

# Indian Point Energy Center Retirement Analysis

A summary of the Charles River Associates report

August 2, 2011

Full text: [http://www.safesecurevital.com/pdf/2011\\_cra\\_indian\\_point.pdf](http://www.safesecurevital.com/pdf/2011_cra_indian_point.pdf)

## KEY FINDINGS

### **IPEC's retirement will increase the cost to New York's consumers in every scenario**

Energy costs in New York State would increase approximately \$1.5 billion per year, or roughly 10%. NYC consumers would pay approximately \$300 million per year more for wholesale energy, or approximately a 5-10% increase.

These price increases do not include financial support which would be necessary to construct new energy generation projects, nor does it include other costs which would be necessary to reinforce the grid to support new generation.

It is likely these costs would be passed on to utilities, and ultimately to consumers. Our analysis indicates that the additional costs to consumers from the first three options mentioned above would range from \$691 million to \$2.1 billion. These costs are in addition to the costs for energy mentioned above, and because these projects can be uncertain, should be considered a minimum.

Finally, Entergy, the company that runs IPEC, might pursue legal action if IPEC is forced to close.

### **IPEC's retirement without new generation or transmission system additions will compromise the reliability of the electricity grid**

In order for electricity to be reliable, there must be an adequate amount of available electricity, a system to transmit the electricity effectively and proper system operation. We only analyzed the first of these items. The system cannot be considered reliable until these other issues are analyzed as well.

Reliability depends on "resource adequacy." In other words, there must be enough energy to adequately serve the demand. If there isn't it can lead to interruption of service (blackouts).



Unless new energy facilities are constructed beyond anything already planned, the retirement of IPEC would cause the grid to fall short of minimum resource adequacy standards the year after IPEC closed. This calculation is based on estimates about how much electricity New York uses and even includes new programs in energy conservation and energy efficiency.

### **Every option studied to replace IPEC would increase air emissions (pollution)**

IPEC produces roughly 2000 MW of electricity with no air emissions. Its retirement will cause a substantial increase in air emissions under all the scenarios analyzed in our study. Our analysis indicates that both NYC and NYS would see approximately a 15% increase in carbon emissions under most conventional replacement scenarios, with roughly a 7-8% increase in NO<sub>x</sub> emissions.

Even the environmentally friendly option 2 (hydropower and wind power) would cause carbon and NO<sub>x</sub> increases of between 5-10% in NYC and statewide. This is because imports from Canada wouldn't be enough to totally replace IPEC; additional generation from conventional thermal power plants would be required.

Developing a solution in which there is no net emissions increase would be extraordinarily expensive. The largest projects currently proposed amount to slightly more than half of IPEC's generating capacity. Retirement of IPEC would substantially reduce the possibility of reaching NYC's goals of reducing NYC's carbon emissions by 30% from 2007 levels.

### **Energy conservation must be considered in a realistic context**

A small change in future energy consumption (1-2%) may be enough to keep the power system reliable. Increased energy efficiency and conservation measures may forestall a resource adequacy crisis upon IPEC's retirement, but will still result in increased consumer prices and air emissions. Over the past three years, NYS has achieved 57% of its targets for energy efficiency, which has had an impact on the grid and markets. The most recent forecasts for energy consumption, however, forecast 91% achievement in the future, with many programs forecast to achieve virtually all of their potential impact by 2018. If these programs fall behind schedule, or do not achieve greater success in the future than they have in the past, then the load could be higher than forecast and the reliability consequences could be substantial upon IPEC's retirement. We have assumed in our study that 50% of energy efficiency targets will be achieved over the timeframe of our study to address these factors.



**New replacement options may not be fully supported by market revenues; subsidies or contracts may be required**

New resources will be necessary to replace IPEC's lost production – the only question is when they would be required. When considering how to weigh different costs under different scenarios, it is important to remember that if energy prices are lower (through lower demand, greater energy efficiency, reduced gas prices, or other factors), then there will be a greater need for financial support necessary for such replacement projects.

**Not all replacement options for IPEC may be available in time**

Our analysis indicates that given the current prospects for new capacity in New York, resource adequacy will fall below acceptable levels at that point unless new generation is constructed.

For planning purposes, no company will commit to building new resources until IPEC is officially announced as retiring. If Entergy were to announce its intentions at the latest possible date, there would not be enough time to put a solution in place. Development and construction can last as much as 4-5 years.