New York Power Pool

Triennial Review of Resource Adequacy

June 1999

TABLE OF CONTENTS

TABLE OF CONTENTS (cont'd.)

1.0 EXECUTIVE SUMMARY

1.1 Major Findings

This report was prepared to satisfy the triennial review requirements of the Northeast Power Coordinating Council (NPCC) "Guidelines of Area Review of Resource Adequacy." The 1999 Review demonstrates that the New York Power Pool (NYPP) is in compliance with the NPCC resource reliability criterion. For the period 1999 through 2003, New York has sufficient internal and planned resource additions to meet the criteria, except for 2001 when an external purchase of 245 MW is required to cover the shortfall. Beyond 2003, NYPP, by then the New York State Independent System Operator (NYISO), expects that the NPCC resource reliability criterion will be met through its installed capacity market from yet unspecified resources.

NYPP is presently forecasting base case load growth of 0.9% per year for 1999 through 2008. NYPP's high growth rate is projected to be 2.1% per year. Under the high case load forecast, New York has only sufficient internal resources to meet the criteria through 1999.

1.2 Major Assumptions and Results

Table I shows where to locate the major assumptions and results.

TABLE I
MAJOR ASSUMPTIONS AND RESULTS

ASSUMPTION	DESCRIPTION	REF. PAGE
Criterion	NPCC Criterion of 1 day in 10 years disconnection	6
Required Installed Reserve	22%	7
Adequacy of System	Through 2003 with Base Forecast Through 1999 with High Forecast	9
Reliability Study		
Program	GE MARS Program	13
Load Model	8760 Hours	13
Load Uncertainty	Historical Basis	13
Unit Availability		
Definition	NERC-GADS	14,15
Basis	10 Year History	14,15
Maintenance Schedule	Based on 10 Year History	14
Emergency Operating Procedures	Modeled	7
Operating Reserve	Modeled	7

2.0 INTRODUCTION

This report is the NYPP response to the NPCC Reliability Assessment Program requirements specified in "Guidelines for Area Review of Resource Adequacy (Revised: February 14, 1996)." The report demonstrates that NYPP is expected to meet its 22% installed reserve requirement and the NPCC reliability criteria (i.e., the frequency of disconnecting non-interruptible customers due to resource deficiencies, on average, will be no more than once in ten years) for the period 1999 through 2003, inclusive, except for the year 2001. A contract expiration causes NYPP to fall below 22% that year. For 2001 and the period 2004 through 2008, NYPP will be able to meet is 22% installed reserve requirement with as yet unspecified resources. It is anticipated that these resources will be procured through the installed capacity market of the NYISO.

2.1 Previous Triennial Review

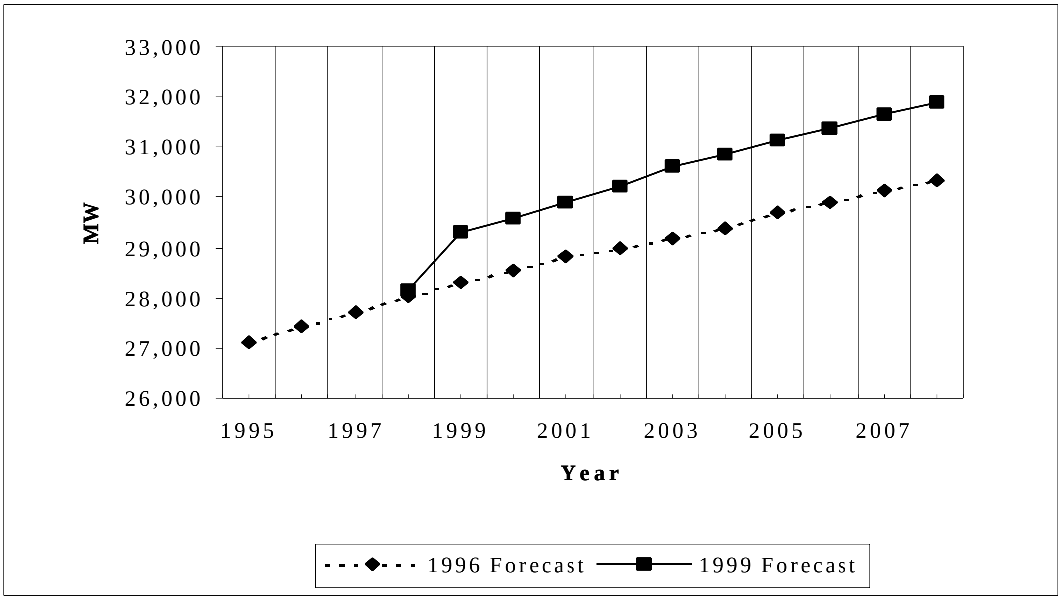
The previous NYPP triennial review was approved by the NPCC Joint Coordinating Committees in February, 1996. This review concluded that NYPP had adequate capacity planned to meet its load forecast for the ten year planning period.

2.2 Comparison of Current and Previous Resource Plans

In 1996, NYPP projected annual peak load growth of 0.9% and annual energy growth of 0.9%. In NYPP's 1999 "EIA-411 Report," these respective growth rates are projected to be 0.9% and 1.1%. The similarity in growth rates not withstanding, the 1999 forecast is approximately 1,000 MW higher than the forecast used for the 1996 review. This increase is the result of two factors: 1) New York's economy experiencing its best performance in a decade; and 2) Reflecting in the forecast the total load in the New York Control Area. The NYPP load is the sum of the member systems' forecasts, adjusted for diversity. The New York Control Area forecast adds to this internal wheeling losses and an estimate of otherwise unreported load that has been observed historically. Also, the annual growth in energy for 1998 was slightly over 2%.

The comparison of 1996 and 1999 load forecasts is shown in Figure 1. Both forecasts are net of DSM.

Figure 1 – Summer Peak Load Forecasts
1996 vs. 1999 Triennial Review



Since the 1996 Review, NYPP has filed tariffs with FERC to reorganize itself as an Independent System Operator. The NYISO will not be able to direct the procurement of resource capability. However, it will be empowered by the New York State Reliability Council to set installed capacity requirements that are consistent with the NPCC reliability criterion. The procurement of installed capacity will be accomplished via an installed capacity market. Each Load Serving Entity (LSE) in the New York Control Area (NYCA) will be required to purchase sufficient capacity to have enough installed reserves so that the NYISO installed capacity will be sufficient to meet the NPCC criterion. Failure to do so will result in the imposition of financial penalties.

The restructuring of the New York electricity market raises the following question: What is the appropriate NYCA installed capability to be used for measuring resource adequacy? Is it only capacity that is owned by or currently under contract to an LSE or is it the total installed operable capability in the NYCA? For the purpose of this review, NYPP believes it should be the latter, at least until the market processes become clearer. Thus, the analysis presented herein is based on this view of installed capability.

Significant changes to NYPP's resource plan since 1996 include:

1. Existing utility capacity is being sold to independent power producers resulting in significant changes in the amount of utility capacity owned. Existing utility capacity in 1999 has

dropped from 29,686 MW in the 1996 Review to 26,512 MW in the 1999 Review. Most of this decrease is attributable to the purchase of LILCO generating units by KeySpan Energy Corp. The sale of Niagara Mohawk and New York State Electric & Gas accounts for the bulk of the 6,331 MW reduction in 2000. Existing utility capacity declines by 1,648 MW in 2002 as a result of the anticipated sale by Central Hudson of its generating units. Consolidated Edison and Orange & Rockland have capacity sales pending also, but these are not shown.

2. Approximately 1,400 MW of new potential resource capability is projected to be available by 2003.
3. For 1999, IPP (Independent Power Producers) capacity has declined from 5,263 MW to 3,872 MW (after deducting 4,228 MW of IPP capacity that is now purchased by the Long Island Power Authority and was previously owned by the Long Island Lighting Company from the 8,100 of MW of IPP capacity shown on Table III).
4. The summer diversity purchase of 800 MW from Hydro-Quebec by the New York Power Authority ended in 1998. Consolidated Edison has a contract for 400 MW of capacity from Hydro Quebec through 2003.
5. NYPP's current peak load forecast for 1999 is 990 MW greater than the 1996 forecast. This is due to the strong economic growth that New York has experienced over the past couple of years and restating the forecast on a total NYCA basis.

Figure 2 shows the capacity projection made in 1996 and the current one. Total Capability in NYCA includes energy-only IPPs, IPPs whose contracts have expired, and projected merchant plant additions, which will be able to provide capacity in the future. Had the 1996 capability been stated equivalently, it would have been approximately 900 MW greater in 2008.

Figure 2 – Projected Summer Capacity
1996 vs. 1999 Triennial Review

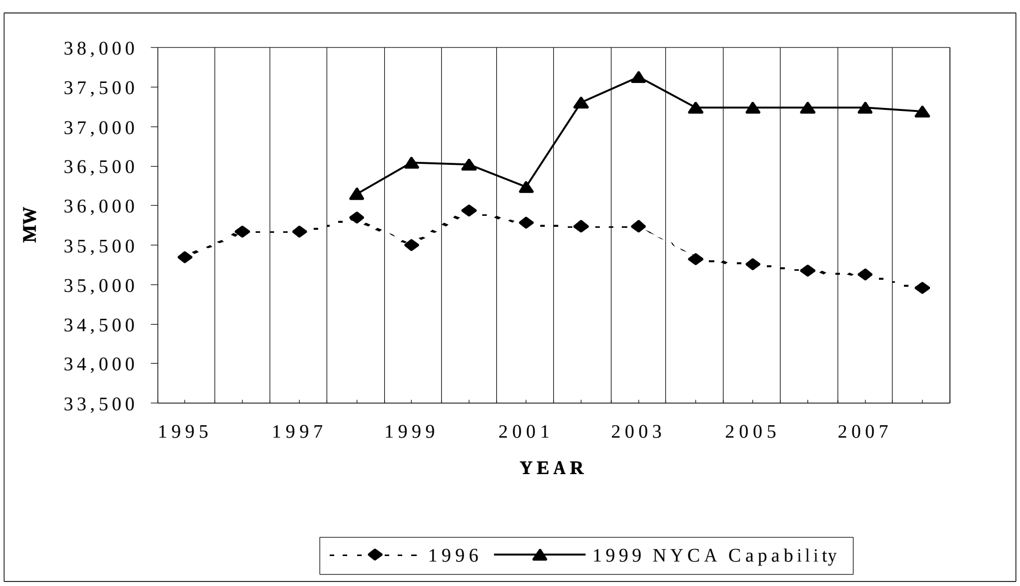
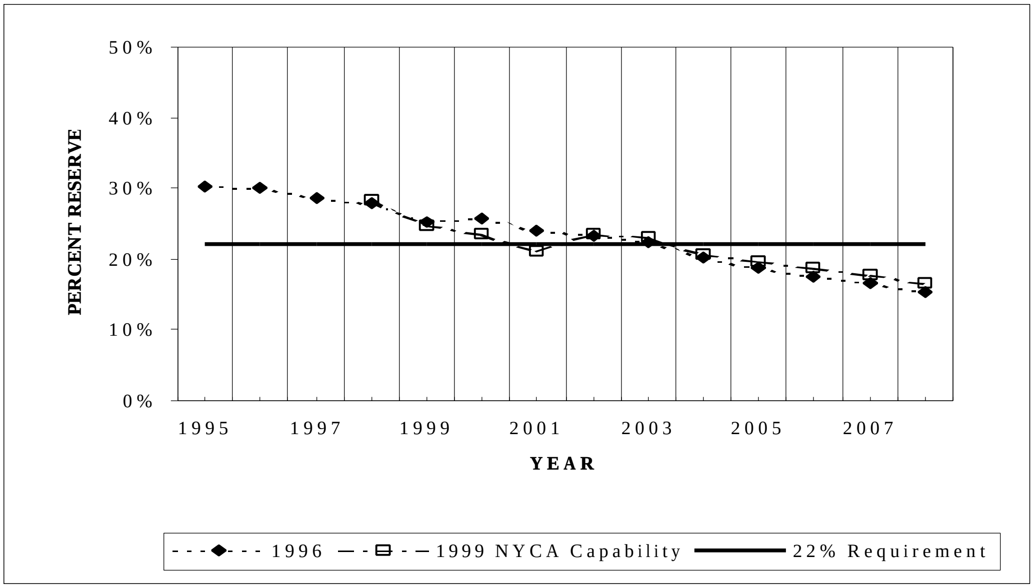


Figure 3 shows the projected NYPP installed reserve levels for the base load forecasts made in 1996 and 1999 and the 22% required reserve for maintaining the NPCC criterion.

Figure 3 – Percent Installed Reserve
1996 vs. 1999 Triennial Review



3.0 RESOURCE ADEQUACY CRITERION

3.1 Statement of NYPP Resource Adequacy Criterion

The New York Power Pool adheres to the NPCC resource criterion, which reads:

> "Each Area's resources will be planned in such a manner that, after due allowance for scheduled outages and deratings, forced outages and deratings, assistance over interconnections with neighboring Areas and regions, and capacity and/or load relief from available operating procedures, the probability of disconnecting non-interruptible customers due to resource deficiencies, on the average, will be no more than once in ten years."

NYPP uses this criterion to establish the appropriate Pool reserve requirements. According to this criterion, expected disconnections are limited to once in ten years. However, before a load disconnection will occur, a series of emergency operating procedures (EOP's) will be invoked. These are aimed at either reducing load or increasing capacity. The procedures are described in section 3.2.

The NYPP Member Systems also have a Transmission Capability Design Criterion. It states:

> "The NYPP bulk power system will be planned with sufficient emergency transmission capability to meet the NYPP resource adequacy criterion."

This means that NYPP transmission capacity limitations should not prevent NYPP from meeting its resource criterion.

3.2 Statement of NYPP Emergency Operating Procedures

Although some form of loss of load expectation (LOLE) index is widely used by utility planners throughout the world, such an index does not provide a physical measure of system reliability. The reason for this is that conventional LOLE calculations cannot take into account possible system operator strategy during dwindling capacity conditions. Table II lists the selection of load control and generator resource supplements which may be available on an emergency basis to reduce the possibility of customer disconnections. These EOPs are initiated when required by the senior NYPP dispatcher. In general, the priority order shown in Table II is followed. These EOP's are also modeled in NYPP reliability studies.

TABLE II
EMERGENCY OPERATING PROCEDURES

STEP	PROCEDURE	EFFECT	MW VALUE
1	Emergency Purchase	Increase capacity	Varies
2	Cancel firm sales	Load relief	0
3	5% manual voltage reduction	Load relief	40
4	Thirty-minute reserve to zero	Allow operating reserve to decrease to largest unit capacity (10 minute reserve)	600
5	Generation to dependable maximum net capability	Increase capacity	800
6	5% remote voltage reduction	Load relief	380
7	8% remote voltage reduction	Load relief	140
8	Curtail NYPP member loads	Load relief	40
9	Voluntary industrial curtailment	Load relief	207
10	General public appeals	Load relief	106
11	10 minute reserve to zero	Allow 10 minute reserve to decrease to zero	1200
12	Customer disconnections	Load relief	As needed

3.3 Statement of Required Installed Reserve

For resource planning, NYPP requires a 22% installed reserve margin over its annual peak load. A recent reliability study (see Section 3.5) demonstrated that this reserve level meets the NPCC resource reliability criterion.

Due to the diversity of the peak load among the eight member systems of NYPP, for NYPP to maintain a 22% reserve, each member only has to carry 18% reserve over its company annual peak load.

Interconnections to neighboring Areas are considered as a part of NYPP's analysis of installed reserve adequacy. NYPP's recent study showed that reliance on emergency support from its interconnections represents the equivalent of adding a minimum of 1,000 MW (year 2002) of perfect capacity to the NYPP system. Interconnection support allows the installed reserve margin to be reduced from 27% to 22%.

3.4 Comparison of NYPP and NPCC Resource Reliability Criterion

The New York Power Pool's resource adequacy criterion is identical to that established by NPCC.

3.5 Reliability Study Results

In a 1996 study, NYPP reevaluated its 22% installed reserve requirement. This study showed that for a Pool reserve level of 22%, the expected frequency of disconnecting non-interruptible customers due to resource deficiencies would be less than one day in ten years. Thus, NYPP's required reserve margin may decrease in the future. The General Electric MARS (Multi-Area Reliability Simulation) model was used for this study. This model was also used in the 1994 "Review of Interconnection Assistance Reliability Benefits" study (the CP-5 study) performed by the CP-5 Working Group of NPCC's Task Force on Coordination of Planning.

The 1996 study also determined that internal NYPP transmission constraints would not cause its resource adequacy criterion to be violated when a 22% reserve margin is maintained.

NYPP has updated the database used in the 1996 study for use in the current CP-5 study. Updated load and capacity forecasts and revised forced outage rates are the most significant changes. The new CP-5 study is expected to show that NYPP's assumed interconnection benefit is not at variance with actual interconnection tie benefit.

The above assessments demonstrate that a 22% reserve level is sufficient for NYPP to meet the NPCC resource adequacy criterion.

4.0 RESOURCE ADEQUACY ASSESSMENT

4.1 Planned vs. Required Reserve for Base Case Load Forecast

Figure 3 and Table III show that NYPP is expected to have adequate capacity under the present 22% reserve requirement through 2003, except for a slight deficiency in 2001. A contract expiration causes NYPP to fall slightly below 22% in that year.

The only significant new capacity being added to NYPP are 1,400 MW of merchant plants. Table III reflects the sales and retirement of 8,010 MW of existing utility capacity by 2001. However, almost all of this capacity is changing ownership. (It reenters Table III as part of Purchases.) Only 24 MW of it is retiring.

Extending the contract period of certain IPPs (441 MW) and converting energy-only IPPs to firm capacity (1,547 MW) represent potential additional resources. Together, these two sources add 1,988 MW to NYCA capability by 2008. This capacity could come on line in a matter of months since it is already built and operating.

4.2 Planned vs. Required Reserve for High Load Forecast

Recognizing the impact of load uncertainty on resource capacity requirements, NYPP develops a high range load forecast. This is also shown in Table III. Under this scenario, NYPP had adequate capacity to meet its installed reserve requirement of 22% through 1999.

4.3 Contingency Plans

The NYISO tariff includes provision for an installed capacity market. Under it, LSEs in the NYCA are required to procure sufficient installed capacity to meet their required reserve margins. Their reserve margins, in turn, are calculated to be consistent with an overall NYISO reserve margin that will satisfy the NPCC resource adequacy criterion. Failure to procure sufficient reserves will result in the imposition of a monetary penalty that is equal to three times the cost per KW of a new gas turbine. It is anticipated that this will provide enough incentive for LSEs to maintain their required reserve margins.

Evidence that market mechanisms can provide the capacity resources that will be needed in the NYCA is provided by the fact that six projects, representing approximately 4,000 MW of capacity beyond that identified in the previous section, are currently in various stages of approval before the New York State Board on Electric Generation Siting and the Environment. Generators in neighboring Areas will also be able to sell capacity in the NYISO capacity market, subject to constraints set by the NYISO such that the NPCC reliability criterion is met.

Table III
NYPP LOAD AND CAPACITY SCHEDULES

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
EXISTING CAPABILITY	25,829	26,512	20,181	20,157	18,510	18,510	18,510	18,510	18,510	18,510	18,510
UTILITY ADDITIONS	0	0	0	0	0	0	0	0	0	0	0
UTILITY RERATINGS	850	0	0	0	0	0	0	0	0	0	0
UTILITY SALES & RETIREMENTS	-7	-6,331	-24	-1,648	0	0	0	0	0	0	0
EXISTING IPP	5,068	8,100	8,090	8,111	8,102	8,071	8,068	8,055	7,957	7,879	7,879
IPP ADDITIONS	11	0	22	0	0	0	0	0	0	0	0
IPP END OF CONTRACT	-55	-10	-2	-8	-32	-2	-13	-99	-78	0	-197
NYPP CAPABILITY	31,696	28,271	28,267	26,612	26,580	26,579	26,565	26,466	26,389	26,389	26,192
PURCHASES	5,340	7,055	7,055	8,403	8,403	8,403	8,003	8,003	8,003	8,003	7,948
SALES	-890	-339	-339	-339	-339	-336	-330	-330	-330	-330	-330
ENERGY-ONLY IPPs (1)		1,547	1,549	1,557	1,589	1,591	1,604	1,703	1,781	1,781	1,978
MERCHANT PLANT ADDITIONS					1,080	1,400	1,400	1,400	1,400	1,400	1,400
OTHER AVAILABLE CAPABILITY	4,450	8,263	8,265	9,621	10,733	11,058	10,677	10,776	10,854	10,854	10,996
TOTAL CAPABILITY IN NYCA	36,146	36,534	36,532	36,233	37,313	37,637	37,242	37,242	37,243	37,243	37,188
BASE FORECAST											
NET LOAD	28,160	29,310	29,560	29,900	30,210	30,600	30,860	31,130	31,370	31,640	31,900
ACTUAL RESERVE	7,986	7,224	6,972	6,333	7,103	7,037	6,382	6,112	5,873	5,603	5,288
RESERVE REQUIREMENT	6,195	6,448	6,503	6,578	6,646	6,732	6,789	6,849	6,901	6,961	7,018
ADDITIONAL REQUIREMENT	0	0	0	245	0	0	407	737	1,028	1,358	1,730
RESERVE MARGIN - NYCA CAPACITY	28.4%	24.6%	23.6%	21.2%	23.5%	23.0%	20.7%	19.6%	18.7%	17.7%	16.6%
HIGH FORECAST											
NET LOAD	28,160	29,490	30,010	30,610	31,160	31,900	32,590	33,390	34,120	34,980	35,700
ACTUAL RESERVE	7,986	7,044	6,522	5,623	6,153	5,737	4,652	3,852	3,123	2,263	1,488
RESERVE REQUIREMENT	6,195	6,488	6,602	6,734	6,855	7,018	7,170	7,346	7,506	7,696	7,854
ADDITIONAL REQUIREMENT	0	0	80	1,111	702	1,281	2,518	3,494	4,383	5,433	6,366
RESERVE MARGIN - NYCA CAPACITY	28.4%	23.9%	21.7%	18.4%	19.7%	18.0%	14.3%	11.5%	9.2%	6.5%	4.2%

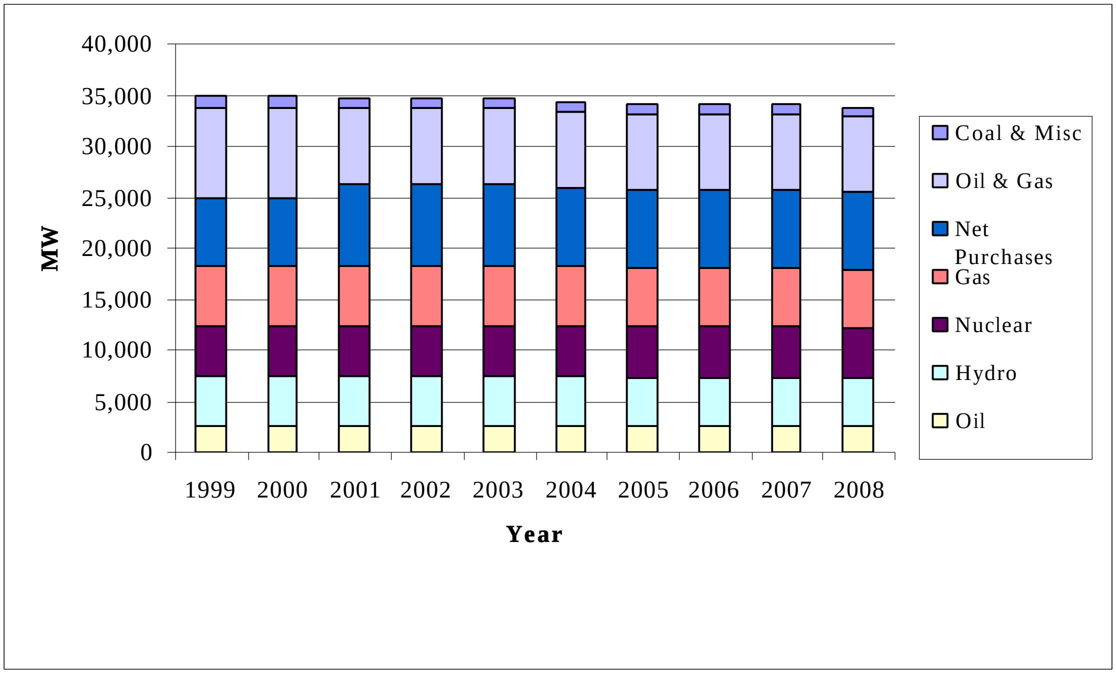
(1) Includes energy-only IPPs plus IPPs beyond contract expiration date.

NOTE: Totals may not add due to rounding.

5.0 PLANNED RESOURCE ENERGY MIX

Figure 4 depicts NYPP's resource capacity mix by fuel type for 1999 through 2008.

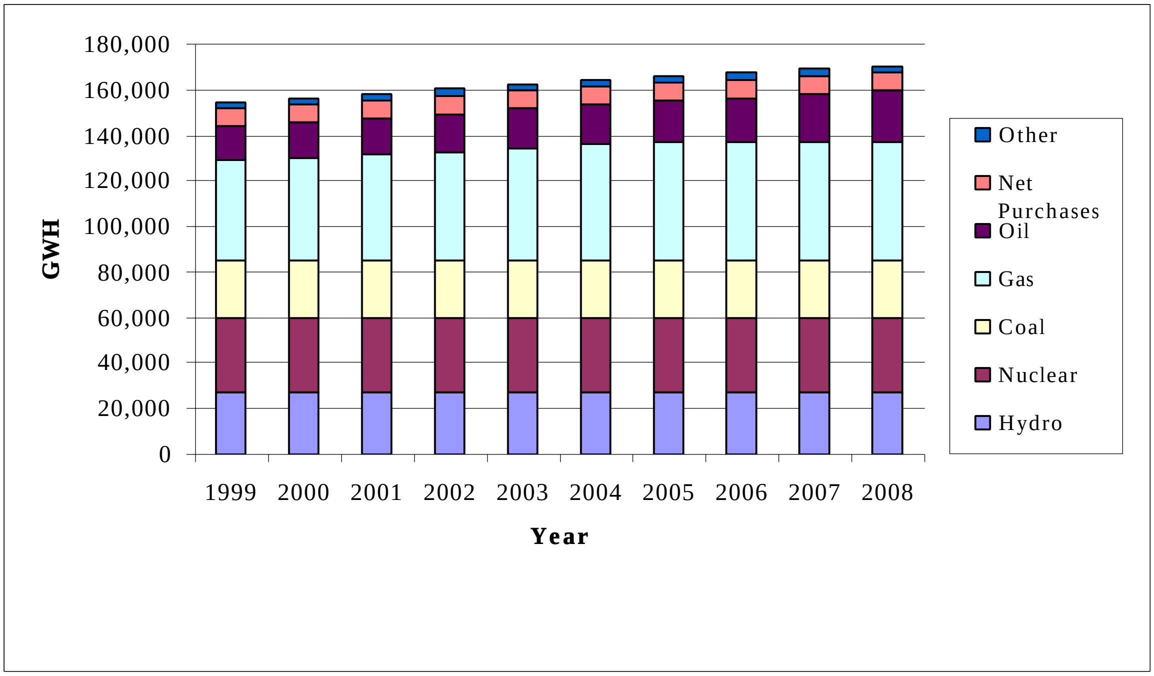
Figure 4 –NYPP Capacity Mix



NYPP retains a diversified portfolio of capacity resources, with no source accounting for more than 25% of total capability. Due to this diversified portfolio, energy production from any one fuel accounts for less than one-third of the total.

Figure 5 shows NYPP's forecast energy production by type of fuel for the Review period.

Figure 5 – NYPP Energy Production by Fuel Type



Most of the growth in projected energy consumption is expected to be produced by resources fueled by either gas or oil. Resources using other fuels are essentially fully loaded right now, and no new resources employing these fuels are expected to be added in the planning period. The growth in gas is due to the new resources referred to in Section 4.1. Growth in oil use is expected because these resources, which presently operate at low capacity factors, are expected to be more intensively utilized by their non-utility owners in the competitive New York energy market.

APPENDIX A

The current reliability model is described in this appendix.

A. DESCRIPTION OF RESOURCE RELIABILITY MODEL

NYPP uses the GE MARS model to perform its reliability studies. MARS can model multi-pool power systems and each pool can be modeled as several areas. MARS uses sequential Monte Carlo simulation to model the availability of generating units over the time period of the study. The study period is one year, with each day modeled sequentially. For each unit, the model generates a random operating profile based on its forced and partial outage rates. Units can be fully available, forced out, or in one of several partial availability states. The availability profiles for each unit change from replication to replication. Scheduled maintenance is developed externally based on history.

Total resource capacities are developed from these profiles for each area. These are compared to the daily peak loads. If an area's resource capacity is not enough to meet its load, emergency purchases are made to the extent excess capacity is available elsewhere and transmission constraints allow the excess capacity to be transmitted to the deficient area. If emergency purchases are not sufficient for the area to meet its load, then additional emergency operating procedures are initiated. If more than one area is deficient, excess reserves from other areas are shared between the deficient ones proportionately.

If an area is still deficient after all these steps, the program records that it has experienced a loss of load for that day in that replication. These are accumulated over the number of replications, and the LOLE, and other measures of reliability, are calculated and reported.

A 1.1 LOAD MODEL

A 1.1.1 ***Description of Load Model***

MARS employs an 8760 hour chronological load model. The load model currently used relies on an actual year of historical loads that is representative of a typical year. This model is then scaled up to the summer peak for the future year being analyzed.

A 1.1.2 ***Load Forecast Uncertainty***

Load forecast uncertainty was determined by analyzing NYPP's actual vs. predicted loads for 1978 through 1993.

A 1.1.3 ***Loads of Other Areas***

These are based on each Area's load model used in the current CP5 study. The load models are scaled so the projected peaks for 2000 are obtained.

A 1.2 RESOUCE UNIT REPRSENTATION

A 1.2.1 ***Unit Ratings***

A 1.2.1.1 ***Definitions***

The unit ratings in reliability calculations, referred to as Dependable Maximum Net Capability (DMNC), are based on seasonal audits which establish each unit's sustained maximum net output. Combustion turbines are tested for a one hour period and all other units, for a four hour period.

A 1.2.1.2 ***Procedure for Verifying Ratings***

The document which describes the audit procedure for verifying unit ratings is the NYPP Operating Committee Manual Methods and Procedures #2, "Uniform Method for Rating Generating Capability."

A 1.2.2 ***Unit Unavailability Factors***

A 1.2.2.1 ***Unavailability Factors Represented***

NYPP represents forced outage rates, planned outages, maintenance outages, and partial outage rates.

A 1.2.2.2 ***Source of Outage Factors***

All unit outage data is based on actual history. All steam unit forced outage rates are calculated from NERC-GADS (North American Electric Reliability Council Generation Availability Data System) outage data for the years 1987 – 1996. Combustion turbine and small hydro units forced outage rates are provided by the member systems.

The scheduled outages for the steam and gas turbine units include both planned and maintenance outages. They are also derived from the 1987 – 1996 NERC-GADS data.

Partial outages for the steam units are also derived from the 1987 – 1996 NERC-GADS data.

Historical hydro generation from the small units has been found to vary significantly by season. An analysis of the on-line data at the NYPP control center resulted in a monthly adjustment to the model. This adjustment is equivalent to reducing NYPP capability by 80 MW on an annual basis.

A 1.2.2.3 ***Maturity Considerations***

No separate immature/mature unavailability factors are used in NYPP reliability studies.

A 1.2.2.4 ***Tabulation of Unavailability Factors***

Table IV presents the average unavailability factors used in the NYPP reliability study.

Table IV
NYPP Unavailability Factors: Based on 1987 - 1996 NERC - GADS Data

Fuel	Size (MW)	DMNC	Forced Outage Rate	Scheduled Outage Rate	NERC Equivalent Availability	Equivalent Forced Outage Rate
Coal	0 < 100	72.97	3.13	8.09	85.80	6.92
	100 < 200	174.20	6.62	10.15	81.65	9.39
	500 < 1300	615.88	9.36	9.70	77.47	14.46
Coal & Oil	500 < 1300	665.27	2.37	5.04	91.44	3.79
Oil	0 < 100	42.75	3.02	3.37	90.70	8.57
	100 < 200	168.62	4.74	14.97	81.06	
	300 < 400	372.88	7.74	16.13	76.58	10.46
	400 < 500	496.08	2.57	8.85	89.11	4.30
	500 < 1300	800.38	7.50	16.16	72.80	25.13
Oil & Gas	0 < 100	59.61	9.85	9.92	84.86	12.32
	100 < 200	161.17	4.84	13.36	80.33	7.96
	200 < 300	233.50	7.38	12.83	73.34	16.34
	500 < 1300	667.51	5.07	11.95	79.29	11.19
Gas & Oil	0 < 100	97.00	4.44	9.66	86.88	5.98
Nuclear	400 < 500	470.00	2.89	12.62	83.29	4.82
	500 < 1300	896.76	19.40	20.21	62.72	21.51
Com. Turb.	0 < 100	33.44	5.00	8.77	86.31	6.50
Diesels	0 < 100	2.07	0.27	1.48	98.25	0.27

A 1.2.3 ***Purchase and Sale Representation***

The following firm purchases and sales were modeled for the study year.

TABLE V
PURCHASES AND SALES – 2003

	Purchases (MW)		Sales (MW)	
	Summer	Winter	Summer	Winter
Hydro-Quebec	400	0	0	0
ISO-New England	0	0	136	130
PJM	55	55	171	171
OH	54	54	21	85
Municipalities	54	20	7	3
TOTAL	563	129	335	389

A 1.2.4 ***Retirements***

NYPP member companies provided the retirement data in Table III. For IPPs, units are removed from the Load and Capacity Tables Total Capability entries and from the reliability study database at the end of their current contracts with the host utility. The total MW of IPP retirements is shown in Table III of section 4.1, "Planned vs. Required Reserve for Base Load Forecast." The only NYPP member owned unit scheduled to retire is Consolidated Edison's 74 St. #11. This unit's capacity is 24 MW.

A 1.3 INTERCONNECTED SYSTEMS

Ontario Hydro, PJM, ISO-New England, Hydro-Quebec, the Maritime Provinces, and PJM were modeled as described in the 1994 CP-5 Study.

A 1.4 MODELING OF LIMITED ENERGY RESOURCES

The Gilboa pumped storage facility is considered available for all hours in which the unit is not on forced or scheduled outage.

Seasonal variation in small hydro units is accounted for and is described in Section A 1.2.2.2 above. Small hydro units are modeled with a 3.3% forced outage rate.

The Robert Moses – Niagara hydro electric project is modeled with a probability capacity model that is based on historical data.

A 1.5 MODELING OF DEMAND SIDE MANAGEMENT (DSM)

NYPP models DSM as a reduction to the load model.

A 1.6 MODELING OF NON-UTILITY RESOURCES

All IPPs are modeled as generating units with two weeks of annual maintenance. The forced outage rates are provided by the NYPP member systems. Availability is 82%.

APPENDIX B

B. OTHER FACTORS CONSIDERED IN ESTABLISHING RESERVE REQUIREMENT DOCUMENTATION

The NYPP agreement currently requires that the member systems maintain an 18% reserve margin. Due to seasonal load diversity, this provides NYPP with at least a 22% reserve margin.