

Energy Matters

[State & Grid Operators Concur: Indian Point Unnecessary](#)

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By Roger Witherspoon

Schenectady, NY – The 1,000-megawatt Indian Point 2 nuclear power plant could be shut down when its license expires in 2013 with no impact on either system reliability or the electricity needs of the New York City -Westchester County section of the state’s electric grid.

But the region could face an electricity shortage and a stress on system voltage if its nuclear twin, Indian Point 3, closes when its license expires at the end of 2015 and no replacement power is in place. However, projections are that the region’s shortfall would be 750 megawatts – three quarters of Indian Point’s production capacity – and these could be made up by a combination of new electricity generation, conservation measures, and new or improved transmission capabilities, according to both analyses.

These conclusions – that at least one of the two reactors is no longer necessary – were made in comprehensive, back to back analysis by the New York Independent System Operator,

which regulates and runs the state's power grid and released its 97-page, draft "Reliability Needs Assessment" (RNA) last week; and the New York State Energy Planning Board, which on Friday released its 111-page final "Transmission and Distribution Systems Reliability Study and Report". The two analyses differ only in terms of their respective views of electricity needs if IP3 shuts down on schedule December 31, 2015.

The ISO, which has to deal with the systems as they exist, rather than what may develop, projects a worst case scenario with a shortfall in 2016 if the economy has picked up and electricity usage is growing rapidly.

"Reliability violations would occur in 2016 if the Indian Point Plant were to be retired at the latter of the two units' current license expiration dates," the ISO report predicts. "Under stress conditions, the voltage performance on the system without Indian Point would be degraded."

That scenario would require Consolidated Edison, the transmission company, to make up the shortfall during peak periods with a combination of targeted blackouts, service reductions, or planned conservation measures. The region's peak daily usage is between 9,000 and 13,000 megawatts, with higher summer demand driven by the use of air conditioners. Indian Point provides only 560 megawatts of the electricity transmitted in the area by ConEd, and sells the rest in a market stretching from Maine to Ohio. That is just five percent of the electricity used by area businesses, transit systems, and residents.

But the 2000 megawatts flowing from the plants form an important part of the carefully balanced electric grid. That is why the ISO requires some of that electricity must be replaced to ensure system stability in the NYC-WC sector.

The ISO projection continues that if electricity usage grows at the current, moderate pace, shortfalls would develop after 2018; and if the economy is sluggish problems will not occur until 2022. The ISO does not, however, state that that means IP3 must remain open and operating.

"Continued reliability of the bulk power system during the study period depends on a combination of additional resources provided by market-based solutions..." the ISO report states. "However, the solutions submitted to the NYISO for evaluation...does not have to be in the same amounts of compensatory megawatts of the locations reported in the Reliability Needs Assessment. There are various combinations of resources and transmission upgrades that could meet the needs identified in the RNA."

The ISO is currently developing a more precise assessment of what combinations would be

needed to replace the plants so the free market can step in.

“A new plan envisions the possibility that Indian Point will be taken off line,” said ISO spokesman Ken Klapp during a discussion at the agency’s control center in the Albany suburbs. “The market won’t respond to needs unless they are made aware of the needs in the future. Then we get the market and the political system involved.”

A Manageable Problem

The NY State Energy Planning Board acknowledges the possible shortfall, but expresses confidence the private sector will step in to fill the gap, which it says stems from the retirement of more power plants since 2010 than the ISO had anticipated, pulling some 700 megawatts from the system.

“However, there are mechanisms in place that would adequately replace any deficiency related to the closure of the IP units,” the report states. “New York has robust planning and regulatory processes that would automatically implement either market-based options or regulatory backstop solutions in the event a deficiency is identified.

“In addition, there are a variety of generation and transmission projects that are in different stages of development that could provide adequate replacement power. For example, since the 2010 RNA, the Hudson Transmission Project, currently under construction, will provide at least 320 megawatts of supply to New York City by mid-2013. There are also a number of projects in the NYISO queue, including generation projects proposed in Southeast New York that may come into service by 2015, adding up to 2,000 MW, as well as several proposed transmission projects that could bring up to 3,000 MW of additional capability into Southeastern New York by 2016.

“In addition, Governor Cuomo created the Energy Highway Task Force in 2012 to address the infrastructure needs of the energy system in New York. The Task Force issued a Request for Information in April, 2012 and received responses from 85 private developers, investor-owned utilities, financial firms, and other entities with 130 ideas to upgrade and revitalize the state’s ageing infrastructure, totaling more than 25,000 MW. Among those responses, over 11,000 MW of new generation, dedicated transmission, and other upgrades could be applied toward a replacement for Indian Point.”



The reason that Indian Point 2, the oldest of the twin reactors, can close in 2013 with no problems stems from the earlier success the ISO had in identifying energy needs which were filled by the more than 300 power generators in the state. The 2005 needs assessment, the ISO's first after the disastrous 2003 northeast blackout, identified 3,105 MW of new resources that would be needed within a decade to strengthen the state's grid. The private sector added 1,200 MW new generation and made up the rest with extensive additions in transmission capability.

The 2007 assessment identified 1,800 MW of additions needed by 2016, which generated new projects providing 3,007 MW in a combination of new generation and transmission improvements or additions. Their 2008 assessment, which called for 2,350 MW, drew "market solutions" providing 3,380 MW.

As a result, the report states, "the NYISO Board of Directors in January, 2011, indicated that the system was reliable and no solutions were necessary..." at that time. The new Reliability Needs Assessment, however, takes into account the possibility that Indian Point 2 may close at the end of 2012 and Indian Point 3 at the end of 2015, as well as several coal plants around the state because of higher operating prices due to new environmental regulations and stiffer competition from natural gas.

But the stated needs clearly indicate that both nuclear power plants are not required under any scenario currently envisioned.

Promoting a False Image

The two independent, authoritative, unequivocal analyses will come as a blow to Entergy, owners of the twin reactors on the banks of the Hudson River about 25 miles from New York City. They also undermine the persistent, inflated claims of the plants' media and business community supporters that the Indian Point Energy Center provides 30 percent of the electricity used in the area – when they actually provide just 5 percent – and are

essential for continued economic growth.

Two weeks ago the New York Post and its sister publication, the Wall Street Journal, falsely reported that the ISO assessment declared that the region would suffer “rolling blackouts” if the Indian Point plants closed. That phrase does not appear in the ISO assessment. That false story was widely circulated by media outlets such as the Associated Press and the Journal News, WNYC radio and NBC television, which apparently borrowed from the Post and did not read the ISO report themselves. The Journal News went so far as to erroneously declare that the report from the State Energy Planning Board conflicted with the ISO assessment. In reality, the two are complementary, with the Planning Board accepting the ISO analysis and delineating how the projected needs would be met.

According to the ISO, the state has a generating capacity of 37,707 megawatts which is sent over some 11,000 miles of major transmission lines. The peak load so far this year was 33,295 megawatts on July 18, near the end of a heat wave. In theory, since the generating capacity is about 5,000 MW higher than the greatest daily need, there should not be a problem.

In practice, however, there are bottlenecks in the state system, with limits on the number of transmission lines carrying electricity to specific regions. In the last decade, ISO officials said the New York City area has added some 3,000 megawatts of new generation and 1,650 MW of new transmission lines. That is still not enough to tap all the electricity generated upstate.

Shutting down both nuclear plants, without either adding a replacement plant or new transmission, would overload the 345 kilovolt power line in Pleasant Valley to 124 percent of capacity in 2016 and 158 percent of capacity in 2022, under the ISO’s worst case scenario.

“Southeastern New York, with the Indian Point Plant in service, currently relies on transfers to augment existing capacity,” the ISO report states, “and load growth or loss of generation capacity in this area would aggravate those transfer limits.”

ConEd does have a “Demand Response Program,” in which companies are paid to let the utility reduce their electricity during peak periods. ConEd is currently able to cut peak demand by 531 megawatts under that program. Significantly expanding that program would reduce the amount of additional electricity needed if both nuclear plants are shut.

“If you can shave that peak demand,” said Klapp, “that’s fewer megawatts that you have to build.”

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