

Final Scope of 2009 New York State Energy Plan

Submitted to
The New York State
Energy Planning Board

August 7, 2008

I. Purpose

The purpose of this document is to set forth a Final Work Scope (“Scope”) for the 2009 New York State Energy Plan (“2009 NYS Energy Plan” or “the Plan”). The Final Scope reflects public comments received between May 30, 2008 when the Draft Work Scope was issued and July 18, 2008, the end of the public comment period on the Draft Work Scope. This Final Work Scope will guide the development of Assessments, Issue Briefs, and policy and program recommendations which will ultimately comprise the 2009 NYS Energy Plan.

II. Background

Executive Order No. 2, issued April 9, 2008, created a State Energy Planning Board (“the Board”) charged with creating a New York State Energy Plan to be completed by June 30, 2009. The Board, in turn, created an Energy Coordinating Working Group (ECWG) to assist in fulfilling the responsibilities of the Executive Order. The Executive Order and other documents relevant to the preparation of the Scope and 2009 NYS Energy Plan are posted on the website (www.NYSEnergyPlan.ny.gov or www.NYSEnergyPlan.com).

The Executive Order is specific with respect to certain analyses and assessments to be included in the Plan which are recited below. The required elements of the Executive Order, in addition to the Assessments and Issue Briefs will form the basis for specific policy and program recommendations to be undertaken during 2009-2018, the ten-year planning horizon of the 2009 NYS Energy Plan. These policy and program recommendations, along with supporting analyses, will be published in the Draft 2009 NYS Energy Plan on March 31, 2009. A 60 day public comment period will follow and the Final 2009 NYS Energy Plan will be issued on June 30, 2009.

The ECWG solicited and received public comment on the Draft Work Scope during meetings with stakeholder groups and through the submission of written comments. Between May 30 and July 18, 2008 the ECWG met with approximately 70

stakeholder organizations in Albany, Buffalo, New York City and on Long Island. Sixty-eight sets of written comments were also submitted to the ECWG.

III. Final Scope of the 2009 NY Energy Plan

(A) *Executive Order No. 2 directs that the following elements be included in the Plan:*

- (a) A statement of long-range energy policy objectives and strategies appropriate to increase energy supply and reduce energy demand, considering factors such as (i) diversity of fuel supplies; (ii) protection of public health and safety; (iii) the needs of vulnerable communities; (iv) consumer cost impacts; (v) the relative economic competitiveness of the State; (vi) the State's natural resources, (vii) the reduction of greenhouse gases; (viii) energy conservation and efficiency; (ix) clean and renewable energy resources; (x) the maintenance of reliable electric and natural gas systems; and (xi) existing energy policies and objectives, including the Statewide Transportation Plan and State Implementation Plan.
- (b) Demand forecasts for periods up to 10 years for electricity, natural gas, coal and petroleum products, which shall assess demand for the State, considering reasonably expected changes in demographic and economic activity, energy efficiency, and load management;
- (c) Supply requirements for the State (and any appropriate regions thereof) which are needed to satisfy forecasted demand for electricity, natural gas, coal and petroleum products;
- (d) Assessments of existing electric generation, transmission and distribution systems, fuel transmission facilities, delivery and storage systems, and energy transport systems to meet the resource supply requirements for electricity, natural gas, coal, and petroleum products over the forecast period;
- (e) Projections of energy prices over the forecast periods;
- (f) Assessments of the costs, benefits, uncertainties, market potential and opportunities for promoting sustainable alternatives to traditional energy resources, including clean and renewable energy resources for electric generation and other energy requirements, distributed generation technologies, cogeneration technologies, energy efficiencies, demand management, and biofuels which are reasonably available for satisfying energy supply requirements;
- (g) Assessments of the impacts associated with electricity production and energy use on public health and the environment, including on communities that are burdened disproportionately by health and environmental impacts;
- (h) Assessments of State environmental policies and programs which impact the State's development and implementation of energy policy and programs;
- (i) An inventory of greenhouse gas emissions, and strategies for facilitating and accelerating the use of low carbon energy sources and/or carbon mitigation measures;
- (j) Assessments of the costs, benefits, and uncertainties of traditional and alternative transportation measures required to meet system demands over the

forecast periods, including options such as reduced vehicle miles traveled, to address the energy, environmental and health impacts of using traditional and alternative fuels;

- (k) State energy policies and programs intended to support economic growth in the State, including those intended to develop a clean energy economy;
- (l) Comparison of energy prices for various customer classes provided by electric and natural gas utilities of the State with those in other states that compete with New York for business;
- (m) The role of environmental justice considerations in energy-related decisions;
- (n) Recommendations for administrative and legislative actions to implement the policies, objectives, and strategies set forth in the Energy Plan, and;
- (o) Recommendations for the study of additional issues and/or for further study of issues addressed in the Energy Plan.

(B) *The Development of the 2009 NYS Energy Plan: Assessments and Issue Briefs.* As is evident from the Executive Order, the 2009 NYS Energy Plan is intended to identify and assess critical factors that will affect the State's ability to meet its projected future energy needs, including its ability to sustain an environment capable of attracting reasonably priced capital to support necessary investments. Maintaining the adequacy and reliability of critical systems and infrastructure will be a primary focus of the Plan. In addition, it will consider the roles that public and private sector entities, or regulated and non-regulated companies may play in the delivery of traditional and new energy services. The 2009 NYS Energy Plan will consider alternative technological pathways, and steps that could be taken in the short-, mid- and long-range to meet the State's future energy needs in a sustainable manner, while balancing the multiple objectives of reducing greenhouse gas emissions, improving the environment, and encouraging economic growth. It will discuss the importance of sustained public sector leadership at all levels of government within the State and a broad-based public education campaign in helping to achieve the State's long-term goals. The ECWG will address the above elements through the development of Assessments and Issue Briefs.

(i) *Assessments.* As a general matter, Assessments are intended to be quantitative in nature containing, among other information, data sets, modeling results and projections relevant to the essential elements of the State's energy systems. A list of Assessments, along with a brief description of the contents of each, appears below; the description is intended to be illustrative, not exhaustive.

Energy Efficiency Assessment

This Assessment will provide estimates of the potential for energy efficiency gains in the residential, commercial and industrial sectors. It will review the factors that have a material impact on the success of energy efficiency technologies and programs, including a discussion of energy prices, current federal, state and local initiatives and the installation of advanced meters. It will also discuss the role that building codes and appliance efficiency standards can play as market-drivers for energy efficiency technologies. The Assessment will address the potential impacts of combined heat and

power systems and efficiency improvements in the State's electric transmission and distribution systems.

Renewable Energy Assessment

This Assessment will address the current and potential use of renewable resources in the electric generation (central station generation and end-use applications, including distributed generation technologies) and transportation sectors as well as thermal applications for biofuels and solar. It will provide an economic evaluation of the reviewed technologies. The Assessment will also review current federal and state programs that have a significant effect on the market penetration of renewable resources.

Electricity Resource Assessment

This Assessment will provide a status report on the State's generation, transmission and distribution infrastructure. It will describe physical and market linkages with neighboring regional organized energy markets (PJM and ISO-NE) and Canada. It will review issues relevant to generation technologies not addressed in other Assessments or Issue Briefs (for example, nuclear licensing and relicensing and advanced coal) and describe the role of demand response in meeting the State's peak electric demand. The Assessment will discuss issues related to the State's aging infrastructure as well as issues related to fuel diversity in electric generation. The Assessment will also present electricity load and price forecasts and will show results of various future scenarios.

Natural Gas Assessment

This Assessment will provide information on historic and current natural gas demand, prices and supplies. It will also present forecasts of future demand by end use sector, and for power generation, accounting for the impact of energy efficiency. The Assessment will estimate future natural gas prices and will address various future supply options. Diverse supply sources (domestic, indigenous and Canadian) will be discussed. The Assessment will address the inter-dependency of the electricity and natural gas systems.

Petroleum Assessment

This Assessment will provide an overview of the market for petroleum products -- from the global perspective of world production trends for crude oil to an analysis of refined products used in the State's energy systems, including distillate fuels, gasoline, propane, residual and jet-fuels. The Assessment will include a New York petroleum demand and price forecast.

Coal Assessment

This Assessment will provide an overview of the domestic and New York markets for coal, including a discussion of production and reserves, prices and transportation issues. Issues related to the use of existing coal-fired generation, as well as emerging trends in the use of coal for electric generation, will be examined. The Assessment will include a New York coal demand and price forecast.

End User Energy Price Assessment

This Assessment will provide forecasts of reference energy prices by fuel type and market sector: residential, commercial, industrial, transportation and electricity. It will also examine the effects of current energy prices on New York State consumers. This will be accomplished by analyzing regional price differences for various sources of energy and regional variations in energy consumption patterns for electricity, transportation fuels, and fuels for heating. Consumers' energy expenditures will then be considered in the context of other relevant and readily available economic indicators of consumer welfare. The analysis will cover residential, commercial and industrial end-users. Energy Profiles will be developed for a small set of consumers in each sector. The Energy Profiles are intended to illustrate the disparate impact of energy prices on consumers based on factors that are both within and beyond the consumers' sphere of influence.

(ii) **Issue Briefs.** In addition to the Assessments, the 2009 NYS Energy Plan will contain Issue Briefs on cross-cutting issues that affect the development, distribution, and use of energy in New York State. The Issue Briefs will synthesize the analyses and discussion in the Assessments and other sources of information, including the results of other public and private energy-related initiatives and plans and present specific policy and programmatic recommendations that will advance the State's goals and objectives over the 2009 – 2018 time frame. Below is a descriptive list of these Issue Briefs.

Energy Infrastructure Needs

This Issue Brief will discuss the decade long evolution of the State's market structure for the production, transmission and sale of wholesale electricity and consider the effects of the current competitive market, as administered by the New York Independent System Operator, on infrastructure development. The paper will focus on current and future bulk energy delivery infrastructure needs for electricity (transmission) and natural gas (interstate and intrastate pipelines) along with associated fuel oil, coal, and liquified natural gas (LNG) delivery infrastructure. This Issue Brief will address relevant intra-state regional differences associated with infrastructure development and the delivery of electricity and fuel. The Issue Brief will address the security of the State's energy infrastructure. It will discuss infrastructure requirements, including new and existing electric generation facilities, to meet public policy goals as well as reliability needs and will consider barriers to market entry which may have an effect on meeting those requirements. Examples of infrastructure additions include projects to import economic power from neighbors (*e.g.*, the Pennsylvania-New Jersey-Maryland Regional Transmission Organization, Canada), deliver power for economic development, deliver wind power to loads, and provide gas for electric generation.

Siting New Energy Infrastructure

This Issue Brief will address existing siting processes, as well as the expired Article X siting law, for energy infrastructure projects and will assess the effectiveness of

these processes from the perspective of developers, involved government agencies and local communities. It will clarify the roles of federal, state and local authorities in siting energy facilities in New York, with a special emphasis on areas of shared or contested jurisdiction. This paper will consider the relative complexities of siting generation and transmission facilities in different regions across the State. The Issue Brief will examine issues related to the uses of rights-of-way associated with transportation corridors for the siting of energy facilities.

Energy Costs and Economic Development

This Issue Brief will explore the extent to which energy price and reliability affect the economic competitiveness of New York State. The Issue Brief will discuss in a general manner the effect that government action (legislative, regulatory, policy) may have on the State's business and economic development climate. This paper will compare New York's energy prices to those in states that compete with New York for industry and jobs giving due consideration to the low-cost power programs administered by the New York Power Authority (NYPA), the Long Island Power Authority (LIPA) and other utilities. The Issue Brief will look at intra-state regional differences in energy prices and consider the effects on local economic development initiatives. This Issue Brief will also explore the economic effects of energy investments and how New York may be positioned in a carbon-constrained economy. It will discuss current efforts to develop "green economy" sectors within the State and the workforce development initiatives that will be needed to support those efforts.

Health Impacts of Energy Use

This Issue Brief will describe the known and potential health impacts of energy production and use. It will also describe the methods, including standards and criteria, used to assess known and potential impacts of energy production and use on public health and potential strategies for reducing these impacts. The Issue Brief will also analyze the extent to which community health concerns may affect the development of energy facilities.

Environmental Justice

This Issue Brief will: (1) evaluate existing policies, programs and procedures that are intended to ensure the fair treatment and meaningful involvement of all people, regardless of race, color, national origin or income, who are affected by the development and siting of energy facilities; (2) identify areas of the State that are disproportionately affected by impacts from energy-related and other industrial facilities; (3) identify options, programs and policies for improving the health and environmental well-being of communities that are disproportionately affected by impacts from energy-related and other industrial facilities; and (4) identify options, programs and policies to improve opportunities for participation in energy decision-making by residents of disproportionately affected communities.

Meeting Transportation Needs and Alternative Transportation Options

This Issue Brief will examine the energy impacts of maintaining the current transportation system (transit, highway and other transportation modes); issues related to the expansion or contraction of existing systems of highway, transit, rail, aviation, maritime and non-motorized transportation; transportation related strategies to support the economic development and environmental objectives of the State; issues related to greenhouse gas abatement strategies, alternative fuel and vehicle technologies, including the effect on electricity supply of the increased electrification of the transportation system; and issues related to local, state or regional efforts to reduce vehicle miles traveled.

Climate Change

This Issue Brief will examine the significant environmental challenges that the State will face if climate change continues unabated, including potential adverse impacts on the State's natural resources, agriculture, public health and infrastructure. This Issue Brief will explore the nexus between energy planning and the urgent need to reduce greenhouse gas emissions. A detailed status report on federal climate change legislation and likely international protocols or national programs to address greenhouse gas emissions will be provided along with an evaluation of the ramifications of such policies for New York. An analysis of New York State sources of greenhouse gases, the chief contributors to climate change, will be included along with existing or proposed measures that can ameliorate the contribution of the energy sector to those emissions. Existing and proposed programs of local, state, and regional governments, as well as private sector initiatives to stabilize greenhouse gas emissions will be analyzed and discussed. The Issue Brief will also consider water supply issues, as these relate to the State's current and future energy systems. Climate change adaptation strategies for the State's energy systems will be addressed.

Environmental Impact and Regulation of Energy Systems

This Issue Brief will evaluate the environmental impact and regulation of energy systems. The paper will provide an inventory of existing and proposed environmental programs and policies that affect the energy sector, including, but not limited to, the Regional Greenhouse Gas Initiative, the High Electric Demand Day program, air emissions standards pursuant to state and federal clean air laws, as well as clean water regulations. It will also identify existing strategies and proposed strategies for avoiding environmental impacts of energy systems, or minimizing unavoidable impacts, while supporting the state's economic prosperity.

Regional Collaboration

This Issue Brief will identify the existing and proposed physical and market linkages between New York State's energy sectors and those in neighboring states and Canadian provinces. It will address the opportunities for improving the regional flow of fuels and electricity and development of key energy infrastructures and will identify legal and jurisdictional issues that would need to be addressed in order to achieve potential benefits. This Issue Brief will explore best practices of regional coordination in energy

project development which can support economic growth and the development of a clean energy economy in the State.

IV. Other Energy Plans and Initiatives

There is no shortage of actors, or activity, in the sphere of energy-related programs, initiatives or planning processes. Before the Draft and Final 2009 NYS Energy Plan are released, new laws may have been enacted, or new programs may be underway as a result of international, federal, state, regional, and local government action. The ECWG will follow closely the development of other energy initiatives and plans over the next ten months and, to the extent practical, will account for these efforts in the Draft and Final 2009 State Energy Plan.

V. Public Comment on the 2009 NYS Energy Plan

Although the public comment period on the Scope of the 2009 NYS Energy Plan has closed, the Energy Planning Board welcomes stakeholder input on issues that will be addressed in the Plan any time during the next eight months. Stakeholder input may be submitted electronically through the Energy Plan website at www.NYSEnergyPlan.ny.gov or www.NYSEnergyPlan.com or in hard copy to:

Energy Plan Comments
NYSERDA
17 Columbia Circle
Albany, NY 12203-6399

VI Next steps

In keeping with the timeframe established in Executive Order No. 2, the SEPB will issue the Draft 2009 NYS Energy Plan on March 31, 2009. A 60 day public hearing and comment period will follow. The Final 2009 NYS Energy Plan is scheduled to be released on June 30, 2009.