



NEW YORK STATE ENERGY PLANNING BOARD

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MEMORANDUM

NEW YORK STATE ENERGY PLANNING BOARD

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TO: Members of the State Energy Planning Board

FROM: Planning Board Agencies and Authority Staffs

DATE: December 18, 2002

SUBJECT: 2002 State Energy Plan - Annual Update

INTRODUCTION

In June of this year, the Energy Planning Board (Board) approved and directed release of the 2002 New York State Energy Plan and Final Environmental Impact Statement (Energy Plan). Since the Energy Plan was released, numerous actions have been taken to implement its recommendations. This memorandum provides an update to the Board on the actions and initiatives taken and underway to implement the strategies and recommendations contained in the Energy Plan. This memorandum also summarizes the data and information filed with the Board by major energy suppliers in 2002, under regulations promulgated by the Energy Planning Board (Title 9 NYCRR Parts 7840-7863).

SUMMARY OF EFFORTS TO IMPLEMENT THE ENERGY PLAN

In the six months since the Energy Plan was approved, the State has made notable progress implementing the Energy Plan's recommendations. Because many of the actions taken support more than one policy objective, progress to date is presented in this memorandum in the context of four broad themes:

1. Energy and Infrastructure Security
2. Energy Diversity
3. Retail Electricity and Regional Markets
4. Transportation

The themes encompass the numerous recommendations included in the Energy Plan's policy objectives, listed in Table 1. Additional details about the initiatives highlighted in the following text are provided in the Tracking Matrix, included as Appendix A of this memorandum.

1. Energy and Infrastructure Security

Following the terrorist attacks of September 11, 2001, the security of New York's energy infrastructure came under increasing scrutiny. Since that time, and release of the Energy Plan, the State has undertaken major initiatives to ensure the security of its energy infrastructure.¹ These initiatives include: (1) a security assessment of critical infrastructure, including energy infrastructures as a key component, being performed by the State and U.S. DOE, (2) a study of security at radioactive materials facilities, conducted by OPS, with support from NYSERDA, DEC, DOH, and DOL, and Brookhaven National Laboratory, (3) a detailed review of security at the Indian Point nuclear power plants, completed by OPS, with support from the FBI, NYSERDA, and SEMO, and (4) evaluations of physical and electronic (cyber) security arrangements are being conducted by independent experts for New York's telephone and energy utility companies, under the guidance of the Public Service Commission (PSC).

Table 1: 2002 Energy Policy Objectives

<p>The five public policy objectives adopted by the Board and contained in the Energy Plan are:</p> <ol style="list-style-type: none">1. Supporting the continued safe, secure, and reliable operation of the State's energy and transportation system infrastructures;2. Stimulating sustainable economic growth, technological innovation, and job growth in the State's energy and transportation sectors through competitive market development and government support;3. Increasing energy diversity in all sectors of the State's economy through greater use of energy efficiency technologies and alternative energy resources, including renewable-based energy;4. Promoting and achieving a cleaner and healthier environment; and5. Ensuring fairness, equity, and consumer protections in an increasingly competitive market economy.

NYSERDA, with co-funding from the New York Independent System Operator (NYISO), and with participation of the Department of Public Service (DPS) staff and a working group of industry and environmental interest stakeholders, sponsored an analysis of the ability of New York's natural gas delivery system to meet the growing demand for natural gas for electricity generation.² While the analysis touched briefly on the potential impacts a sudden loss of natural gas delivery capability, regardless of cause, might have on the reliability of the State's electricity system, further study is required.

¹ These activities are being led by the New York State Office of Public Security (OPS) in collaboration with the Department of Public Service (DPS), the United States Department of Energy (U.S. DOE), the Federal Bureau of Investigation (FBI), the New York State Departments of Environmental Conservation (DEC), Health (DOH), Labor (DOL), the State Emergency Management Office (SEMO), and New York State Energy Research and Development Authority (NYSERDA).

² *The Ability to Meet Future Gas Demands from Electricity Generation in New York State*, Charles Rivers Associates, July 2002.

2. Energy Diversity

Article X Plants. Since the Energy Plan was issued in June, three new combined-cycle natural gas-fired power plants were approved under the State's Article X siting process, including: New York Power Authority's (NYPA's) Poletti Station Expansion (500 megawatts) in Queens, the Calpine Corporation's Wawayanda Energy Center (540 megawatts) in Orange County, and the Brookhaven Energy Limited Partnership Project (580 megawatts) in Suffolk County.

Demand Resources. The **New York Energy SmartK** public benefits-funded program, through the third quarter of 2002, has reduced electricity use and demand by over 600 gigawatt hours annually and 466 megawatts, respectively. These programs result in annual bill reductions of \$70 million. It is estimated that during the summer of 2002, peak demand was reduced by approximately 1,000 megawatts through State-sponsored and NYISO peak demand reduction programs. NYSERDA, Long Island Power Authority (LIPA), and NYPA supported about 450 megawatts of this peak reduction through their various demand management initiatives.

Interconnections Standards. Since the PSC's adoption of Standardized Interconnection Requirements (SIR) for small distributed generators (300 Kilo Volt-Ampere [KVA] or less) at the end of 1999, 109 applications have been received, with 78 installations completed and 19 installations in process as of September, 2002. Applications for 93% of these units, of which the vast majority were photovoltaics, were processed within the time frames set forth in the SIR. In November 2002, revisions to the SIR were issued, which included streamlining of the application process that effectively reduced the maximum processing time by two to four weeks.

Distributed Generation and Combined Heat and Power. NYSERDA has committed \$24 million for 45 Combined Heat and Power (CHP) systems that will produce 35 megawatts of new electric generation. An additional \$4 million was committed for 11 projects to develop distributed generation (DG) technologies. When combined with funding from co-sponsors, these 56 projects represent \$96 million in investment in DG and CHP technologies for New Yorkers.

Wind Power. In accordance with recommendations in the Energy Plan, NYPA and LIPA have commenced projects that will bring 150 megawatts of wind generated power to their customers. NYSERDA's **New York Energy SmartK** program has already helped to establish 48 megawatts of wind generation in the State, and an additional 300 megawatts of wind power is expected from current program efforts.

Biofuels and Biomass. The Governor signed legislation for "net metering" of methane digesters, and NYSERDA announced plans with NOCO Energy Corporation to develop an ethanol fueling network in western New York. NYSERDA has also made funding available to facilitate the development, demonstration, and commercialization of biodiesel manufacturing plants in New York and to conduct market demand and supply assessments.

Vehicles. The New York Alternate Fuels Tax Credit Program was extended through 2004.

3. Retail Electricity and Regional Electricity Markets

Retail. The movement toward retail electricity choice recommended in the Energy Plan is being supported by numerous activities of the PSC, DPS and NYSERDA. The PSC is in the process of establishing unbundled costs for services. These activities, along with other infrastructure improvements now underway³ should provide a significant stimulus for development of a competitive retail market. In addition, NYSERDA has issued two solicitations for price responsive load management and time-sensitive electricity pricing demonstrations. Such projects are expected to help enhance customer choice and enable greater end user participation in electricity markets. The number of customers choosing alternate retail electricity providers reached 388,000 at the end of October 2002, and continues to grow.

Regional Markets. In August, the NYISO and ISO New England (the ISOs) filed a proposal with the Federal Energy Regulatory Commission (FERC) to form a Northeast Regional Transmission Organization. While that proposal might have provided the benefits of an expanded electricity market and increased competition, it was recently withdrawn by the ISOs in favor of focusing on the continued development of FERC's Standard Market Design (SMD). The SMD was put forward by FERC to facilitate the sale and transmission of electricity across all states and regions. The call for a broad regional common electricity market is consistent with the recommendations in the Energy Plan.

4. Transportation

The New York State Department of Transportation (DOT) has convened an internal State Energy Plan Implementation Group to develop recommendations to achieve the policy objectives of the Energy Plan, as they relate to the transportation sector. These objectives include energy and greenhouse gas considerations in transportation planning and decision making, project tracking criteria, and a broad array of other transportation design, construction and maintenance practices. In addition, using the Energy Plan as an example, the U.S. Department of Transportation and the American Association of State Highway and Transportation Officials are collaborating with DOT on a project to examine New York's integration of transportation into the State energy planning process as a potential nationwide "best practices" example.

Methyl tertiary butyl ether (MTBE) will be banned from use as an oxygenate in gasoline in New York after January 1, 2004. The 107th Congress did not act on comprehensive energy legislation or specific legislation that might have delayed or otherwise provided relief from the implementation of the pending MTBE ban. As a result, New York will submit an oxygenated fuel waiver request to the U.S. Environmental Protection Agency in early 2003. The request will

³ For example, competitive billing and metering, uniform business practices, electronic data interchange.

cite New York's lack of need for oxygenated fuel and stress the myriad concerns associated with the use of ethanol as a substitute.

Comprehensive Tracking of Energy Plan Implementation

The attached tracking matrix (Appendix A) provides a comprehensive reference to the implementation status of the Energy Plan recommendations. Given the relatively brief period since release of the Energy Plan and the progress to date, the identified activities represent a significant commitment to consumers, security of energy supplies and infrastructures, improved environmental quality, and the fair delivery of services for all New Yorkers.

MAJOR ENERGY SUPPLIER FILINGS

New York's major energy suppliers are required by Article 6 of the Energy Law to file information and data with the Energy Planning Board.⁴ The required information must be filed by July 1 each year, with the exception of certain forecast and petroleum data which are filed only in even-numbered years. Regulations promulgated by the Board (Title 9 NYCRR Parts 7840-7863) identify the specific types of information that major energy suppliers in various categories are required to file, including such information as:

1. Forecasts of energy demand and supply requirements over a period of 20 years;
2. An assessment of existing supply resources;
3. An inventory of electric generation and transmission facilities; recommended supply additions and demand-reducing measures;
4. Research and development plans;
5. Energy price projections;
6. Load forecasting methodologies; and
7. Proposed policies, objectives and strategies for meeting the State's future electricity needs.

The following text briefly summarizes the information and data provided in 2002 by major energy suppliers in the electricity, petroleum, natural gas, and coal industries.

Electricity (9 NYCRR Parts 7857,7861, and 7863)

Alternative power producers, transmission facility owners, municipal electric utilities, and the New York Independent System Operator (NYISO) all file information annually with the

⁴ Separate filing requirements apply to the following groups of energy suppliers: New York Power Pool and its members (successor organization is the New York Independent System Operator); New York Gas Group and its members; petroleum suppliers, including petroleum pipeline and barge operators; coal suppliers; alternative power producers; intrastate natural gas pipeline companies; and municipally-operated electric utilities.

Energy Planning Board.⁵ The NYISO's *2002 Load and Capacity Data* filing provides electricity system information, including:

- forecasts of peak load, energy requirements, and demand-side management;
- existing resource capacity and planned changes;
- existing and proposed transmission; and
- normal power transfer limits.

The transmission owners, in aggregate, forecast a 1.2 percent annual peak load growth rate and a 1.1 percent annual energy requirement growth rate for the years 2002 through 2020. This compares to the Energy Plan's forecast annual growth bandwidths of 0.75 -1.23 percent for peak and 0.76 - 1.32 percent for energy.

Assuming the 18 percent reserve margin requirement established by the New York State Reliability Council remains in effect, the NYISO projects that in-State existing and planned generation capacity plus known purchases and sales with neighboring control areas should provide sufficient generation capacity to meet the reserve requirement through 2011. The NYISO projection assumed approximately 6,220 megawatts of new Article X capacity would become available. The 6,220 megawatts represent the capacity of units approved by the Article X Siting Board and proposed units with applications accepted but not yet approved by the Siting Board, as of the date of the NYISO's filing. For comparison, the Energy Plan's "Reference Resource Scenario" assumed that 5,224 megawatts of new Article X capacity could become available, along with another 1,000 megawatts of out-of-State capacity committed to New York, to satisfy the resource requirements of the State through most of the planning period. Energy Planning Board agencies and authority staffs are currently reviewing the latest demand and resource projections with the NYISO.

Alternative power producers, transmission owners, and municipal electric utilities all must file information regarding generation units they own and that operated at any time during the previous calendar year. A total of 128 filings providing 2001 information have been received either directly from the individual entities or through the filing submitted by the NYISO. Some electricity generators submitted a single filing providing data for all their facilities, while others provided separate filings for individual generating stations.

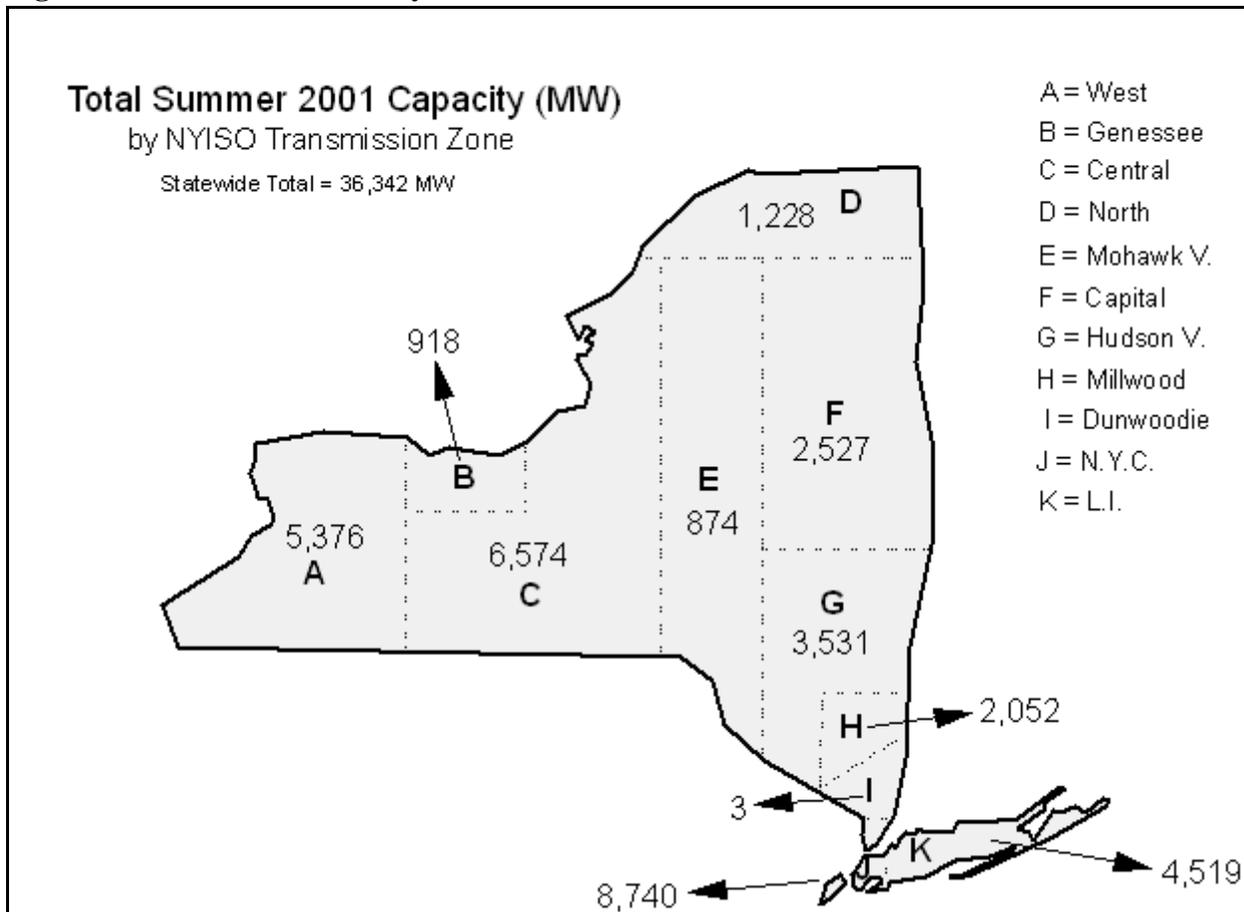
The filings show that New York's total electric energy requirements for 2001 were 156,696 GWh, with net imports providing approximately 11,800 GWh or 7.5 percent of the total. Essentially all in-State 2001 electric generation capacity and energy production is represented by

⁵ On December 1, 1999, the NYISO assumed responsibility for the operation of New York State's bulk power system and the newly established wholesale electric energy markets. Prior to December 1, 1999, operation of the bulk power system was the responsibility of the New York Power Pool (NYPP) which had specific statutory and regulatory responsibility for filing electric system information with the Board. Since its inception, the NYISO has fulfilled the filing responsibilities of the former NYPP.

the reports submitted to the Board.

The map in Figure 1 provides New York's in-State summer electricity generating capacity by NYISO transmission zone. Zones J & K (N.Y.C. and L.I.) collectively contained approximately 36 percent of New York State's summer 2001 electric generating capacity. For comparison purposes, the summer 2001 systemwide peak hour demand was 30,982 Megawatts and New York City and Long Island were responsible for 49 percent of that demand. In 2002, New York City and Long Island accounted for 50 percent of the summer systemwide peak hour demand of 30,662 megawatts.

Figure 1: New York Electricity Load Zones



Petroleum (9 NYCRR Part 7859)

A total of 36 petroleum industry participants filed reports with the Energy Planning Board, including 31 fuel suppliers, 5 barge operators, and 4 refined petroleum pipeline companies. A number of these companies operate in more than one of the market areas

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addressed. Many of the filing companies provided addresses for websites containing detailed information related to their areas of operation. The universe of companies required to file this information is derived from U.S. Energy Information Administration filings and Energy Planning Board agencies staffs' knowledge of the companies operating in New York. NYSERDA staff estimate that a compliance rate in excess of 90 percent was achieved for the 2002 filings to date, with work continuing to ensure full compliance.

The 31 filings submitted by major petroleum product suppliers provided information regarding the type of petroleum business operated (*i.e.*, integrated major oil company, independent supplier, or terminal operator), emergency contacts, and the types of refined petroleum products marketed or in inventory. The specific volumes of refined products delivered and sold in the State during the past two calendar years were also reported. Further, the filings included information related to storage capacities, by location and fuel type, and the infrastructure characteristics of facilities, including barge, pipeline, and trucking capabilities.

Five filers reported that they operated petroleum barges within the State's borders. The filings provided information related to the number of barges, their capacity, the types of petroleum products they transport, emergency contacts, and descriptions of expansion projects the companies may be considering. A total of 131 barges were listed by the filing companies as operating in New York waters. None of the barge filers reported any plans to expand operation, but one reported it was replacing several barges with new equipment.

Four filers reported that they operated refined petroleum product pipelines within the State. The filings provided the average daily throughput capacity, annual fuel volumes by type, descriptions of expansion projects and modifications to existing facilities, maps showing the pipeline routes throughout the State, and emergency contacts. Data provided by petroleum suppliers show an increase in motor gasoline and distillate fuel throughput from 2000 to 2001 but a decrease in jet-fuel volumes over the same period. No petroleum product pipeline companies reported expansion plans in their filings.

In 2001, refined petroleum products accounted for 41 percent of total statewide primary energy use. Such consumption is distributed across major end-use sectors as follows: transportation – 65 percent; residential – 13 percent; commercial – 10 percent; electric generation – 9 percent; and industrial – 3 percent.

Natural Gas (9 NYCRR Parts 7858 and 7862)

The New York Gas Group (NYGAS) filed a summary of current and projected natural gas market conditions for New York as of July 2002.⁶ The summary addresses three major areas:

⁶ The NYGAS filing is on behalf of the following natural gas local distribution companies (LDCs): Central Hudson Gas and Electric Corp.; Consolidated Edison Company of New York, Inc.; Coning Natural Gas Corp.; KeySpan Energy Delivery NY & LI; National Fuel Gas Distribution Co.; New York State Electric & Gas Corp.; Niagara Mohawk Power Corp.;

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current market conditions; future market projections; and market issues. Highlights of the NYGAS filing include:

- New York has approximately 4.5 million natural gas customers. Residential customers number 4.1 million; commercial and industrial customers number over 375,000.
- By class, New York has 4,171,597 firm customers, 1,717 interruptible customers, and 339,043 transportation customers.
- New York has over 54,000 miles of natural gas pipeline. This is an increase of 15.6 percent since 1990.
- The U.S. and North American untapped resource base is extensive. New technologies to locate, extract, and move natural gas are making more supplies available.
- New York's supply outlook appears positive, assuming planned enhancements of both the transmission and distribution systems develop as expected. New York's local gas distribution companies will need to make major investments to their systems to meet the projected needs of the State's end-use markets.

A total of six interstate natural gas pipeline companies filed information with the Energy Planning Board.⁷ Only one major natural gas pipeline company has yet to submit the required information, and Energy Planning Board agencies staffs expect this information to be submitted shortly. As allowed by the Board's regulations, each of the six filing companies submitted a copy of its respective Federal Energy Regulatory Commission (FERC) "Form 2", which included detailed information on pipeline capacity, contract quantities and deliveries. Highlights of the information include:

- The majority of New York's natural gas comes from U.S. domestic supplies, primarily from the Gulf Coast. A significant portion of the remainder comes from western Canada. New York is also interconnected with a pipeline network that now has access to offshore supplies in eastern Canada.

Orange & Rockland Utilities, Inc.; Rochester Gas & Electric Corp.; and St. Lawrence Gas Company, Inc.

⁷ The companies that filed information in 2002 include: Columbia Gas Transmission; Dominion Transmission, Inc.; Iroquois Gas Transmission System; National Fuel Gas Supply Co.; Texas Eastern Pipeline Co.; and Transcontinental Gas Pipe Line Corp.

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- Net interstate natural gas pipeline activity is approximately 5.1 billion cubic feet per day; approximately 8.4 billion cubic feet of natural gas enter the State and 3.3 billion cubic feet of natural gas exit the State each day.
- To meet growing demand for natural gas, several pipeline and infrastructure enhancements are planned to serve New York and the Northeast in the next few years. Also, the Federal Energy Regulatory Commission has issued approvals for several new projects.

Coal (9 NYCRR Part 7860)

Coal suppliers are only required to file at the request of the Chair of the Energy Planning Board. In 2002, no coal suppliers were requested to submit information. NYSERDA monitors coal use in New York by reviewing data regularly compiled by the U.S. Department of Energy's Energy Information Administration. In 2001, coal comprised 8 percent of total statewide primary energy consumption. In particular, coal accounts for 16 percent of electric generation in New York, compared to more than 57 percent in the United States, as a whole.

No.	State Energy Plan Recommendation	Progress to Date
Policy Objective 1. Supporting the continued safe, secure, reliable operation of the State’s energy and transportation systems infrastructures.		
1.A.	<p>The State will continue its study of the security of New York’s energy infrastructure used for production, storage, and delivery. The study will include a risk and vulnerabilities assessment and recommendations for appropriate actions and will be conducted cooperatively by the Office of Public Security, appropriate Energy Planning Board agencies, and major energy market participants, in cooperation with appropriate federal agencies.</p>	<ul style="list-style-type: none"> • The Office of Public Security (OPS), with the assistance of the U.S. Department of Energy (U.S. DOE), is currently performing a critical infrastructure security assessment for the State. Energy infrastructure is an important component of this effort and the OPS/U.S. DOE team is reaching out to the Energy Planning Board agencies for input. U.S. DOE, along with staff of the national laboratories and other experts, and assisted by staff from the New York State Department of Public Service (DPS), performed security surveys at critical electric and gas infrastructure locations and performed a vulnerability and risk assessment at one significant electric system location. According to U.S. DOE, the assessment should be completed by December 31, 2002. • NYSERDA and the New York State Departments of Environmental Conservation (DEC), Health (DOH), and Labor (DOL) are participating in a related OPS/U.S. DOE study of security at radioactive material facilities in the State. A report was completed in December 2002. • OPS, with support from the Federal Bureau of Investigation, NYSERDA, and the State Emergency Management Office (SEMO), concluded a detailed review of security at the Indian Point nuclear power plants in December 2001. The review found security at the plants to be robust and offered a series of recommendations for making it even stronger. • Following the terrorist attacks of September 11, 2001, DPS staff consulted with officials from New York’s telephone and energy utilities regarding their security preparedness. DPS staff recommended that the utilities retain third-party consultants and experts to evaluate the adequacy of their physical and cyber security arrangements. These evaluations are under way. • One component of the analysis of the natural gas delivery system (see No. 1.D.), conducted by NYSERDA, the New York Independent System Operator (NYISO), and DPS staff, was consideration of the impact of the sudden loss of a natural gas pipeline on the reliability of the State’s electricity system.
1.B.	<p>The State supports investments in natural gas and electricity transmission and distribution system infrastructures, including consideration of multiple redundancies, shared design practices, shared inventories, and flexibility necessary to ensure continued safe and reliable system operation.</p>	<ul style="list-style-type: none"> • The combined construction budgets of the major local natural gas distribution companies (LDCs) total approximately \$490 million a year. Of this amount, approximately 96 percent is spent on distribution system improvements.

No.	State Energy Plan Recommendation	Progress to Date
1.B. (con'd)		<ul style="list-style-type: none"> • The New York Public Service Commission (PSC) has intervened with the Federal Energy Regulatory Commission (FERC) in support of pipeline projects to increase natural gas pipeline delivery capacity to New York. These interventions include support for the Millennium, Iroquois Eastchester, and Islander East projects, all of which have been approved by FERC. • The PSC approved (under Article VII of the Public Service Law) several projects to expand the pipeline infrastructure within New York including: <ul style="list-style-type: none"> – An upgrade of Niagara Mohawk’s existing Putnam Road pipeline serving Saratoga and Warren counties. – Construction of 2.3 miles of pipeline from the Texas Eastern gate station to the Arthur Kill generating facility on Staten Island. – Construction of over eight miles of pipeline in Schuyler and Chemung Counties to permit the delivery of gas from the Trenton/Black River formation to NYSEG's transmission and storage facilities. – Construction of 1.3 miles of pipeline in Suffolk County to provide gas service to the proposed 250 MW electric generator, the Spagnoli Road Energy Center. • The safe, reliable operation of electric utilities is enhanced by information sharing among utilities. The mergers of New York State Electric and Gas (NYSEG) with Rochester Gas and Electric (RG&E) and Niagara Mohawk with National Grid New England in 2002, as well as the previous merger of Consolidated Edison of New York (Con Edison) with Orange and Rockland (O&R) have resulted in sharing of inventories, work forces, and best practices for safety and reliability. Some electric utilities are also developing reliability centered maintenance programs through the use of new metering, testing, and software technologies.
1.C.	<p>The State requests that the New York Independent System Operator (NYISO) consider the certainty and availability of primary and backup fuels in valuing capacity from electricity generators in order to ensure that the reliability of the electricity, natural gas, and petroleum supply and delivery infrastructures would not be adversely affected if generator fuel supplies are disrupted. As an alternative, NYISO should consider the certainty and availability of primary and backup fuels in establishing local reliability rules.</p>	<ul style="list-style-type: none"> • The New York State Reliability Council has updated its reliability rules to better deal with operational limitations necessitated by the common source supply of natural gas and the availability of back-up fuel.

No.	State Energy Plan Recommendation	Progress to Date
1.D.	<p>The State supports greater energy diversity in all sectors of the economy through investments in technology and infrastructure development for indigenous and renewable fuels, demand reduction techniques, and energy efficiency, to reduce the risks associated with single fuel dependency and price volatility.</p> <p>In addition, the State supports the continued safe operation of nuclear, coal, natural gas, oil, and hydroelectric generation as part of a diverse portfolio of electricity generation resources.</p>	<ul style="list-style-type: none"> • Certificates were issued by the Siting Board for new highly energy efficient power generating plants for (1) the New York Power Authority’s Poletti Power Project, a 500 Megawatt combined cycle generating plant to be built in Astoria, Queens, (2) Calpine Corporation’s Wawayanda Energy Center, a 540 megawatt plant planned for Orange County, and (3) a 580 megawatt plant to be built by Brookhaven Energy, L.P. in Brookhaven, Long Island. • NYSERDA is negotiating contracts to build 315 megawatts of new wind energy facilities in New York State. • As part of the New York Energy SmartK program, NYSERDA is undertaking two major initiatives that promote green energy. <ul style="list-style-type: none"> – The Green Market Development Program. Competitively selected retail electric providers conduct market research and develop promising options and concepts for green power marketing. – The Green Marketing Program. Community Energy, Inc. is partnering with NYSEG to provide green energy in the utility’s service territory. Introduced in August 2002, the program now provides green energy to 1,200 customers. NYSERDA anticipates the involvement of at least three additional businesses before the end of 2003. • New York Power Authority (NYPA) and Long Island Power Authority (LIPA) has issued solicitations for a total of 150 megawatts of renewably generated power. • NYSERDA is exploring several innovative electricity generating technologies (see 3.A.5.) including liquified natural gas, wood chips, and methanol. In addition, significant work is going forward with distributed generation (DG) and Combined Heat and Power (CHP) applications and technologies (see 3.B.2.).
1.E.	<p>The State will continue its efforts to reduce traffic congestion and delays and increase energy efficiency in transportation through a complement of actions that include supporting public transit, transportation management, intelligent transportation systems, and capital construction.</p>	<ul style="list-style-type: none"> • In the update of the three-year federal transportation improvement programs (TIPS), New York State Department of Transportation is working with local partners to incorporate projects consistent with the State Energy Plan.
1.E.1.	<p>The State will work to ensure that transportation planning and construction is compatible with current and planned community development.</p>	<ul style="list-style-type: none"> • See 1.E.

Appendix A: New York State Energy Plan 2002 Tracking Matrix

No.	State Energy Plan Recommendation	Progress to Date
1.E.2.	The State supports expanding intermodal freight capabilities as a means to reduce transportation sector energy use.	<ul style="list-style-type: none"> • See 1.E.
1.E.3.	The State’s emphasis on maintaining its existing transportation infrastructure through capital construction programs will be continued.	<ul style="list-style-type: none"> • See 1.E.
1.E.4.	The State will work more closely with utility companies to better identify and, if possible, design project work around utility facilities . The State will work in partnership with municipal governments to accomplish this objective for municipal projects.	<ul style="list-style-type: none"> • New York State Department of Transportation and the utility industry have begun an executive level partnering effort to review and revise guidelines. As a result, the parties will work more closely during the design phase, better identify locations of existing utilities, and design work around them, where possible. A number of coordination issues geared to reducing costs and delays for the parties are under discussion.
<p>Policy Objective 2. Stimulating sustainable economic growth, technological innovation, and job growth in the State’s energy and transportation sectors through competitive market development and government support.</p>		
2.A.	The Energy Planning Board recommends reauthorization of Public Service Law Article X , scheduled to expire on January 1, 2003, relating to the siting of new major electric generating facilities.	<ul style="list-style-type: none"> • Several legislative proposals have passed the Senate and Assembly but consensus has not materialized. The legislature is expected to again address Article X reauthorization during the 2003 legislative session.
2.B.	The Energy Planning Board recommends reauthorization of Article 6 of the Energy Law , for statewide energy planning, scheduled to expire on January 1, 2003. Modifications should include reducing the forecasting period for energy demand and prices from 20 years to 10 years and changing statutory language to reflect changes in the electricity industry.	<ul style="list-style-type: none"> • The legislature is expected to address Article 6 reauthorization during the 2003 legislative session.
2.B.1.	With respect to the reauthorization of Article 6, the Energy Planning Board should meet annually to coordinate development and implementation of energy-related strategies and policies, receive reports from the agencies’ staffs on the compliance of major energy suppliers with its information filing requirements, and receive summary reports on the information filed.	

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No.	State Energy Plan Recommendation	Progress to Date
2.B.2.	With respect to the reauthorization of Article 6, the information filing regulations of the Energy Planning Board should be modified to recognize new entrants into the energy marketplace and the need for pertinent energy-related information and data.	<ul style="list-style-type: none"> • See 2.B.
2.C.	The State supports working expeditiously toward establishing a regional market in the northeastern portion of the country.	<ul style="list-style-type: none"> • The Independent System Operator for New England (ISO-NE) and the NYISO filed a joint proposal to the Federal Energy Regulatory Commission (FERC) in August 2001 to create a regional transmission organization. Following issuance of FERC’s Standard Market Design (SMD), the NYISO and ISO-NE withdrew the proposal to focus on further developments of a northeast SMD. • The State continues to advocate for a larger regional market. DPS staff is actively engaged in the SMD process.
2.C.1.	The State will continue to participate in negotiations to bring about a larger, regional common market in order to ensure the incorporation of best practices of the New York Independent System Operator (NYISO) and fair representation by market participants, including affected state governments, within the common market governance structure.	
2.C.2.	Any system developed for merging the NYISO into a larger market must be designed to incorporate appropriate State and local reliability requirements and ensure that short-term economic pressures do not adversely affect the reliable operation of New York’s integrated electric system. In addition, any future system must allow full participation of demand management resources in the competitive procurement process.	
2.D.	The State will move expeditiously to a fully-competitive retail electricity marketplace while maintaining appropriate customer service protections.	<ul style="list-style-type: none"> • The PSC has an ongoing proceeding to determine many of the remaining issues associated with a competitive retail market and the proper roles of the parties, such as the provider of last resort responsibility. This proceeding includes unbundling Case 00-M-0504, currently before the PSC, which addresses unbundling costs for services. The utilities have filed embedded cost of service (ECOS) studies, and hearings have been scheduled, beginning with Con Edison and NYSEG in November 2002 and extending through 2004 for the other utilities. • NYSEG’s unbundling mechanism was approved by the PSC on November 20, 2002. Full unbundling for NYSEG customers will occur over the next three years.
2.D.1.	The State supports the unbundling of electricity services and implementing statewide competitive services for metering, billing, and other services for which competition has the potential to lower costs and improve service quality.	

No.	State Energy Plan Recommendation	Progress to Date
2.D.2.	<p>The State will stimulate technological and institutional solutions that promote price responsive load management and load control technologies for all customer classes as appropriate, paying particular attention to the multifamily residential sector throughout New York State.</p> <p>The State supports the use of interval meters, where appropriate, to enable customers to respond to real-time electricity prices.</p>	<ul style="list-style-type: none"> • NYSERDA developed the Peak Load Reduction Program (PLRP) to promote price responsive load management. Direct load controls, real-time pricing (RTP), and time of use (TOU) rate options are strongly promoted. In addition the PLRP pays for 70 percent of project costs to install interval meters which will help customers to respond to TOU and RTP. • Through the Comprehensive Energy Management (CEM) program, NYSERDA has approved the installation of over 37,000 interval meters in 300 multifamily buildings. Using these meters, building owners, operators, and tenants will be able to take advantage of variable price signals from utilities to lower energy costs.
2.E.	<p>The State, in coordinating rebuilding efforts in lower Manhattan with private developers following the terrorist attacks of September 11, 2001, must ensure that these efforts maximize the use of energy efficient and environmentally sound transportation services and building design and construction practices to reduce energy use and costs, and emissions.</p>	<ul style="list-style-type: none"> • The New York Energy SmartSM Loan Fund introduced enhanced incentives for the “Liberty Zone,” expanding the list of eligible improvements, increasing the interest buy-down to 6.5 percent, and increasing the project cap to \$1.5 million. • NYSERDA’s ENERGY STAR® Labeled Homes Program has been expanded into New York City. • An allocation of the final 38,000 kilowatts (of the original 80,000 kilowatts) of New York Power Authority (NYPA) power was made available at reduced cost to displaced World Trade Center tenants and other Liberty Zone enterprises in August 2002. • As part of the first rebuilding effort in lower Manhattan, the design of World Trade Center 7 will conform to the U.S. Green Buildings Council LEED™ rating for the core and shell.
2.F.	<p>The State will continue to strive to reduce energy costs for all New Yorkers with the expectation of narrowing the disparities between New York’s costs and costs in other states and regions of the country.</p>	<ul style="list-style-type: none"> • As of May 2002, energy costs for New Yorkers were declining relative to the United States as a whole and other regions of the country. • Phase Five of the Power for Jobs program authorized making 183 megawatts of electricity available at reduced cost to new and continuing Power-for-Jobs employers in August 2002. • Recent action to freeze or reduce rates for gas distribution service include: <ul style="list-style-type: none"> – NYSEG. In November 2002 the rates for gas distribution (delivery) service were frozen through December 2008. NYSEG was also allowed to terminate its cap on the total customer price, including commodity costs replacing it with a mechanism to flow through the actual market price of gas. This will increase customer bills, but will put NYSEG on par with other utilities.

No.	State Energy Plan Recommendation	Progress to Date
2.F. (Con'd)		<ul style="list-style-type: none"> - Con Edison. In April 2002, gas distribution rates were reduced by \$25 million for three years (through September 2004), effective May 1, 2002. - In late 2001, gas rates for Niagara Mohawk and Central Hudson were frozen for three years through December 2004. Rates for National Fuel were reduced by \$19.1 million in the first year of the agreement and by \$6.5 million in the second and third years. - Petitions for changes in gas rates for Rochester Gas & Electric, Orange & Rockland Utilities, and St. Lawrence Gas Company are awaiting PSC action.
<p>Policy Objective 3. Increasing energy diversity in all sectors of the State's economy through greater use of energy efficiency technologies and alternative energy resources, including renewable-based energy.</p>		
3.A.	<p>The State supports significantly increasing energy resource diversity in electricity generation and transportation through increased reliance on indigenous, renewable, energy efficiency, and demand management resources.</p>	<ul style="list-style-type: none"> • See 1.D.
3.A.1.	<p>The State adopts the goal of reducing statewide primary energy use in 2010 to a level that is 25 percent below 1990 energy use per unit of Gross State Product (GSP).</p> <p>The State adopts the goal of increasing the share of renewable energy as a percentage of primary energy use 50 percent by 2020, up from 10 percent in 2000 to 15 percent in 2020.</p>	<ul style="list-style-type: none"> • A major portion of NYSERDA's system benefit charge funded New York Energy SmartK programs and statutory research and development programs focus on reducing statewide primary energy use through energy efficiency. • DOT has convened an internal State Energy Plan Implementation Group (Group) chaired by the Environmental Analysis Bureau's Air Quality Section. The Group will develop recommendations to the DOT Executive Policy Committee. These recommendations will include ways to include energy and greenhouse gas reductions in decision making and tracking criteria for program development and project selection. • Governor Pataki announced \$17 million in funding for five wind farms that will provide 315 megawatts of new capacity. In July 2002, he signed legislation to assist wind generation facilities in Lewis County. • As a result of actions during the 2002 legislative session, localities and school districts are allowed to accept payment in lieu of taxes on wind and solar energy systems.

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No.	State Energy Plan Recommendation	Progress to Date
3.A.1.a.	<p>The State should competitively solicit 60 to 120 megawatts of renewable electricity generation to meet the requirement of the Governor’s Executive Order No. 111, which requires up to 10 percent of State facilities’ electricity be provided from renewable resources by 2005 and 20 percent by 2010.</p>	<ul style="list-style-type: none"> The first annual report on Executive Order No. 111 will be published by NYSERDA in early 2003. The agencies’ preliminary plans to competitively solicit renewable energy by 2005 and 2010 will be presented. NYPA will facilitate the procurement of renewable energy with assistance from the New York State Office of General Services.
3.A.1.b.	<p>The New York Power Authority should competitively solicit bids for long-term contracts for the purchase of 100 megawatts of electricity capacity from renewable energy resources.</p> <p>New York Power Authority should increase its annual investment in energy efficiency by 25 percent and continue to cooperate with NYSERDA and LIPA in program offerings and delivery.</p>	<ul style="list-style-type: none"> NYPA issued a solicitation for 50 megawatts of electric power from current and new wind projects for ten to fifteen years. Bids are due on January 31, 2003, with project selection anticipated by February 28, 2003, and power purchases scheduled to begin on January 1, 2005.
3.A.1.c.	<p>The Long Island Power Authority (LIPA) should competitively solicit bids for long-term contracts for the purchase of 100 Megawatts of electricity capacity from renewable energy resources.</p> <p>LIPA should increase its annual investment in energy efficiency by 25 percent and continue to cooperate with NYSERDA and the New York Power Authority in program offerings and delivery.</p>	<ul style="list-style-type: none"> Long Island Power Authority (LIPA) solicited 100 megawatts of electricity from off-shore wind turbines for Long Island’s power grid.
3.A.2.	<p>NYSERDA will examine and report on the feasibility of establishing a statewide renewable portfolio standard (RPS) for electricity generation, assess the economic impacts of an RPS, and determine whether and how an RPS might be harmonized with a restructured and competitive electricity market and the goals from planned State actions to promote renewable energy development.</p>	<ul style="list-style-type: none"> NYSERDA and DPS staffs are conducting an analysis of the implications of an RPS for the State.

No.	State Energy Plan Recommendation	Progress to Date
3.A.3.	<p>The State encourages greater use of indigenous fuels and renewable-based electricity generation by pursuing appropriate regulatory reform initiatives, wider application of net-metering programs where appropriate, continuing review of interconnection requirements, consolidating and enhancing tax incentives, and supporting development of a renewable fuels industry in New York.</p>	<ul style="list-style-type: none"> • Legislation (Chap. 515) was signed in September 2002 (1) to expand the net metering statute (Public Service Law j-66) to include farm waste generation systems not more than 400 kilowatts, (2) to authorize LIPA to provide for interconnection of farm waste electric generating equipment, and (3) to provide real property tax exemptions resulting from any increase in value resulting from such systems for 15 years. • New York State’s Environmental Disclosure Program has been underway since January 2002. All electric providers must inform their customers of the fuel source and emissions associated with the generating sources from which the provider obtains electricity. Providers must distribute the labels to customers at least once in each six month period. • The PSC approved a rate and restructuring Joint Proposal for National Fuel that includes a provision that allows for greater use of indigenous natural gas. Previously, National Fuel would only allow five percent of indigenous gas transported by marketers to be considered “firm” for reliability purposes. Based on a study of its system, the Joint Proposal increases the amount to 50 percent of indigenous natural gas that will be considered firm. • As mentioned in 1.B. above, the PSC approved the construction of pipeline in Schuyler and Chemung Counties to permit the delivery of indigenous gas from the Trenton/Black River formation into NYSEG's transmission and storage facilities. • As an outcome of the merger of Niagara Mohawk and National Grid, Niagara Mohawk will purchase renewably generated electricity for those customers willing to pay a price premium. Within two months of the program’s introduction in September 2002, over 3,000 customers had signed up to purchase green energy. • The standard interconnection requirements (SIP) were modified in November by the PSC to facilitate such interconnections.

No.	State Energy Plan Recommendation	Progress to Date
3.A.4.	<p>The State supports expanding biofuels research and development activities with the goal of creating a self-sustaining private sector biofuels industry in the State within the next 5 to 10 years.</p> <p>The State will develop a specific plan for producing, refining, and marketing biomass fuels derived from waste, soybean, and corn oils, and from paper sludge, municipal solid waste, and other cellulose sources, working in cooperation with other states.</p> <p>The State supports the commercialization of biofuels technology and use of biofuels as vehicle fuel, heating fuel, emergency electricity generation fuel, and in marine applications.</p>	<ul style="list-style-type: none"> • NYSERDA, in partnership with NOCO Energy Corp., announced plans to develop an ethanol fueling network in western New York. Other partners include U.S. DOE, the U.S. Postal Service, and United Parcel Service. • NYSERDA provided over \$200,000 for a pilot program to demonstrate use of biodiesel fuel (B20) for transit buses, school buses, and municipal heavy-duty vehicles in Western New York. • NYSERDA made \$250,000 available for biodiesel manufacturing research and design and \$200,000 to explore the potential uses and production technologies for biodiesel. • NYSERDA joined with Electrotek Concepts in a project for Verizon to explore a role for biodiesel in backup generators.
3.A.5.	<p>The State supports research, demonstration, and commercialization of advanced electricity generating technologies and encourages the retrofit or repowering of existing generating facilities in the State to maintain the State’s energy diversity.</p>	<ul style="list-style-type: none"> • General Electric Co., U.S. DOE, and NYSERDA initiated a three-year \$26 million project to design and develop a high-temperature superconducting generator that can be used in new and retrofit applications. • NYSERDA has supported the demonstration of wood chip cofiring in coal power plants, most recently at the Dunkirk Station in western New York. • Work has been done with NRG Energy in New York City to explore the possibility of converting gas turbine peaking plants, now firing distillate oil, to convert to methanol. • Explorations continue regarding the use of liquified natural gas for small power plants in areas that have transmission constraints, such as the Lake Placid area.
3.B.	<p>The State supports the development and use of distributed generation (DG) and combined heat and power (CHP) technologies at customer sites, with the goal of becoming a national leader in the deployment of clean distributed generation technology. Primary focus should be on applications where such technologies can be shown to reduce energy costs, improve electricity system reliability, and reduce harmful pollutant emissions.</p>	<ul style="list-style-type: none"> • NYSERDA committed \$24 million for 45 CHP systems that will produce 35 megawatts of new electric generation. In addition, \$4 million was committed for eleven projects to develop new distributed generation technologies, which include pilot testing of laboratory-scale prototypes and other innovative products and equipment. In all, the 56 projects were able to attract \$96 million in leveraged investment in DG and CHP technologies.

Appendix A: New York State Energy Plan 2002 Tracking Matrix

No.	State Energy Plan Recommendation	Progress to Date
3.B.1.	The State should continue its research and development support for DG and CHP technologies and applications, supporting, in particular, clean and renewable energy-based DG and CHP technologies.	<ul style="list-style-type: none"> • NYSERDA awarded the Town of Perry over \$833,000 for anaerobic digestion systems for three of its largest dairy farms. The systems will generate more than 630 kilowatts of electricity and heat for heating water, space heating, and drying compost.
3.B.2.	The State should take all reasonable steps necessary to facilitate the interconnection of DG and CHP resources into the electricity system and increase the use of DG and CHP resources in the State.	<ul style="list-style-type: none"> • The Public Service Commission and distribution utilities are in the first year of a three-year pilot program to develop policies and procedures for integrating distributed generation (DG) into the utilities' distribution system planning process. Utilities will be required to solicit proposals and enter into contracts with owners of DG projects. During the summer of 2002, three utilities issued RFPs for a total of six projects. Ultimately, the utilities will enter into 26 separate agreements. • The PSC's Standardized Interconnection Requirements (SIR) were revised in October 2002, streamlining the application process to reduce the time to complete interconnection. A clause added to the SIR prohibits the imposition of fees for study reviews on applicants with projects rated at 15 KVA or less. • Several units, including the first packaged cogeneration module, were added to the Type Tested and Approved Equipment list.
3.B.3.	The State should offer investment tax credits to spur private sector investment in environmentally-sound and cost-effective DG and CHP technologies.	<ul style="list-style-type: none"> • Efforts are ongoing, but no significant progress can be reported at this time.
3.C.	The State supports fuel neutrality in its support for alternative-fueled vehicle technology . The New York Alternate Fuels Tax Credit program, scheduled to expire on February 28, 2003, should be extended and consideration given to enhancing it by including all types of alternative- fueled vehicles. Incentives should also be considered to support the development of an alternative fuels infrastructure in New York.	<ul style="list-style-type: none"> • The New York Alternate Fuels Tax Credit Program was extended through 2004.

No.	State Energy Plan Recommendation	Progress to Date
3.D.	The State supports federal surface transportation legislation that leads to more energy-efficient transportation. Specific elements should include increased federal funding for transit, retention of the Congestion Mitigation and Air Quality program, continued funding for intelligent transportation systems and transportation systems operations, and modification of the Federal Transportation Equity Act for the 21st Century (TEA-21) programs to improve rail service.	<ul style="list-style-type: none"> TEA-21 expires on September 30, 2003. Specific legislative proposals, consistent with this recommendation, are being developed.
3.E.	The State encourages the Federal government to adopt new corporate average fuel economy (CAFE) standards for vehicles to address vehicle energy efficiency in a way that protects driver and passenger safety.	<ul style="list-style-type: none"> Efforts are ongoing, but no significant progress can be reported at this time.
Policy Objective 4. Promoting and achieving a cleaner and healthier environment.		
4.A.	The State should continue to develop and implement strategies to reduce environmental impacts from stationary sources of pollution.	<ul style="list-style-type: none"> Efforts are ongoing, but no significant progress can be reported at this time.
4.A.1.	Work with industry to promulgate emission standards for distributed generation.	<ul style="list-style-type: none"> DEC has begun steps that will culminate in a rule addressing emission standards for distributed generation (DG) and combined heat and power (CHP) projects. Among the parties involved with the rulemaking are NYSERDA, the PSC, Pace Energy Project, energy manufacturing associations, emissions equipment and microturbine manufacturers, independent power producer organizations, and numerous other interested parties and industry stakeholders. The rule is expected to be finalized by spring 2004.
4.A.2.	Implement the Governor's Acid Deposition Reduction Program (ADRP) , which is expected to significantly reduce GHG emissions and the acid rain precursors SO ₂ and NO _x .	<ul style="list-style-type: none"> The draft regulation for the ADRP was developed by DEC and published for public comment. The comment period is over and comments are being reviewed by DEC staff, with the assistance of NYSERDA and DPS staff. A final version of the regulation is under development by DEC staff.
4.A.3.	Provide expedited permitting procedures to encourage siting of electric generation facilities that minimize aquatic and air quality impacts.	<ul style="list-style-type: none"> Among the pending Article X legislative proposals is a Governor's program bill that would allow a faster certification process for repowering proposals that have overall environmental benefits and no community opposition.

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No.	State Energy Plan Recommendation	Progress to Date
4.A.4.	Work with federal government to develop national strategies to reduce multi-pollutant emissions from electric generating facilities.	<ul style="list-style-type: none"> • Efforts are ongoing, but no significant progress can be reported at this time.
4.A.5.	Use System Benefit Charge funding to promote the development of clean energy generation technologies.	<ul style="list-style-type: none"> • See 3.A.5.
4.B.	The State should continue to develop and implement innovative strategies to reduce environmental impacts from mobile sources of pollution.	<ul style="list-style-type: none"> • See 3.A.1.
4.B.1.	Work with automobile and truck manufacturers to develop new technologies to reduce emissions from such vehicles, and to promote the introduction of such technologies into the marketplace.	
4.B.2.	Promote the introduction of clean fuels, including renewables, low-sulfur diesel, and other alternative fuels by purchasing vehicles that use such fuels for use in the State fleet and developing incentives to encourage their use in the private sector.	
4.C.	The State should proceed to phase out the use of methyl tertiary butyl ether (MTBE) as an oxygenate additive in motor gasoline as required by State law. At the same time, the State will seek Federal relief from the oxygenate requirement. The State will begin supporting infrastructure development for an indigenous and renewable-based substitute for MTBE in the event that relief is not provided. The State should recommend strategies for building and supporting such an infrastructure and industry in New York.	<ul style="list-style-type: none"> • The State is expected to file a request for a waiver of the oxygenate mandate with the U.S. EPA in late December 2002 or early January 2003. The waiver request will cite (1) the lack of need for an oxygenate in New York and (2) myriad concerns with the impacts of ethanol.

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No.	State Energy Plan Recommendation	Progress to Date
4.D.	<ul style="list-style-type: none"> The State should lead the nation in taking actions to reduce greenhouse gas emissions, stressing the aggressive implementation of existing and development of new technologies and strategies that would significantly reduce emissions. The State should build upon its successes to date in promoting energy efficiency and renewable energy technologies and transportation strategies, that have helped New York become the most energy-efficient state in the continental U.S., and a significant developer of renewable energy, which already accounts for 15 percent to 18 percent of the State’s electricity generation and 10 percent of primary energy use. The State will continue to evaluate the economics and environmental benefits of the recommendations of the Governor’s Greenhouse Gas Task Force. 	<ul style="list-style-type: none"> See 3.A.1. The United States Department of Transportation Center for Climate Change and Environmental Excellence at the American Association of State Highway and Transportation Officials (AASHTO) and DOT have undertaken a project entitled <i>Development and Implementation of the New York State Energy Plan</i>. The project will include qualitative and quantitative assessments of the State Energy Plan. The goals of the project are to (1) develop a “best practices” guide for states interested in exploring the benefits of integrating energy, transportation, and air quality planning to reduce greenhouse gases in the transportation sector, (2) help states integrate transportation, energy, and air quality planning strategies, and (3) support the federal government’s climate change strategy.
4.D.1.	Commit to a statewide goal of reducing greenhouse gas (GHG) emissions 5 percent below 1990 levels by 2010, and 10 percent below 1990 levels by 2020.	<ul style="list-style-type: none"> Efforts are ongoing, but no significant progress can be reported at this time.
4.D.2.	Develop a GHG emission registry program for registering baseline GHG emissions and emission reductions from actions implemented at facilities.	<ul style="list-style-type: none"> Efforts are ongoing, but no significant progress can be reported at this time.
4.D.3.	Emphasize the greenhouse gas emission reduction potential, most notably of carbon dioxide (CO₂) , as a criterion in developing new program initiatives in the State’s public benefits programs.	<ul style="list-style-type: none"> The alternative fuel vehicle (AFV) tax credits were extended until 2003 and included a specific tax credit of \$2,000 for hybrid-electric vehicles. Greenhouse gas reduction potential has been added as a selection criterion for NYSERDA’s AFV deployment programs.
4.D.4.	Expand the State’s efforts to improve the efficiency of electricity generation and encourage use of indigenous and renewable energy resources , including solar, wind, waste methane, geothermal, sustainable biomass, combined heat and power, clean and efficient distributed generation.	<ul style="list-style-type: none"> Efforts are ongoing, but no significant progress can be reported at this time.

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No.	State Energy Plan Recommendation	Progress to Date
4.D.5.	Adopt a specific plan to develop an indigenous biofuels industry in New York to produce, refine, and market transportation and other fuels from indigenous biomass resources.	<ul style="list-style-type: none"> • See 3.A.4.
4.D.6.	Develop a program that allows businesses to enter into voluntary agreements to meet certain energy efficiency targets and reduce greenhouse gas emissions . To assist businesses in meeting such voluntary agreements, the State should offer technical assistance, public recognition, expedited regulatory permit review, and financial incentives, as appropriate or necessary.	<ul style="list-style-type: none"> • Through various New York Energy SmartK programs, NYSERDA provides cost-shared technical assistance to businesses to reduce their building operating costs. Over 800 businesses have been provided assistance in the last three years alone.
4.D.7.	Redirect transportation funding toward energy-efficient transportation alternatives , including public transportation, walking, and bicycling, and provide incentives to encourage greater use of related alternatives that improve transportation efficiency.	<ul style="list-style-type: none"> • See 3.A.1., 1.E.
4.D.8.	Include in the State transportation planning and State Environmental Quality Review Act (SEQRA) related processes, consideration of CO₂ production and mitigation strategies , as appropriate.	<ul style="list-style-type: none"> • See 3.A.1.
4.D.9.	Target open space funding to prevent suburban sprawl, promote Quality Communities, reduce vehicle miles traveled, and support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions.	<ul style="list-style-type: none"> • See 3.A.1., 1.E.
4.D.10.	Support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions , such as Commuter Choice, Ozone Action Days, diesel vehicle retrofits, improved traffic signal coordination with light emitting diode (LED) replacement technology, transportation system management, and other similar actions.	<ul style="list-style-type: none"> • See 3.A.1., 1.E.

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No.	State Energy Plan Recommendation	Progress to Date
4.D.11.	<p>Encourage low-cost, passive building efficiency measures, such as white roofs, passive solar design, and improved foundation membranes, and incorporate such measures in the State’s building construction codes.</p> <p>In addition, the State should support local building and development projects that include funding for open space conservation and urban forestry and that reduce the need for air-conditioning in urban “heat islands.”</p>	<ul style="list-style-type: none"> • Efforts are ongoing, but no significant progress can be reported at this time.
4.D.12.	<p>Expand research, development, and demonstration of energy and GHG-efficient vehicle technologies, add GHG goals to vehicle tax credits and incentives, and coordinate with other states to encourage improvements in vehicle fuel economy.</p>	<ul style="list-style-type: none"> • See 4.D.3.
4.D.13.	<p>Working with regional and local planning organizations, analyze and quantify the energy use and air pollution emissions expected to result from transportation plans and programs.</p>	<ul style="list-style-type: none"> • See 4.D.
4.D.14	<p>Support the design and construction of energy-efficient and environmentally-friendly “green buildings” through financial incentives, technical assistance, and related program initiatives</p>	<ul style="list-style-type: none"> • Results to date indicate that the energy efficiency of buildings studied can exceed the requirements of the New York State Energy Code by an average of 32 percent, while reducing annual carbon dioxide emissions by more than 22,000 tons. Peak demand reductions in green buildings average 40 percent with an increase of less than 1 percent in construction costs. Energy-efficient measures can reduce operating costs by \$3.5 million per year. • NYSERDA’s ENERGY STAR® Labeled Homes Program provides incentives to over 500 new home builders and owners each year. • NYSERDA’s Green Buildings Program supplied technical and financial assistance in the development of the New York City Department of Design and Construction’s High Performance Building Guidelines and Battery Park City Authority’s Residential Environmental Guidelines.

No.	State Energy Plan Recommendation	Progress to Date
4.D.14. (Con'd)		<ul style="list-style-type: none"> • The New York State Green Building Tax Credit provides a state tax credit of \$15.75 per square foot for commercial buildings larger than 20,000 square feet. The tax credit, which was developed by the New York State Department of Environmental Conservation (DEC) and NYSERDA, is administered by DEC. It is available for five years. • NYSERDA's photovoltaic program provides support for the installation of photovoltaics in new construction and for innovative applications in existing buildings and the residential sector. • The U.S. Green Building Council's rating program, LEED™ (Leadership in Energy and Environmental Design), is used to assess the performance of potentially green buildings.
Policy Objective 5. Ensuring fairness, equity, and consumer protections in an increasingly competitive market economy.		
5.A.	The State will examine the feasibility of effectively aligning public policy interests in energy efficiency, combined heat and power, and indigenous and renewable-based electricity generation with the financial interests of distribution utilities and their customers.	<ul style="list-style-type: none"> • DPS will issue a report on the subject, asking for comments and specific issues that might affect statewide application.
5.B.	The State supports expediting efforts to have electricity distribution and customer service prices to consumers reflect the true cost of service and eliminate inter-class and intra-class subsidies, to the extent practicable.	<ul style="list-style-type: none"> • The PSC continues to work toward revised rate designs that provide customers accurate price signals.
5.C.	The State should review the recommendations from the Department of Environmental Conservation's Environmental Justice Advisory Group and implement appropriate recommendations in a timely manner.	<ul style="list-style-type: none"> • Efforts are ongoing, but no significant progress can be reported at this time.

No.	State Energy Plan Recommendation	Progress to Date
5.D.	<p>The State encourages agencies to consider the effectiveness, efficiency, and coordination of their low-income energy assistance programs, including the New York Energy \$martK program, the Weatherization Assistance Program, the Low-Income Home Energy Assistance Program, and other State programs that offer incentives, assistance, and information services to improve the efficiency of energy use and reduce the energy burden of low-income households. The State should consider consolidating programs where opportunities exist to improve administrative efficiency and customer service.</p>	<ul style="list-style-type: none"> The NYSERDA-funded Low Income Forum on Energy (LIFE) Steering Committee is actively working in this area. LIFE brings together representatives of utility companies, energy services companies, community-based organizations, State and local governments, and other stakeholders to coordinate the design and delivery of low-income programs. The Home Energy Assistance Program, the Weatherization Assistance Program, and utility-run programs are included in the coordination effort.