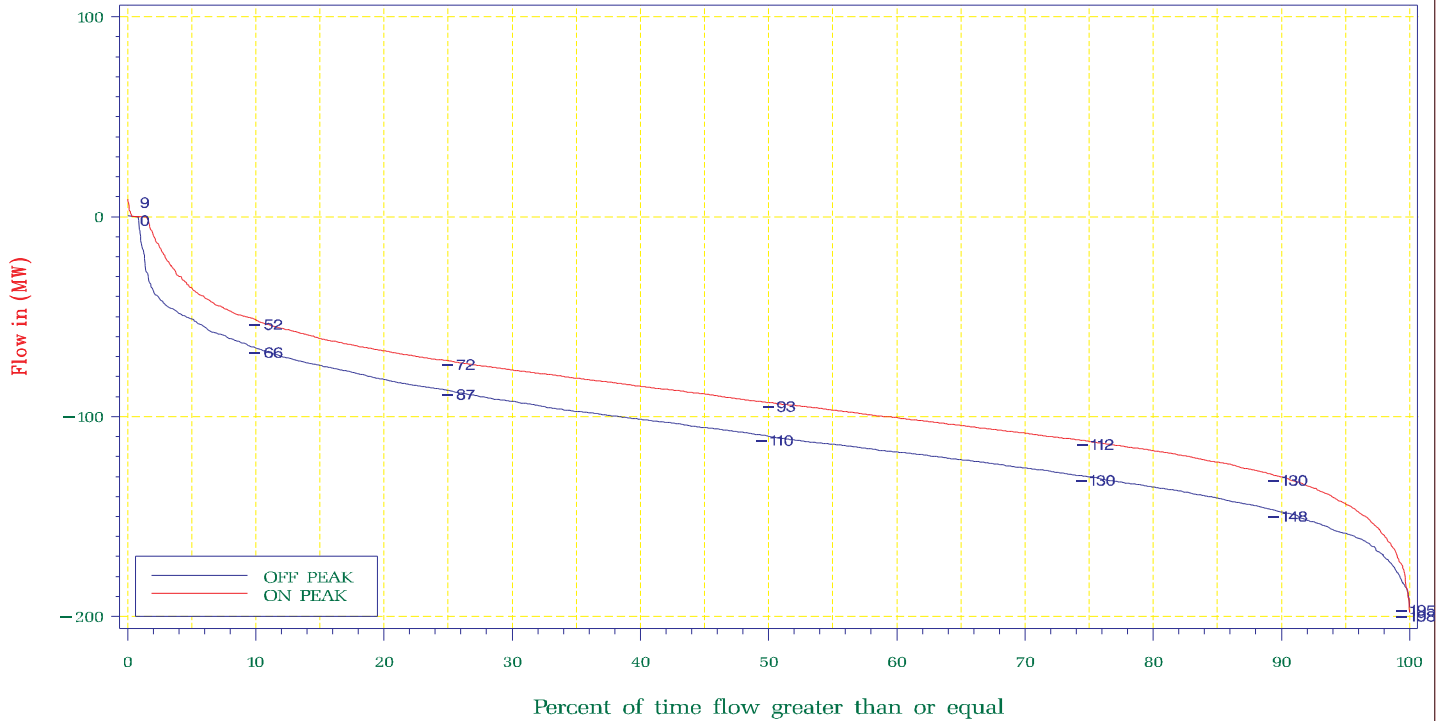


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NYISO Percent of time Interface Flow For January – December 2003

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

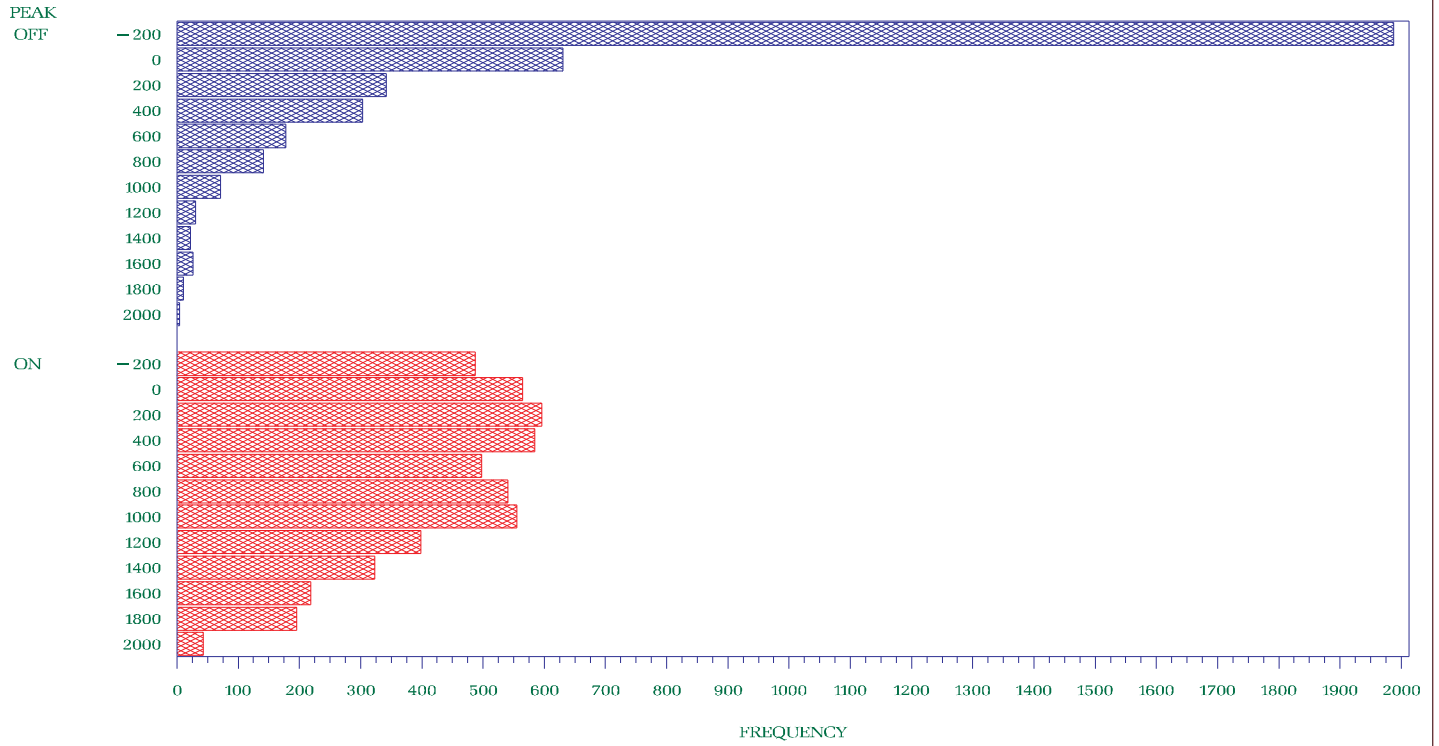


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

MOSES SOUTH  
Adirondack – Central

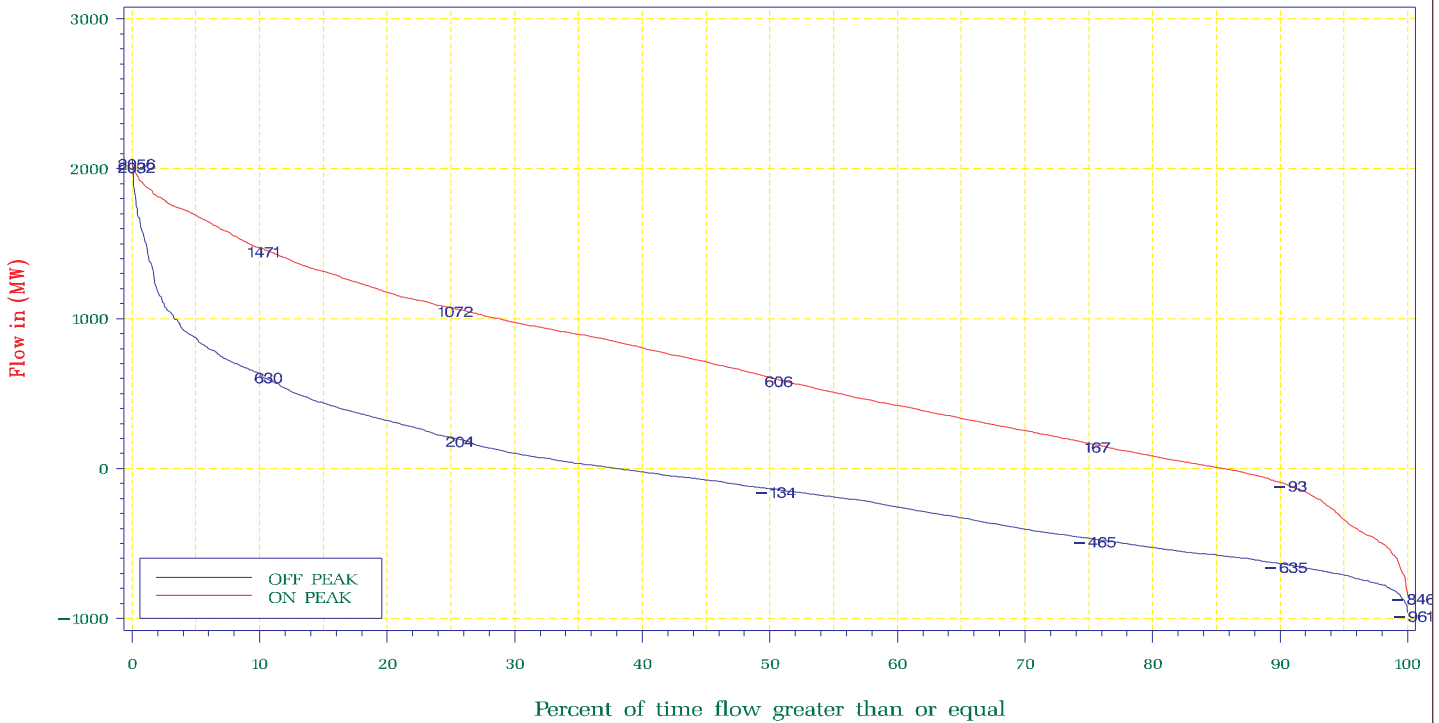


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NYISO Percent of time Interface Flow For January – December 2003

MOSES SOUTH  
Adirondack – Central

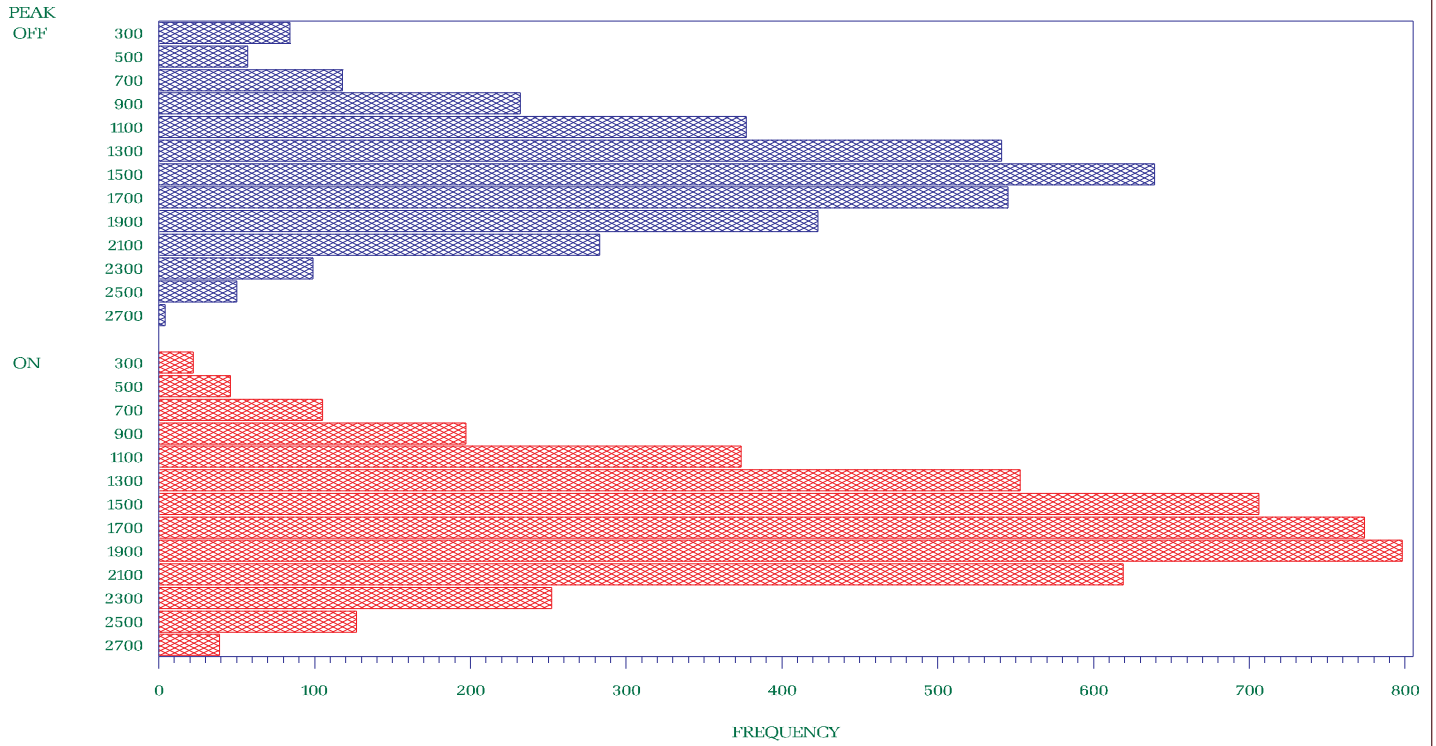


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

**DYSINGER EAST**  
Frontier – Genesee

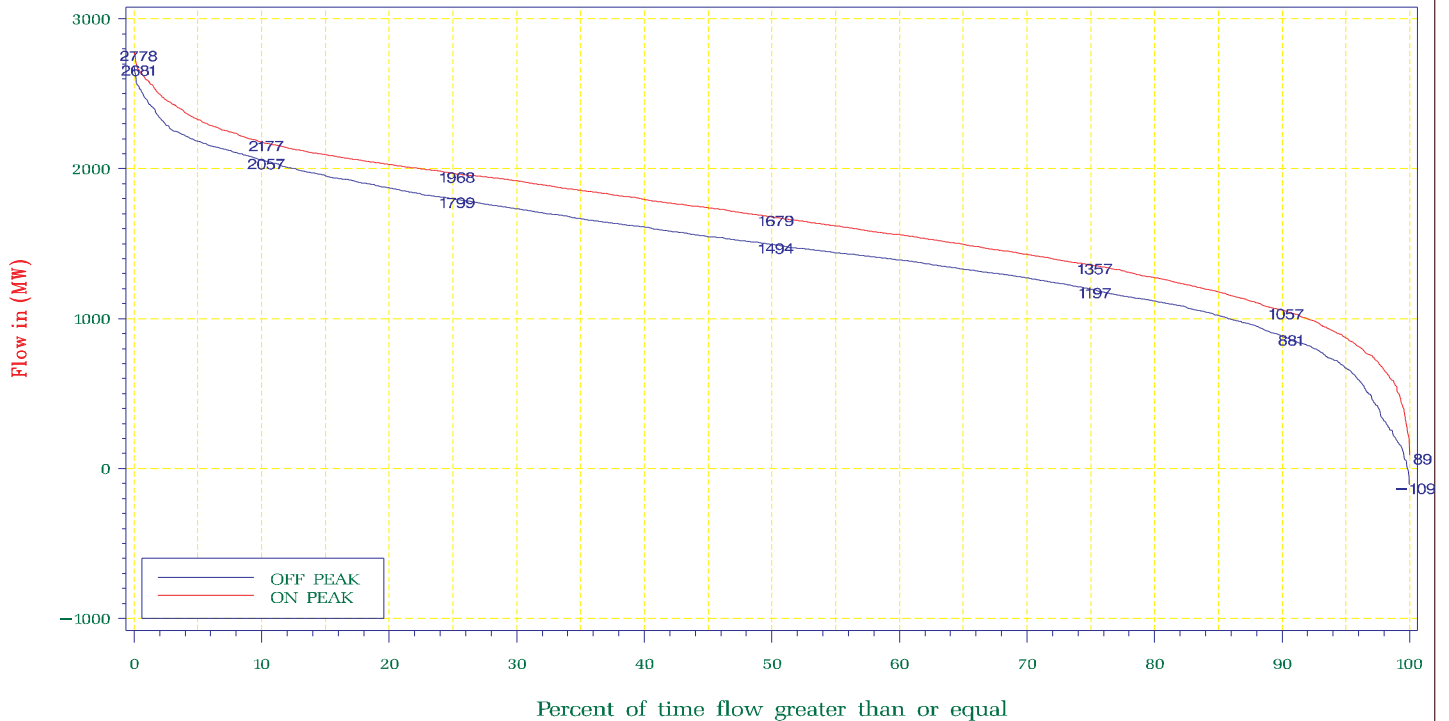


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

**DYSINGER EAST**  
Frontier – Genesee



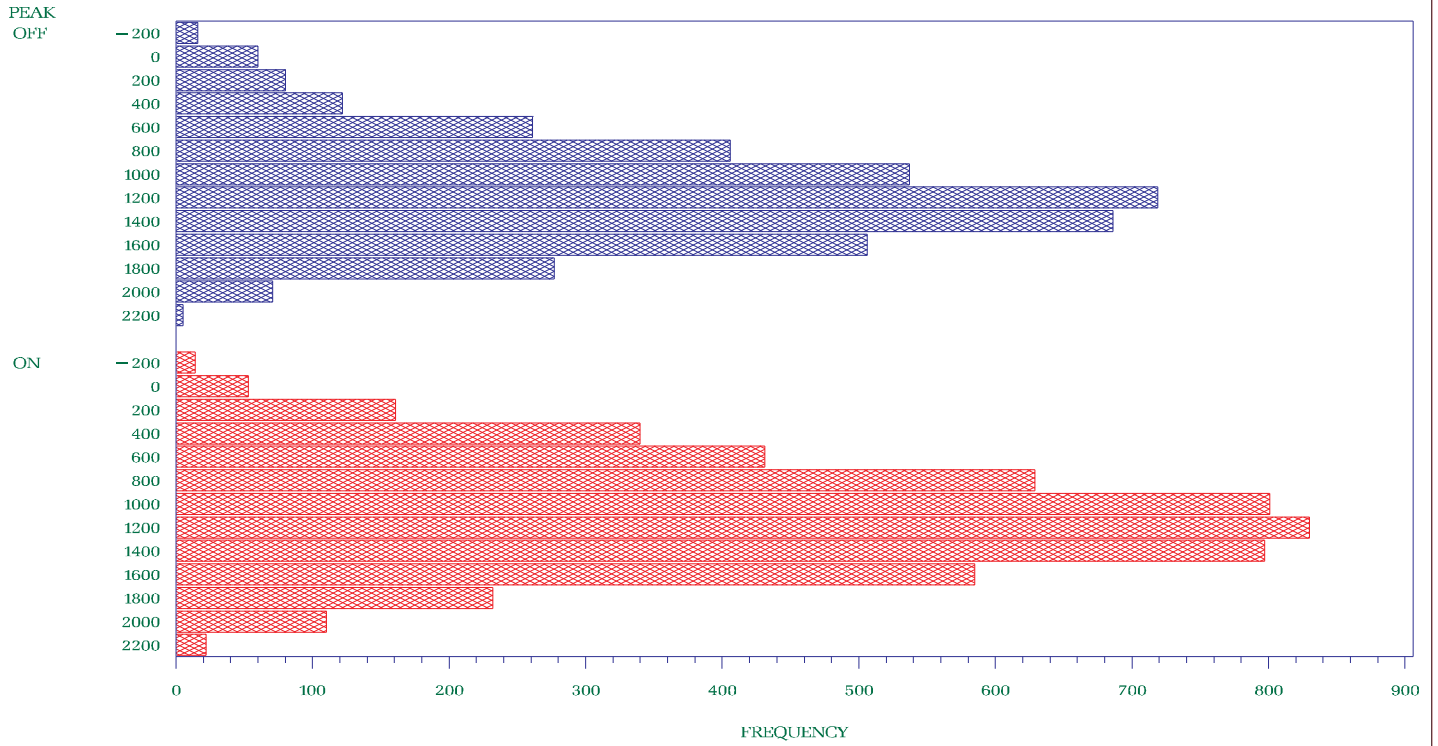
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

WEST CENTRAL  
Genesee – Central

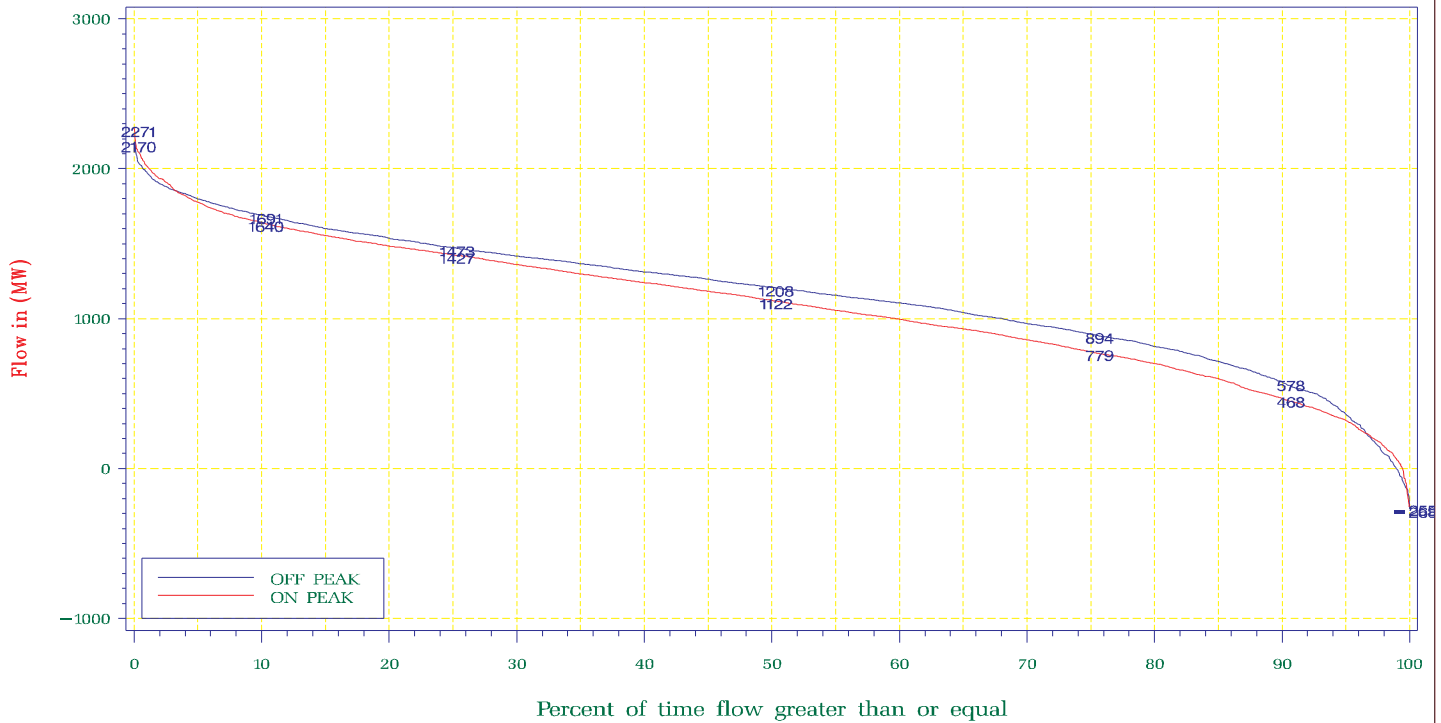


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

WEST CENTRAL  
Genesee – Central

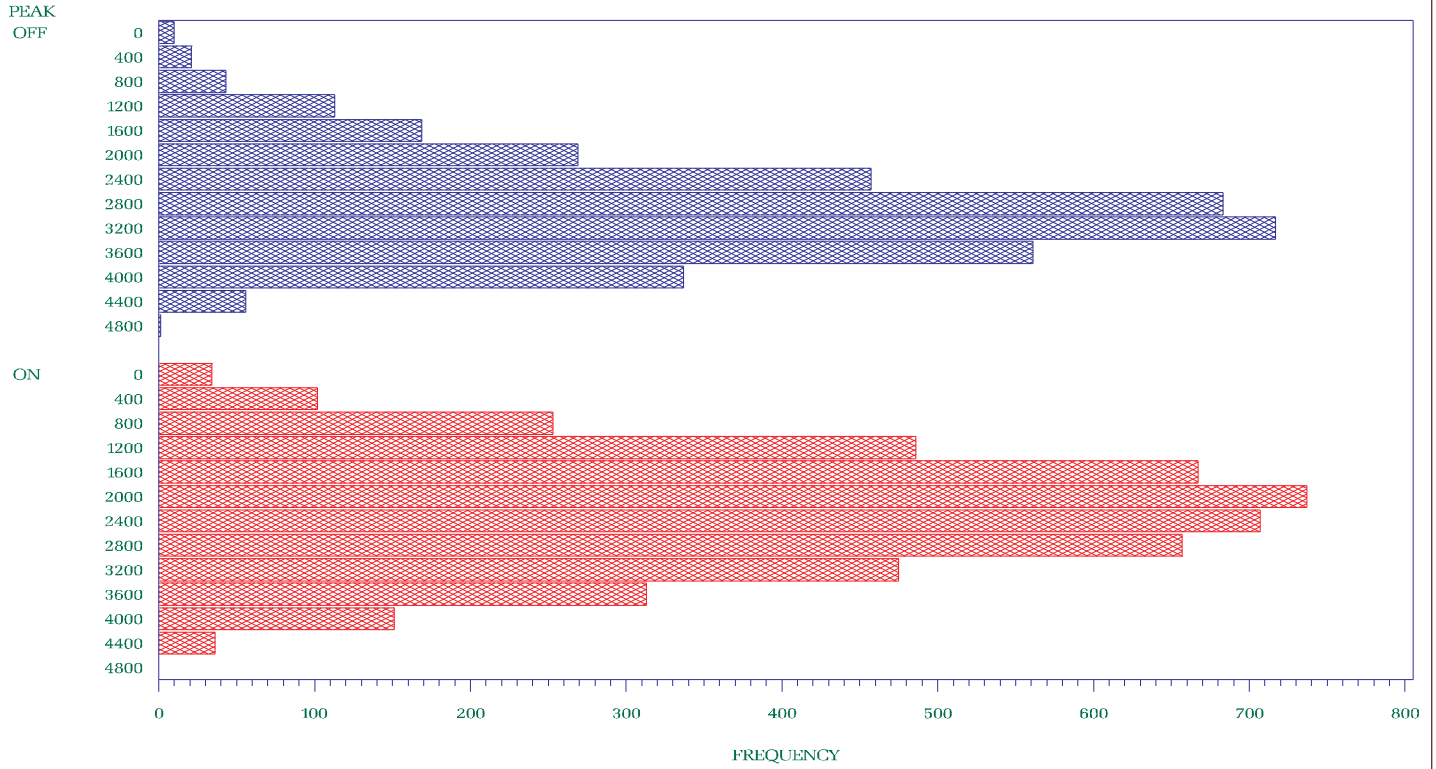


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

WEST CENTRAL (CLOSED)

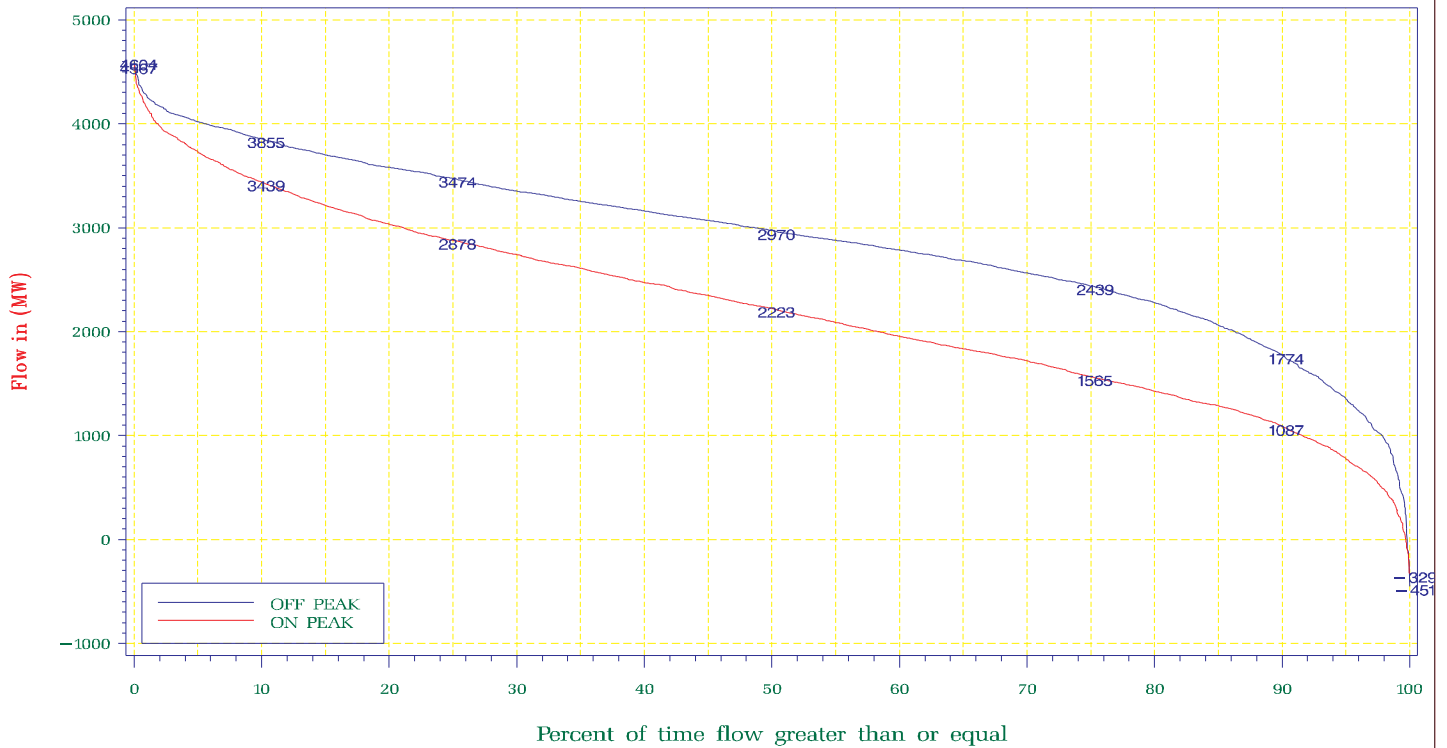


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

WEST CENTRAL (CLOSED)

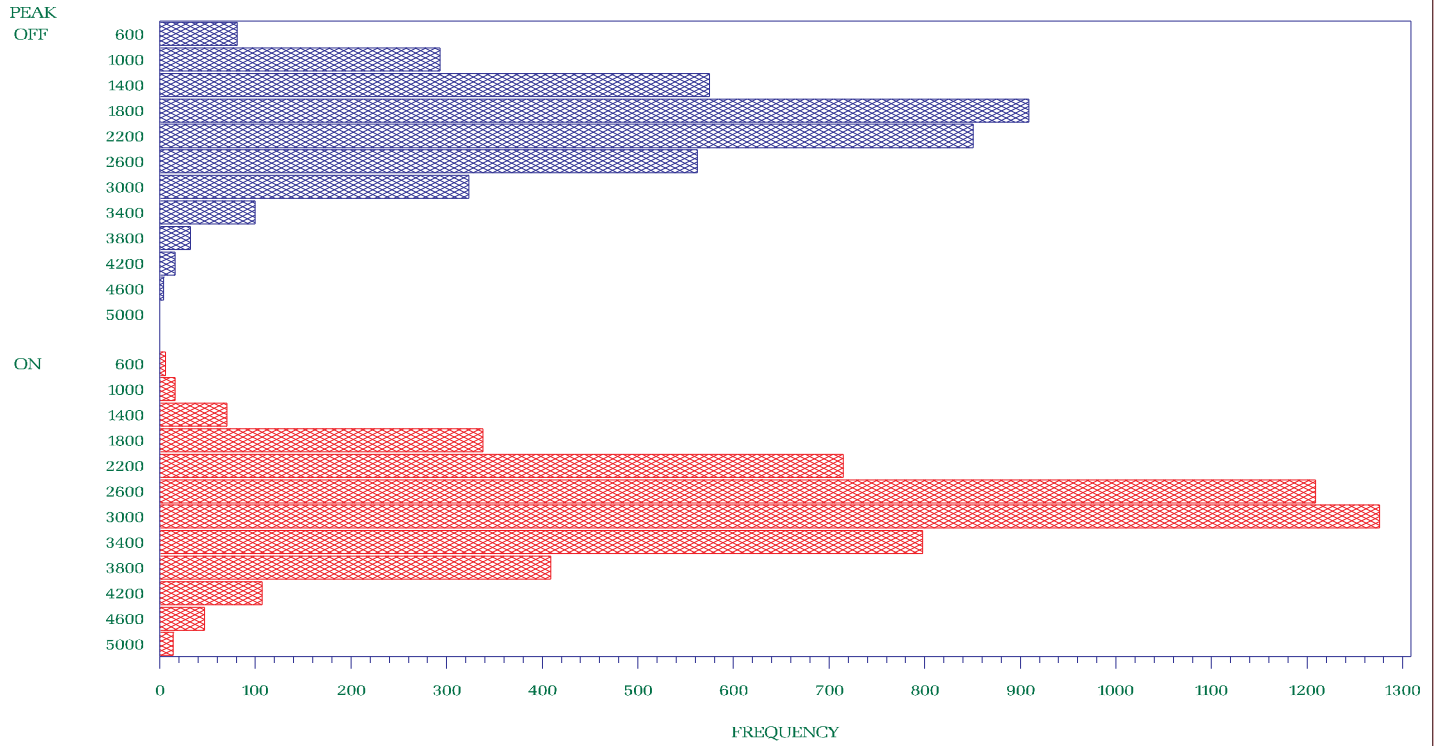


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

UPNY – CONED  
Capital/Mid Hudson – Westchester

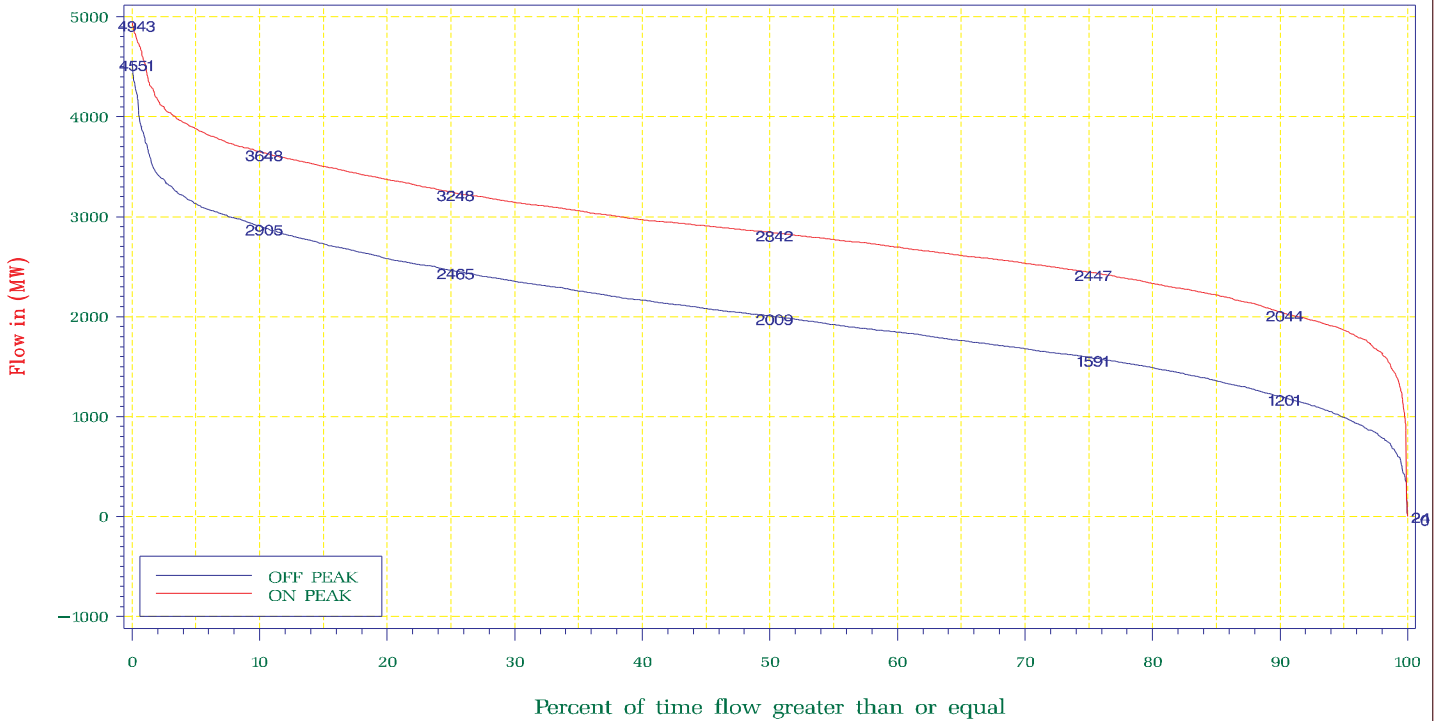


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NYISO Percent of time Interface Flow For January – December 2003

UPNY – CONED  
Capital/Mid Hudson – Westchester

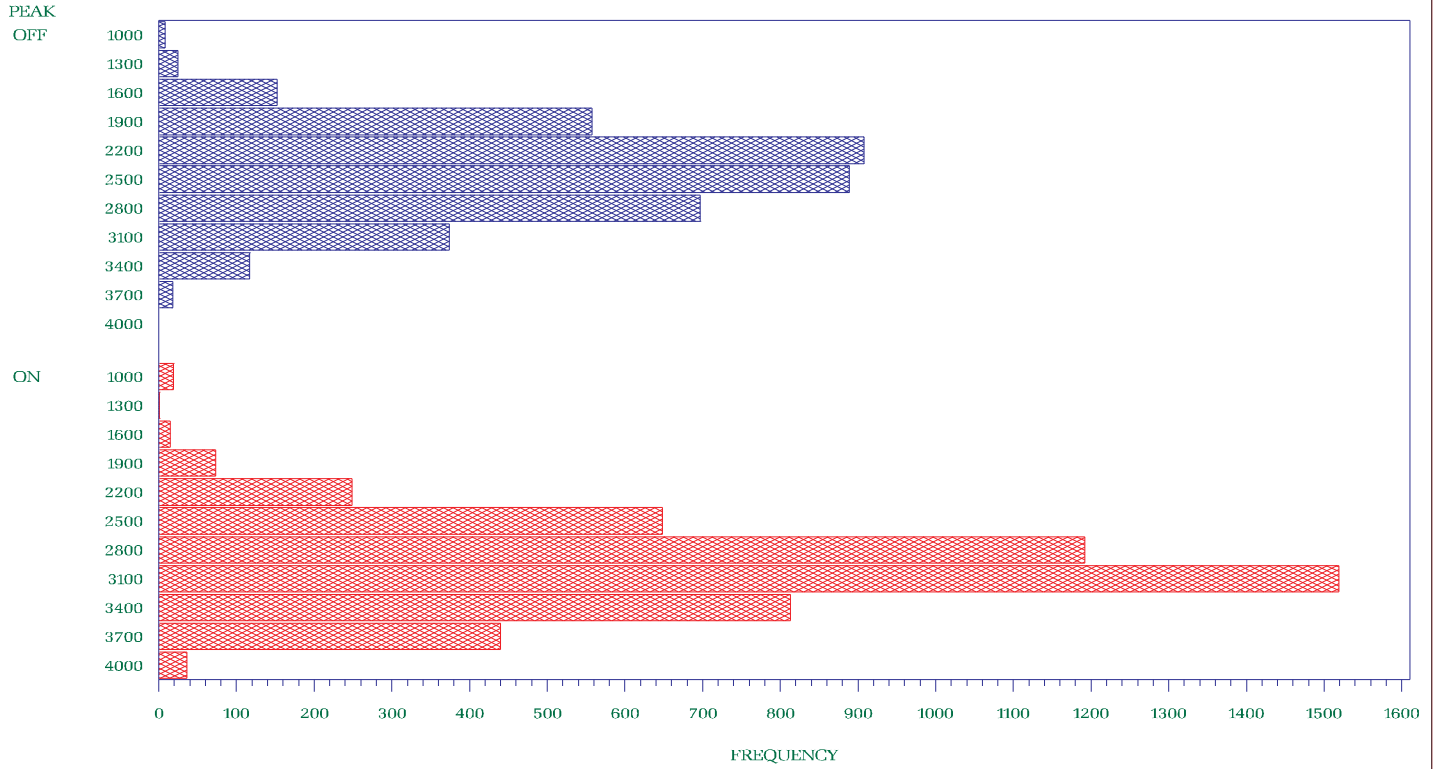


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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NYISO Frequency Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH

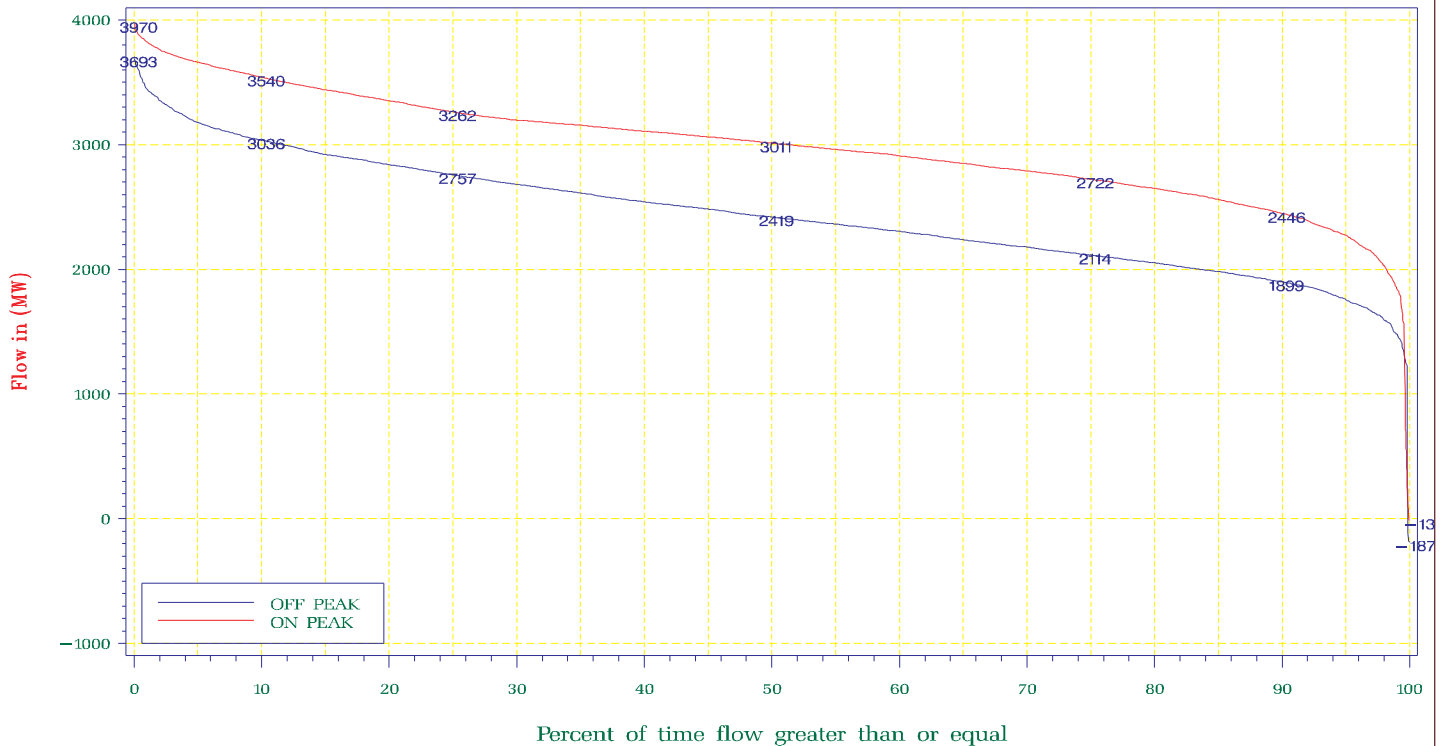


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH

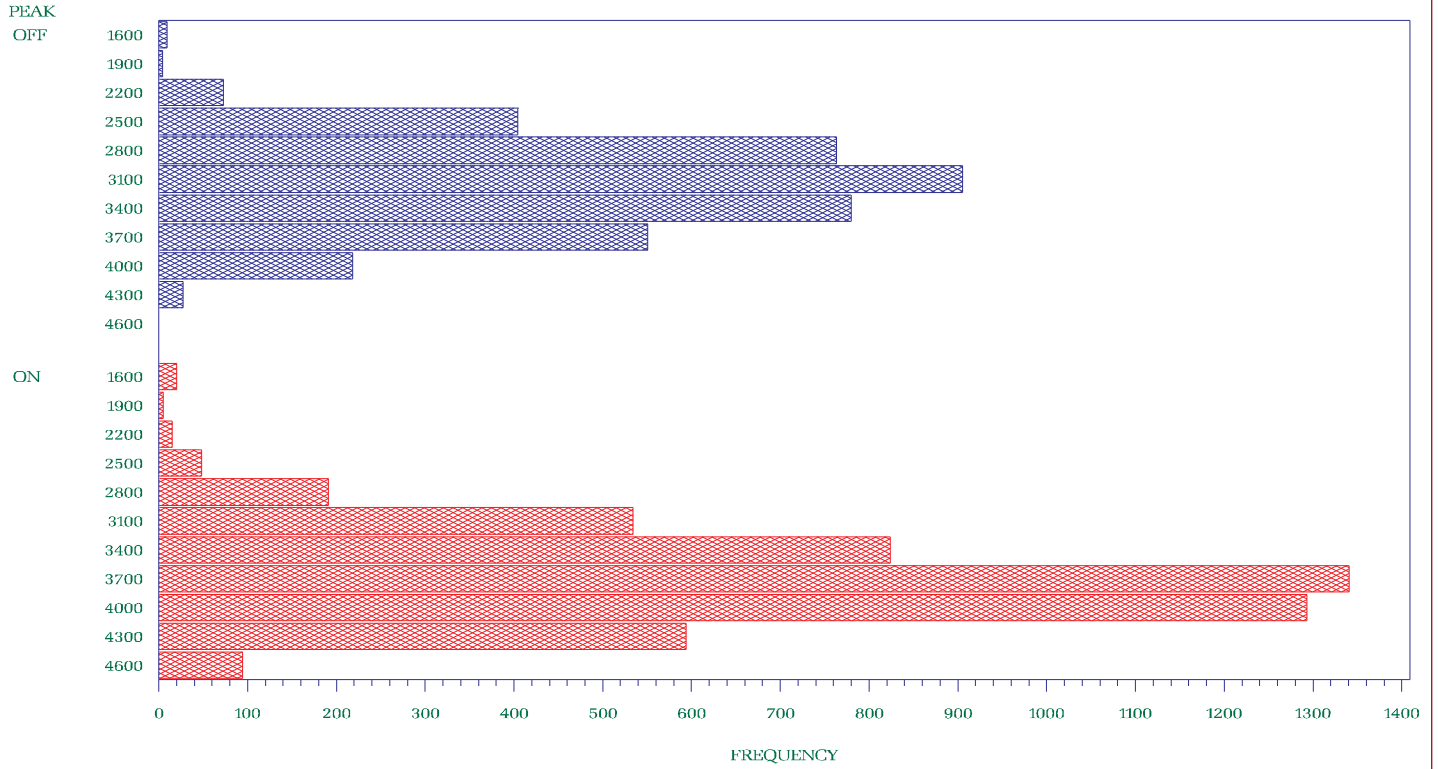


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)

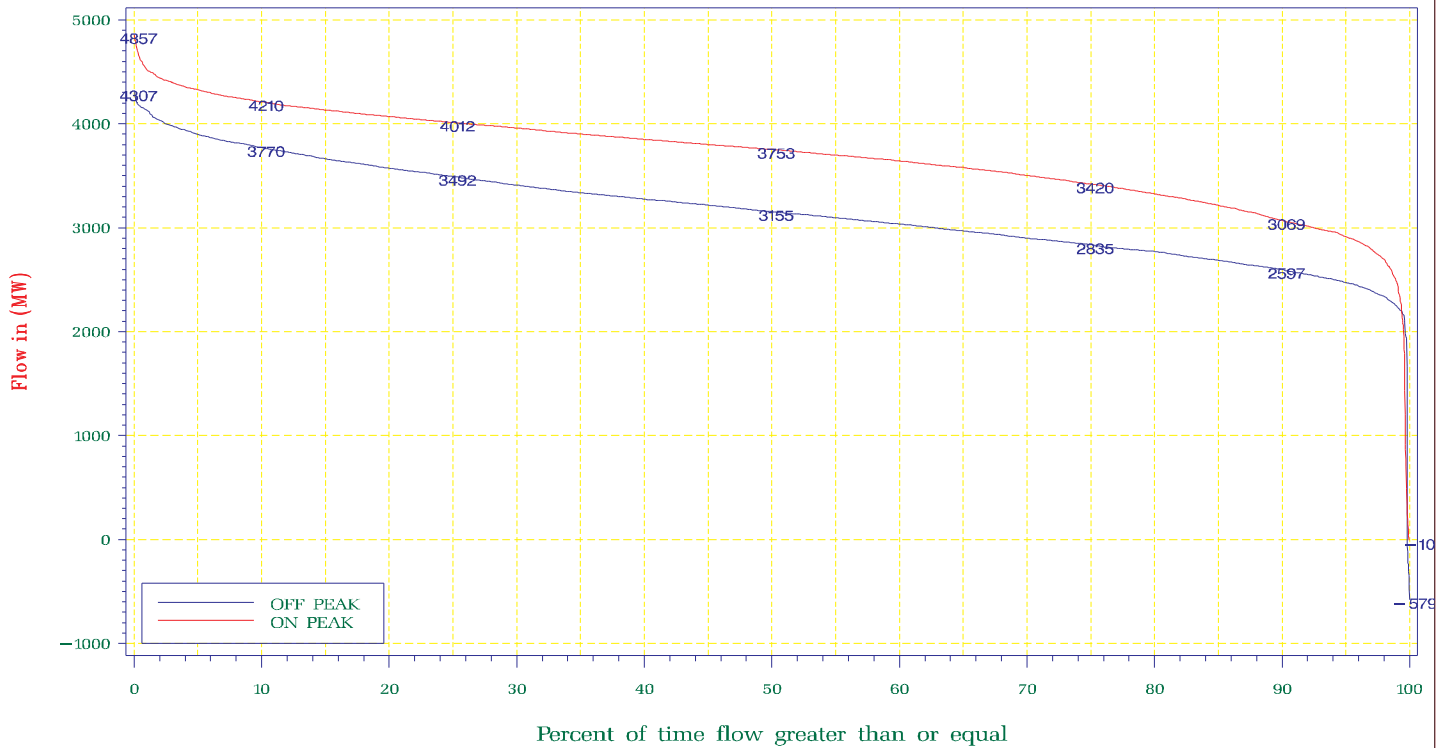


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

SPRAINBROOK – DUNWOODIE SOUTH (Closed)

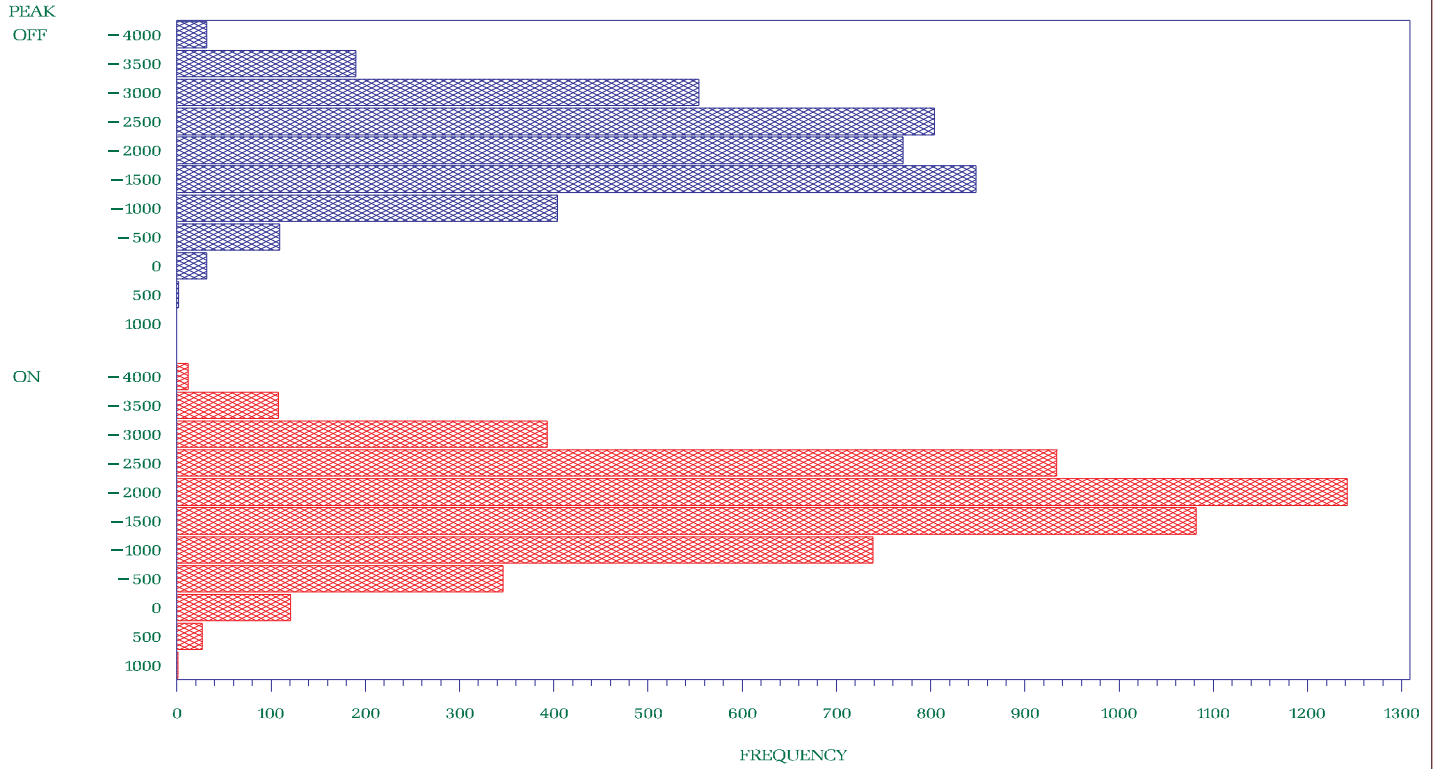


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

NY EXPORT

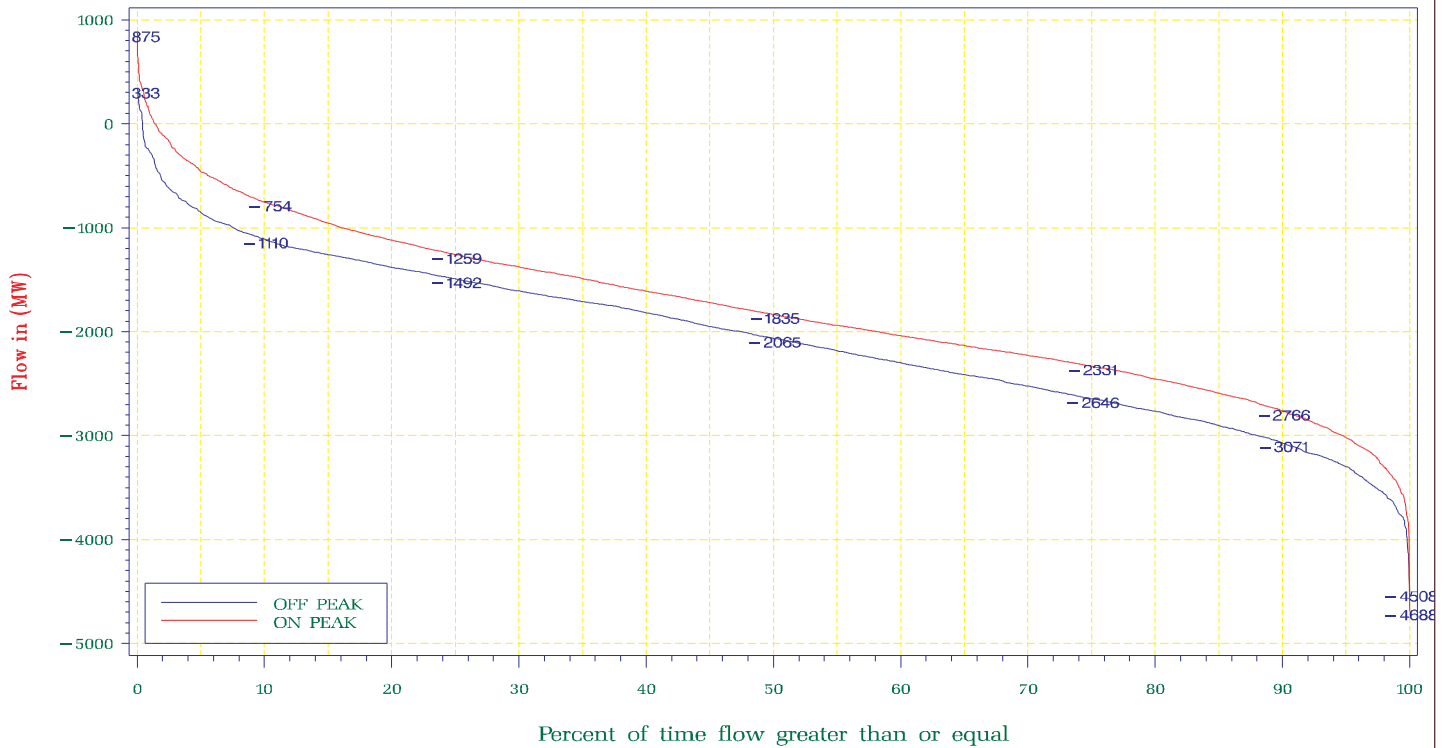


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

NY EXPORT

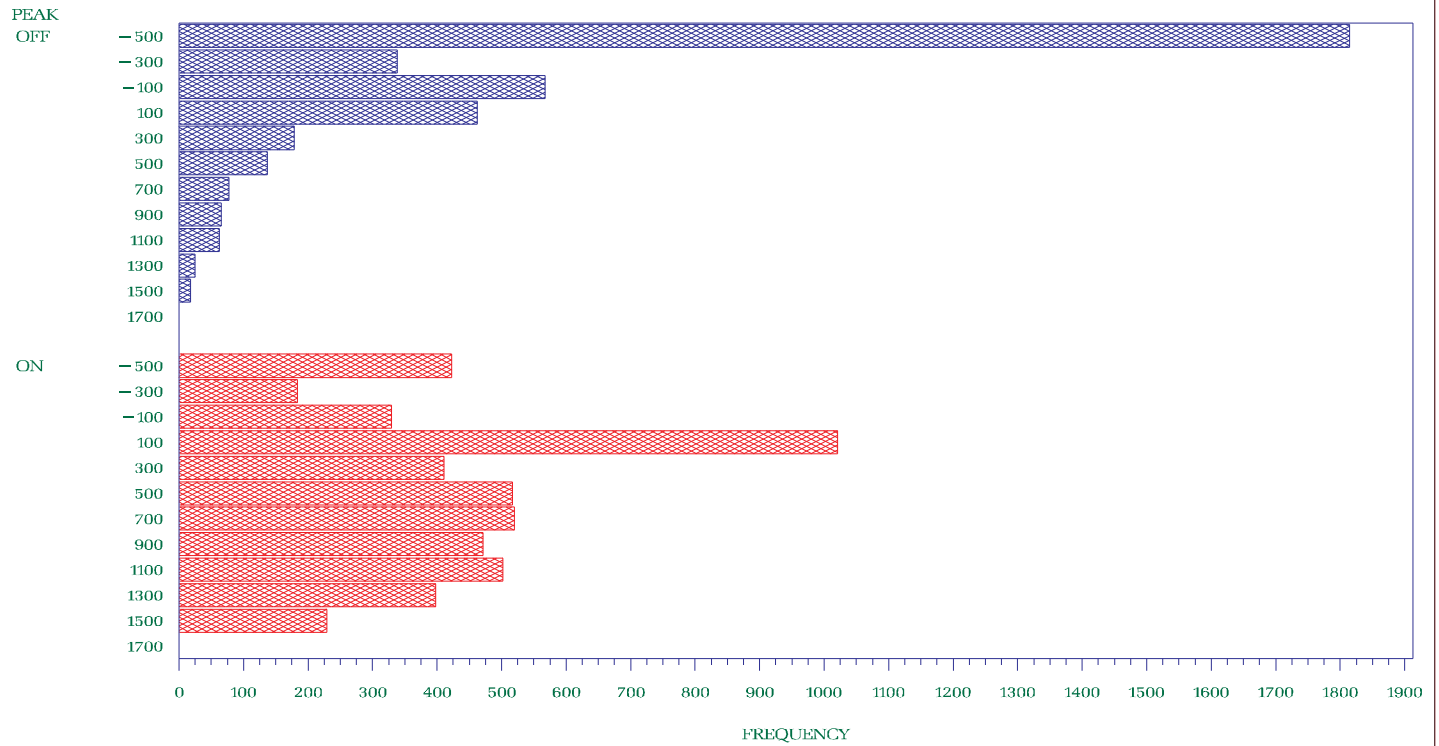


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

TE – NY SCHEDULE  
Chateauguay – Massena

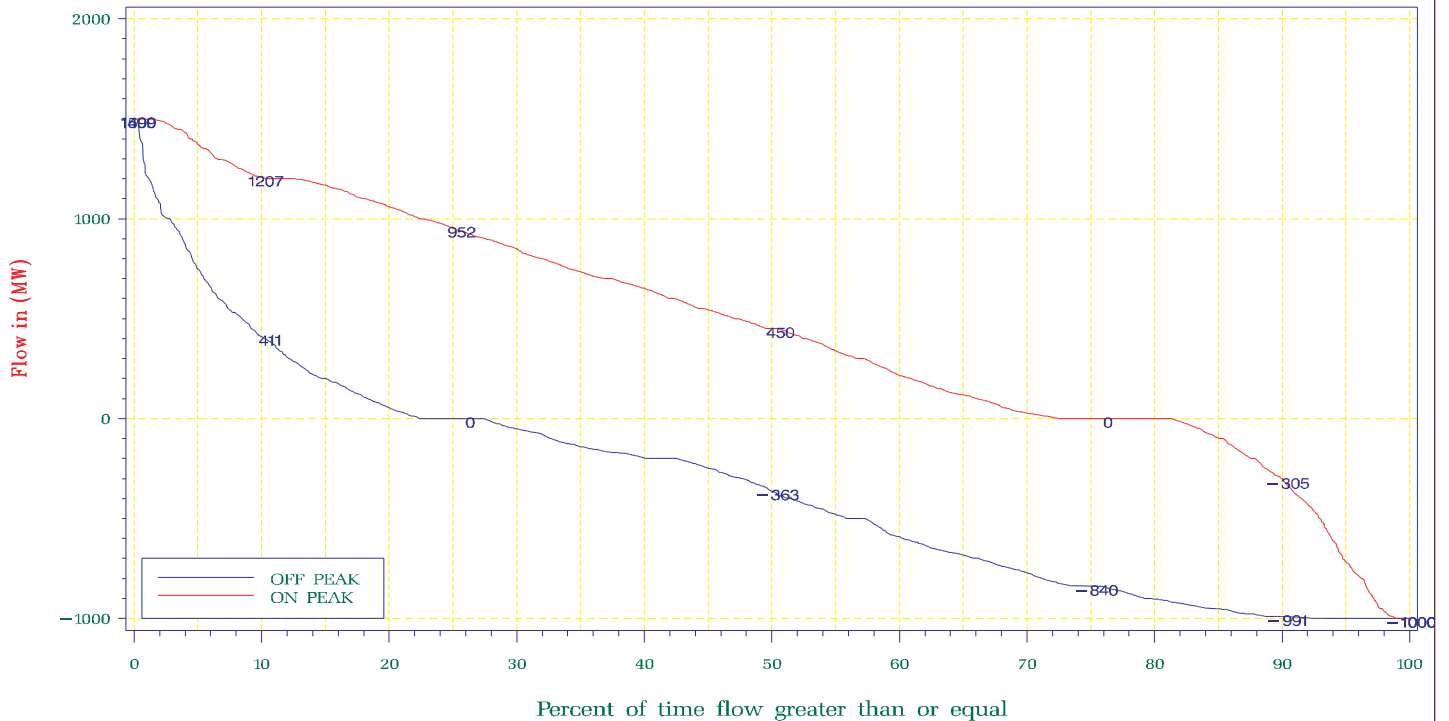


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

TE – NY SCHEDULE  
Chateauguay – Massena

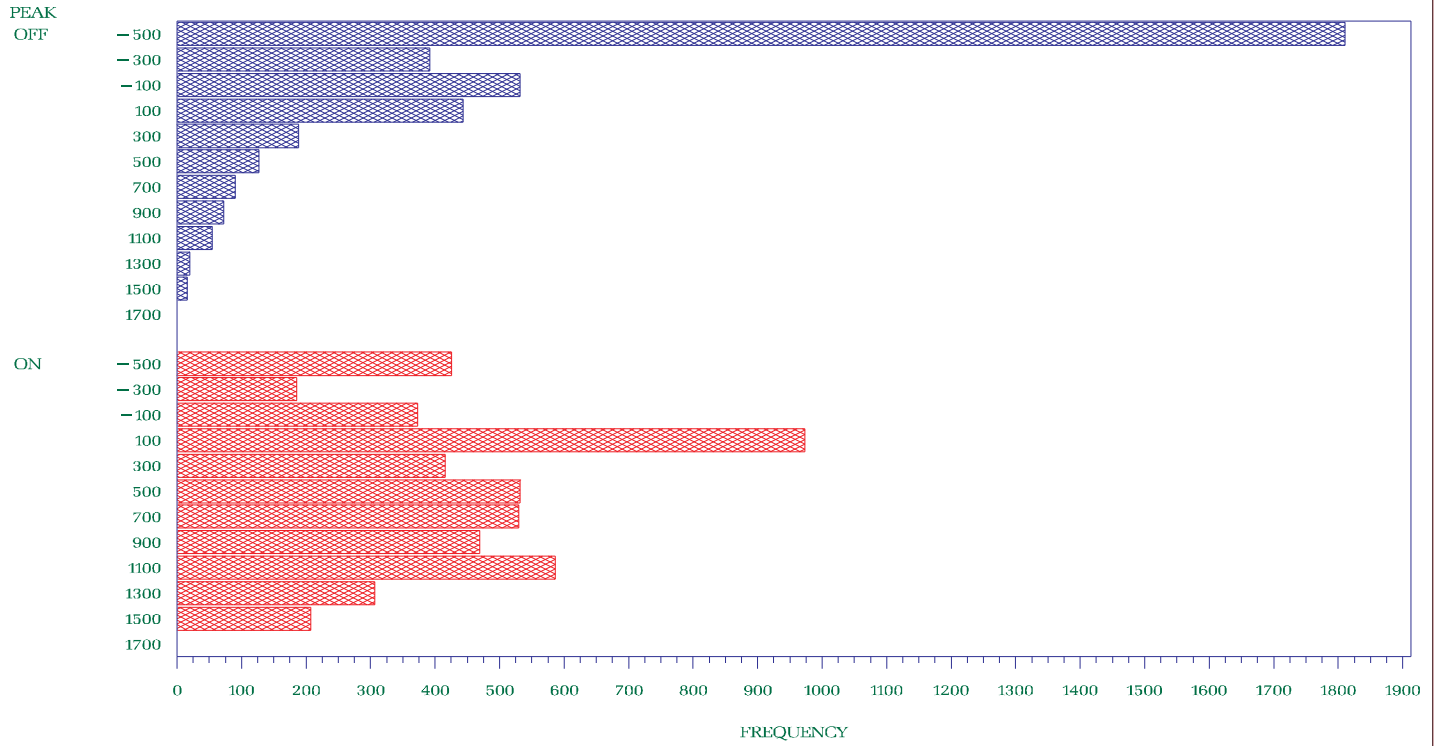


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

TE – NY  
Chateauguy – Massena

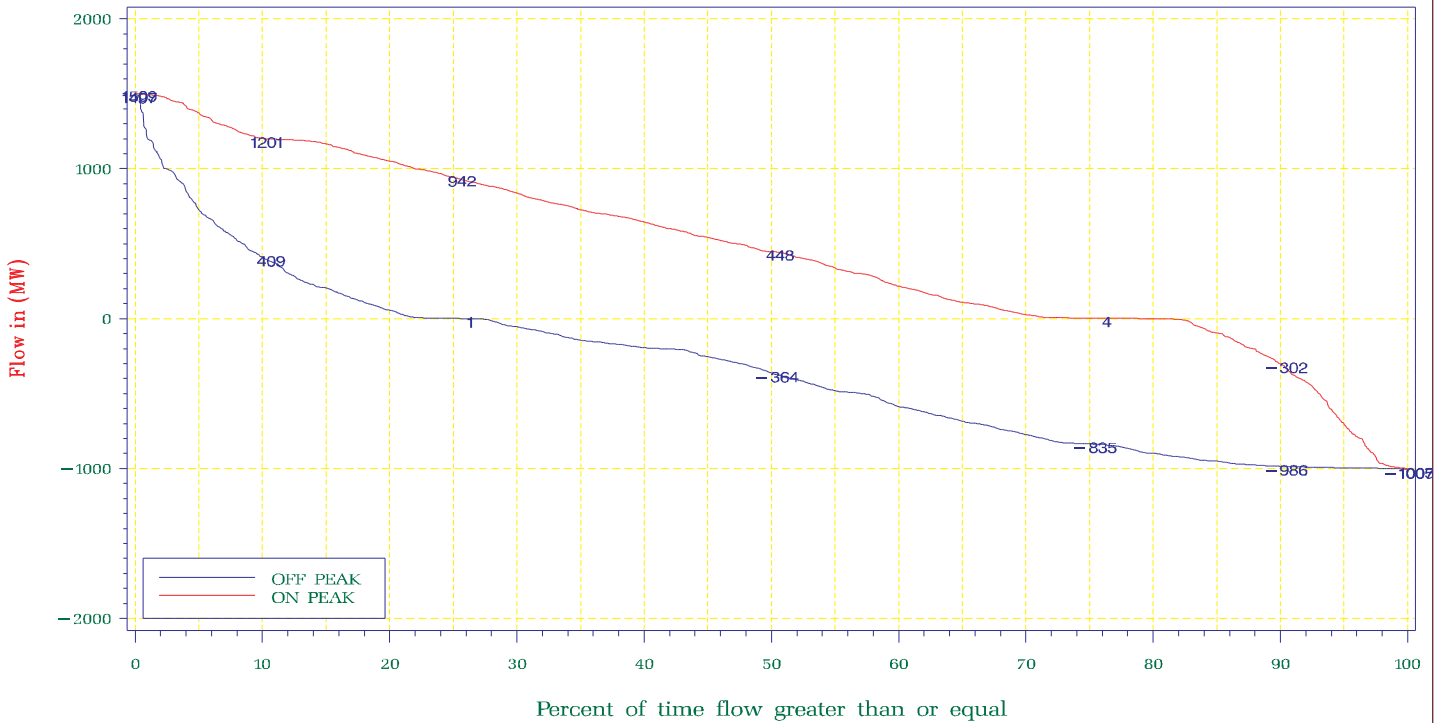


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

TE – NY  
Chateauguy – Massena



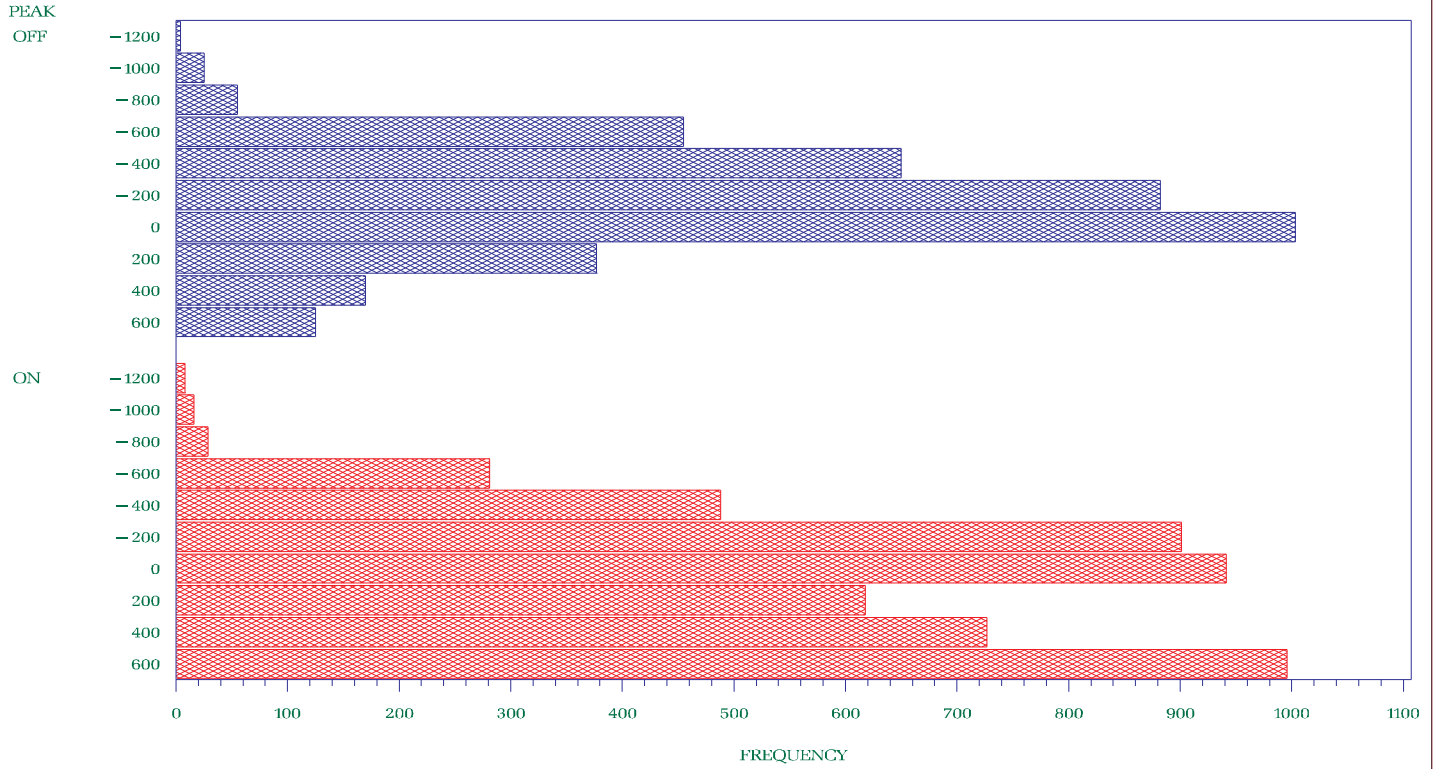
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

New England – NY SCHEDULE

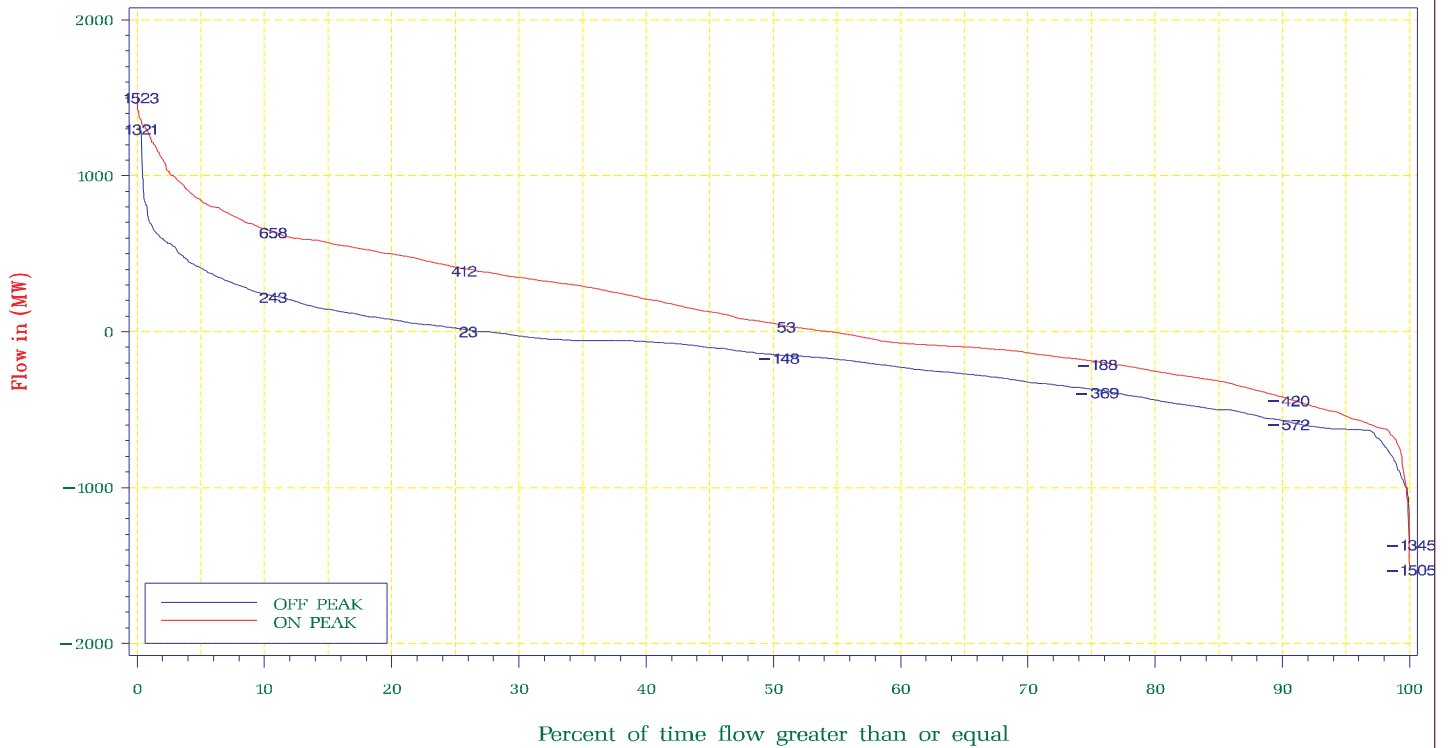


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

New England – NY SCHEDULE

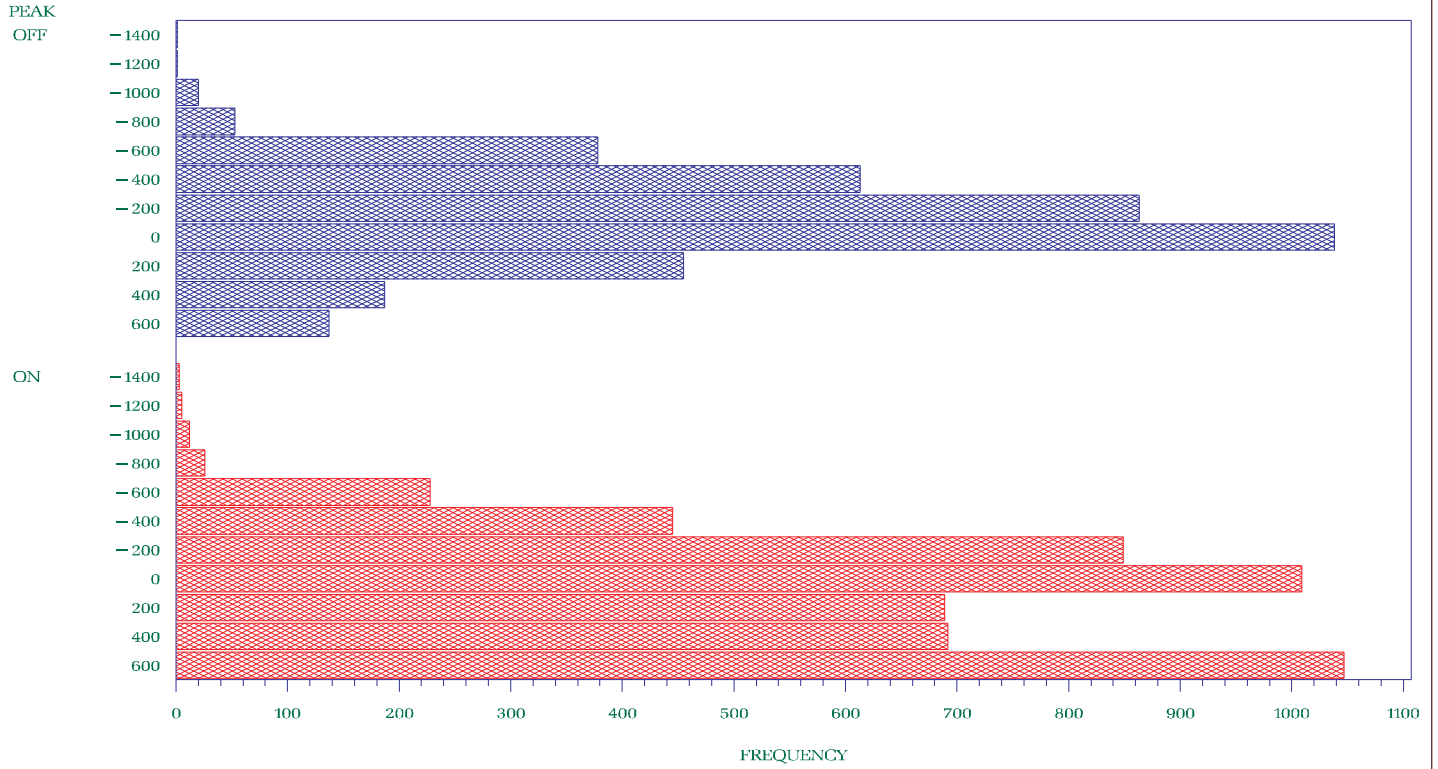


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

New England – NY

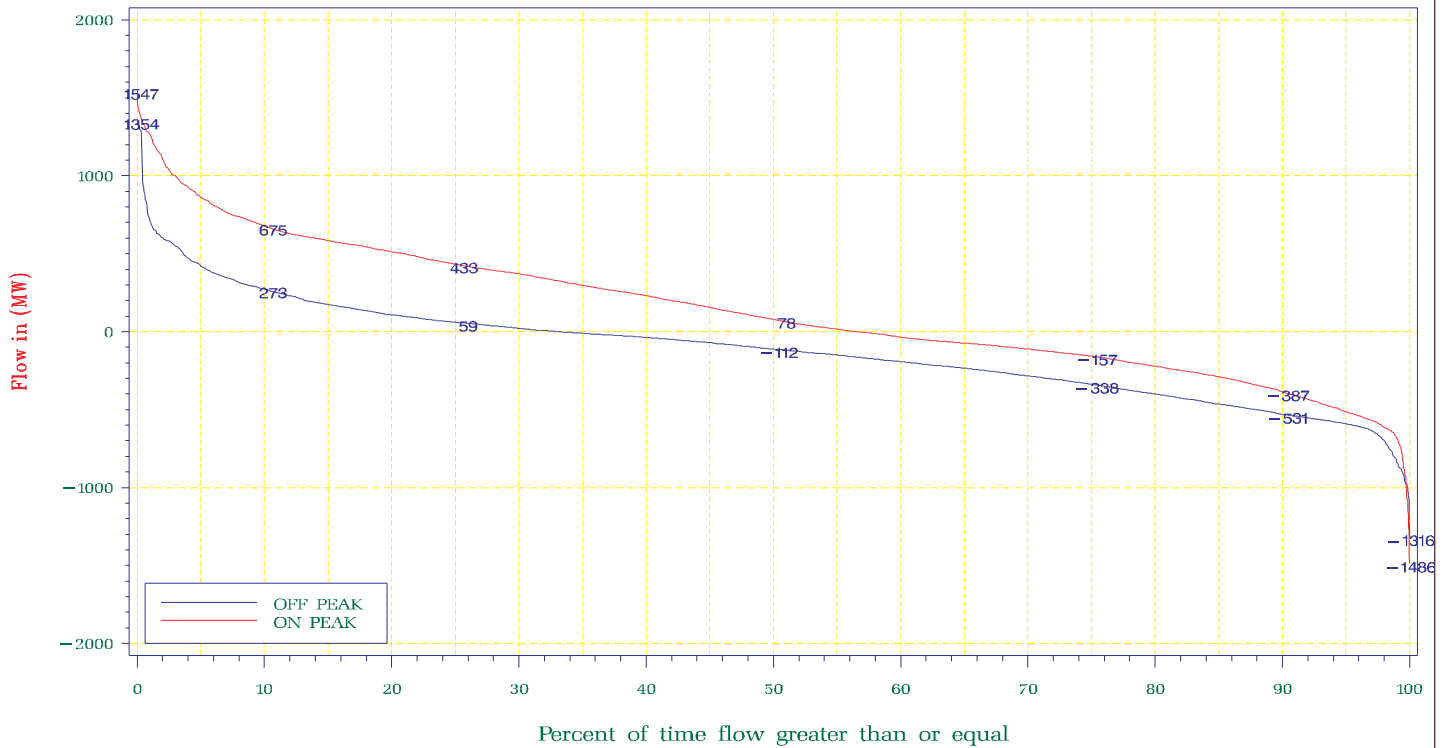


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

New England – NY

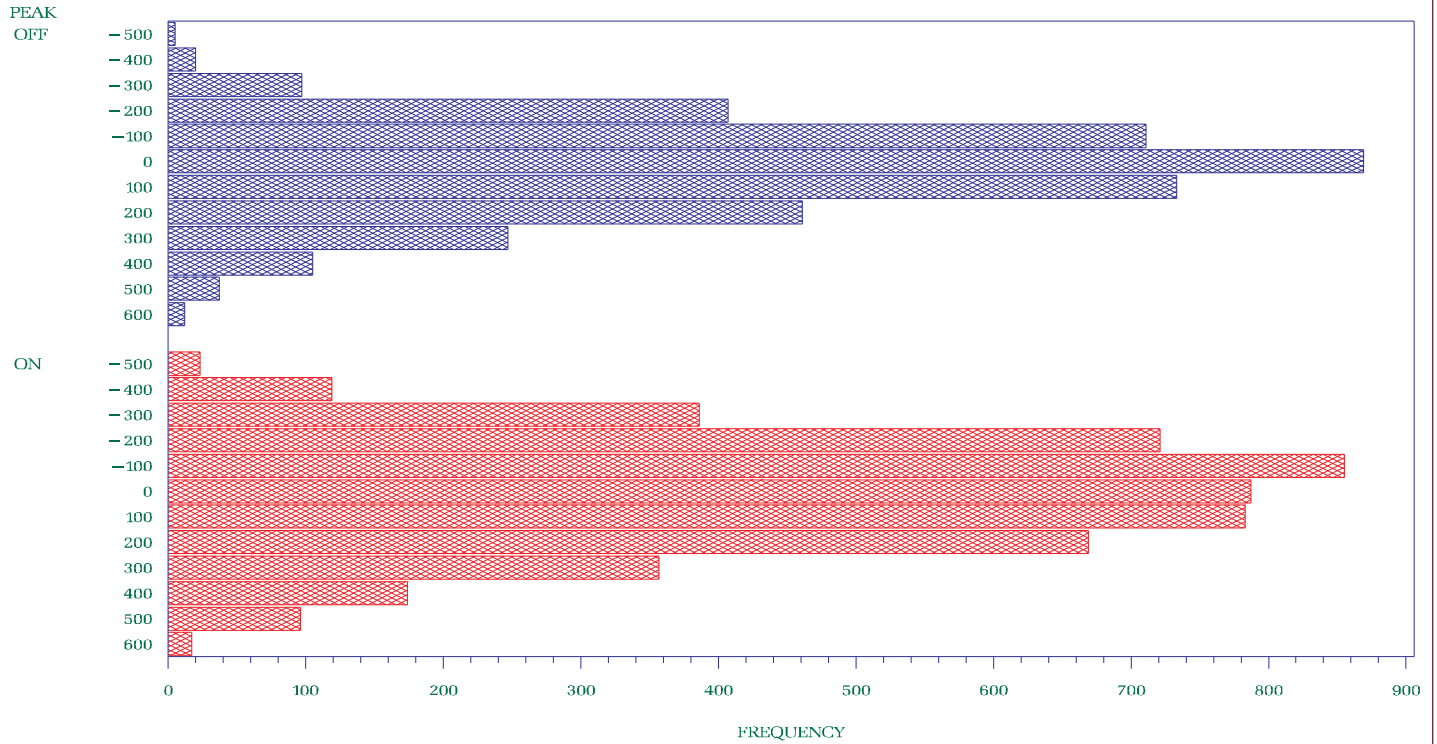


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

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

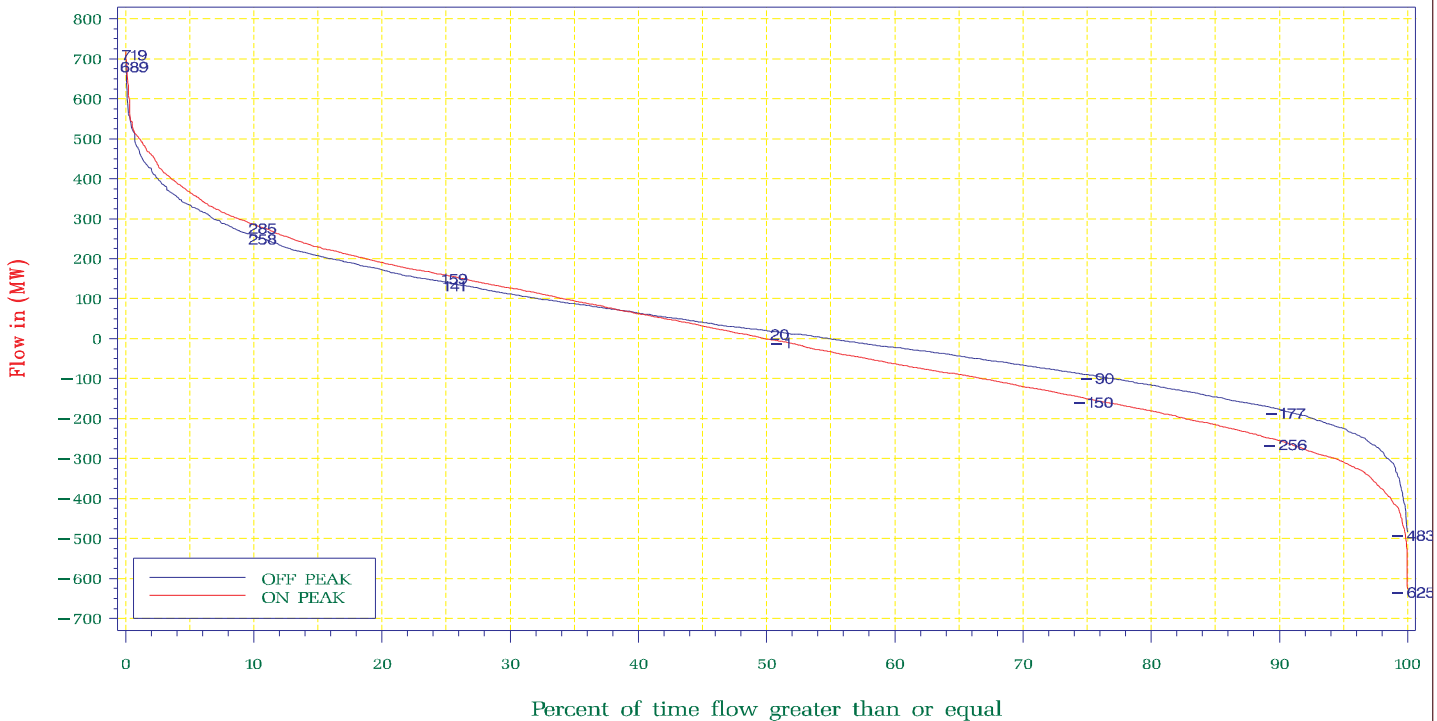


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

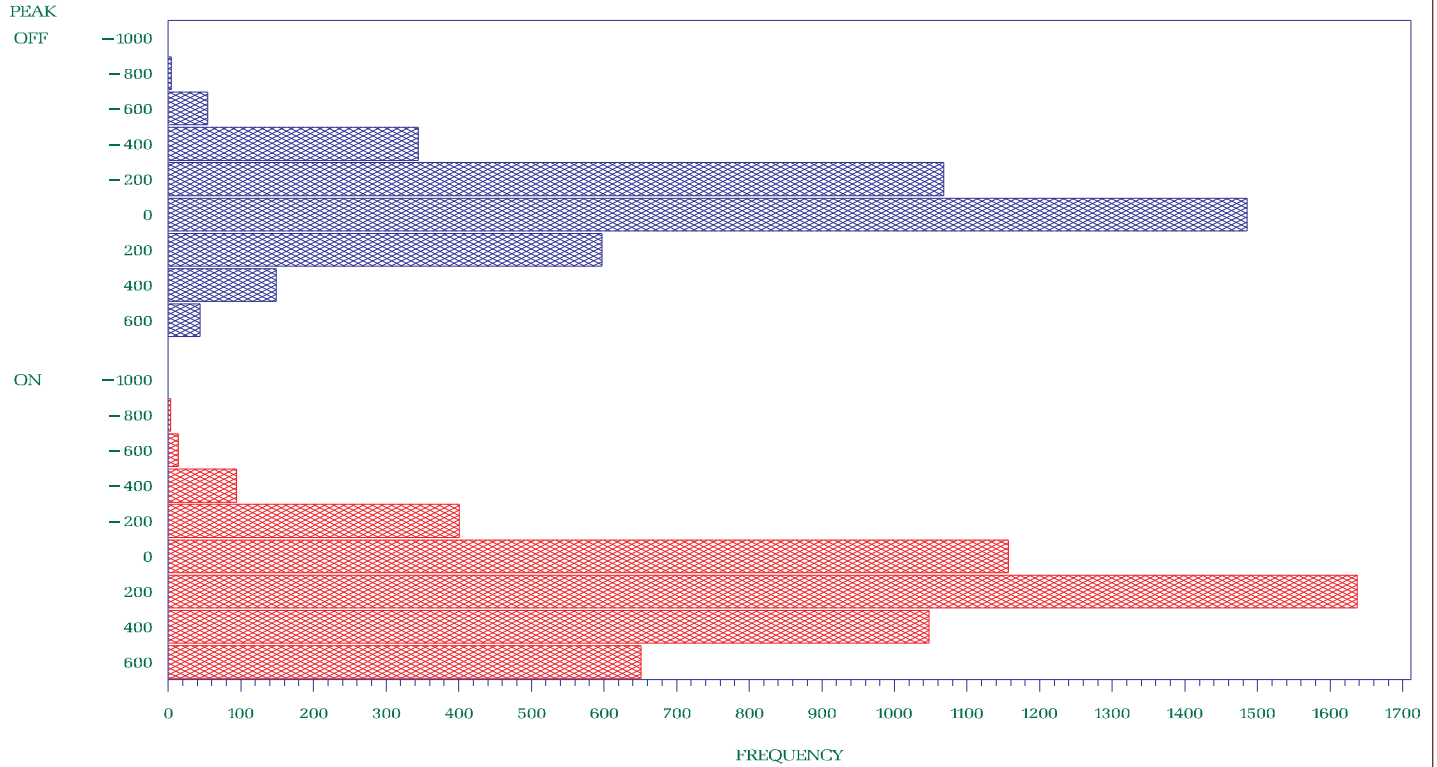


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

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

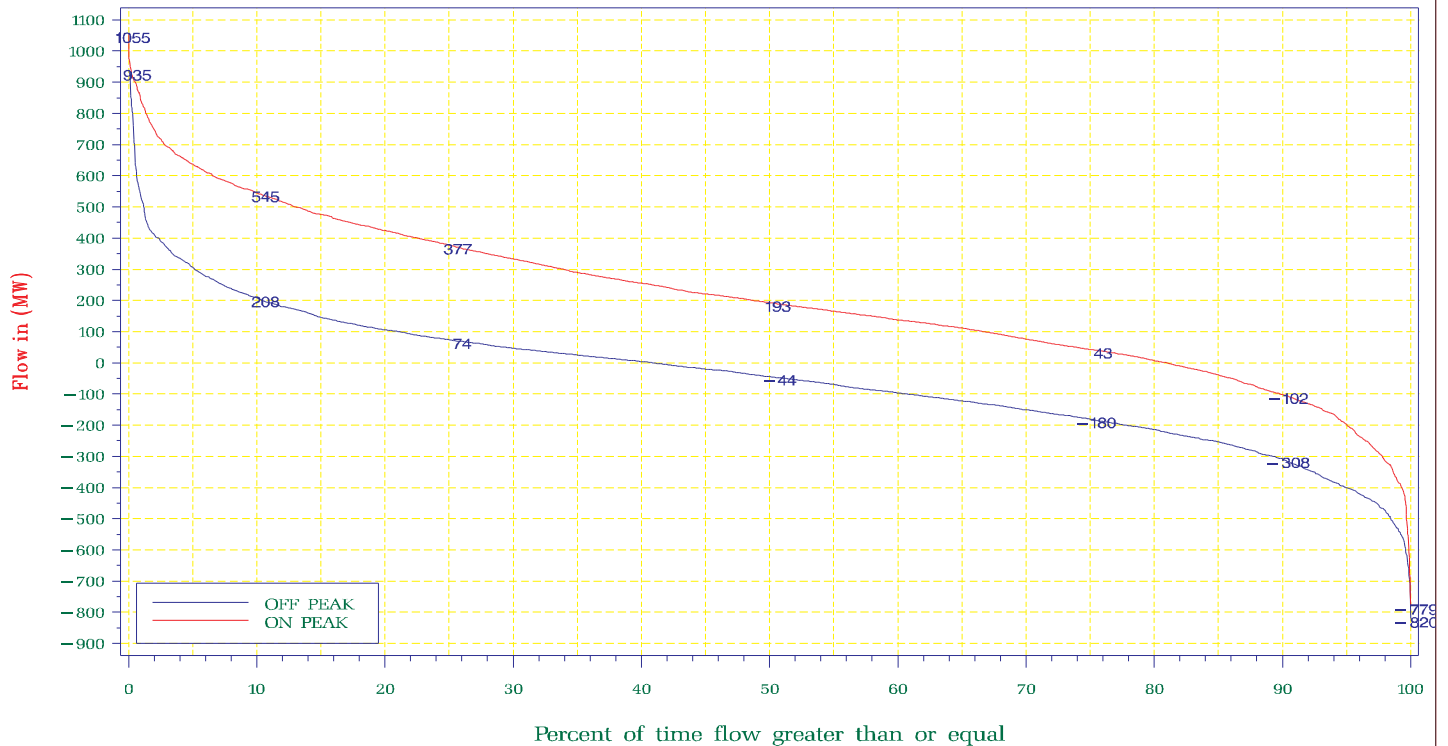


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

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

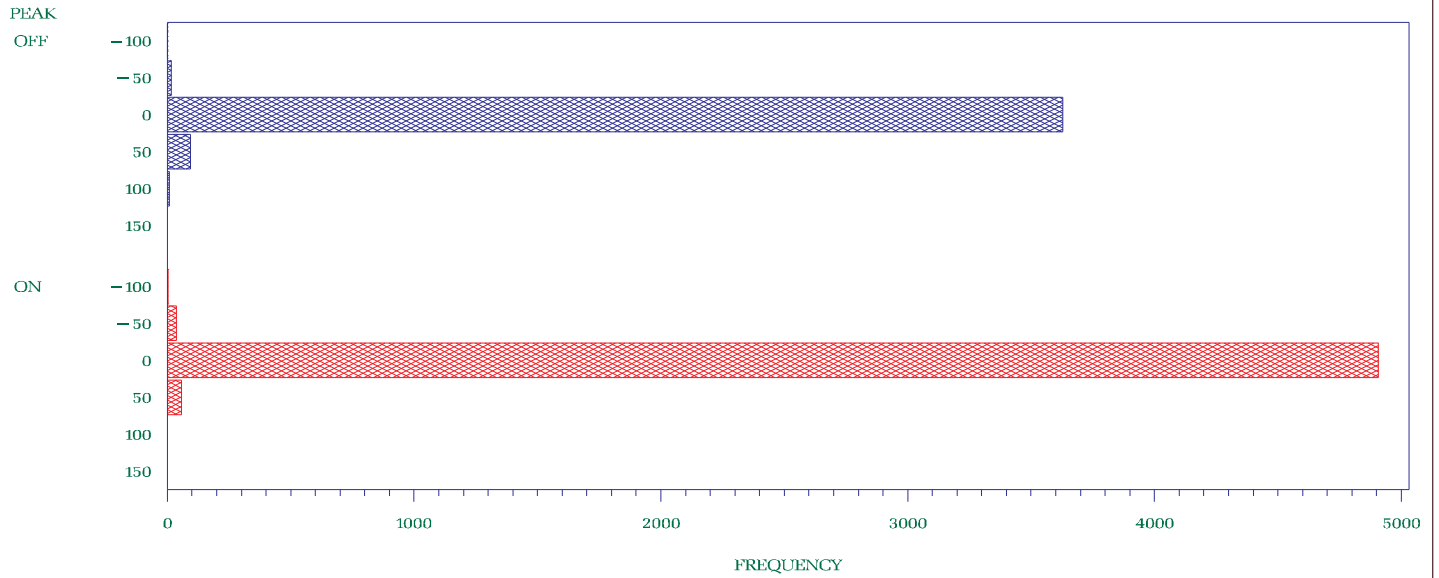


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

New England/NU – Long Island

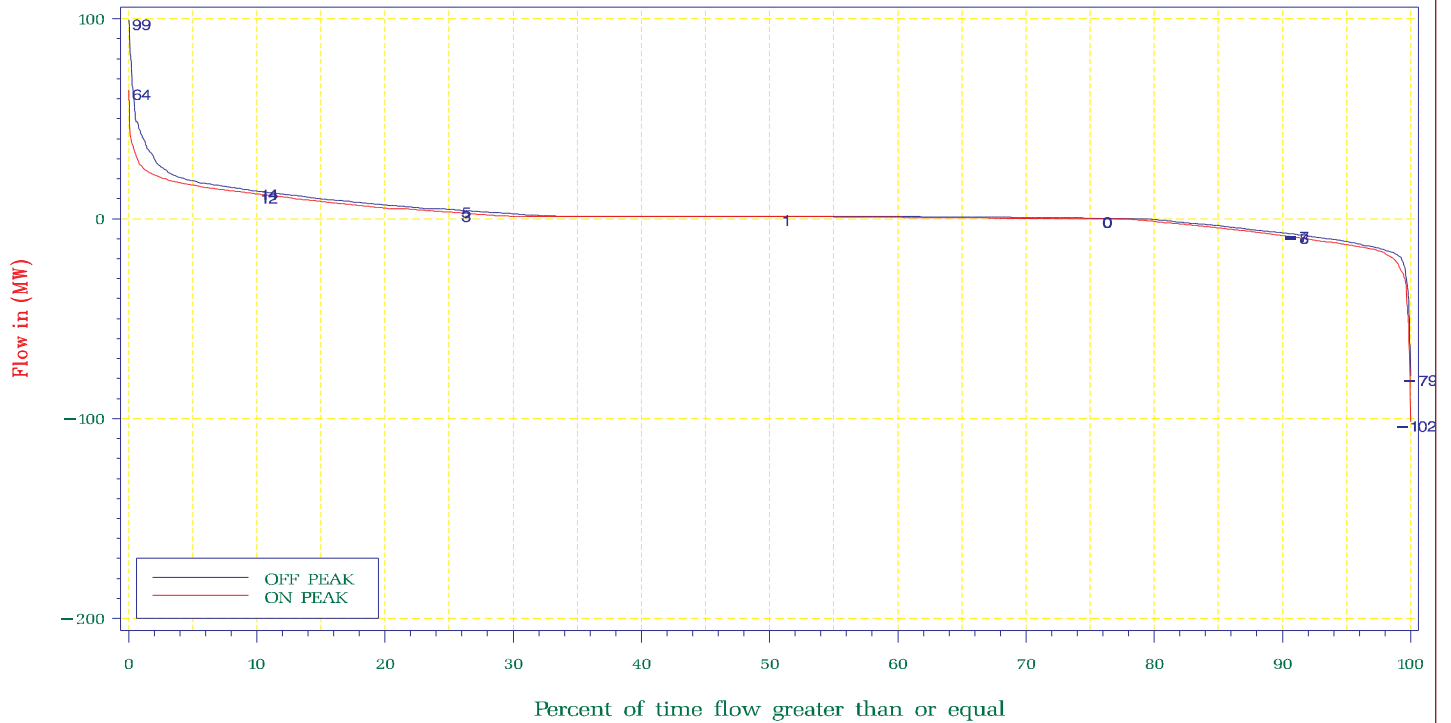


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

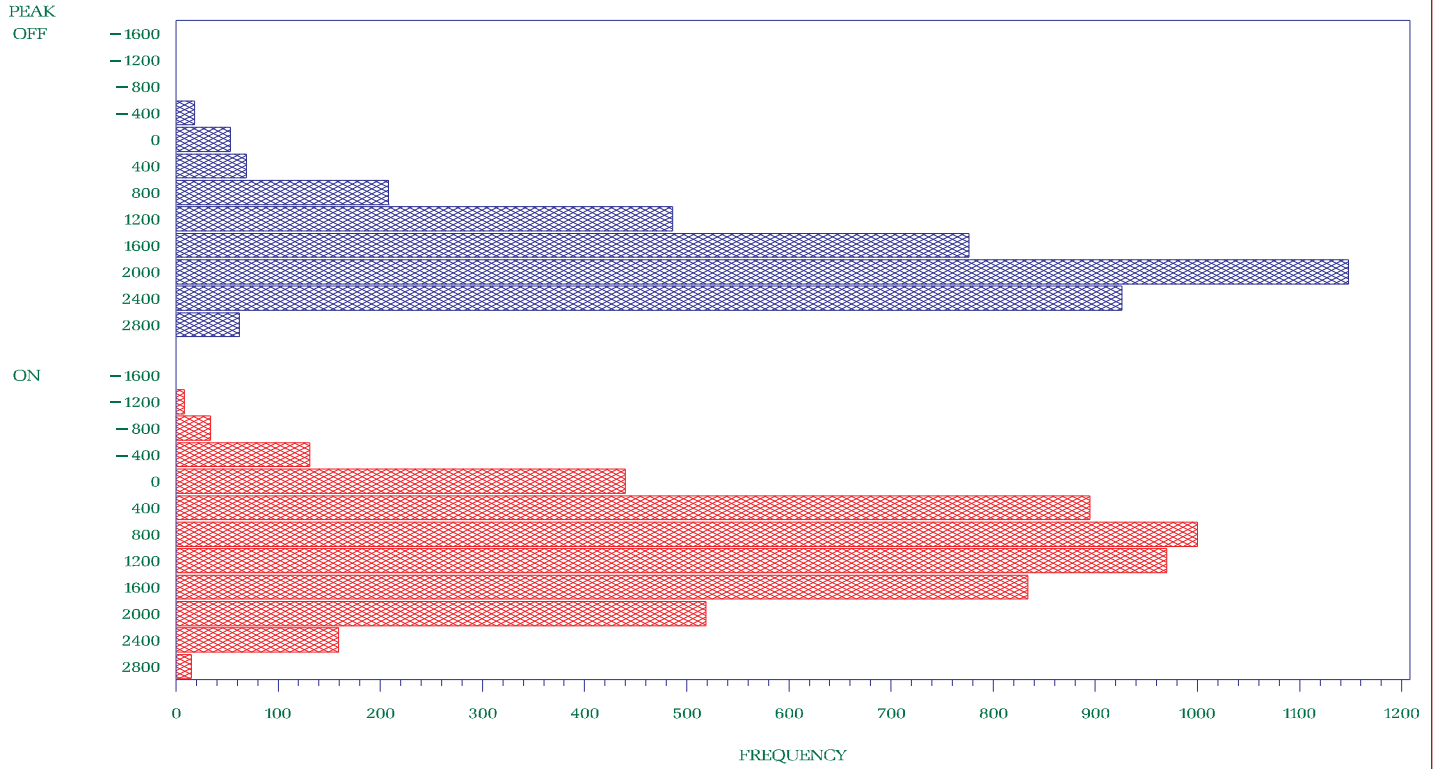


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

PJM – NY SCHEDULE

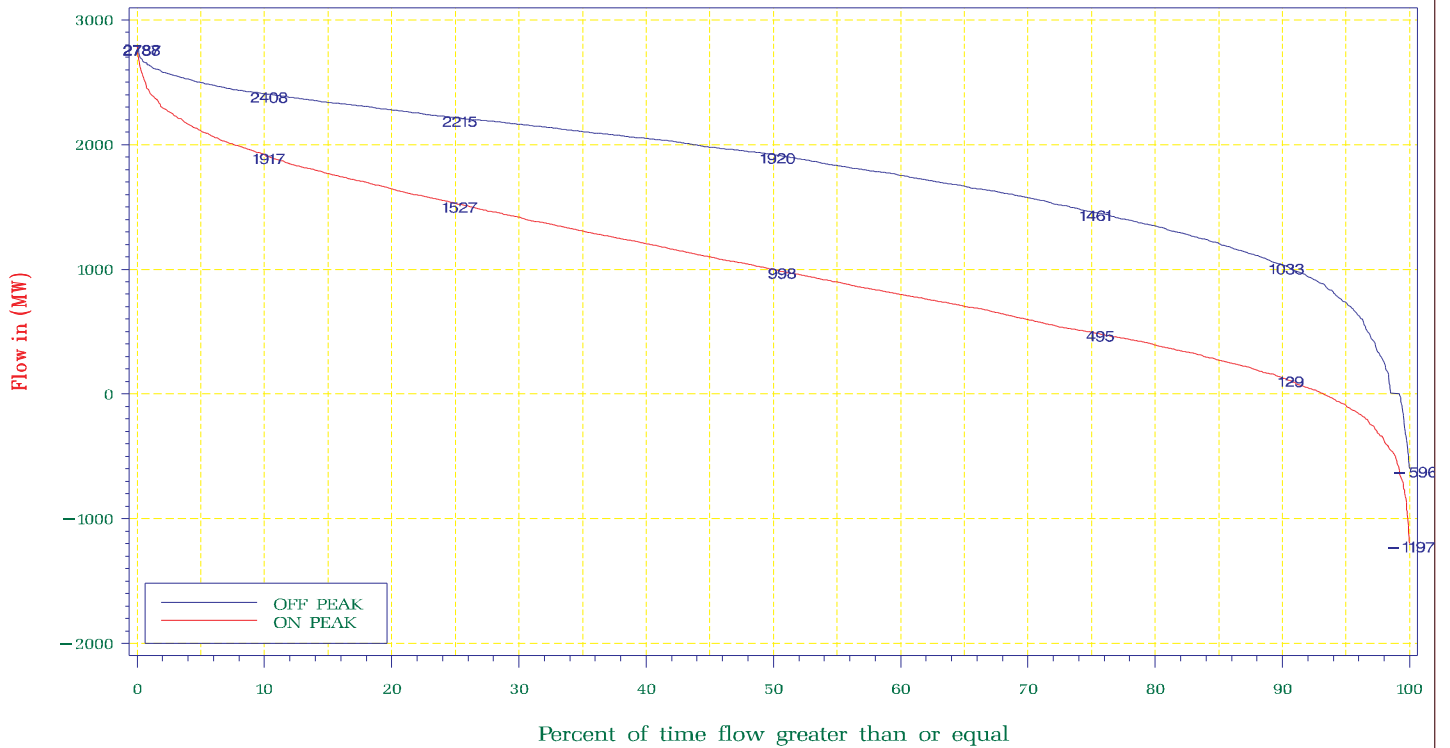


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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 2003

PJM – NY

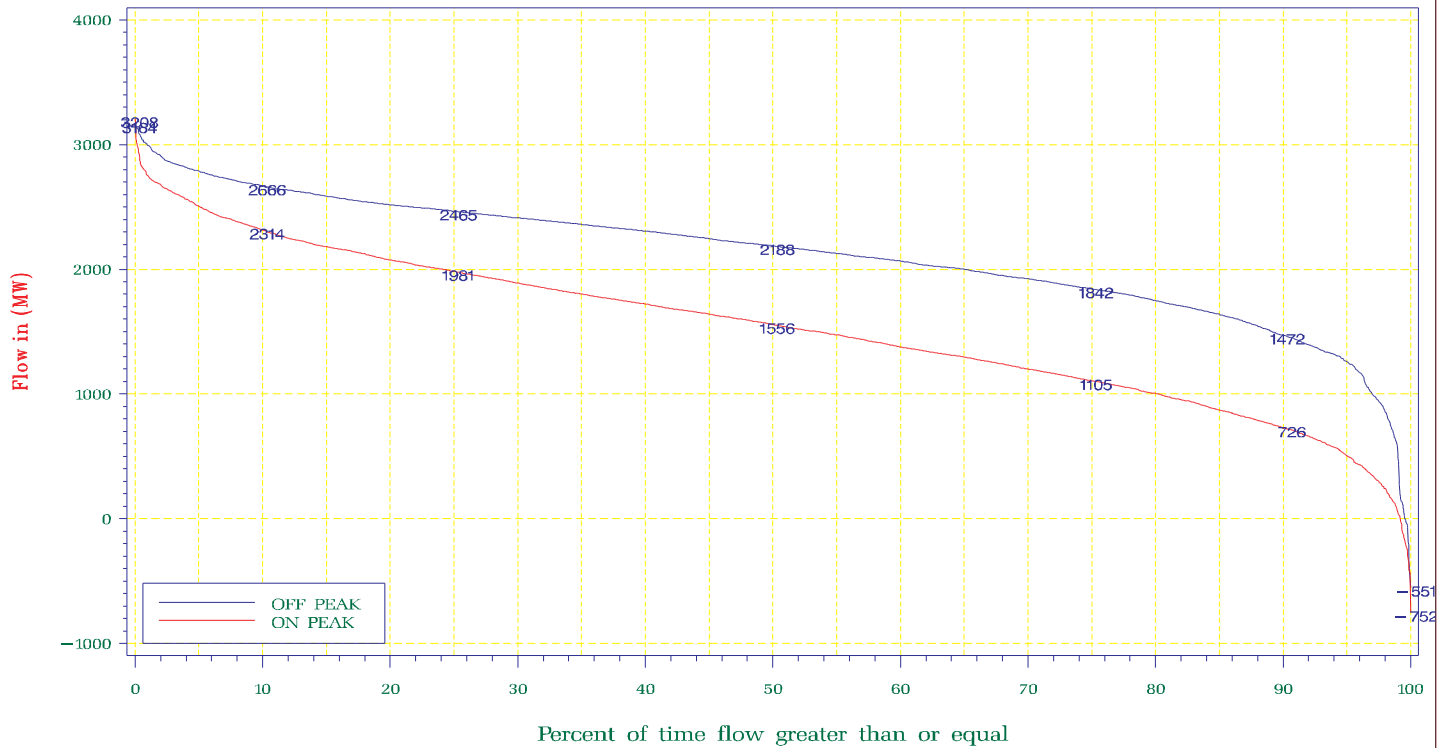


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

PJM – NY

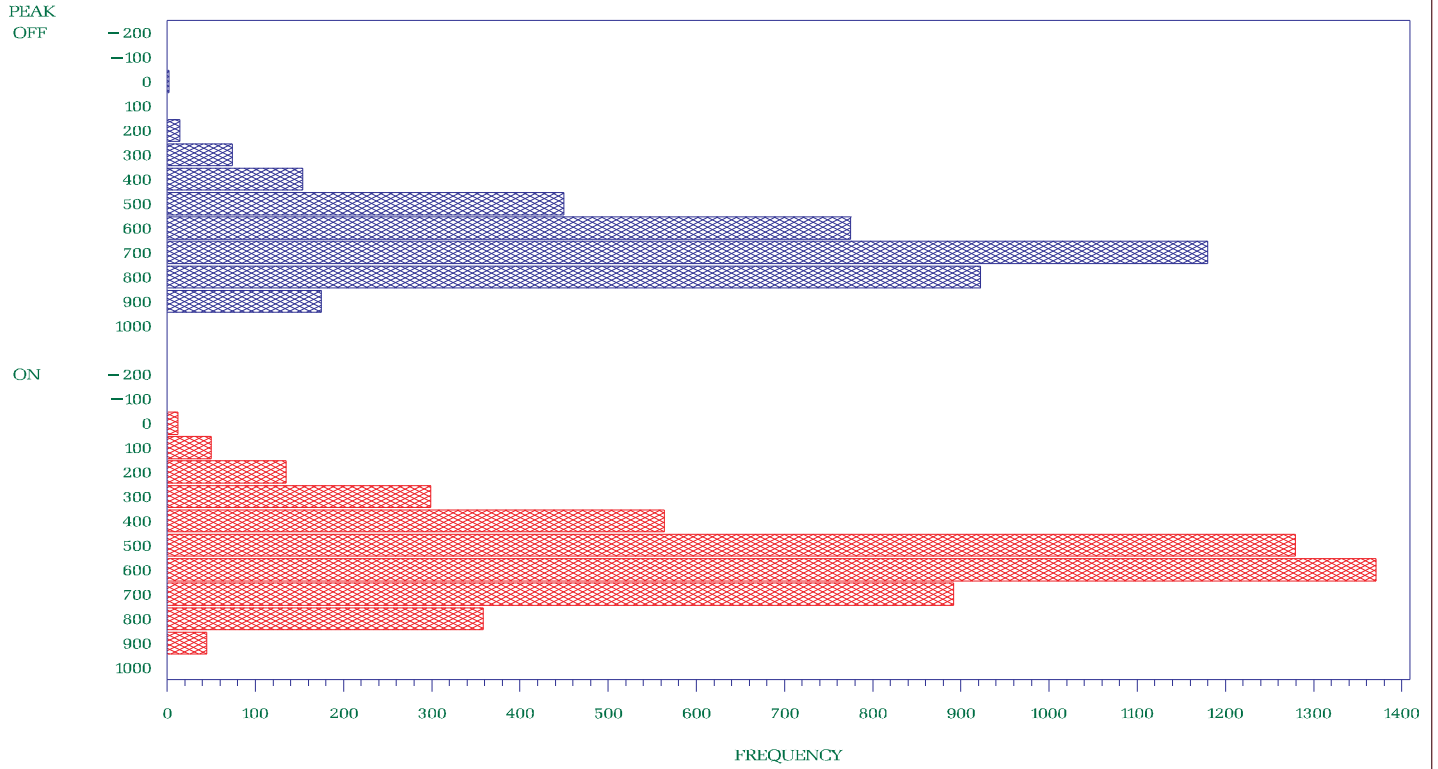


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

PJM West – Central

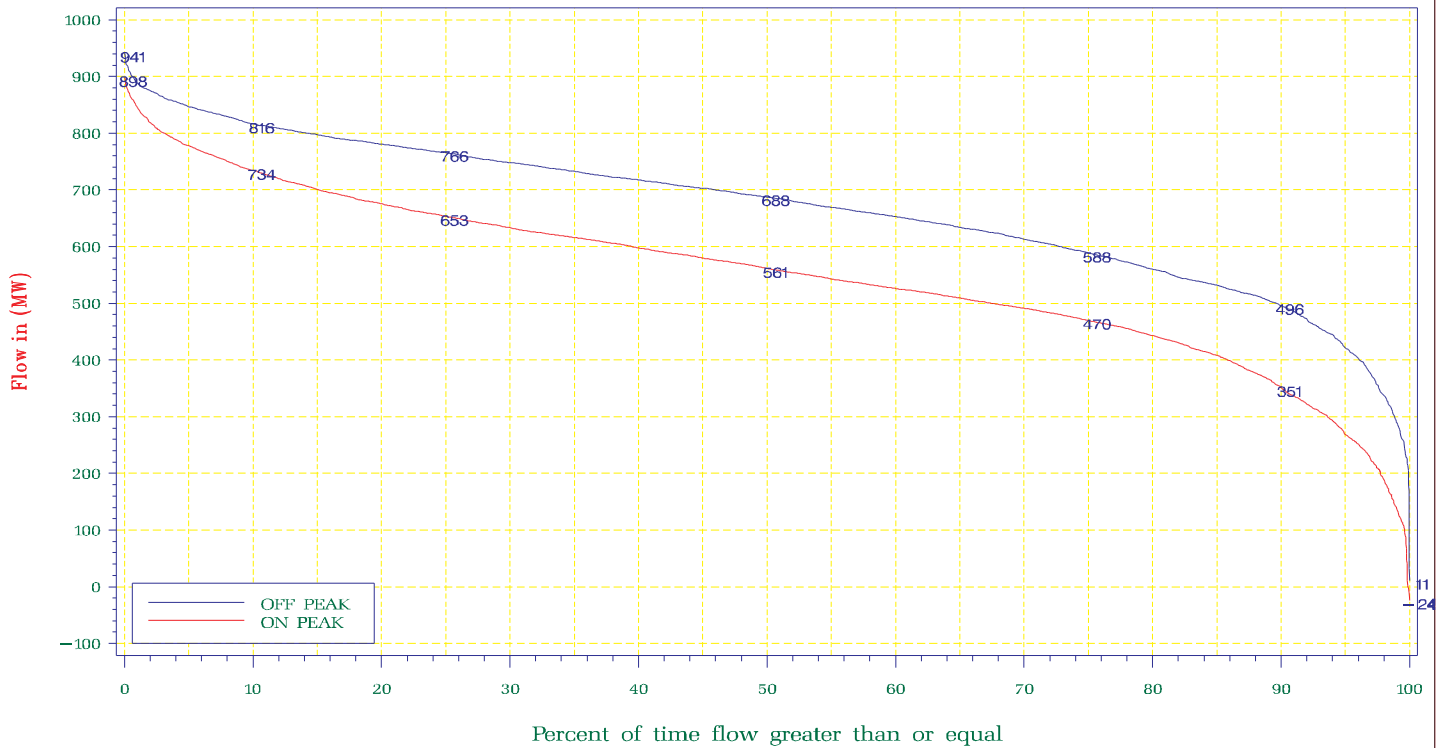


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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 2003

PJM West – Frontier

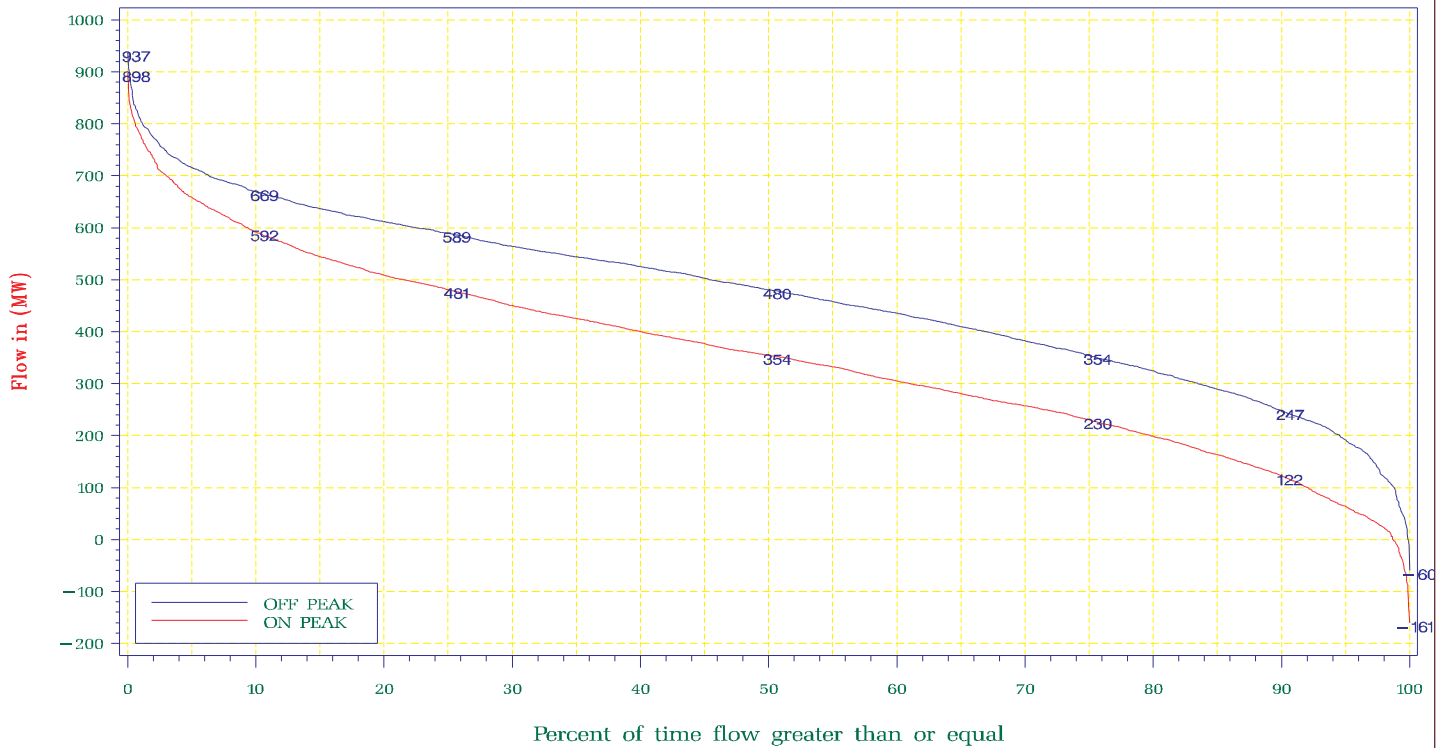


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

PJM West – Frontier

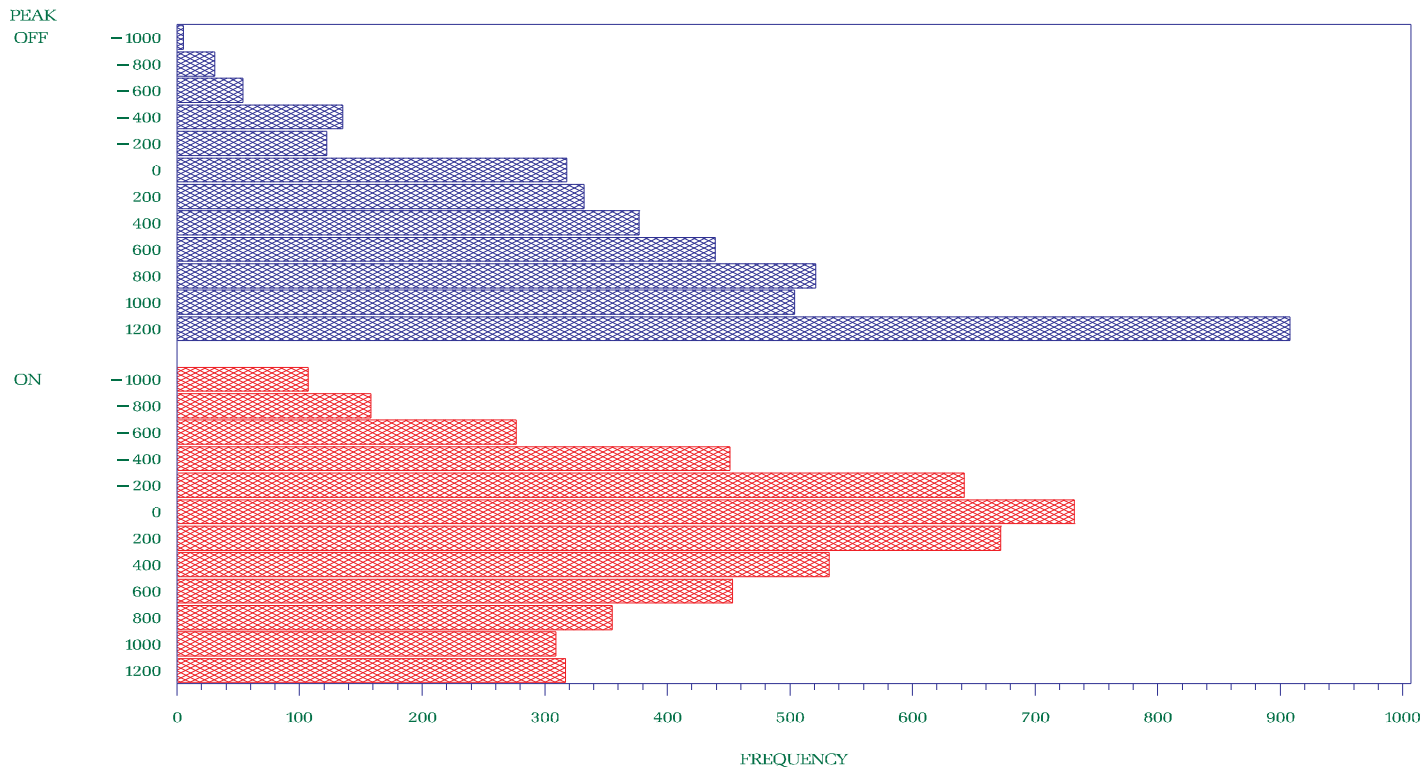


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

ONTARIO – NY SCHEDULE

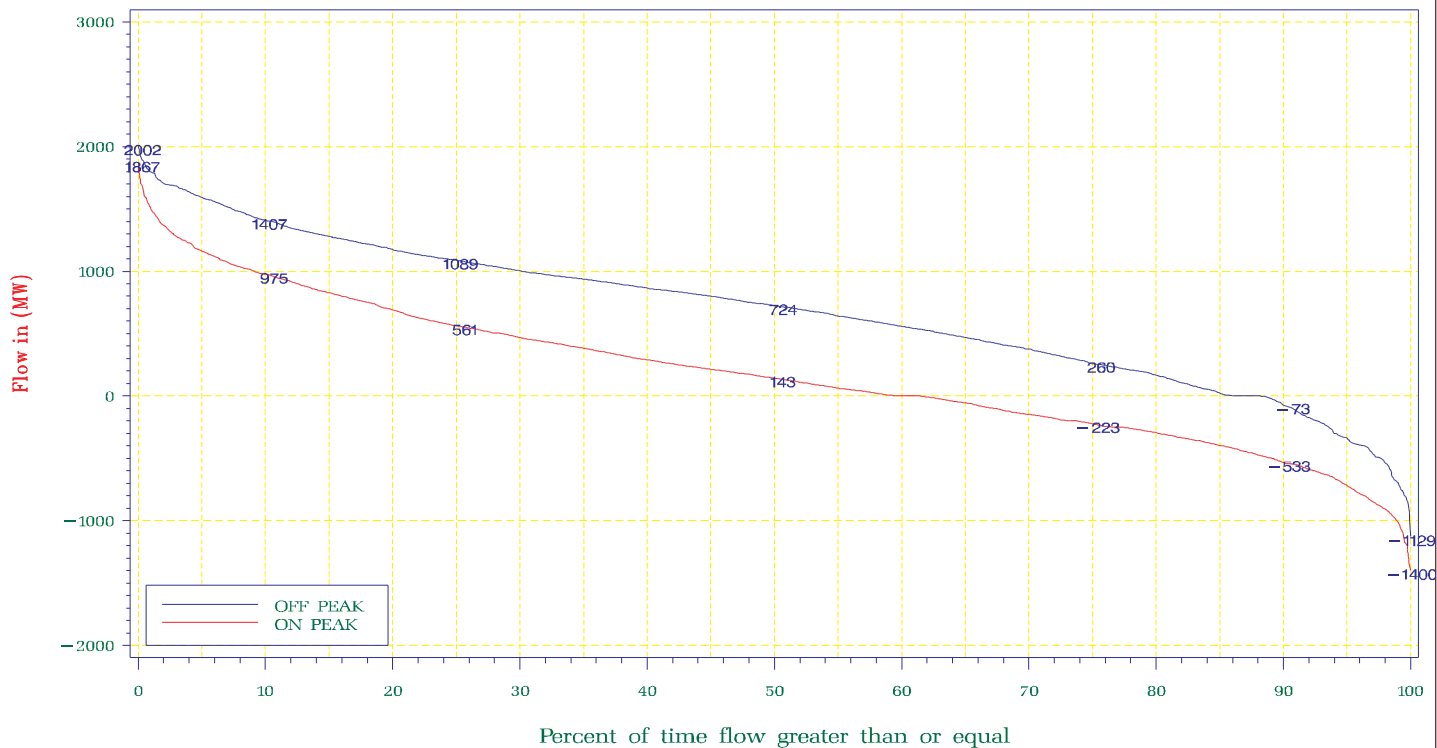


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

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 2003

ONTARIO – NY

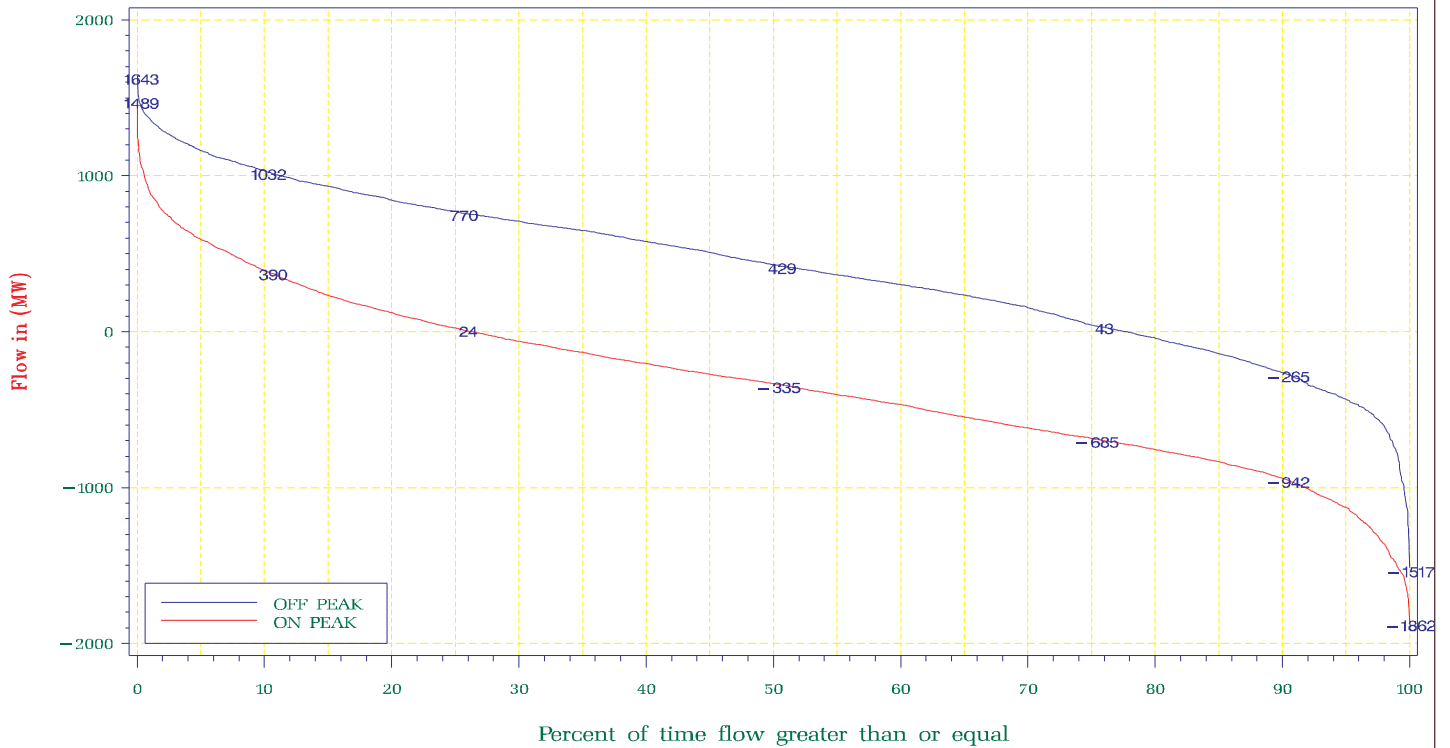


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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 2003

Ontario East – Adirondack

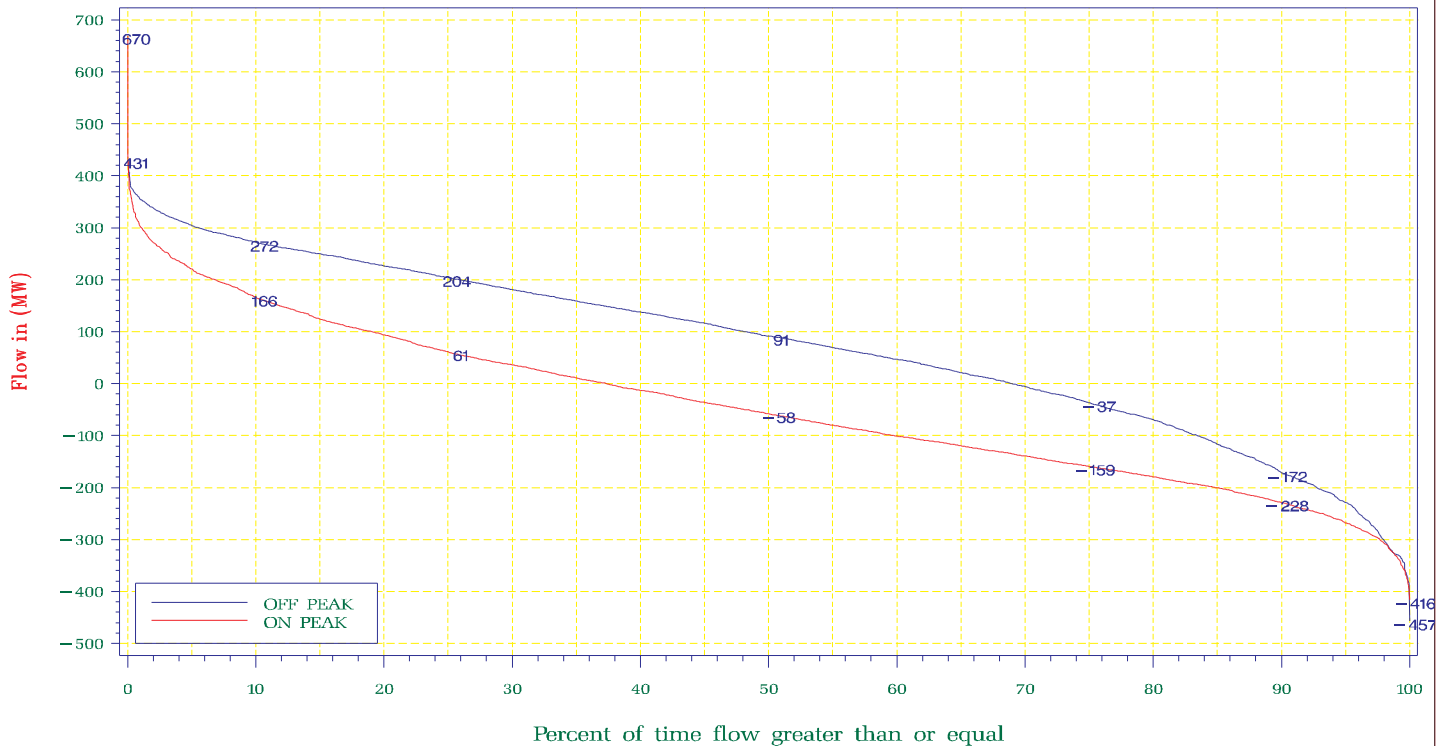


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Ontario East – Adirondack

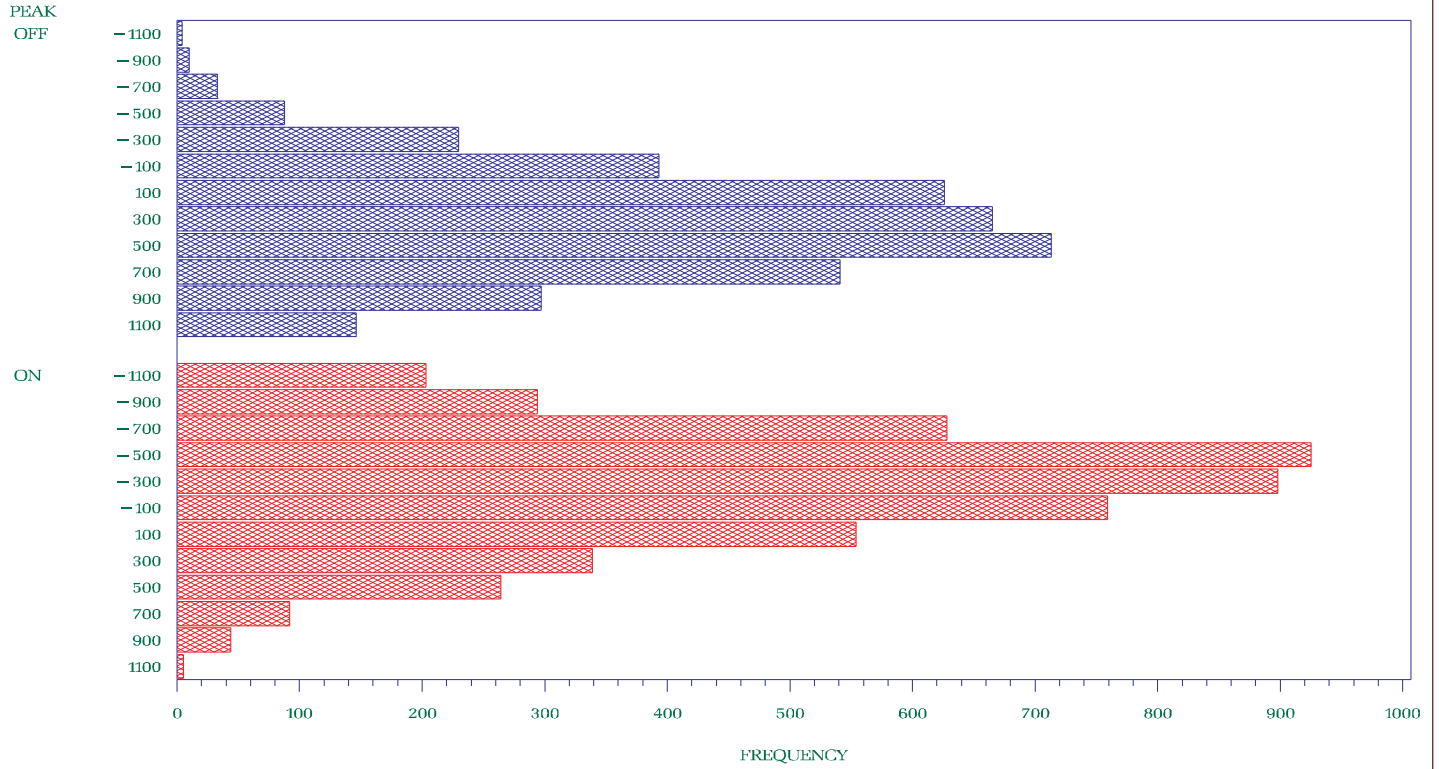


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Ontario South – Frontier

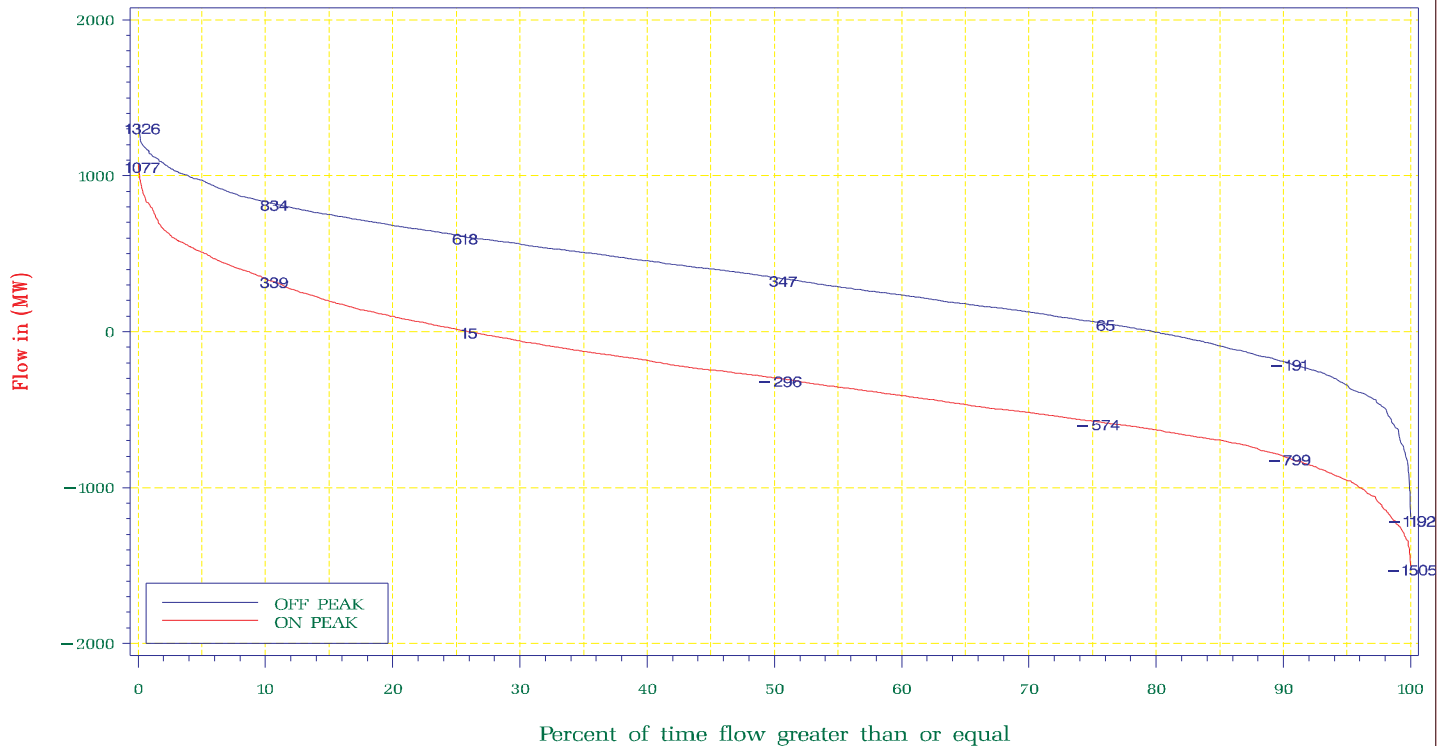


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Ontario South – Frontier

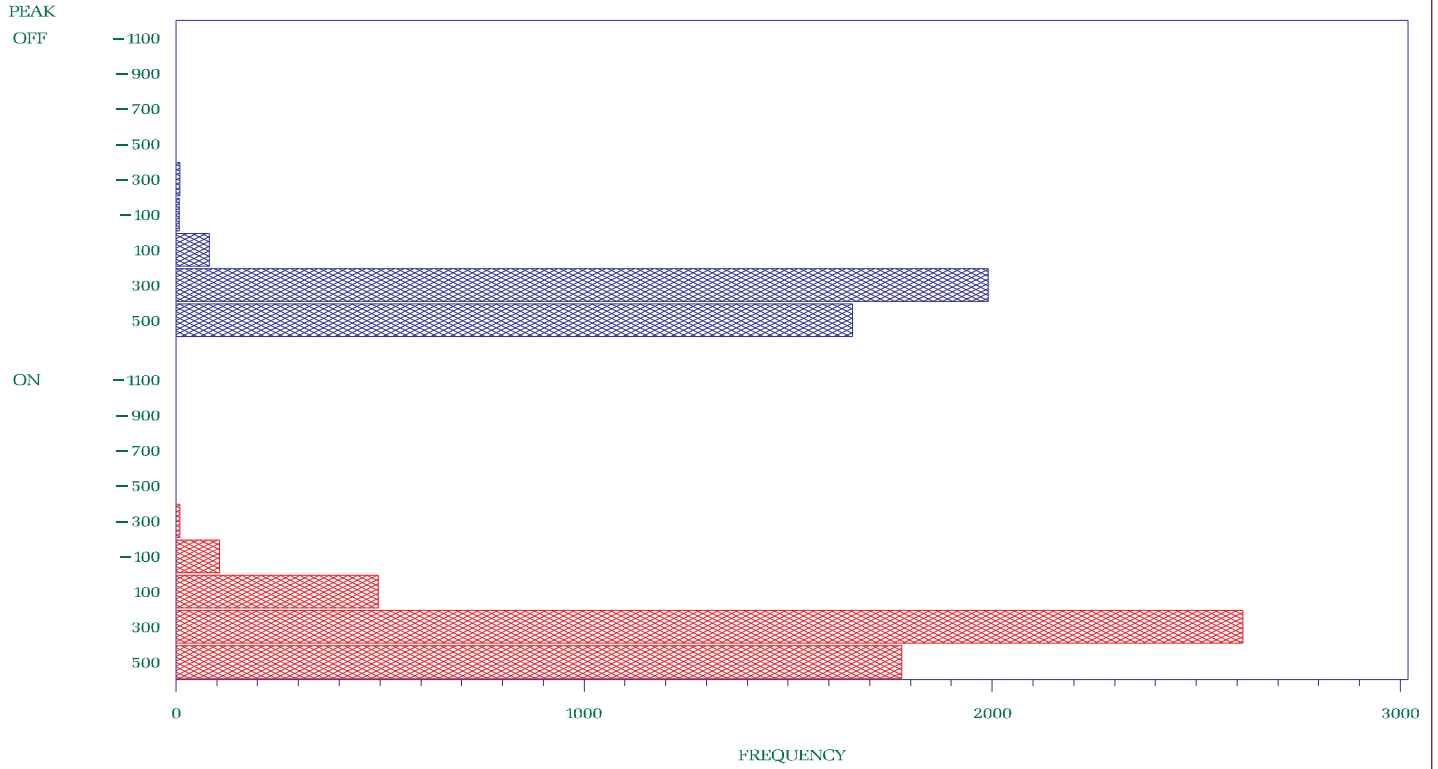


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

NY – ONTARIO COUNTER CLOCKWISE CIRCULATION

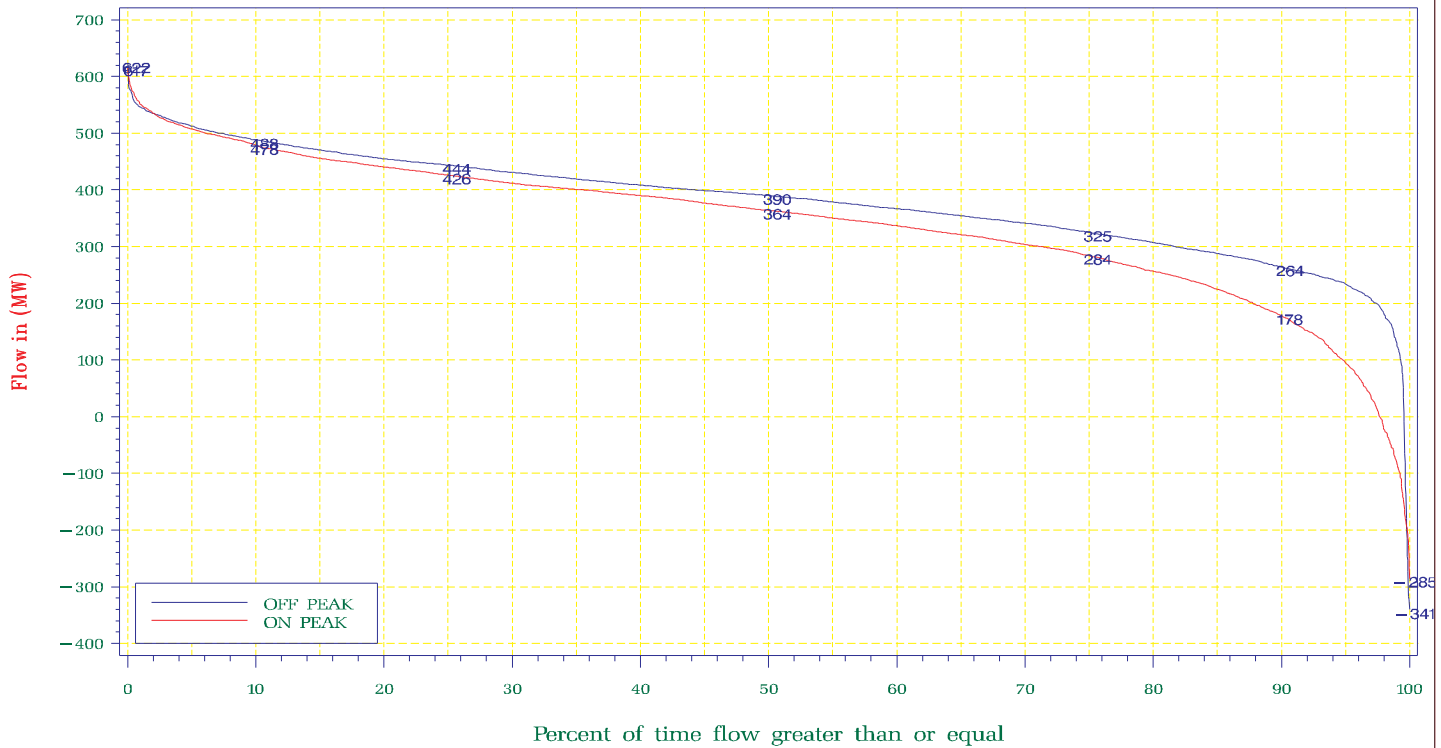


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

NY – 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 2003

UPNY – SENY (OPEN)

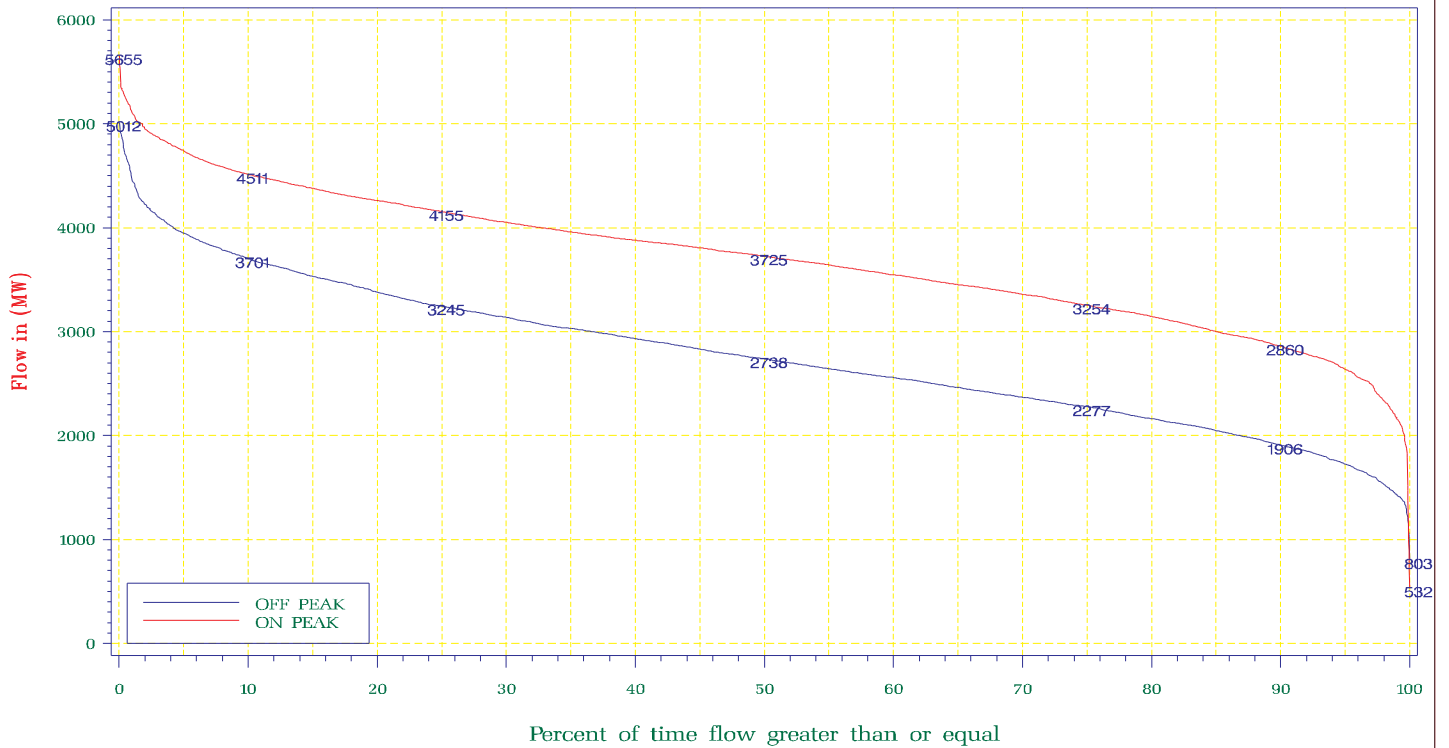


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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 2003

UPNY – SENY (CLOSED)

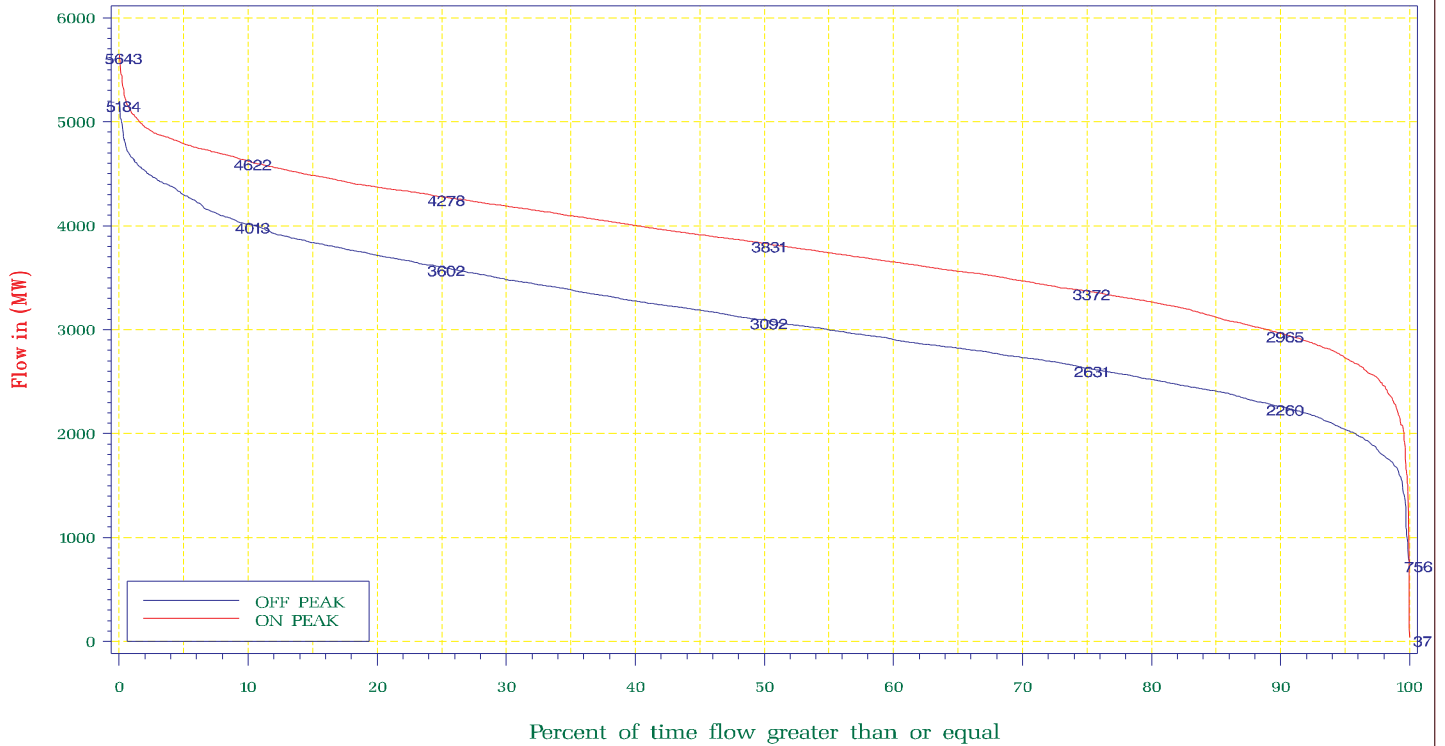


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

UPNY – SENY (CLOSED)



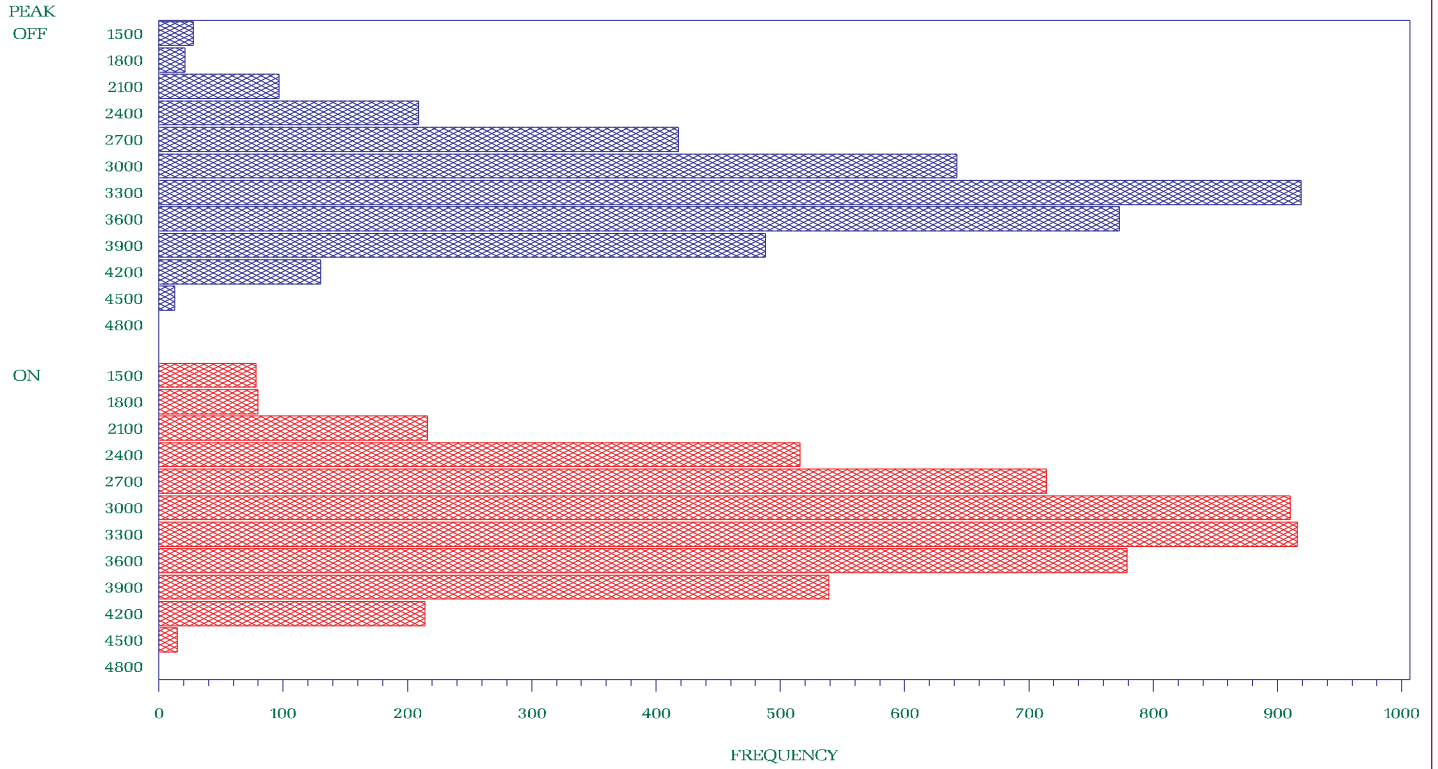
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

Volney – East (OPEN)

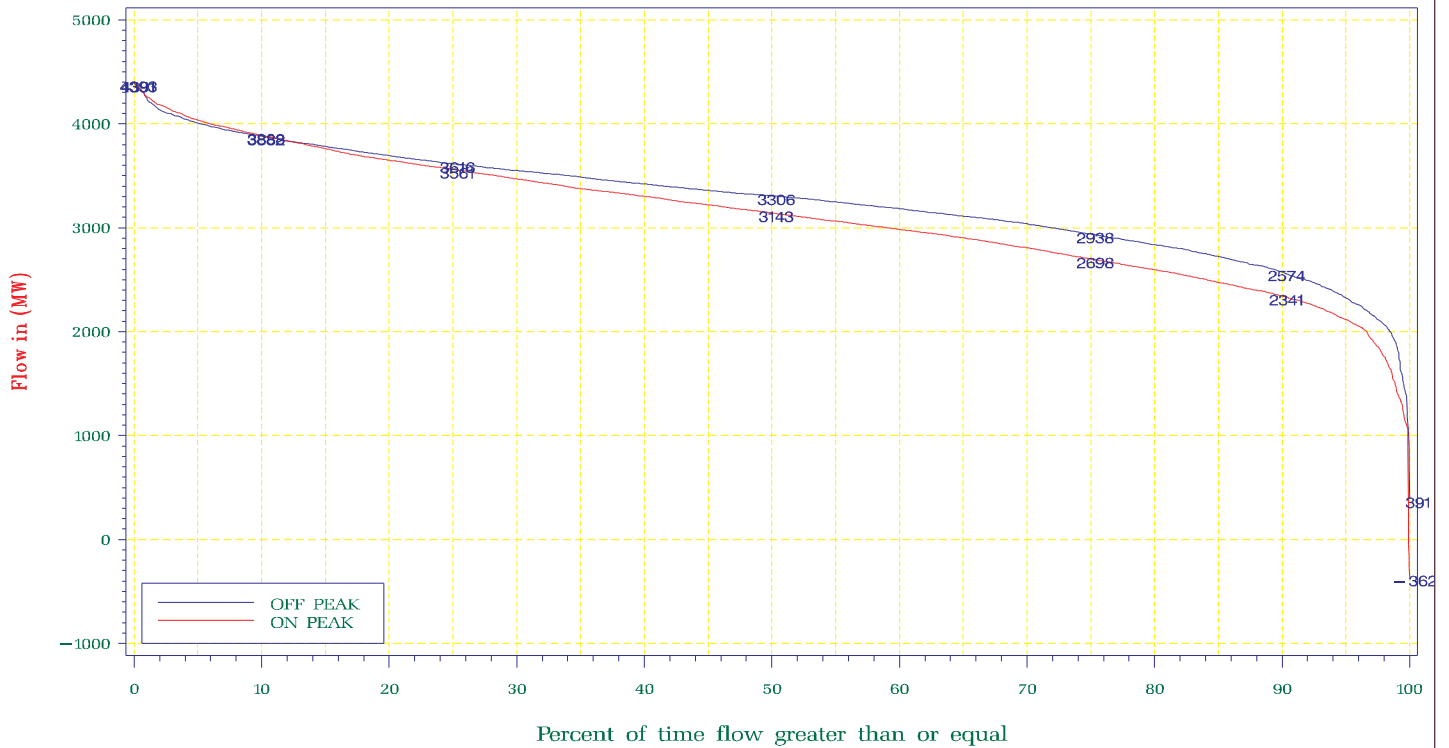


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Volney – East (OPEN)

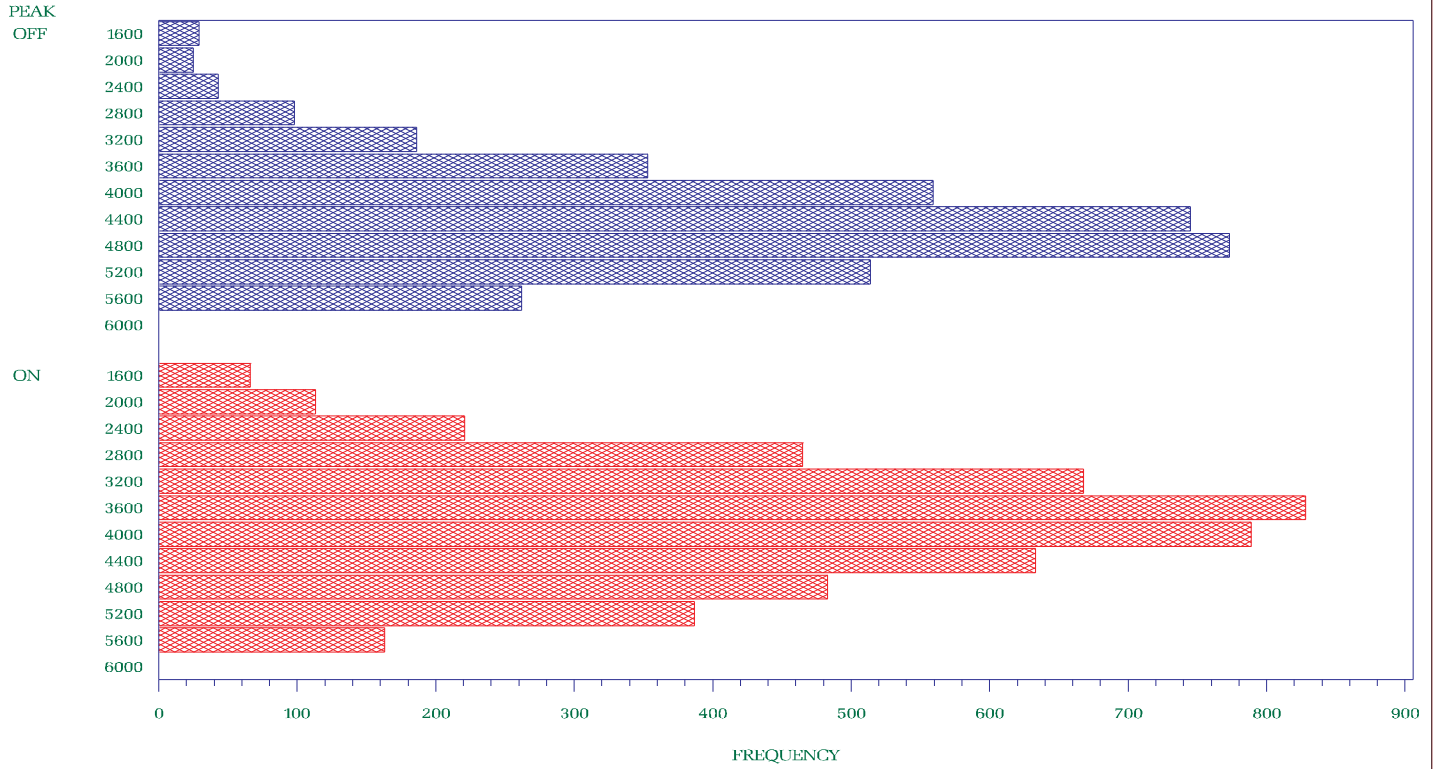


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Volney – East (CLOSED)

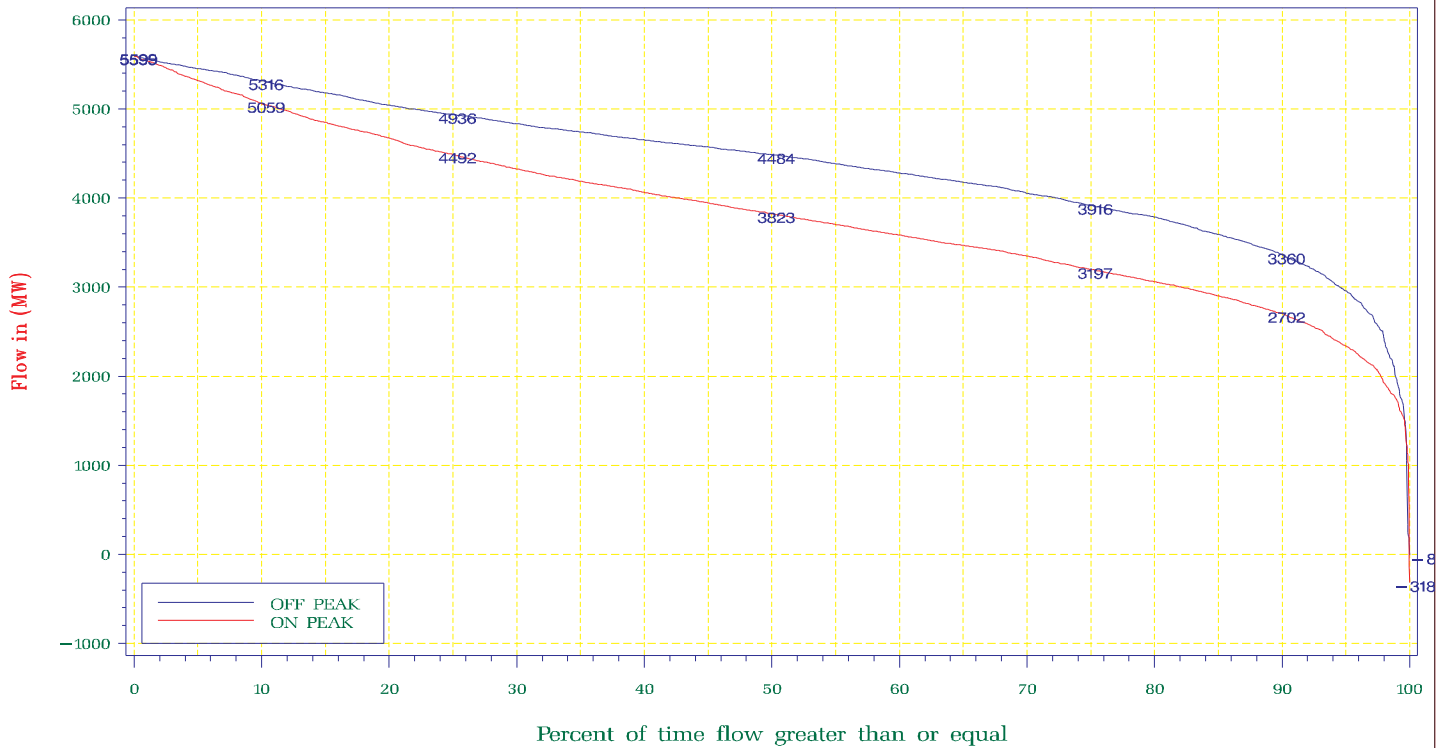


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Volney – East (CLOSED)

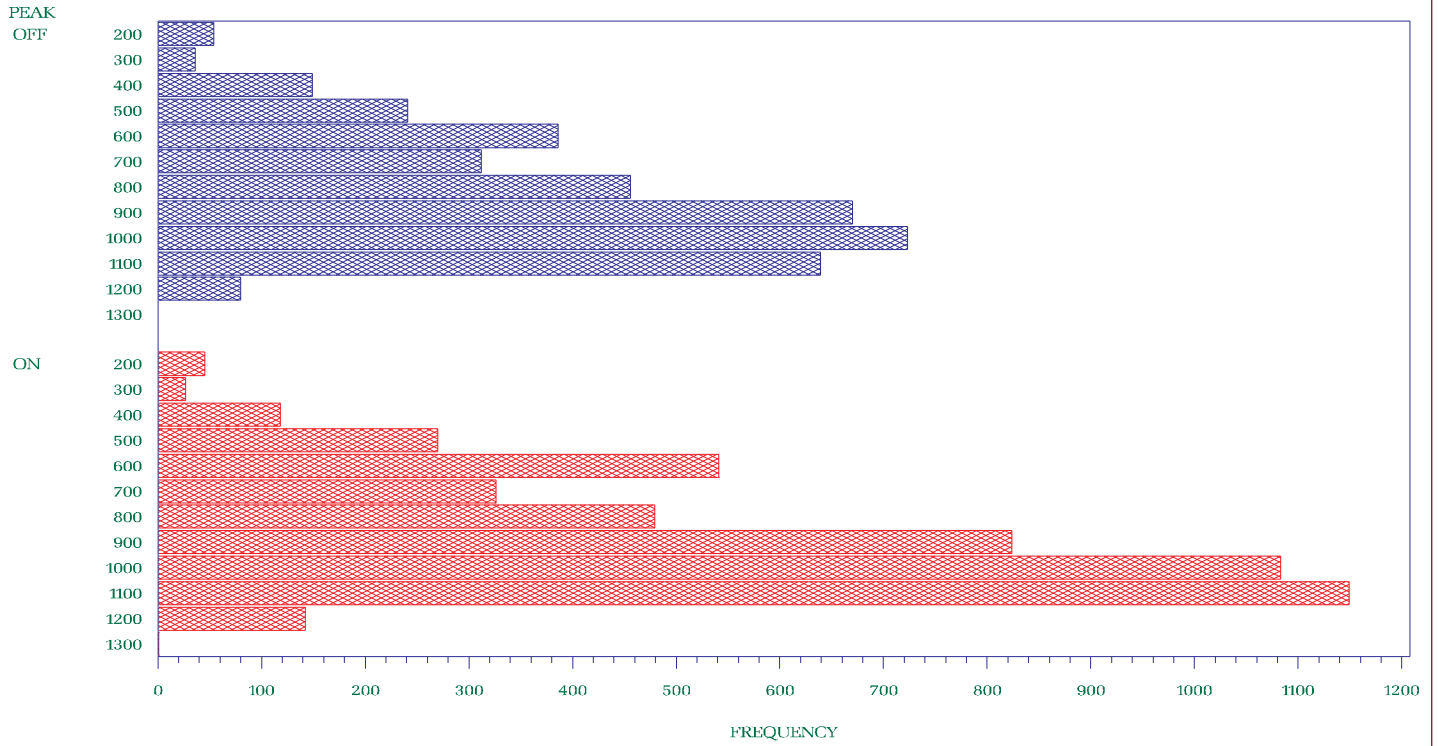


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Westchester – Long Island  
Y49 + Y50

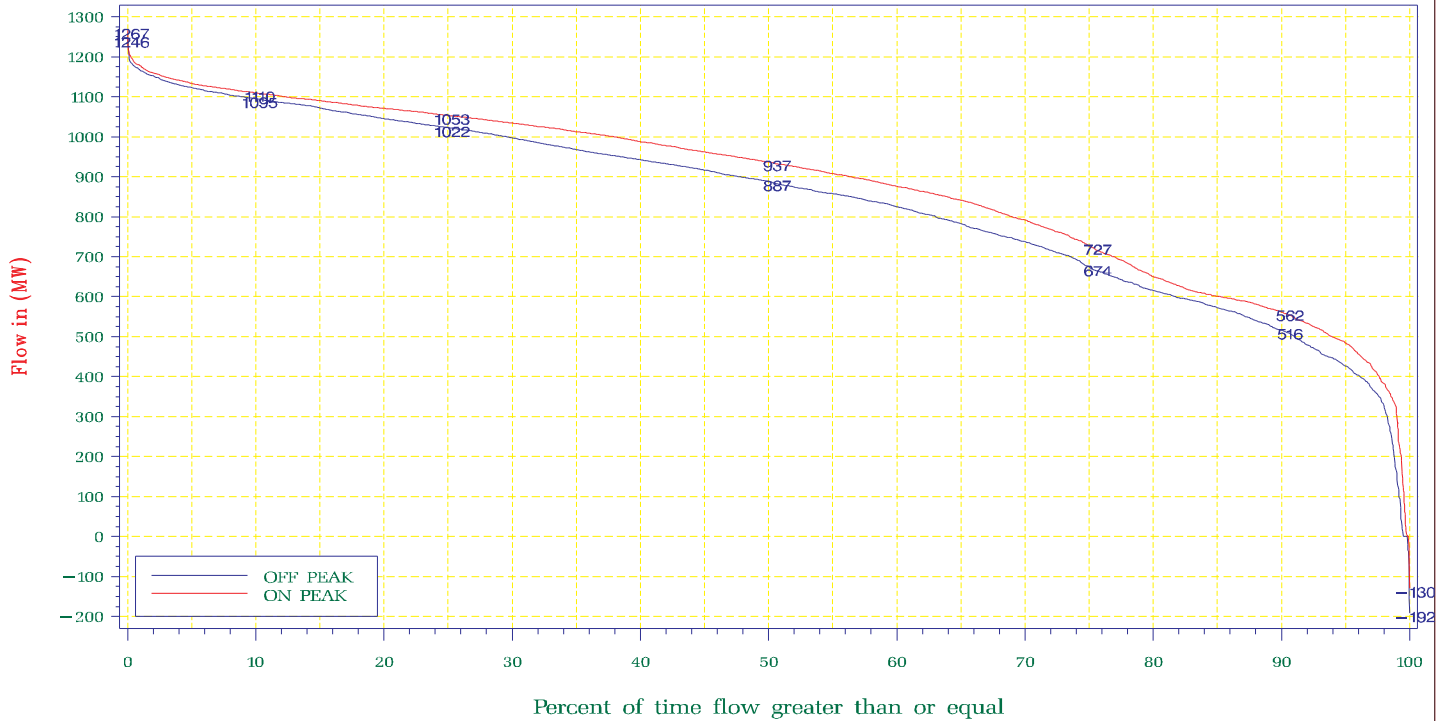


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Westchester – Long Island  
Y49 + Y50

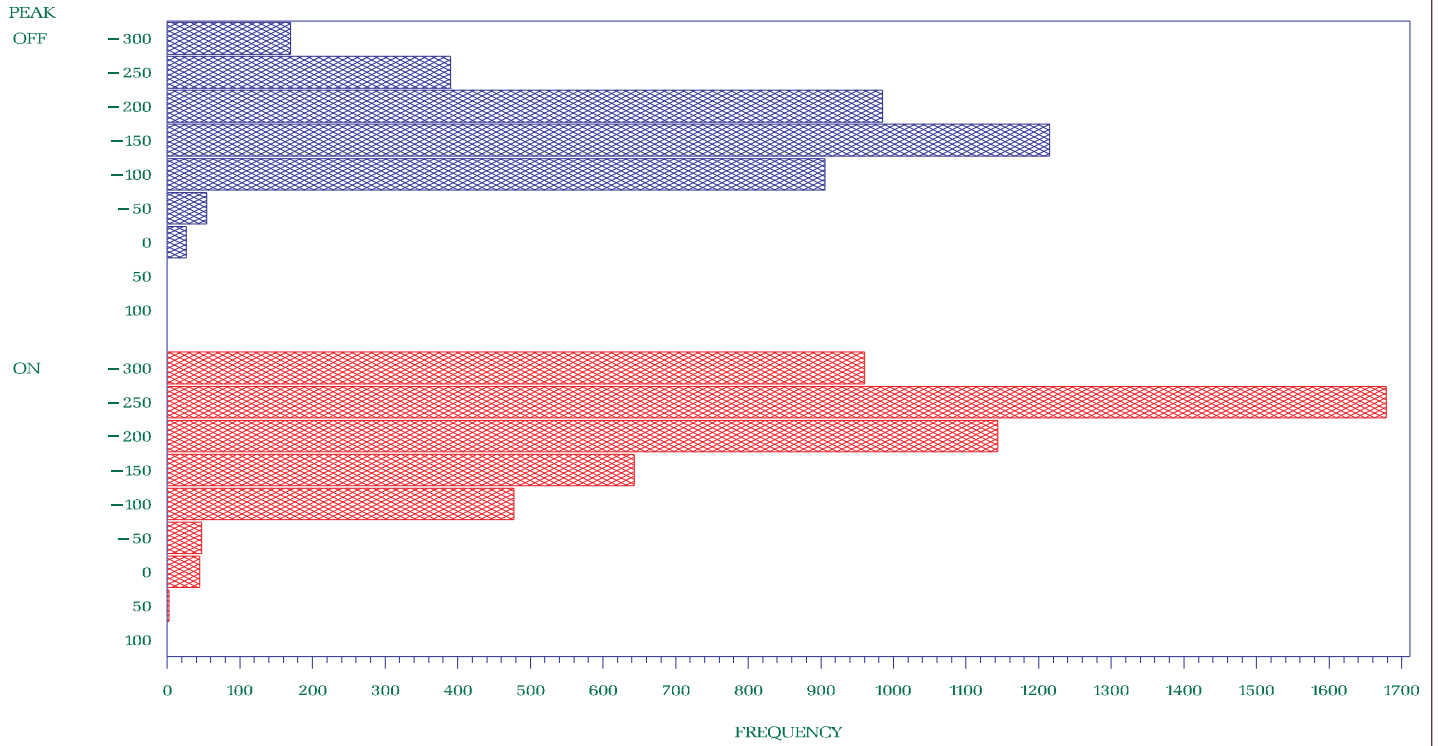


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

New York City – Long Island  
901 + 903

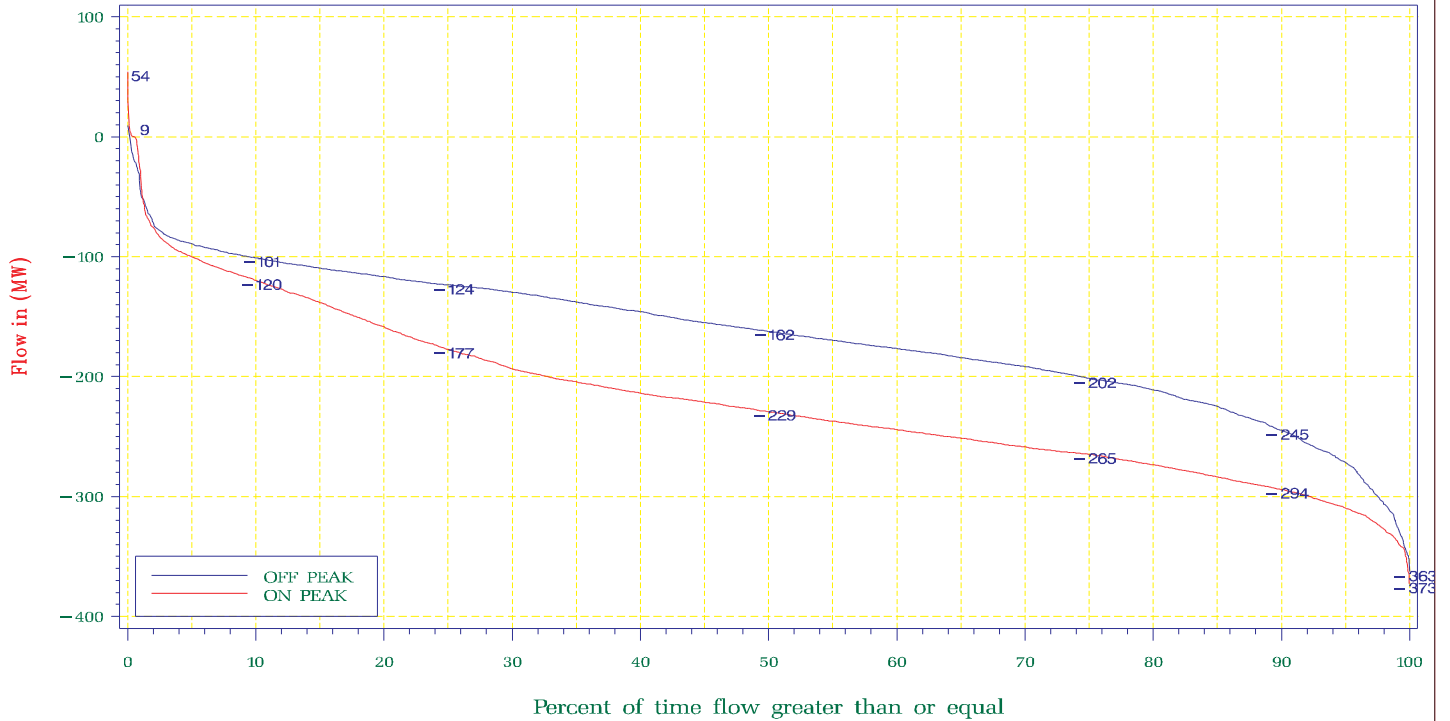


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

New York City – Long Island  
901 + 903

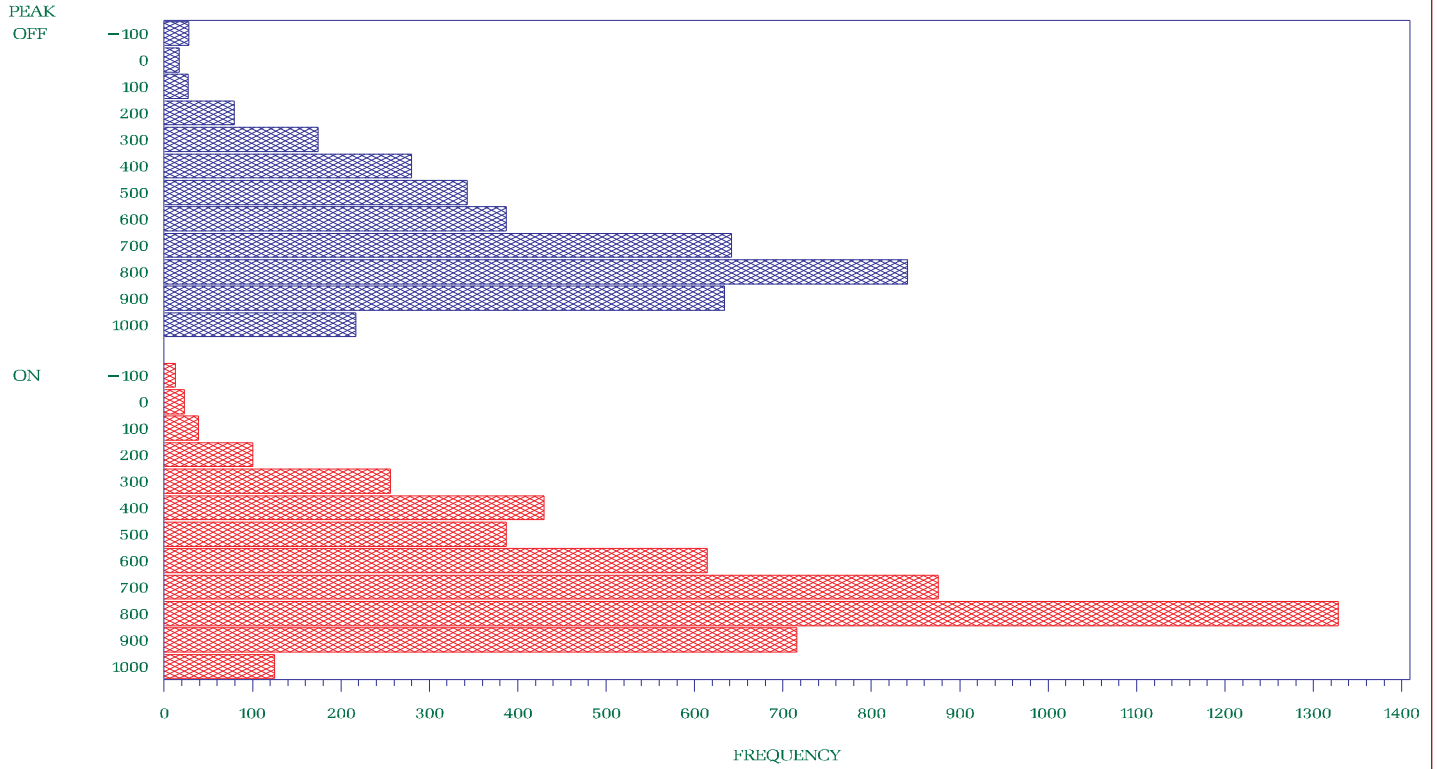


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

LIPA Import

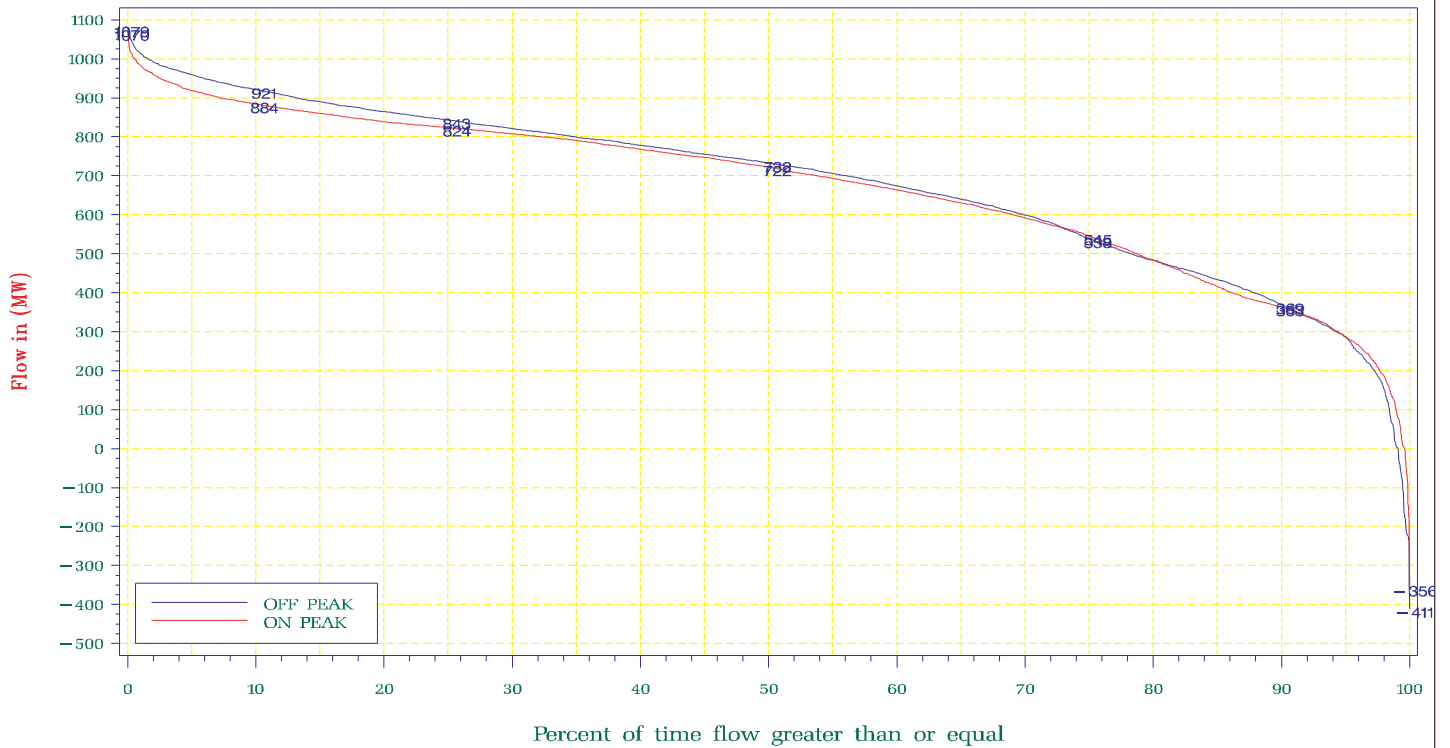


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

LIPA Import

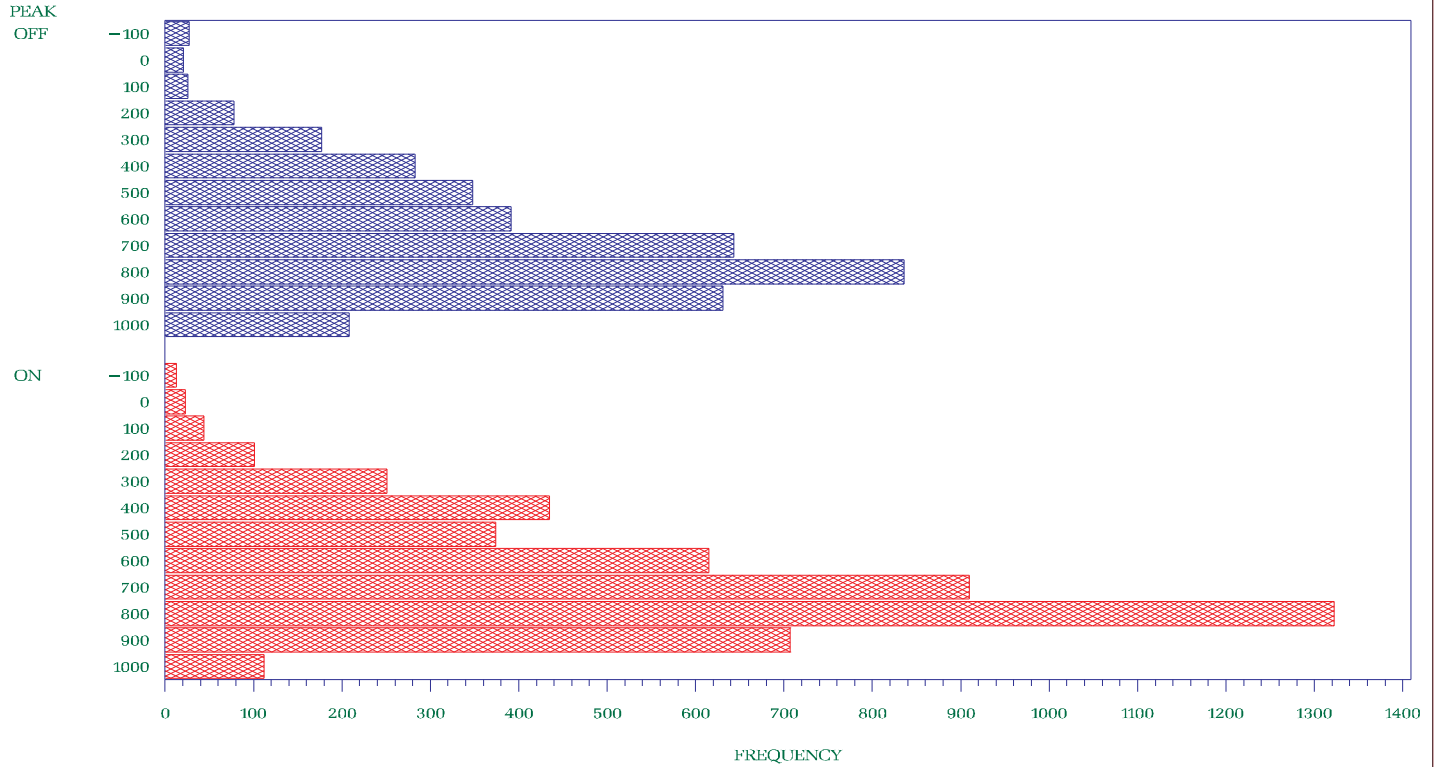


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Con Ed – LIPA

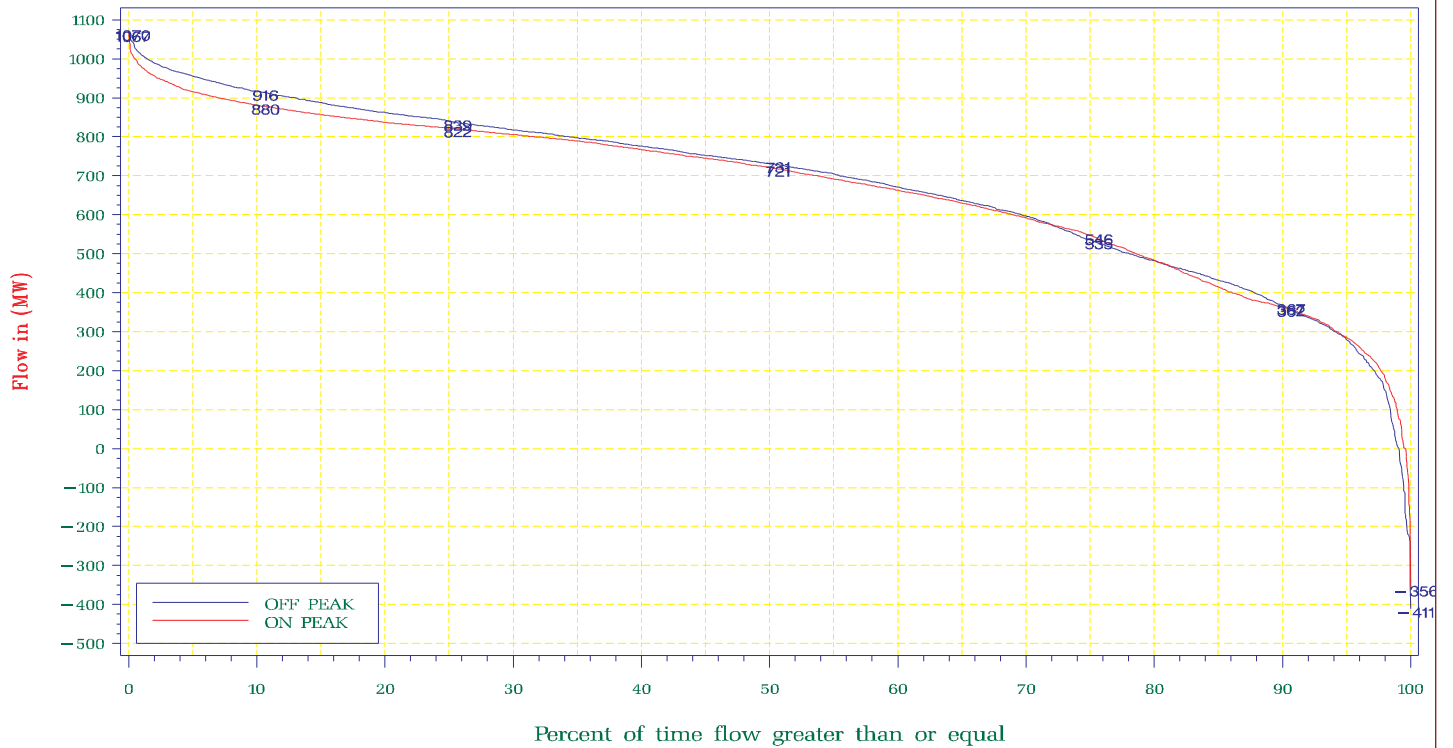


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Con Ed – LIPA

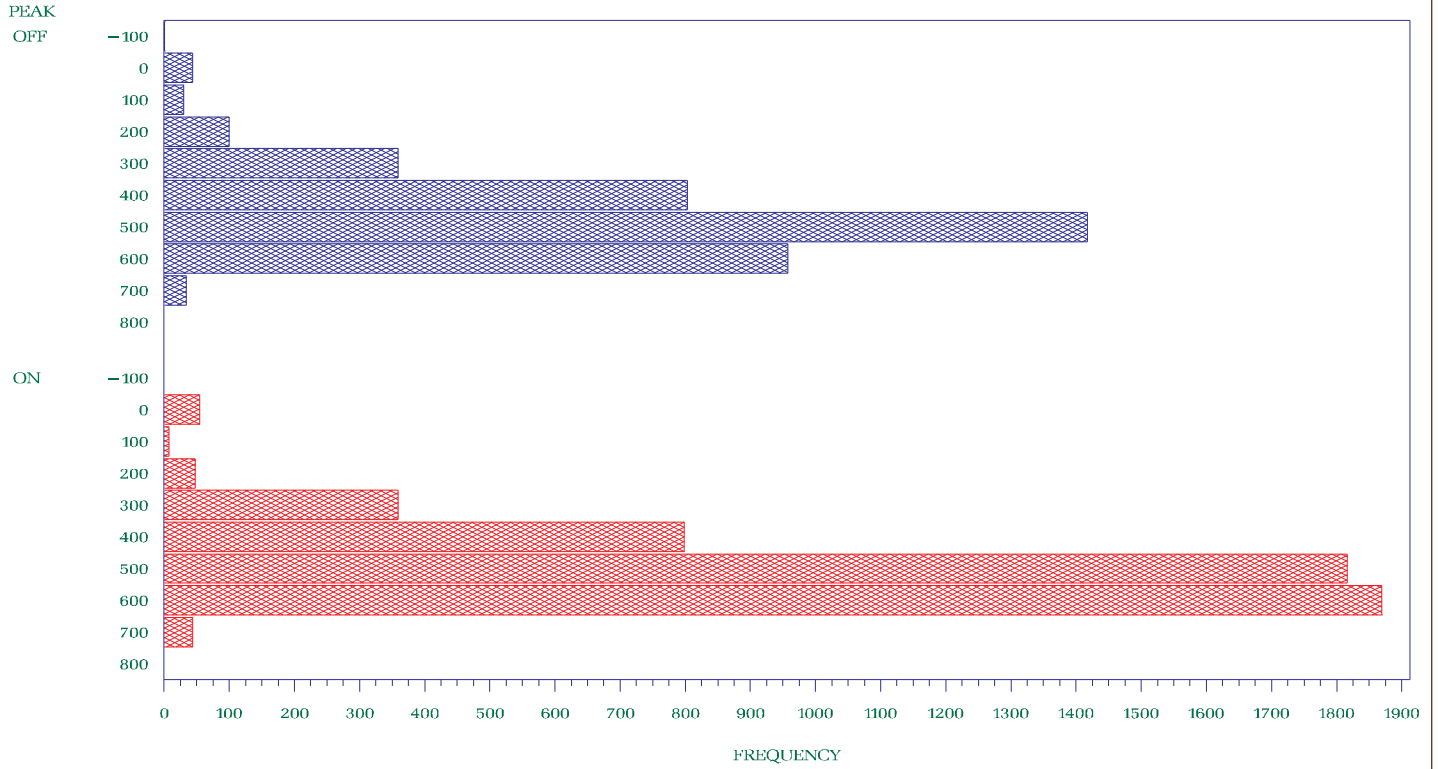


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Y50:Dunwoodie – Shore Rd.

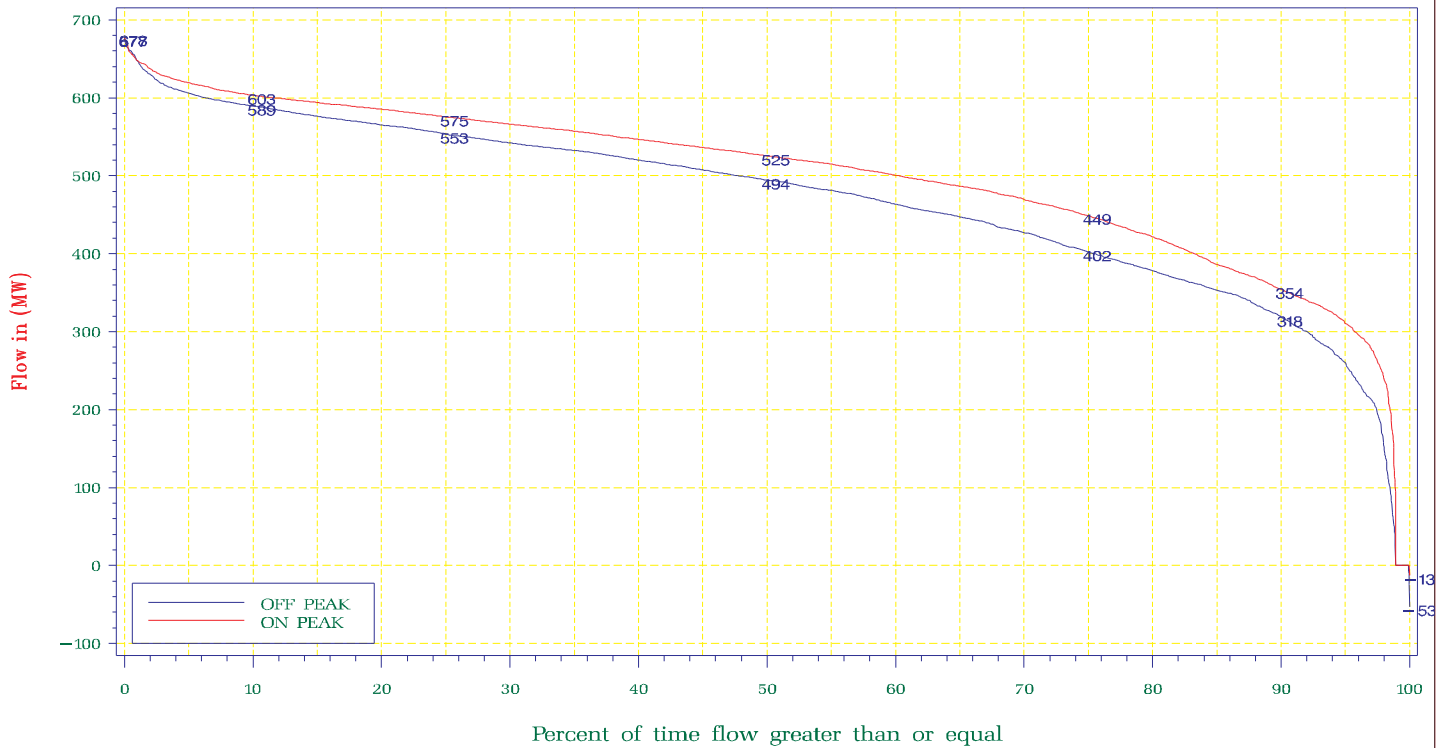


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Y50:Dunwoodie – Shore Rd.

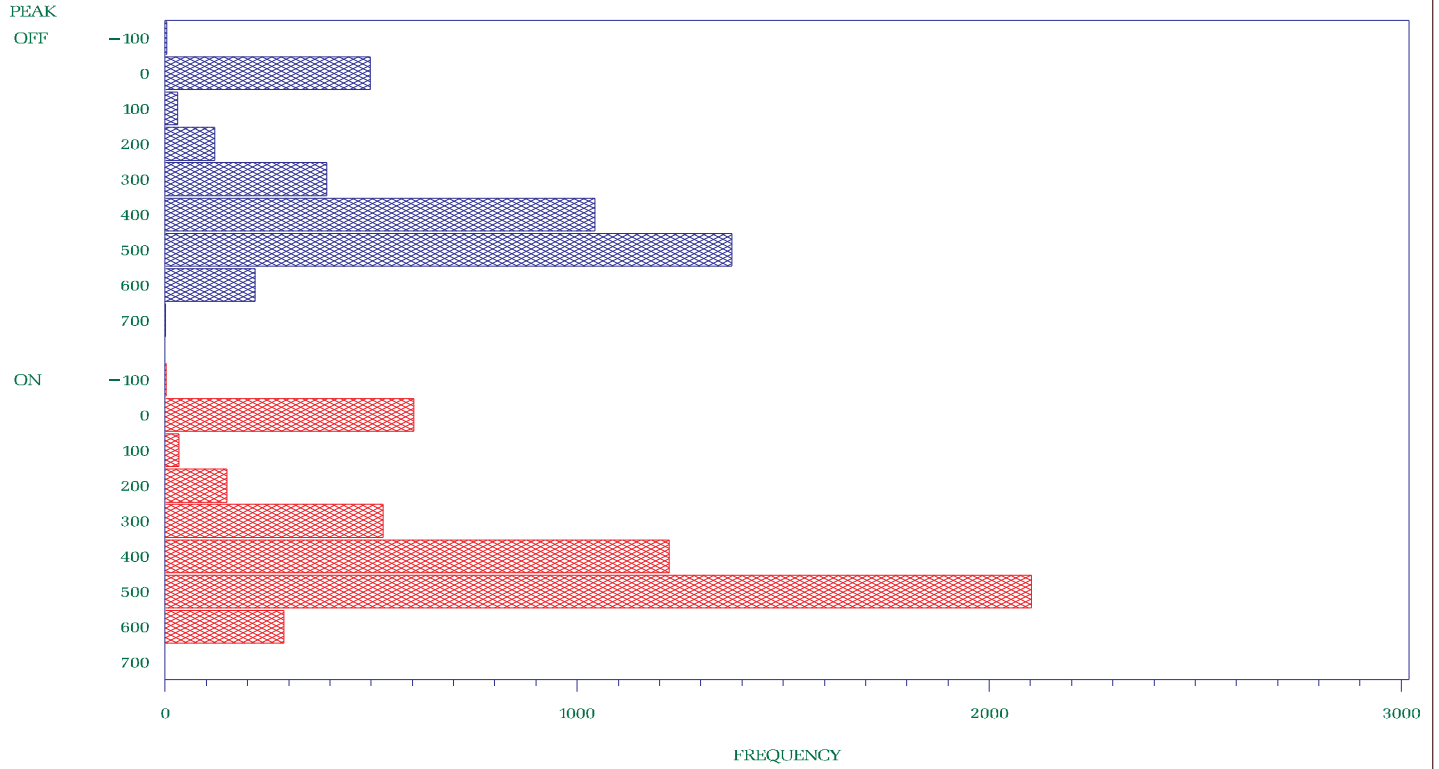


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Y49:Sprainbrook – E.Garden City

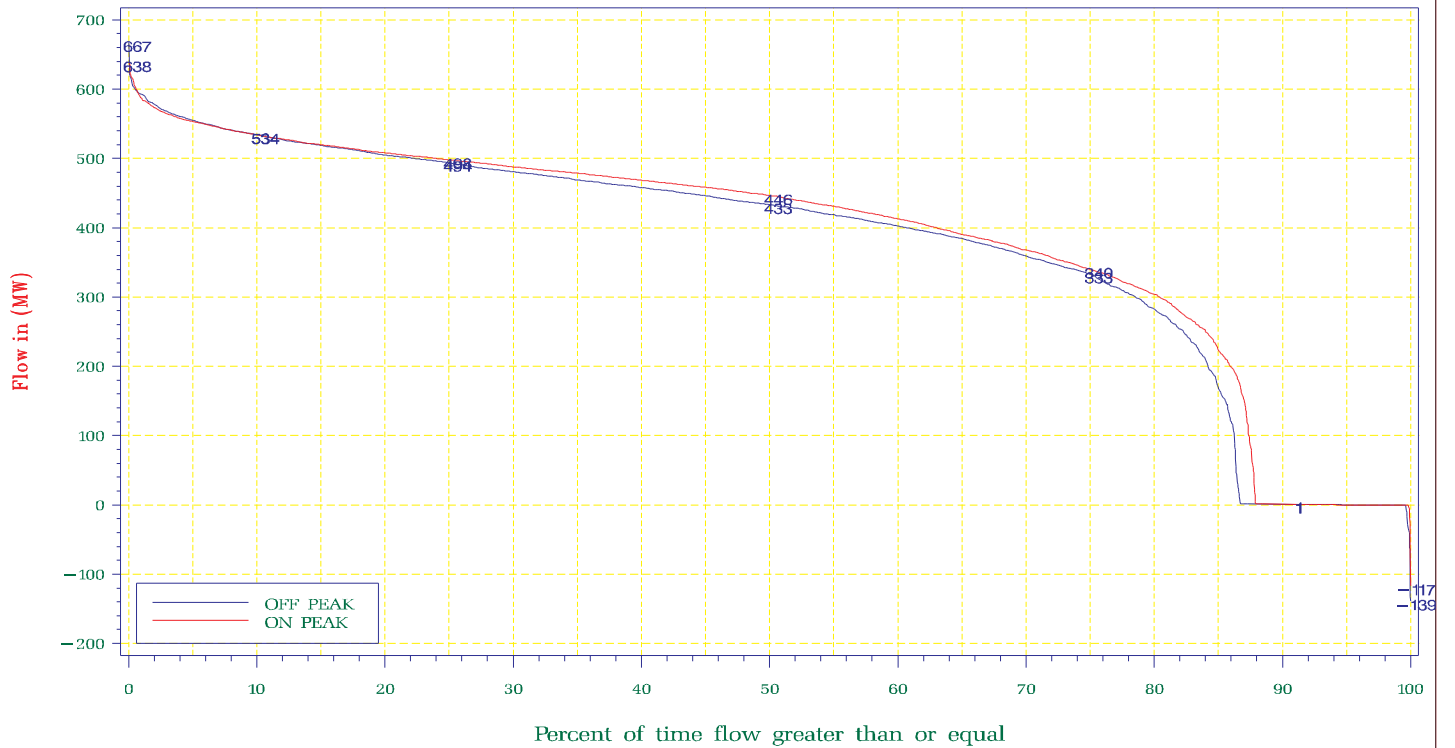


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Y49:Sprainbrook – E.Garden City



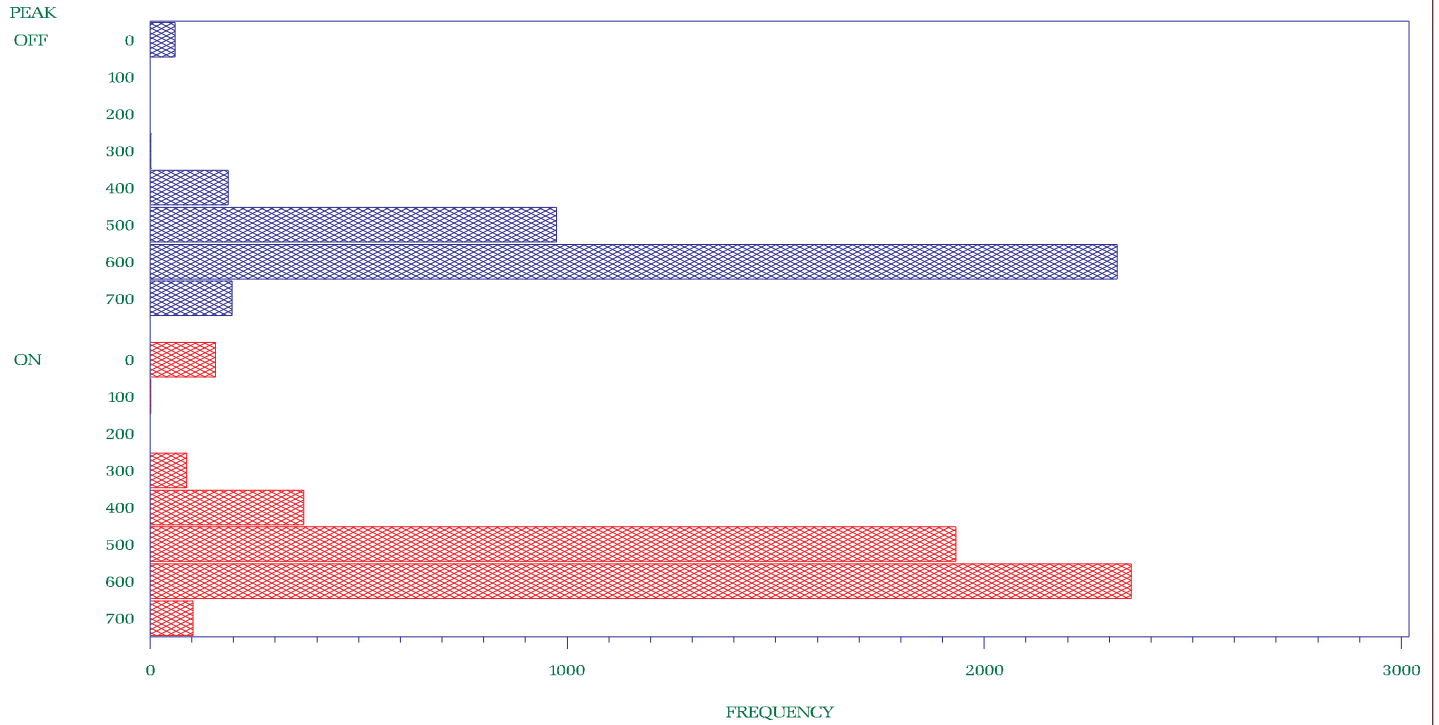
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

HOMER CITY – WATERCURE

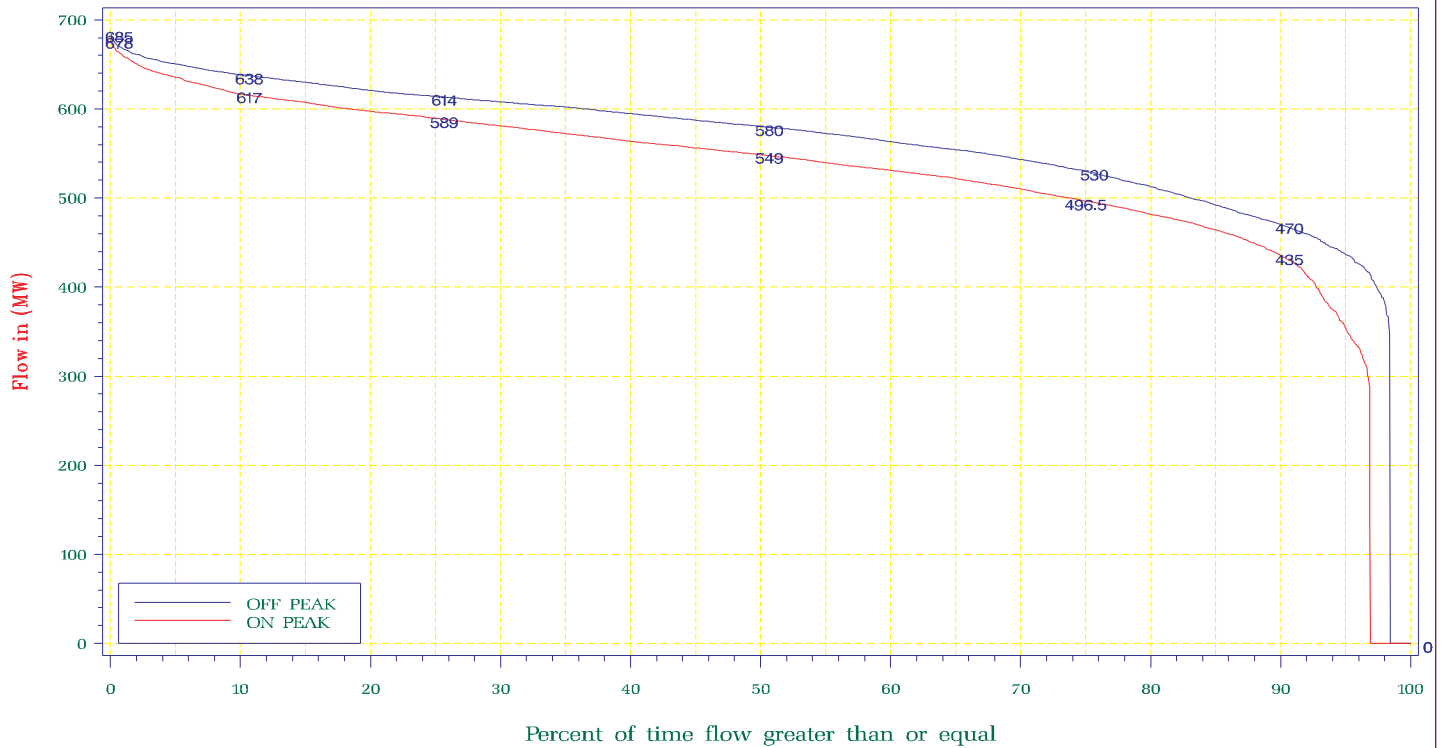


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

HOMER CITY – WATERCURE

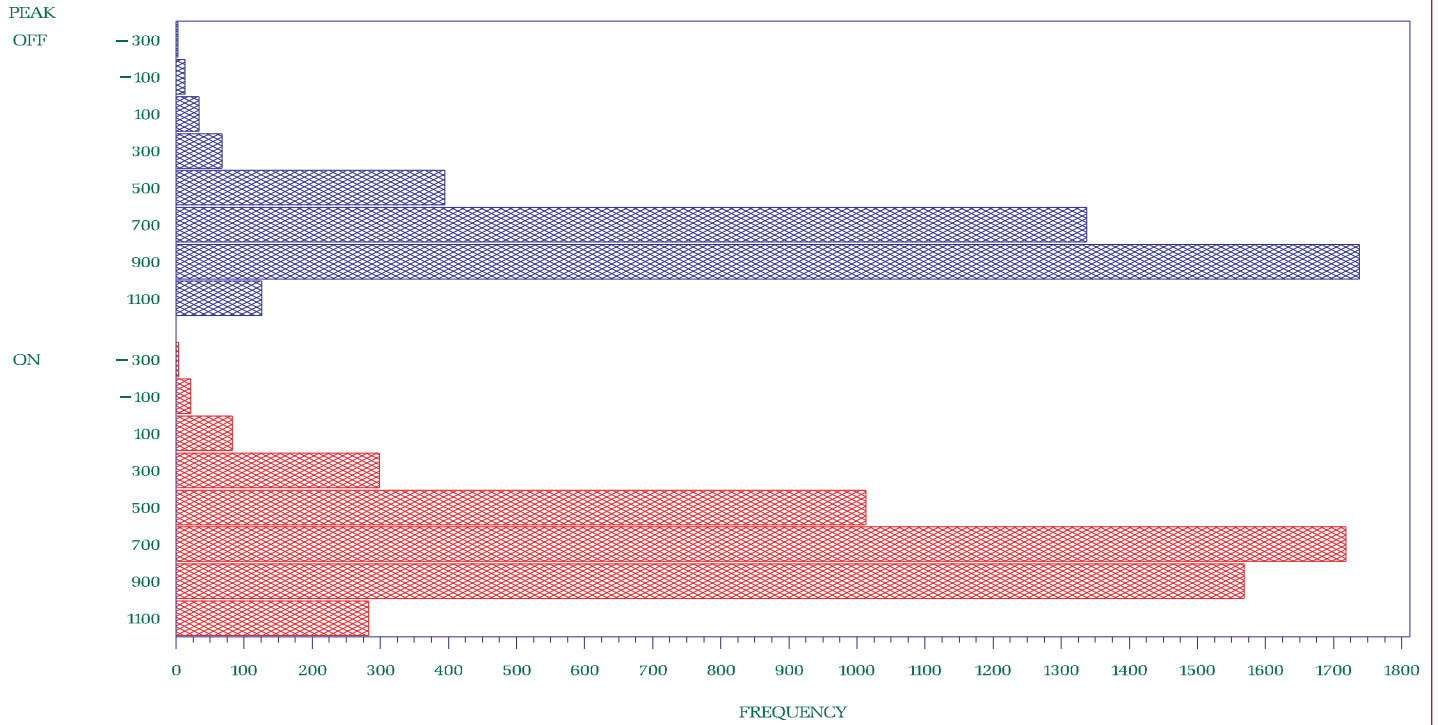


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

5018:BRANCHBURG – RAMAPO

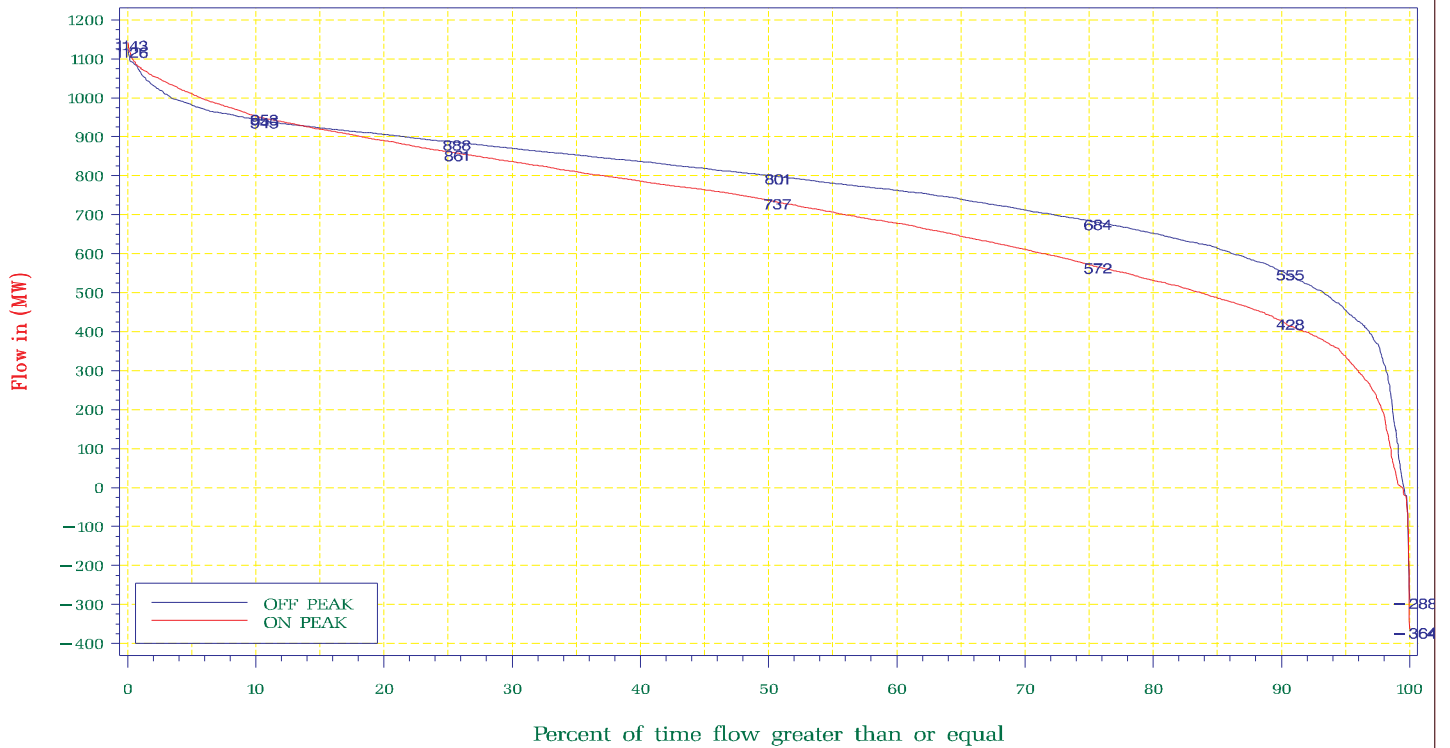


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

5018:BRANCHBURG – RAMAPO



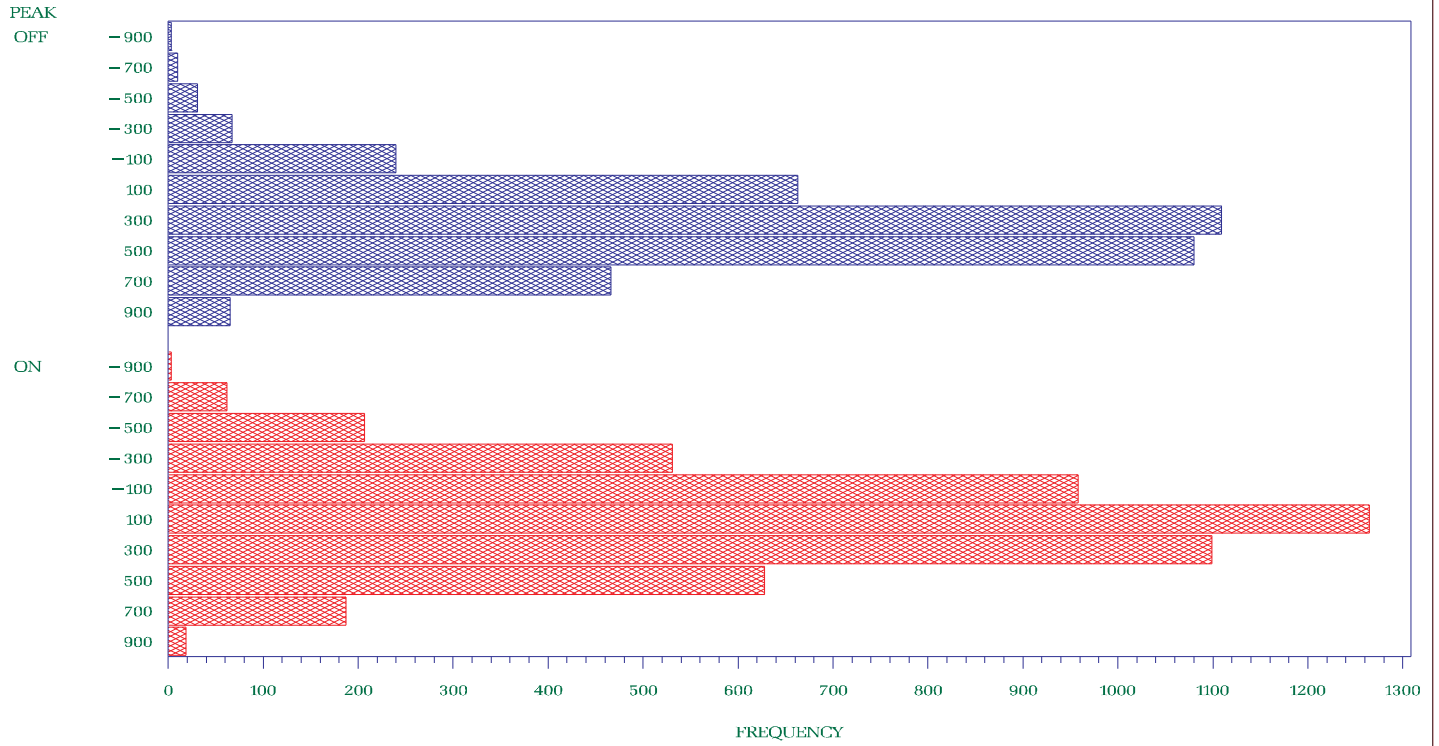
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Con Ed/PSEG PAR (JK/ABC) Imbalance

+ is toward PSEG



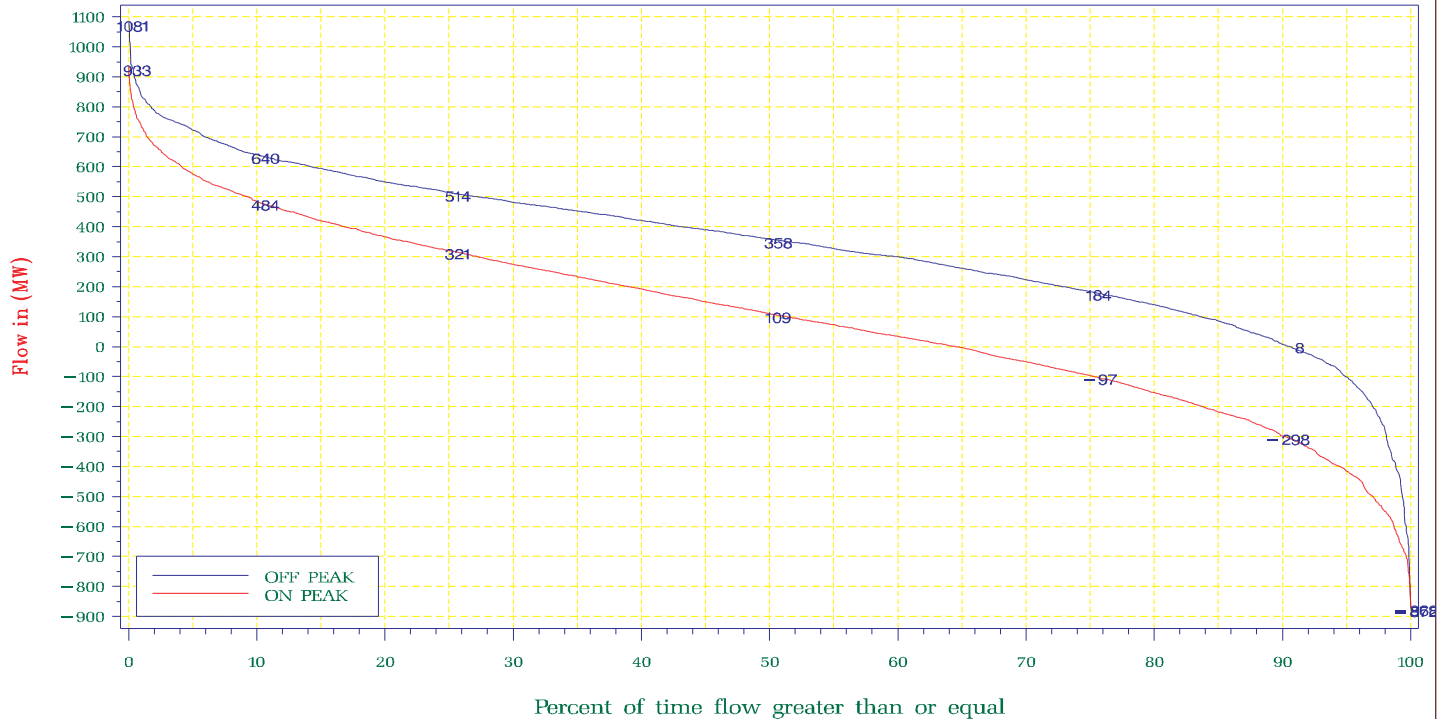
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO 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 2003

West NY Gen Export

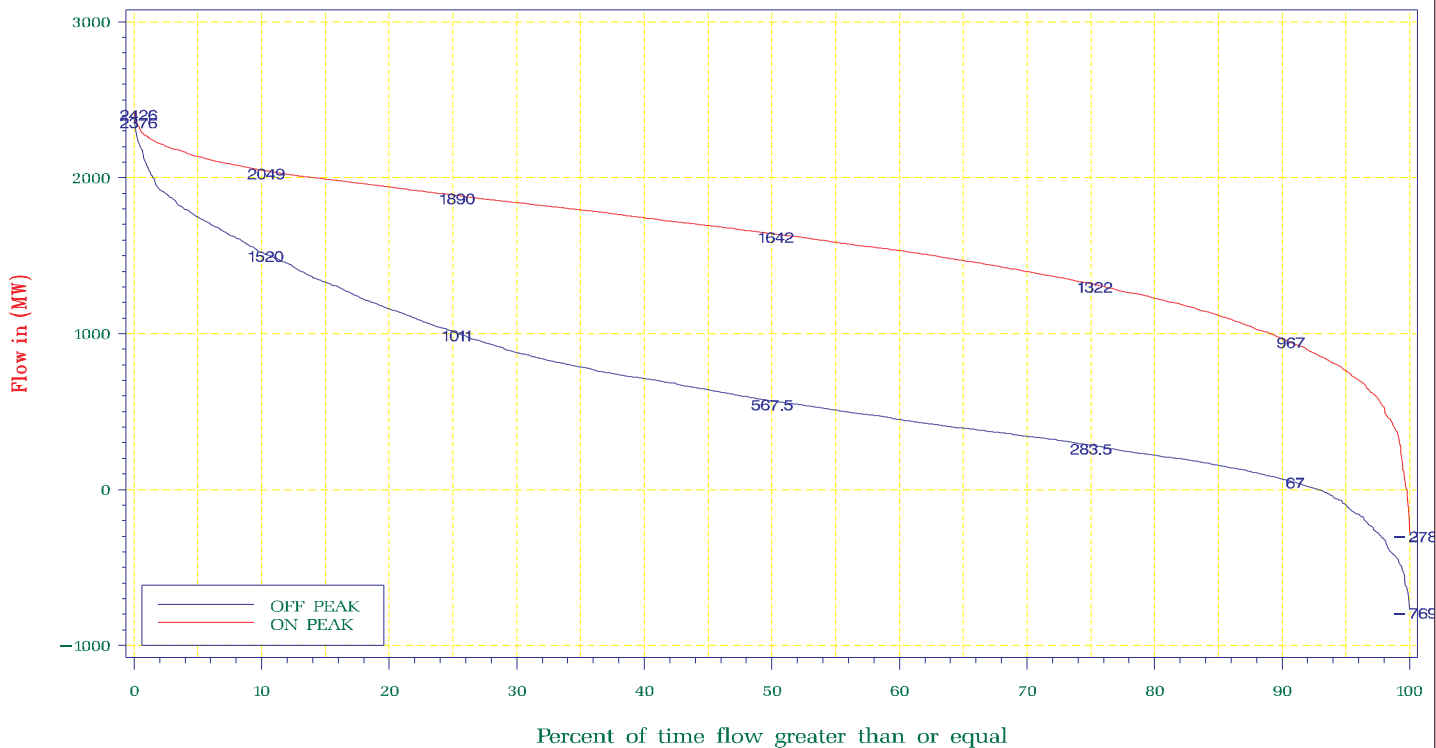


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



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

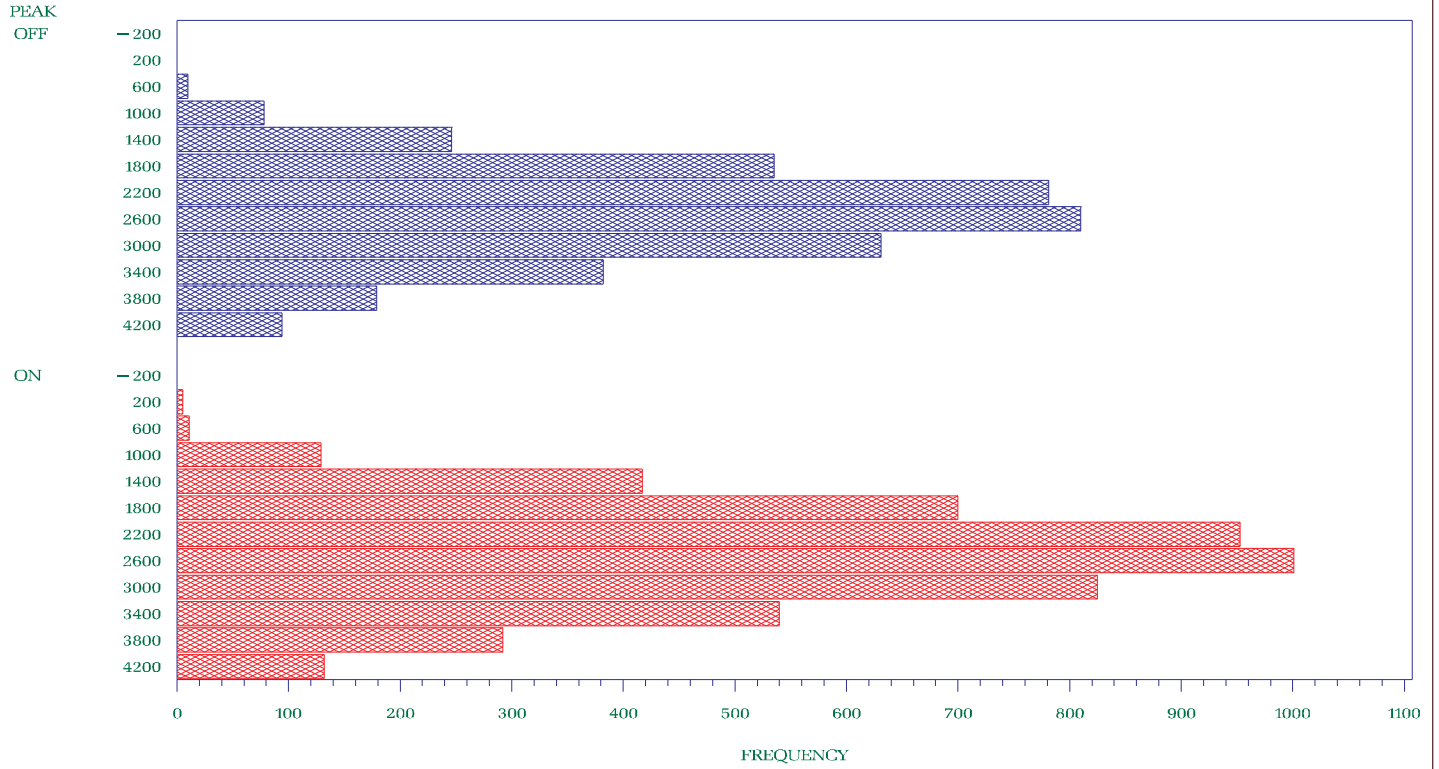
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Margin to Total East Limit (MW) .....	G3
Margin to Central East Stability Limit (MW) .....	G4
Post-Contingency Margin to Central East Limit .....	G5
Margin to West Central Limit (MW) .....	G6
Margin to Dysinger East Limit (MW) .....	G7
Margin to UPNY Con Ed Limit (MW) .....	G8
Margin to Sprainbrook /Dunwoodie Limit (MW) .....	G9
Margin to Moses South Limit (MW) .....	G10
Margin to TE-NY Limit (MW) .....	G11
Margin to Ontario-NY Limit (MW) .....	G12
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Margin to NY – PJM Limit (MW) .....	G15
Margin to New England – NY Limit (MW) .....	G16
Margin to NY – New England Limit (MW) .....	G17

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NYISO Frequency Interface Flow For January – December 2003

Margin to Total East Limit

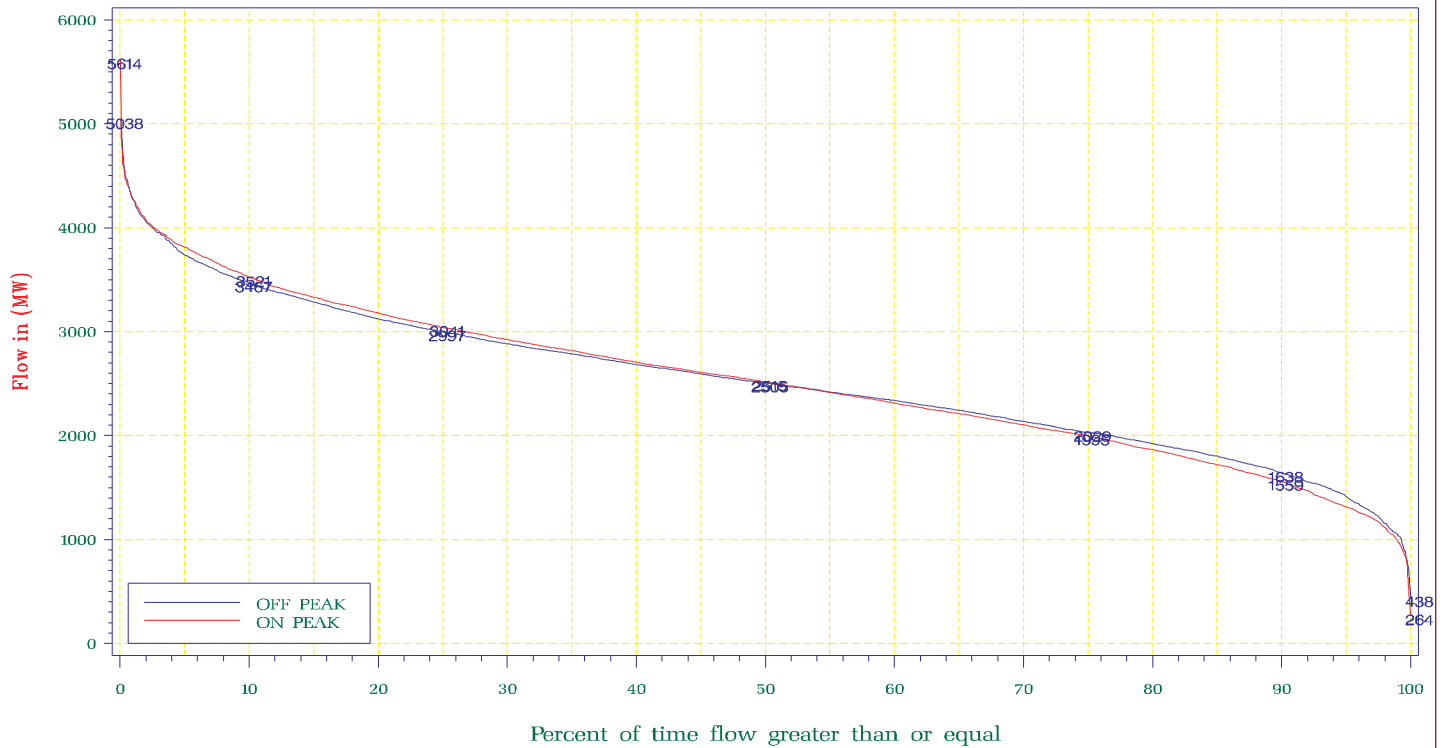


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

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 2003

Margin to Central East Stability Limit

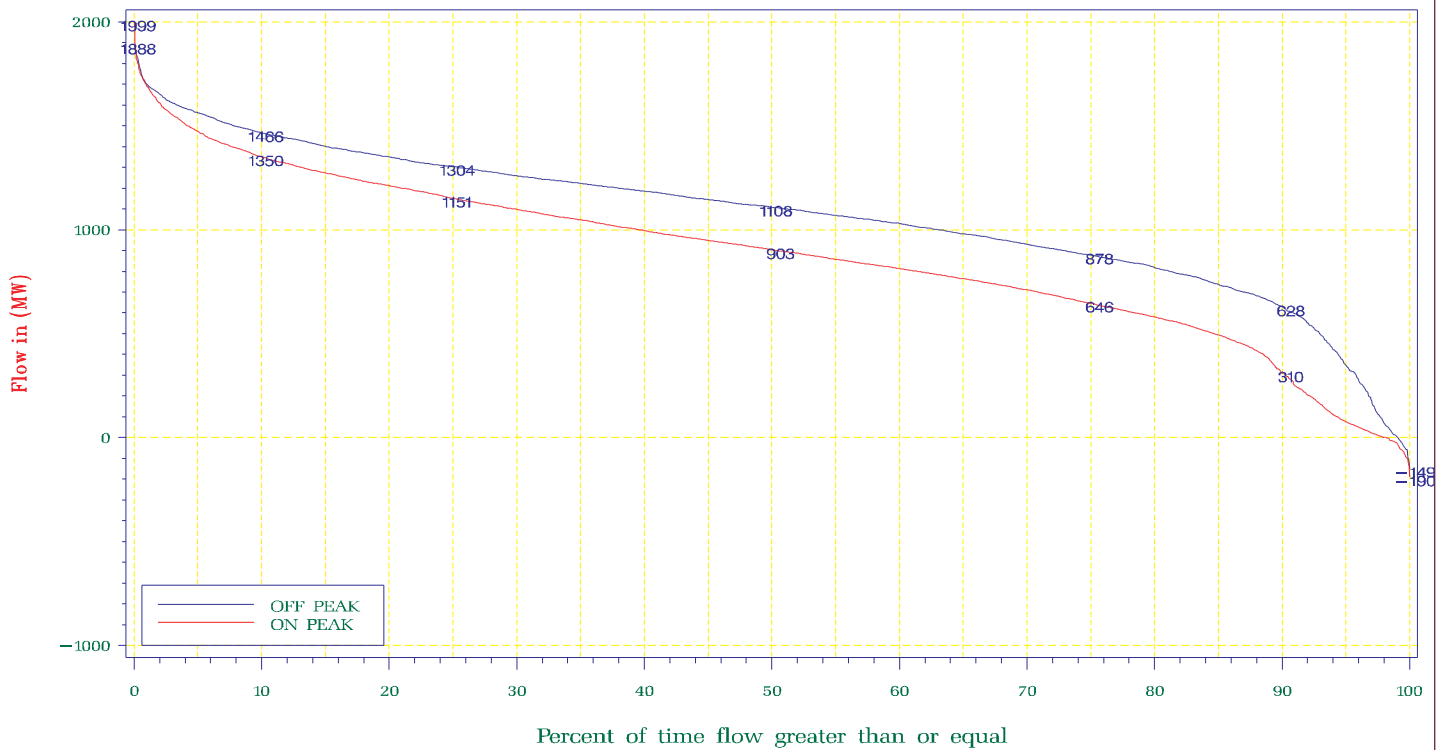


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to Central East Stability Limit



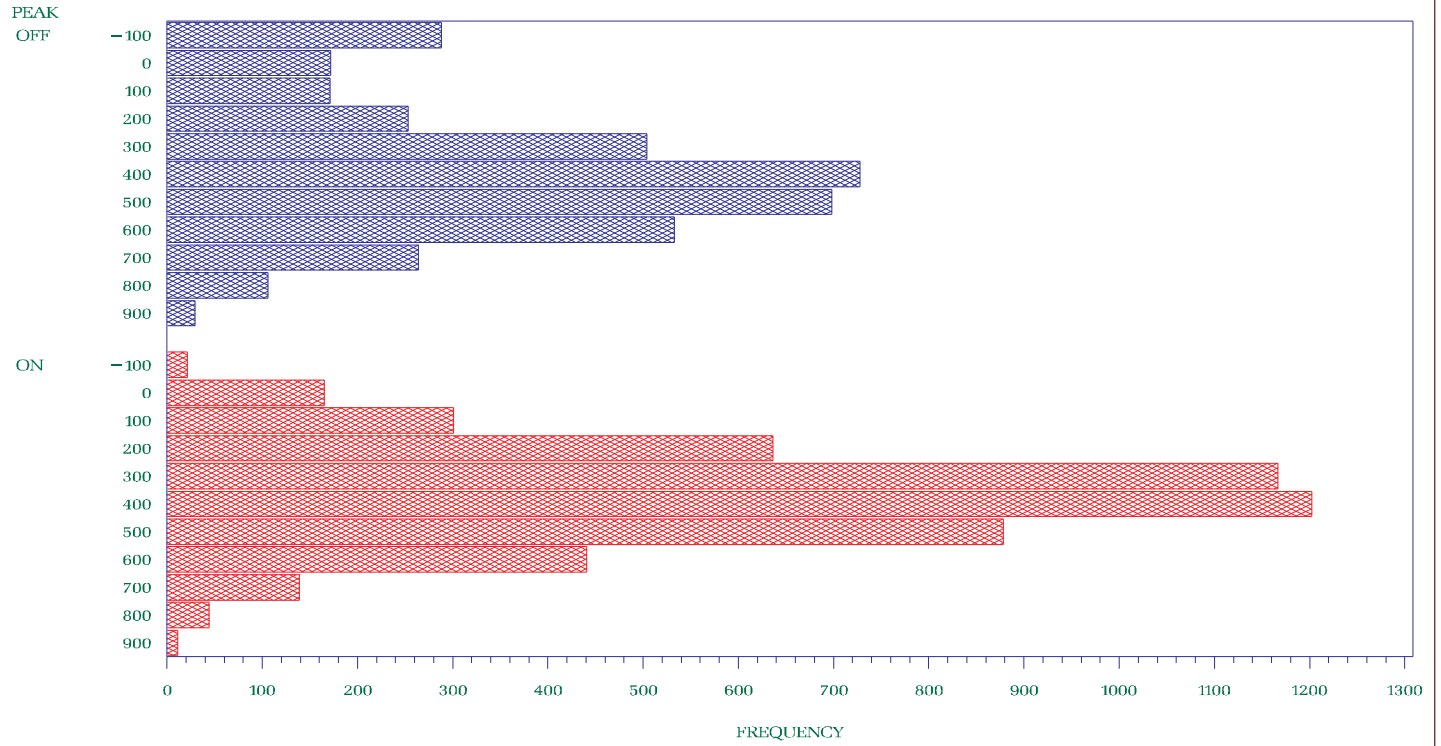
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

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

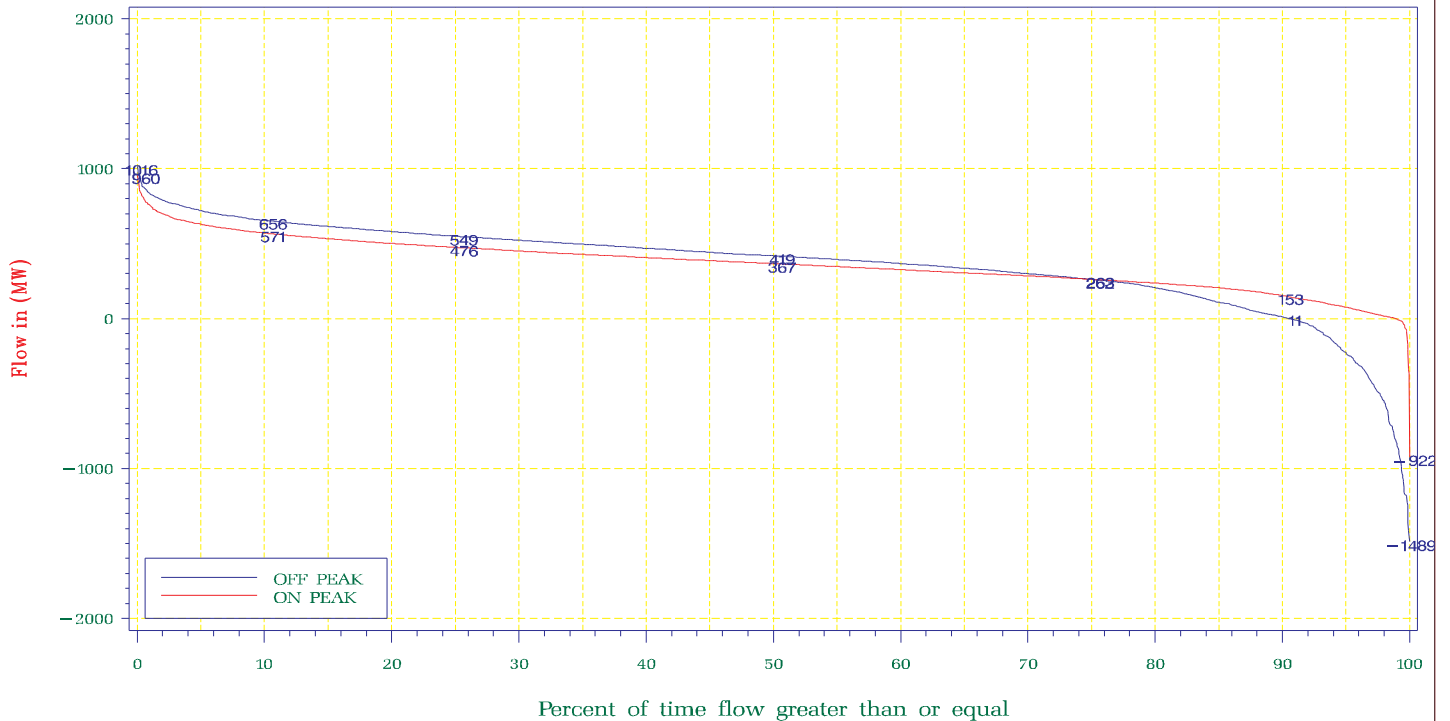


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

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

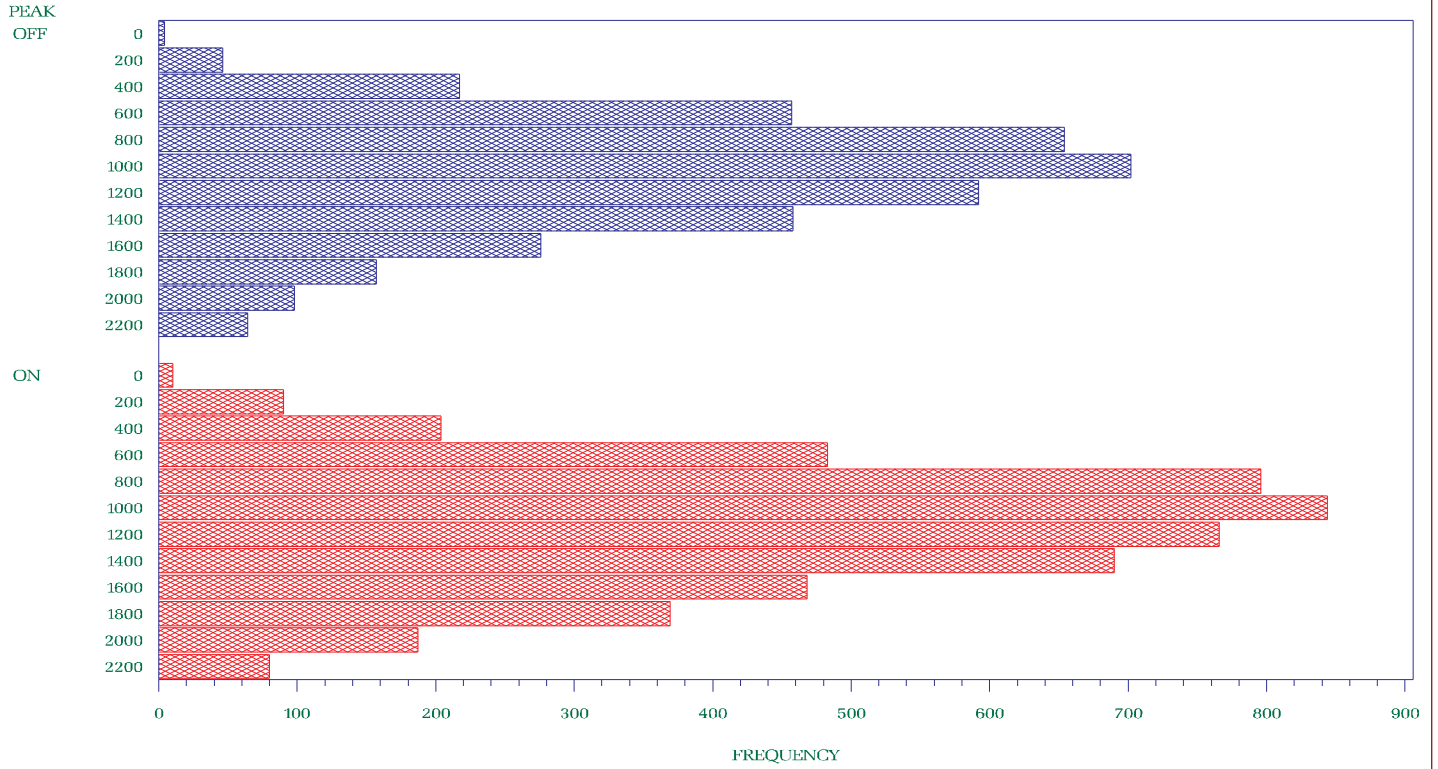


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to West Central Limit

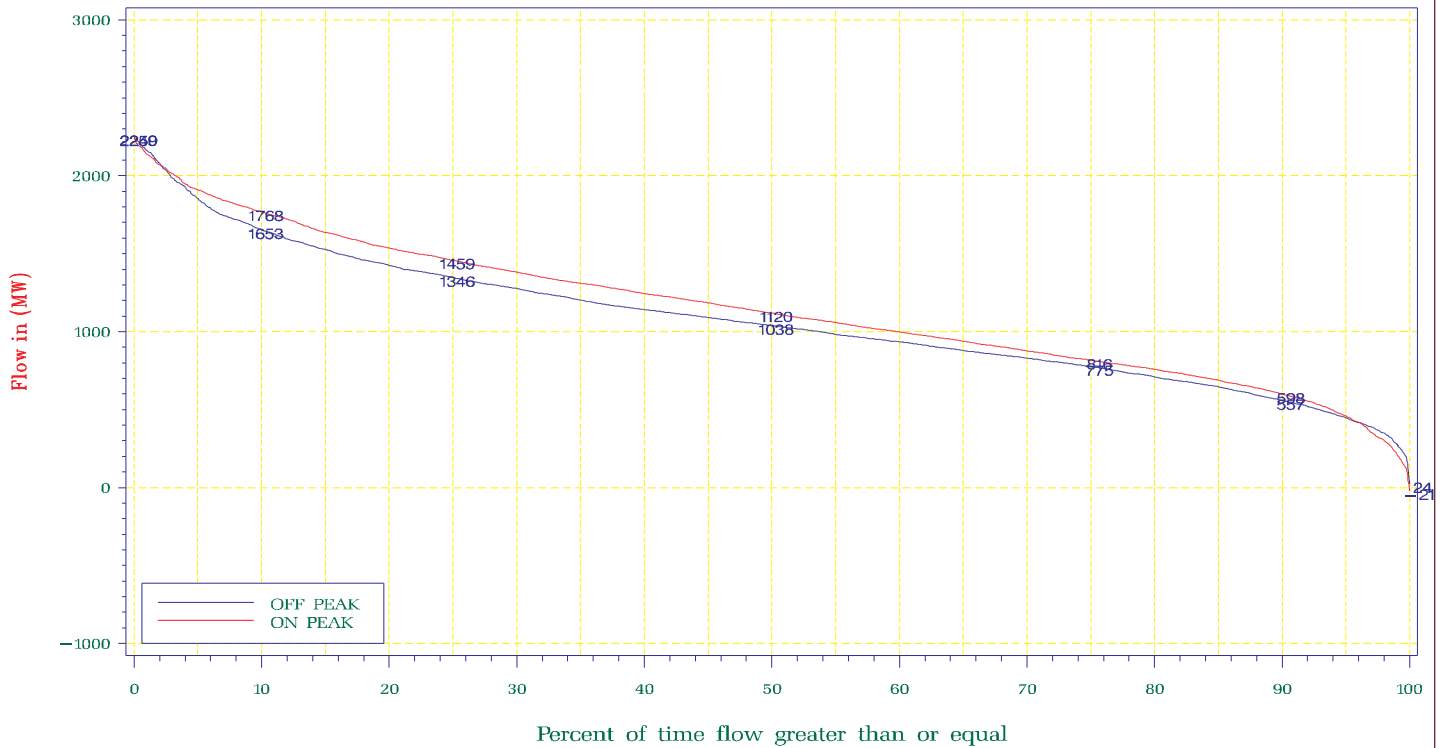


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to West Central Limit

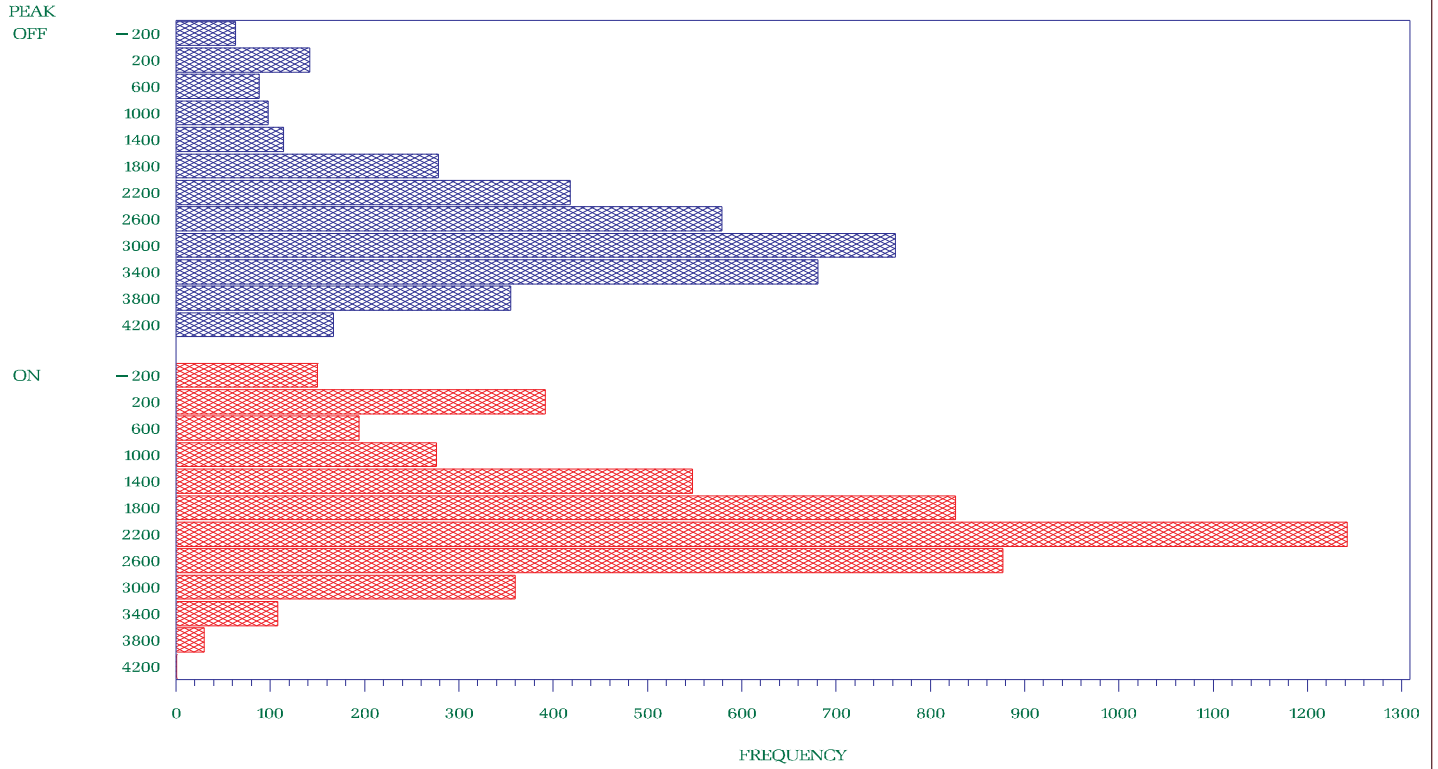


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to UPNY Con Ed Limit

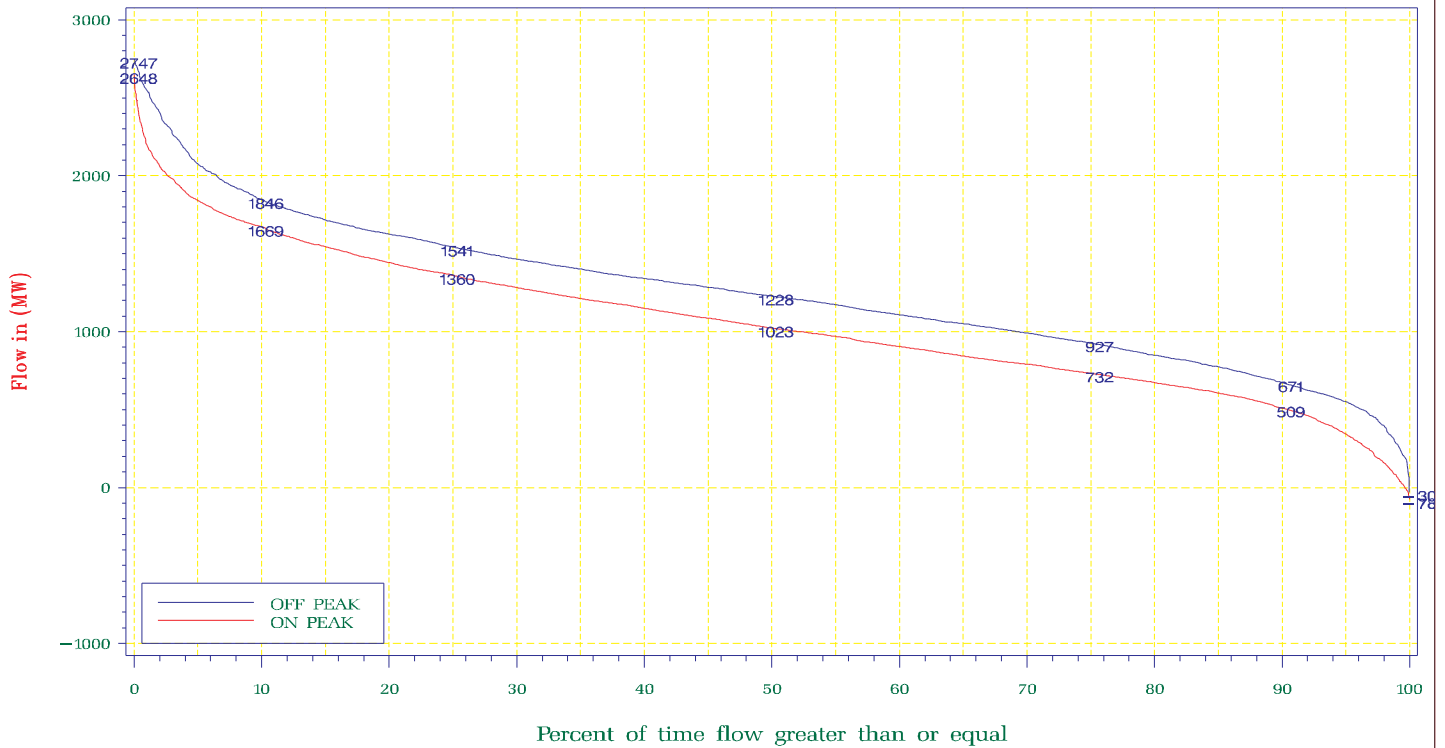


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to Dysinger East Limit

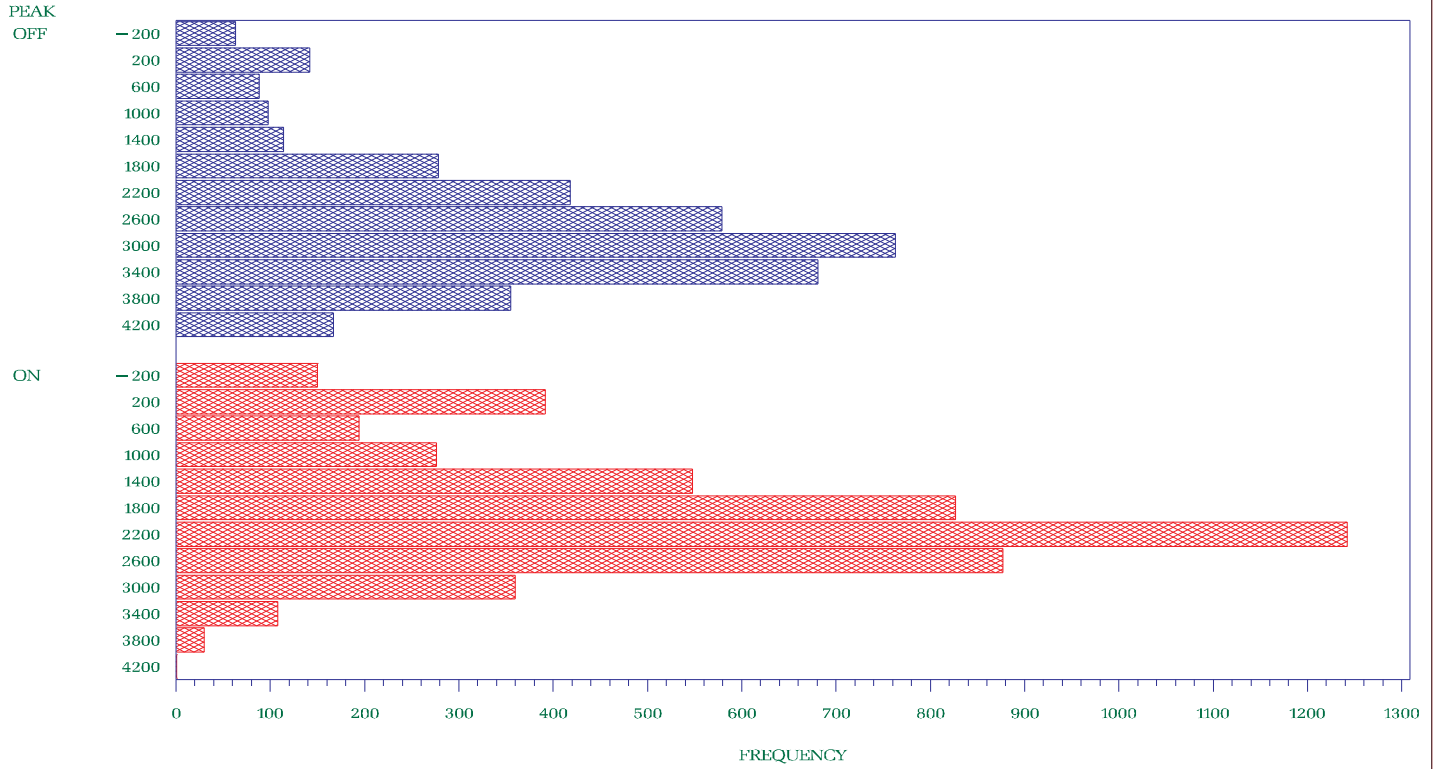


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to Sprainbrook/Dunwoodie Limit

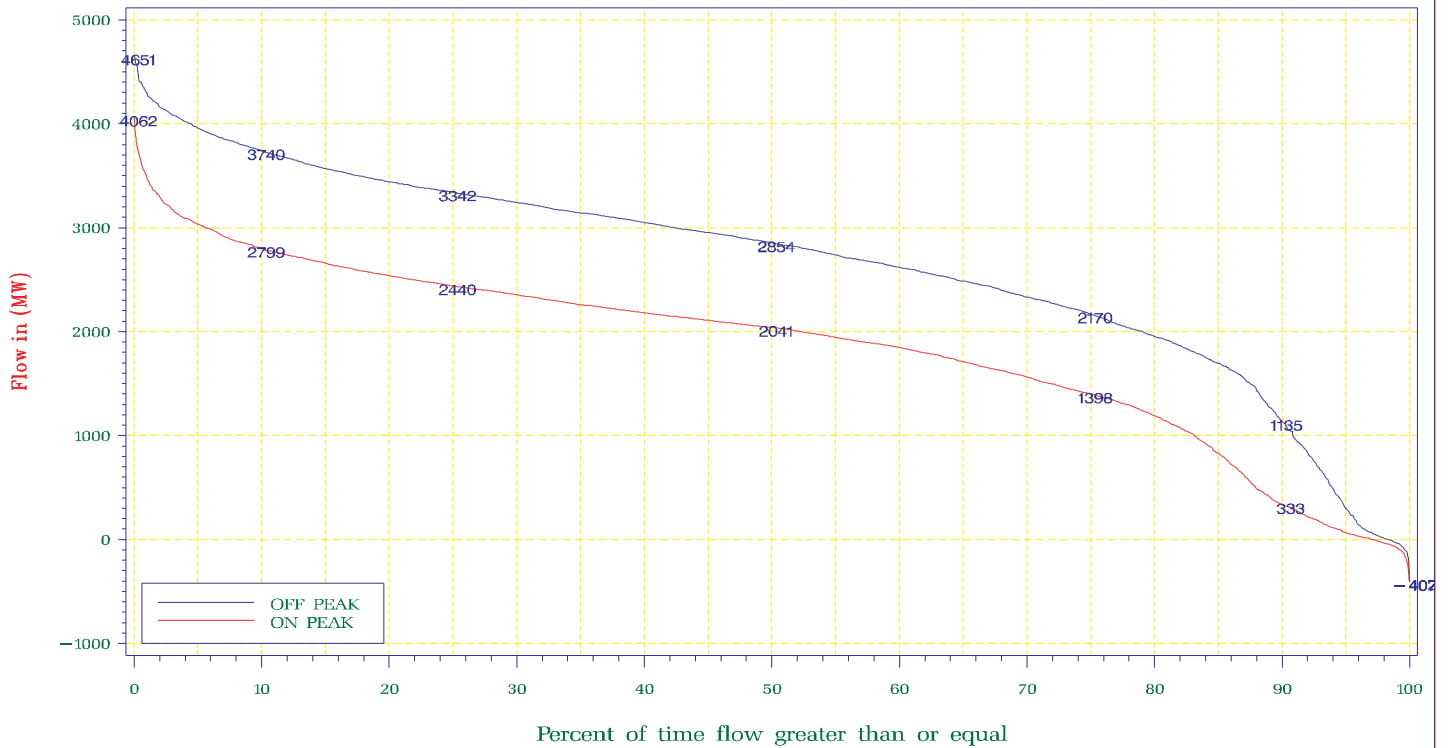


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to UPNY Con Ed Limit

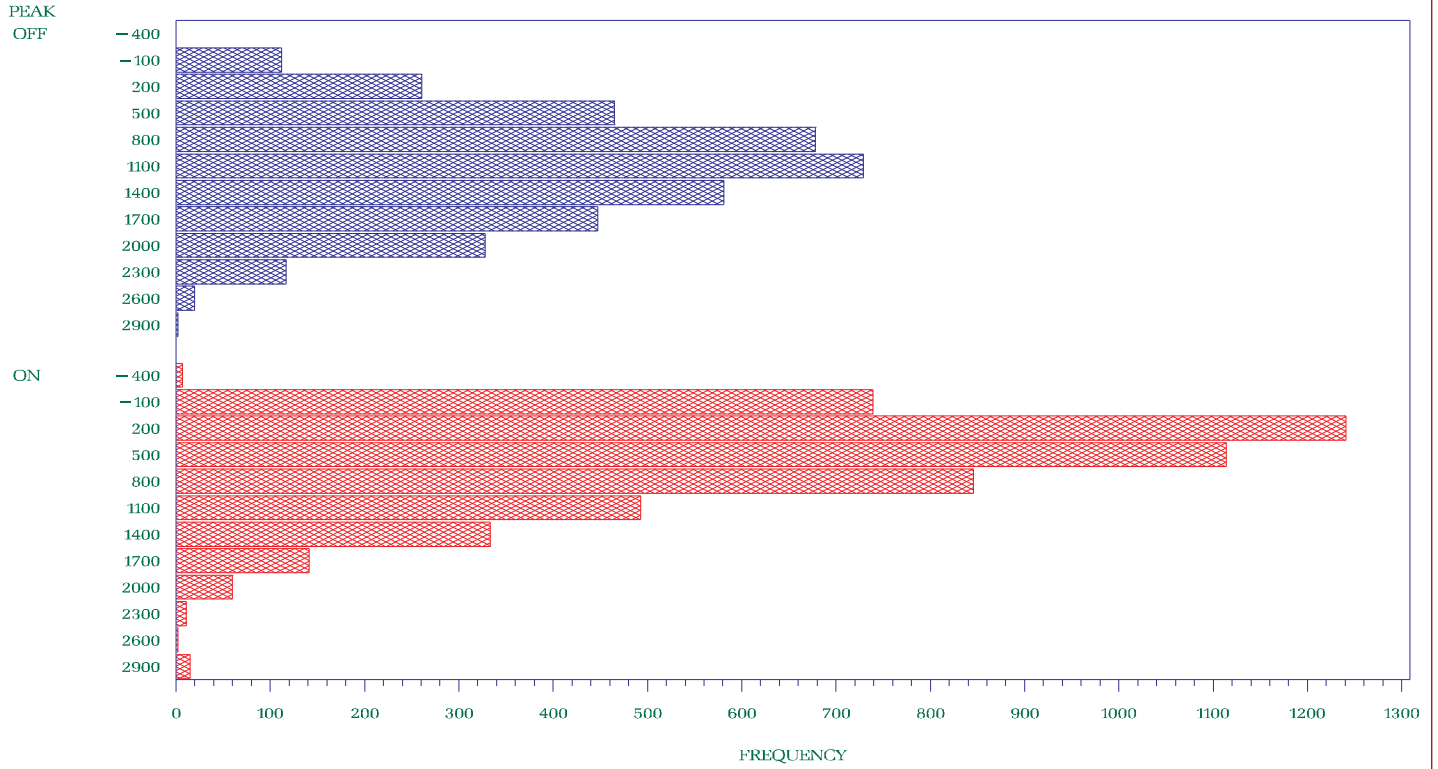


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to Sprainbrook/Dunwoodie Limit

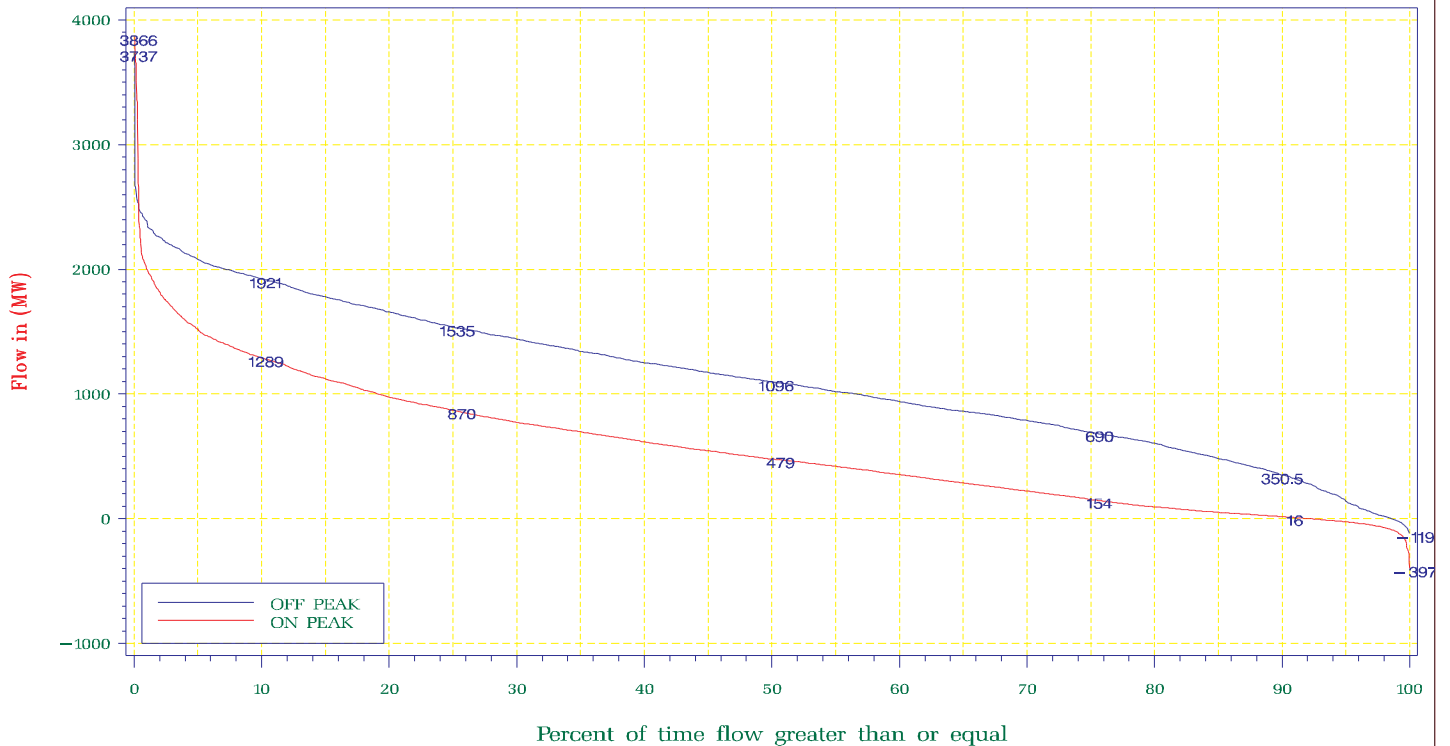


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to Sprainbrook/Dunwoodie Limit

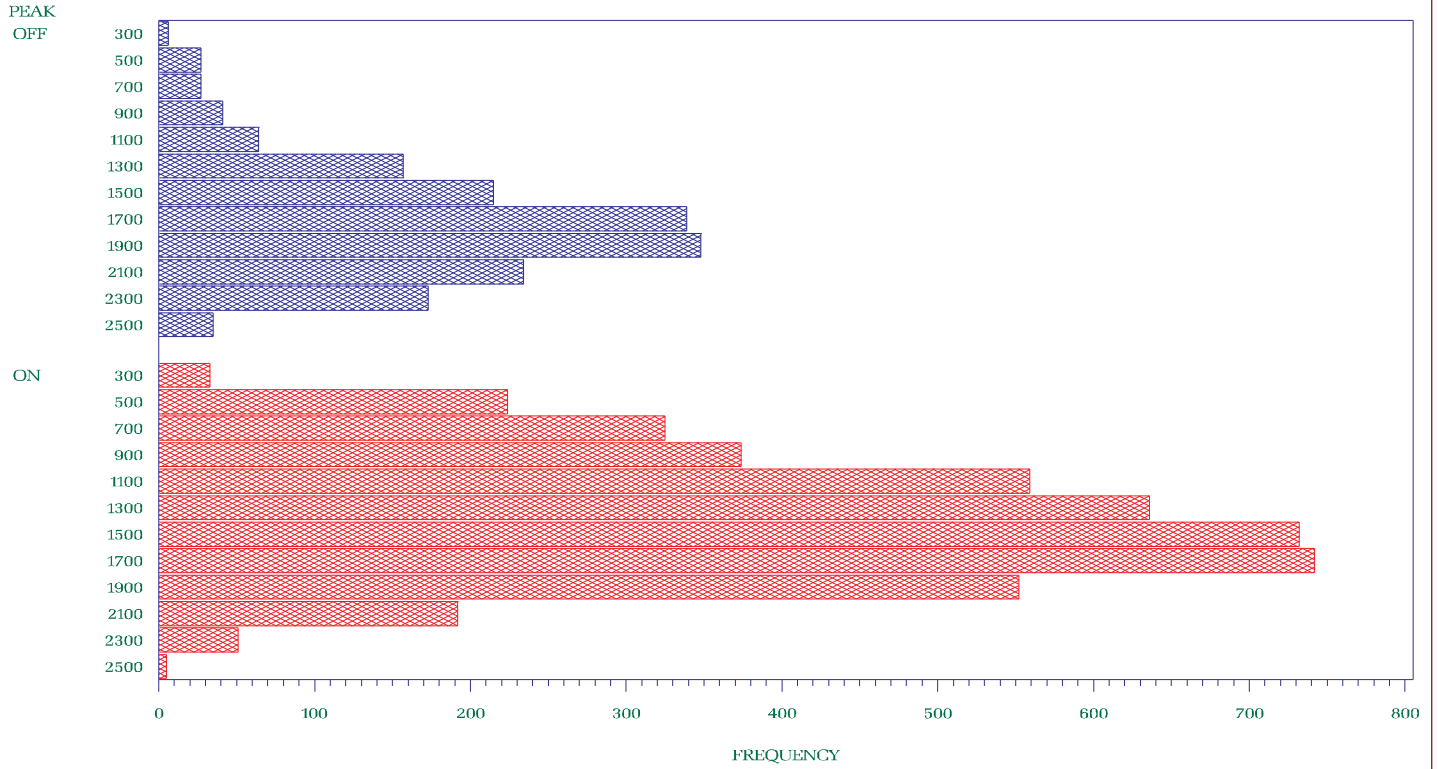


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to Moses South Limit

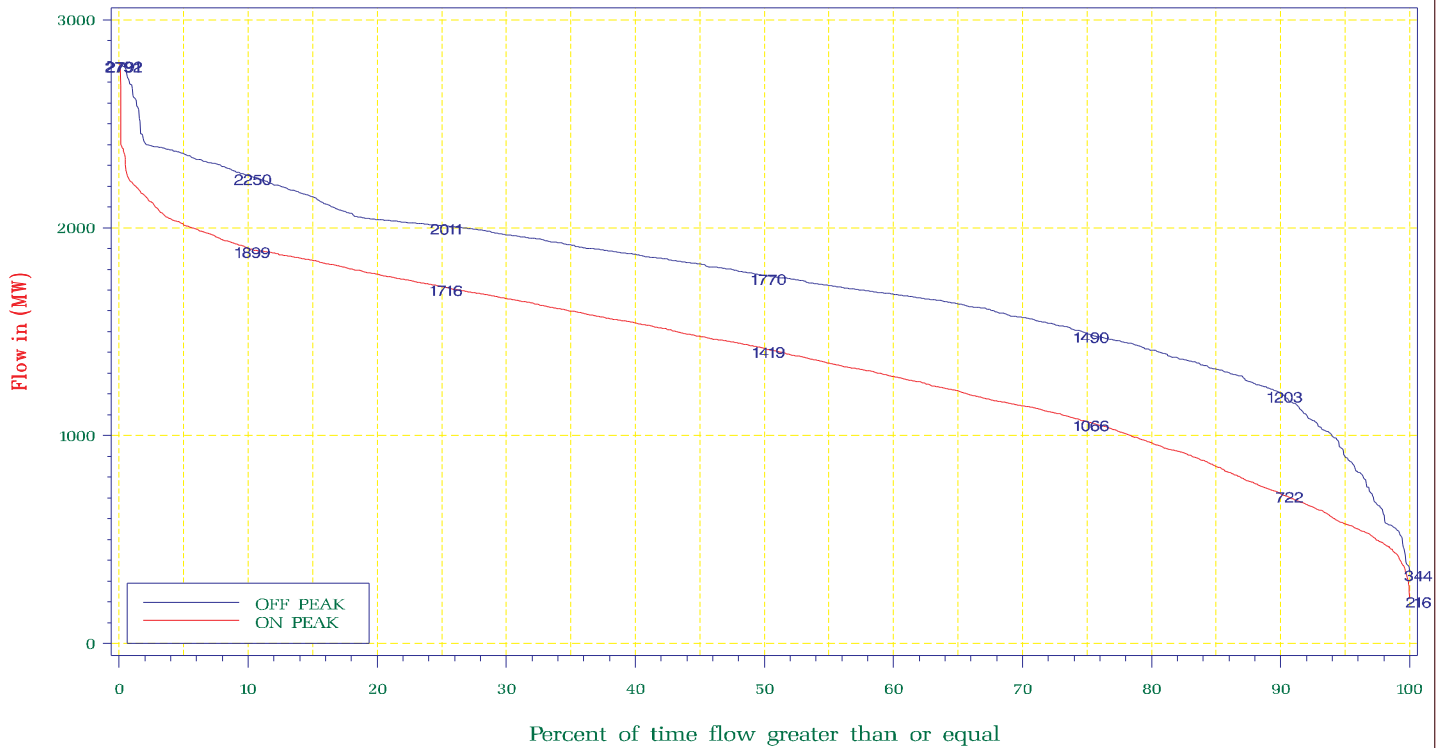


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to Moses South Limit

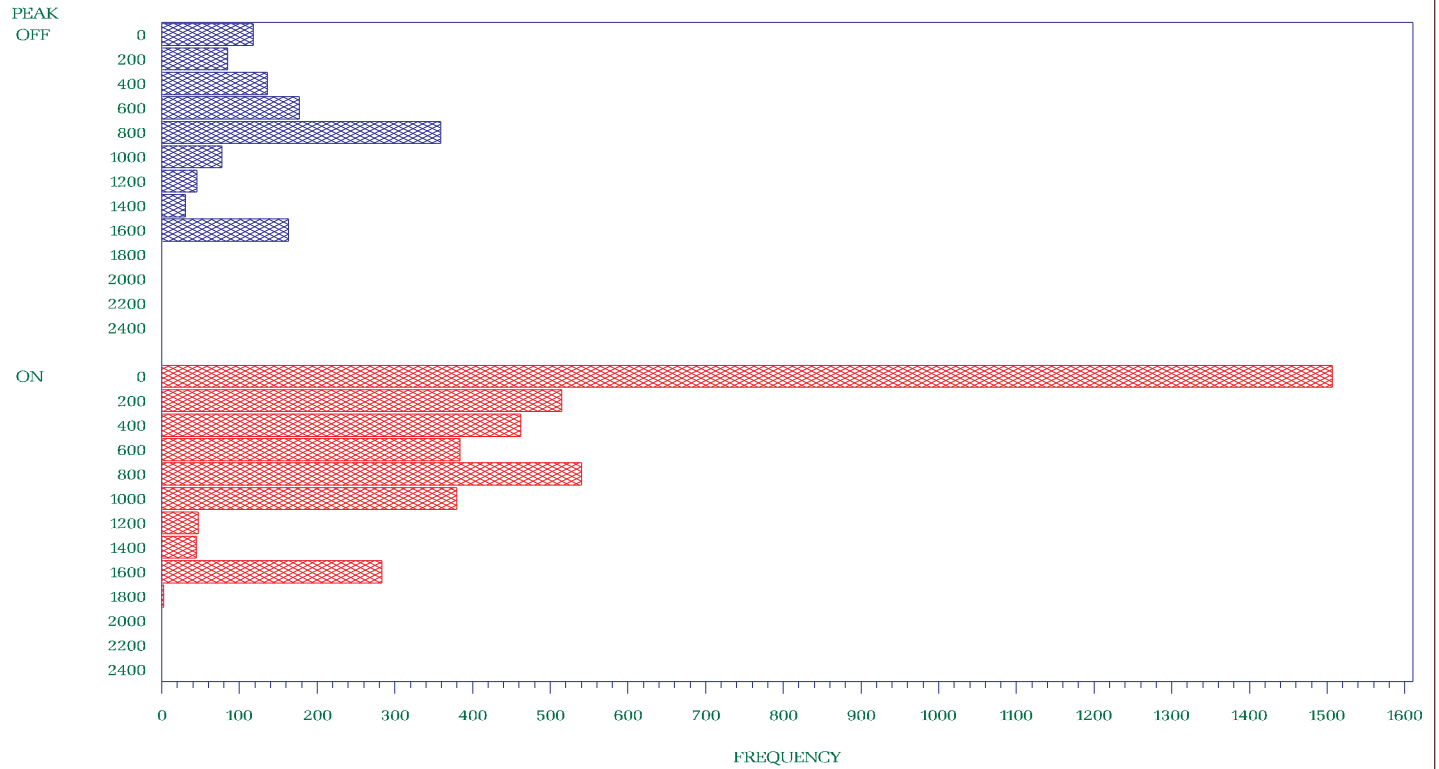


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to TE–NY Limit

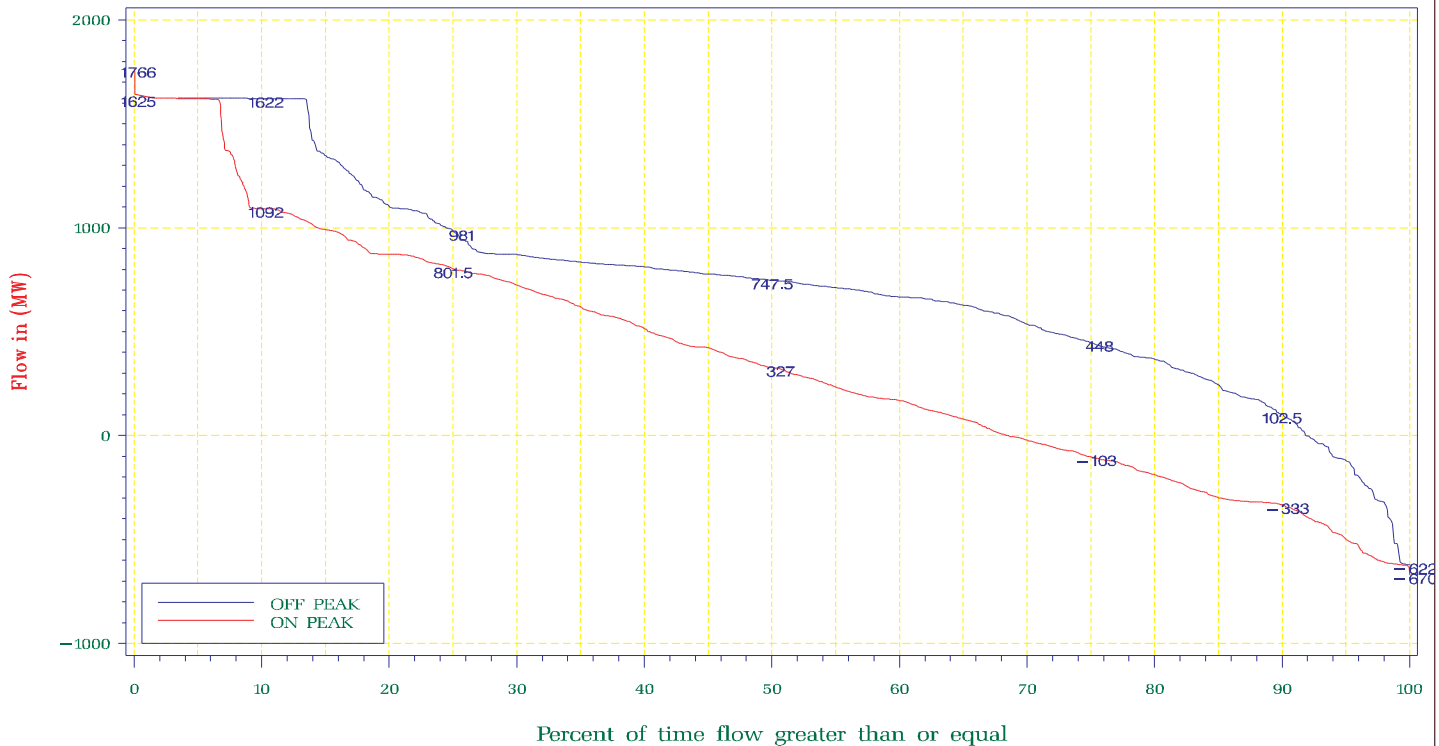


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to TE–NY Limit

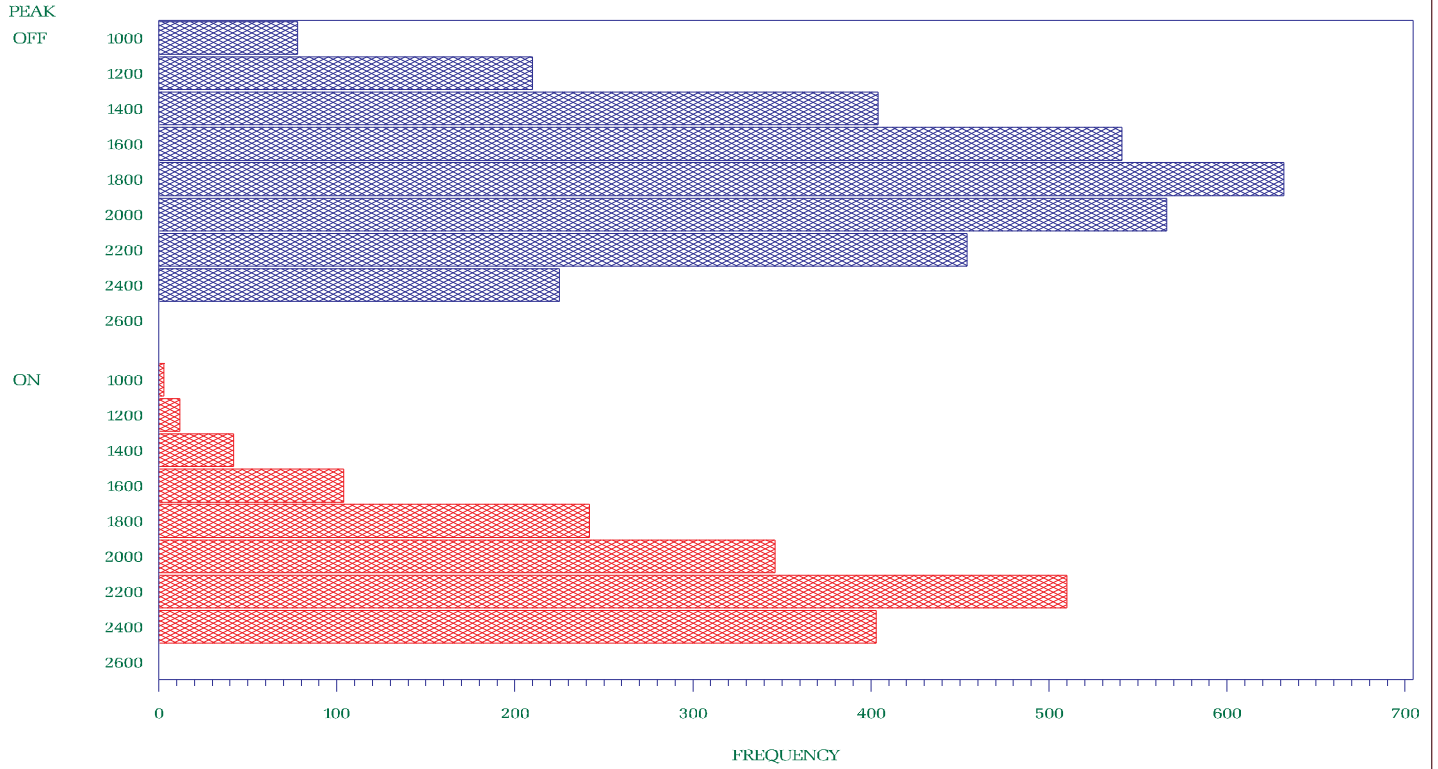


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to Ontario – NY Limit

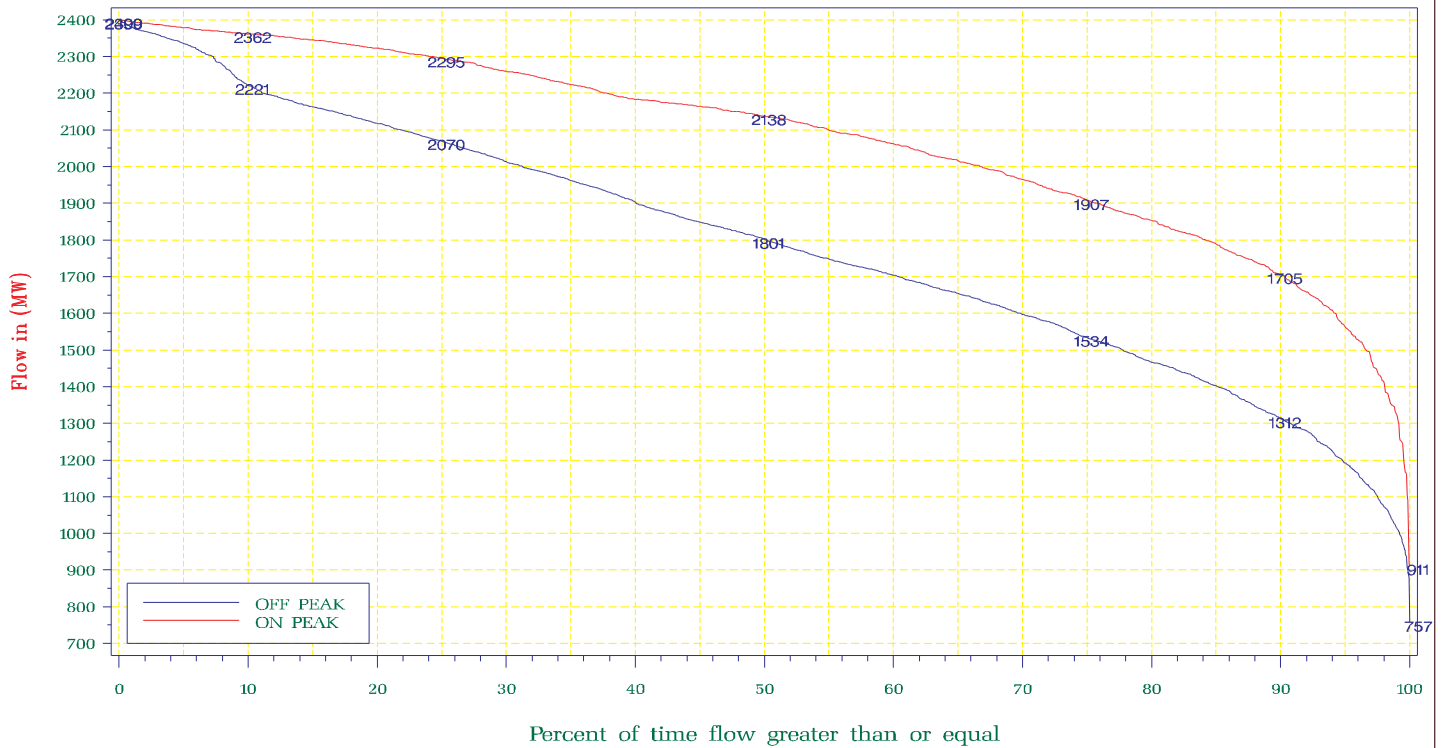


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to Ontario – NY Limit



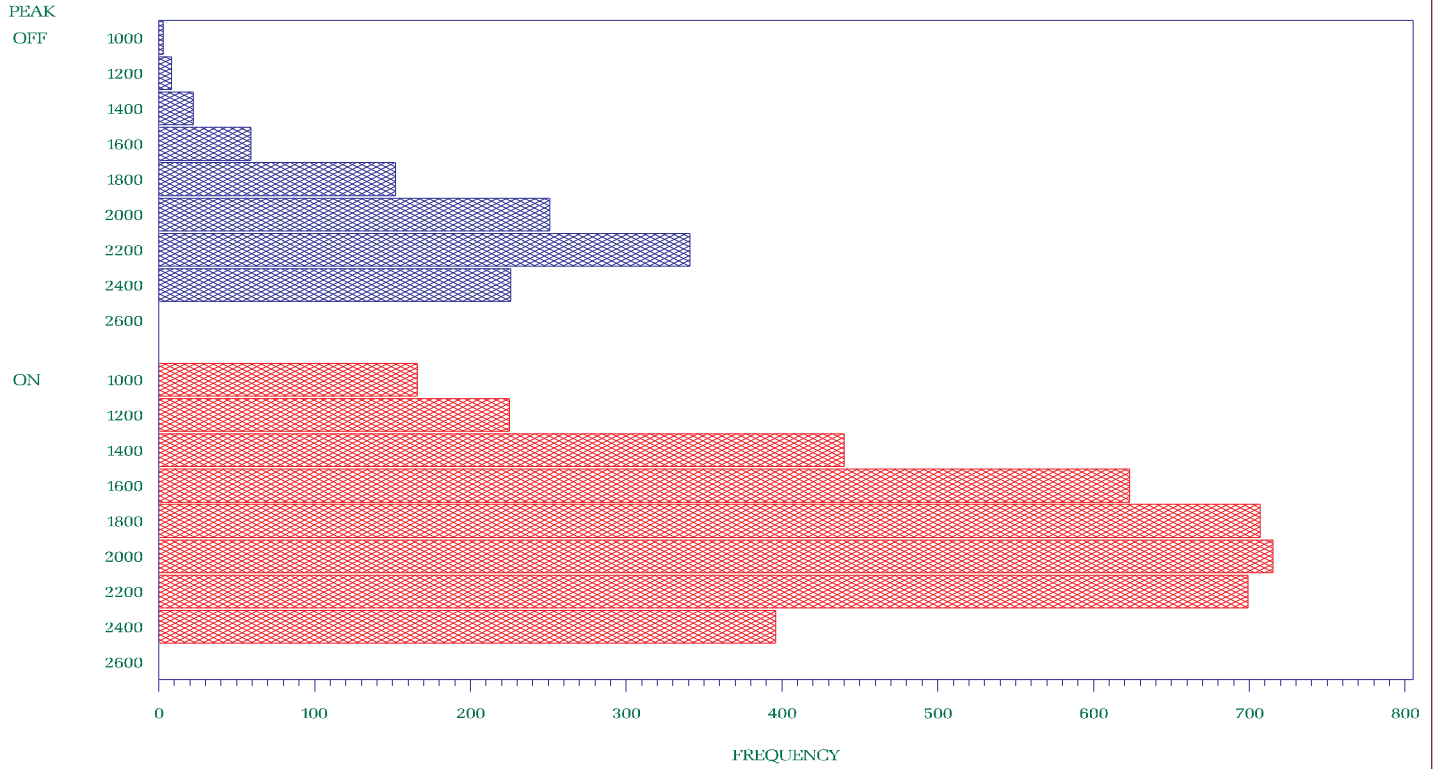
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

Margin to NY–Ontario Limit

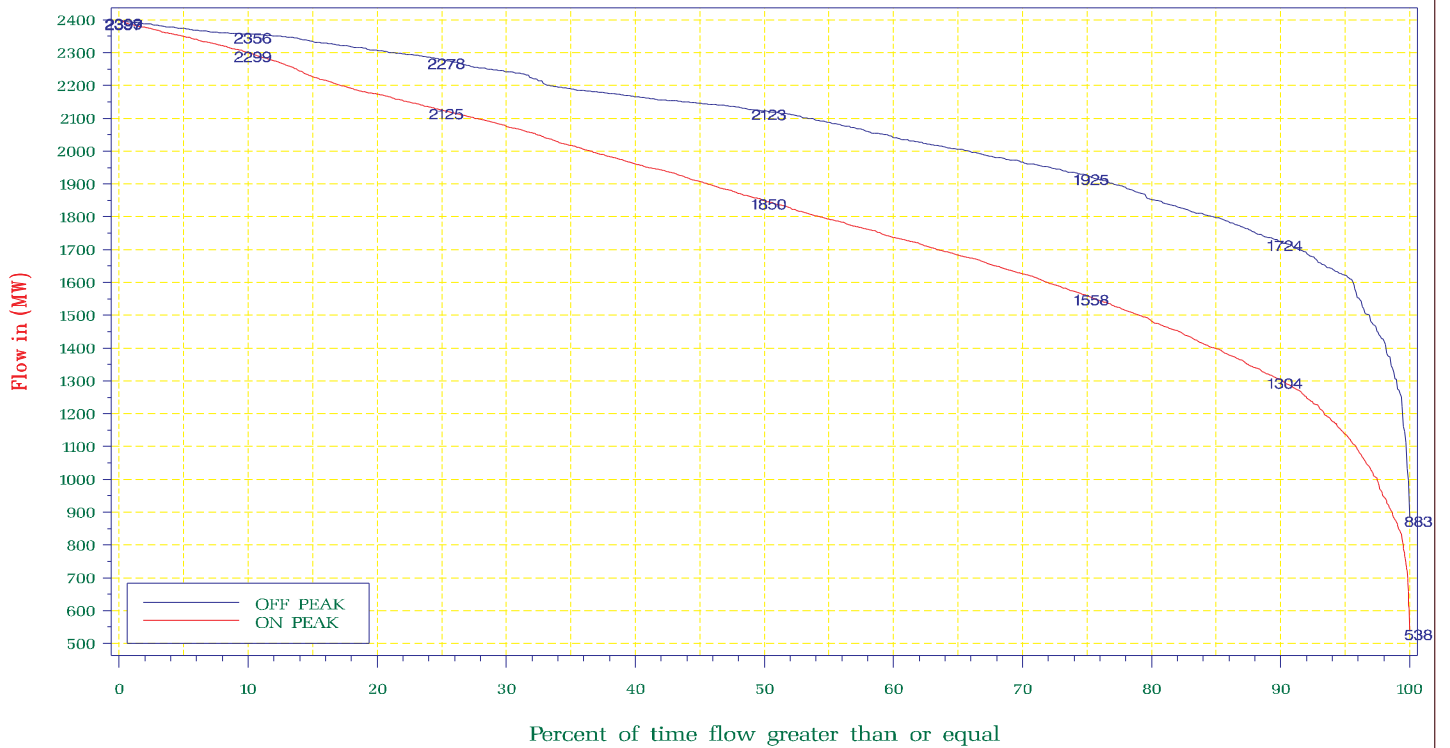


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to NY–Ontario Limit

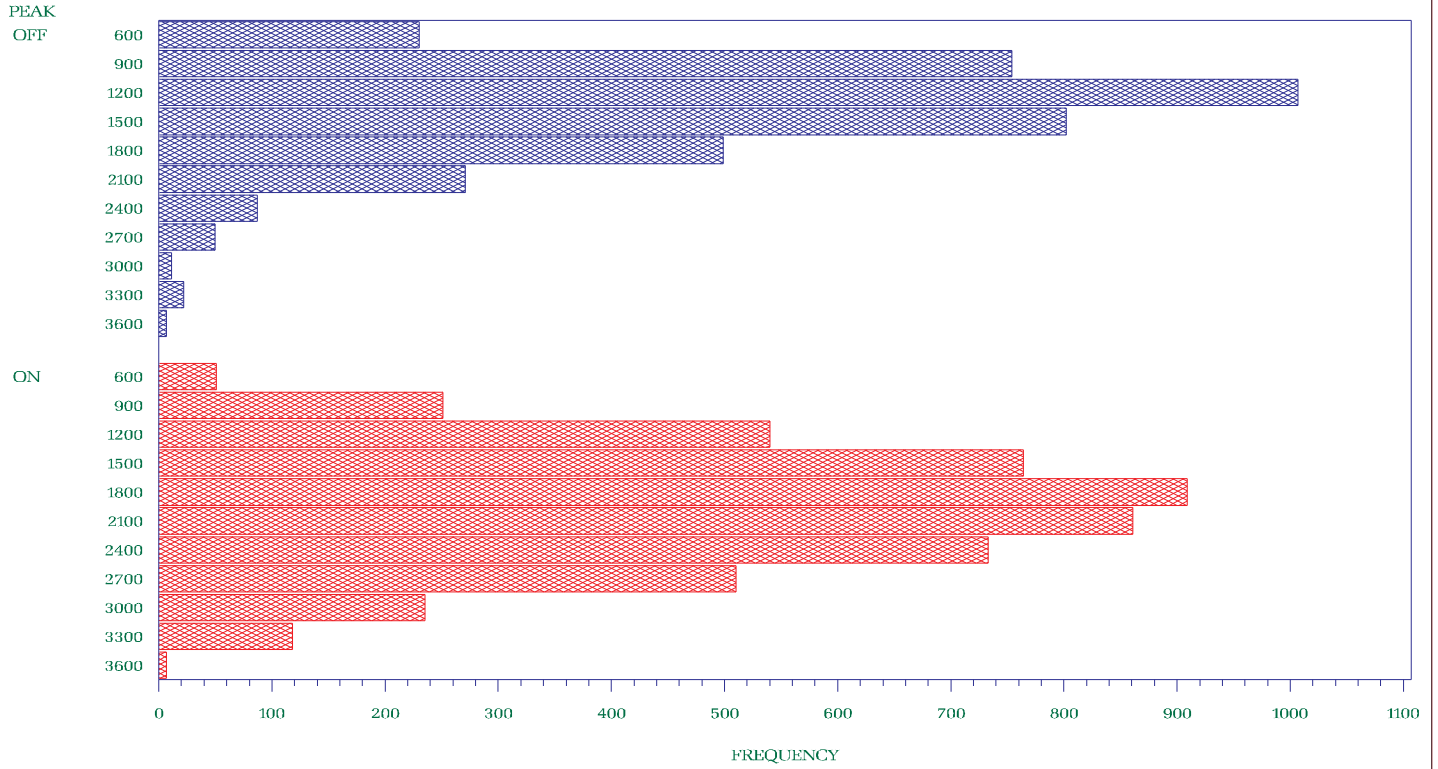


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to PJM – NY Limit

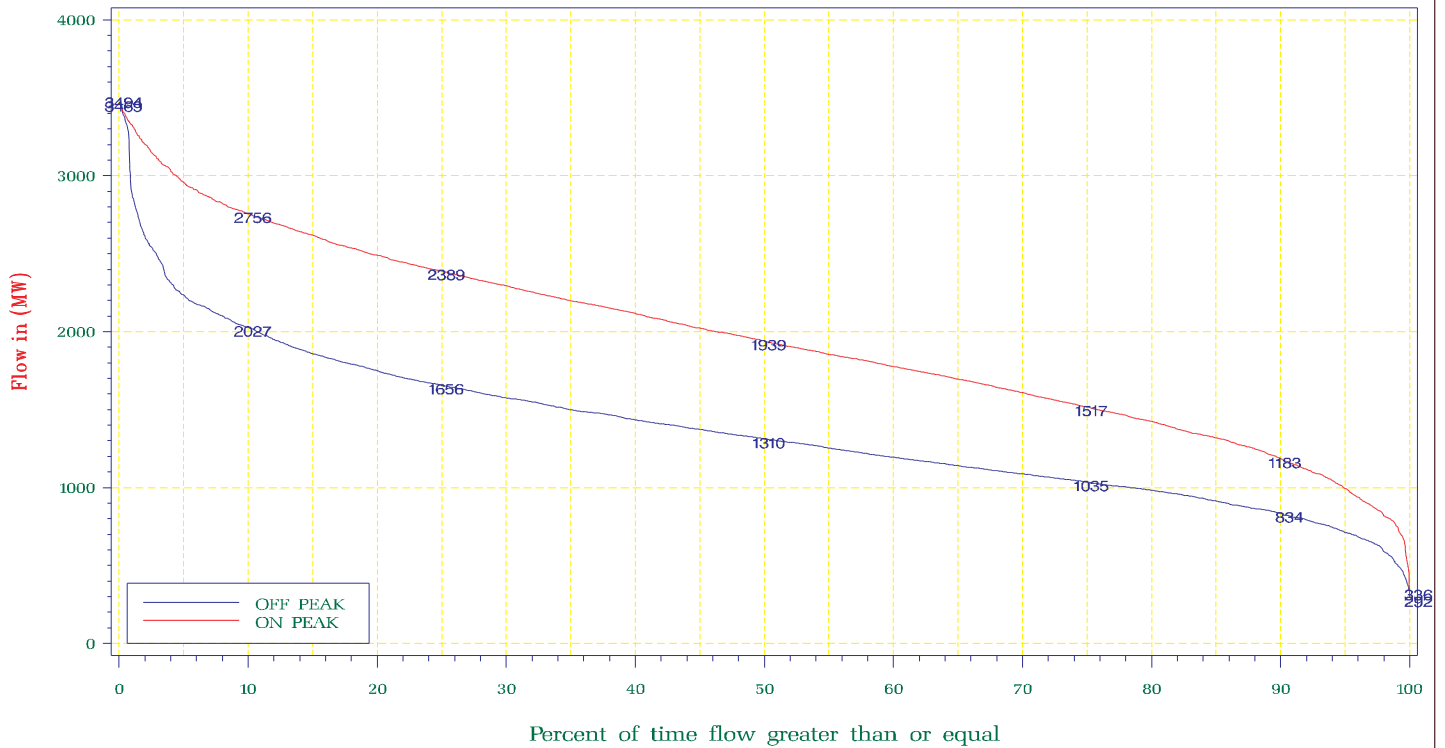


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to PJM – NY Limit

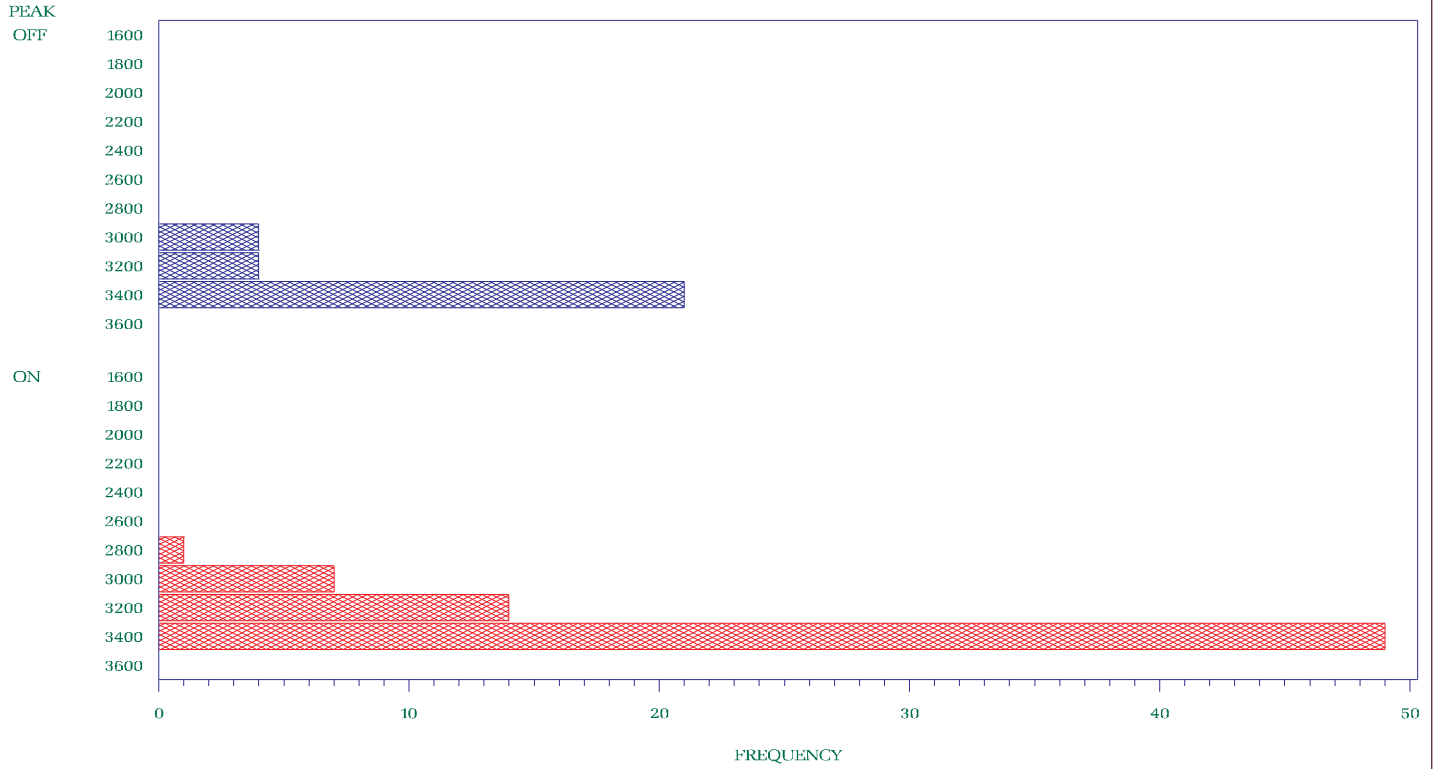


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to NY-PJM Limit

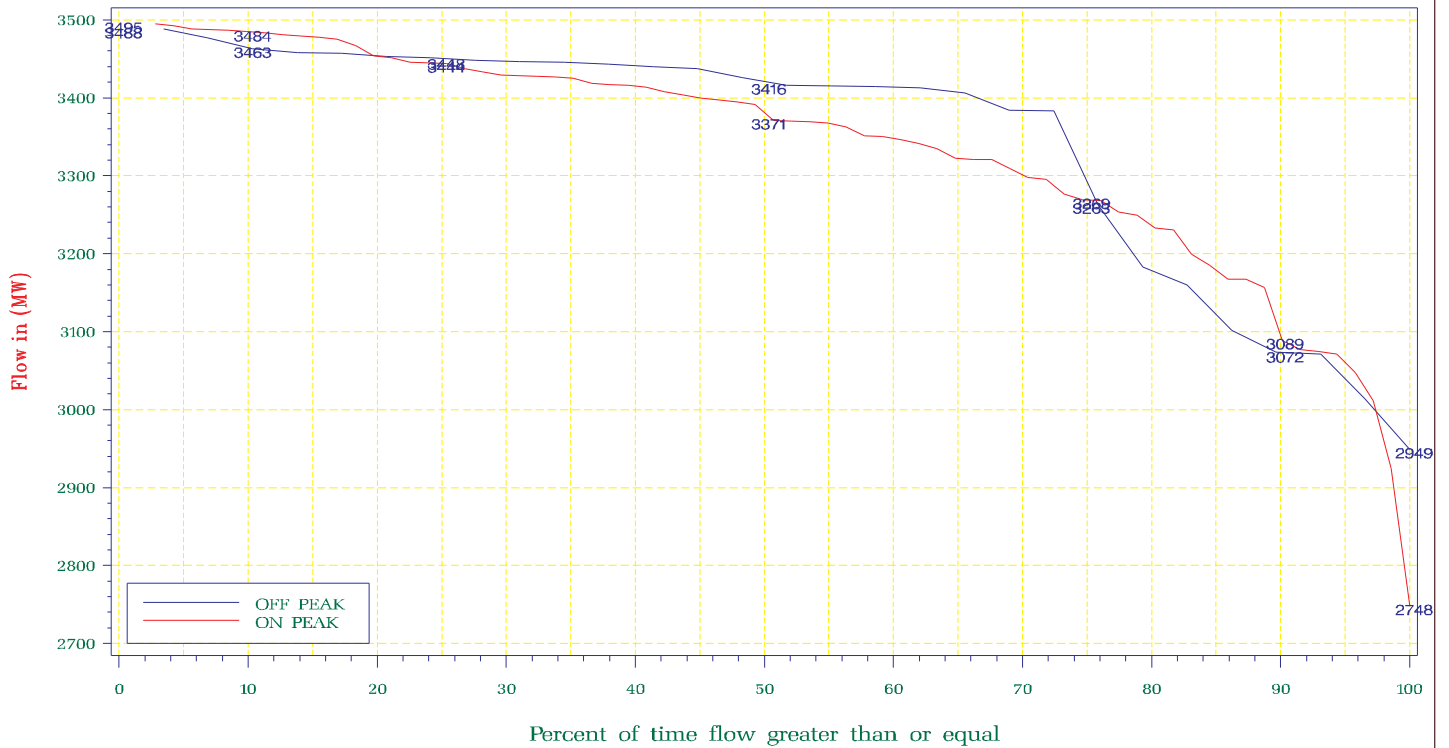


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to NY-PJM Limit

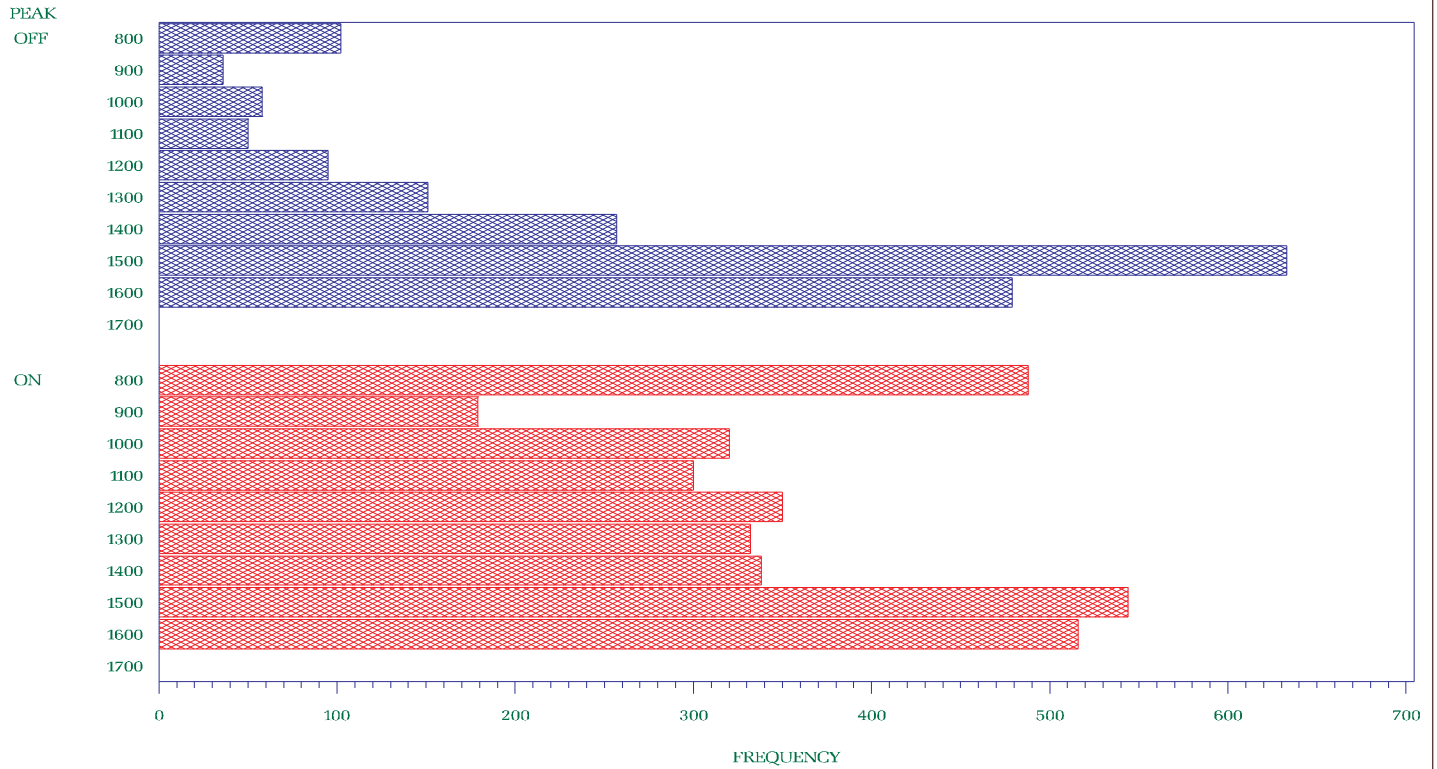


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to New England – NY Limit

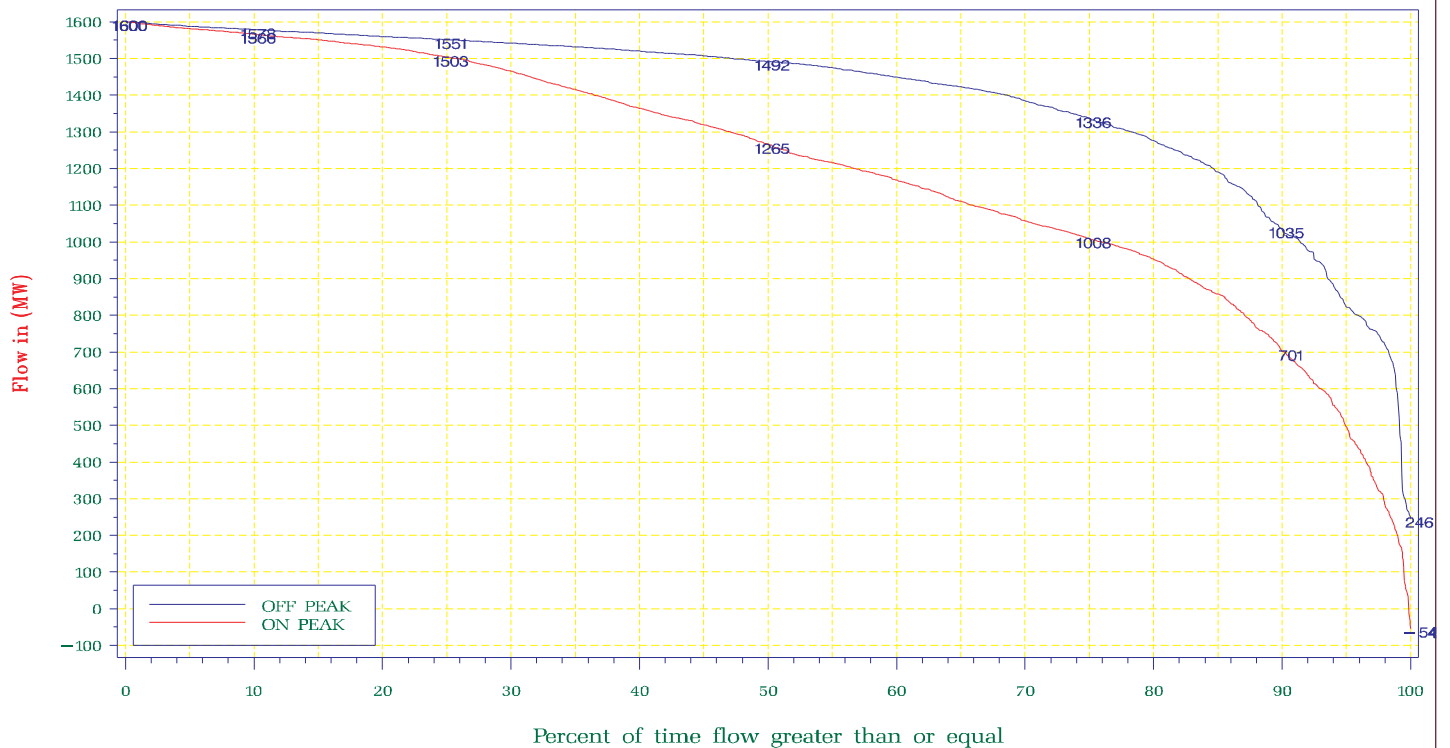


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to New England – NY Limit

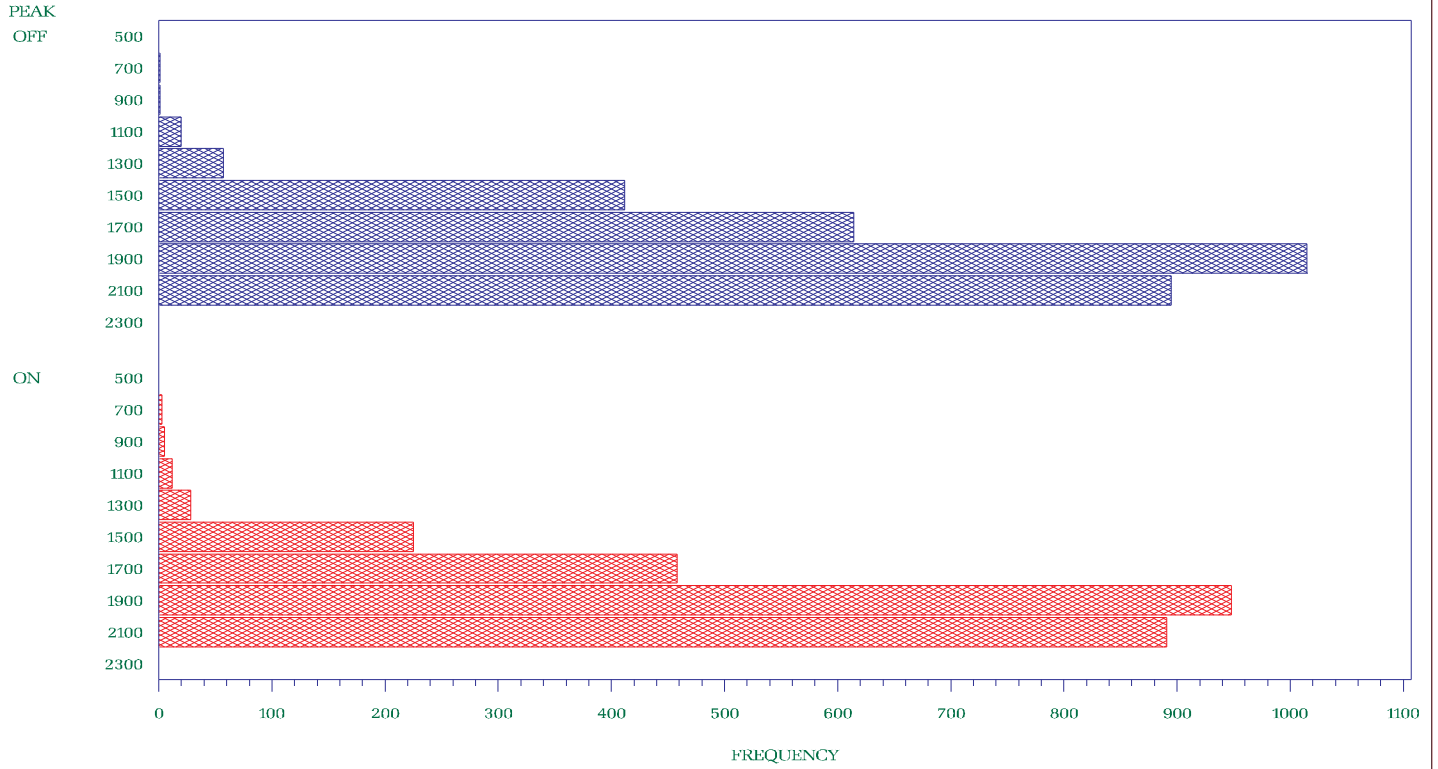


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Margin to NY–New England Limit

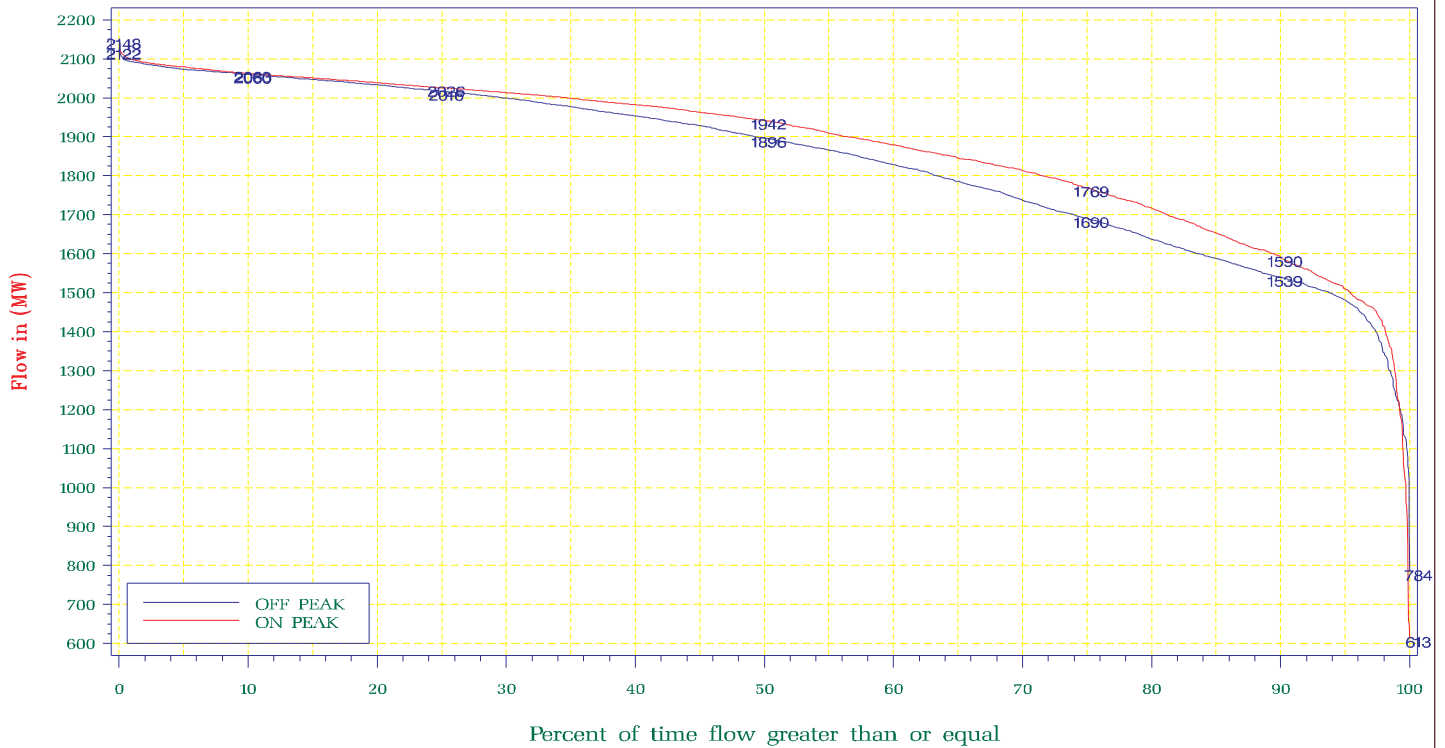


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Margin to NY–New England Limit



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

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

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

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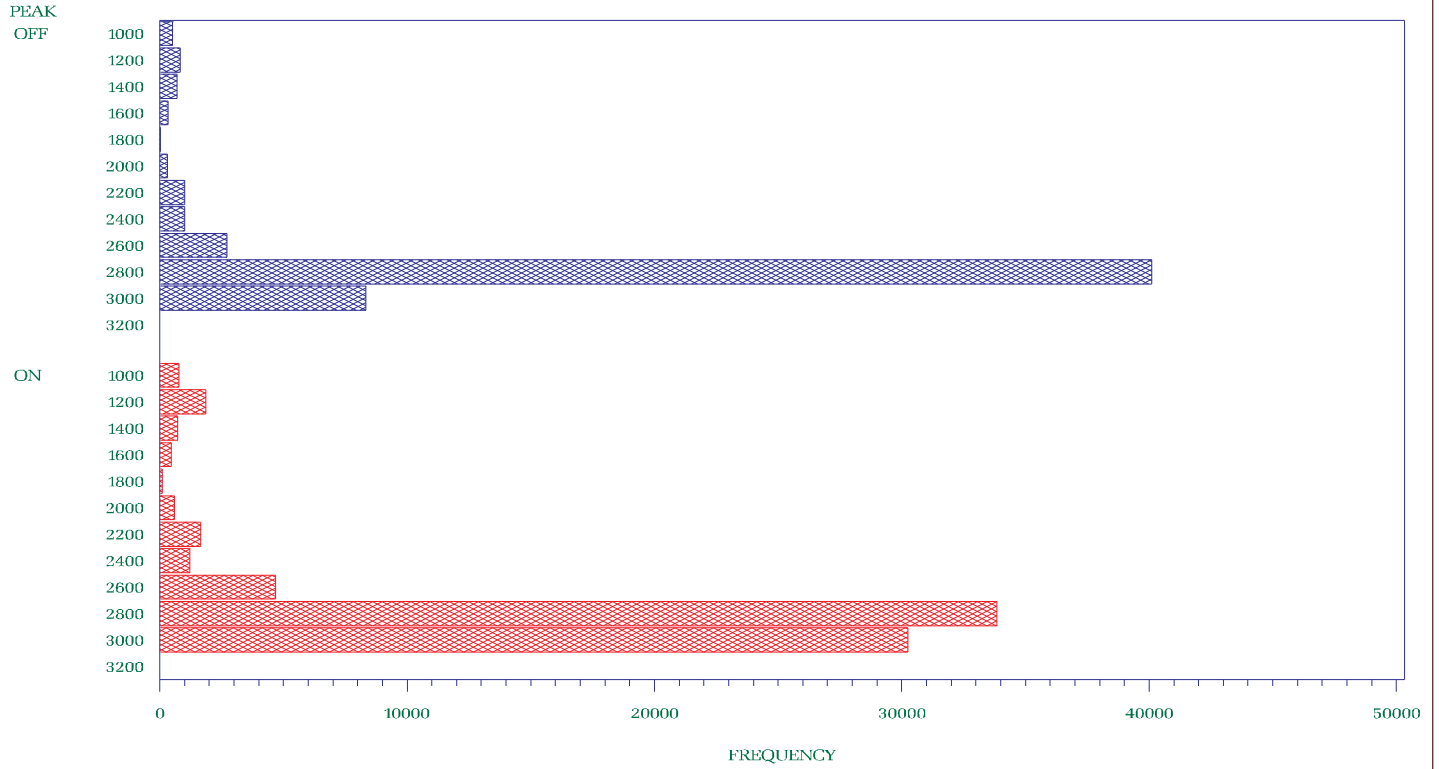
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NYISO Frequency Interface Flow For January – December 2003

Central East Limit

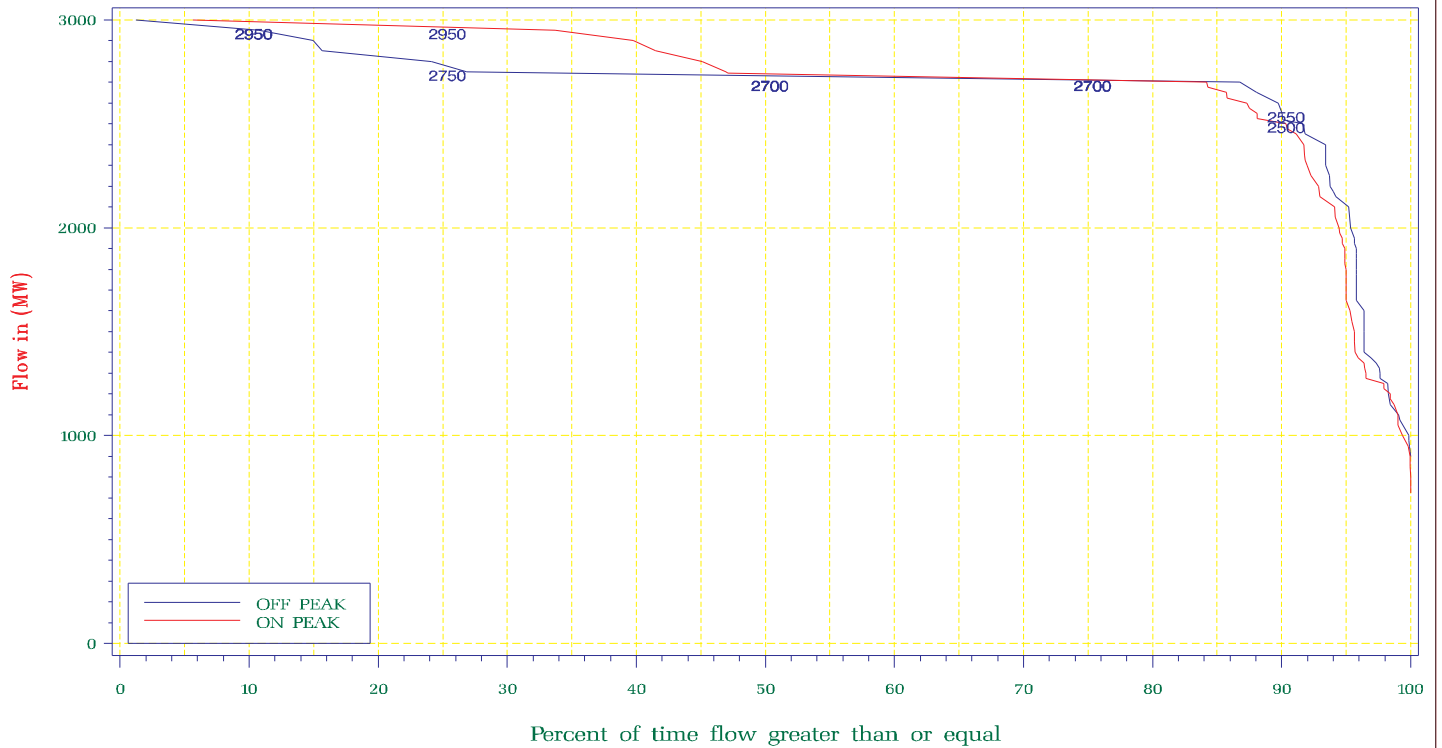


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Central East Limit

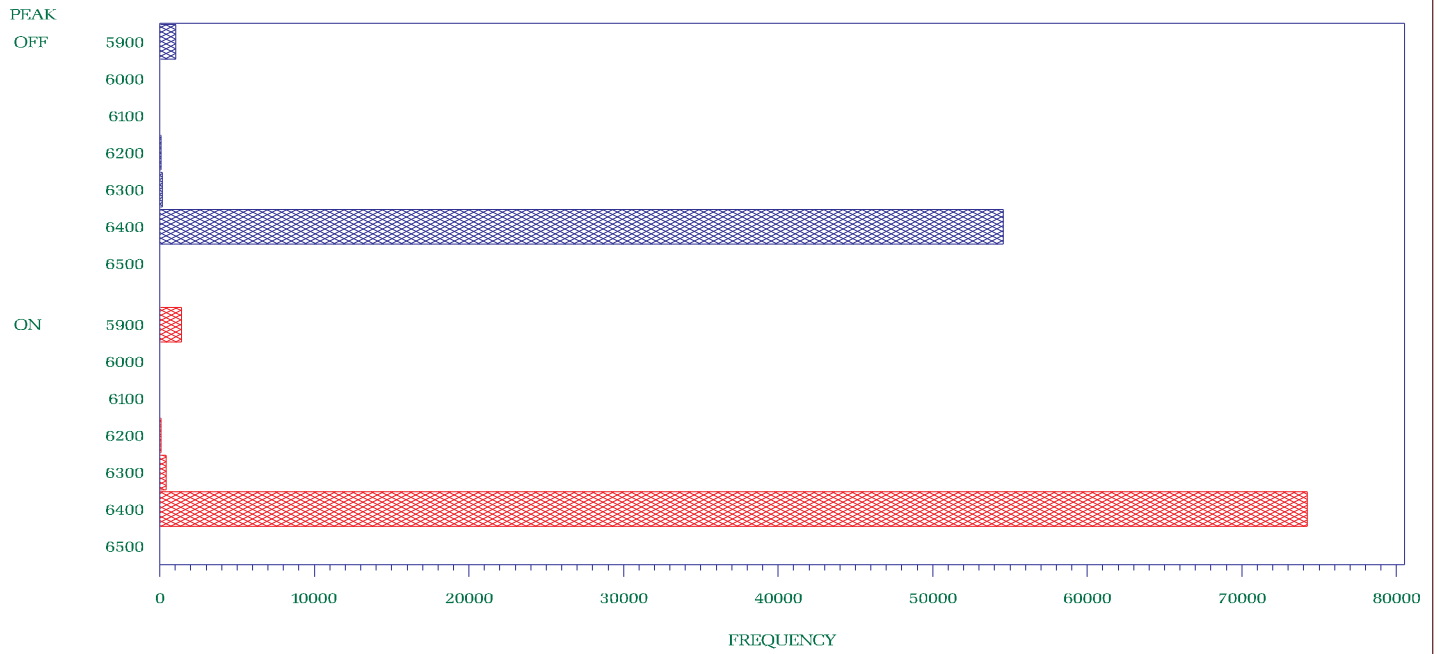


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Total East Limit

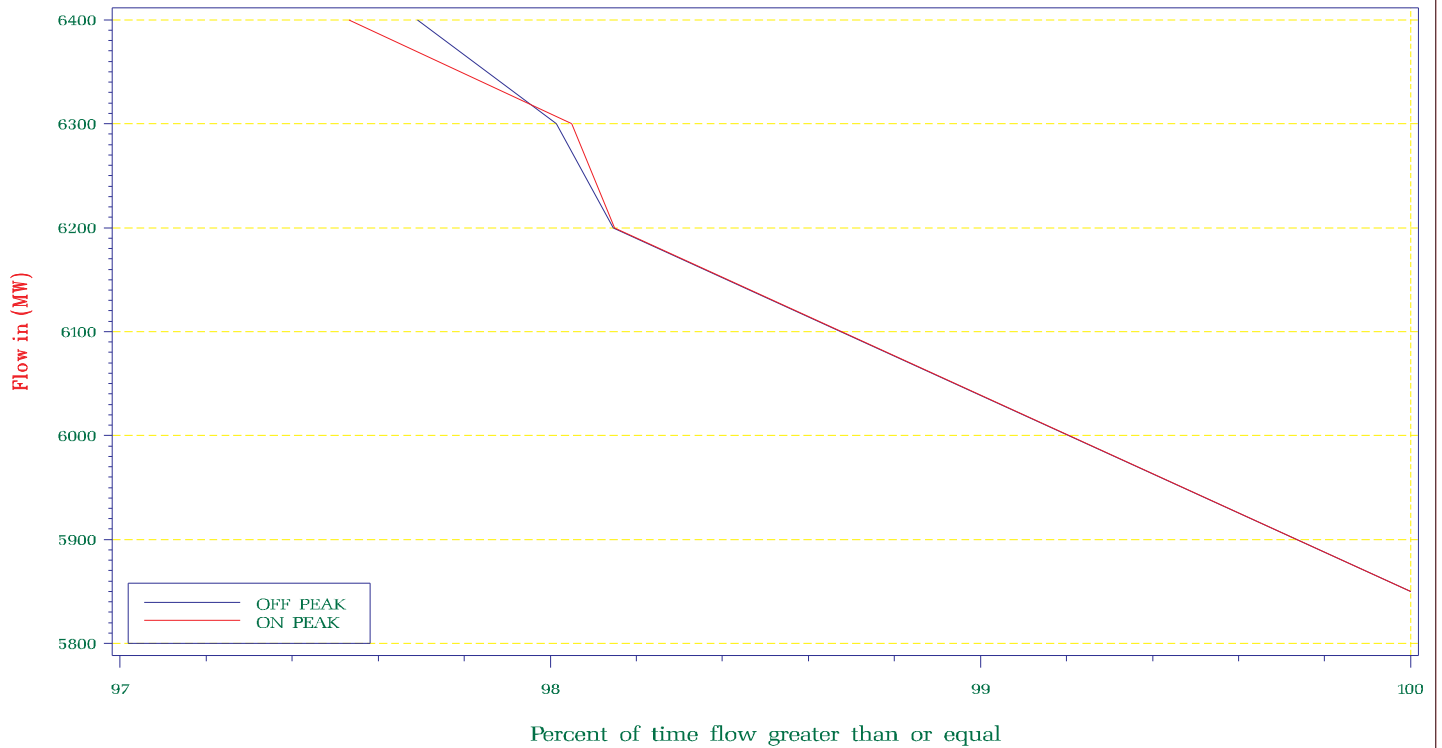


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Total East Limit

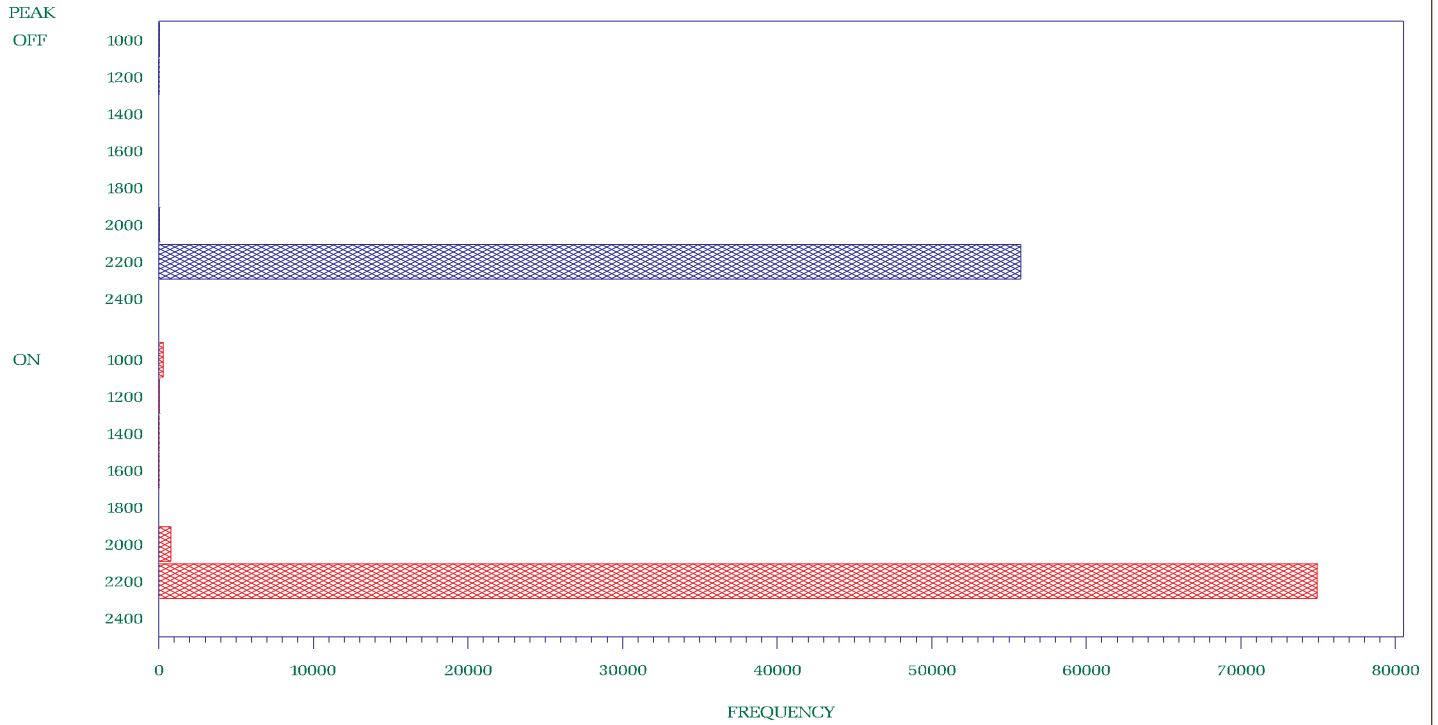


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

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 2003

West Central Limit

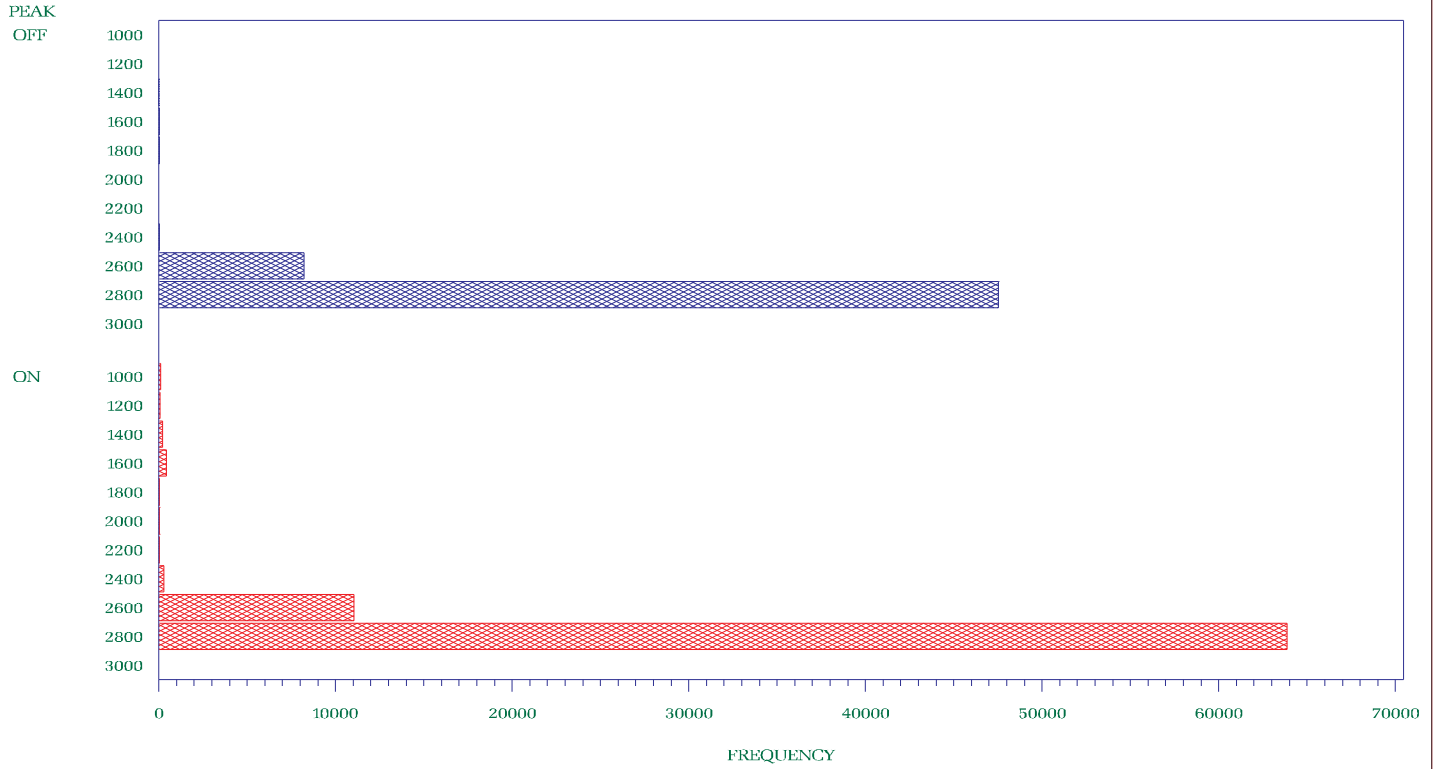


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Dysinger East Limit

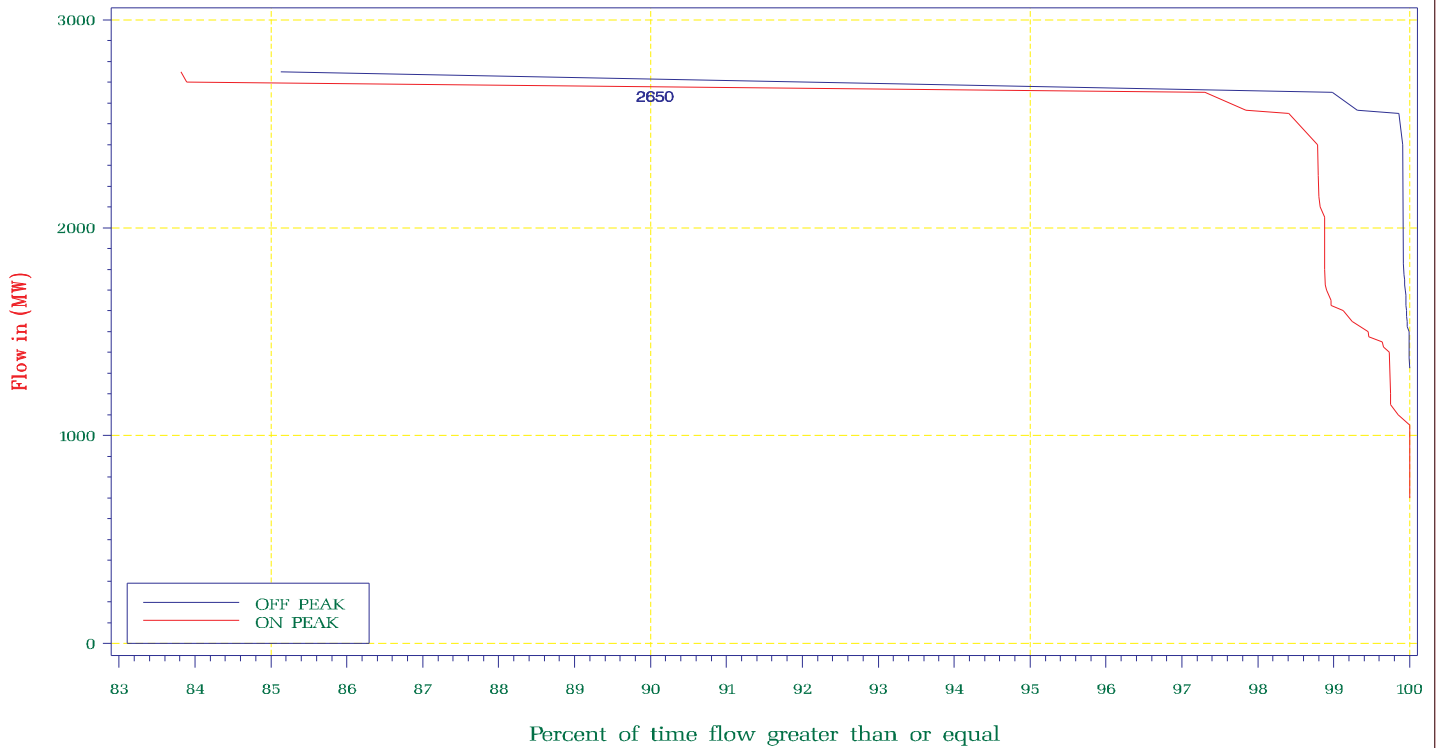


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Dysinger East Limit

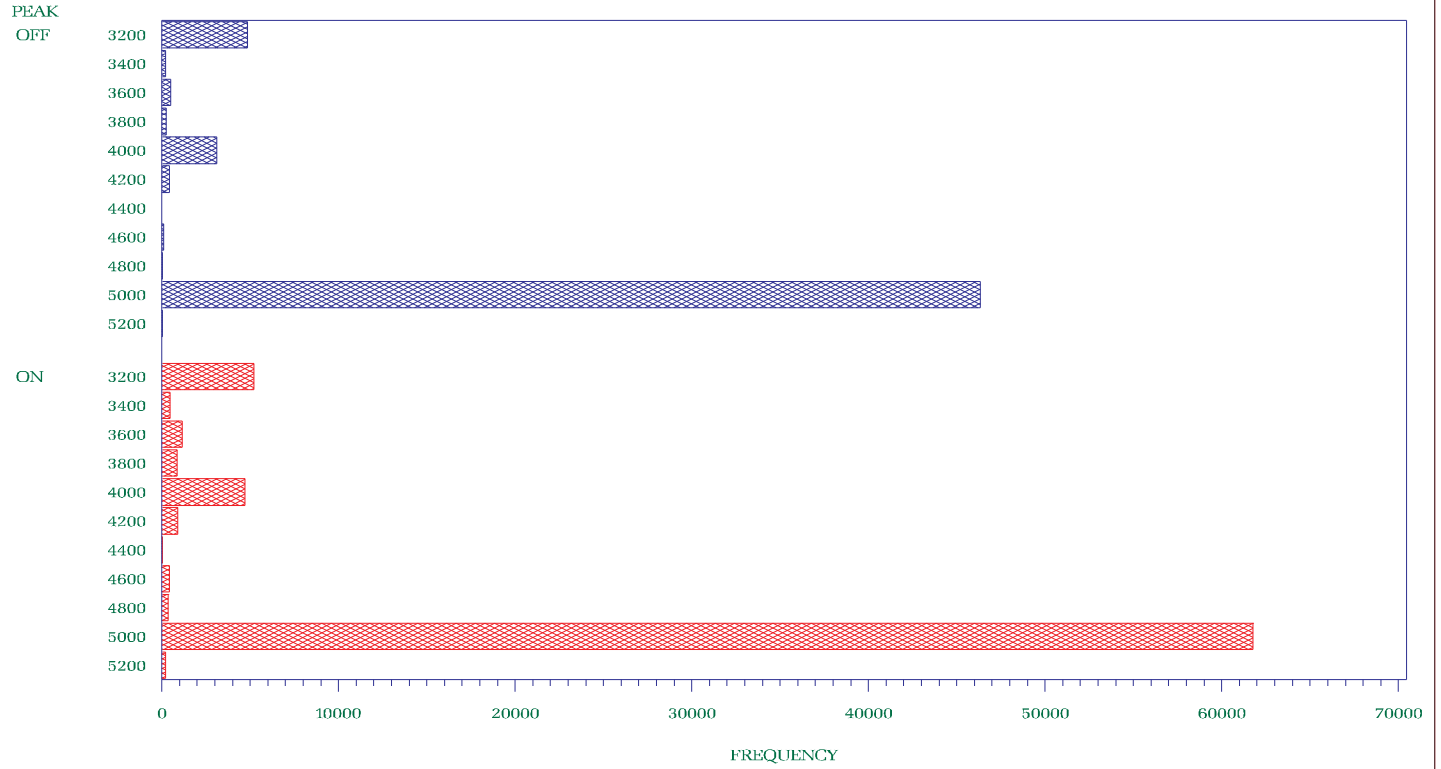


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

UPNY Con Ed Limit

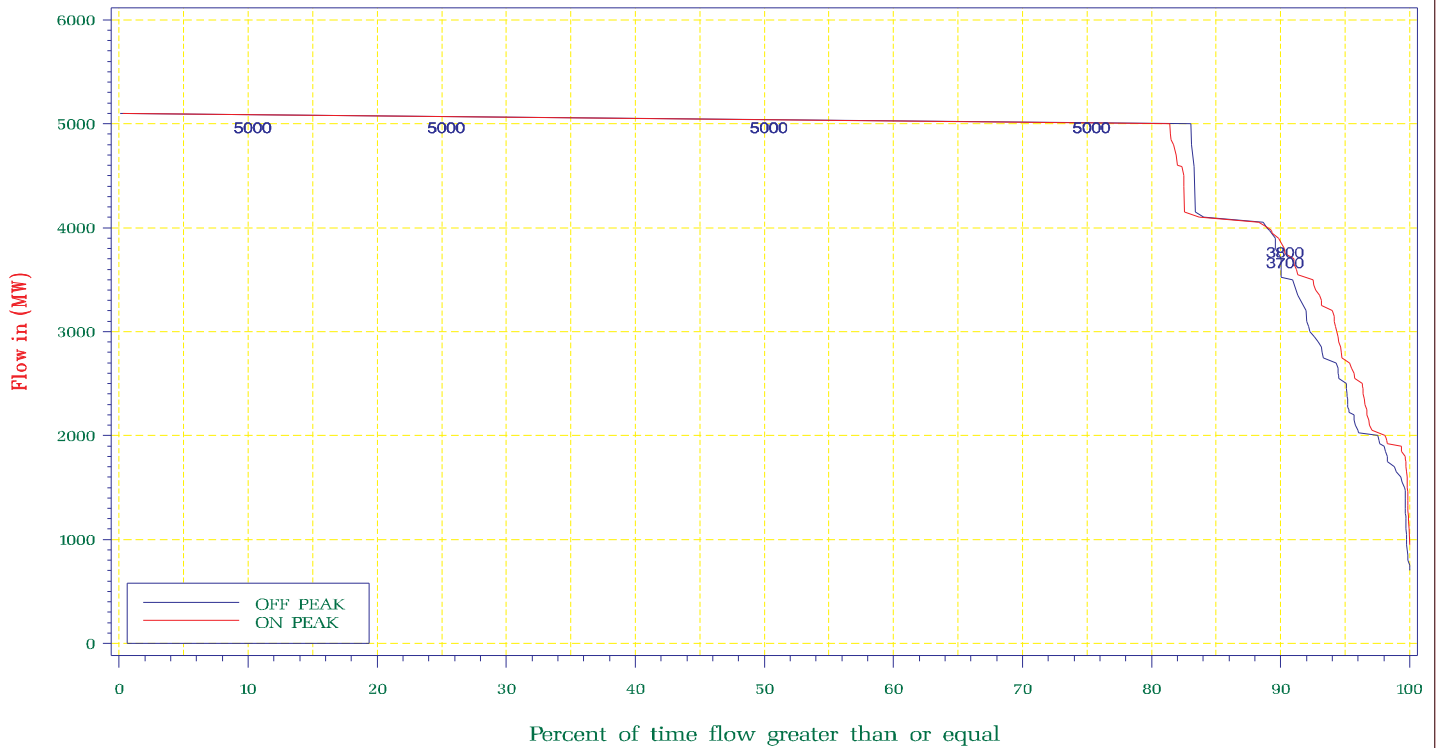


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

UPNY Con Ed Limit

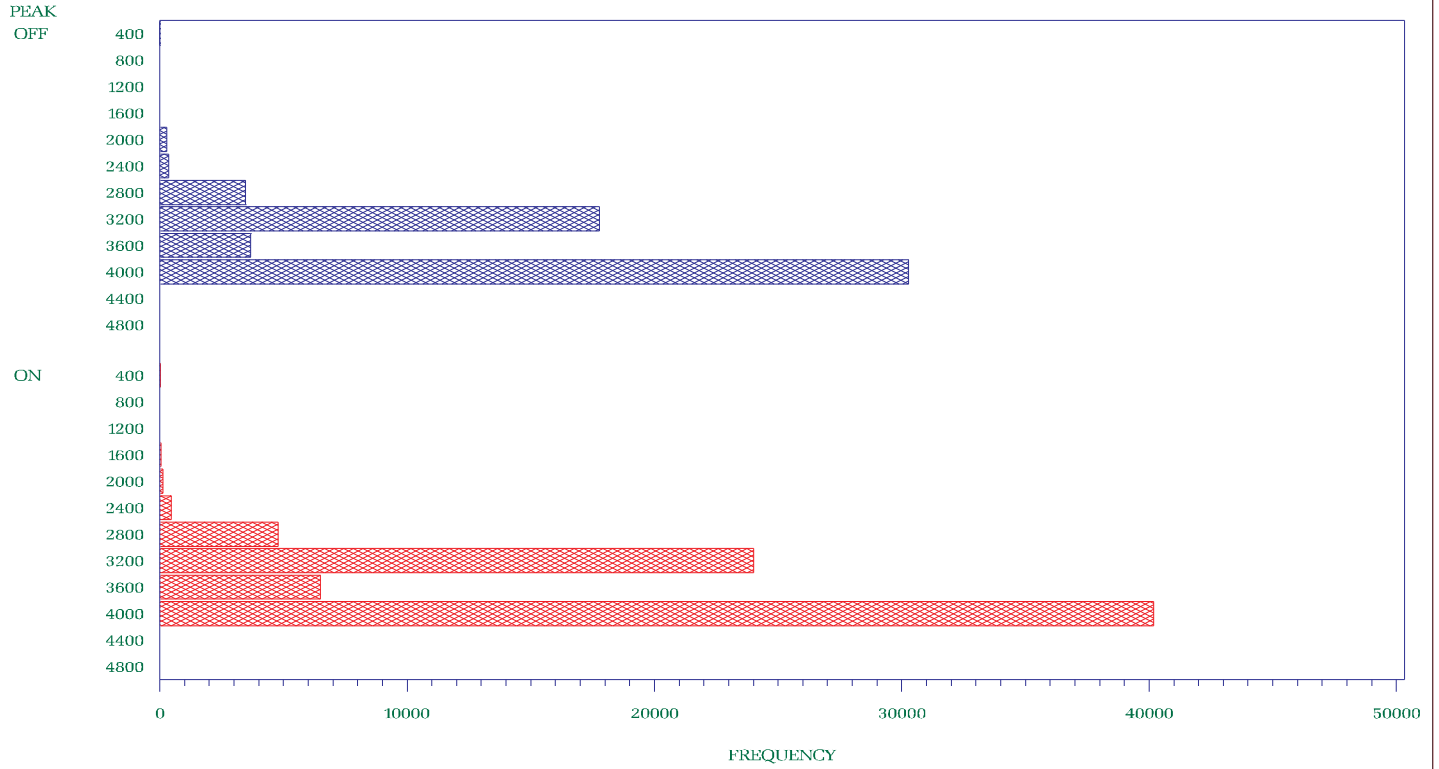


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Dunwoodie South Limit

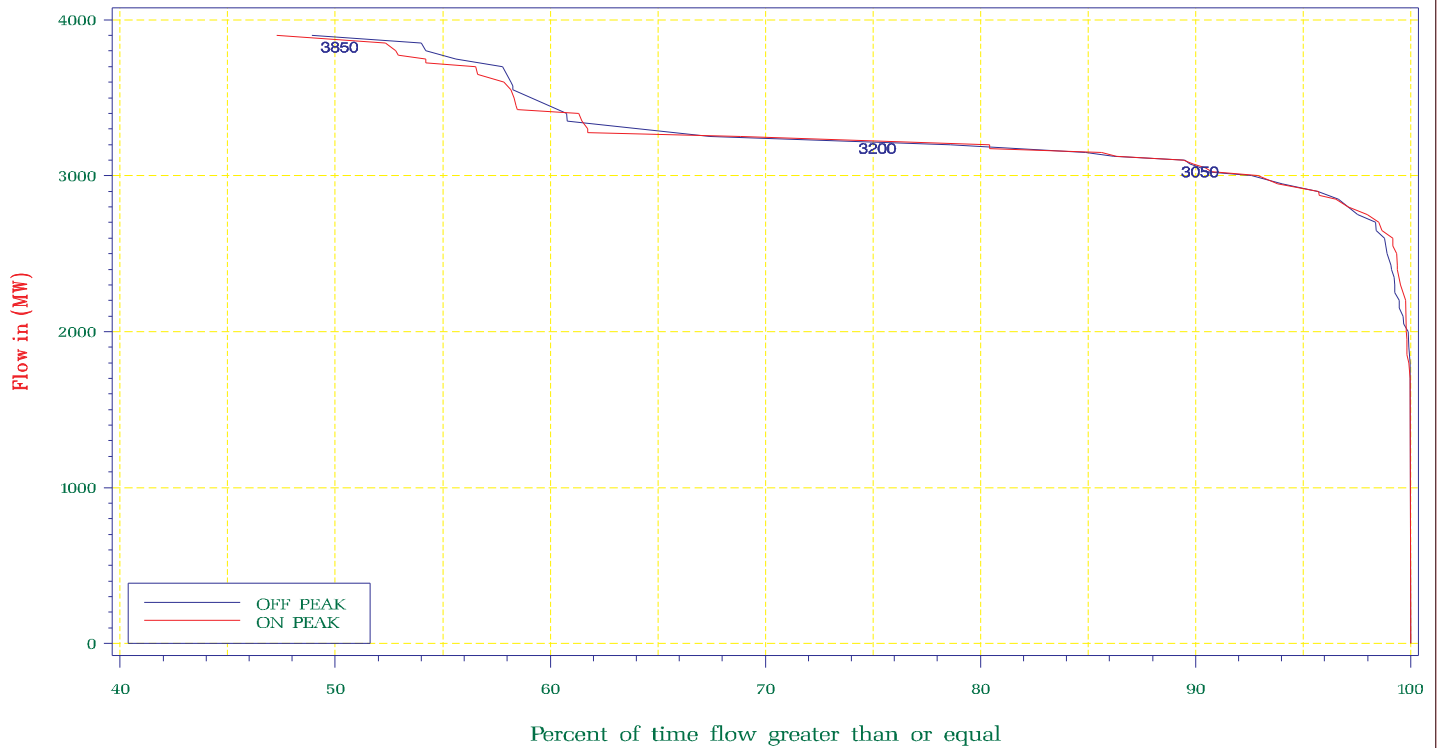


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Dunwoodie South Limit

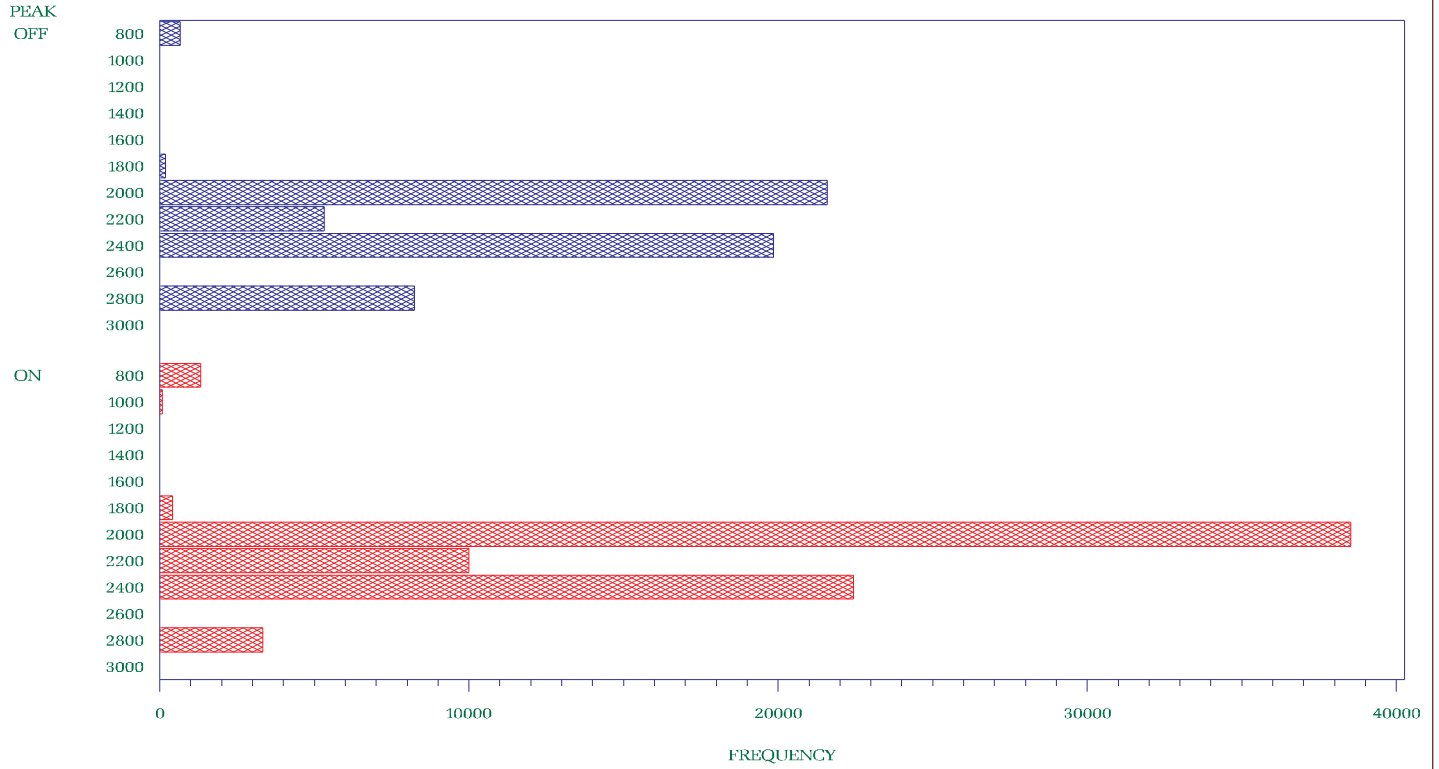


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Moses South Limit

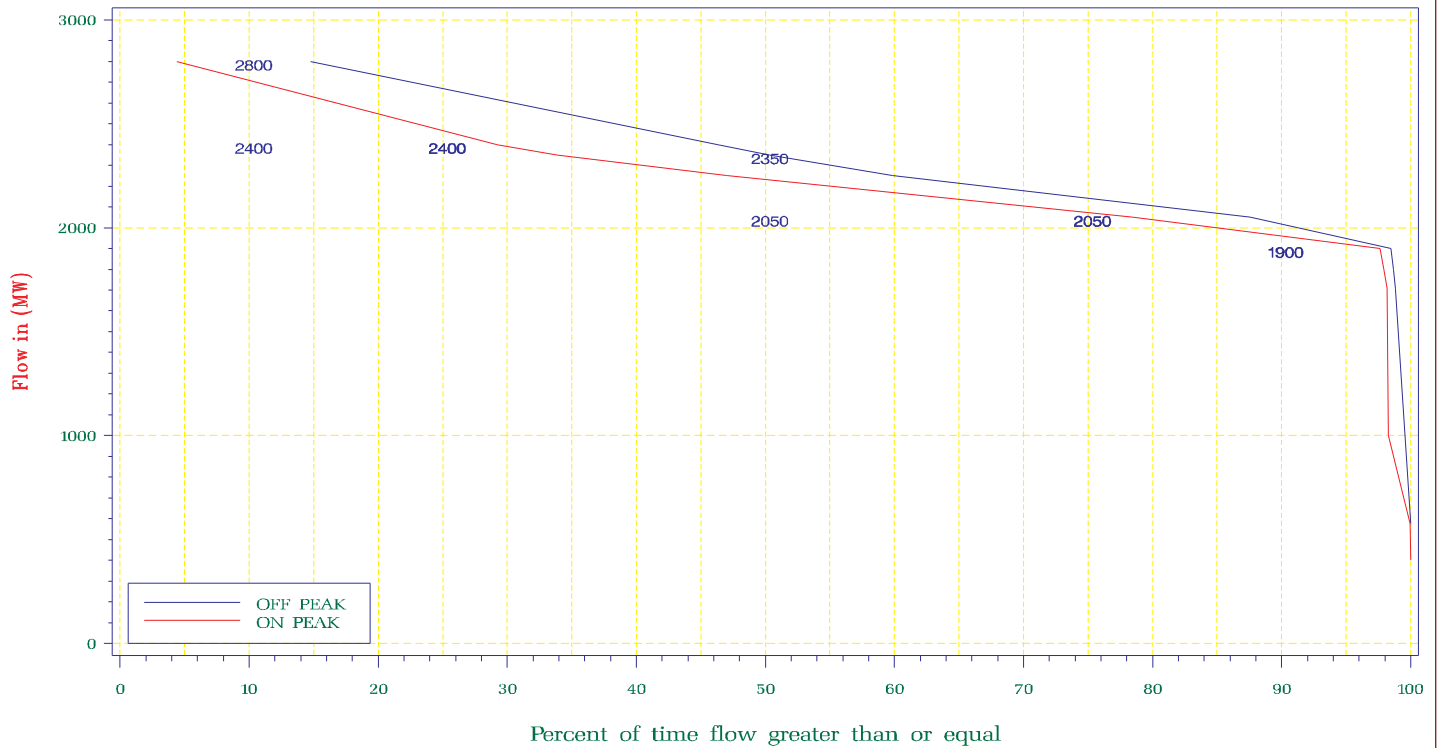


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Moses South Limit

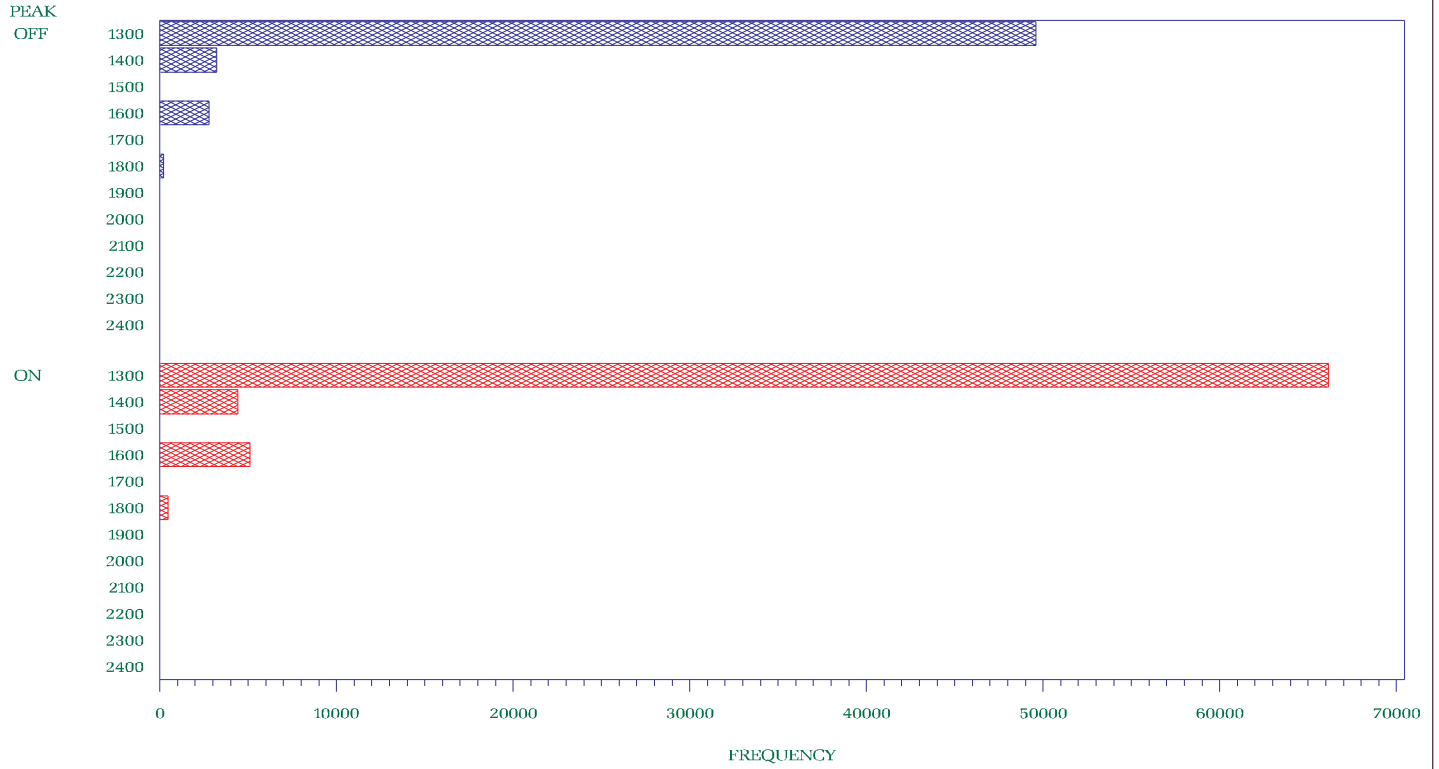


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

TE – NY Limit

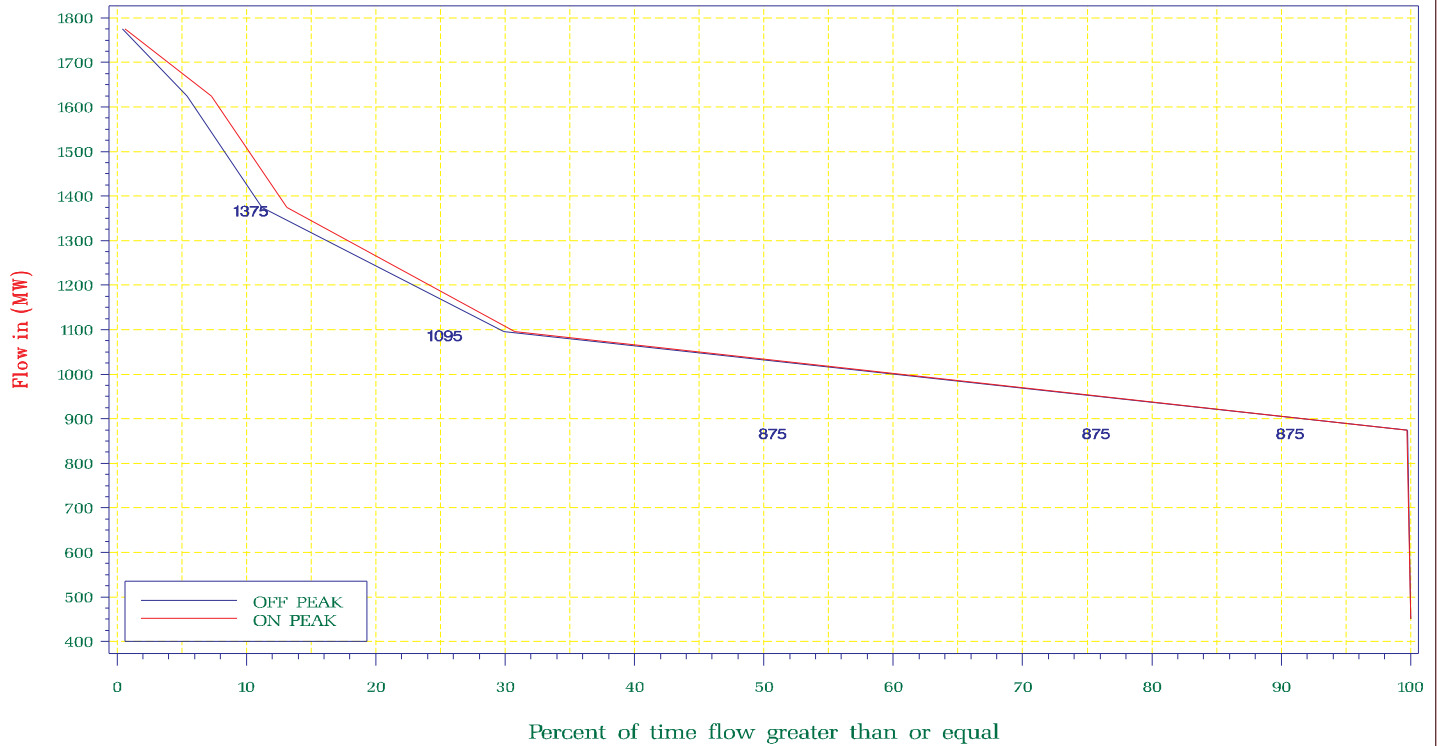


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

TE – NY Limit



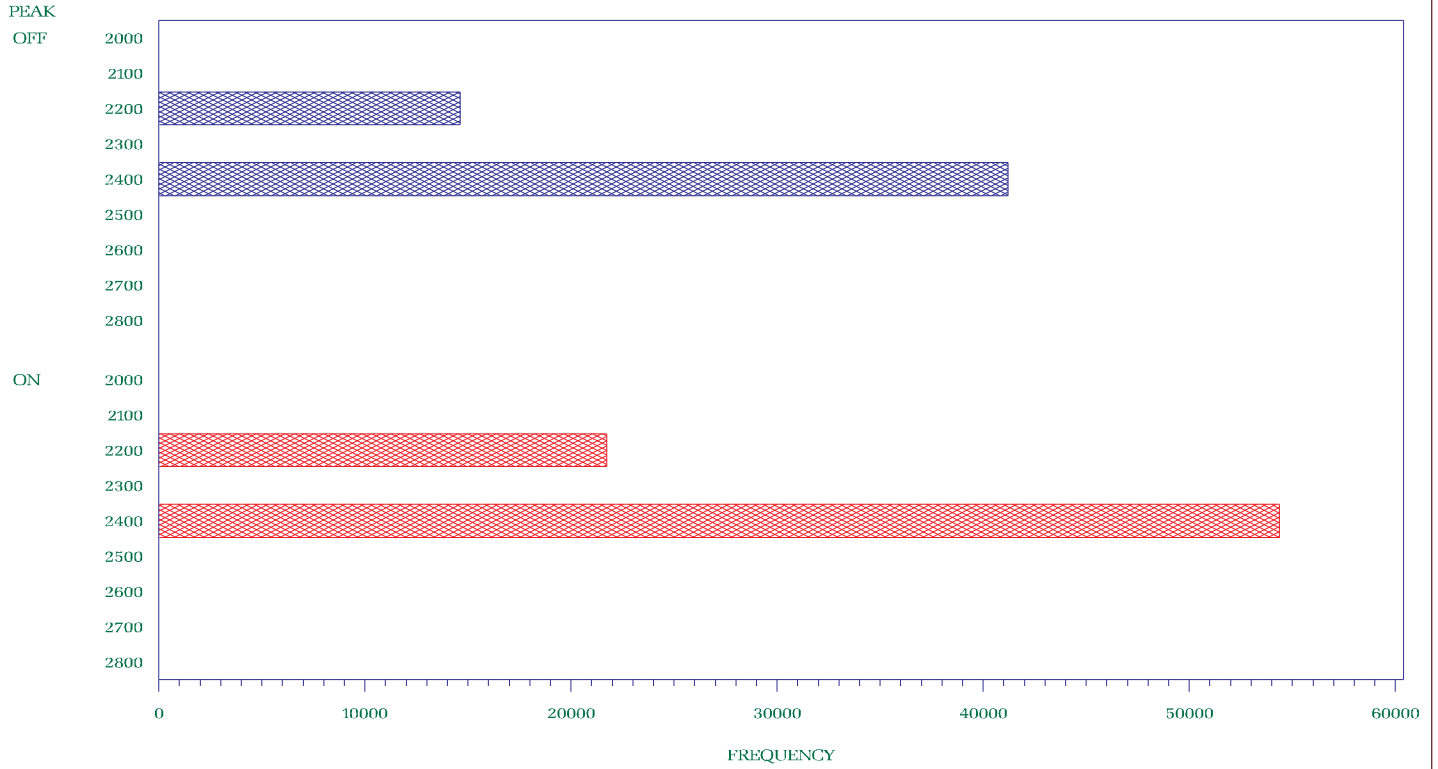
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

Ontario – NY Limit

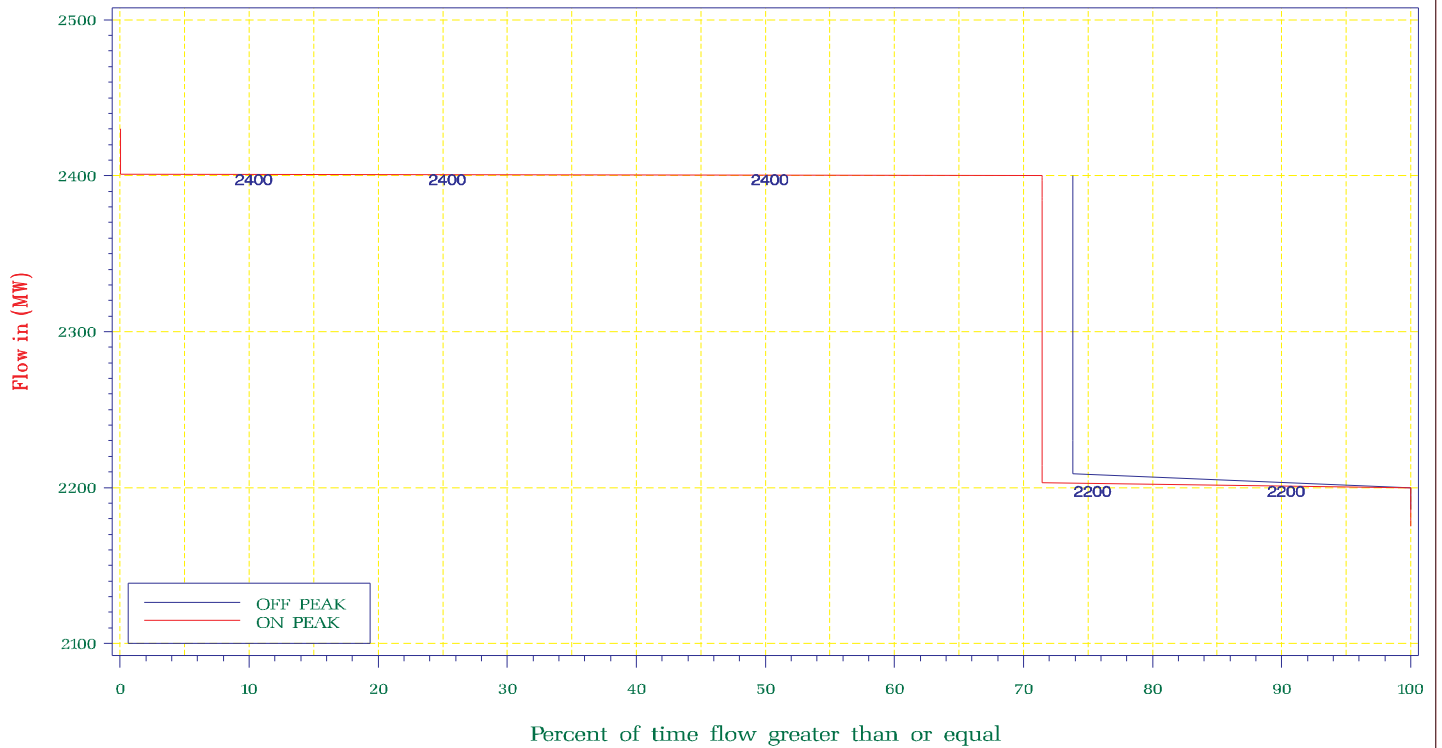


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Ontario – NY Limit

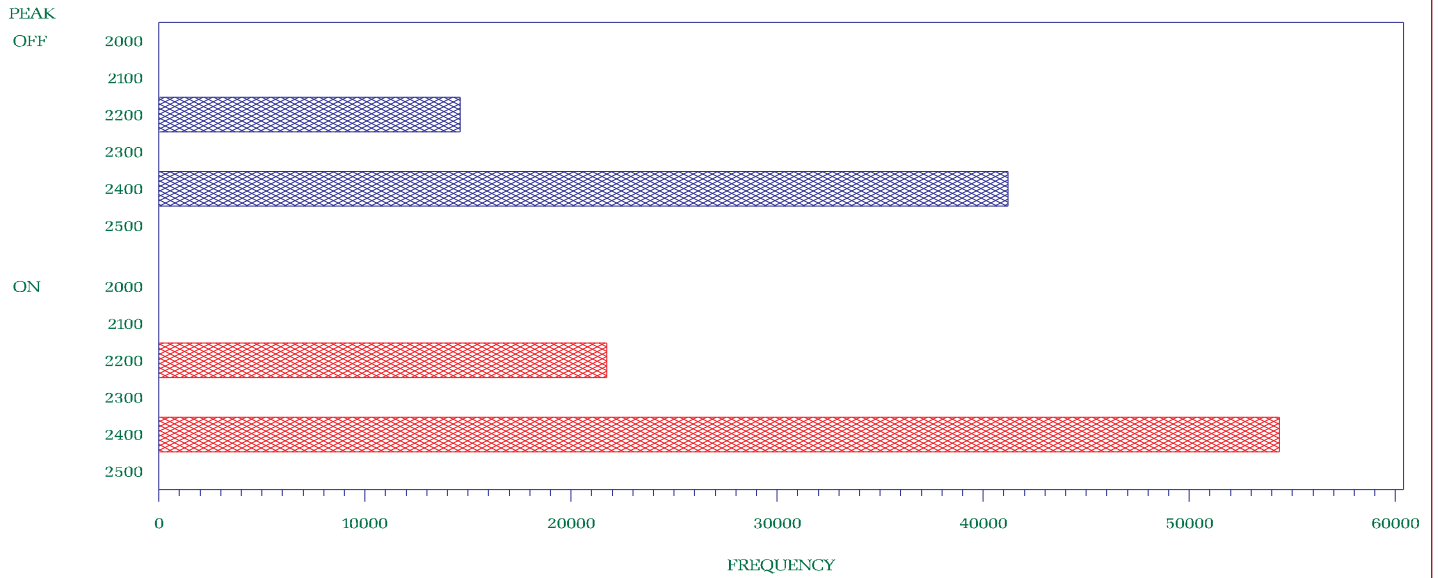


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

NY – Ontario Limit

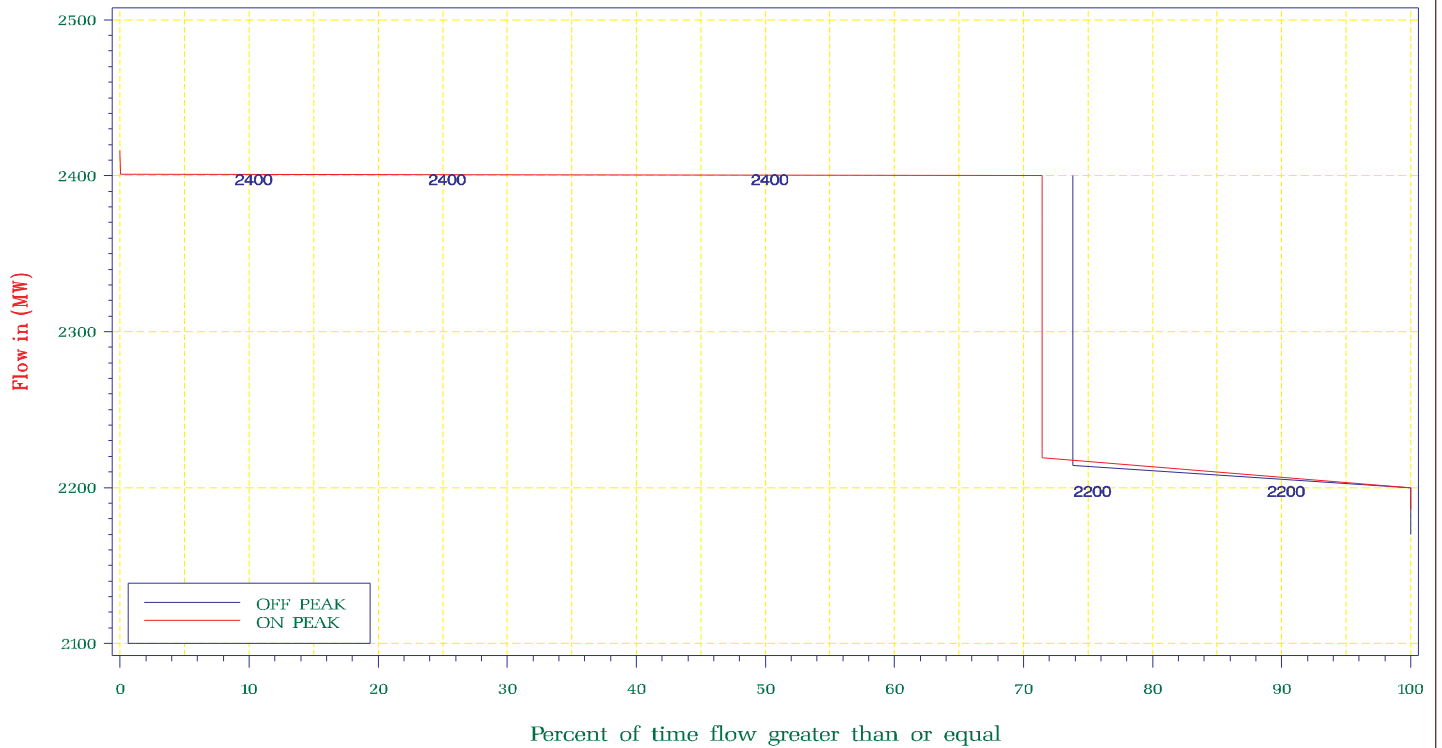


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

NY – Ontario Limit

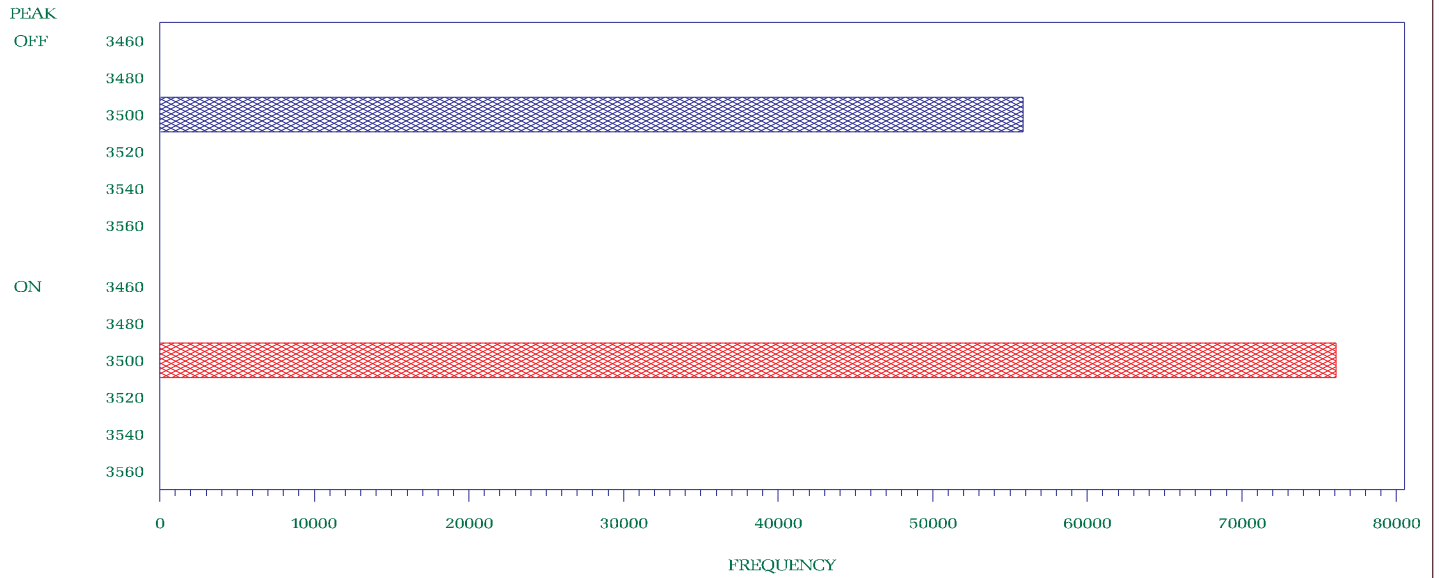


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

PJM – NY Limit

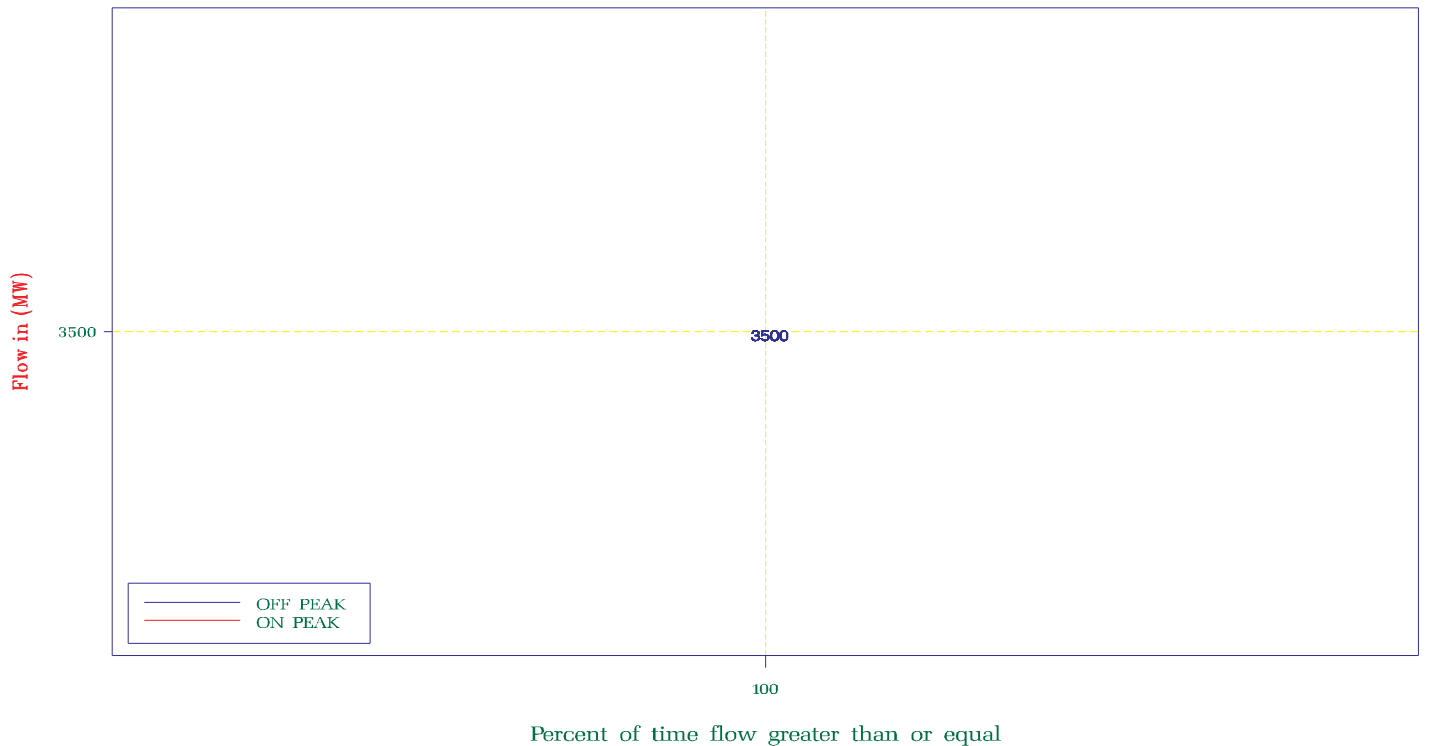


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

PJM – NY Limit

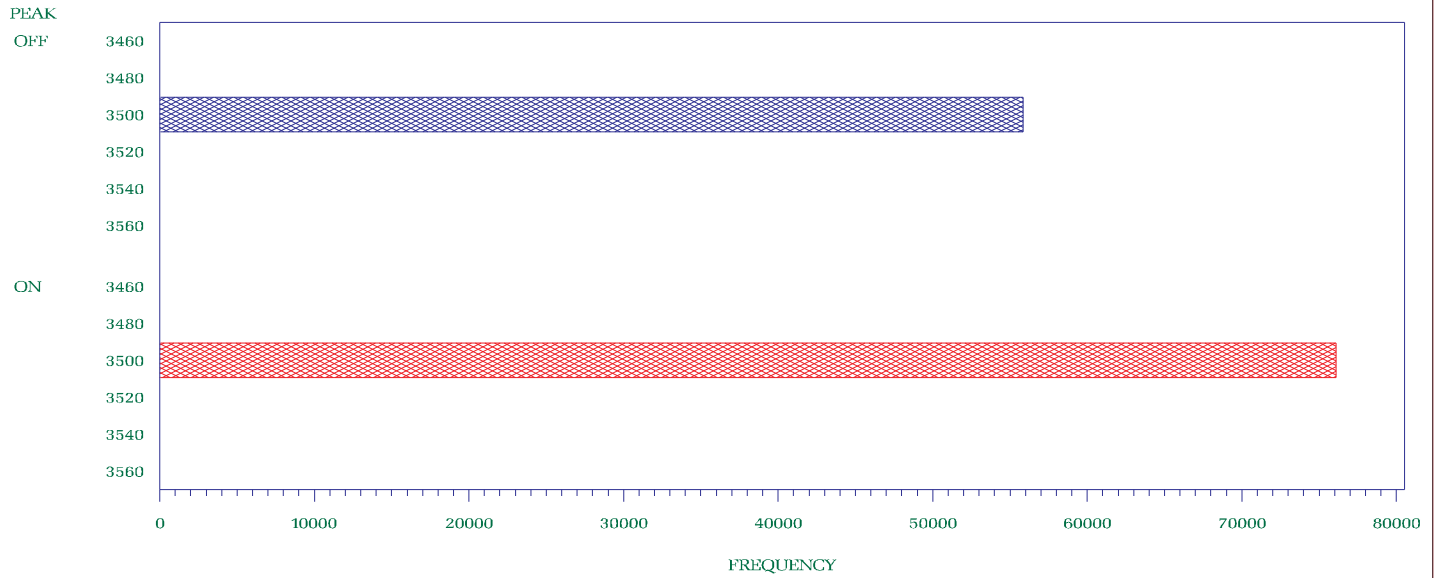


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

NY – PJM Limit

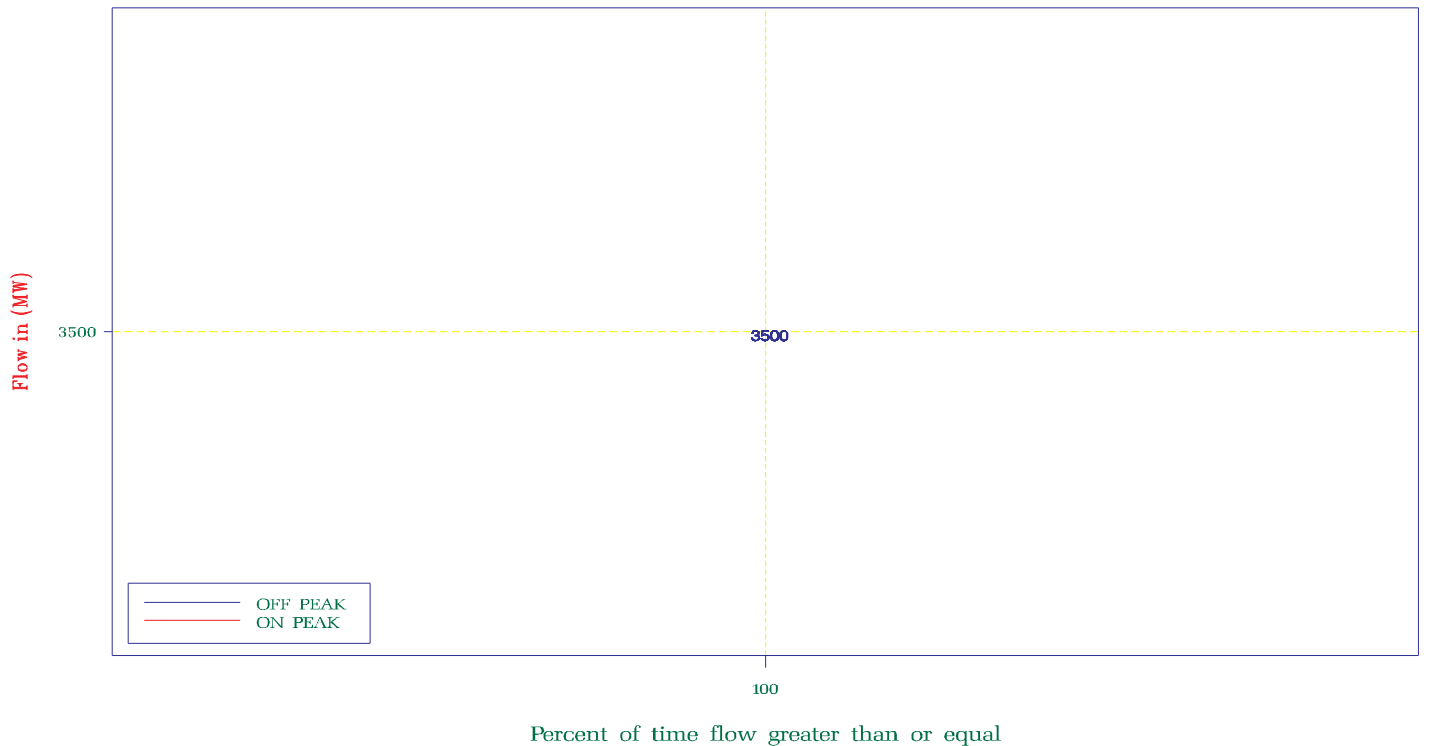


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

NY – PJM Limit

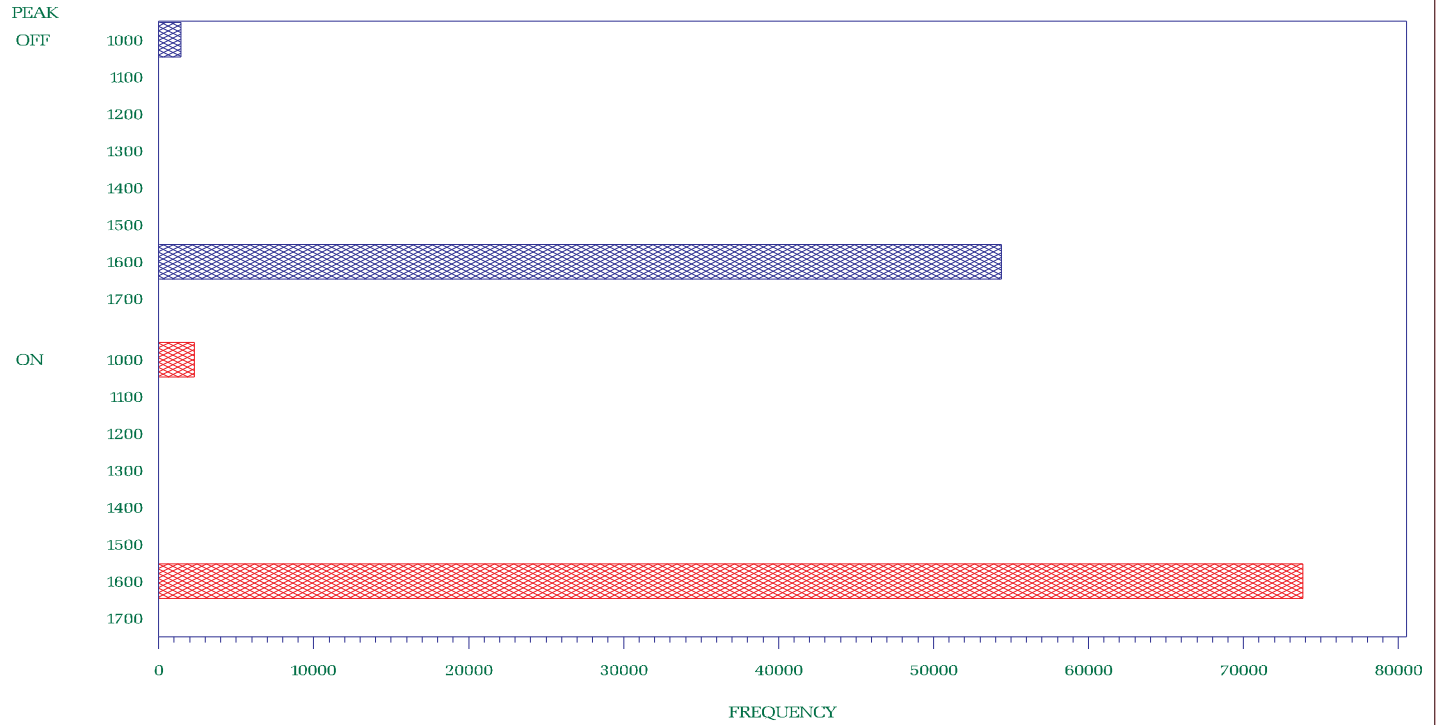


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

NE – NY Limit

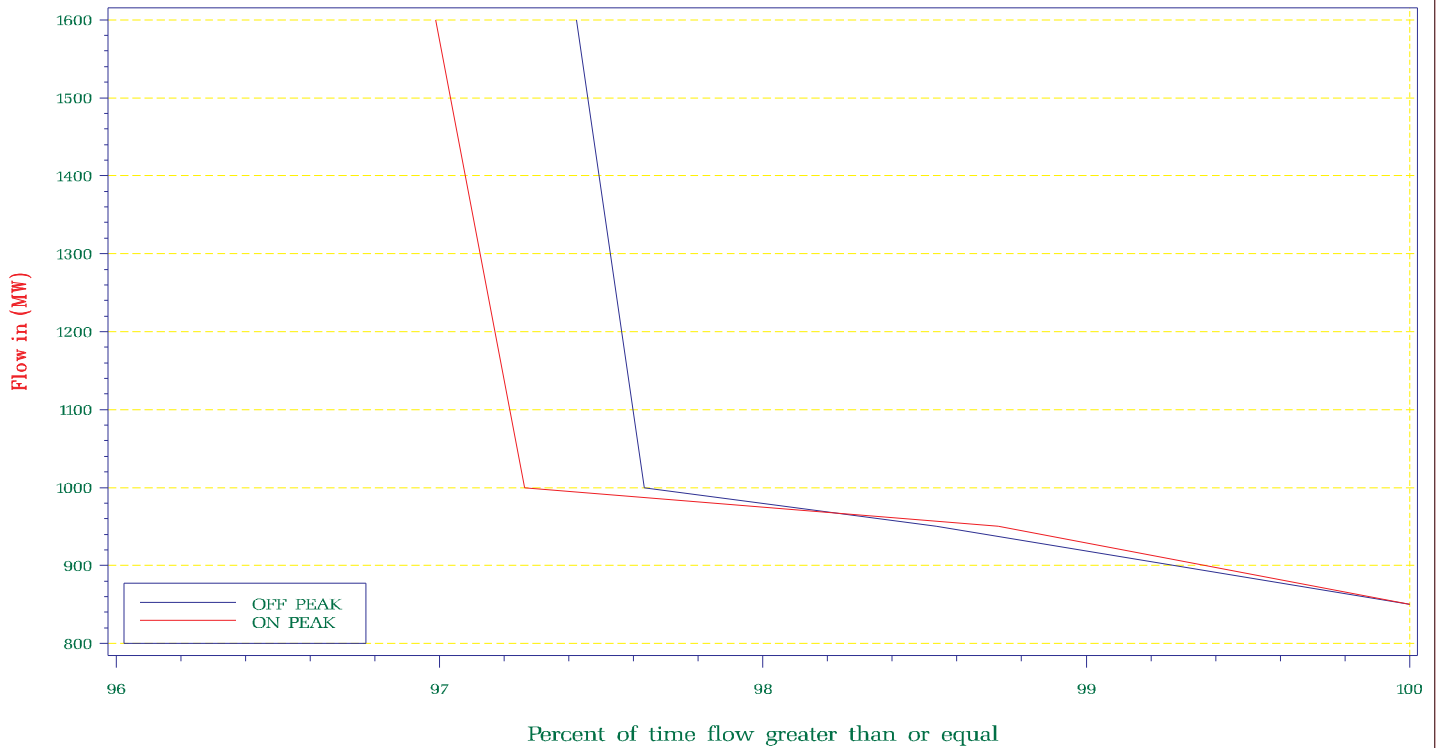


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

NE – NY Limit

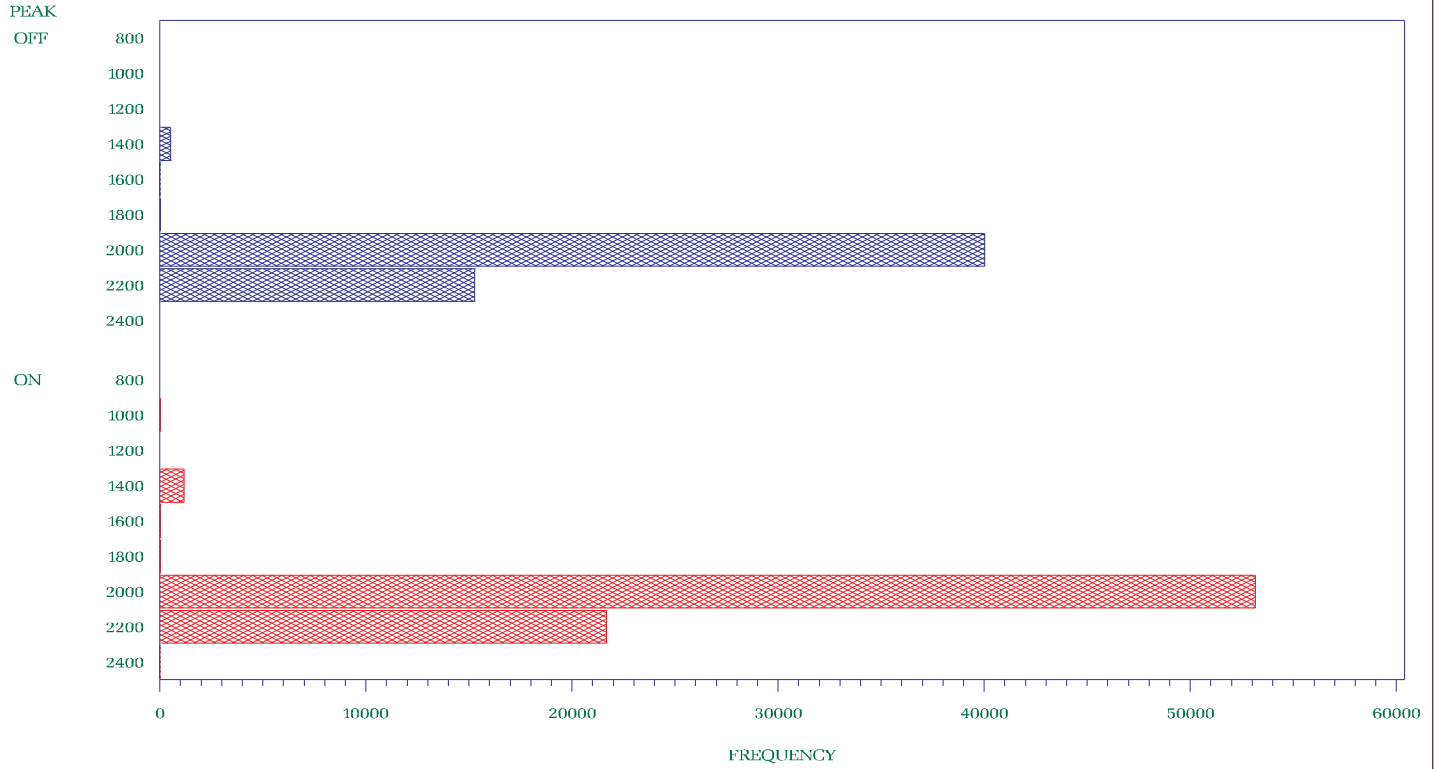


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

NY – NE Limit

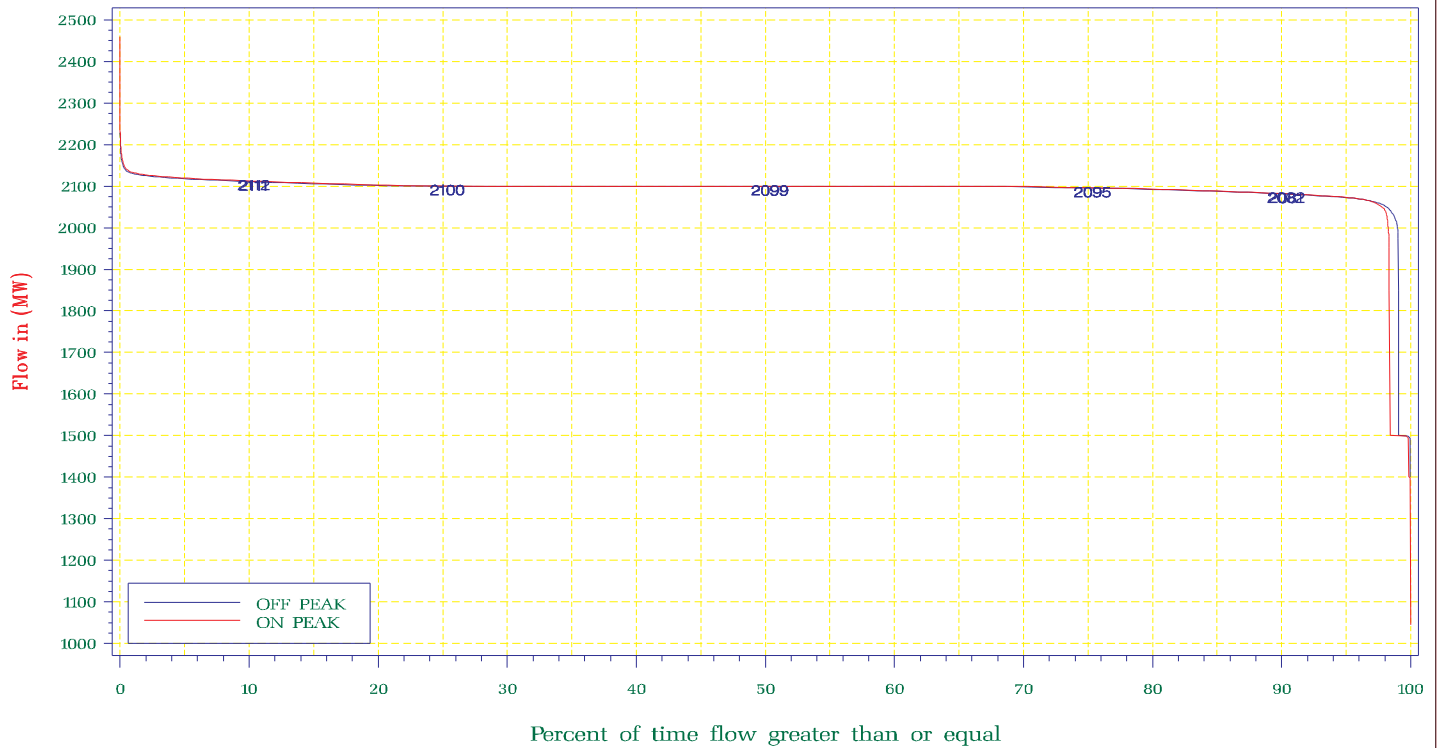


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

NY – NE Limit

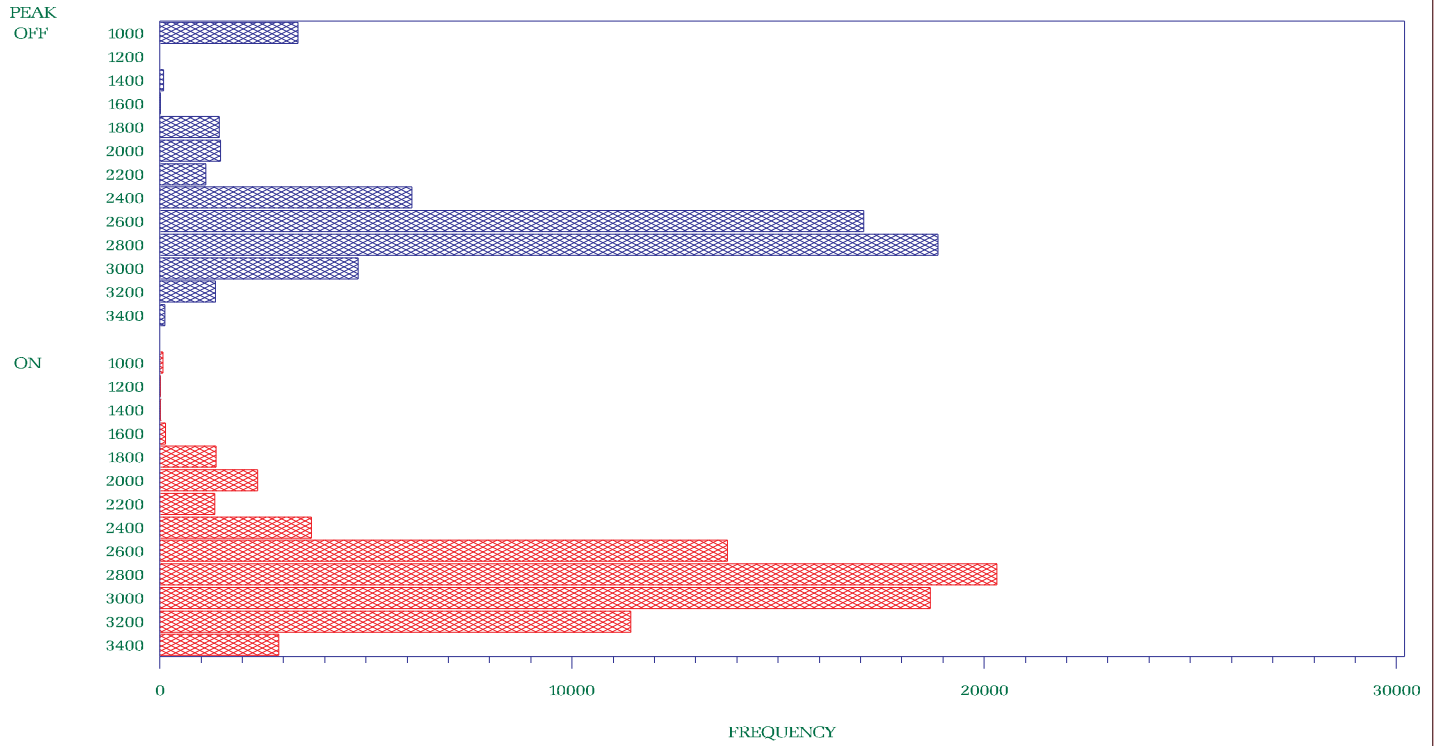


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
 /o New England Generation

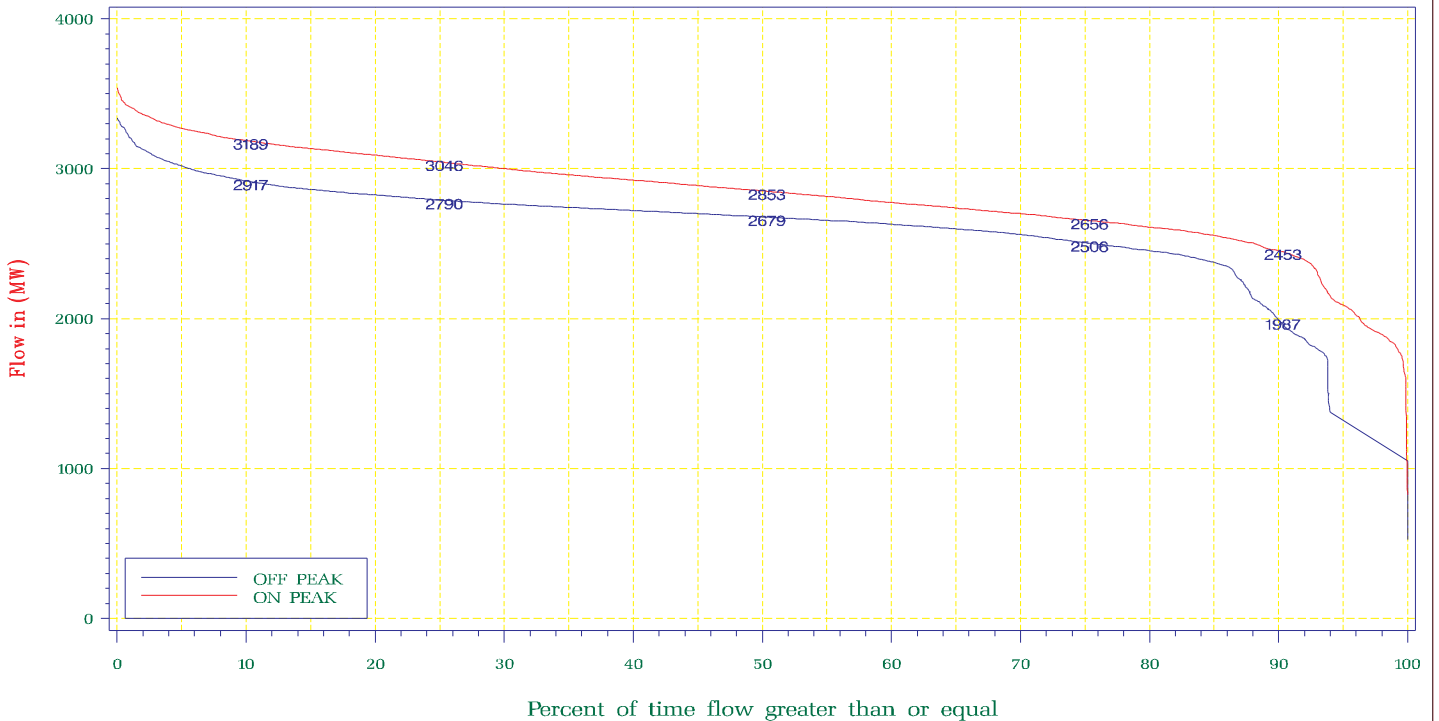


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Percent of time Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
 /o New England Generation

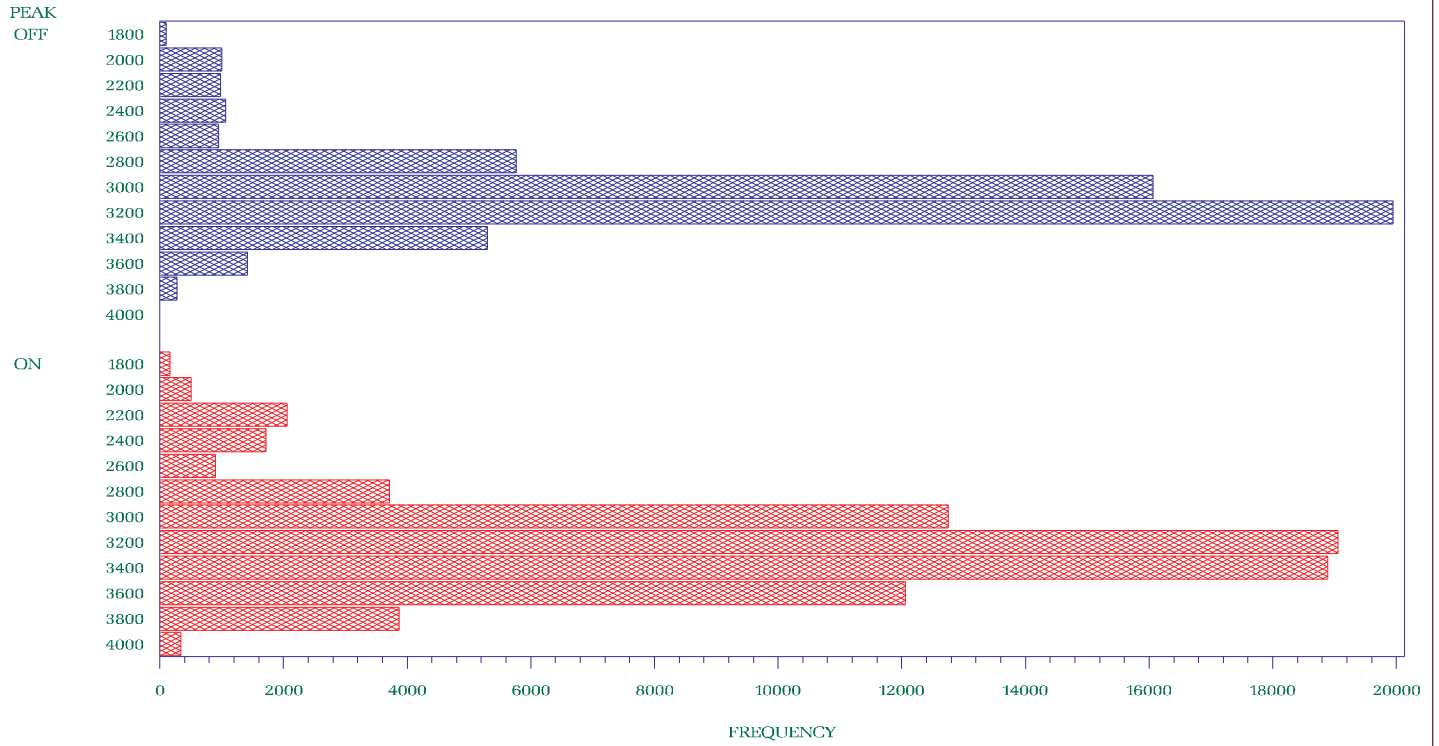


OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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

NYISO Frequency Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o Marcy South Tower

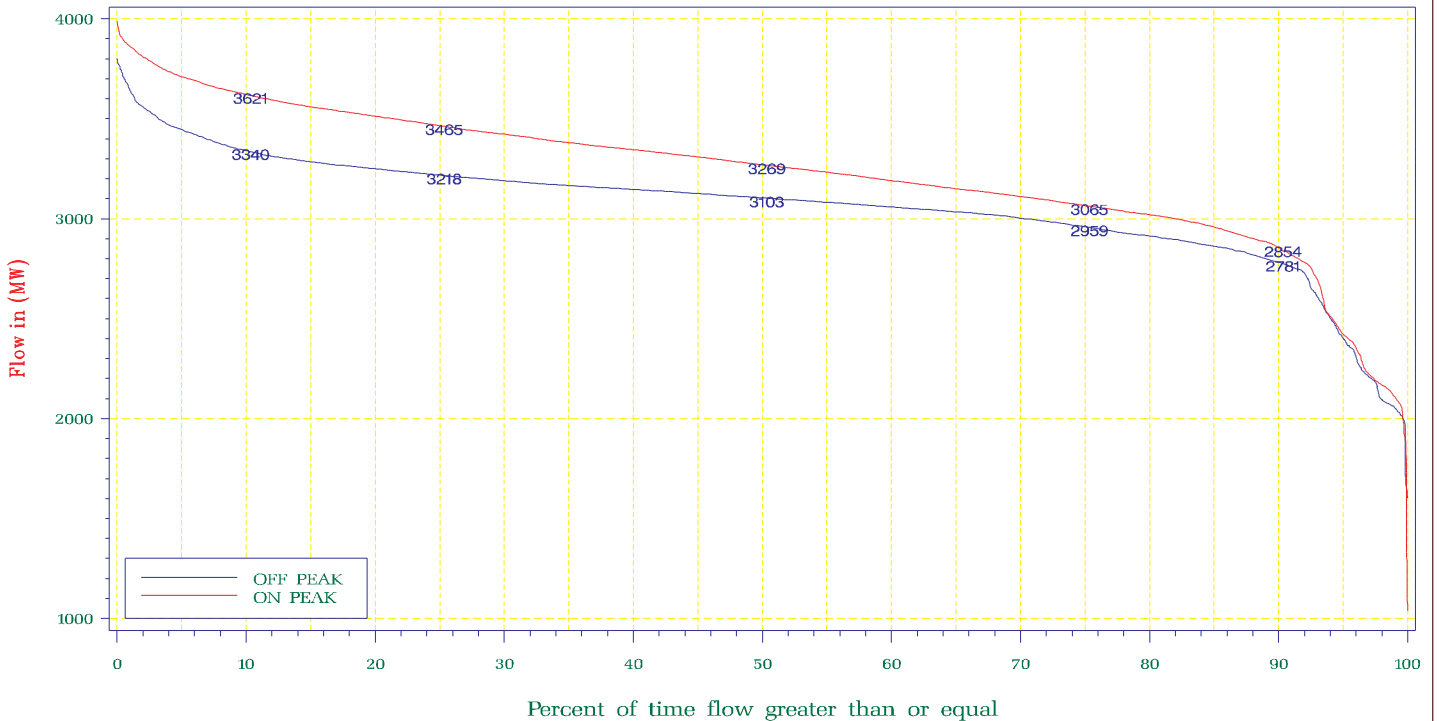


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ONPEAK : Monday – Saturday : From 07:00am – 11:00pm

NYISO Percent of time Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
l/o Marcy South Tower



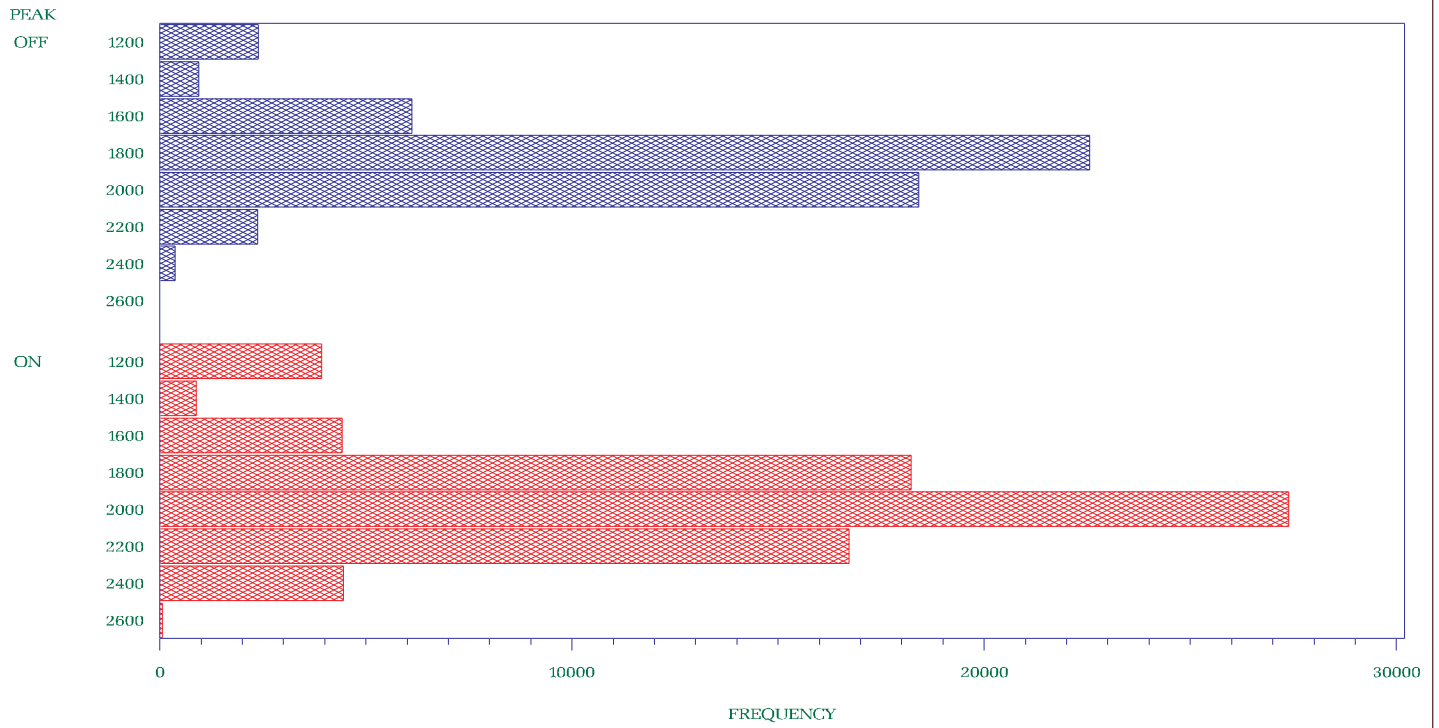
OFFPEAK: Monday – Saturday : From 11:00pm – 07:00am and Sunday

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



NYISO Frequency Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
/o New Scotland 99 Bus

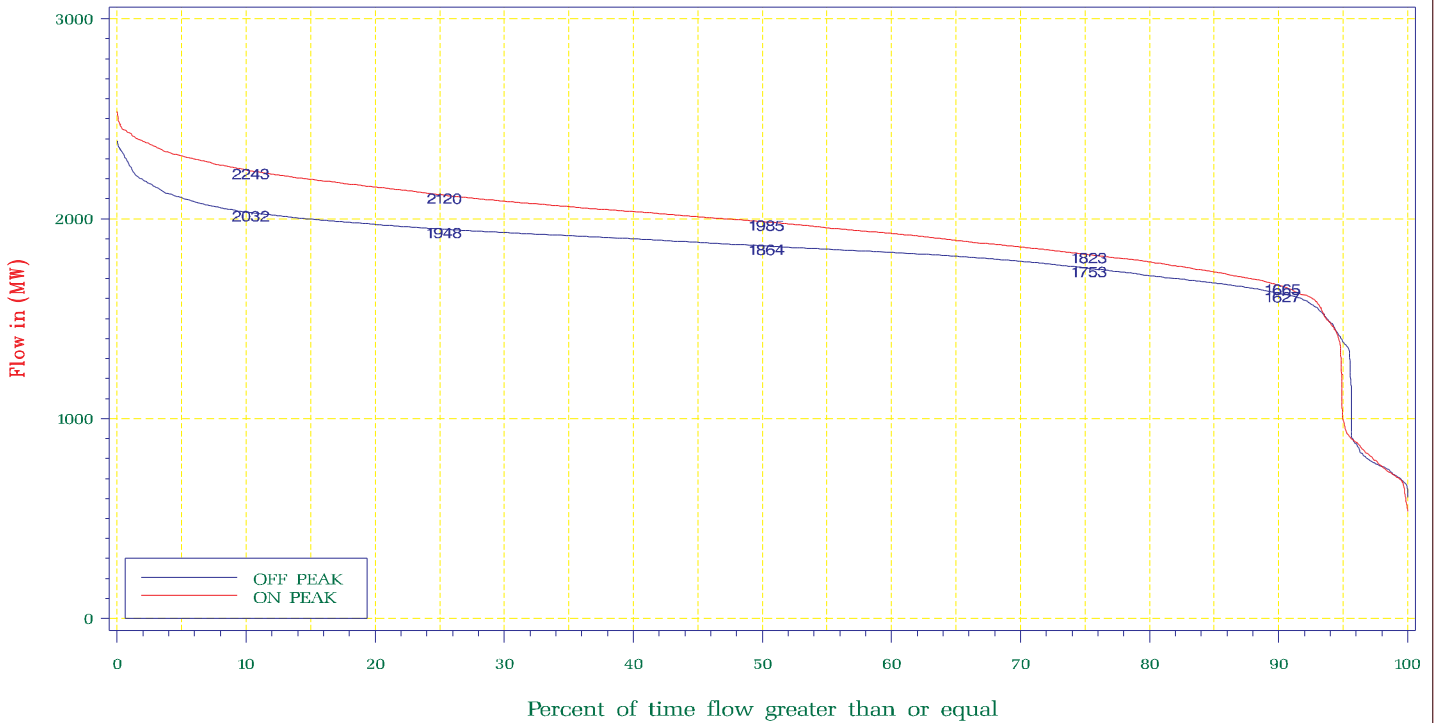


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NYISO Percent of time Interface Flow For January – December 2003

Central East Post – Contingency Voltage Collapse Limit  
/o New Scotland 99 Bus



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

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