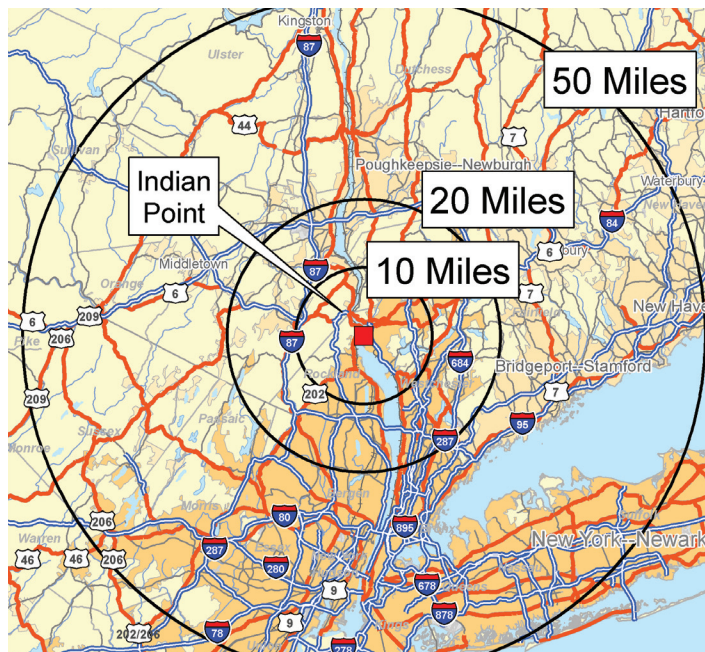
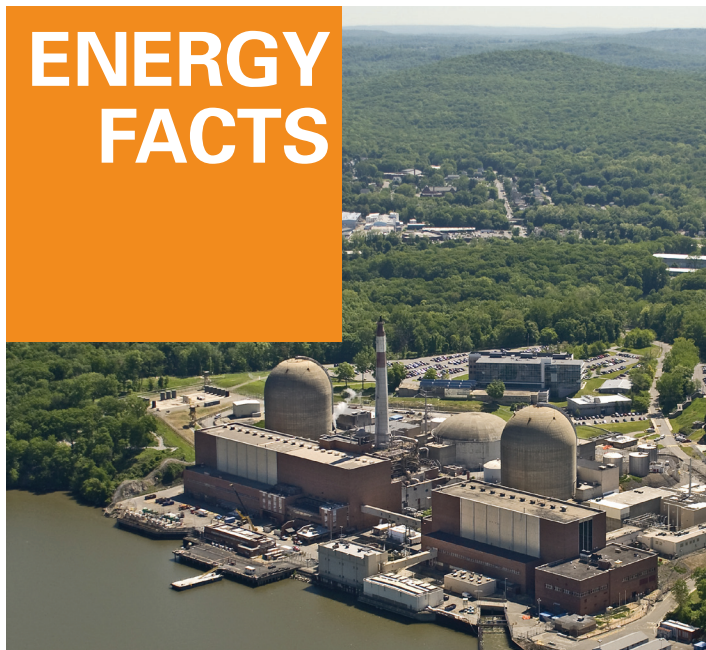


# ENERGY FACTS

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## Key Findings of the Indian Point Energy Center Retirement Analysis

The Natural Resources Defense Council (NRDC) and Riverkeeper have commissioned a report from Synapse Energy Economics, an energy consulting firm, on energy alternatives to the Indian Point Energy Center, a 2,000 megawatt (MW) nuclear power plant in Westchester County, New York. Our analysis shows that a wide range of options are available to make the transition to a safe, sustainable energy future for New York without Indian Point. These options include energy efficiency, renewables such as wind and solar power, new transmission projects, and repowered natural gas plants. All of these energy options can be implemented within the next 10 years, and many earlier than that. Due to the current surplus in electricity capacity in New York State and New York City, even if Indian Point shuts down in 2015, there is no need to add further generation until 2020 to address reliability concerns, which allows plenty of time to bring on more sustainable energy alternatives.

### RELIABILITY

The current surplus of electricity capacity in downstate New York (New York City, Westchester, and Long Island) and the availability of imported power means that if Indian Point is not relicensed and shuts down in 2015, and no other actions are taken, there will be no impacts on reliability of electricity supply in the region until 2020, providing ample time to plan for and put in place the energy alternatives discussed below.

### REPLACEMENT OPTIONS

Assembling the right, diverse portfolio of energy supply resources from among the many options available will result in safer, cleaner, more sustainable energy resources that benefit both New York's economy and our environment.

- **ENERGY EFFICIENCY.** At least 1,550 megawatts (MW) of energy savings in New York City and the region near Indian Point can be achieved by 2020 through efficiency measures. This is based on a very reasonable projection of achievable energy efficiency savings, about 1.5% per year. This level of energy efficiency savings has already been achieved by other states and is consistent with assessments by New York State energy planners.



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- **RENEWABLE ENERGY.** Renewable resources such as solar, wind from upstate New York, and offshore wind energy could also play an important role in replacing Indian Point's capacity, adding about 580 MW. New renewable energy projects totaling over 6,000 MW have already been proposed and are in the planning process in New York. Taking into account the intermittent nature of renewables, the report conservatively assumes that these renewable energy projects would provide roughly 1,154 MW of capacity for reliability purposes. To provide a conservative estimate of the amount of this renewable capacity that might be built by 2020, the report assumes that half of these renewable projects—about 580 MW—will be built by 2015.

Significantly, these conservative estimates show that a combination of increased investment in energy efficiency (1,550 MW) and renewable energy (580 MW) could provide enough electricity to replace Indian Point's 2,000 MW capacity.

- **TRANSMISSION.** Currently, there are 8,000 MW of new transmission lines proposed for New York City and other regions near Indian Point. The following projects, which will bring power to New York City from other states or regions, are already approved or moving through the approval process:

- **Hudson Transmission Line:** 660 MW from New Jersey to Manhattan (Approved. Target completion date 2013.)
- **Cross Hudson Line:** 800 MW from New Jersey to Manhattan (Pending.)

There are also several pending proposals to build 1000 MW transmission lines to transmit power from upstate New York or Canada to New York City, including the Champlain Hudson Cable, New York Power Pathway, and the West Point Transmission Line.

- **REPOWERING.** Upgrading existing natural gas and/or oil burning power plants in downstate New York to "combined cycle" efficient systems will reduce air emissions, reduce the need for natural gas, and increase the capacity of existing plants.
  - Increasing the overall capacity of New York City's existing older natural gas plants could easily provide almost 1,000 MW of additional generating capacity. There is more than 5,000 MW of older, inefficient natural gas generating capacity in New York City potentially available for repowering.
  - New combined-cycle power plants, which have been proposed by developers and are currently in the planning stages, have the potential to add over 4,000 MW of new capacity in New York State and could assist in replacing Indian Point. NRDC and Riverkeeper would not support building new natural gas power plants to replace Indian Point until plans for efficiency, renewables, and repowering existing power plants have been fully explored and implemented.



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## COST ESTIMATES FOR REPLACEMENT POWER

**REPLACING INDIAN POINT'S CAPACITY CAN BE DONE AFFORDABLY.** Many of the projects discussed above have been proposed and will likely be built even if Indian Point doesn't close down. These projects will be built by private developers using mostly private capital and financing. The exact cost of replacement will depend on the mix of energy alternatives that are used to replace the power. The range of increases on consumer electricity bills will be about \$1 to \$5 per month, depending on the mix of alternatives used. The more we rely on energy efficiency as a replacement, the lower the bill increase will be. Customers who participate in energy efficiency programs will actually lower their bills.