

HISTORICAL CONGESTION COSTS

Reporting & Analysis

ESP Working Group Meeting

July 18, 2003

Albany, NY

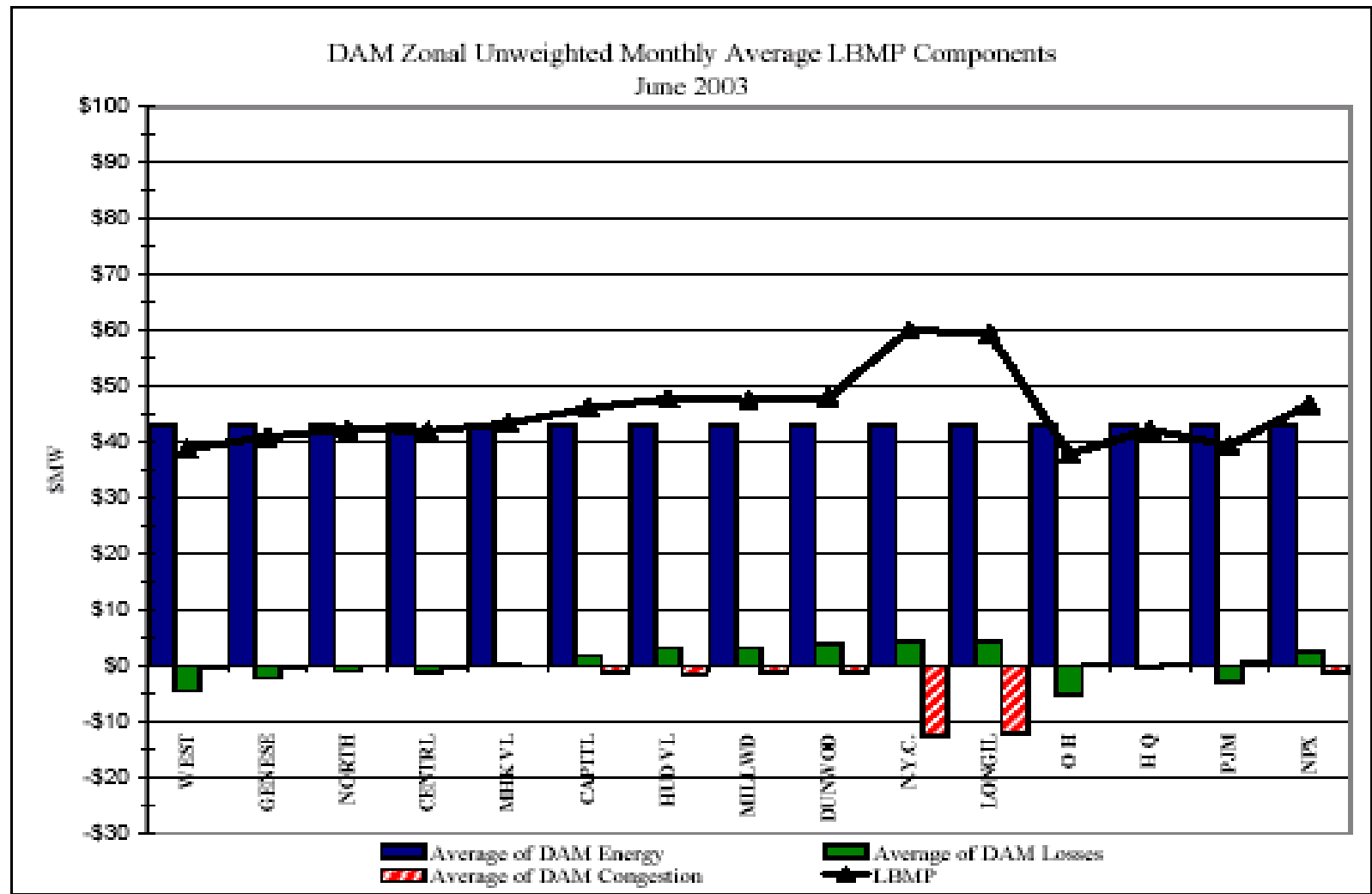
Discussion at July 2 ESP Meeting

- **Format for historic data presentation**
 - *Consideration of available data*
- **Analysis of congestion causes**
 - *Use of SCUC model*
 - *Other methods?*
- **Current and future capabilities**
- **Consideration of additional cost components**
 - *Losses, capacity costs, operating reserves, bilaterals*

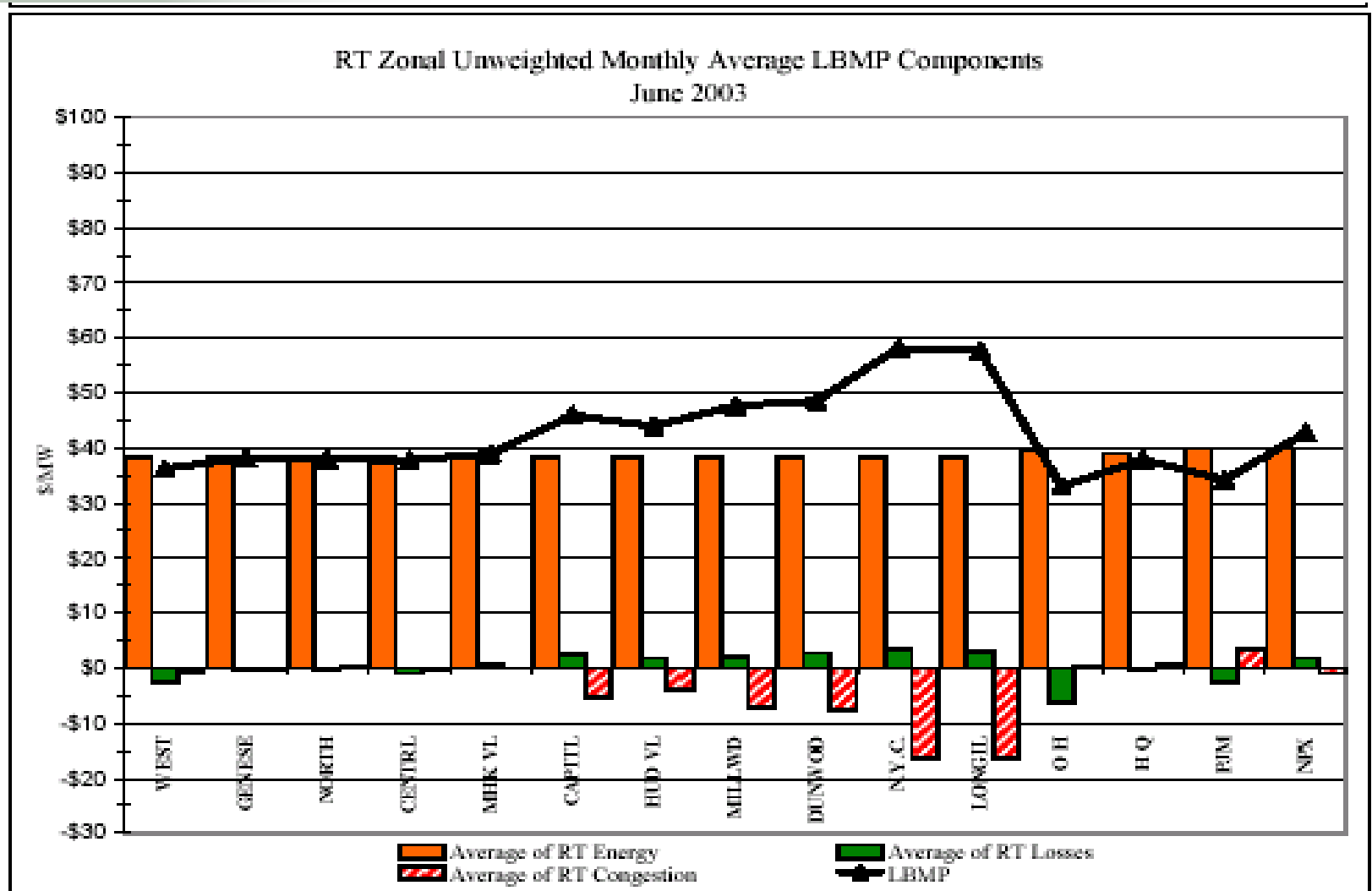
Format for Historical Congestion Data

- **NYISO Market Operations Report**
 - *Monthly congestion rent data by zone*
- **NYISO Transmission Performance Report**
 - *Physical flows by interface*
 - *Statistical distributions: flow and duration*
 - *Four year comparison*
- **Potential alternate format**

NYISO Market Operations Report: DAM



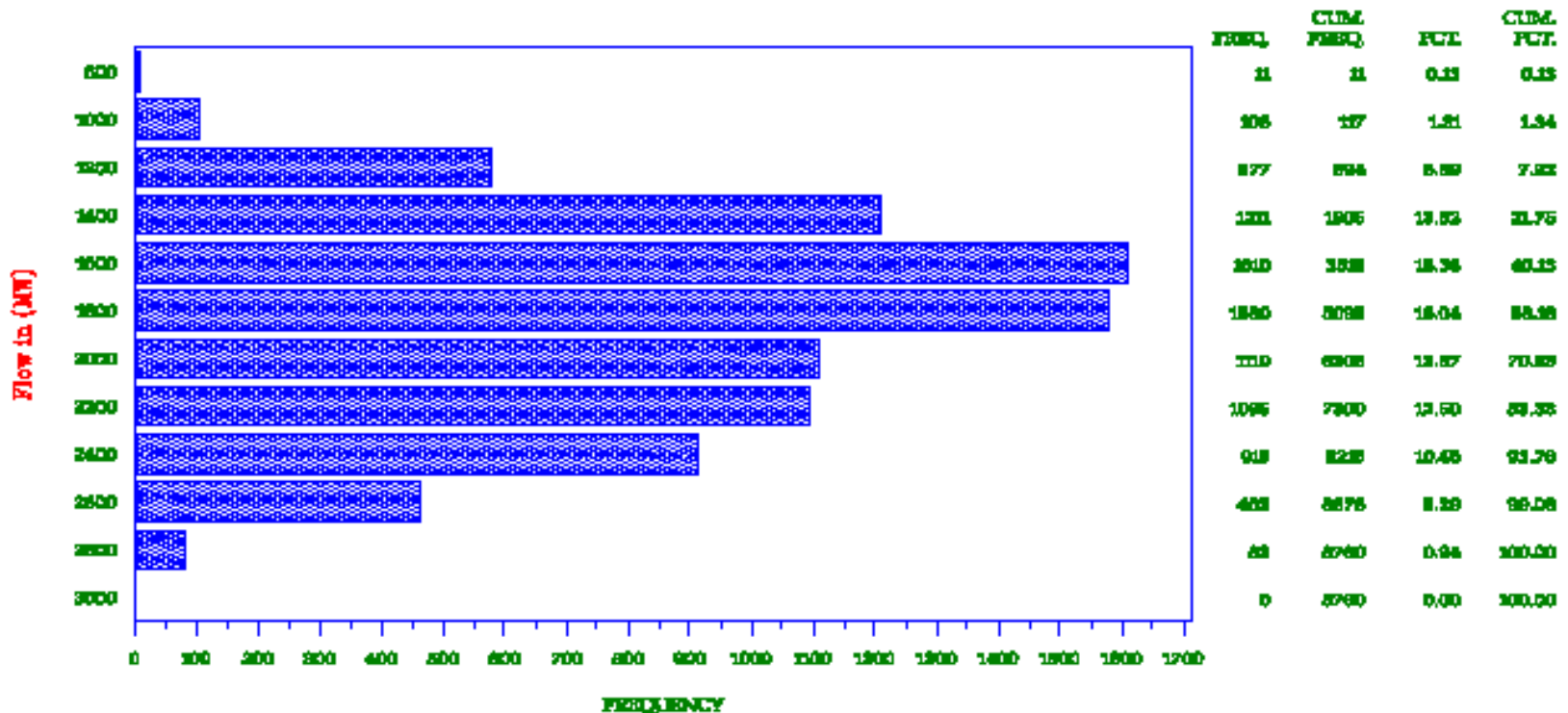
NYISO Market Operations Report: RT



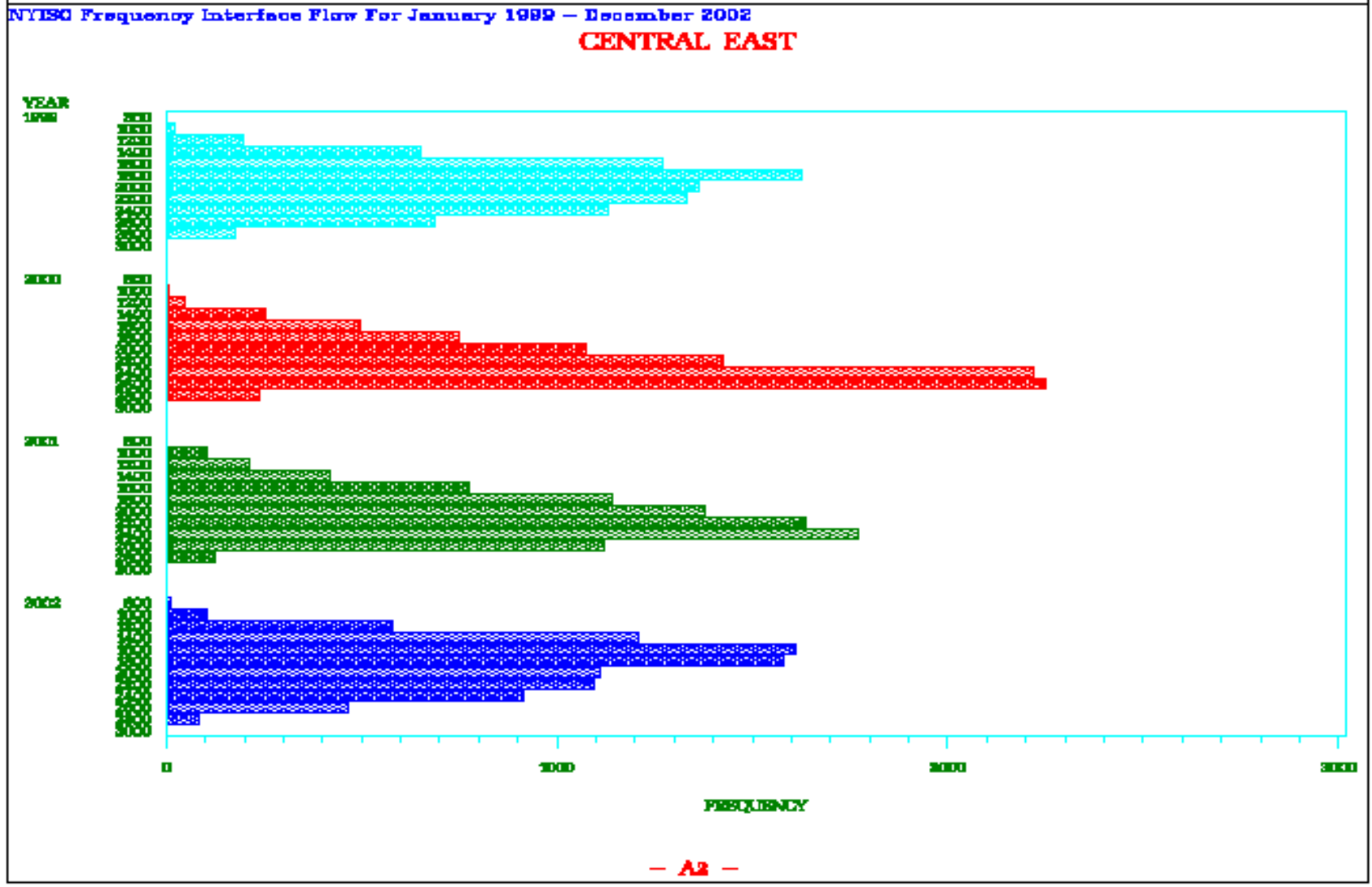
NYISO Transmission Performance Report

NYISO Frequency Interface Flow For January – December 2002

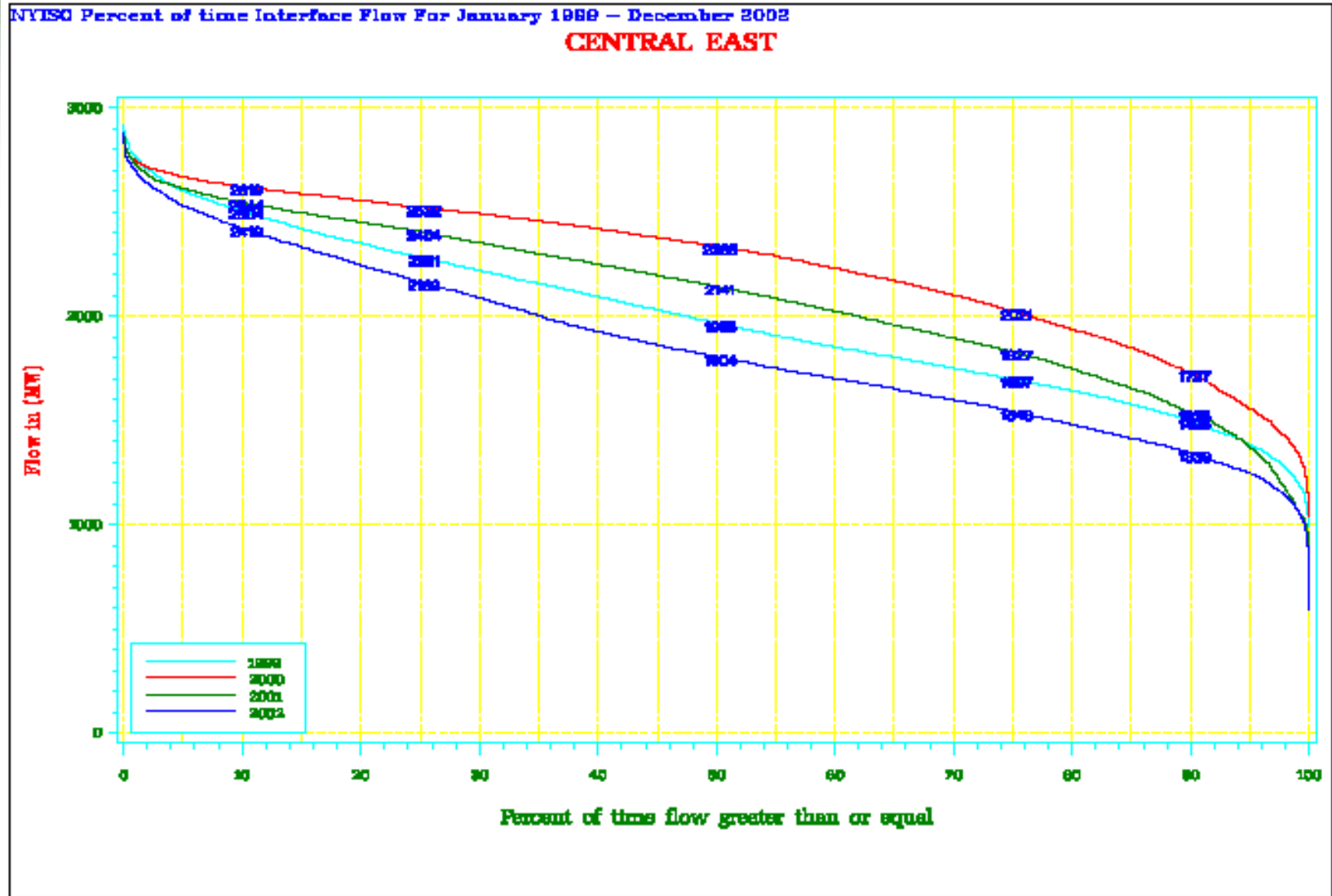
CENTRAL EAST



NYISO Transmission Performance Report



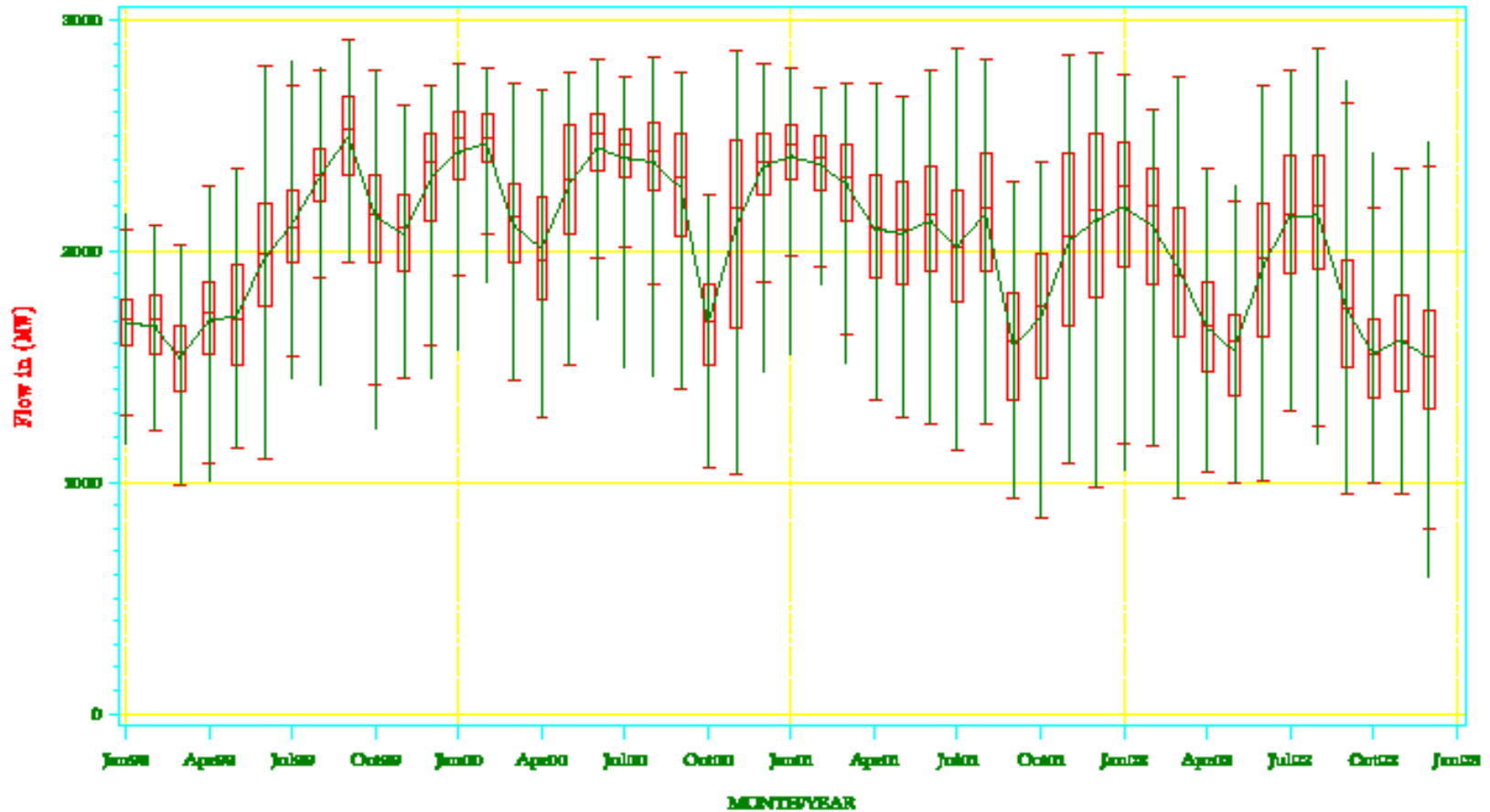
NYISO Transmission Performance Report



NYISO Transmission Performance Report

NYISO Average Monthly Interface Flow For January 01, 1999 – December 31, 2002

CENTRAL EAST



Historic Congestion Data: Alternate Format

YEAR	TOTAL NYCA	BY ZONE	BY CONSTRAINT
2000	Rent Costs Pmt to Gens	Rent Costs Pmt to Gens	NA
2001	“	“	NA
2002	“	“	NA
2003	“	“	NA
>June 2003	“	“	Rent

Analysis of Congestion Causes

- **Not feasible to re-run models daily for past 3 years**
- **Could analyze “typical days” in different seasons, etc.**
- **Could investigate congestion under major outage conditions (generation & transmission)**
- **Try to correlate congestion costs by constraint with actual system outage conditions**

Analysis: Potential Models

➤ Use of SCUC Model

- *Not feasible to re-run full SCUC model for every day*
- *May be possible to use the results of “Pass 1” as the “unconstrained” case*
 - ▶ Caveat: Pass 1 only includes bid loads

➤ PROBE Model

- *Security constrained economic dispatch*
- *Simplified Model: Does not change unit commitment or optimize reserves*
- *Based upon historic SCUC data*
- *Can run unconstrained system*

Current & Future Capabilities

- **Reach agreement on historic congestion data needs & format of presentation**
- **Decide on a realistic degree of historic analysis for past 3 years**
- **Set up process for capturing actual data on an on-going basis**
- **Degree of granularity:**
 - *Aggregate data: by year, month, total, zone*
 - *By constraint: define major constraints*
 - *By major outages*

Additional Cost Components

- **Losses**
- **ICAP***
- **Operating Reserves***
- **Effect on bilaterals***
- **TCCs***

***For the Initial Planning Process these issues would be addressed in a qualitative manner.**

Discussion