

**Testimony of
Stephen G. Whitley
President and CEO
New York Independent System Operator**

**Joint Public Hearing of the Assembly Standing Committee on Energy
and the Assembly Standing Committee on Corporations**

**March 5, 2009
Albany, NY**

Good morning Chairman Brodsky, Chairman Cahill, and Members of the Assembly Corporations and Energy Committees. We welcome this opportunity to examine existing wholesale energy market design and to look for ways to enhance reliability, reduce cost to consumers, and improve environmental sustainability to New York.

My name is Stephen G. Whitley. I am President and Chief Executive Officer of the New York Independent System Operator (NYISO). The New York ISO is a not-for-profit corporation that began operations in 1999, operating New York's bulk electricity system, and administering the wholesale electricity markets. The New York ISO also conducts reliability and resource planning for the state's bulk electricity system.

With me today is Dr. David Patton, President of Potomac Economics. Dr. Patton has two decades of experience in energy economics and serves as the Independent Market Advisor to the New York ISO, and for the wholesale electric markets in the Midwest, Texas, and New England. In addition to these duties, Dr. Patton serves as market advisor for the 12 states participating in the Regional Greenhouse Gas Initiative.

Today I am testifying on the efficiency of New York's market design, and the benefits it has brought to the people and businesses in New York. Dr. Patton will testify on the efficiency of uniform clearing price designed for energy markets. After our testimony, we will be glad to answer any questions you may have.

While I am a relatively recent arrival at the New York ISO, I bring with me over 38 years experience in both traditionally structured electricity markets and competitive wholesale electricity markets. During my 30-year tenure at the Tennessee Valley Authority (TVA), I served as General Manager, Electric System Operations, of the Transmission Power Supply Group, and was responsible for electric system operations and planning for the seven-state TVA service territory. Previous to my position at the New York ISO, I served as Senior Vice President and Chief Operating Officer of ISO New England (ISO-NE), a regional transmission organization (RTO) serving a six-state area, for seven years.

New York's energy needs are both diverse and complex. We have limited local fuel resources. Geographically, we serve one of the nation's largest states, with the world's largest and most complex "load pocket," New York City. We have 11,000 miles of transmission lines, more than 350 large generating units, and over 1,000 megawatts (MW) of wind generation spread out over a vast area. Our electricity demand averages about 20,000 MW, while peak demands are

over 34,000 MW during the summer months. Meeting peak summer demand requires that electricity generation must come online instantaneously and without fail if we are to continue to supply this vital commodity with the reliability our citizens have a right to expect. We know that the economic costs of a large outage in our state can total \$6 to \$10 billion per day.

Upgrading and protecting the integrity of our electricity delivery infrastructure remains critically important, and economically efficient energy markets will play a pivotal role in helping to revitalize our state's economy. We face these challenges together as citizens, private industry, and policy makers. On behalf of the New York ISO, I look forward to assisting Governor Paterson, Legislative Leaders and Legislative Committees in achieving the State's energy, economic, and environmental goals.

New York's electricity markets opened to wholesale competition in 2000 based on the recognition that an independent organization, separate from the regulated utilities or other economic interests, would be required to operate the state's bulk transmission system and administer its new wholesale markets. Such an independent entity is key if competition is to be open and fair, avoid market manipulation, and attract needed investment. To date, experience shows that the New York ISO has been and continues to meet these market needs. The New York ISO was created to include an independent Board of Directors. In order to assure that all interests were represented, the Board was supplemented by a governance process open to market, consumer, environmental, and relevant governmental interests.

A great misconception about the state of the electric industry in New York today, is that it has been fully "deregulated." It has not. The industry has been restructured to move ownership of generation to independent companies, but the transmission and distribution systems and ancillary service systems remain tightly regulated. And, the Federal Energy Regulatory Commission (FERC) has oversight and regulatory responsibility for wholesale electricity markets, like New York's. Our bulk power and local distribution systems, wholesale consumer's rights, and the safety and adequacy of electric service at just and reasonable rates, remain the mandate of FERC, and the New York Public Service Commission (PSC). Congress has given FERC jurisdiction over interstate transmission service and the terms and conditions of wholesale power sales. This encompasses nearly everything the New York ISO does.

New York and many other states introduced competition at the wholesale level in their electric industries when many utilities found themselves with uneconomic investments resulting in stranded costs on their books. Rather than focusing on improving regulation, it was felt that competition should be introduced into the markets for electricity. At the same time, computer systems and generation technology evolved to the point where the electric energy and capacity itself could be sold on a competitive basis by suppliers who would bear the risk of their investments. Likewise, energy efficiency and demand management investments and resources could compete equally with generation resources to meet customer needs in an open market setting.

In a competitive environment, power suppliers are not paid for their energy unless their power plants generate power or provide capacity or other essential electricity services. Their plants are only chosen to generate energy if their output is competitively priced. In the event the competitive projects prove uneconomic, the investors bear the risks – not the consumers.

In our energy markets, competitive pricing is determined through a series of auctions. The system is designed to give producers the motivation to offer energy into the auctions at the lowest possible price. In New York, as in almost all other markets, that motivation is supplied by

the uniform market clearing price. While the cost of fuel has driven the cost of electricity higher in recent years, the numbers here in New York show that, after adjusting for the cost of fuel, the markets have produced wholesale energy prices approximately ten percent lower than they were in the year 2000. In fact, if it had not been for the increases in the cost of fuel, competitive markets would have yielded wholesale prices for electricity, including both generating capacity and energy, 18 percent lower than in the year 2000, or over \$2 billion on a current annual basis. (See *Figure 1*.)

The electricity system of this state and the nation has operated for nearly a century under a regime of regulated, geographic monopolies. We have had a little less than a decade of experience with the operation of wholesale electricity markets. However, there are strong indications that the competitive system is working and benefiting New York.

In 2008, New York's wholesale electricity markets involved more than 400 market participants and approximately \$11 billion in annual transactions. The markets cleared nearly \$70 billion in competitive transactions since its inception. The benefits of competitive markets in New York include attractiveness to clean and renewable sources of electricity; more efficient power plant dispatch than occurred before we started operation; improvements in the amount of power produced at existing power plants; and lower generator non-fuel operating costs. Together, these improvements created approximately \$575 million in production cost savings in 2006, which contributed to lower costs to consumers.

The design of New York's markets and open access to the grid has also proven attractive to development of renewable energy resources (mostly wind) in New York. While there was no significant wind generated electricity in New York in the year 2000, before competitive markets were established, there are now more than 1,200 MW in commercial operation, as shown on the map of the New York power system we brought here today. (See *Figure 2*.) The contribution of these new wind farms is crucial. Last week wind power output reached 1,000 MW on our system for the first time, approximately five percent of the roughly 25,000 MW of total system load at the time. Our studies show that for each 1,000 MW of wind added to the system, wholesale energy costs are reduced by approximately \$300 million. The market structure helps the State realize its Renewable Portfolio Standard goal. It will also help Governor Paterson's new clean energy agenda support investment and development in clean renewable energy resources in New York. The New York ISO has actively assisted the State Energy Planning Board as they craft the State Energy Plan to ensure we can meet the energy needs of our citizens.

Over 8,000 MW of additional wind and other renewable power projects are proposed for interconnection to New York's bulk electricity grid. These clean, homegrown fuels offer both significant environmental and economic benefits, as well as needed diversity to our generation fuel mix. In fact, the regions of North America served by organized wholesale electricity markets have developed 78 percent of installed wind generating capacity.

Competitive wholesale markets have also led to existing plants being run more efficiently and effectively. In New York, average plant availability increased from 87.5 percent (in the 1992–1999 timeframe) to 94.4 percent (from 2001–2007). Those improvements produced the equivalent of adding 2,400 MW of generation, the equivalent capacity of four large power plants.

Since the markets began operation, with the help of the New York Power Authority (NYPA), the Long Island Power Authority (LIPA), Consolidated Edison, and other regulated companies, New York has seen the development of new generation and transmission where it is most needed: in New York City, Long Island, and the lower Hudson Valley. More than 6,000

MW of new generation has been built since the year 2000, and over 80 percent is sited where demand is greatest. This represents a \$5.5 billion investment in New York generating assets. Transmission developers also have invested nearly \$1 billion to deliver approximately 1,000 MW of new capacity to Long Island.

New York has also been a leader in developing demand-side management in its electricity markets. These programs effectively reduce the need for additional resources by lowering consumption during times of high demand. The total of the resources in our demand response programs have increased more than ten-fold since the year 2000, and now totals more than 2,000 MW. Demand-side resources now compete head-to-head with generation.

While a growing number of new generation resources have come into service since the start of New York's markets, a significant portion – 68 percent – of the existing generation fleet was put into service before 1980. These facilities are aging, and the costs of continued maintenance are increasing.

Replacement of these aging plants with newer technology will provide substantial environmental benefits, but will likewise require substantial new investment. To encourage these investments, it is essential that market rules maintain a level of integrity and predictability. It is also essential that the administration of the markets be independent, objective, and unbiased. Without independent administration, attracting investment will be infinitely more difficult, and ultimately more costly. Attracting investment will be more of a challenge than ever, due to the national financial crisis we currently find ourselves in, and we will be competing with other regions for such investment. Disrupting the fundamental construct of our energy markets would create uncertainty and chill the climate for additional investment.

As you know, the greatest variable cost in generating electricity in fossil fuel plants is the cost of fuel. Needless to say, the costs of oil and natural gas are governed by world energy prices, beyond the control of the New York ISO or the State of New York. Despite this, the wholesale energy markets in New York have been effective to control other costs. In the second half of 2008, wholesale electricity prices in New York declined significantly as natural gas prices dropped. Natural gas prices decreased by 43 percent from June to December, and the statewide average cost of wholesale power dropped by 51 percent in that same period.

However, the recent drop in fossil fuel prices, and the decrease in demand linked to a troubled economy, must not lull us into complacency about planning for New York's energy future. Without sustained investment in diverse, non-polluting energy resources and the transmission infrastructure needed to transport these clean and renewable power supplies to high demand areas, New York's electricity consumers will continue to see power price swings tied to volatile fossil fuel prices.

Fair and competitive markets are fundamental to some of the important goals we seek to achieve, such as the investment in renewable resources, increasing our fuel diversity and independence, which leads to a cleaner environment, and the addition of jobs to our struggling economy.

The current pricing method provides greater efficiency and the ability to monitor bidding effectively, thus providing transparency and protection to consumers. It creates a marketplace that enables smaller generators, such as wind and other renewable power providers, to compete more fairly and effectively with larger traditional power producers. Now is the time for us to move forward to build more enabling infrastructure – transmission and Smart Grid enhancements – to

allow greater penetration of renewables, enhance energy efficiency, increase fuel diversity, lower emissions, and lower costs to consumers. As Dr. Patton will explain, changing the market design construct to “pay-as-bid” does just the opposite. It will actually raise costs to consumers and stifle private investment.

Thank you Chairman Brodsky and Chairman Cahill for this opportunity to assist your Committees in examining the way energy markets work to determine the price of wholesale electricity in New York State. We are happy to assist you in any way.

I will now yield to Dr. Patton.

FIGURE 1

Wholesale Electricity Prices in New York 2000 & 2008



