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NY nuclear plants: On the brink of a subsidized future or more shutdowns

By [Andrew Coffman Smith](#)

New York's nuclear plants are in dire need of revenue and [Exelon Corp.](#) is warning that the [Nine Mile Point](#) and [R.E. Ginna](#) nuclear plants may be forced to close if state regulators fail to provide subsidies to compensate upstate nuclear generation at above-market prices. Meanwhile, [Entergy Corp.](#) is crying foul at the exclusion of [Indian Point](#) — the sole downstate nuclear plant — from Gov. Andrew Cuomo's subsidy plan.

The November 2015 announcement by Entergy that it is retiring its uneconomic [James A. FitzPatrick](#) plant by early 2017 has galvanized New York and Cuomo's Democratic administration into action to save the state's three upstate nuclear plants in an era of low electricity prices fueled by low natural gas prices.

Nuclear generation makes up roughly a third of New York's electricity mix, and the loss of the 851-MW FitzPatrick plant alone would threaten the reliability of the state's grid by leaving a statewide deficiency, warned a [Feb. 11 New York ISO](#) report. Cuomo has stressed that the emissions-free power produced by nuclear power plants is also essential in meeting the state's goal of cutting carbon dioxide emissions 40% by 2030 from 1990 levels.

As a result, the Cuomo administration is trying to provide "zero-emissions credits" as part of the governor's clean energy standard, or CES, initiative to compensate the carbon-free baseload of upstate nuclear plants, which are located along the shore of Lake Ontario. The New York Public Service Commission is also seeking to develop interim payments to keep plants commercially afloat until the credits kick in. State lawmakers have likewise proposed [\\$100 million](#) of funding for FitzPatrick but Entergy is adamant that the plant will still close.

"Both Ginna and Nine Mile Point are facing significant, long-term financial challenges due to historic low natural gas prices, record low capacity market clearing prices, and the lack of federal and state policies that value nuclear power's reliable, carbon-free baseload power," said David Tillman, a spokesman with Exelon.

While [Exelon Generation Co. LLC](#) owns the 582-MW Ginna plant with [EDF Group](#) subsidiary [EDF Inc.](#), the Exelon subsidiary owns the 1,937-MW Nine Mile Point plant with both EDF Inc. and the [Long Island Power Authority](#).

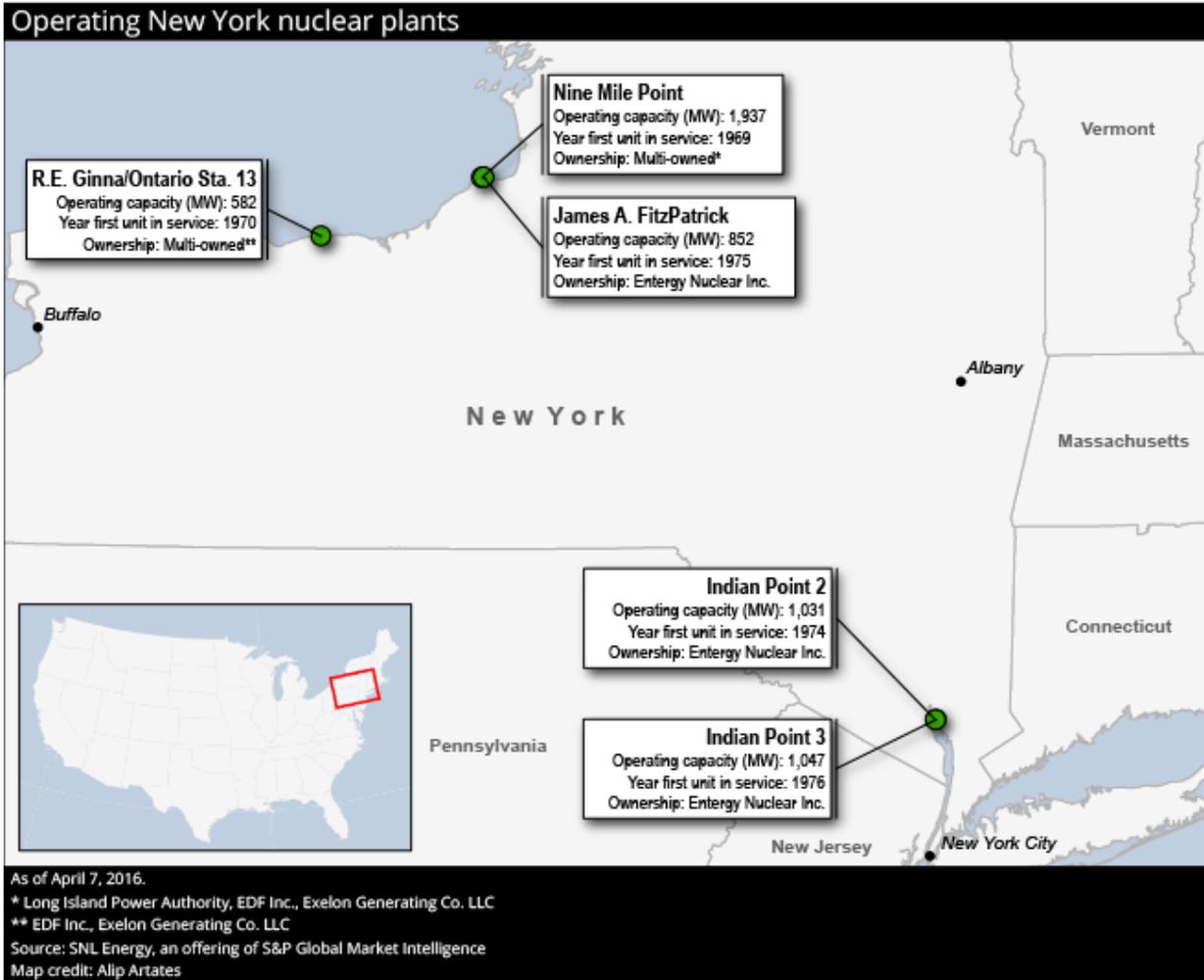
So far, New York has acted to compensate Ginna to keep the plant online after continued loss of revenue threatened to shut it down. The recent approvals by state and federal regulators of payments to Ginna under a reliability support services agreement have relieved the plant of its financial hardships. However, it is "only a temporary solution to a long-term problem" and the payments run out in March 2017, Tillman said.

"Without a long-term market based solution like the CES, we would be forced to consider closing unprofitable upstate nuclear facilities," Tillman said. "It is important that the NYPSC establish the CES quickly so that important decisions on the future of our plants can be made."

Price of carbon

During a [Feb. 23](#) meeting and using Ginna as an example, Raj Addepalli, the NYPSC's managing director of utility rates and services, said current wholesale power prices in New York are averaging about \$35/MWh to \$36/MWh, or roughly \$15/MWh lower than the nuclear plant needs to operate. Addepalli said PSC staff is looking to set prices for the proposed zero-emissions credits at almost \$15/MWh — "depending on the cost structure of the particular unit." Utility ratepayers could end up footing the bill to make up the difference, but Addepalli insisted that doing so and keeping the plants running is still cheaper than letting them retire.

According to an April 8 [cost-benefit analysis report](#) by the NYPSC, subsidizing New York's three upstate nuclear plants could cost the state about \$270 million by 2030 but produce \$2.8 billion in net benefits after factoring in the "social cost of carbon" — the amount of damage done by each ton of carbon dioxide — as defined by the U.S. EPA. This estimated social cost includes lower agricultural production, increased human health problems, property damages from increased flooding and changes in energy costs, such as reduced costs for heating and increased costs for air conditioning.



Addepalli also said the commission needs to consider what it would take to replace a nuclear plant to ensure the grid's reliability. "It's not just the price, but just the physical ability to get those resources in place in a hurry is also a constraint," he said.

New York would need more than 2,500 MW of new renewable generation to make up for the loss of the 851-MW FitzPatrick plant, "and if you're talking about solar, it will be much, much higher," Addepalli added. "By necessity, you would be replacing some of them with fossil fuels in

the near term if they were to shut down."

Indian Point's exclusion

The only reactors that would be ineligible for Cuomo's proposed zero-emissions credits are Entergy's 1,031-MW Indian Point 2 and 1,047-MW Indian Point 3, which are about 50 miles north of New York City along the Hudson River in Westchester County.

The dual-unit plant is the target of several lawsuits and investigations following a series of incidents at the plant, including a low-level radioactive leak in February. The Cuomo administration has been adamant that Indian Point should not be relicensed over concerns that it poses a risk to communities down river, including New York City.

Entergy, which is the operator of both Indian Point and FitzPatrick, asserts that the NYPSC's mission to stop the loss of upstate nuclear plants and to prevent the shutdown of FitzPatrick while excluding Indian Point from receiving the zero emissions credits is disingenuous and unfair.

"If the state is truly focused on reducing CO2 emissions, the clean energy standard should apply to Indian Point, which is an essential generation resource critical to the state's goal of reducing CO2 emissions," said Patricia Kakridas, a spokeswoman with Entergy. New York should enact a clean energy standard that recognizes the "unique nonemitting, baseload" generation of all nuclear power plants, she said.

According to Kakridas, the continued operation of Indian Point prevents the emissions of more than 8 million metric tons of CO2 each year. She also noted that the New York City Department of Environmental Protection had determined that replacing the plant with fossil-fueled generation would lead to a 15% increase in CO2 emissions and a 7% to 8% jump in nitrous oxide emissions in the state.

Nuclear's impact on upstate industry

Among those who do support Cuomo's initiative to save New York's upstate nuclear plants is Michael Treadwell, the CEO of the County of Oswego Industrial Development Agency and a member of the pro-nuclear Upstate Energy Jobs coalition. Like Addepalli, Treadwell believes the benefits of keeping the nuclear plants online will far outweigh the costs.

"We believe that the zero-emission credits certainly are an investment that will be repaid from the economic activity of these facilities," Treadwell said. Not only are the three upstate nuclear plants vital to Oswego County, which is home to FitzPatrick and Nine Mile Point and neighbors Wayne County where Ginna is located, but the plants are also important to the wider regional economy.

According to a 2015 report by the Brattle Group cited by both the NYPSC in its cost-benefit analysis report of the clean energy standard and the Upstate Energy Jobs coalition's website, upstate nuclear plants contribute \$3.16 billion to New York's economy, 16 million tons of avoided CO2 emissions annually and \$144 million in annual and local taxes.

The absence of the significant amount of baseload of electricity generated by nuclear plants would also have a very "devastating effect" on the state economy and, specifically, on manufacturing, which needs not just low energy costs but also reliable power, warned Treadwell.

"In order to attract business and industry, you have to be able to prove to them that you have that heavy baseload and the reliability and dependability of a good energy source to run their facilities or they are going to go elsewhere," Treadwell said. As for FitzPatrick, he said the county is hoping for a miracle that another company will purchase the nuclear plant and continue its operations but thinks it is "very unlikely" without the zero-emissions credits.

"Plus we all know that [the price of] natural gas isn't going to stay low forever," Treadwell said. "There will be a time when fuel costs start inching up and the nuclear industry therefore would be more competitive."

Ian Campbell contributed to this article.

Article updated at 1:10 p.m. ET on April 22, 2016, to clarify the ownership of the Nine Mile Point power plant.