

SECTION 1.1

PREFACE

INTRODUCTION

The United States (U.S.), by and large, has access to abundant supplies of energy. These energy resources enable our country to be the world's largest producer of goods and services and the leader in the world economy. Events in recent years, however, have served to remind Americans just how critical energy is to our society and way of life. After having access to plentiful and inexpensive energy supplies through much of the 1980s and 1990s, the nation has experienced intermittent price increases for natural gas and petroleum products, particularly over the past several years. In the winters of 1996-1997 and 2000-2001, natural gas prices spiked, as increasing demand for this fuel threatened to outstrip available supply, and starting in 1999, heating oil and gasoline prices also increased. During this same period, after a natural gas pipeline explosion in New Mexico, and power outages in the West and Midwest, concerns began to grow over the safety and reliability of the nation's energy systems infrastructure. In 2000, events in the State of California focused the country's attention on the adequacy and reliability of electricity markets, when its plan to restructure the electricity industry was undermined by supply shortages and extreme price volatility. Most recently, following the terrorist attacks of September 11, 2001, energy markets throughout the world are being tested for their resiliency as prices, particularly petroleum, become more volatile and uncertain, threatening global economic recovery.

The New York State Energy Planning Board (Planning Board) recognizes the inextricable link between the availability and price of energy and economic activity and well being. The U.S.'s position in the world economy and the standard of living of its residents is dependent, to some extent, on having ready access to reasonably priced sources of energy. The primary sources of energy are, to a large degree, imported from abroad, have significant and long-term effects on the environment, and ultimately face depletion. Until new and sustainable sources of energy are developed, the U.S. and New York will continue to experience the economic and social challenges of fossil fuel dependency.

A global challenge – such as ensuring adequate and reasonably priced energy in the face of climate change – requires a global solution. There is, nonetheless, a vital role for the states in addressing future energy needs. Although there is considerable

In response to the tragic events of September 11, 2001, Governor Pataki created the Office of Public Security to coordinate and bolster anti-terrorist efforts throughout New York State. The Office, which reports directly to the Governor, is responsible for:

Reviewing existing State policies, protocols and strategies designed to detect, respond to, and recover from terrorist acts or threats, identifying potential shortfalls, and implementing appropriate revisions and enhancements;

Coordinating State resources for the collection and analysis of information regarding terrorist threats, and facilitating information sharing among local, State, and Federal law enforcement officials; and

Assessing the preparedness of State and local health systems to respond to terrorists attacks.

The Office of Public Security is specifically charged with developing a comprehensive statewide anti-terrorism strategy, including an assessment of the vulnerability of critical systems infrastructures to terrorist attacks. Energy Planning Board agencies, specifically the State Departments of Transportation (DOT), Public Service (DPS), and the New York State Energy Research and Development Authority (NYSERDA), are working closely with the Office of Public Security and appropriate federal agencies to address security at important energy resources and public assets, including nuclear power plants and other electric generating facilities, electricity transmission and distribution systems, telecommunication systems, public roadways, railways, bridges and tunnels, natural gas and petroleum pipelines, and water systems. The Energy Planning Board agencies have committed their full support to the Office as it develops strategies and plans to protect these facilities from attack, and if attacks occur, ensure rapid restoration of critical infrastructures.

As energy demand increases, the effects of energy production and use on natural resources require that the State consider the implications of energy decisions on the State's environment and the public's health and safety. The Energy Plan balances the need for new energy supplies and investments in critical energy infrastructures with the need to protect the State's environment and public health. It also takes into consideration the significant changes that are transforming New York's energy markets. Finally, the Energy Plan provides strategic direction and policy guidance to foster further collaboration on the State's energy, environmental, transportation, and economic development activities.

were presented to the Planning Board at its nine public hearings and 740 sets of written comments were received. During this period, the Planning Board agencies' staffs continued to meet with interested parties throughout the State to ensure that anyone interested in participating in the planning process had the opportunity to do so. Parties and individuals that delivered comments at the public hearings and submitted written comments on the Draft Energy Plan are listed in Table A-2 at the end of Section 1. As with development of the Draft Energy Plan, the level of public participation in development of the Final State Energy Plan was unprecedented. As required by the State Environmental Quality Review Act (SEQRA), the Planning Board agencies' staff have responded to all of the comments and suggestions offered by parties and individuals on the Draft Energy Plan and modified the Plan as necessary, and, or appropriate, to reflect these comments and suggestions. The *Response to Comments* is provided under separate cover and accompanies release of the *State Energy Plan and Final Environmental Impact Statement*.

NEW YORK'S ENERGY MARKETS

New York's energy markets have changed dramatically over the past few years. These changes, especially in the utility sector, have focused the State's attention on ensuring that the transition to competition and customer choice unfolds in an orderly manner. While energy supplies and prices are determined to a great extent by world and national markets, the State continues monitoring markets and adopting policies to support the development of competitive energy markets and to maintain necessary consumer protections. The benefits of greater competition, in the form of increased diversity in energy and resource supplies, greater supply and resource availability, greater technological innovation, and prices that are lower than might otherwise be anticipated under regulation, are expected to be realized once this transition is completed. The State continues to monitor the reliability and safety of its energy infrastructure during the transition to competition to ensure that the quality of energy services is maintained.

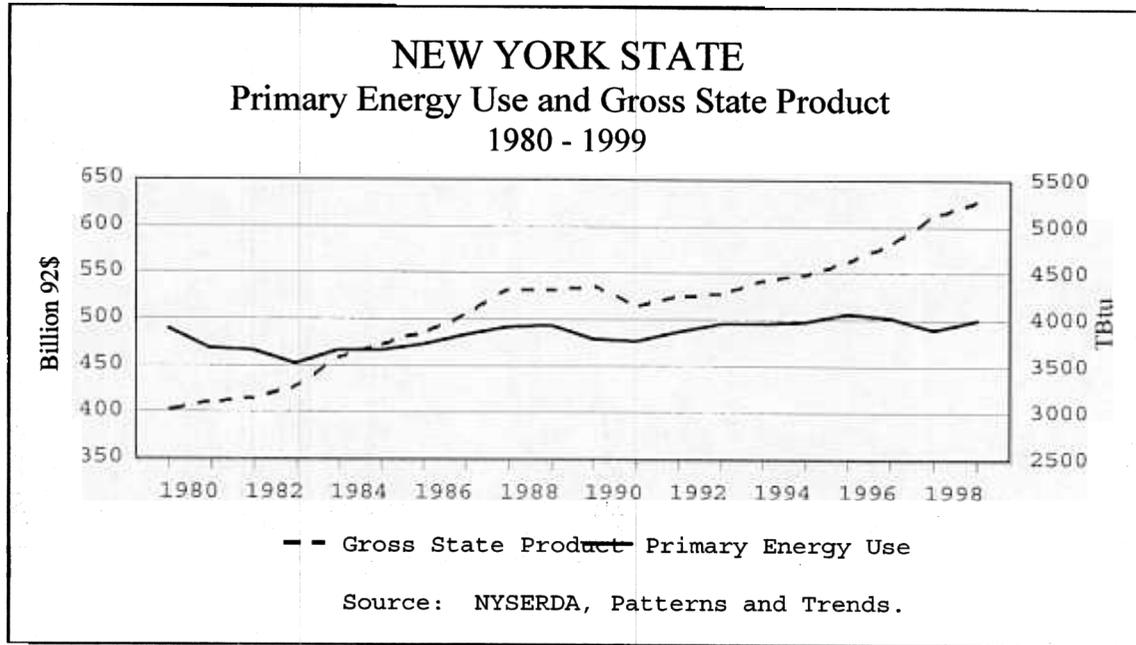
New York State Energy Overview

New York is the most energy-efficient state in the continental United States on a per-capita basis, accounting for less than 5% of the nation's primary energy use², while

² Primary use is defined as the total of all energy used directly, including natural gas, petroleum, coal, and biomass. Electricity is a secondary form of energy that is created from the use of primary energy sources.

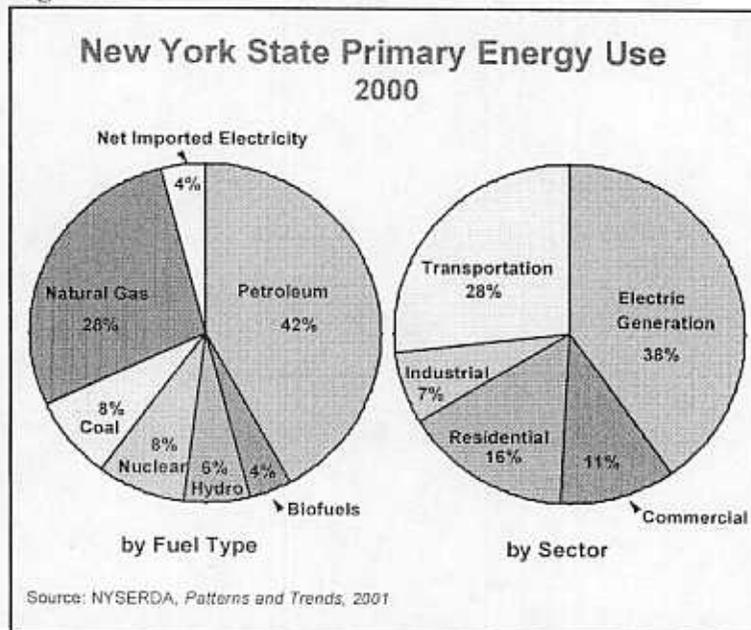
GSP over the same 20-year period is shown in Figure 2. This figure shows that GSP has risen despite relative stability in primary energy use.

Figure 2



As shown in Figure 3, most of the State's energy is derived from fossil fuels (petroleum products, 42%; natural gas, 28%; and coal, 8%). Renewable energy resources supply 10% of the State's primary energy (hydroelectricity, 6%; and biofuels 4%). Nuclear fuel used to generate electricity accounted for 8%, while net imported electricity represents the remaining 4%. Only 11% of primary energy use is met by resources produced within the State. The largest in-State energy resource is hydroelectric power,

Figure 3



electricity, a larger percentage than any other fuel, followed by nuclear, coal, and hydropower.

New York consumers pay more, on a per-unit basis, than the national average for most forms of energy, particularly electricity, as shown in Table 1. In 2000, New York residential electricity and natural gas prices were 72% and 27% higher, respectively, than the national average. New

Table 1: New York Energy Prices

Selected Energy Prices, 2000		
Fuel Type:	New York State:	National Average:
Electricity (¢/kWh)		
Residential	14.1	8.2
Commercial	12.5	7.2
Industrial	4.9	4.5
Natural gas (\$/Mcf)		
Residential	9.86	7.76
Commercial	7.77	6.59
Industrial	6.13	4.48
Home-heating oil (¢/gal.)	152.6	131.0
Motor gasoline (¢/gal.)	158.8	156.3

Source: NYSERDA, *Patterns and Trends, 2001*

York's average home heating oil price was 16% higher than the national average, while its average motor gasoline price, for all grades was 2% higher than the national average. In 2000, New Yorkers spent \$38.4 billion for energy, ranking third behind California and Texas in terms of total state energy expenditures, although New York ranks among the lowest on an energy expenditure per capita basis. Buildings account for the largest share of New York's total annual energy expenditure. Expenditures for lighting, heating, and cooling buildings was \$23.4 billion, representing 61% of the State's \$38.4 billion energy bill, followed by transportation at \$12.6 billion (33%), and industries at \$2.4 billion (6%), respectively. Expenditures on petroleum products (42%) represent the largest share of New York's annual energy expenditure followed closely by electricity (41%). In 2000, \$16.4 billion was spent on petroleum products and \$15.7 billion spent on electricity. The State spent \$6.2 billion (16%) on natural gas in 2000.

Recent Accomplishments

During the past several years, the State's electric and gas customers have received the benefits of significant reductions in their electric and gas delivery rates. Since 1996, the New York State Public Service Commission (PSC) has issued orders that have resulted in cumulative customer rate reductions of about \$3.3 billion through 2001, with at least \$1.6 billion of additional savings expected to be available each year over the next several years. The Long Island Power Authority (LIPA) has similarly provided rate reductions for its customers in the amount of about \$2 billion through 2001. In addition,

In a competitive market, participants will determine when and where new electricity generation or demand reductions are most needed and economically viable. Plans for new electricity generation that promote or contribute to the development of a competitive market will be consistent with the long-range plans for expansion of the State's electricity system, as envisioned in the State Energy Plan.

Many new independently-owned power plants have been proposed to serve the New York market. As of May 1, 2002, seven new power plants, totaling approximately 4,990 megawatts (MW) of additional capacity (representing a net addition of 4,426 MW), have been approved through New York's Article X siting process.⁷ Developers of an additional 11 plants, totaling 6,883 MW, have filed applications and another six proposed plants, representing 4,325 MW, have been announced. As the metropolitan New York region faced a limited ability to import power and a rising demand that threatened to outpace local generation capacity in 2001, the New York Power Authority (NYPA) purchased and installed 11 new 44-MW natural gas-fired generating plants in New York City and Long Island, greatly adding to the reliability of the regional electric system, particularly during the peak summer demand periods.

In addition to opening the electricity and natural gas markets to greater competition, the PSC has enacted a public benefits program through which System Benefits Charge⁸ (SBC) funds are used to promote energy efficiency, assist low-income customers, encourage research and development (R&D), and protect the environment. The PSC recognized the responsibility to ensure that electricity service be provided safely, cleanly, and efficiently, and that continuing such public benefits programs beyond what competitive markets might provide was necessary. This program, predominately administered by the NYSERDA, is funded through June 2006 at \$150 million a year.⁹ From 1998 through 2006, New York's public benefits funding is \$984 million. With interest earnings, this amount will exceed \$1 billion. In addition to this funding, the NYPA and the LIPA together will spend another \$130 million annually on energy efficiency and related public benefits programs. In May 1999, LIPA's Board of Trustees

⁷ One of the seven projects approved was subsequently canceled, yielding a potential net addition of 3,626 MW

⁸ The SBC is a non-bypassable charge on the transmission and distribution of electricity in New York State that is collected by the State's electricity load serving entities (distribution utilities).

⁹ NYSERDA administers approximately \$140 million annually with the remainder of funding being administered by utilities to serve selected low-income customer needs. These programs are described more fully in the Preserving Energy-Related Public Benefits Programs issue report, the Energy Efficiency, and Renewable Energy assessment reports in the State Energy Plan.

During the transition period to competition, the State's SBC-funded public benefits programs are providing a wide range of services to residents and businesses. These programs provide energy efficiency and related services to small customers and low-income households, support development of markets for manufacturing, stocking and sales of energy efficient products, and support R&D activities in renewable energy development, new product development and applications, and environmental protection. At the direction of the PSC, the State's public benefits program was expanded to include load management and emergency generation resources procurement to help meet the State's peak electricity needs until new generation resources become available. The combined effect of State government activities directed at improving energy efficiency and load management enhances the State's ability to meet peak electricity demand. The State's rapid efficiency deployment initiatives, collectively referred to as the Coordinated Electricity Demand Reduction Initiative, enhances the State's ability to respond to peak electricity demand periods with demand reduction measures such as increased efficiency, market-based responses, conservation, and public awareness campaigns. Contingency plans are in place for State agencies to respond quickly if the need arises.

In support of the State's load management initiatives, in 2001, the NYISO implemented a day-ahead economic demand response program. This program enables demand reductions and new electricity supplies to compete on equal footing to meet the State's peak load needs. The NYISO also implemented an Emergency Demand Response Program that requires participating customers to reduce demand when requested by the NYISO. These efforts facilitate competition among alternatives (*e.g.*, energy efficiency, load management and electricity generation) and are expected to promote greater customer choice and diversity in energy resources. During the summer of 2001, as a result of these coordinated NYISO programs involving energy service company and utility customers, the State's peak demand was reduced by nearly 500 MW. In addition, through public appeal, State government initiatives, voltage reductions, and other utility and NYISO programs, peak load was reduced by another 1,165 MW, bringing the total statewide reduction to approximately 1,665 MW. The availability of these demand management resources, including energy efficiency, enabled New York to assist neighboring states in maintaining electricity service and stabilized wholesale electricity prices at the time of system peak.

While load reduction and energy efficiency programs are important components of New York's strategy, California has demonstrated the risk in relying solely on these initiatives to meet future energy needs. As our economy continues to grow and businesses and residents become more reliant on technology, so too does the State's

The State continues to be heavily dependent on petroleum products for sectors other than electricity generation. These include motor gasoline, home heating oil, diesel fuel, propane, and residual oil. New York is the fourth largest petroleum fuel market in the U.S., exceeded only by Texas, California, and Florida, and the largest market for home heating oil in the U.S. A diverse distribution network has developed over the years to transport petroleum products into and throughout the State, including several pipelines connecting New York to Gulf and East Coast states and a vast port and barge waterway system. As demand for energy increases and investment in new supplies and distribution infrastructures becomes increasingly responsive to market forces, energy producers, suppliers, and users also must have the ability to respond to market forces.

The State is continuing its efforts to maintain and improve the existing transportation network to provide mobility to its residents and businesses and enhance the efficiency of the transportation system. Actions to enhance efficiency include greater emphasis on public transportation, technological innovations, alternative-fuel vehicle deployment, and pollutant emission reductions. To lessen the State's reliance on a single transportation fuel, the State now leads the nation in the use of alternative-fueled vehicles and is continually incorporating new clean-fueled vehicle technologies. Since 1995, the State has increased the number of alternative-fueled vehicles in the State fleet from less than one dozen to more than 1,400.

The transportation sector is continuing to invest in infrastructure enhancements throughout the State to improve mobility, promote economic development, and improve the environment. These projects include the purchase of new buses that use a clean-burning diesel technology and will reduce hydrocarbon and particulate emissions. In addition, beginning with model year 2004, the California Low Emission Vehicle (LEV II) standards will be required of all light- and medium-duty vehicles in New York State. The LEV II program: extends passenger car emission standards to sport utility vehicles and pick-up trucks; expands and tightens average fleet emission standards; and presents a super-ultra-low-emission vehicle category for light duty vehicles. In addition, LEV II requires that 10% of vehicles sold be advanced technology vehicles, which includes electric vehicles, hybrid vehicles, and vehicles powered by fuel cells.

These programs are expected to reduce the amount of air pollution from motor vehicles, especially in metropolitan areas, by continuing to drive the development of new technology to produce cleaner and more durable cars and trucks. DOT, through its Environmental Initiative, has integrated environmental considerations into its statewide transportation planning and project development. The State is developing and

partnership among State government, the Saratoga Economic Development Corporation, and the University at Albany can attract new businesses and jobs to New York State to address the growing need and demand for clean-energy and energy-efficient technologies.

The State's commitment to reducing energy costs and developing energy markets by lowering taxes, streamlining and eliminating unnecessary regulations, and providing energy customers with greater choices among energy service providers is an important impetus behind the policies and strategies in the State Energy Plan. Equally important, however, is the State's commitment to: improving energy diversity and energy efficiency; increasing energy supplies; fostering a sustainable market for indigenous and renewable energy; encouraging new, cleaner energy technologies; and improving transportation system efficiencies. These commitments will lead to increased economic development in an environmentally sustainable manner.

The 2000-2001 State Budget eliminated the Gross Receipts Tax (GRT) paid by manufacturers and industrial energy customers, began a gradual elimination of the GRT for all other business customers over five years, and provided a major reduction in GRT for residential energy customers over a five-year period. When fully implemented in 2005, annual tax savings from GRT modifications are expected to reach \$330 million. The State also is eliminating the sales tax on the delivery of energy, providing \$150 million in tax savings to the State's natural gas and electricity customers. The first phase of this tax cut began in September 2000, and the entire reduction will be fully implemented by September 2004. When combined with the GRT reductions, State taxpayers will save approximately \$580 million a year, further lowering their energy costs.

NEW YORK'S ENERGY POLICY

The policies and strategies included in the State Energy Plan place New York on a path toward greater energy self-sufficiency and customer choice. The policy and strategy recommendations support a flexible and market-based approach to growing the State's economy, improving the environment, and enhancing the transportation system. The recommendations will drive technological innovation and facilitate competition in energy markets that will result in the delivery of new and efficient energy products and services at competitive prices. In addition, they are designed to provide for continued energy system security and reliability.