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October 19, 2009

## **DELIVERED ELECTRONICALLY AND BY HAND**

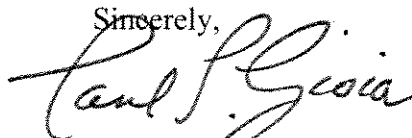
New York State Energy Planning Board  
c/o Suzanne Baker  
NYSERDA  
17 Columbia Circle  
Albany, NY 12203-6399

Re: NYSRC Comments on Draft State Energy Plan

Dear Ms. Baker:

Enclosed please find comments on the Draft State Energy Plan, submitted on behalf of the New York State Reliability Council. Please contact me with respect to any questions concerning these comments.

Sincerely,



Paul L. Gioia  
Counsel to the  
New York State Reliability Council

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**COMMENTS ON  
THE DRAFT 2009 STATE ENERGY PLAN**

**SUBMITTED ON BEHALF OF  
THE NEW YORK STATE RELIABILITY COUNCIL**

**October 19, 2009**

**INTRODUCTION**

The primary responsibility of the New York State Reliability Council (“NYSRC”) is to establish the reliability standards necessary to maintain the reliability of New York State’s bulk power system.<sup>1</sup> While the NYSRC generally does not take positions with respect to state energy or environmental policy initiatives, such policy initiatives often do have a potential direct or indirect impact on bulk power system reliability. The NYSRC has served as a source of information for state policymakers with respect to the potential impact of state policy on bulk power system reliability, and has consistently urged policymakers to carefully balance the strong public interest in a reliable bulk power system with other important policy objectives. The NYSRC also has consistently urged policymakers to monitor state energy and environmental programs to determine if system reliability is being adversely affected and to provide sufficient flexibility to permit the modification of such programs if that is determined to be necessary to protect electric system reliability. The NYSRC adopts a similar approach in its comments on the Draft 2009 State Energy Plan (SEP).

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<sup>1</sup> The NYSRC was formed and approved by the Federal Energy Regulatory Commission in 1999. It is the successor to some of the functions of the New York Power Pool. The NYSRC’s primary responsibilities include the development of reliability rules that must be complied with by the New York Independent System Operator (“NYISO”) in its operation of New York State’s bulk power system, and by the NYISO’s market participants. The NYSRC also is responsible for determining the annual installed reserve requirement (“IRM”) necessary to meet resource adequacy criteria for the New York Control Area.

## **COMMENTS**

The NYSRC is pleased to see that the first Planning Objective in the SEP is to Maintain Reliability. The NYSRC also supports many of the findings in the SEP that will help maintain or enhance system reliability. These include:

- support for investment in upgrades or expansion of the State’s transmission and distribution infrastructure needed for reliability (SEP, pp. 57-58);
- the need to have adequate natural gas pipeline deliverability capacity to meet peak load demand (SEP, pp. 60-61);
- support for the enactment of a power plant siting law (SEP, pp. 54-55);
- the need for adequate storage capacity for liquid fuels, (SEP, pp. 61-62);
- the importance of evaluation, monitoring and verification of energy efficiency programs (SEP, p. 14); and
- the importance of a diversity of fuel sources for electricity generation (SEP, p. 54), including the continued and possible expanded use of nuclear power, consistent with applicable safety, security and environmental standards (SEP, pp. 56-57).

In addition, the NYSRC has several comments and recommendations related to the SEP objective of maintaining electric system reliability.

## **RELIABILITY STANDARDS**

The discussion of the importance of maintaining reliability in Section 1.1.1 of the SEP omits a very important aspect of electric system reliability. While adequate supplies and a robust

delivery infrastructure are necessary to maintain the reliability of the State's electricity system, those resources must be carefully managed and constantly coordinated in compliance with a comprehensive set of reliability standards. Given the special characteristics of electricity, supply and demand must be kept in constant balance. Also, bulk power system facilities must be constantly monitored to ensure that they are not overloaded or otherwise damaged. In addition, when unanticipated problems occur, the system must be operated pursuant to well defined procedures to avoid having a problem cascade out of control and causing an extensive loss of power. All of these considerations require the development of comprehensive reliability standards to govern the operation of the state's bulk power system and all of its components. Such standards are promulgated on the national level by the North American Reliability Council (NERC), on the regional level by the Northeast Power Coordinating Council (NPCC), and by the NYSRC on the state level.

#### RECOMMENDATION

The NYSRC recommends that the discussion of the objective to maintain the reliability of the State's energy systems in Section 1.1.1 of the SEP include a reference to the continuing need for comprehensive and effective reliability standards for the operation of the State's bulk power system, promulgated by the NYSRC and implemented by the NYISO.

#### IMPACT OF STATE ENERGY AND ENVIRONMENTAL POLICIES ON BULK POWER SYSTEM RELIABILITY

In various sections, the SEP emphasizes the goal of significantly increasing energy efficiency and renewable resources to meet the State's electricity needs. However, it is important for the SEP to recognize the relationships between both energy efficiency and renewable energy programs and maintaining the reliability of the bulk power system. For

example, the intermittent nature of some renewable resources, including wind generation, presents technical challenges with respect to their integration with the bulk transmission system so that reliability is not adversely affected. Renewable energy programs also may have an impact on the NYSRC's annual statewide installed reserve margin (IRM), which establishes the amount of capacity above the forecasted peak load that must be purchased on behalf of New York consumers to meet reliability criteria. Because of the intermittent nature of wind, the currently projected wind power capacity factor during the summer peak period is, on average, 11%. As direct result of this relatively low capacity factor, the NYSRC projects increases in statewide IRM to maintain the same level of reliability as more wind projects become operational. An elevated IRM due to the low capacity factor of wind would affect costs and would become a reliability issue if it increased the IRM requirement to a level that could not be achieved.

Energy efficiency programs, designed to attain desired State goals to reduce energy consumption and lower emissions, may in some cases also result in significant changes in power characteristics which may be impact system reliability. These changes should be coordinated with system planners so that power system reliability is not compromised. For example, the Energy Star Program Requirements for CFLs Partner Commitments require a power factor greater than a very low level of 0.5 for an average of 10 sample tests. Appendix B, Section 2 Power Requirements states, "Many integrated compact fluorescent reflector lamps have a power factor in the range of 0.5 to 0.6." These are considered very low power factors resulting in higher lagging reactive loadings which could result in a significant shift in load characteristics and the need for infrastructure investments to provide sufficient voltage support to maintain

reliability. It is important, therefore, that electricity system planners be informed of the status of these programs.

Similarly, the State RGGI Program to reduce greenhouse gas emission and other environmental initiatives may impact energy production and, thereby, electric system reliability. For example, under the RGGI program, New York State will have an annual budget of approximately 60 million allowances to be auctioned periodically. The NYISO has informed the Department of Environmental Conservation that if sufficient allowances are not available for New York generators that could pose a threat to electric system reliability. This does not appear to be an issue currently, but may be an issue in the future.

The SEP should recognize the potential impact of individual environmental initiatives on electric system reliability, as well as the potential cumulative impact of environmental initiatives being implemented by different agencies or different units within an agency, including initiatives to further reduce nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and other emissions. These new environmental standards will likely have a significant impact on statewide IRM in the future, due to their potential effect on the operation and availability of fossil fueled generating plants in New York State.

Given the potential impact of State energy and environmental policies on electric system reliability and on the reliability standards and annual IRM promulgated by the NYSRC, it is important that there be an on-going exchange of information between the NYSRC and State agencies that will establish energy and environmental policies. This exchange of information is necessary to ensure that in promulgating its reliability standards and the annual IRM the NYSRC has a clear understanding of state energy and environmental policy initiatives. This exchange

also would ensure that state agencies have an understanding of the potential impact of proposed energy and environmental policies on the reliability of the State's bulk power system.

#### RECOMMENDATION

The NYSRC recommends that the discussion of the policy objective to maintain the reliability of the State's energy systems in Section 1.1.1 of the SEP include a reference to the potential impact of state energy and environmental policy initiatives on the reliability standards and annual IRM promulgated by the NYSRC and the importance of cooperative relationship and exchange of information between the NYSRC and state agencies to ensure that the full range of potential impacts on reliability are considered.

#### DEFENSIVE STRATEGIES

Following the August 14, 2003 blackout, the NYSRC formed a Defensive Strategies Working Group to explore ways to mitigate the impact of major disturbances on the New York Control Area. The Working Group includes representatives of the NYISO, the Northeast Power Coordinating Council, the New York Department of Public Service, and the New York transmission owners. The basic Defensive Strategies concept is to establish a protection system that would assist in arresting the spread of a disturbance through the formation of sub-areas or islands to protect the healthy portions of the system from areas experiencing major difficulties or collapse. Recently, the NYSRC supported an application by New York State for federal funding for phasor measurement technology to provide a simplified and cost effective approach to the protection of the New York bulk power system from large scale disturbances. In Section 2.2.2 of the SEP, Potential for Additional Efficiencies, there is a discussion of the need to invest in Smart

Grid technology and a brief reference to the fact that technology can anticipate and respond to system disturbances.

RECOMMENDATION

The NYSRC recommends that the discussions of the policy objective to maintain the reliability of the State's energy systems in Section 1.1.1 of the SEP include a specific reference to the need to support Smart Grid investments to better protect the New York bulk power system from major disturbances and service interruptions, and the Defensive Strategies initiative undertaken by the NYSRC.

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