

NEW YORK POWER AUTHORITY

Presentation – NYDPS Electric
System Losses Proceeding

A. J. Schuff

Manager – Transmission Planning

July 17, 2008

NYPA

- Transmission and Generation
- Transmission 765KV – 155 miles
 - 345KV – 908 miles
 - 230KV – 336 miles
 - 115KV – 53 miles
- Total Generation – 6900 MW (Approx NP)

NYPA LOAD

- No Load Service Territory
- Municipal, Industrial and Governmental load
- Sales to IOUs
- Served from Transmission Voltage Level or embedded in other TO distribution system.
- DAM Obligation – 8/8/07, Hour Beginning 1600
(2007 Summer Peak Hour)

Municipal:	878MW
Ind/EcDv:	1385MW
Govermt:	1667MW
IOUs:	986MW
Total:	4916MW

NYPA LOSSES

- Transmission Lines and Transformers
- Summer Peak 2012 FERC Case
148MW NYPA Losses
 - 765KV – 4%
 - 345KV – 81%
 - 230KV – 5%
 - 115KV – 2%
 - PTRF – 1%
 - GSU – 7%
- Power Factors are high – Above 98%

NYPA LOSSES

- Light Load 2012 FERC Case
45% Summer Peak
151MW NYPA Losses
765KV – 3%
345KV – 79%
230KV – 6%
115KV – 1%
PTRF – 2%
GSU – 9%
- Power Factors are high – Above 98%

NYPA LOSSES

- Winter Peak 2012 FERC Case
96MW NYPA Losses
765KV – 0%
345KV – 83%
230KV – 3%
115KV – 4%
PTRF – 1%
GSU – 9%
- Power Factors are high – Above 98%

NYP& REACTIVE COMPENSATION

- Transmission Voltage Level Only
- Capacitors – Marcy 345KV – 2x 200MVAR
Gilboa 345KV – 135MVAR
Platts 230KV – 2x 11MVAR
No. NY 115KV – 165 MVAR
- Reactors – Massena 765KV– 2x200MVAR
Marcy 765KV – 1 x 200MVAR
Poletti 345KV – 2 x 150MVAR
Y-49 345KV - 4 x 150MVAR

NYPA REACTIVE COMPENSATION

- MARCY CSC/FACTS - ± 200 MVAR
- Fraser SVC - + 325MVAR, -300MVAR
- These devices are usually operated at 0 MVAR output pre-contingency in order to provide post-contingency dynamic support.

POWER FACTOR

- Reactive support operated at the direction of the NYISO.
- Municipals and Industrial loads – Power factor correction would most likely occur on the load side.
- Governmental Customers – Power Factor correction would need to be worked out with the service provider.

NYPA/NYISO

- NYPA considers losses in Transmission Planning studies.
- NYPA actively participates in NYISO Planning studies and working groups.
- Reactive Power Working Group.