

eBriefing

The Governor's Energy Agenda: Transforming Supply and Demand in New York



Presented By

Environmental Sciences & Sustainable Development and the NY League of Conservation Voters.



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A pivotal player

The intertwined subjects of climate change, energy, and the environment increasingly dominate the news. Governor Eliot Spitzer is working to address them. Instrumental to his agenda is a state agency with a memory-challenging name: the New York State Energy Research and Development Authority, known widely

as NYSERDA.

NYSERDA's CEO is **Paul Tonko**, who assumed those duties in July 2007. Tonko brings to the position a long record of public service and an insider's knowledge of energy issues. A member of the State Assembly from 1983 through June 2007, he chaired its Standing Committee on Energy for 15 years.

In a November 5, 2007, talk at the Academy, cosponsored by the Sallan Foundation and the New York League of Conservation Voters, Tonko described the Spitzer team's strategic approach to environmental, energy, and climate change challenges, with a focus on his agency's efforts. But he first offered a salute to his host: "I am particularly proud of our strong relationship with the New York Academy of Sciences," he said, explaining that the Academy had helped NYSERDA develop a research plan for its Environmental Monitoring, Evaluation and Protection Program. That program aims to increase understanding of the environmental impacts of energy systems and to provide expertise to mitigate impacts. The research plan prioritizes key research areas.

An "energy revolution" in New York

Tonko's assessment of the challenges New Yorkers face was stark: environmental damage caused by climate change, skyrocketing energy costs, reliability issues, and concerns about the adequacy of energy supplies and energy security. "I believe we are in a deepening energy and environmental crisis. Our economy, our environment, and our communities cannot sustain this course. It is imperative that we act now," he stated.

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"Governor Eliot Spitzer has responded aggressively by embarking on a much needed energy revolution in New York. [It] will transform how we use energy, bolster our economy, and clean our air," he continued. "NYSERDA is working closely with the administration in every facet of this effort."

Spitzer envisions an "innovation economy ... a knowledge-based economy of new businesses and new ideas ... the clean-energy economy," Tonko said. NYSERDA's strategic vision is that,

[N]ew York becomes a world-class leader in clean and efficient energy technology ... our businesses and institutions produce the technology that can be exported throughout the world ... our citizens have access to the cleanest, most efficient energy products and services ... we move toward a more environmentally sustainable energy future.

Aggressively managing demand and supply

How can the State achieve all this? Promoting energy efficiency tops a long list:

- "15 by 15" initiative. This "dramatic acceleration" of energy efficiency would reduce statewide electricity use by 15% from forecasted levels for 2015, cutting energy costs and pollution, too. Tools include new appliance efficiency standards, stringent energy building codes, and the investment of hundreds of millions of dollars in renewable energy projects. The initiative is "the cornerstone of New York's energy and environmental policies," Tonko explained, because "using energy more efficiently is clearly the easiest and most cost-effective means to reduce emissions."
- Efficiency Portfolio Standard. A proceeding before the Public Service Commission would advance the "15 by 15" initiative by setting targets for energy efficiency. A working group is determining what technologies and programs should be developed and what can be fast tracked.

Worsening climate change and the need to transition from fossil fuels "is driving a sense of urgency," Tonko noted. The Spitzer administration wants "to accelerate the transition toward renewables." This means aggressively implementing and improving existing technologies—including wind, hydro, and solar—and growing R&D and deployment programs dramatically. The energy portfolio must be diverse. These efforts are under way:

- Renewable Portfolio Standard (RPS). This program (inaugurated under Spitzer's predecessor, Governor George Pataki) aims to increase the state's share of electricity from renewable sources from the 2004 baseline of 19.3% to at least 25% by 2013. NYSERDA stimulates and supports projects that include hydropower, wind, biomass, solar, hydrogen, and other emerging technologies. But funding for R&D and deployment must be doubled to reach that goal.
- Lieutenant Governor's Renewable Energy Task Force. Lieutenant Governor David A. Paterson's task force is formulating a strategy to increase renewable energy sources to potentially 30% or more, building on the RPS and on system benefits charge programs, which promote renewable energy technologies and energy efficiency, respectively.

Building to green standards

"Green building design and retrofits provide a tremendous opportunity to expand the use of green energy technologies," Tonko asserted. Among administration efforts:

- Green residential buildings. The Spitzer administration will introduce legislation providing financial incentives for homeowners to build or renovate homes to green standards. Setting an example, the Governor and First Lady aim to cut electricity consumption and greenhouse gas emissions by half in the Governor's mansion.
- High performance schools. NYSERDA and the state Education Department are setting standards for energy-efficient school construction that will reduce operating costs, improve indoor air quality, conserve natural resources, and enhance learning. Through its School Power ... Naturally program, NYSERDA has provided more than \$2 million to 50 schools for systems that include collection and online display of data about weather and the system's energy performance, an educational feature for students.
- Green state buildings. Beginning in 2008, all new construction projects and major renovations managed by the state Dormitory Authority (whose authority extends beyond schools) will meet LEED standards. (Exec Order 111 applies energy efficiency and other green standards to all state buildings and vehicles.)

Market measures and sequestration

Coupling market forces and regulations offers another approach to reducing greenhouse gas emissions. Technology offers yet another. Tonko described these initiatives:

- Regional Greenhouse Gas Initiative (RGGI). New York participates in this carbon cap-and-trade program, which is to launch in 2009. NYSERDA is developing the carbon-allowance auction system. Carbon offsets will generate additional revenue, to be invested in programs to further reduce carbon emissions.
- International Carbon Action Partnership. New York has joined with other U.S. cap-and-trade states, Canadian provinces, and European countries to share information about carbon cap-and-trade markets and perhaps eventually link them.
- Carbon capture and sequestration. NYSERDA is working to further the understanding of the state's sequestration potential.

Intellectual capital and skills

Climate scientists predict that global greenhouse gas emissions must be cut by more than 75% by the year 2050, but current investment falls far short of what's needed, Tonko cautioned. "The importance of university-based research ... cannot be overstated—especially given our urgent need to accelerate research and development." The state's "brain trust" is an invaluable asset. The intellectual economy, the clean energy economy, and the state must join forces in the "necessary technological revolution."

"Green collar" workers are needed.

Tonko stressed that skilled "green collar" workers are also needed, to construct and retrofit infrastructure and build and maintain new energy systems. The State must work with universities, colleges, high schools, trades and apprenticeship programs, and other parties to create programs on cutting-edge technologies, he said. NYSERDA is partnering with community colleges to offer training.

Overall, collaboration toward these shared societal goals pays an invaluable dividend, Tonko reflected: it reinigorates the long-neglected sense of community, inspiring "the 'we' in us."

Questions from respondents

Respondents Nancy Anderson, Executive Director of the Sallan Foundation, and Marcia Bystryn Executive Director of the NY League of Conservation Voters, posed questions to Tonko.

Anderson asked how NYSERDA monitors, measures, and verifies, to ensure that promises made are kept and learning occurs. Tonko replied that NYSERDA is strong in applied R&D and is "notoriously measuring, assessing, evaluating, recommending, doing matrices" to examine what does and doesn't work, and analyzing every dollar it invests. It has invested its primary revenue stream, \$175 million a year, wisely, he contended. The RPS is one example; roughly 1000 megawatts of wind power may be generated by the end of 2008.

But the capital needs for developing new technologies are "tremendous," and states are competing to attract industry investments. Revenues from RGGI may bolster NYSERDA's R&D budget.

Bystryn asked how NYSERDA works with other state agencies to ensure a coordinated approach to research, and with stakeholders to market its programs. Tonko said he's impressed by the administration's "push to bring people to the table" and the continuous, close communication. He favors the development of a formal state energy plan. The administration is also "leading by example," he noted, in executing Executive Order 111, which requires state entities to be energy efficient and environmentally aware.

NYSERDA will be strengthening its own communication efforts, including its Web site, so all parties eligible for funding are aware of it, he continued. Energy Smart.org offers energy-saving tips. A pledge drive promoting compact fluorescent light bulbs has enlisted more than 10,000 municipal governments, businesses, retailers, and others.

A new clean-tech industry is emerging.

Bystryn asked how the administration is attracting clean-tech industry. Tonko cited General Electric, which he had earlier described as an example of the growing clean-energy economy. After the state offered GE an economic development package and NYSERDA made GE aware of green building incentives, the company decided to add 500 new "green" jobs at its Schenectady plant for engineers who will develop renewable energy technology. That city's old industrial economy had collapsed; a new one is emerging. (NYSERDA's Saratoga Technology + Energy Park, STEP, is a major initiative to attract clean-energy and environmental technology companies, too.)

Efforts to develop a skilled, high-tech workforce are another tool. NYSERDA is learning from other countries' efforts, too. All this is essential to making New York competitive with other states, Tonko added.

Questions from the audience

That issues related to energy are hard to delimit, get very technical, and generate strong interest was evident in the many questions the audience posed to Tonko. All (including the respondents') are captured in the audio of the Q&A session. Some are documented in the Open Questions section of this eBriefing.

Among the questions was how the State can help "green up" New York City's building binge. One way, Tonko suggested, is by funding demonstration projects that can be emulated. What are the prospects for an expansion of net metering? It will "become a big issue," Tonko predicted. The Lieutenant Governor's Task Force on Renewable Energy is likely to recommend legislation adopting it, to further the renewable energy agenda.

Another audience member wanted to know how—given the little renters can do to conserve energy—owners and managers of apartment buildings could be helped to do more. Smart metering and NYSERDA's technical assistance are two of the means, Tonko explained, along with "aggressive efforts to partner and dialogue."

And why should electricity, however efficiently generated, be wasted on lighting up the sky? asked one questioner, gesturing to the glittering view from the Academy's 40th-floor meeting room. Legislation regulating outdoor lighting was once introduced, Tonko recalled. It did not succeed, but technology can help: motion sensors can reduce a lot of unnecessary use.

The reception that concluded the event was a convivial continuation of the Q&A session: Tonko conversed at length with Academy members, listening, sharing information, and exchanging views. What members learned is sure to be shared in other forums, as the climate warms and energy issues grow hotter.

Open Questions

Will Governor Spitzer endorse, as Mayor Michael Bloomberg, Al Gore, and a growing number of other leading figures have, a tax on carbon?

The Regional Greenhouse Gas Initiative (RGGI) will cap utilities' carbon emissions. Will it raise New York's electricity prices, already among the highest in the nation? If so, will support for RGGI erode?

How effective will collaboration among participants in cap-and-trade markets in the United States, Canadian provinces, and Europe prove to be? Will these markets eventually be linked?

Absent sound federal energy policy, how much can states accomplish to slow climate change? How might future federal legislation affect the State's plans?

NYSERDA has an ambitious mission but limited resources. How much can its staff actually accomplish?

Will the legislature vigorously advance, and fund, green energy policies and programs?

To expedite siting of renewable energy facilities, the Governor has proposed reinstating Article X of the Public Service Law, which streamlined review of sites for power generation facilities; it expired in 2002. Will the legislature reenact it?

How will nuclear power figure in the Spitzer administration's energy plans? Will the petition submitted to the Nuclear Regulatory Commission by the Governor and the Attorney General opposing license renewals for Indian Point nuclear reactors prevail?

To increase supplies of natural gas, will the administration approve the controversial Broadwater offshore liquefied natural gas terminal?

Can New York create a thriving knowledge-based economy centered on clean-energy technologies? Will a new state energy plan make a difference?

Will New York be able to maintain the reliability of its electric grid in the face of rising demand for electricity? Will needed new transmission lines be approved?

The state's green-building tax credit law has provided \$25 million in credits to developers who promise to "build green" and to report on their energy use. What are the results?

NYSERDA is investigating the state's potential for carbon sequestration. Will sequestration prove effective on the scale needed?

Over time, how dramatically will devices—such as motion sensors, compact fluorescent light bulbs, light-emitting diodes, and smart meters—cut electricity use? How can their wide adoption best be accelerated?

What can New York State learn from California's leadership on energy and environmental issues? From energy-efficient Europeans?