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## Corporations Division

### Business Entity Summary

ID Number: 134120330

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Summary for: **ENERGY NUCLEAR OPERATIONS, INC.**

<b>The exact name of the Foreign Corporation:</b> ENERGY NUCLEAR OPERATIONS, INC.		
<b>Entity type:</b> Foreign Corporation		
<b>Identification Number:</b> 134120330		<b>Old ID Number:</b> 000000000
<b>Date of Registration in Massachusetts:</b> 04-04-2001		
<b>Last date certain:</b>		
<b>Organized under the laws of:</b> State: DE Country: USA on: 05-09-2000		
<b>Current Fiscal Month/Day:</b> 12/31		<b>Previous Fiscal Month/Day:</b> 01/01
<b>The location of the Principal Office:</b>		
Address: 1340 ECHELON PKWY		
City or town, State, Zip code, Country: JACKSON, MS 39213 USA		
<b>The location of the Massachusetts office, if any:</b>		
Address:		
City or town, State, Zip code, Country:		
<b>The name and address of the Registered Agent:</b>		
Name: C T CORPORATION SYSTEM		
Address: 155 FEDERAL STREET STE 700		
City or town, State, Zip code, Country: BOSTON, MA 02110 USA		
<b>The Officers and Directors of the Corporation:</b>		
<b>Title</b>	<b>Individual Name</b>	<b>Address</b>
TREASURER	STEVEN C MCNEAL	639 LOYOLA AVE NEW ORLEANS, LA 70113 USA
SECRETARY	DANIEL T. FALSTAD	639 LOYOLA AVE NEW ORLEANS, LA 70113 USA
VICE PRESIDENT	T. MICHAEL TWOMEY	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA
VICE PRESIDENT, GOVERNMENTAL AFFAIRS	KENNETH THEOBALDS	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA
VICE PRESIDENT, OPERATIONS - PALISADES	ANTHONY J. VITALE	27780 BLUE STAR MEMORIAL HWY COVERT, MI 49043 USA
VICE PRESIDENT, OPERATIONS - VERMONT YANKEE	CHRISTOPHER J. WAMSER	GOVERNOR HUNT ROAD VERNON, VT 05354 USA
SR. VICE PRESIDENT & GENERAL COUNSEL	MARCUS V. BROWN	639 LOYOLA AVE NEW ORLEANS, LA 70113 USA
SR. VICE PRESIDENT, COO - ENO	TIMOTHY G. MITCHELL	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA
VICE PRESIDENT	STEVEN C. MCNEAL	639 LOYOLA AVE NEW ORLEANS, LA 70113 USA
ASSISTANT SECRETARY	AMY A BLAYLOCK	1340 ECHELON PKWY JACKSON, MS 39213 USA

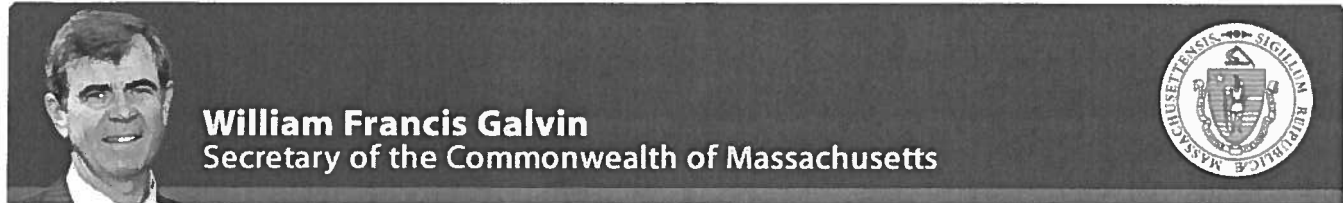
VICE PRESIDENT, CFO - NUCLEAR OPERATIONS	WANDA C. CURRY	1340 ECHELON PKWY. JACKSON, MS 39213 USA
VICE PRESIDENT, LICENSE RENEWAL	FRED R. DACIMO	450 BROADWAY, SUITE 1 BUCHANAN, NY 10511 USA
VICE PRESIDENT, PROJECT MANAGEMENT	CLIFFORD EUBANKS	1340 ECHELON PKWY. JACKSON, MS 39213 USA
VICE PRESIDENT, OPERATIONS - INDIAN POINT ENERGY CENTER	JOHN A. VENTOSA	450 BROADWAY, SUITE 1 BUCHANAN, NY 10511 USA
SR. VICE PRESIDENT, COO - ENO	MICHAEL PERITO	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA
VICE PRESIDENT, OVERSIGHT	STEPHEN J. BETHAY	1340 ECHELON PKWY JACKSON, MS 39213 USA
SR. VICE PRESIDENT, NUCLEAR TECHNICAL SERVICES	MICHAEL A. BALDUZZI	1340 ECHELON PKWY JACKSON, MS 39213 USA
VICE PRESIDENT, SITE - PILGRIM NUCLEAR POWER STATION	ROBERT G. SMITH	600 ROCKY HILL ROAD PLYMOUTH, MA 02360 USA
VICE PRESIDENT, NUC SAFETY, EMERGENCY PLANNING & LICENSING	JOHN F. MCCANN	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA
ASSISTANT SECRETARY	JOSEPH A. ALUISE	639 LOYOLA AVENUE NEW ORLEANS, LA 70113 USA
ASSISTANT TREASURER	MARY ANN VALLADARES	639 LOYOLA AVENUE NEW ORLEANS, LA 70113 USA
VICE PRESIDENT, BUSINESS DEVELOPMENT	JAMES R. DOUET	1340 ECHELON PKWY JACKSON, MS 39213 USA
TAX OFFICER	PAUL J. WICHERS JR.	639 LOYOLA AVENUE NEW ORLEANS, LA 70113 USA
VICE PRESIDENT, OPERATIONS	JOSEPH E. POLLOCK	101 CONSTITUTION AVENUE, NW, SUITE 200 EAST WASHINGTON, DC 20001 USA
PRESIDENT AND CEO	JEFFREY S. FORBES	1340 ECHELON PKWY JACKSON, MS 39213 USA
VICE PRESIDENT, OPERATIONS - FITZPATRICK	MICHAEL J. COLOMB	277 LAKE ROAD OSWEGO, NY 13126 USA
VICE PRESIDENT, OPERATIONS - COOPER	OSCAR LIMPIAS	P.O. BOX 98 BROWNVILLE, NE 68321 USA
VICE PRESIDENT, OPERATIONS SUPPORT	WILLIAM F. MAGUIRE	1340 ECHELON PKWY JACKSON, MS 39213 USA
VICE PRESIDENT, ENGINEERING	JAY K. THAYER	1340 ECHELON PKWY JACKSON, MS 39213 USA
DIRECTOR	MICHAEL A. BALDUZZI	1340 ECHELON PKWY JACKSON, MS 39213 USA
DIRECTOR	MICHAEL PERITO	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA
DIRECTOR	JEFFREY S. FORBES	1340 ECHELON PKWY JACKSON, MS 39213 USA
DIRECTOR	TIMOTHY G. MITCHELL	440 HAMILTON AVENUE WHITE PLAINS, NY 10601 USA

Business entity stock is publicly traded:

The total number of shares and the par value, if any, of each class of stock which this business entity is authorized to issue:

Class of Stock	Par value per share	Total Authorized		Total issued and outstanding
		No. of shares	Total par value	No. of shares
CWP	\$ 0.01	3,000	\$ 30.00	1,000

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### Business Entity Summary

ID Number: 640900523

Summary for: **ENERGY NUCLEAR GENERATION COMPANY**

<b>The exact name of the Domestic Profit Corporation:</b> ENERGY NUCLEAR GENERATION COMPANY		
Converted from ENERGY NUCLEAR GENERATION COMPANY on 12-16-2005		
<b>Entity type:</b> Domestic Profit Corporation		
<b>Identification Number:</b> 640900523		<b>Old ID Number:</b> 000911853
<b>Date of Organization in Massachusetts:</b> 12-16-2005		
<b>Last date certain:</b>		
<b>Current Fiscal Month/Day:</b> 12/31		
<b>The location of the Principal Office:</b>		
Address: 600 ROCKY HILL RD.		
City or town, State, Zip code, Country: PLYMOUTH, MA 02360 USA		
<b>The name and address of the Registered Agent:</b>		
Name: C T CORPORATION SYSTEM		
Address: 155 FEDERAL STREET STE 700		
City or town, State, Zip code, Country: BOSTON, MA 02110 USA		
<b>The Officers and Directors of the Corporation:</b>		
<b>Title</b>	<b>Individual Name</b>	<b>Address</b>
PRESIDENT	JEFFREY S. FORBES	1340 ECHELON PKWY. JACKSON, MS 39213 USA
TREASURER	STEVEN C. MCNEAL	639 LOYOLA AVE. NEW ORLEANS, LA 70113 USA
SECRETARY	JOSEPH A. ALUISE	639 LOYOLA AVE. NEW ORLEANS, LA 70113 USA
CEO	JEFFREY S. FORBES	1340 ECHELON PKWY. JACKSON, MS 39213 USA
VICE PRESIDENT, OPERATIONS	ROBERT G. SMITH	600 ROCKY HILL ROAD PLYMOUTH, MA 02360 USA
ASSISTANT SECRETARY	JAMES W. SNIDER, JR.	308 E. PEARL STREET JACKSON, MS 39201 USA
TAX OFFICER	PATRICIA A. GALBRAITH	639 LOYOLA AVENUE NEW ORLEANS, LA 70113 USA
ASSISTANT SECRETARY	AMY A BLAYLOCK	1340 ECHELON PKWY JACKSON, MS 39213 USA
TAX OFFICER	PAUL J. WICHERS JR.	639 LOYOLA AVENUE NEW ORLEANS, LA 70113 USA
VICE PRESIDENT	ANDREW J. ROSENLIB	2001 TIMBERLOCH PLACE THE WOODLANDS, TX 77380 USA
VICE PRESIDENT	STEVEN C. MCNEAL	639 LOYOLA AVE. NEW ORLEANS, LA 70113 USA
VICE PRESIDENT	JOSEPH A. ALUISE	639 LOYOLA AVE. NEW ORLEANS, LA 70113 USA
VICE PRESIDENT, CFO-NUCLEAR OPERATIONS	WANDA C. CURRY	1340 ECHELON PKWY. JACKSON, MS 39213 USA
VICE PRESIDENT	EDDIE D. PEEBLES	2001 TIMBERLOCH PLACE THE WOODLANDS, TX 77380 USA
DIRECTOR	JEFFREY S. FORBES	1340 ECHELON PKWY. JACKSON, MS 39213 USA



## THE HILL'S Congress Blog

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Where lawmakers come to blog

### **Fundamental change needed in Northeast power markets to avoid future 'energy cliff'**

By Bill Mohl - 09/19/13 04:00 PM ET

Chinese philosopher Lao Tzu once wrote, “If you do not change direction, you may end up where you are heading.”

The decision to shut down Entergy’s Vermont Yankee merchant nuclear plant has generated a lot of attention – much of it correctly focused on the need for changes in the design of the ISO New England and New York ISO power markets. Those changes involve leveling the playing field, ensuring diversity of energy sources and recognizing environmental impacts.

If we do not change direction, we may end up facing an energy cliff in the future that would have significant economic and environmental consequences.

A confluence of three key factors led to the Vermont Yankee shutdown decision:

- A natural gas market that has undergone a game-changing shift in supply due to shale gas, resulting in sustained low natural gas and wholesale energy prices;
- A high cost structure for this single unit plant whose only sin was being small – making it more vulnerable to the financial impact of cumulative regulation in these market conditions; and
- Wholesale market design flaws that have resulted in artificially low energy and capacity prices in the region – and that prevent merchant nuclear plants from receiving adequate compensation for their fuel diversity benefits.

Simply stated, we were not able to run this long-term asset in what has become a short-term market.

A relevant question is whether the current markets are flawed and unfair or simply unfavorable to some generation sources. A compelling case can be made for the former.

An electric market must meet the following long-term objectives:

- 1) Ensure reliable service to customers,
- 2) Be environmentally sustainable, and
- 3) Be economically sustainable for both investors and customers.

Under the current market design, these long-term objectives are just not achievable in the Northeast.

The Northeast has experienced several major changes in recent years that were never contemplated in the original market design: the advent of shale gas and a substantial and increased reliance on natural gas, the rapid addition of renewable energy resources, and the addition of a significant amount of demand side management resources.

All of these resources belong in a diversified, long-term power supply portfolio. But just like your 401(k) portfolio, balance is the key for long-term success. And balance is something the Northeast markets are lacking.

Another thing lacking is a consistent valuation of the environmental benefits of the respective energy resources. Renewables such as wind and solar contribute to carbon reduction goals, but those goals simply cannot be met without nuclear generation as a long-term resource in the region's supply portfolio.

Shutting down Vermont Yankee, a virtually carbon-free source of electricity, will make it harder and costlier to meet tighter greenhouse gas emission caps announced by the states as part of their Regional Greenhouse Gas Initiative.

Finally, if an electricity market is going to be economically sustainable for investors and consumers, it must be truly competitive. Northeast power markets have drifted away from being competitive and have become "hybrid markets," with some high-cost resources entering the market tied to state-sanctioned, long-term contracts. This method looks like traditional cost-based utility models and makes it nearly impossible for existing resources to compete.

It would be one thing if those market prices reflected true market fundamentals. They don't. Prices are artificially lower than those of a true competitive market, which makes it very difficult for the existing generators to sustain operations and receive a fair return on the ongoing capital investments needed for reliability and fuel diversity. When existing generation resources are forced to retire, consumers will be exposed to even higher prices in the long run when additional out-of-market resources are built to maintain grid reliability.

It's too late for Vermont Yankee, but independent system operators should step back and reassess the current market design. They should work with federal and state regulators as

well as other stakeholders to make changes that result in a balanced, diversified energy resource mix.

A good place to continue this discussion is the Sept. 25 technical conference on “Centralized Capacity Markets,” convened by the Federal Energy Regulatory Commission.

Without decisive action to address energy market shortfalls, we will look back – in the not too distant future – and long for the day when our Northeast energy supply was reliable, diverse and environmentally and economically sustainable.

And – to paraphrase a Lao Tzu parable – we will know the sound of no hands clapping.

*Mohl is president of Entergy Wholesale Commodities. Entergy owns the Vermont Yankee Nuclear Plant.*

Source:

<http://thehill.com/blogs/congress-blog/energy-a-environment/323153-fundamental-change-needed-in-northeast-power-markets-to-avoid-future-energy-cliff->



## PART 2: INTERVIEW WITH ENTERGY'S BILL MOHL: A balanced portfolio

Customers, community, regulators and shareholders

By Frank Mand

Wicked Local Plymouth

Posted Oct 01, 2013 @ 12:00 PM

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PLYMOUTH — Perhaps it's new version of the Domino Theory: knock over one of New England's three single-reactor nuclear power plants and the rest will fall?

It might just be wishful thinking on the part of Pilgrim's critics, but in part one of this interview with Bill Mohl, president of Entergy Wholesale Commodities, he acknowledged that many of the same factors that contributed to the decision to close Vermont Yankee are applicable to Plymouth's Pilgrim Station.

In part two, Mohl revisited the Vermont Yankee decision and explained in relatively simple terms the main factors that contributed to the decision to decommission that plant, and also reflects on what he sees as the downside of the natural gas phenomena.

"First, I should say that we don't just evaluate the assets, we evaluate the markets we participate in," Mohl said.

The first "driver" of that market, Mohl said, is the abundance of natural gas due the advent of shale gas.

"Our point of view is that for this commodity (natural gas) the price will remain fairly low for an extended period of time, and that translates to lower energy prices in the market," Mohl added.

That's not a good thing for Pilgrim.

A second important driver of the Vermont Yankee decision was what Mohl called the "continuing escalation in the cost of regulation."

That would seem to be particularly relevant for Pilgrim, which is likely to undergo a variety of potentially expensive modifications, known as the "Fukushima fixes," because its design is identical to the devastated Japanese plants.

"Lastly, as you look at these markets, ISO New England and ISO New York, the wholesale prices for merchant generation are, in many ways, suppressed," Mohl said. "There are insufficient revenues to support plant operations, and that was certainly the case for Vermont Yankee."

So, how is Pilgrim better situated than Vermont Yankee to withstand those pressures?

Mohl began by stressing, again, that single reactor plants – like Vermont Yankee and Pilgrim – have their challenges. "But Vermont Yankee was the smallest of all of our merchant plants," Mohl said, "and Pilgrim is at least 10 percent larger than Vermont Yankee – and every megawatt hour counts."

That 10 percent translates into more than 80 megawatts. And in the power supply field, Entergy officials say, that's a lot – 80 MW can supply some 80,000 households.

"Pilgrim is also located much closer to the 'load zone' around Boston," Mohl added, "and as we work through its value and market design issues, that proximity to the load zone hopefully means it's a more valuable resource and will, over time, be valued higher by the market."

Is Pilgrim undervalued by the market and, perhaps, by regulators as well?

Mohl argued that Pilgrim and other nuclear power plants should be valued higher because they help maintain what he called a diverse supply portfolio.

"Vermont Yankee provides an estimated 4 percent of the total energy needs of ISO New England," Mohl pointed out. "So, the question is what's going to happen when that unit goes offline?"

"Two things to consider," Mohl said. "First, it's more than likely that the majority of (Vermont Yankee's) power will be replaced by natural gas. If you look at the New England region, and ISO NE, currently more than 50 percent of our energy comes from natural gas. Vermont Yankee's decommissioning will increase our reliance on natural gas even further."

"I think you know what happened last winter," Mohl added, "when we had peak demands for natural gas and peak electricity demands; they ran into problems with regards to gas supply and pipeline availability."

"So, taking a big picture approach, one of the concerns would have to be that if you take any additional baseload merchant nuclear generation out of the portfolio, that would skew our over-reliance on natural gas even more."

A more reliable power source, Mohl clearly suggested, is a more valuable power source.

"The other issue I'm not sure people understand or appreciate is that as the country or the region moves to more stringent carbon reduction requirements, nuclear generation is carbon free," Mohl said. "When Vermont Yankee shuts down, if it is replaced by natural gas, that will add 2 million tons of CO<sub>2</sub> on an annual basis."

Mohl made the argument that, for a variety reasons, nuclear power should be valued more by the public. But it appears opposition to nuclear power is actually increasing and critics are winning the public relations war.

But does that opposition have real impact?

Mohl said the opposition may be winning some of the PR battles, but he insisted that decisions such as the one to decommission Vermont Yankee are not influenced by that criticism.

"Honestly, we want to do a good job of working with everybody, knowing that folks will have different opinions," Mohl said. "Overall, our objective is to be transparent, to be fact based, and to be constructively engaged.

"We know that some people will see it differently than we do, but we can't let that drive decisions."

What could drive decisions, however is the cost of regulation, Mohl added.

"To put that into perspective, look at our overall fleet of nuclear plants – including the south," Mohl explained. "The Fukushima costs alone, for the full portfolio, are estimated at a half billion dollars. From a thumbnail perspective, though each plant is different, that works out to about \$50 million a plant. That's a significant investment."

Mohl emphasized that Entergy isn't looking for a way around the regulations, it just wants the "appropriate" cost benefit analysis done.

"Not that its all about dollars, but we need to think about the most efficient way to maintain the safety and reliability of these plants," Mohl said.

Mohl admits that a merchant nuclear plant is challenged, even in the best of times.

Pilgrim needs to satisfy its customers, who often look simply for the lowest cost alternative; its shareholders, who want the price as high as possible; the communities, which want the company to spend what it takes to make sure the plant is safe; and the regulators.

Is that even possible?

Mohl said it's difficult but not impossible. And one of the techniques that Entergy will employ to achieve its goals is communication.

"We want to be engaged on this topic, to have the discussion," he explained. "My message is, look, we understand that people have different points of view, but we hope that people know that we are trying to operate a business and properly balance all the risks."

So what's the answer to the question of Pilgrim's future?

Mohl made the case that if regulators and consumers weighed all the factors (proximity to load zone, environmental effects, reliability and diversity), they would choose to support plants like Pilgrim.

Without that support, though, it's anybody's guess.

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"Mohl made the argument that, for a variety reasons, nuclear power should be valued more by the public. But it appears opposition to nuclear power is actually increasing and critics are winning the public relations war."

But does that opposition have real impact?

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Well said Mr. Mohl. In consumer words "you ... > more

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## Central New York nuclear plants struggle to avoid financial meltdown

2013-09-29-tsk-FitzPatrick.JPG

James A. FitzPatrick Nuclear Power Plant in Scriba, Oswego County, is a "challenged facility" that faces potential financial losses in the years to come, industry analysts say. *(Courtest of Entergy Corp.)*

**Tim Knauss | [tknauss@syracuse.com](mailto:tknauss@syracuse.com) By Tim Knauss | [tknauss@syracuse.com](mailto:tknauss@syracuse.com)**

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on September 29, 2013 at 2:00 AM, updated October 03, 2013 at 4:39 PM

SCRIBA, N.Y. - As recently as four years ago, nuclear power companies were planning to spend billions of dollars to build a new reactor in Oswego County, alongside three existing nuclear plants.

Then the bottom fell out. Natural gas-burning power plants that benefit from a glut of cheap gas produced by hydrofracking cut wholesale electricity prices in half.

Now the outlook for nuclear power plants is so bleak that Wall Street analysts say one or more Upstate nuclear plants could go out of business if conditions don't change.

Two Upstate nukes in particular - the James A. FitzPatrick Nuclear Power Plant in Oswego County and the R.E. Ginna Nuclear Power Plant in nearby Wayne County - are high on the watch list of plants that industry experts say are at risk of closing for economic reasons.

Oswego County's other two reactors, Nine Mile Point Units 1 and 2, are in a stronger financial position, analysts say. But the Upstate electric market remains one of the harshest in the country for nuclear plants, raising the stakes each time a plant is faced with a prolonged outage or an expensive repair.

Nuclear critics and industry supporters finally agree on something: Nuclear power, the bedrock of Oswego County's economy and the biggest source of electricity in Central New York, faces a financial crisis.

These are "very challenging times," said Bill Mohl, president of **Entergy Wholesale Commodities**, which owns FitzPatrick and five other nuclear plants. "We're working very hard to work through this . . . and do everything we can to maintain these units and try to see if we can improve the financial results."

"We should expect more early (plant) retirements," nuclear critic Mark Cooper, senior fellow at the **Institute for Energy and the Environment** at Vermont Law School, wrote in a July report. "Rising costs of an aging fleet and the availability of lower cost alternatives are likely to persist over the next couple of decades."

Across the country, four nukes have shut down this year -- the first plant retirements in 15 years -- and a fifth announced it will close next year.

Analysts at UBS Securities LLC project financial losses for FitzPatrick nuclear plant in years to come.

Sue Santola | [ssantola@syracuse.com](mailto:ssantola@syracuse.com)

Three of those plants closed rather than make expensive, do-or-die repairs. But the other two - Kewaunee in Wisconsin and Vermont Yankee in Vermont - were high-performing units that simply could not make enough money to continue

operating, said Richard Myers, vice president for policy development at the **Nuclear Energy Institute**, an industry trade group.

"There is absolutely nothing wrong with these plants," Myers said this week in a conference call with reporters.

"There is something seriously wrong, in our view, with the markets in which they are generating."

UBS Securities LLC, a Wall Street firm that follows the nuclear industry, issued a report in January that identified Upstate New York as the second most difficult market for nuclear plants, after the Midwest. UBS predicted FitzPatrick and Ginna would begin to operate at a loss soon, if they haven't already, and said the plants will lose money at least through 2016.

### A "challenged facility"

Entergy Corp., which owns FitzPatrick, and **Exelon Corp.**, which owns Ginna, both say they have "no current plans" to close the plants. But high-ranking officials from both companies acknowledge that FitzPatrick and Ginna are at risk.

"Fitz is a challenged facility," Mohl, of Entergy, said in a telephone interview Wednesday. "It's a marginal unit. It's a unit that we are watching very closely - marginal meaning that in some years it may make money, and in other years it may not."

FitzPatrick is Oswego County's fifth-largest private sector employer and one of its biggest taxpayers.

Entergy officials said FitzPatrick will lay off about 35 workers by the end of the year, 5 percent of the 650-person payroll. Mohl said Entergy will strive to become more efficient but will not be able to cut its way to profitability. "It's not the single answer to the issue," he said.

Mohl and other nuclear leaders are urging regulators to reform wholesale markets to put more emphasis on payments for "capacity," which reward generators for being available on a round-the-clock basis. That would benefit nuclear plants, which aim to run at full power 24 hours a day.

The two reactors at Nine Mile Point Nuclear Station in Scriba are generally regarded as less vulnerable than FitzPatrick and Ginna, because paired reactors can save money by sharing personnel and other costs.

Nine Mile Point's two units employ 1,000 workers and generate up to 1,900 megawatts. Barring other factors, Nine Mile Point can produce roughly 45 percent more power per employee than FitzPatrick, which has 650 employees and produces up to 850 megawatts.

### NY officials concerned

In Oswego County, the announcement last month that Vermont Yankee would close sent chills down some spines. Like FitzPatrick, Vermont Yankee is owned by Entergy. Like FitzPatrick, which opened in 1975, the Vermont plant is an aging, stand-alone facility operating as a merchant plant. It opened in 1972. It's 25 percent smaller than FitzPatrick but similar in many other respects.

The FitzPatrick nuclear plant paid \$12.3 million in school property taxes last year to the Mexico district in Oswego County, 51 percent of the school district's total tax levy and 24 percent of the total budget.

Jim Commentucci | The Post-Standard

Mohl was clear: The only reason Vermont Yankee will close is because it can't make money.

That prompted both New York state Assemblyman Will Barclay and state Sen. Patty Ritchie to call Entergy officials for a status update on FitzPatrick. Both said they have been assured there are no immediate plans to shutter the plant. Instead, Entergy officials say they are planning to refuel FitzPatrick a year from now.

But refueling is no guarantee of longevity. Vermont Yankee was refueled in April, four months before the company announced it would close at the end of its fuel cycle, in October 2014.

Barclay and Ritchie said they will fight for any changes that could help the local nuke plants. "The last thing we want to happen is for those three plants in Oswego to shut their doors," Ritchie said.

The three nuclear plants in Scriba account for 30 percent of Oswego County's tax base, County Administrator Phil Church said. FitzPatrick pays roughly \$18 million a year in property taxes. Nine Mile Point makes nearly \$24 million a year in payments in lieu of taxes.

>Big power, little pay

Central New Yorkers consume less than 9 percent of the state's total electricity, but the three nuclear plants in Scriba produced 14 percent of the electricity generated in New York last year, according to the **New York Independent System Operator**. Ginna's output increases that to 17 percent. The four plants produced nearly 24,000 gigawatt-hours, enough to supply 2.8 million average homes.

Despite that output, the nuclear plants are struggling with record low electric prices. In New York, nuclear facilities operate as "merchant" plants selling power in a competitive wholesale market rather than supplying utility ratepayers at government-regulated rates.

Natural gas costs half what it cost five years ago, thanks to a plentiful supply uncorked by **hydrofracking** in the Marcellus Shale, energy analysts say. Because natural gas is used by quick-start, quick-stop generating plants that respond to short-term price signals, natural gas plants tend to play a dominant role setting wholesale electric prices.

There is also a glut of electricity Upstate, where there are plenty of generating plants but not much economic growth and limited transmission capacity to lucrative Downstate markets. As a result, payments to generators in Central New York are extra low. Over the past summer, Central New York wholesale prices were 20 percent to 48 percent lower than prices on Long Island.

Entergy Corp., the owner of FitzPatrick nuclear plant, spends about \$350,000 a year on charitable giving in Oswego County, including its sponsorship of the annual Harborfest fireworks show, according to Bill Mohl, president Entergy Wholesale Commodities.

Lauren Long | [llong@syracuse.com](mailto:llong@syracuse.com)

Myers, of the Nuclear Energy Institute, said the wholesale market discourages big, long-term capital investments that nuclear power requires. It also fails to reward nuclear plants for being on almost all the time, or for producing no air emissions, he said.

Five new nuclear reactors are under construction in Georgia, South Carolina and Tennessee, but each is being built in an area where the owners can recover their costs through regulated utility rates.

In competitive markets, the greatest risk falls on the smallest, oldest, single-unit nuclear plants, like FitzPatrick and Ginna. The risk intensifies when a plant faces costly improvements.

Like other nuclear plants, FitzPatrick in the next few years must make significant upgrades required by federal regulators in response to the tsunami-induced nuclear disaster in 2011 at Fukushima, Japan. Mohl estimated the cost of Fukushima upgrades at roughly \$50 million for FitzPatrick.

The facility also is under pressure to replace its condenser tubes, which have leaked 16 times in the past three years, forcing the reactor to reduce power to make repairs. FitzPatrick had so many unplanned power changes during 2012, some because of condenser leaks, that it was placed under heightened oversight earlier this year by the Nuclear Regulatory Commission.

Mohl said Entergy is considering replacing the condenser tubes during the next refueling outage, which is scheduled for roughly a year from now. No final decision has been made, he said.

Asked how much it would cost, Mohl declined to be specific. "It's a substantial investment," he said.

### **Will politics play a role?**

Ginna, a small, stand-alone reactor 60 miles west of Oswego, has yet to face the full force of a competitive market. When regulated utility Rochester Gas & Electric sold the plant 10 years ago to Constellation Energy Nuclear Group, the utility contracted to buy 90 percent of the output at what turned out to be an above-market price, \$44 per megawatt-hour. That contract expires in June 2014.

Exelon Corp., the nation's largest nuclear company with 22 reactors, acquired the Ginna and Nine Mile Point nukes last year when it took over Constellation. In a July 31 conference call with stock analysts, Exelon CEO Christopher Crane identified Ginna and another nuke plant in Illinois as weak links in the portfolio.

He implied that Ginna's future may depend on state regulatory changes to improve the financial picture for nuclear plants.

"So, there's nothing on the chopping block right now," Crane said. "It is constant work to look at cost. It's constant work to look at regulatory structure, and if it does not improve we'll be talking more about those facilities."

The fragile finances of nuclear power have provided new ammunition to anti-nuclear groups. In March, prior to the announcement of Vermont Yankee's shutdown, a coalition of four groups **petitioned the NRC** to suspend Entergy's license to operate FitzPatrick and Vermont Yankee arguing that the plants produce insufficient revenue to maintain and operate the reactors safely. Entergy has not yet responded to the petition.

Although economics are at the heart of Upstate nuclear problems, many observers expect politics to play a part in the resolution. As UBS analysts wrote in January: "Given the substantial tax base and employment supported by nuclear plants, as well as the material increases in . . . power prices resulting from a retirement, we see real potential for regulatory and political intervention to save plants, particularly in Illinois and New York."

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