



MEMORANDUM

March 2006

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Charles A. Gargano

FROM: Energy Coordinating Working Group¹

SUBJECT: State Energy Plan - 2005 Annual Report and Activities Update

INTRODUCTION

The *2002 State Energy Plan and Final Environmental Impact Statement* (State Energy Plan) was released by the State Energy Planning Board (Energy Planning Board) in June 2002. In December 2002, February 2004, and February 2005, the staffs of the Energy Planning Board agencies issued memoranda documenting progress in implementing recommendations contained in the State Energy Plan. This report updates the State's activities and progress through December 2005. This memorandum also summarizes the results of NYSERDA's request for the voluntary filing of information by major energy suppliers who were previously required to report information pursuant to the former Article 6 of State Energy Law and Energy Planning Board regulations (Title 9 NYCRR Parts 7840-7863)².

STATE ENERGY PLAN IMPLEMENTATION EFFORTS

The State Energy Plan's energy policy objectives listed in Table 1 remain as relevant and timely today as they were in 2002, especially in light of energy market developments since adoption of the State Energy Plan, recent volatility in energy supplies and prices, and the damage to the U.S. natural gas and

¹ Staffs of the Energy Planning Board agencies comprise the Energy Coordinating Working Group, which was responsible for conducting the 2002 planning proceeding, preparing the State Energy Plan, and receiving information filings from major energy suppliers pursuant to Article 6 of State Energy Law and Board regulations. The Energy Planning Board agencies were the New York State Energy Research and Development Authority, New York State Department of Transportation, New York State Public Service Commission, New York State Department of Economic Development, and New York State Department of Environmental Conservation.

² Although Article 6 expired on January 1, 2003, NYSERDA, acting on behalf of the former Energy Planning Board, requested this information on a voluntary basis in an attempt to maintain an accurate and complete record of information and data in anticipation of the future re-authorization of the planning process. As compliance of major energy suppliers with this voluntary request has waned considerably, NYSERDA will cease to request voluntary compliance.

petroleum infrastructures caused by the hurricanes of 2005.

Since release of the State Energy Plan, the State has made notable progress implementing its recommendations and supporting its policies. The following summarizes progress achieved during the past year. A more complete accounting of the progress made implementing recommendations is provided in the Appendix to this memorandum.

Energy and Infrastructure Security

The State's critical energy infrastructures have undergone continuing review since the September 11, 2001 terrorist attacks in New York City. The New York

State Office of Homeland Security (OHS) and U.S. Department of Energy (U.S. DOE) Office of Energy Assurance have surveyed security threats to the State's electric power grid, local electricity distribution systems, natural gas pipelines, and natural gas distribution companies. OHS continues to actively monitor potential threats to the State's critical infrastructures.

Over this same period, the New York State Department of Public Service (DPS) has been reviewing, evaluating, and inspecting utility security programs. The Office of Utility Security (OUS) at DPS established in 2003, leads this effort. In addition to providing regulatory oversight, OUS works with both regulated utilities and the "lightly regulated" electricity generation facilities to ensure that current threat information is shared as appropriate and security capabilities are kept up to date with technology advances. OUS performs frequent site visits to critical utility facilities to verify security readiness and confirm the continued deployment of enhanced security equipment and measures.

Energy Diversity

Since release of the State Energy Plan, the State has initiated numerous actions to improve energy diversity throughout the State including:

- Investing in energy efficiency through a statewide public benefits program and the energy efficiency programs of the New York Power Authority (NYPA) and Long Island Power Authority (LIPA);
- Implementing a Renewable Portfolio Standard (RPS) program for electricity use;
- Initiating a natural gas efficiency pilot program in Con Edison's service territory; and
- Evaluating the potential gas savings opportunities available statewide from investment in improved energy efficiency.

Table 1: Energy Policy Objectives

The five broad public policy objectives contained in the State Energy Plan are:

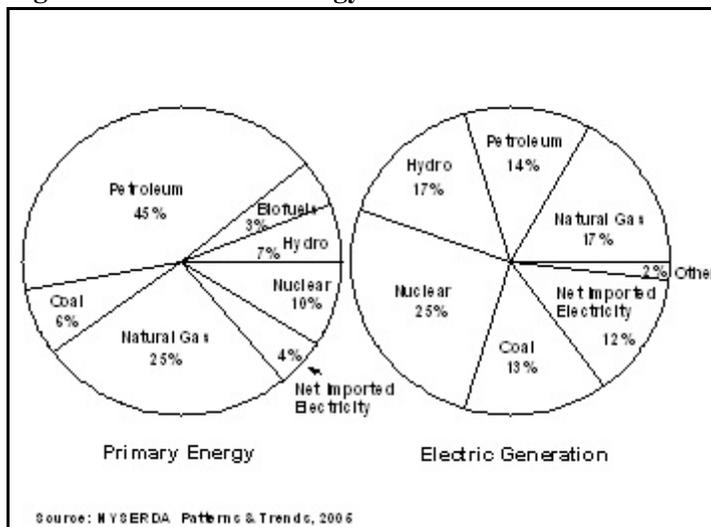
1. Supporting the continued safe, secure, and reliable operation of the State's energy and transportation system infrastructures;
2. Stimulating sustainable economic growth, technological innovation, and job growth in the State's energy and transportation sectors through competitive market development 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; and
5. Ensuring fairness, equity, and consumer protections in an increasingly competitive market economy.

Source: 2002 New York State Energy Plan and Final Environmental Impact Statement.

Highlights of these efforts are summarized below. Figure 1 illustrates the current diversity in New York's primary energy and electricity generation³ in 2004, the latest year for which data are available.

Energy Efficiency and Demand Management. The **New York Energy SmartSM** public benefits program established by the PSC and administered by NYSERDA, is reducing electricity use and peak demand by about 1,700 gigawatt hours per year and 1,000 megawatts, respectively, from measures installed through September 2005, the latest quarter for which data are available. Of the 1,000 megawatts of demand reduction, more than 377 megawatts represent firm reductions from permanently installed energy efficiency measures, and the remaining 623 megawatts represent callable reductions available on short notice from customers participating in day-ahead programs offered by the New York Independent System Operator (NYISO). In addition, more than 400 megawatts of reduction potential will benefit the New York City area. These programs result in annual bill reductions of more than \$230 million annually for New Yorkers, and they continue to provide promising opportunities for energy efficiency and load management resources to participate equally with electricity generation in meeting electricity demand.

Figure 1: New York Energy Fuel Mix 2004



Through year-end 2005, the **New York Energy SmartSM** Program has invested over \$800 million in energy efficiency and demand reduction and generated close to \$2.0 billion in present value benefits. The Program has created over 4,400 jobs and reduced environmental emissions by over 1,500 tons of nitrogen oxide (NO_x), 2,700 tons of sulfur dioxide (SO₂) and 1.2 million tons of carbon dioxide (CO₂). In December 2005, the PSC extended this program for another five-year period to run through June 30, 2011 at a funding level of \$175 million annually.

As of September 2005, through numerous programs offered by NYSERDA, NYPA, and LIPA, the State is saving over 2,900 gigawatt-hours of electricity annually and has reduced peak electricity demand by nearly 1,500 megawatts. Energy efficiency helps meet an increasingly larger share of the State's energy needs and results in substantial reductions in air and water emissions from power plants and reductions in oil and natural gas used in households, businesses, and industry. The creation of NO_x and SO₂ credits from these reductions help support continuing economic growth in New York, where offsets are required for new source permitting.

In March 2005, the PSC approved a new, three-year electric rate plan for Con Edison Company of New York, Inc. To help offset electric load growth expected over the next few years, thus reducing the need for additional central generation and distribution and transmission facilities, the rate plan

³ Although not shown in Figure 2, petroleum products account for more than 98 percent of the energy used in the transportation sector.

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establishes mechanisms to promote energy efficiency, distributed generation and peak load management initiatives where it is cost-effective to do so. The program is designed to have two components: a Con Edison administered program targeting selected energy efficiency and distributed generation initiatives, and a "system-wide" program to be administered by NYSERDA, consisting of broad energy efficiency, distributed generation, and load management initiatives. The goal of each component is to reduce demand by 150 MW.

Renewable Energy. Early in 2003, the PSC instituted an RPS for electricity retailed in the State to be administered by NYSERDA⁴. In support of this effort, NYSERDA and the NYISO jointly evaluated the impact of adding large amounts of wind-generated electricity into the New York power grid. The study was released on March 4, 2005 and concluded that the New York State bulk power system can accommodate up to 3,300 MW of wind capacity with only minimal adjustments to existing operational practices. The PSC established the RPS target of providing 25 percent of the electricity retailed in New York from renewable resources within ten years. Currently, approximately 17 percent of the State's electricity is generated from renewable resources.

NYSERDA's first solicitation for renewable power under the RPS was issued in December 2004. This resulted in the acquisition of over 821,000 megawatt-hours of renewable electricity production at seven facilities, starting in 2006. Four of these electricity generating facilities, representing 98 percent of the total, are wind-powered and the remaining three are re-powered hydro facilities. It is expected that a second solicitation for renewable electricity will be issued in the first half of 2006.

The State Energy Plan has a goal of increasing renewable energy use as a share of statewide primary energy use by 50 percent; up from 10 percent in 2000 to 15% in 2020. Through year-end 2005, renewable energy as a share of primary energy use has remained steady at about 10 percent, in spite of increases in energy use.

Distributed Generation (DG) Technology. The State's **New York Energy SmartSM** Program continues to support research, development, and demonstration of distributed generation technology applications in New York, including combined heat and power (CHP) systems. As of October 2005, the Program was supporting 99 CHP demonstration projects with a potential peak capacity of 102 megawatts. Approximately one-half of this anticipated capacity will be located downstate. To date, the Program has invested over \$50 million in these projects and leveraged another \$220 million in co-funder investment. In addition, the Program is supporting another 50 DG/CHP product development projects.

The New York State Department of Environmental Conservation (DEC) continues to work on the development of regulations governing emissions from distributed generation sources with adoption expected in early 2006.

Bio-fuels. The State has made a concerted effort to introduce bio-fuels through mandated use of bio-diesel fuel in the State vehicle fleet and piloting the use of bio-diesel fuel in transit and school buses and in heavy-duty vehicles. A full complement of research and development is under way to support bio-fuels in the State's transportation, buildings, and electricity generation sectors.

On November 20, 2005, Governor Pataki announced a major initiative to increase the production of bio-fuels in New York State. By Executive Order, all State agencies and public authorities will be required to purchase and use bio-fuels for heating State buildings (at least 5% by 2012) and fueling the

⁴ New York State Public Service Commission, Case No. 03-E-0188, *Order Regarding Retail Renewable Portfolio Standard*, issued and effective September 24, 2004.

State motor vehicle fleet (at least 2% by 2007, increasing to 10% by 2012). NYSERDA will also offer a \$500,000 incentive program for the planning, design, construction, and operation of bio-diesel refining facilities. This initiative is part of a comprehensive plan to develop and expand markets for ethanol and other bio-fuels, and to help reduce our dependence on foreign energy sources. The proposal is also expected to provide a boost to farmers in New York who will see an increased market for feedstocks used in bio-fuel production.

Energy Use Efficiency in New York versus the U.S.

The following graphs compare primary energy consumption for New York State and the United States on per capita and economic output bases. Some notable trends include:

- On average, from 1990 to 2004, New York State's primary energy use per unit of economic output was 47 percent lower than the national figure.
- From 1990 to 1995, New York State primary energy use per GSP was essentially unchanged. However, from 1995 to 2004, New York State decreased its primary energy use per GSP by 21 percent, while U.S. use decreased by 18 percent.
- From 1990 to 2004, New York State's average primary energy use per capita was 38 percent less than the national average.
- From 1995 to 2004, New York State decreased its primary energy use per capita by 2.1 percent, while U.S. use declined by 1.9 percent.

Overall, New York remains significantly more energy efficient than the nation as a whole. New York's

Figure 2: Primary Consumption per Dollar of Gross State Product/Gross Domestic Product

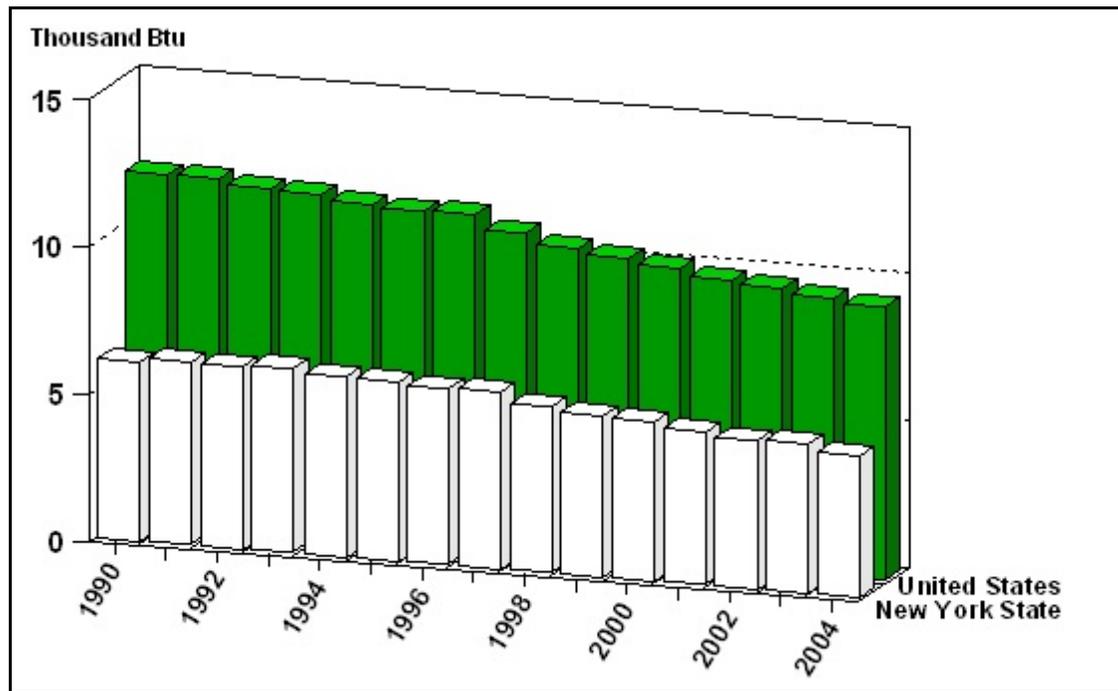
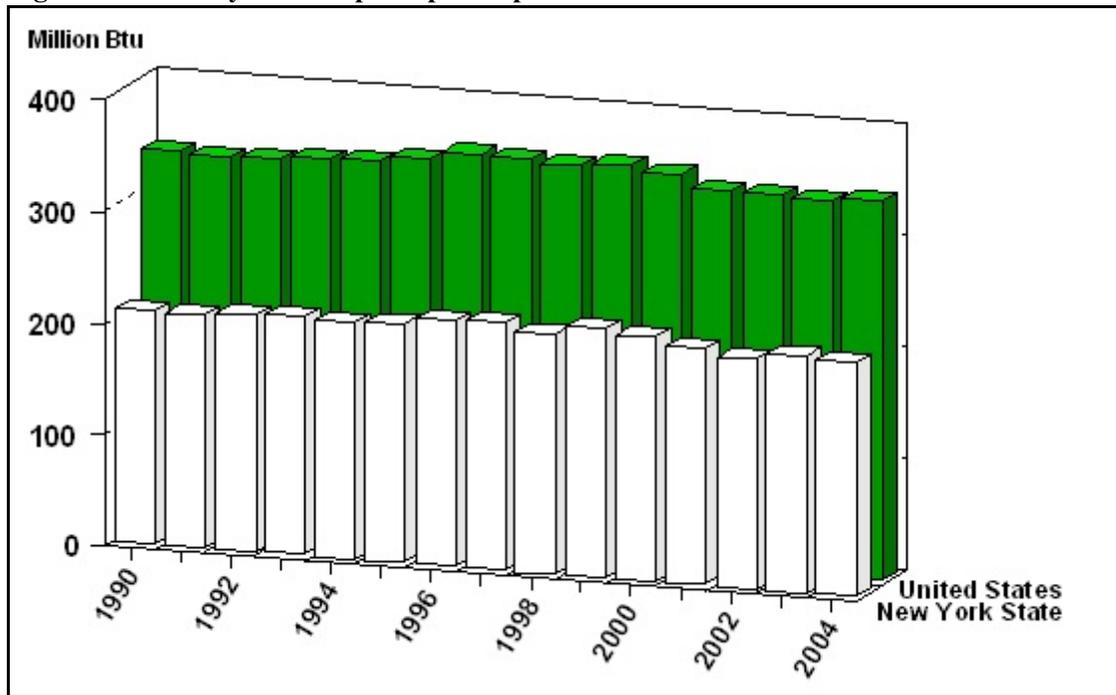


Figure 3: Primary Consumption per Capita



residential sector energy efficiency is improving at a faster rate than the nation as a whole, industrial energy efficiency in the State is slowing relative to the nation.

Transportation

Energy resource diversity in the transportation sector continues to be a major focus of State activities as a means of reducing dependence on imported petroleum, improving environmental quality and promoting economic development. For example, NYSERDA has invested over \$25 million in transportation R&D including \$16 million for compressed natural gas projects, \$6.8 million for hybrid electric vehicle projects and \$3.6 million for fuel cell development. In addition, through its deployment programs, NYSERDA has invested \$27 M in 66 AFV projects, representing over 800 CNG vehicles and 16 CNG refueling stations.

Other New York agencies are also aggressively pursuing AFV options. For example, the NYS Department of Transportation has acquired over 800 CNG vehicles. The Metropolitan Transportation Authority has acquired over 53 CNG vehicles and 325 diesel-hybrid electric vehicles, and has another 500 hybrid-electric vehicles on order. The Office of General Services now offers almost 30 different models of AFVs for purchase under State contract and expects to add 16 more. NYPA supports a variety of clean-fuel vehicle initiatives, including retrofitting up 2000 New York City school buses with improved emission control devices. DEC has established biodiesel fueling capability at its Chenango, Cortland and Broome County facilities. The Thruway Authority fleet includes both CNG and ethanol (E85) vehicles and the Thruway has opened an ethanol fueling facility in Cheektowaga which is available to serve other New York State fleet vehicles. The Governor's Office reports that State vehicle fleet now includes more than 4,600 AFVs.

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In 2005 New York became the first State to lease Honda's new hydrogen powered fuel cell vehicle. The State leased two vehicles for two years as part of a project cosponsored by NYSERDA, Honda, Plug Power and Air Products designed to demonstrate cold-weather performance of this technology and to help develop a hydrogen refueling infrastructure.

In November 2005, the Governor issued an Executive Order which calls for biodiesel to meet 10% of the fuel needs of the State vehicle fleet by 2012. This is in addition to the goal established in Executive Order 111 that 100% of all new State light duty non-emergency vehicle purchases be alternative fuel vehicles by 2010.

On December 30, 2005, the Department of Transportation released for public review and comment the draft statewide master Transportation Plan. It can be accessed at <http://www.dot.state.ny.us/tranplan/mp-intro.html>. This new transportation Master Plan presents a comprehensive, 25-year outlook for transportation in New York State and includes new ideas for managing and operating the State's multi-modal transportation network, encompassing highway, rail, air, water, and pedestrian infrastructures. The Plan is designed to foster the creation of a seamless, customer-friendly transportation network that is predictable, convenient, and accountable to the public. The draft Plan focuses on strategies and policies needed to achieve results in the five priority areas of Mobility and Reliability, Improving Environmental Conditions, Safety, Security, and Economic Competitiveness. The draft Plan identifies major initiatives designed to increase energy efficiency in the transportation sector while reducing emissions of criteria pollutants and greenhouse gases.

Environmental Initiatives

The State Energy Plan has a goal of reducing greenhouse gas (GHG) emissions five percent below 1990 levels by 2010 and 10 percent below 1990 levels by 2020. While the State has undertaken several initiatives to improve energy efficiency, increase the share of renewable energy in the State's fuel mix, and reduce vehicle emissions, the State's GHG emissions have increased seven percent above 1990 levels through year-end 2005. However, because of the State's efforts, GHG emissions in 2005 were one-half of one percent lower than they would have been absent the State's initiatives. Other activities being implemented promise further reductions.

In July 2003, nine northeastern and mid-Atlantic states initiated a collaborative effort to develop a program to reduce carbon dioxide emissions from electricity generating facilities known as the Regional Greenhouse Gas Initiative (RGGI). Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont fully participate in the RGGI effort and Maryland, the District of Columbia, Pennsylvania, the Eastern Canadian Provinces, and New Brunswick are observers in the process. DEC, DPS, NYSERDA, and representatives of the other participating states created a Staff Working Group (SWG) to analyze the possible impacts of a various program features. The SWG developed a proposal which includes the implementation of a multi-state cap-and-trade program with a market-based emissions trading system. The proposal would stabilize electricity sector emissions from 2009 to 2015, followed by a 10% reduction between 2015 and 2019. The relevant agency leaders from all of the participating states reviewed and discussed this proposal.

On December 20, seven of the nine states that participated in the initiative signed a supporting Memorandum of Understanding. Only Massachusetts and Rhode Island declined to sign the MOU. The MOU is an agreement among seven Northeast states to implement a cap-and-trade program to lower carbon dioxide (CO₂) emissions from power plants. This is the first mandatory cap-and-trade program for CO₂ emissions in U.S. history. Under RGGI, emissions of CO₂ from power plants in the region would be capped at current levels, beginning in 2009 - approximately 121 million tons annually - with this cap remaining in place until 2015. The states would then begin reducing emissions incrementally

over a four-year period to achieve a 10 percent reduction by 2019. RGGI calls for at least 25 percent of a state's CO₂ allowances to be auctioned to power plants. The funds generated from these sales must be used for beneficial energy programs dedicated to strategic energy or consumer benefit purposes, which might include greater energy efficiency, support for new clean energy technologies, or funds returned to ratepayers to lower the price effects of RGGI. The agreement allows power plants to use "offsets" - greenhouse gas emission reduction projects from outside the electricity sector - to account for up to 3.3 percent of their overall emissions. Examples of offset projects include: natural gas end-use efficiency, landfill gas recovery, reforestation, and methane capture from farming or natural gas transmission facilities.

Electricity System Reliability and Electricity Prices

Studies conducted by the NYISO, PSC, Federal Energy Regulatory Commission (FERC) and others following the electricity system blackout of August 2003 have assessed the reliability of New York's transmission system and concluded that it remains one of the most reliable, if not the most reliable, system in the world. Nonetheless, the NYISO, PSC and the New York State Reliability Council continue to look at policies, including possible incentives and regulations, to maintain and further improve the reliability of New York's electric system, consistent with the State's energy policy goals.

The Electric System Planning Working Group (ESPWG) was created by the NYISO in response to a FERC request for a regional transmission organization to administer a comprehensive planning process within the region. The ESPWG is composed of market participants from all sectors who work to identify electric system needs in New York. Both NYSERDA and DPS participate in the Working Group. In 2004, the ESPWG developed a reliability planning process which was submitted to and approved by FERC. In 2005, the ESPWG completed its first Reliability Needs Assessment (RNA) under the new process and the RNA was approved by the NYISO Board on December 19, 2005. The RNA identified the need for reliability enhancements in New York State as early as 2008. Work will now begin on soliciting market based responses to the needs while the affected regulated transmission owners analyze possible back up regulated solutions.

New York State's Article X power plant siting law expired on December 31, 2002. The State Energy Plan recommended renewal of the law and the Governor has offered legislation for that purpose. Prior to its expiration, a total of 24 projects representing about 14,900 MW of net electricity generating capacity had applied for Article X Certificates. As of January 1, 2006, 13 projects, totaling about 7,300 MW of net capacity, had obtained such Certificates. Five of those projects, about 2,380 MW of net capacity, are now in commercial operation and one additional 500 MW project is under construction. Two of the projects awarded Certificates, about 1,240 MW of capacity, were subsequently cancelled. Six projects, about 4,000 MW, were cancelled before receiving Certificates and five projects, about 3,600 MW, are still in the application review phase.

New York uses more natural gas and petroleum as a relative percentage of fuels used in electricity generation, at 17 percent and 13 percent, respectively, compared with 13 percent and 3 percent respectively for the U.S. Natural gas and petroleum prices are primarily established in world and national markets and reflect rapidly changing demand and supply conditions. The effect of these rapid changes in market conditions is high volatility in natural gas and petroleum product prices, which in turn creates greater price volatility in New York relative to national average prices. The recent petroleum and natural gas price increases, resulting in part from rising world demand, particularly in China and India, and damage to the U.S. domestic supply chain caused by severe hurricanes, have served to slow New York's progress in closing the gap between New York and U.S. electricity prices. For each natural gas

and petroleum product price increase, the State's price differential increases, as New York is more reliant on these fuels than the U.S.

NYSERDA, on behalf of the PSC, is conducting a study of the State's petroleum infrastructure on Long Island, in the New York City area, and in the Hudson Valley up to Albany. The study, which is nearly complete, will characterize the petroleum infrastructure serving the study area, assess its adequacy and resiliency, and identify needed improvements if the system is to continue operating safely and reliably and continue meeting the needs of both electricity generation and residential heating customers in the future. The study is scheduled to be completed in January 2006.

Governor's Nine Point Energy Action Plan

To help combat the recent significant increases in energy prices brought on by growing world demand and hurricane damage to domestic natural gas and petroleum supplies, and to increase energy efficiency, diversity and security, in September 2005, Governor Pataki issued a 9-point Strategic Energy Action Plan. The 9-point plan includes: (1) home heating tax credits for the elderly; (2) home energy assistance for elderly and low-income households; (3) energy assistance for small businesses and farmers; (4) tax credits for home heating systems upgrades; (5) a sales-tax-free week for Energy Star appliances; (6) tax credits for alternative fuel vehicles; (7) incentives for alternative fuel production; (8) bulk purchasing of electricity by the State; and (9) access to HOV lanes for clean and energy efficient vehicles. These initiatives, and others, are currently being discussed with the Legislature, with the goal of providing short-term price relief and long-term energy independence.

STATE ENERGY PLAN FORECASTS AND CURRENT OUTLOOK

New York's electricity load in gigawatt hours (GWh) in the years beginning with the release of the State Energy Plan and ending in 2005, the latest year for which actual data are available was within 1.6% of the 2002 SEP electricity load forecast. The difference between actual load and the SEP forecast ranged from 1.6% less than the forecast in 2004 to 1.12% greater than the forecast in 2005. Similarly, New York's peak in megawatt (MW) demand over the same period was within 1.8% of the SEP forecast in three of the four years from 2002 through 2005. In 2004, the actual peak was 9.28% below the SEP forecast peak. This difference resulted from an unusually cool summer, which had 9% fewer cooling degree days than a "normal" summer. Tables 2 and 3 respectively present the actual and forecast energy and peak demand for the 2002 to 2005 period.

Table 2: SEP Electricity Load Forecast (gWh) vs. Actual Load

GWh	2002 SEP Forecast	Actual	Percent Difference: Actual from SEP
2002	158,019	158,752	+0.47%
2003	160,480	158,013	-1.54%
2004	162,844	160,211	-1.62%
2005	165,280	167,225	+1.12%

Table 3: SEP Peak Forecast vs. Actual Peak

MW	2002 SEP Forecast	Actual	Percent Difference: Actual from SEP
2002	30,500	30,664	+0.54%
2003	30,984	30,333	-1.82%
2004	31,340	28,433	-9.28%
2005	31,907	32,027	+0.53%

Table 4 compares the most recent NYISO forecast for electrical energy use and peak power demand to the comparable forecasts contained in the four-year-old State Energy Plan forecasts. The table demonstrates that:

- The State Energy Plan’s forecast, both in absolute terms and in relative annual growth rates, remains a reasonable estimate of energy use and peak electricity demand over the next ten years when compared to the much more recent NYISO forecast;
- Electricity use in New York State is expected to grow by just over one percent per year, on average, over the next ten years; and
- Peak electricity demand is likewise expected to grow by just over one percent per year, on average, over the next ten years.

Table 4: Forecast Comparison of New York’s Annual Electricity and Peak Demand with the NYISO’s 2005 “Load and Capacity Data” report forecast.

Year	Energy (GWh)		Peak (MW)	
	NYISO 2005 Forecast	2002 State Energy Plan	NYISO 2005 Forecast	2002 State Energy Plan
2006	166,790	165,280	32,120	32,319
2007	169,400	167,490	32,560	32,786
2008	172,100	169,977	33,050	33,185
2009	174,290	172,404	33,480	33,633
2010	176,340	174,658	33,910	34,031
2011	178,060	176,910	34,280	34,415
2012	179,520	179,031	34,600	34,711
2013	180,710	180,907	34,880	35,147
2014	181,740	182,867	35,120	35,472
2015	182,880	184,677	35,370	35,670
Annual Average Growth Rate	1.1%	1.2%	1.1%	1.1%

MAJOR ENERGY SUPPLIER FILINGS

Prior to the expiration of Article 6 of the Energy Law on January 1, 2003, major energy suppliers in New York were required to file information and data with the Energy Planning Board. Regulations promulgated by the Energy Planning Board identified the specific types of information that major energy suppliers in various categories were required to file.

With the expiration of Article 6, several proposals to continue this effort have been introduced in the State Legislature. In lieu of a legislative mandate, NYSERDA, which had served as the records access and secretariat organization to the Energy Planning Board, has sought voluntary compliance with Energy Planning Board regulations until such time as new energy planning legislation is adopted. It was hoped that such voluntary filings would help maintain a consistent data set for planning and policy purposes.

2005 Response to Requests for Voluntary Filing. In 2003, the call for voluntary filings met with an extremely positive response. In 2004, the response was less enthusiastic than in 2003. In 2005, the response to the request for voluntary filing was minimal and the responses received did not provide adequate information from which to draw meaningful findings. As a result, voluntary compliance with the former filing requirements will no longer be sought. It seems clear to staff that, absent a renewed statutory requirement, collecting useful information from major energy suppliers is a difficult and generally fruitless activity. One notable exception is the NYISO’s annual Load and Capacity Data which provides substantial information on the status of New York’s integrated electricity system. The following is a brief discussion of the level of voluntary responses received.

Electricity. As of November 30, 2005, a total of 41 reports were received from alternative power producers, transmission owners, and municipal electric utilities with information regarding more than

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230 generation units they owned or operated during 2004. Some parties submitted a single filing providing data for all their generation facilities, while others provided separate filings for individual generation stations. The filings represent approximately 47 percent of New York's summer 2004 electricity generation capacity.

In addition, as mentioned above, the NYISO submitted its 2005 *Load and Capacity Data* report, which included extensive information on historical and projected peak load and energy requirements, existing and expected generation capacity, and existing and expected transmission facilities.

Petroleum Products. Under the former Energy Planning Board regulations, major petroleum suppliers and transporters were only required to file reports in even-numbered years. Consequently, such parties were not asked to file voluntary reports in 2005.

Natural Gas. Voluntary reports were received from six of the nine natural gas pipeline operators serving New York State.

Coal. Pursuant to the former Energy Planning Board's regulations, coal suppliers were required to file information only at the specific request of the Chair of the Energy Planning Board. No information was requested of coal suppliers in 2005.

COMPREHENSIVE TRACKING OF STATE ENERGY PLAN IMPLEMENTATION

_____The attached tracking matrix (Appendix A) provides a comprehensive overview through December 2005 of the implementation of State Energy Plan recommendations. The activities identified represent a significant commitment of resources by State government to consumers, security of energy supplies and infrastructures, improved environmental quality, and the fair delivery of services to all New Yorkers.

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.	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.
	<ul style="list-style-type: none"> ▪ Following the terrorist attacks of September 11, 2001, the New York State Department of Public Service (DPS) staff consulted with officials from New York's telephone and energy utilities regarding their security preparedness. In 2002, DPS staff recommended that the utilities retain third-party consultants and experts to evaluate the adequacy of their physical and cyber security arrangements. The evaluations were completed in 2003. ▪ During 2002 and 2003, the United States Department of Energy (U.S. DOE), Office of Energy Assurance, in conjunction with the New York State Office of Public Security (later renamed the New York State Office of Homeland Security), completed a critical infrastructure security assessment for the State. U.S. DOE surveyed the security of the New York power grid, the New York electricity utilities, natural gas pipelines, and natural gas distribution companies, as far as terrorism threats are concerned. The U.S. DOE study team included input from the Energy Planning Board agencies, staff of the national laboratories and other experts, and staff from DPS and the New York State Office of Public Security. The work product has been incorporated into the U.S. Department of Homeland Security's national infrastructure protection program. ▪ In 2002 the Public Service Commission (PSC) ordered the 12 largest energy and telecommunications utilities in New York to undergo comprehensive security audits. In mid-2003, to better address the requirements of security oversight on a continual and permanent basis, the DPS, Office of Utility Security, was established by the PSC. The DPS Office of Utility Security has completed a review of the PSC-ordered utility security audits and follow-up action plans and verified that each utility is following the recommendations made for improvement in physical and cyber aspects of readiness and that each utility is adhering to industry best practices for security or is formulating definitive plans to do so. Although it has been verified that each utility has met or exceeded a prudent level of security preparedness, DPS Office of Utility Security continues to maintain frequent contact with utility security staffs to share current threat information and share information about security technology developments. The DPS Office of Utility Security staff carries out frequent site visits to confirm the continued deployment of enhanced security equipment and the implementation of improved security measures. ▪ In 2006, the DPS Office of Utility Security will increase its level of security oversight of merchant electric generation companies in New York under the "safety and reliability" authority the Commission exercises over those companies. <p>The DPS Office of Utility Security is acting as liaison with energy and telecommunications providers and maintaining continual outreach to assist in addressing ever-increasing demands for security readiness. Beyond its responsibility for enhancing security through its regulatory oversight responsibility, the Office of Utility Security is undertaking a broadly proactive role in strengthening security.</p>

No.	State Energy Plan Recommendation Progress to Date
	<p>Through close coordination and partnership with federal and state security and public safety agencies, the DPS Office of Utility Security is sharing information with affected entities called for by current threat situations. This task includes education, threat awareness briefings, advocacy, technical guidance, and traditional monitoring and inspections with private sector owners of energy and telecommunications assets.</p> <ul style="list-style-type: none"> ▪ In 2003, the New York State Legislature enacted Chapter 403 of the Laws of 2003 requiring that the NYS Office of Homeland Security initiate a review of security measures currently in place to protect the State’s critical energy generation and transmission infrastructure. The review has been completed, and findings are being evaluated by executive policy makers and the legislature. <p>In addition to regulated electric utilities in New York, the DPS Office of Utility Security is working with over 50 companies that operate more than 200 electric power generating plants in New York. These generating companies supply 98 percent of all non-nuclear power in the State and provide 84 percent of the state's electric power requirements. These electric generation providers are in discussions with the DPS on ways to make their systems more secure.</p> <p>During 2005, the emphasis of the DPS Office of Utility Security continued to be on achieving progress in eight priority areas:</p> <ol style="list-style-type: none"> 1. Continuing site inspections of 288 critical utility facilities to verify the implementation of physical security management action plans by the 12 largest regulated utilities. 2. Continuing site visits to regulated utility facilities to verify implementation of cyber security action plan items. 3. Extending site security reviews to regulated utility facilities not covered in the audits. Developing and recommending security enhancements at these facilities. 4. Conducting site security reviews of approximately 200 fossil fuel burning power plants operated by independent merchant power generation companies in the State. 5. Continuing work with utility security directors to monitor their responses as utility security incidents arise. 6. Conducting cross training and providing briefings to security counterparts at nuclear power facilities in New York. 7. Conducting cross training and providing briefings to counterparts at New York State agencies responsible for homeland security, specifically OHS and the State Office of Emergency Management (SEMO). 8. Expanding staff participation in the development of security preparedness practices and policies with national industry associations and regulatory bodies.
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>

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	<ul style="list-style-type: none"> <li data-bbox="297 289 1511 552">▪ 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 Power Authority (Niagara Mohawk) with National Grid New England (National Grid) 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. Electric utilities are developing reliability centered maintenance programs through the use of new metering, testing, and software technologies. <li data-bbox="297 590 1487 720">▪ In 2002, the combined construction budgets of the major local natural gas distribution companies (LDCs) totaled approximately \$490 million. Of this amount, approximately 96 percent was spent on distribution system improvements. In 2003, the total rose to more than \$600 million, of which approximately 90 percent was spent on distribution system improvements. <p data-bbox="342 751 1511 821">In 2004, the combined construction budgets of the major LDCs totaled approximately \$600 million. Of this amount, approximately 90 percent was spent on distribution system improvements.</p> <p data-bbox="342 852 995 884">In 2005, total gas construction budgets were as follows:</p> <table data-bbox="532 898 1008 1213" style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Major Gas LDC</th> <th style="text-align: right;">Budget</th> <th style="text-align: right;">Percent For</th> </tr> </thead> <tbody> <tr> <td>Central Hudson</td> <td style="text-align: right;">\$ 12.9</td> <td style="text-align: right;">96%</td> </tr> <tr> <td>National Fuel Gas</td> <td style="text-align: right;">38</td> <td style="text-align: right;">85%</td> </tr> <tr> <td>Con Edison</td> <td style="text-align: right;">145</td> <td style="text-align: right;">87%</td> </tr> <tr> <td>Orange &</td> <td style="text-align: right;">23</td> <td style="text-align: right;">87%</td> </tr> <tr> <td>NYSEG</td> <td style="text-align: right;">42</td> <td style="text-align: right;">38%</td> </tr> <tr> <td>RG&E</td> <td style="text-align: right;">25</td> <td style="text-align: right;">89%</td> </tr> <tr> <td>National Grid</td> <td style="text-align: right;">45.6</td> <td style="text-align: right;">95%</td> </tr> <tr> <td>KeySpan East</td> <td style="text-align: right;">123</td> <td style="text-align: right;">79%</td> </tr> <tr> <td>KeySpan West</td> <td style="text-align: right;">165</td> <td style="text-align: right;">69%</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">\$ 619.5</td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li data-bbox="297 1251 1511 1787">▪ The PSC intervened with the Federal Energy Regulatory Commission (FERC) in support of pipeline projects to increase natural gas pipeline delivery capacity to New York State. These interventions included support for the Millennium, Iroquois Eastchester, and Islander East projects. The Iroquois Eastchester project was completed and placed in service in February 2004. On August 1, 2005, Millennium filed an application with FERC for permission to build Phase 1 of the Millennium Pipeline from Corning to Ramapo, NY. Also, Empire Pipeline filed an application with FERC on October 10, 2005 for the construction of the Empire Connector pipeline. In addition, the PSC is participating in the pre-application process for the Empire Extension, which is planned to link Phase I of Millennium to Canadian supplies. Algonquin and Iroquois are expected to be filing applications soon for permission to construct the necessary downstream pipeline facilities to move the natural gas delivered by Millennium to the downstate New York market. When all the related applications are filed regarding Millennium’s capacity, FERC will consider the filings in a combined proceeding. The PSC anticipates filing an intervention in support of the related projects at that time. The Islander East project is awaiting a Federal Court decision with respect to its water quality permit before it can commence construction. The Iroquois Eastchester project was completed and placed in service in February 2004. 	Major Gas LDC	Budget	Percent For	Central Hudson	\$ 12.9	96%	National Fuel Gas	38	85%	Con Edison	145	87%	Orange &	23	87%	NYSEG	42	38%	RG&E	25	89%	National Grid	45.6	95%	KeySpan East	123	79%	KeySpan West	165	69%	Total	\$ 619.5	
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	<ul style="list-style-type: none"> <li data-bbox="297 289 1516 688"> <p>▪ The Electric System Planning Working Group (ESPWG) was created by the New York Independent System Operator (NYISO) in response to a FERC request for a regional transmission organization to administer a comprehensive planning process within the region. The ESPWG is composed of market participants from all sectors who work to identify electric system needs in New York. Phase I, the reliability planning phase of the process, was completed by the working group during the summer of 2004 and subsequently approved by FERC. In the fall of 2005, the ESPWG advanced its first Reliability Needs Assessment (RNA), which passed the NYISO Management Committee on November 9, 2005 and was approved by the NYISO Board on December 19, 2005. The RNA showed system needs in New York State as early as 2008. The NYISO filed the proposal on August 20, 2004 and subsequently received FERC approval. The ESPWG has decided to pursue an “informational” approach to economic planning and will continue to work on economic planning issues in Phase II of the process.</p> <li data-bbox="297 722 1516 989"> <p>▪ The New York Power Authority (NYPA) completed final commissioning tests for the Convertible Static Compensator (CSC) at its Marcy substation and placed the equipment into commercial operation in 2004. This advanced transmission enhancement technology has helped to increase the power flow on the statewide power grid by nearly 200,000 kilowatts, including more than 100,000 kilowatts on the heavily used transmission corridor between Utica and Albany. The CSC employs Flexible Alternating Current Transmission Systems (FACTS) which use high-speed, solid-state electronics rather than conventional electromechanical devices to control transmission voltage and power flow.</p> <li data-bbox="297 1022 1516 1188"> <p>▪ NYSERDA and the NYISO jointly sponsored an evaluation of the impact of adding large amounts of wind-generated power into the New York grid. The first phase of the study was completed on January 31, 2004. Phase I included a preliminary screening analysis and included the conclusion that New York should be able to add up to 3,300 MW of wind capacity without significant adverse effects on the planning, operations, and reliability of the bulk power system.</p> <p>A final report was released in March 2005. The final report substantiated the findings in Phase I, subject to certain assumptions. The report examined several potential impacts of adding large amounts of wind capacity in New York, including: (1) wind forecasting uncertainty; (2) operational impacts; and (3) the capacity value of added wind. The report made several recommendations for system planners to ensure that system reliability can be maintained.</p> <li data-bbox="297 1423 1516 1589"> <p>▪ Between June 2001 and December 2004, six electricity transmission projects were approved by the PSC under Article VII of the Public Service Law, the longest being a 58-mile 600-MW line connecting New Jersey and Long Island. Another five proposed projects have filed for Article VII certification and were in various stages of review. These projects range up to 1,000 miles in length and 2,000 MW in transfer capability.</p> <li data-bbox="297 1623 1516 1877"> <p>▪ Under Article VII, in 2005:</p> <ul style="list-style-type: none"> <li data-bbox="345 1671 1516 1770"> <p>▫ 10 miles of 230 kV electric transmission were completed by Flat Rock Wind Power to connect the approximately 330 MW Maple Ridge wind farm (formerly Flat Rock wind farm) to the National Grid electric system in Lewis County.</p> <li data-bbox="345 1803 1516 1877"> <p>▫ 4 miles of 138 kV underground transmission were completed by Con Edison in Westchester County</p>

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	<ul style="list-style-type: none"> ▫ Construction was begun on the Neptune Project in which 58 miles of high voltage direct current (HVDC) lines will be constructed between Long Island and New Jersey. ▫ The PSC approved 8.1 miles of 345 kV transmission proposed by National Grid to transmit electricity from the certified Empire State Newsprint Project in the City of Rensselaer. ▫ More than 10 miles of pipeline were approved and constructed to deliver natural gas from wells drilled in Chemung, Seneca, Steuben, and Schuyler counties. ▪ Two Article X certified electric generation facilities totaling 1,110 MW were completed in 2005, a net increase of 550 MW — Bethlehem Energy Center, owned by PSEG, in Albany County, and East River Repowering, owned by Con Edison, in New York City. Two Article X facilities in Queens, New York, will come on-line in 2006: the Astoria Energy Project with 500 MW, owned by SCS Energy, and the Poletti Station Expansion, also with 500 MW, owned by NYPA. Construction of a second planned 500-MW Astoria Energy Project has been delayed. ▪ In 2005, the PSC approved a joint proposal among Con Edison, DPS staff, and other parties that called for substantial infrastructure improvements over the next three years. Upgrades will include several new substations, replacement of outdated cables, and enhancements to Con Edison’s secondary network system. ▪ See 3.A.3.
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"> ▪ On November 4, 2003, the PSC issued an <i>Order Concerning Interruptible Gas Sales and Transportation Service</i> in case No. 00-G-0996. In that Order, the PSC decided not to change alternate fuel inventory requirements at the time and instead to require local distribution companies (LDCs) to provide prior notice of the occurrence and expected duration of interruptions in gas service and operational flow orders and provide system alerts upstream and downstream of the city gate. Under the Order, LDCs must alert interruptible customers when accumulated gas service interruptions exceed five days of the winter season before February 15. <p>The Order called for a limited study of domestic heating industry infrastructure with respect to the distillate and residual fuels used to serve the interruptible gas market. NYSERDA was invited to manage the study. On October 20, 2004, the PSC issued an <i>Order Approving Expenditures for Petroleum Infrastructure Study</i>. In this Order, the PSC approved the scope of the study and the expenditures required to finance the study and gave NYSERDA authority to assess portions of the expenditures to each LDC in the study area.</p>

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	Work on the study began in November 2004 and a final report is due in early 2006. Following completion of the study, the PSC will determine whether additional actions and requirements are necessary to ensure the adequacy of alternate fuel supplies during periods of interruptions.
1.D.	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. 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.
	<ul style="list-style-type: none"> ▪ As part of the New York Energy \$martSM program NYSERDA is bringing businesses to New York that will sell green power. As of October 31, 2005, NYSERDA programs were supporting the sales activities of three retail green power marketers, which include the participation of various energy services companies. Annualized sales of green power now approach 200 million kilowatt-hours. ▪ Since 2002, certificates were issued by the New York State Board of Electric Generation and the Environment for new highly-energy-efficient power generating plants. : <ul style="list-style-type: none"> ▫ NYPA, Astoria, Queens, adjacent to the Poletti Power Project, 500-MW — expected to come on-line early in January 2006. ▫ Calpine Corporation, Wawayanda Energy Center, 540 MW, Orange County — abandoned in December 2005. ▫ Brookhaven Energy, 580 MW, Brookhaven, Long Island, — permitted but construction has not commenced ▫ PSEG, 750 MW, Albany County — operational in 2005. ▫ Empire State Development Corporation, 505 MW, City of Rensselaer — construction delayed. ▫ Astoria Generating Company, two 500 MW plants, Queens, New York — one plant constructed and operating in 2005, the second placed on hold. ▫ KeySpan, Ravenswood, 250 MW, Huntington, New York — operating in 2005. <p>As of November 2005, TransGas Energy Facility’s 1,100 MW project in Brooklyn, New York, is the last project remaining in the Article X review process.</p> <ul style="list-style-type: none"> ▪ In 2002 and 2003, NYPA and the Long Island Power Authority (LIPA) issued solicitations for a total of 150 MW of renewably generated power. <p>In 2005, LIPA announced a 20 MW wind project at the site of the former Shoreham nuclear plant. A second project for 140 MW of offshore wind southwest of the Robert Moses State Park is expected to be completed by 2008.</p>

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	<ul style="list-style-type: none"> ▪ Through the Governor’s Coordinated Demand Response Working Group (CDRWG), NYPA, LIPA, DPS, and NYSERDA achieved critical peak load reductions of approximately 1,500 MW during the summer of 2003 by implementing energy efficiency and curtailable-load-reduction measures. Of that total, nearly 400 MW of reductions were achieved in New York City. The NYISO’s accounting rules for peak reduction, as defined by the NYISO tariff, are expected to reduce measured customer participation in the LIPA peak reduction program in 2004 and beyond.
	<ul style="list-style-type: none"> ▪ The PSC established an environmental disclosure program that identifies the sources of electricity supplied by utilities and energy services companies and enables consumers to identify and choose renewables and traditional energy supplies. ▪ As an outcome of the merger of Niagara Mohawk and National Grid, Niagara Mohawk agreed to purchase renewably generated electricity (green energy) for those customers willing to pay a price premium. Within two months of the program’s introduction in September 2002, more than 3,000 customers signed up to purchase green energy. Through 2005, more than 492,000 consumers were enrolled. ▪ In June 2003, Con Edison issued a Request for Proposals seeking 125 MW in demand reductions to offset planned reinforcements to its local distribution system. The projects are for reductions in peak load and will have a positive impact on capacity, reduce installed capacity (ICAP) costs and reduce peak energy revenues. The winning bidders have been determined and contracts have been signed. The demandside management (DSM) measures will be phased in, with about two MW in 2005, ramping up to about 47 MW by 2008. ▪ In September 2004, the PSC approved a new gas and steam rate plan for Con Edison that includes a \$5 million natural gas efficiency pilot program and a \$0.2 million gas efficiency study to examine the potential to achieve cost effective gas savings in the Company’s service territory. Both elements are being administered by NYSERDA, using established programs, procedures, and implementation contractors. In June 2005, NYSERDA’s Gas Efficiency Program Plan was approved by the Commission. The Plan allocates program funds 50 percent to low-income gas efficiency programs; 25 percent to other residential gas efficiency programs, including single- and multifamily buildings, and 24 percent to commercial gas efficiency programs. The anticipated annual savings to customers is expected to be more than \$1.1 million and more than 1 million therms. <p>NYSERDA added \$200,000 to expand the gas efficiency study statewide. The Con Edison study is scheduled for completion in February 2006 and the statewide study is scheduled for completion in the spring of 2006.</p>

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	<ul style="list-style-type: none"> ▪ In March 2005, the PSC approved a new, three-year electric rate plan for Con Edison. To help offset electric load growth expected over the next few years, thus reducing the need for additional central generation and distribution and transmission facilities, the rate plan establishes mechanisms to promote energy efficiency and the cost-effective use of distributed generation and peak load management initiatives. This will be achieved through a "targeted" program to be administered by Con Edison, consisting of energy efficiency and distributed generation initiatives, and a "system-wide" program to be administered by NYSERDA, consisting of energy efficiency, distributed generation, and load management initiatives. Each program will endeavor to achieve up to 150 MW of demand-reductions. <p>NYSERDA's action and implementation plans for the system-wide program were submitted in 2005 and are pending action by the DPS.</p>
	<ul style="list-style-type: none"> ▪ On October 8, 2003, the New York State Department of Environmental Conservation (DEC) issued a §401 Water Quality Certification for the R.E. Ginna Nuclear Power Plant as part of RG&E's application for renewal of its federal operating license, which was scheduled to expire in 2009. On May 19, 2004, the Nuclear Regulatory Commission approved the license renewal application for the plant, extending its licensed operating life by 20 years to September 18, 2029. ▪ The current licenses for the Indian Point units expire on September 28, 2013 and December 15, 2015, respectively. The Fitzpatrick unit's license expires on October 17, 2014. The Indian Point Energy Center Units 2 and 3 and the Fitzpatrick Nuclear Station have not filed for life extension license renewals. ▪ New York State is pursuing alternatives to conventional power plants, including distributed generation, combined heat and power systems, liquefied natural gas, wood chips, and methanol. These systems receive support through the State's system benefits charge program, including a \$15-million-a-year program to support combined heat and power technology development and innovative demonstrations. (See Sec. 3.B.3.) ▪ Overall, NYSERDA's New York Energy \$martSM Program is making the State more energy efficient. As of September 2005, more than 1,700 gigawatt-hours of electricity are being saved each year by program participants. ▪ In 2003, the Federal Energy Regulatory Commission issued NYPA a new 50-year license to operate the 900-MW St. Lawrence—FDR hydroelectric power project in Massena, New York. The new license was the result of a multi-year cooperative consultation process involving federal and state agencies, local municipalities, environmental groups, and business and labor representatives. NYPA is also conducting a life extension and modernization program for its St. Lawrence—Franklin D. Roosevelt Project. The \$280 million program, begun in 2000, involves replacing the project's 16 turbine-generators and almost all other power production equipment. Six units have been completed to date, and the program is expected to be completed by 2013.

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	<ul style="list-style-type: none"> ▪ In August 2005, NYPA submitted an application for a new 50 year license for its Niagara Power Project; the current license expires in 2007. A \$300-million upgrade to the Niagara Project's Robert Moses Niagara Power Plant is planned to be completed by the end of 2006. In addition, the Authority is also undertaking a \$20 million maintenance overhaul of the Niagara Project's Lewiston Pump Generating Plant, which operates during periods of peak power demand, supplementing the electricity from the Moses plant. That work is expected to be completed by mid-2006. ▪ NYPA announced plans for a four-year, \$135 million program to modernize and extend the life of its Blenheim—Gilboa Pumped Storage Project. The program is scheduled to begin in September 2006 when the first of four turbine-generators will be taken out of service. The renovation of the first unit should be completed by May 2007 with the entire program wrapped up in May 2010. ▪ See 3.A.1.a., 3.A.2., 3.A.4, 3.A.5., and 3.B.
1.E.	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.
1.E.1.	The State will work to ensure that transportation planning and construction is compatible with current and planned community development .
	<ul style="list-style-type: none"> ▪ As part of the transportation planning process that includes adopting Transportation Improvement Programs and Long-range Transportation Plans, the New York State Department of Transportation (DOT) is working with its regional and local partners to incorporate projects consistent with the State Energy Plan. These projects are consistent with the Quality Communities Interagency Task Force Report, dated January 2001. Guidance has been provided to regional offices and Metropolitan Planning Organizations regarding the State Energy Plan's recommendations.
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"> ▪ The State is making progress in expanding intermodal freight capabilities in all parts of New York. Upstate, construction of facilities in Buffalo, Rochester, and Plattsburgh is proceeding or has been recently completed. Downstate, the State is moving forward on an Environmental Impact Statement for the use of the former Pilgrim State Hospital site as an intermodal terminal. Improvements are also planned for the intermodal facilities at Harlem River Yard and the Hunts Point Terminal.
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"> ▪ Emphasis on maintaining existing transportation infrastructure continues. Of the current road construction program, approximately 96 percent is for infrastructure maintenance and repair. DOT has adopted a strategy placing infrastructure and operations first. While the size of future programs is not known, a high level of commitment to this State Energy Plan recommendation is expected to continue. In other transportation modes, a similar situation exists. The majority of rail funding goes for infrastructure repair. Similarly, approximately 90 percent of transit funding is used for replacement buses and transit vehicles.

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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"> ▪ DOT and the utility industry have continued the executive-level partnering effort they began in 2002 to review and revise guidelines for coordinating with the utility industry. Highway Design Manual, Chapter 13, was issued in June 2003 and incorporated much in the way of utility coordination improvements. In addition, DOT representatives have met with representatives of the Federal Highway Administration and the NYS DPS to discuss concerns and options related to new utility accommodations on DOT rights-of-way, particularly along controlled access facilities. An in-house task force has been established to develop policy recommendations in this regard.
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.	
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"> ▪ In 2003, the Governor introduced a program bill to address power plant siting. Several legislative proposals have passed the Senate or the Assembly but no consensus has been reached. Numerous proposals were introduced in 2004 and 2005 but none were passed.
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.
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.
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"> ▪ In 2003, 2004, and 2005, the Governor introduced program bills to address Article 6 reauthorization. Several legislative proposals have passed the Senate and Assembly but no consensus has been reached.
2.C.	The State supports working expeditiously toward establishing a regional market in the northeastern portion of the country.
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.

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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.
	<ul style="list-style-type: none"> ▪ The New England Independent System Operator (ISO-NE) and the NYISO filed a joint proposal to the 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 more seamless regional market. ▪ The FERC approved a Regional Transmission Organization (RTO) filing for the ISO-NE. Achievement of this status for the ISO-NE fostered regional markets by reducing the operational barriers known as seams. As part of the filing, and pursuant to an agreement with the NYISO, "pancaking" rates, or paying multiple transmission rates for transactions involving multiple transmission providers, were eliminated on December 1, 2004.
	<p>The biggest seams issue addressed in the ISO-NE filing, other than elimination of pancaking rates, continues to be virtual regional dispatch between New York and ISO-NE.</p> <ul style="list-style-type: none"> ▪ The NYISO implemented its SMD early in 2005.
2.D.	The State will move expeditiously to a fully-competitive retail electricity marketplace while maintaining appropriate customer service protections.
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.
	<ul style="list-style-type: none"> ▪ In 2002, the New York Legislature enacted the Energy Consumers Protection Act of 2002 (ECPA) amending the Home Energy Fair Practices Act. ECPA, which is being implemented by the PSC, requires that residential customers of energy services companies (ESCOs) shall receive the same consumer protections as those traditionally provided by regulated utility companies. The PSC issued regulations on this issue for ESCOs in 2004 ▪ As part of a national effort to develop uniform procedures, on November 21, 2003, the PSC issued revised Uniform Business Practices based on its experiences with retail competition during the past several years. <p>The PSC directed that customer payments on bills containing both ESCO and distribution utility charges must now be prorated among the parties, rather than being first allocated to utility charges, as had been the case in the past. This change is expected to ensure a fairer distribution of customer payments on bills and will improve the cash flows of the ESCOs.</p>
2.D.2.	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. The State supports the use of interval meters , where appropriate, to enable customers to respond to real-time electricity prices.

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	<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 promoted. The PLRP pays for 70 percent of project costs to install interval meters which will help customers to respond to TOU and RTP. Through September 2005, the PLRP enabled facilities to reduce summer peak demand by more than 505 MW statewide by installing and using curtailment technologies such as direct load controls and permanently reducing their base load by implementing improvements such as lighting and HVAC measures. Through September 2005, reductions of 238 MW were realized in Con Edison's service territory alone. <p>Through the Comprehensive Energy Management program, NYSERDA has approved the installation of more than 34,000 interval meters and more than 15,000 load control devices in 556 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.</p>
	<ul style="list-style-type: none"> ▪ Beginning in fall 2004, NYSERDA implemented a first-of-its-kind pilot program in Westchester County that incorporates the installation of advanced interval meters in 150 single family homes coupled with a time-of-use rate offered by an energy services company. Energy use data and patterns will be examined throughout the final year of the two-year pilot to determine future steps. NYSERDA also conducted a summer time-of-use pilot in 3,000 multifamily units in New York City with the New York City Economic Development Corporation. Results are being evaluated and plans are being formulated to continue the pilot through Summer 2006. ▪ In 2005, the Westchester Smart Homes pilot had a total savings of \$5,392; 89 percent of participants averaged savings of \$63 per household. The multifamily real time pricing pilots' projected billing for summer 2005 indicated that 55 percent of residents would have saved between \$1.59 and \$5.68 per month.
	<ul style="list-style-type: none"> ▪ The PSC provides ongoing regulatory support for the NYISO's Price Responsive Load Programs. The PSC previously ordered utilities under its jurisdiction to file tariffs under which customers would be allowed to participate in the NYISO incentive programs. The Emergency Demand Response Program (EDRP) and the Day Ahead Demand Response Program (DADRP) are both voluntary programs through which customers are paid for curtailing load. EDRP is initiated by the NYISO for reliability purposes during emergencies and customers provide curtailment voluntarily. Under DADRP, customers provide bid prices at which they would be willing to curtail usage the day before they would be called upon to curtail. ▪ As of October 18, 2005, NYISO demand programs had enrolled the following: <ul style="list-style-type: none"> ▫ Special Case Resources (SCR) that participate in the Installed Capacity (ICAP) market — 1794 participants representing 1,120 MW. ▫ Emergency Demand Response Program (EDRP) — 917 participants representing 597 MW. ▫ Day-ahead Demand Response Program (DADRP) — 19 participants representing 394 MW.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ In 2003, an EDRP call on August 15 resulted in approximately 520 MW of load curtailment. The NYISO also facilitates load curtailment through its Special Case Resources (SCR) program, whereby customers receive a contractual price in exchange for curtailing load for a specified period when called upon by the NYISO. In 2003, an SCR call on August 15 resulted in approximately 369 MW of load reduction. No customers were called by the NYISO in 2004. On July 27, 2005, the NYISO called EDRP and SCR for zones G through K, which resulted in approximately 323 MW of SCR and 154 MW of EDRP load reductions.
	<ul style="list-style-type: none"> ▪ On April 30, 2003, the PSC instituted a proceeding to evaluate the need for changes in existing voluntary real time pricing programs offered by five of the six major electric utilities operating in New York. On October 30, 2003, the PSC issued an order directing the utilities to undertake more focused and enhanced customer education and outreach efforts aimed at identifying large volume customer who might have the greatest potential for shifting and reducing loads in response to high hourly market commodity prices. The PSC chose not to impose expanded mandatory real-time pricing programs at that time. However, on September 23, 2005, as a necessary response to burdensome electricity price increases, the Commission decided to accelerate the New York utilities' implementation of RTP programs, directing them to file draft tariffs that would make RTP mandatory for their largest customer classifications that currently provide service at mandatory time-of-use rates. The Order also directed the filing of expanded outreach and education plans needed in support of the accelerated RTP effort. ▪ The PSC continues to encourage utilities to actively participate in NYISO programs. In conjunction with NYSERDA and the NYISO, the PSC sponsored targeted outreach and education forums describing NYISO programs throughout the state. The PSC attends working group meetings and continues to be involved in the process of refining NYISO programs to encourage participation. The PSC also advises on the programs' evaluation processes to determine their effectiveness.
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"> ▪ Governor Pataki proposed and the State Legislature approved legislation to provide 80 MW of power for displaced World Trade Center (WTC) tenants and other lower Manhattan businesses affected by the September 11 terrorist attacks. The economical electricity, which had been previously supplied by NYPA to the Port Authority of New York and New Jersey for the WTC, has helped return more than 43,000 jobs to lower Manhattan. ▪ Agencies constructing transportation facilities in lower Manhattan have collaborated on an <i>Environmental Analysis Framework and Performance Commitments</i>. A key element of this framework is the "Construction Environmental Protection Plan" that requires project sponsors to commit to protect environmental resources during construction. This includes use of clean fuels and use of diesel oxidation catalyst technologies for construction equipment. DOT, which is the first transportation agency to have projects under construction in Lower Manhattan, has included these requirements in its construction contracts.

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	<ul style="list-style-type: none"> ▪ To ensure that air quality is maintained during the reconstruction of lower Manhattan, the State has initiated a plan that will control emissions from non-road construction equipment by requiring the use of ultra-low sulfur diesel fuel and best-available retrofit technologies to reduce the emissions of fine particulate matter and NOx, establish a process to identify the best available control technology for a wide range of construction equipment, conduct joint project reviews with U.S. EPA, U.S. DOT, the New York State Department of Environmental Conservation, and NYSDOT, and establish a workgroup to identify and implement emission control strategies like traffic signal improvements, commuter choice programs, and Ozone Action Days programs that promote public transportation and clean, alternative fuels for fleets.
	<p>In addition, NYSDOT, the Lower Manhattan Construction Command Center (LMCCC), NYSDEC, U.S. EPA, and New York City transportation agencies have developed a special purpose air quality monitoring plan (AQMP) for particulate matter for Lower Manhattan. The data will assist the LMCCC in managing overall construction in Lower Manhattan, in determining if construction-related activities are causing elevated concentrations of particulate matter in nearby neighborhoods, and, if so, what further construction-related measures are appropriate to minimize such impacts.</p> <ul style="list-style-type: none"> ▪ On February 4, 2004, U.S. EPA approved New York State Implementation Plan (SIP) revisions involving the one-hour Ozone Plan which is intended to meet several Clean Air Act requirements for the New York portion of the New York-Northern New Jersey-Long Island non-attainment area. These requirements include Reasonable Further Progress Plans; projection year inventories and transportation conformity budgets for milestone years 2002, 2005, and 2007; ozone contingency measures; Reasonably Available Control Measure Analyses; one-hour Ozone Attainment Demonstrations; and enforceable commitments. The intended effects of these actions are approval of programs required by the Clean Air Act which will result in emission reductions that will help achieve attainment of the newly adopted eight-hour national ambient air quality standard for ozone in the New York, northern New Jersey, and Long Island non-attainment areas. The eight-hour standard is more stringent than the one-hour standard that was replaced on June 15, 2005. ▪ As part of the rebuilding effort in lower Manhattan, the World Trade Center 7 (WTC) has been registered with the U.S. Green Buildings Council to obtain a Leadership in Energy and Environmental Design™ (LEED™) rating for the building core and shell. Sustainable Design Guidelines were developed for the site, and NYSERDA, the Port Authority of New York and New Jersey, and the Lower Manhattan Development Corporation co-funded a Reference Manual to complement the Design Guidelines. Both documents will be used for all construction projects at the WTC including buildings, the victims' memorial, open spaces, and the subway and PATH terminals. WTC buildings will be LEED™ compliant and meet the requirements of Executive Order 111.

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	<ul style="list-style-type: none"> ▪ The Freedom Tower, like the other structures at the WTC, will comply with the WTC Sustainable Design Guidelines, the requirements of Executive Order 111, and the United States Green Building Council's LEED™ rating program. NYSERDA is negotiating with the New York Power Authority to use fuel cells for power in the structure. Engineers are completing a feasibility study calling for the use of river water for cooling at the entire site. Other planned energy efficiency measures include high performance glazing, reduced lighting power densities, daylight dimming controls in perimeter spaces, demand controlled ventilation, and displacement ventilation in the lobby space. With the implementation of these measures, the Freedom Tower will substantially exceed the efficiency requirements of Executive Order 111 and the New York State Energy Code. ▪ In 2005, NYSERDA provided technical assistance to the New York City Council and New York City Economic Development Corporation that was used as the basis for recently enacted New York City legislation requiring certain municipal buildings to comply with requirements necessary to achieve a LEED™ Silver rating.
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"> ▪ In September 2005, Governor Pataki issued a Nine Point Energy Action Plan to help combat the recent significant increases in energy prices brought on by growing world demand and hurricane damage to domestic natural gas and petroleum supplies, and to increase energy efficiency, diversity and security. Among the items called for by the nine-point plan to mitigate energy prices increases are: home heating tax credits for the elderly; home energy assistance for elderly and low-income households; tax credits for home heating systems upgrades; a sales-tax-free week for Energy Star appliances; and bulk purchasing of electricity by the State. ▪ <i>Rochester Gas and Electric Company (RG&E).</i> In case 02-E-0198, on March 7, 2003, the Commission issued an order implementing a delivery rate freeze which included an incremental \$15.6 million write-down of deferred expenses. In case 03-E-0765, the Commission issued an Order in May 2004 effectuating a five-year base delivery rate freeze through December 31, 2008 and instituting a separate retail access surcharge to recover \$7.4 million a year. customers also received a cash refund totaling \$110 million over the first three years as a portion of the net gains from the sale of RG&E's Ginna nuclear facility. An additional \$120 million in net gains were booked in the Asset Gain Account for ratepayers' benefit beyond the current five-year rate plan term. ▪ <i>Jamestown Municipal Electric Company.</i> In case 04-E-1485, on September 29, 2005, the Commission approved a 25% rate increase to be phased in over three years, rather than the 32% requested by Jamestown. The utility's base electric rates had not changed in the 10 years preceding this decision. ▪ <i>Orange and Rockland Electric Company.</i> The company's rates were established prior to the 2002 State Energy Plan and remain unchanged.

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	<ul style="list-style-type: none"> ▪ <i>Central Hudson Gas & Electric Co.</i> Central Hudson’s rates have remained constant since 2001. Central Hudson’s most recent electric rate plan, case 00-E-1273, was approved by a Commission Order issued in October 2001. Although that plan expired on June 30, 2004, the utility was allowed to continue with its existing rates for two years, through June 30, 2006, while deferring some expenses. Many non-price features expired on June 30, 2004, including service quality, reliability, and customer service. A collaborative was established by the parties to the case and a proposal for addressing the non-price features was approved by the Commission in June 2004. ▪ <i>Consolidated Edison of New York, Inc.</i> In case 04-E-0572, the Commission, on March 24, 2005, issued an Order limiting Con Edison’s rate change: <ul style="list-style-type: none"> ▫ A \$104.6 million delivery service revenue increase was allowed in rate year one accounting for 4% on delivery rates rather than the 22%, or \$550 million, sought by the company. ▫ No rate change was allowed for the second year. \$58.6 million in delivery service revenue was deferred, as was \$1.5 million in interest that would accumulate at the unadjusted customer deposit rate. ▫ \$220.4 million in delivery service revenue was allowed in rate year three rather than the \$289 million sought by the company.
	<ul style="list-style-type: none"> ▪ The Power for Jobs program provides low cost power to more than 700 employees and is linked to the creation and preservation of nearly 300,000 jobs. In August 2002, Phase Five of the Power for Jobs program authorized making 183 MW of electricity available at reduced cost to new and continuing Power For Jobs employers. As of July 2003, Phase Five of the Power for Jobs program was completed. In August 2004, the Governor signed legislation to extend the Power for Jobs benefits to existing recipients through December 31, 2005. Allocations of low cost power are provided to Power for Jobs employers based on maintenance of job commitments. Legislation signed in August 2005 extended the Power for Jobs program for existing recipients until December 31, 2006. ▪ Through 2004, energy costs for New Yorkers were declining relative to the United States as a whole and other regions of the country. While New York’s retail energy prices remain generally higher than national average prices for comparable fuels, improvements in the differential between New York and U.S. prices have been observed since 1997 for electricity and natural gas. During the period 1997 through 2004, New York’s all-sector electricity price in nominal dollars increased 7.1%, going from 11.2 cents to 12.0 cents per kWh, while the national average rose 10.2%. During the same period, New York’s residential natural gas price in nominal dollars increased 28.5%, going from \$9.73 to \$12.42 per thousand cubic feet, while the national average rose 54.8%.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> <li data-bbox="297 289 1513 821"> <p>▪ In November 2002, New York State Electric & Gas Corporation’s (NYSEG) rates for gas distribution delivery service were frozen through December 2008. At that time, NYSEG was allowed to terminate its cap on the total customer price, including commodity costs, and replace it with a mechanism to charge customers the actual market price of gas. The resulting increase in customer bills will place NYSEG at the same pricing level with other utilities. NYSEG's gas revenue requirement has been frozen for seven years. The company last changed its base rates on August 1, 1998. At that time, the Commission approved a base rate reduction of approximately \$9.6 million on an annual basis as part of a four year settlement through July 31, 2002. By order effective November 20, 2002, the Commission adopted a joint proposal that established a rate and restructuring plan that froze delivery service revenues through December 31, 2008 (i.e., for 6.25 years). The plan reflected the imputation of savings resulting from the merger with RG&E and also established a Phase II to consider revenue neutral rate design changes, further unbundling of delivery service rates, resolution of marketer issues, implementation of a competition performance mechanism, as well as other issues. Phase II issues were resolved through two separate Commission orders, effective September 23, 2003 and September 23, 2004, which adopted joint proposals. The company is not eligible to file for new rates until January 2008.</p> <li data-bbox="297 890 1513 1150"> <p>▪ In September 2003, the PSC approved a joint proposal that extended National Fuel Gas Co.’s (NFG) prior rate plan, freezing rates until October 2004 and providing for a \$5 million annual customer credit. In September 2004, the PSC extended the \$5 million annual customer credit, included in NFG's current rate plan, until October 1, 2005. In July 2005, the Commission adopted a two year rate plan ending July 2007 and decreasing gas delivery bills \$15 million (2%) each year, including the retention of benefits from the restructuring of revenue tax charges and flow-through to customers of deferred revenue tax credits. The company is eligible to file for new rates in summer 2006.</p>
	<ul style="list-style-type: none"> <li data-bbox="297 1192 1513 1352"> <p>▪ In May 2004, gas rates for Rochester Gas and Electric Company (RG&E) were frozen for four years until 2008. The company will be permitted to make certain changes in the way it collects supply costs and costs associated with retail access programs that enable customers to purchase natural gas from competitive suppliers. Resulting increases in customers’ bills will put RG&E on par with other utilities.</p> <li data-bbox="297 1423 1513 1623"> <p>▪ Effective May 1, 2002, Con Edison's gas distribution rates were reduced by \$25 million for three years through September 2004. In September 2004, the PSC granted Con Edison an increase of \$46.8 million, or 4.3%, a year. The increase includes recovery of \$35 million set aside in 2002 to offset costs resulting from destruction of the World Trade Center. Allowance was made for possible future cost recovery from governmental agencies and insurance carriers. Resulting increases in customers' bills will be constant until 2007.</p>

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ National Grid's gas revenue requirement has been frozen for 10 years. National Grid last changed its base rates, or delivery service rates, on December 20, 1996 when an annual decrease of \$10 million was approved by the PSC as part of a three-year settlement through October 31, 1999. By a subsequent Order Adopting Terms of Settlement, the October 1999 rates remained in effect for an additional three years and ten months, <i>i.e.</i>, through August 31, 2003. By another Order authorizing the merger of National Grid and Niagara Mohawk, the PSC approved a joint proposal extending the base rate freeze for gas customers for an additional 16 months through December 31, 2004. The company is eligible to file for new rates at any time.
	<ul style="list-style-type: none"> ▪ Central Hudson Gas & Electric Corp.'s (Central Hudson) rates have not increased since 1991. In October 2001, the Commission adopted a three year rate plan that froze gas delivery rates. On June 2004, the Commission modified the rate plan but kept gas delivery rates at the same level. In August 2005, Central Hudson filed for new rates that would increase gas delivery rates by \$18,082,000 (15% total bills, 41% delivery portion of bills).
<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"> ▪ Energy resource diversity in the transportation sector continues to increase. For example, the New York Thruway Authority (Thruway Authority) is piloting the use of ethanol in western New York, the New York State Department of Corrections (DOCS) has purchased bi-fuel propane vehicles, the Department of Environmental Conservation (DEC) is using biodiesel at several locations, and DOT is piloting compressed natural gas (CNG) conversions in its heavy duty trucks – so far 20 trucks have been converted and funding is in-place to convert 11 more. Under contract to the New York State Office of General Services, Clean Energy, Inc. is operating eleven CNG refueling sites which are open to the public.
	<ul style="list-style-type: none"> ▪ Through its alternative-fuel vehicle deployment programs, NYSERDA is supporting introduction of more than 850,000 gallons of biodiesel (B-100) fuel and has awarded funds for fleets to procure 1,400 natural gas and hybrid-electric vehicles. Ethanol fueling capacity is being developed to help the State fleet meet its fuel diversity and reduced vehicular emissions goals. Six of the State's largest urban communities, including the entire metropolitan area in and around New York City, have been designated by U.S. DOE as Clean Cities, demonstrating leadership by these areas in introducing alternative-fuel and advanced-technology vehicles. ▪ 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). 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>

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	<ul style="list-style-type: none"> ▪ Statewide energy use per unit of GSP in 1990 was 6.09 mBtu and, by 2004, statewide energy use had dropped to 4.84 mBtu per unit of GSP, a reduction of 1.25 mBtu or 20.5%. Reductions continuing at this rate will allow the State to achieve its goal in 2008. ▪ Through calendar year 2004, the relative contribution of renewable energy to New York’s primary energy use has remained about 10%. However, many of the specific initiatives begun following the issuance of the final State Energy Plan in 2002, such as the RPS program, will begin to show positive measurable results over the next few years. ▪ 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. Also in 2002, legislation was passed to assist wind generation facilities in Lewis County.
	<ul style="list-style-type: none"> ▪ Through September 2005, New York Energy \$martSM energy efficiency and research and development programs provided approximately 1,000 megawatts of demand reduction potential. ▪ DOT convened an internal State Energy Plan Implementation Group chaired by the Environmental Analysis Bureau's Air Quality Section. In 2003, recommendations were adopted and guidance was provided to regional offices and metropolitan planning organizations to move forward with these efforts. Based on the adoption of Transportation Improvement Programs and Long-range Transportation Plans, projected savings of energy are 5.5 trillion Btus by 2025. Work is ongoing to further reduce energy use in the transportation sector.
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 <i>First Annual Energy Report for Executive Order No. 111</i> was published by NYSERDA in July 2003, and the first edition of the <i>Guidelines for Executive Order 111</i> was published by NYSERDA in December 2003. The second edition of the <i>Guidelines</i> was published in December 2004. Progress has increased each year, resulting in purchases of 375,000 kilowatt-hours in 2002. In 2003, a number of State agencies made independent purchases of wind power which will be used to meet part of their Executive Order No. 111 requirements and several more installed on-site generation, bringing renewable energy purchases to more than 4,400 megawatt-hours. In FY 2003-04, the latest year for which actual data is available, affected State agencies purchased more than 13,200 megawatt-hours of renewable energy. Based on the latest projections from the agencies, the 2005 goal (<i>i.e.</i>, 250,000 MWh) will be met in FY 2005-06. ▪ DOT has opened a new vehicle equipment maintenance repair shop that uses the latest energy efficient technologies including geothermal heat, a gas turbine generator, and solar panels to reduce energy demand and provide cost savings in the normally high-energy-demand facility. It is now undergoing system testing and review. In addition, DOT has obtained multiple price quotes for green energy options through NYSERDA and is in the process of selecting a firm to be in compliance with this Executive Order 111 requirement. DOT has also been working with NYSERDA and is currently in the process of selecting firms to help with an energy audit of its thirty-plus Capital District facilities. The program will allow identified energy savings to be used to pay for energy related building improvements. It is hoped that the results can then be applied across the state for the benefit of the remaining 300 DOT facilities.

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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. 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 has been investing about \$100 million in energy efficiency programs annually, since 2001, when the Energy Plan was first prepared, up from about \$2 million in 1990 and about \$50 million in 1995. NYPA’s spending on energy efficiency remains unchanged since 2001. ▪ In 2005, NYPA trustees authorized the purchase of up to 56 MW of wind energy for delivery to the Authority’s southeastern New York governmental customers. These purchases will extend over a ten year period beginning in 2008. ▪ From January 1, 2004 through November 30, 2005, NYPA’s Energy Services Program completed 106 projects at 189 facilities. These energy efficiency projects will reduce the electricity costs of schools and other public buildings by more than 42,269 megawatt hours annually and help avoid 63,037 tons of greenhouse gas emissions each year. ▪ Among its array of new clean power projects, NYPA has installed solar power photovoltaic applications (690 KW existing and in progress); fuel cells, including several powered by anaerobic digester gas at sewage treatment plants (2,850 KW existing and in progress); microturbines using waste gas as the fuel source (60 KW existing). Projects involving landfill gas, biomass gasification, and new technologies such as Stirling engines are also in development.
	<ul style="list-style-type: none"> ▪ Governor Pataki proposed and the State Senate passed legislation (S.4830) to enhance the availability of energy efficiency upgrades for public facilities by streamlining the procurement process for programs offered by NYPA and NYSERDA. The legislation has not been approved by the Assembly and is expected to be reintroduced.
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. 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"> ▪ In 2006, LIPA projects spending about \$44 million on energy efficiency efforts, a more than 40% increase since 2001. ▪ In 2004, LIPA selected Florida Power and Light (FPL) as the developer to construct a 140-MW offshore wind project. Environmental studies are under way and LIPA is negotiating the necessary agreements with FPL. In April 2005, LIPA and FPL filed a formal application for permit with the U.S. Army Corps of Engineers. At this time, the commercial operation date is expected to occur in 2008.

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	<ul style="list-style-type: none"> ▪ In 2004, LIPA selected six firms to assist in an aggressive demand side management program. Contracts were executed with five energy services contractors in 2005 and beginning in 2006 the firms will target nonresidential, small and large commercial, and multifamily customers for energy efficiency projects. The goal is to reduce load by 73 MW. The contracts have been fully negotiated and approved by the Office of the New York State Comptroller. With the rollout of this program in 2006, LIPA’s overall demandside management (DSM) impact for 2006 will be approximately one-third more than 2005. ▪ In 2005, LIPA issued a request for proposals (RFP) for 10 MW of fuel cells to be installed on Long Island. The results of the solicitation are expected to be released in early 2006. ▪ Beginning in 2004, LIPA adopted NYSERDA’s ENERGY STAR® Labeled Homes Program for residential new construction, and, in fall 2005, NYSERDA’s Home Performance with ENERGY STAR® Program for existing homes was also adopted on Long Island. ▪ From the summer of 2000 through the summer of 2003, LIPA, NYPA, and NYSERDA successfully collaborated on the Keep Cool residential peak load reduction program that resulted in approximately 235 KW of old, inefficient units being replaced with ENERGY STAR® models. This effort resulted in 57 MW of permanent peak load reduction and more than 100 MW of behavior change reduction stemming from a coordinated public appeal to shift energy intensive tasks from peak periods. In 2004, the consumer bounty was eliminated and an awareness campaign coordinated with the New York Power Authority became the primary means of achieving energy reductions. In 2004 and 2005, retailers were given the option of receiving incentives based on their sales of ENERGY STAR® room air conditioners. The turn-in component was eliminated and consumers were not provided incentives for recycling their old, inefficient units.
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"> ▪ Pursuant to recommendations in the State Energy Plan, NYSERDA prepared a paper entitled <i>Preliminary Investigation into Establishing a Renewable Portfolio Standard in New York</i> assessing issues associated with introduction of a renewable portfolio standard (RPS) in New York. The paper became a foundation document for the PSC’s RPS proceeding. <p>On February 19, 2003, the PSC instituted a proceeding* to develop and implement an RPS for electric energy retailed in New York. The Order established as a working target that 25 percent of the energy retailed in New York would be generated from renewable resources within 10 years. The proceeding commenced with a collaborative effort to develop and design options for an RPS. A number of working groups were formed; working objectives were developed; and several technical conferences were held. After initial comments were filed on March 28, 2003, an additional round of initial comments were filed by parties on September 26, 2003. Reply comments were filed by parties on October 31, 2003.</p>

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	<p>On September 24, 2004, the PSC issued an order regarding the retail renewable portfolio standard that identified NYSERDA as statewide administrator of the RPS. As administrator, NYSERDA will contract with suppliers, on a competitive basis, for the rights to the environmental attributes of energy produced in accordance with the provisions and rules of the RPS program, subject to change by order of the PSC.</p> <p>The order reaffirmed the 25 percent overall goal, requiring that 24 percent come from the RPS and at least one percent be from the voluntary green power market. The order also identified eligible technologies and presented a schedule and funding levels for the RPS, which is to commence in 2006.</p> <p>In December 2004, NYSERDA issued an initial solicitation, RFP 916, to procure renewable attributes. NYSERDA entered into seven contracts for the rights to attributes associated with more than 821 million kilowatt-hours of renewable generation. Four of the projects are located in New York and three are located in Pennsylvania, Maryland, and New Jersey. Projects in New York include Maple Ridge Wind Power, LLC (formerly Flat Rock Wind Power), in Lewis County and three re-powered hydropower facilities — Spiers Falls, Browns Falls, and Higley Falls — in Saratoga and St. Lawrence counties.</p> <p>Maple Ridge Wind Power, LLC, started construction on Phase 1 of the project in summer 2005 and the construction phase was completed by the end of the year. The project will be commissioned early in 2006 and expects to have approximately 200 MW of capacity on-line in early spring 2006. Phase 2 of the Maple Ridge project is expected to commence construction early in 2006 and be in operation by the end of 2006. The capacity will increase to approximately 330 MW. The environmental attributes associated with 200 MW of capacity have been purchased by NYSERDA on behalf of New York ratepayers to satisfy a portion of the procurement obligation under the New York renewable portfolio standard.</p> <hr/> <p>* See Case 03-E-0188, Order Regarding Retail Renewable Portfolio Standard, issued and effective September 24, 2004; Order Authorizing Fast Track Certification and Procurement, issued and effective December 16, 2004; Order Regarding Petitions for Clarification and Reconsideration, issued and effective, December 15, 2004.</p>
	<ul style="list-style-type: none"> ▪ See 1.B., 1.D., and 3.B.1.
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>

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> <li data-bbox="297 285 1516 653">▪ In September 2005, Governor Pataki issued a Nine Point Energy Action Plan to help combat the recent significant increases in energy prices brought on by growing world demand and hurricane damage to domestic natural gas and petroleum supplies, and to increase energy efficiency, diversity and security. The 9-point plan includes: (1) home heating tax credits for the elderly; (2) home energy assistance for elderly and low-income households; (3) energy assistance for small businesses and farmers; (4) tax credits for home heating systems upgrades; (5) a sales-tax-free week for Energy Star appliances; (6) tax credits for alternative fuel vehicles; (7) incentives for alternative fuel production; (8) bulk purchasing of electricity by the State; and (9) access to HOV lanes lanes for clean and energy efficient vehicles. These initiatives, and others, are currently being discussed with the Legislature, with the goal of providing short-term price relief and long-term energy independence <li data-bbox="297 688 1516 919">▪ Legislation was signed in September 2002 (1) to expand the net metering statute (Public Service Law j-66) to include farm waste generation systems of not more than 400 KW, (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. Additional legislation was signed in September 2004 to expand net net metering statute (Public Service Law j-66) to include residential and farm wind generation systems of not more than 125 kW. <li data-bbox="297 955 1516 1186">▪ In 2002, the PSC approved a rate and restructuring joint proposal for National Fuel Gas Company (NFG) that includes a provision that allows for greater use of indigenous natural gas. Before entering into this agreement, NFG would only allow five percent of indigenous gas transported by marketers to be considered “firm” for reliability purposes. The joint proposal increased the amount to 60 percent. The PSC approved an extension to the plan increasing the level of indigenous natural gas that will be considered firm to 65 percent in 2003. In 2005, the Commission approved a new rate case joint proposal that allows 100 percent to be considered firm. <p data-bbox="342 1222 1516 1421">The PSC approved establishment of a committee composed of local producers and NFG and DPS personnel to identify and implement other improvements to facilitate increased use of indigenous natural gas. The committee is active and is pursuing pilot programs designed to provide additional improvements. Topics include quality control procedures, real-time metering, and balancing issues. Calendar year 2004 production showed an increase of 3,000 Mcf per day <i>i.e.</i>, from 13,000 Mcf per day to 16,000 mcf per day) in the amount connected directly to the NFG distribution system.</p> <ul style="list-style-type: none"> <li data-bbox="297 1457 1516 1619">▪ The PSC's Standardized Interconnection Requirements (SIR) were revised at the PSC's November 2004 session. The major changes consist of an increase in the upper capacity threshold from 300 KW to 2 MW, inclusion of network distribution systems in the Standard, and adoption of the Underwriter's Laboratories Standard 1741 for interface equipment certification. The utilities were directed to revise their tariffs to adopt the revised standards.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ In April 2003, the PSC ordered utilities to file amended tariffs detailing procedures for implementing the farm waste net metering law and to allow qualifying farm waste systems up to 400 KW to use the SIR. The SIR would otherwise be limited to on-site generators of 300 KVA or less. In August 2003, the PSC completed review of the proposed tariffs and ordered some changes. In October 2003, upon satisfactory completion of the recommended changes, the PSC issued an order accepting the amended tariffs for use in implementing farm waste net metering. In June 2005, the utilities filed amended tariffs detailing procedures for implementing the residential and farm wind net metering law to allow qualifying systems up to 125 kW to use the SIR. In September 2005, the PSC completed review of the proposed tariffs and order some changes to the SIR to reflect the new legislation. ▪ See 1.D.
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. 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. 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"> ▪ Governor Pataki’s Nine Point Energy Plan (see 3.A.3 above), proposes tax incentives for both alternative fuel vehicles and alternative fuel production. ▪ DOT used approximately 25,000 gallons of biodiesel (B20) in six locations in 2004 and anticipates use of more than 50,000 gallons per year. ▪ In 2003, NYSERDA entered into agreements with three manufacturers to assist with identifying available feedstocks and to address siting issues. ▪ In 2004 and 2005, NYSERDA’s efforts focused on techniques for more economical biodiesel production, upgrading biodiesel for high-value uses, and improving low-value feedstocks such as brown grease. Interest in biodiesel manufacturing in New York continues to grow and NYSERDA provides support as funding permits. ▪ NYSERDA is working with the New York State Offices of General Services (OGS) and Mental Health (OMH) and the New York State Thruway Authority to site four E-85 ethanol fueling facilities at state facilities to fuel the State’s growing fleet of E-85 vehicles. Funded by NYSERDA, this project is expected to be completed by spring 2006, and will help the Clean Fueled Vehicle Council reach its goals of introducing alternative fuels into the state fleet. ▪ NYSERDA has awarded more than \$650,000 for projects to demonstrate the use of biodiesel fuel (B-20 and B-5) for transit buses, school buses, and municipal heavy duty vehicles throughout New York State. In 2005 demonstration projects were initiated at a Capital District commercial trucking company, a utility fleet in Syracuse, and an industrial site in Rochester. A new public biodiesel fueling facility will be built in Oneonta. NYSERDA provided more than \$200,000 for a pilot program to demonstrate the use of B-20 for transit buses, school buses, and municipal heavy-duty vehicles in western New York.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ NYSERDA and the New York State Department of Agriculture and Markets (Ag and Markets) completed a joint study to evaluate policy options to support a biodiesel industry in New York. The final report, dated November 2004, is posted on NYSERDA's website. ▪ Over the past four years (2002-2005), NYSERDA supported a demonstration of B20 biodiesel blended with low-sulfur home heating oil in 100 homes in the Newburgh area of downstate New York. The study demonstrated the potential to significantly reduce carbon dioxide and sulfur oxide emissions from residential sources while providing cost savings as a result of the reduced need for maintenance associated with the use of the biofuel. In 2004, NYSERDA started a project with Clickable Oil.com and Schildwachter and Sons, Inc. to commercialize B-20 biodiesel blends in New York City and on Long Island. Five other New York City heating oil dealers have since joined the project to form a biodiesel marketing network serving the downstate area. NYSERDA has also supported biodiesel outreach and demonstration activities in New York City apartment buildings with Cornell Cooperative Extension.
3.A.5.	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.
	<ul style="list-style-type: none"> ▪ NYPA is evaluating the potential of Integrated Gasification Combined Cycle (IGCC) technology, which may offer the possibility of using indigenous coal resources to generate electricity in compliance with strict environmental standards.
3.B.	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.
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.
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.
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"> ▪ DEC has completed work with stakeholders to develop regulations governing emissions from distributed generation sources. A draft rule is being developed for adoption in early 2006. ▪ In July 2003, the PSC required Con Edison, O&R, NYSEG, and RG&E to develop revised standby rates. The standby rates for those utilities took effect on February 1, 2004 and apply to distributed generation customers and wholesale generators to the extent they rely on the local electric utility to deliver power to replace or supplement their own generation. The PSC previously approved standby rates for Niagara Mohawk and an order establishing electric standby rates for Central Hudson Electric and Gas was issued and effective on July 1, 2004.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ NYSERDA received two grants totaling \$600,000 from U.S. DOE and is contributing \$190,000 of system benefits charge funds to the Northeast Regional CHP applications Center. The Center is one of eight that have been established nationwide and includes New York and seven New England states. NYSERDA will act as financial administrator of the funds; Pace Energy Project will provide education and outreach services; and the University of Massachusetts Amherst will deliver technical assistance. To date, the Center has conducted one training event geared to technical professionals who might specify CHP systems in building designs. Center staff have given presentations at nine major conferences, conducted 22 scoping studies for sites including eight in New York, and met with numerous decision makers who are considering installing CHP systems. ▪ Through 2005, NYSERDA committed more than \$55 million for approximately 99 combined heat and power systems that will install more than 102 MW of new electricity generation capacity. Approximately 15 MW are currently operational and an additional 87 MW of capacity is expected to come on line in the next two years. In addition, more than \$20 million was committed for more than 70 projects to develop new distributed generation technologies, which include pilot testing of laboratory-scale prototypes and other innovative products and equipment, and to conduct new product feasibility studies. In all, the portfolio of projects attracted approximately \$300 million in leveraged investment in distributed generation and combined heat and power technologies and applications. <p>Another important opportunity has emerged for the CHP industry as the recent increases in natural gas prices have caused widespread interest in alternative and renewable fuels such as landfill gas and anaerobic digester gas. NYSERDA provides incentives to encourage use of renewable fuels as a long-term strategy to diversify the State’s energy mix and to promote development of indigenous resources. Nearly one third of NYSERDA’s DG-CHP projects use renewable fuels and technologies.</p> <ul style="list-style-type: none"> ▪ See I.D. and 3.A.3.
3.C.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ The New York State Alternative Fuels Tax Credit was extended twice, once in 2003 and again in 2004. The tax credit for alternative fuel vehicles ended on December 31, 2004, however the tax credit for infrastructure investments was extended until 2008. The Governor’s nine-point strategic energy plan, unveiled in September 2005, calls for extensions of the hybrid-electric and alternative fuel vehicle tax credits. Numerous incentives for alternative-fuel and advanced-technology vehicles were included in the Federal Energy Policy Act of 2005.
3.D.	<p>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.</p>

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ Congress enacted SAFETEA-LU, the successor to TEA-21, in August 2005. New York State secured language in SAFETEA-LU which increases funding for transit and retains the CMAQ program. In addition, the new law expands CMAQ eligibility to include diesel retrofits for off-road construction vehicles and equipment. The new law also permits single occupancy low emission vehicles, such as hybrids, to use High Occupancy Vehicle (HOV) lanes, so long as traffic flow is maintained. New York continues to work with its Congressional delegation and other groups to seek federal legislation that meets New York’s transportation needs and is consistent with the State Energy Plan.
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"> ▪ Through the end of 2005, the required federal legislation had not been enacted.
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"> ▪ The Acid Deposition Reduction Program (ADRP) regulations for sulfur dioxide (SO₂) and nitrogen oxides (NO_x) became effective on August 17, 2004. See 4.A.2. for more details. ▪ On February 25, 2003, DEC issued a final State Pollutant Discharge Elimination System (SPDES) permit for the Lovett Generating Station that will significantly reduce the aquatic impacts from the station’s once-through cooling technologies. DEC also issued draft SPDES permits for the Danskammer Electric Generating Facility, on June 25, 2003, and the Indian Point Nuclear Generating Station, on November 12, 2003, Roseton Generating Station on April 13, 2005, and the Bowline Point Generating Station on December 7, 2005. These permits, as drafted, will significantly reduce aquatic impacts from the once-through cooling systems used at these facilities. ▪ On May 14, 2003, DEC released a draft policy providing guidance for assessing and mitigating impacts from fine particulate matter emissions (PM_{2.5}) from proposed projects. The final policy and responsiveness summary were published in the <i>Environmental Notice Bulletin</i> on January 14, 2004. ▪ See 4.D. for a thorough discussion of the Regional Greenhouse Gas Initiative (RGGI).
4.A.1.	Work with industry to promulgate emission standards for distributed generation.
	<ul style="list-style-type: none"> ▪ DEC has begun developing emission standards for distributed generation and combined heat and power projects. Among the parties involved with the rulemaking are NYSERDA, the DPS, Pace Energy Project, energy manufacturing associations, emissions equipment and microturbine manufacturers, independent power producer organizations, and numerous other interested parties and industry stakeholders.

No.	State Energy Plan Recommendation Progress to Date
	<p>In January 2005, stakeholders were provided with a draft regulation (6 NYCRR 222) in which emission standards and monitoring and record keeping requirements were proposed for distributed generation sources. Distributed generation sources with a maximum electrical output of 67 horsepower or more that commence operations after the effective date of the rule would be subject to NO_x and CO₂ emission limits. Sources that commenced operation prior to the effective date of the rule would be subject to a NO_x emission limit effective January 1, 2008. A particulate matter (PM) emission limit would apply to diesel-fired sources effective January 1, 2008. The rule is anticipated to take effect in June 2006.</p>
4.A.2.	<p>Implement the Governor's Acid Deposition Reduction Program (ADRP), which is expected to significantly reduce GHG emissions and the acid rain precursors SO₂ and NO_x.</p>
	<ul style="list-style-type: none"> ▪ The Acid Deposition Reduction NO_x Budget Trading Program (6 NYCRR Part 237) and the Acid Deposition Reduction SO₂ Budget Trading Program (6 NYCRR Part 238) (collectively, the ADRP) went into effect on August 17, 2004, when the DEC adopted them as emergency regulations. The final ADRP regulations went into effect on April 27, 2005. <p>The purpose of the ADRP is to reduce emissions of NO_x And SO₂ from fossil-fuel-fired electric Generating sources statewide through market-based cap-and-trade programs. The ADRP Requires Electric Generators in New York To reduce SO₂ Emissions an additional 50 Percent below levels Allowed By the federal clean air act's acid rain program requirements and will be phased in over a three-year period beginning in 2005. The ADRP requires electric generators to reduce NO_x emissions during the non-ozone season — October 1 through April 31 — to a level commensurate with the ozone season NO_x cap-and-trade program imposed on the same sources under the NO_x Budget Trading Program (6 NYCRR Part 204).</p> <p>As originally planned and scheduled, the first three seasons of NO_x and SO₂ allowance allocations have been issued. The first control period for NO_x under Part 237 began on October 1, 2004. and the first control period for SO₂ under Part 238 began on January 1, 2005.</p>
4.A.3.	<p>Provide expedited permitting procedures to encourage siting of electric generation facilities that minimize aquatic and air quality impacts.</p>
	<ul style="list-style-type: none"> ▪ In 2002, the New York Legislature passed a Governor's bill to amend Article X of the Public Service Law to allow faster certification for certain repowering proposals. While Article X expired on January 1, 2003, Bethlehem Energy Center qualified for the expedited procedures and began operations in April 2005.
4.A.4.	<p>Work with federal government to develop national strategies to reduce multi-pollutant emissions from electric generating facilities.</p>
	<ul style="list-style-type: none"> ▪ In November 2003, New York joined a lawsuit filed by a number of other states challenging U.S. EPA's August 28, 2003 decision that it does not have authority to regulate greenhouse gases (GHGs) under the Clean Air Act.
	<ul style="list-style-type: none"> ▪ New York State is actively reviewing various Congressional proposals and regulatory proposals to reduce emissions of multi-pollutants (<i>i.e.</i>, NO_x, SO₂, CO₂, and mercury). On May 12, 2005, U.S. EPA adopted the Clean Air Interstate Rule (CAIR) that applies to electric generation units (<i>i.e.</i>, large power plants) in most states east of the Mississippi River. CAIR is expected to reduce SO₂ emissions by 65 percent in 2015 and NO_x emissions by 60 percent in 2015.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ While the CAIR reductions are significant, more reductions will be needed in order for all counties in New York and other northeast states to reach attainment with the ozone and particulate matter (PM) national ambient air quality standards. On February 2, 2004, the Ozone Transport Commission (OTC), a multi-state organization created by Congress, of which New York State is a member, announced its formal position on reducing emissions from the electric generating sector. The OTC's position calls for NOx and SO₂ emissions from these sources to be capped at 1.87 million and 3.0 million tons, respectively, by 2008 and by 1.2 million and 2.0 million tons by 2012. In addition, the OTC asserts that initial mercury control levels should not exceed 15 tons with an ultimate performance requirement that would achieve approximately five tons per year by 2015, a 90 percent reduction from current emissions. New York continues to work with the OTC and other states to find ways to attain the clean air standards.
4.A.5.	<p>Use System Benefits Charge funding to promote the development of clean energy generation technologies.</p>
	<ul style="list-style-type: none"> ▪ NYSERDA is considering issuing a solicitation for air pollution control technologies for generation facilities in 2006. ▪ See 3.A.2., 3.A.5., and 3.B.
4.B.	<p>The State should continue to develop and implement innovative strategies to reduce environmental impacts from mobile sources of pollution.</p>
4.B.1.	<p>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.</p>
4.B.2.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ Regulations placing emissions controls on personal water craft beginning with model year 2006 became effective on August 8, 2002. ▪ DEC supports the U.S. EPA regulations adopted in August 2002 and May 2004 setting more stringent emissions standards for on-highway and non-road diesel-fueled vehicles. ▪ A number of strategies are being implemented to reduce mobile source emissions, especially in the downstate area. See 4.D.10. for further information. ▪ DOT is piloting a program on Long Island to install retrofit technology and use clean fuels in a number of its heavy-duty on-road fleet vehicles. DOT, in partnership with the Thruway Authority, is implementing a federal grant to install oxidation catalysts and use ultra-low-sulfur diesel (ULSD) fuel in trucks operating in the lower Hudson Valley. DOT has a contract in place for ULSD at all of its maintenance repair shops in downstate New York.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ The Clean Fuel Vehicle Council consists of 18 State agencies, authorities, and offices working to increase the State’s use of clean-fueled vehicles and fueling infrastructure in order to meet federal mandates under the Energy Policy Act (EPACT) and the even more aggressive goals of Governor Pataki’s Executive Order No. 111. In 2004, the State’s clean fuel fleet totaled 4,200 vehicles, primarily using compressed natural gas (55%) and ethanol (20%) and exceeded EPACT requirements by approximately 13 percent. In 2005, the State’s clean fuel fleet totaled 5,236 vehicles with approximately 43 percent using natural gas and 29 percent using ethanol. The State continues to exceed its EPACT requirements. ▪ Five million dollars from the Clean Water/Clean Air Bond Act were awarded by NYSERDA to 74 school districts to install emission-reducing diesel retrofit equipment on 2,200 school buses. An award was included to the New York City Board of Education to install advanced emission controls on 300 privately owned buses that also will be using ultra-low-sulfur diesel fuel. <p>More than 100 compressed natural gas fueling facilities are operational across the State, many of which are open to the public. OGS recently entered into a contract with a private firm to operate several of its CNG sites and to build new ones, allowing these stations to be available for public use and to support market development.</p> <p>In 2004, the New York State Thruway Authority opened an ethanol station to serve its vehicles in western New York. DOT is piloting a project to test winter operations and fleet maintenance issues connected with the use of B-20 in its heavy-duty vehicles. B-20 is a fuel blend containing 20 percent biodiesel and 80 percent low-sulfur diesel fuel. The New York State Department of Correctional Services (DOCS) operates numerous propane vehicles and currently operates propane stations at six of its correctional facilities.</p> <ul style="list-style-type: none"> ▪ New York State has adopted regulations to modify the Zero Emissions Vehicle (ZEV) program to maintain standards identical with California’s, as required by the Clean Air Act. Modifications are designed to improve the flexibility of manufacturers to introduce advanced technology vehicles into motor vehicle fleets.
4.C.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ In January 2003, DEC filed a request for a waiver from the Clean Air Act requirement that reformulated gasoline contain at least two percent oxygen. Subsequently, the federal government requested additional information. The additional information was submitted to U.S. EPA in December 2003, and U.S. EPA denied the waiver request in June 2005. The Energy Policy Act of 2005 will remove the oxygen requirement in 2006.
	<ul style="list-style-type: none"> ▪ Methyl tertiary butyl ether (MTBE) was banned in New York effective January 1, 2004. Ag and Markets, which is responsible for sampling and testing motor fuels for conformance with the ban, has recognized that trace amounts of MTBE may be found in motor fuels for reasons outside the control of the regulated parties and has stated that the presence of de minimus amounts of 0.5 percent or less by volume will not be subject to regulatory action.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ DEC, the New York State Consumer Protection Board (CPB), and the Attorney General of the State of New York (Attorney General), with assistance from NYSERDA and Ag and Markets, monitored the effects of the MTBE phase out on the sale of gasoline to New York consumers. Various worldwide conditions have caused volatility in the gasoline market, resulting in fluctuations in supply and resulting price increases. While the New York and Connecticut MTBE bans contributed to that volatility, no evidence suggests that the MTBE ban caused price spikes to consumers different from price spikes observed elsewhere in the country.
4.D.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ In July 2003, nine northeastern and mid-Atlantic states initiated a collaborative effort to develop a program to reduce carbon dioxide emissions from electricity generating facilities known as the Regional Greenhouse Gas Initiative (RGGI). Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont fully participate in the RGGI effort and Maryland, the District of Columbia, Pennsylvania, the Eastern Canadian Provinces, and New Brunswick are observers in the process. DEC, DPS, NYSERDA, and representatives of the other participating states created a Staff Working Group (SWG) to analyze the possible impacts of a various program features. The SWG developed a proposal which includes the implementation of a multi-state cap-and-trade program with a market-based emissions trading system. The proposal would stabilize electricity sector emissions from 2009 to 2015, followed by a ten percent reduction between 2015 and 2019. The relevant agency leaders from all of the participating states reviewed and discussed this proposal. On December 20, 2005, seven of the nine states that participated in the initiative signed a supporting Memorandum of Understanding. Only Massachusetts and Rhode Island declined to sign the MOU. ▪ In his 2003 State of the State address, Governor Pataki stated that New York State is committed to adopting California's greenhouse gas standards for New York's vehicle fleets. ▪ On September 24, 2004, the California Air Resources Board approved regulations to reduce emissions of GHGs from passenger cars by 37 percent in 2016. In November 2005, DEC's regulation to adopt the greenhouse gas regulations was approved by a unanimous vote of the State Environmental Board.
	<ul style="list-style-type: none"> ▪ The United States Department of Transportation Center for Climate Change and Environmental Forecasting and DOT completed a study entitled <i>Estimating Transportation-Related Greenhouse Gas Emissions and Energy Use in New York State</i>. The goals of the study were to: (1) evaluate the transportation sector's contribution to meeting the greenhouse gas and energy efficiency goals of the State Energy Plan; (2) help metropolitan planning organizations (MPOs) and states integrate transportation, energy, and air quality planning strategies; and (3) evaluate a number of strategies to determine if they may provide emissions and energy reductions to help meet the goals identified in the State Energy Plan. The study can be accessed at http://climate.volpe.dot.gov/papers.html.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ In 2003, the NYPA “Clean Commute Program,” conducted in cooperation with Metropolitan Transit Authority, NYSERDA, New York State Department of Transportation, LIPA, U.S. DOE, and various municipalities, deployed 87 all-electric Ford TH!NK vehicles and charging stations at seven commuter rail stations in the metropolitan New York region. NYPA also deployed 300 all-electric GEM™ (Global Electric Motorcars, LLC) low-speed vehicles, donated by DaimlerChrysler, to state and local government agencies, state universities and colleges, and nonprofit charities. In addition, NYPA initiated a program with the municipal and rural electric cooperative systems of New York State to help finance the purchase of electric-drive vehicles for their fleets. ▪ NYSERDA has numerous projects under way to reduce energy consumption in the transportation sector. <ul style="list-style-type: none"> ▫ 45 electrified berths for diesel tractor trailers were installed at two New York State Thruway Travel Plazas in the Syracuse area. » ▫ 18 shorepower pedestals that provide electric power for overnight diesel tractor trailers were installed at the Wilton Travel Plaza on the I-87 Adirondack Northway. » ▫ In 2004, an advanced energy management preheating system that considers both ambient weather conditions and vehicle scheduling requirements was installed in Amsterdam, New York. The system serves 60 school buses. » ▫ In 2004, projects in early stages of development included the manufacture and deployment of 10 Caterpillar MorElectric™ trucks, new truck stop electrification projects in the Rochester and Newburgh areas, and the development of an automatic tire pressure sensing system for commercial vehicles.
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"> ▪ In 2004, New York’s total CO₂ emissions were 6.97% greater than in 1990. Also in 2004, emissions were 0.46% lower than they would have been absent the implementation of the New York Energy \$martSM program and Executive Order 111. ▪ The regional initiative described in 4.D. will result in reductions in carbon emissions from power plants. ▪ Based on Transportation Improvement Programs and Long-Range Transportation Plans currently in place, the projected reductions in greenhouse gas emissions from the transportation sector are 117 thousand tons.
	<ul style="list-style-type: none"> ▪ See 4.D.8. for activities in transportation.
4.D.2.	Develop a GHG emission registry program for registering baseline GHG emissions and emission reductions from actions implemented at facilities.

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ On October 6, 2003, the Northeast States for Coordinated Air Use Management (NESCAUM) launched the Northeast Regional Greenhouse Gas Registry (RGGR) to create a GHG registry for participating states. New York is actively engaged in the RGGR effort, as are the other NESCAUM member states: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New Jersey. Delaware is participating in the effort, while Pennsylvania and Maryland are observing the process.
4.D.3.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ CO₂ emissions reductions from measures installed with assistance from NYSERDA's New York Energy \$martSM program were 1,187,000 tons per year through the third quarter of 2005. ▪ See 4.D.
4.D.4.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ Through 2004, NYSERDA's natural gas exploration and development program accomplished the following: <ul style="list-style-type: none"> ▫ New York State's 2004 natural gas production hit an all-time high of nearly 48 Bcf due in large part to the hydrothermal dolomite reservoirs in the Trenton and Black River formations. NYSERDA-supported projects helped exploration companies better understand the nature of production from these reservoirs through a series of industry and academic research projects. ▫ NYSERDA has helped exploration companies better understand the nature of the Cambro-Ordovician reservoirs located in western New York. In 2004, NYSERDA's partner, Ardent Resources, began a successful drilling program targeting Cambro-Ordovician reservoirs in Erie and Cattaraugus counties. NYSERDA is working with Ardent and the New York State Museum to better characterize these reservoirs and expand the geographic extent of the activity. ▫ NYSERDA continues to examine gas production potential in non-producing areas such as the Tug Hill Plateau, the region west of Lake Champlain, and the northwestern counties of Niagara and Orleans. ▫ NYSERDA has revived interest in shale gas production in New York through targeted research and active technology transfer. NYSERDA has compiled and presented an extensive body of shale research that is serving as the basis for a number of shale exploration efforts in the State. Exploration interest in New York's shale resources is at an all-time high.
	<ul style="list-style-type: none"> ▫ NYSERDA helped characterize the current production from the shallow Trenton Formation as sourced from the Utica Shale play rather than the fractured carbonates. This may change industry's approach to these fields and fuel further interest in the Utica Shale in central and eastern New York State.

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	<ul style="list-style-type: none"> ▫ NYSERDA assisted in the drilling and recompletion of 20 gas test wells, of which 14 are producers, in eight counties in New York. From 1999 to 2004, these 14 wells produced 548 million standard cubic feet of natural gas, with an estimated wholesale wellhead value of \$2.2 million. ▪ See 1.D., 3.A., 3.A.2., 3.A.4., 3.A.5., and 3.B.
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"> ▪ New York Energy \$martSM programs and Corning Incorporated have partnered in 18 projects at six different locations designed to increase the energy efficiency of Corning's New York operations and thus reduce its overall energy costs and environmental emissions. ▪ Through various New York Energy \$martSM programs, NYSERDA provides cost-shared technical assistance to businesses to reduce their operating costs. More than 3,000 studies and audits have been provided through December 2005.
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"> ▪ The Governor's proposed FY 2006-07 budget includes a substantially greater allocation of available funds to support more energy efficient transportation alternatives for the State. ▪ DOT has provided guidance on implementing this recommendation to Metropolitan Planning Organizations and staff of its regional offices. This guidance is available to other transportation agencies. The guidance is being implemented as Transportation Improvement Programs and Long-range Transportation Plans are being adopted.
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"> ▪ Consideration of CO₂ production and mitigation is being quantified in transportation planning and State Environmental Quality Review (SEQR) documents and is being considered as a key decision-making criterion.
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 4.D.10. for additional information on efforts to reduce vehicle miles traveled and adopt transportation measures that reduce energy use and pollutant emissions.

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	<ul style="list-style-type: none"> ▪ See 1.E.
4.D.10.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ In April 2005, DEC’s Inspection/Maintenance (I/M) Program implemented a statewide on-board diagnostic (OBD II) testing program using stand-alone New York Vehicle Inspection Program (NYVIP) equipment. Annual OBD inspections are now required for non-diesel, non-electric light-duty vehicles for model years 1996 and newer. The New York Transient Emissions Short Test (NYTEST) I/M program continues in the downstate nine-county New York City Metropolitan Area for vehicles not inspected on the NYVIP equipment (<i>i.e.</i>, model years 1981 through 1995 and weighting more than 8,500 pounds). ▪ As part of a coalition of State, city, federal, institutional, and environmental organizations, NYSERDA and the New York City Department of Transportation will manage the New York Harbor Private Ferry Emissions Reduction Program. Funded with \$5 million from the Federal Transit Administration and \$1.8 from New York City Department of Transportation’s federal Congestion Mitigation Air Quality funds, the program aims to cut pollution from over 40 diesel-powered private vessels by identifying and implementing technologies that can reduce harmful emissions up to 90 percent. Private ferries make more than 1,000 trips a day in New York Harbor. Progress on this project is continuing, albeit slowly, since the aftermath of the 9/11 terrorist attacks has presented new obstacles to the ferry owners and the City. ▪ As part of a funded transportation program, transportation agencies in the downstate area have included these activities as enhancements to existing programs and as new initiatives. A Commuter Choice program has been developed that emphasizes the benefits of transit subsidies for commuters. A regional branding effort for this program is being explored. The ongoing Ozone Action Day program has been enhanced and expanded. The lower Hudson Valley has implemented a traffic signal re-timing and optimization effort. Similar projects in the New York City and Long Island areas are being evaluated. See 4.B.2. for information on diesel vehicle retrofits. ▪ See 1.E.
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. 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"> ▪ The State Energy Conservation Construction Code, maintained by the New York State Department of State (DOS), is a performance-based code that allows multiple paths to demonstrate overall energy performance. NYSERDA staff work closely with DOS to encourage code enhancements which reflect the status of technology development and which continually raise the minimum energy efficiency standards in New York. NYSERDA’s programs actively encourage new technologies, such as passive solar, daylighting, cool roofs, and advanced lighting controls, helping to demonstrate to the design and building communities that more aggressive energy efficiency standards can be met.

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	<ul style="list-style-type: none"> ▪ NYSERDA and DEC have undertaken a joint pilot project to address the heat-island issue in high density urban neighborhoods, primarily in the New York City metropolitan area, through urban forestation. NYSERDA will issue solicitations for tree planting contractors. Planting is scheduled to begin in spring 2006. Community organizations will be used to maintain the trees once planted. ▪ As part of its demand management efforts, NYSERDA will also consult with the national labs to obtain technical information on building technologies that may be used to mitigate heat islands. These heat-island mitigation efforts may be linked to demand reductions on the electric grid. ▪ DEC has developed an urban forestry grant program for municipalities and community groups. An RFP was issued in August 2005, and grant awards will be made in January 2006 for tree planting in the spring and fall of 2006. Approximately \$500,000 is available for these urban forestry initiatives. ▪ NYSERDA is supporting development of an environmental learning center at a new 1.5 acre park at Stuyvesant Cove on the East River in Manhattan. The park is being developed from a former brownfield by the New York City Economic Development Corporation. The park is landscaped with native plants and trees and houses a small, solar-powered education center. Plans are under way for the design and construction of a permanent center using various renewable and energy-efficient technologies on the site.
4.D.12.	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.
	<ul style="list-style-type: none"> ▪ See 3.C. and 3.E.
4.D.13.	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.
	<ul style="list-style-type: none"> ▪ Impacts of energy and air quality, including GHGs, are being routinely quantified by Metropolitan Planning Organizations as part of the development and adoption of long-range plans and Transportation Improvement Programs. ▪ See 4.D.
4.D.14	Support the design and construction of energy-efficient and environmentally-friendly “ green buildings ” through financial incentives, technical assistance, and related program initiatives
	<ul style="list-style-type: none"> ▪ In 2005, NYSERDA co-funded development of the <i>Green Guide for Health Care Construction</i> which will improve the efficient use of energy and environmental performance of new construction and retrofitted health care facilities including hospitals, nursing homes, clinics, medical office buildings, and hospices nationally and internationally. The document will be adopted by U.S. Green Building Council as part of the LEED™ rating system. At present, pilot projects are underway in the nineteen U.S. states, including New York, and in four foreign countries. The web site, www.gghc.org has registrants representing 65 countries.

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	<ul style="list-style-type: none"> ▪ Through the end of 2004, technical analyses in the New Construction Program indicate that the energy efficiency of buildings can exceed the requirements of the New York State Energy Code by an average of 25 percent using current technologies. In more advanced “green buildings,” peak demand reductions averaged 40 percent with an increase of less than one percent in construction costs. Energy savings in buildings participating in NYSERDA’s New Construction Program are more than \$27 million per year. ▪ New legislation was passed in 2005 to extend the New York State Green Building Tax Credit Program and add a second phase with another \$25 million in credits. The New York Green Building Tax Credit provides a state tax credit of 1.6 percent of the allowable costs for buildings in economic development areas and 1.4 percent for buildings located outside of economic development areas. Allowable costs for a base building are capped at \$150 per square foot, and allowable costs are capped at \$85 per square foot for tenant space of buildings larger than 20,000 square feet . Phase two caps the maximum tax credit for an individual building at \$2 million. The tax credit is administered by DEC. Phase one of the tax credit became available in 2002 and Credit Component Certificates were issued through December 31, 2004. Phase two begins in 2005 and Credit Component Certificates can be issued through 2009. Credits are divided over a five-year period. The last year of eligibility to receive credits for phase one is 2009, while phase two credits can be received through 2116. <p>Phase one Green Building Tax Credits have been awarded for seven buildings for a total of \$25 million. Regulations are being updated, and we expect to accept applications for phase two credits in 2007.</p> <ul style="list-style-type: none"> ▪ Through 2005, NYSERDA’s ENERGY STAR® Labeled Homes Program provided incentives to nearly 400 new home builders to build more than 6,500 new homes which are approximately 30 percent more energy efficient than homes built to applicable building codes. ▪ The Green Building Tax Credit has been awarded to five buildings for a total of \$18.46 million. \$6.53 million remain available. DEC staff are currently reviewing two applications which, if approved, would exhaust the remaining monies. Interest in the program remains high and potential applicants are seeking to learn about plans to continue the program. ▪ Through November 3, 2005, support for photovoltaic installations under the New York Energy \$martSM program includes 539 installations with 3,881 kW of capacity. Installations include two-kilowatt systems at 50 schools in New York that are linked by a common data acquisition system with performance available to anyone over the internet. Also included are installations at homes and businesses across the state and innovative building integrated installations such as the White Hall Ferry Terminal in New York City and the Solaire Building in Battery Park City.
<p>Policy Objective 5. Ensuring fairness, equity, and consumer protections in an increasingly competitive market economy.</p>	
<p>5.A.</p>	<p>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.</p>

No.	State Energy Plan Recommendation Progress to Date
	<ul style="list-style-type: none"> ▪ On May 2, 2003, the PSC instituted a proceeding to identify the extent to which New York’s electricity delivery utility rate structures produce financial disincentives to the promotion of energy efficiency, renewable technologies, and distributed generation and to develop recommendations for necessary rate design changes to eliminate the disincentives. On July 9, 2004, Staff of the DPS issued a <i>Staff Report</i> summarizing comments received in this proceeding and presenting its recommendations for a final round of comments by the parties. DPS Staff recommended that a revenue decoupling mechanism not be required at this time. Comments on the report were submitted on July 29, 2004 for the PSC’s consideration.
5.B.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ The PSC continues to work toward revised rate designs that provide customers accurate price signals. <p>In July 2000, the PSC instituted a proceeding to examine the then current practice of setting separate delivery rates for New York City and Westchester County. On November 25, 2003, the PSC voted to approve a rate adjustment that established a uniform system-wide delivery rate for electric customers of Con Edison.</p> <p>The first phase of the rate adjustment went into effect in May 2004 and will be phased in over three years and is expected to result in a rate reduction of 2.6 percent per year for Westchester County full-service customers and an increase of approximately 0.4 percent per year for customers in New York City. Annual bill impacts are expected to reflect actual market conditions.</p> <p>The Public Service Commission adopted new Standby Rates for Niagara Mohawk in 2002 and ordered such rates for the other utilities in 2003 (subsequently approved in 2004) to assist in providing proper rate signals to customers.</p> <ul style="list-style-type: none"> ▪ See 2.D.2. for actions related to real time pricing efforts that help send proper price signals to customers
5.C.	<p>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.</p>
	<ul style="list-style-type: none"> ▪ DEC released its final environmental justice policy on March 19, 2003. Pursuant to the new policy, DEC has implemented procedures to address environmental justice in DEC’s permit review process. Also, pursuant to the new policy, DEC has implemented various directives related to environmental justice, including enhanced availability of information to the public, use of geographic information systems to identify potential environmental justice areas, enhanced public outreach and participation, staff training, translation of documents for non-English speakers, a technical assistance grant program, and two work groups to develop and incorporate critical environmental justice information into DEC’s permit review process. These two work groups have completed their work and the resulting reports will be made available for review and comment by the public in early 2005. One work group addressed disproportionate adverse environmental impacts while the other addressed health outcome data.

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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 \$martSM 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"> ▪ By an order issued and effective on May 30, 2003, the PSC established conditions for the continuation and transfer of low-income programs and for establishing system benefits charge funding. Under this order, DPS staff and New York utilities were directed to work with NYSERDA to develop a new coordinated low-income energy efficiency and weatherization program. A PSC order of May 26, 2004 approved a plan submitted by NYSERDA in February 2004. A new program, EmPower New YorkSM, was launched on July 1, 2004. Under the program, NYSEG and Niagara Mohawk will refer customers who are receiving ratepayer-funded payment assistance to NYSERDA for energy efficiency and home performance services. Through October 2005, nearly 3,000 households have received efficiency services at an average cost per unit of \$833 and an average annual cost savings of more than \$240 per unit. ▪ In implementing its Assisted Multifamily Program, NYSERDA has coordinated funding and program decisions with the New York State Division of Housing and Community Renewal (DHCR) to facilitate upgrading of numerous low-income dwellings. By closely interacting with the United States Department of Housing and Urban Development, the New York City Division of Housing Preservation and Development, and DHCR, NYSERDA is able to leverage, on average, \$3 for every \$1 of SBC funding. ▪ LIPA and NYSERDA are co-funding a demonstration pilot as part of the Assisted Home Performance with ENERGY STAR[®] program for low-income LIPA customers. LIPA and NYSERDA launched the New York ENERGY STAR[®] Labeled Homes program on Long Island in mid-2004 and the Home Performance with ENERGY STAR[®] program in late 2005.
	<ul style="list-style-type: none"> ▪ NYSERDA is collaborating with the New York State Office of Temporary and Disability Assistance (OTDA), which is responsible for administering the Home Energy Assistance Program (HEAP), on a low-income fuel-buying pilot program in five counties during 2004 and 2005. This initiative is designed to significantly increase the buying power of available New York State HEAP funds by working with the network of fuel vendors. Based on its early successes, , OTDA, in the 2005-2006 heating season, committed to a statewide implementation of the oil-buying effort beginning with 20 counties ▪ The NYSERDA-funded Low Income Forum on Energy (LIFE) Steering Committee is actively working in the low-income 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. HEAP, the Weatherization Assistance Program (WAP), and utility-run programs are included in the coordinated effort. A statewide conference is scheduled for May 2006 in Albany.

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	<ul style="list-style-type: none"> <li data-bbox="297 285 1516 485">▪ NYSERDA is implementing a low-income program as part of the Con Edison Indian Point 2 Settlement. The program targets customers at or below 60 percent of state median income (SMI) and provides incremental electric efficiency services by expanding two existing NYSERDA programs, the Weatherization Network Initiative and Assisted Multifamily (AMP) programs in New York City and Westchester County. The budget is \$2.5 million and the goal is to serve 1,512 households. <li data-bbox="297 520 1468 653">▪ NYSERDA is implementing the National Grid Gas Efficiency Program. This program provides incremental gas efficiency services to National Grid customers by expanding two existing NYSERDA programs, Empower New York and Assisted Home Performance with Energy Star. The goal to serve 1,600 households over two-years. The budget is \$5 million. <li data-bbox="297 688 1479 789">▪ NYSERDA is implementing a gas energy efficiency program as part of the Con Edison Gas Rate Plan. Approximately \$4 million is available for energy efficiency services. Fifty percent of the funding is dedicated to the low-income sector.