

2010 Load & Capacity Data

*A report by
The New York Independent System Operator*

“Gold Book”



OVERVIEW

This report presents the New York Independent System Operator, Inc. (NYISO) load forecasts for the 2010 – 2020 period and the transmission and generation data for the New York Control Area (NYCA). Specifically, this report includes:

- Forecasts of peak demand, energy requirements, energy efficiency, and emergency demand response;
- Existing and proposed resource capacity; and
- Existing and proposed transmission facilities.

Resources located within the PJM, ISO-New England and Quebec Control Areas may qualify as Installed Capacity Suppliers to the NYCA. Currently, the Independent Electricity System Operator of Ontario (IESO), the operator of the other directly interconnected Control Area to the NYCA, does not meet the NYISO's requirement relating to the recall of transactions associated with installed capacity sold to New York. Therefore, resources located within the IESO Control Area do not qualify as Installed Capacity Suppliers to the NYCA.

The NYCA baseline summer peak demand forecast developed for this report shows an annual average growth rate of 0.68% for the years 2010 through 2020. The baseline energy forecast for the same period shows an annual average growth rate of 0.78%. In last year's report, the annual average growth rate forecast for peak demand was 0.68% for the years 2009 through 2019, and the forecasted growth rate for annual energy in this period was 0.59%. This year's forecasted energy growth rate is slightly higher than last year's, which is indicative of a mild macro-economic recovery. The 2010 energy forecast for Zone K (Long Island) is growing at an annual average rate of 1.01%, the same as last year's. The corresponding 2010 growth forecast for Zone J (New York City) is 0.83% - an increase from last year's growth rate of 0.45%.

The New York State Reliability Council (NYSRC) has determined that an Installed Reserve Margin (IRM) of 18% in excess of the NYCA summer peak demand forecast for the Capability Year 2010-11 is required to meet the Northeast Power Coordinating Council (NPCC) and NYSRC resource adequacy criterion. The NYSRC re-evaluates this IRM each year¹.

The total resource capability in the NYCA for 2010 is 41,841 MW. This includes existing NYCA capacity and resources (including demand response), all resource changes, and known purchases and sales with neighboring Control Areas. It is greater than 118% of the 2010 projected peak load of 33,025 MW. The total resource capability is also greater than 118% of projected peak load for all succeeding years through 2020. The existing capacity resources are detailed in Section III, and the projected schedule of load and installed capacity is in Section V.

The NYISO maintains a list of proposed generation and transmission projects in the NYISO interconnection process by class year², which is described in Section IV. Ten projects on the list totaling 2,172 MW have met Base Case inclusion rules as described in the Comprehensive Reliability Planning Process manual. These projects are included as additions to the Load and Capacity Schedule in Tables V-2a and V-2b. Additionally, the New York installed capacity market rules allow Special Case Resources (*i.e.*, distributed generation and interruptible load customers) to participate in the installed capacity market. These customers are expected to provide 2,251 MW of capacity for the NYISO in 2010 and thereafter, an increase of 315 MW from 2009.

Other projects on the list of proposed generation and transmission projects that have not met the CRPP manual's Base Case inclusion criteria have been categorized as Proposed Resource

¹ NYSRC has the responsibility for establishing the NYCA IRM, which is, according to the Market Administration and Control Area Services Tariff, § 2.120a, Fourth Revised Sheet No. 53A, the “ratio of the amount of additional Installed Capacity required by the NYSRC in order for the NYCA to meet NPCC reliability criteria to the forecasted NYCA upcoming Capability Year peak Load, expressed as a decimal.” The NYISO uses the IRM and the forecast peak Load to establish minimum capacity requirements for each Load-Serving Entity (LSE) located within the NYCA. The NYISO also establishes additional minimum capacity requirements for LSEs in a Locality (*i.e.*, New York City and Long Island), referred to as Locational Minimum Installed Capacity Requirements (LCRs). Each LCR is expressed as a percentage of the forecasted peak demand for the respective Locality. The NYISO administers installed capacity auctions that allow LSEs to procure Unforced Capacity to meet their requirements, and LSEs may also procure capacity through bilateral transactions.

² The class year is the step in the New York interconnection process where system upgrade facilities, or “but for” facilities, are determined for proposed new interconnections and cost responsibility assigned.

Changes. These Proposed Resource Changes³, if constructed, would help to maintain installed capacity well above 118% of projected peak load through the year 2020.

The load forecast for the NYCA is provided in Section I. The NYISO employs a two-stage process in developing load forecasts for each zone within the NYCA. In the first stage, zonal load forecasts are based upon econometric projections prepared in January 2010, which assume a conventional portfolio of appliances and electrical-technologies, with future improvements in energy efficiency similar to those included in the recent historical usage. This first stage represents the NYISO's baseline forecasts. In the second stage, the NYISO adjusts the baseline load forecasts to explicitly incorporate a projection of the energy savings impacts resulting from state energy efficiency programs including the impacts of new codes standards.⁴ Forecasts are reported for each stage. In addition to the baseline forecasts, high and low forecasts for each zone are provided, representing an eighty percent confidence interval between the high and low forecasts obtained after the second stage.

New York's '45x15' clean energy goal challenges the State to meet 30 percent of its forecasted electric energy needs in 2015 through renewable energy, and 15 percent by increased energy efficiency (a reduction of about 26,900 GWh). As part of that effort, the NY Public Service Commission established the Energy Efficiency Portfolio Standard (EEPS). Through its participation in the EEPS Evaluation Advisory Group, the NYISO remains involved in activities directed toward the measurement and verification of the impacts obtained through the EEPS.

Each year, the NYISO develops an independent projection of the degree to which statewide EEPS energy efficiency programs, building codes, and appliance efficiency standards will impact electricity usage throughout the state. New and updated information this year was

³ See load and capacity schedule description (page 73) for a discussion of the treatment of intermittent generators for the purpose of determining their contribution toward installed capacity on a forward looking basis.

⁴ Each year, the NYISO develops an independent projection of the degree to which statewide EEPS energy efficiency programs, building codes, and appliance efficiency standards will impact electricity usage throughout the state. New and updated information this year was obtained from staff of the New York Department of Public Service, staff from the New York Energy Research and Development Agency, staff from state power authorities and electric utilities, through the NYISO's participation in the EEPS Evaluation Advisory Group, and from the NYISO's own advisors and consultants.

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Pursuant to tariff, amendments implementing the FERC's capacity deliverability requirements, Capacity Resource Interconnection Service (CRIS) is now required in order for capacity from a generator to be offered into NYISO's Installed Capacity market. Starting with this issue of its annual Load & Capacity Data Report, the NYISO will publish the Summer CRIS values⁵ for generators, depending on data availability.

The remaining sections of the report describe transmission facilities in the NYCA. Existing transmission facilities are described in Section VI and proposed transmission facilities are described in Section VII.

⁵ CRIS values, in MW of Installed Capacity, for the Summer Capability Period are established pursuant to the deliverability test methodology and procedures contained in Attachments X, S and Z to the NYISO OATT.