Indian Point Fact Sheet

What is a nuclear accident? The events Three Mile Island, Chernobyl, and Fukushima are examples of nuclear disasters. At Three Mile Island there was a meltdown of a pressurized water reactor; at Chernobyl a reactor exploded following an emergency shut down that spiked the power output. At Fukushima, an earthquake and tsunami triggered a meltdown of three reactors, with an explosion at a forth and spent fuel fires.

Is Indian Point really "SAFE, SECURE, and VITAL" as its owner, Entergy, claims?

While Indian Point does provide up to 2,000 megawatts of power and employs 1,250 workers, it is approaching the end of its 40-year life span and has a poor track record, with a history of:

- a steam boiler rupture,
- two transformer explosions,
- multiple siren failures, and
- planned and unplanned releases and ongoing leaks of radioactive material into the environment.

IP is NOT Safe or Secure: Indian Point Unit 2 ranked last among the nation's 104 reactors for many years. Although Indian Point Units 2 and 3 suffer from age-related degradation that reduces their margins of safety, Entergy has requested an extension of their present license to operate for an additional 20 years. While the reactors are encased in 6 feet of reinforced concrete, the overcrowded fuel pools and the facility control rooms are relatively unprotected and there is insufficient back up electricity to provide adequate cooling for the densely-packed 'spent' fuel rods.

IP is NOT Vital: Even if Indian Point were shut down tomorrow, there would be enough electricity to power New York City, Westchester County, and NY State as a whole. In fact, Indian Point Unit-2 was closed for 11 months in 2001 without any loss of power or increase in cost, and it is frequently closed for maintenance and fuel replacement, in addition to unplanned outages. Moreover, nearly 20 million people live within a 50-mile radius of Indian Point's two operating nuclear reactors, located in Buchanan on the Hudson River, just 25 miles north of Manhattan. A **large radioactive release** triggered by an attack or accident could cause devastating health and economic consequences, rendering the Hudson Valley and NYC uninhabitable. If damaged, the so-called 'spent' fuel stored on site could release enough radioactive isotopes to kill or injure people that live or work within a 50-mile radius.

Evacuation Impossible: Indian Point is located in one of the most densely populated areas in the nation, a density that has increased considerably since the plant was first built – but has not been considered in the relicensing process. Its roads are routinely overwhelmed by commuter traffic. A review of emergency preparedness at Indian Point completed by former FEMA Director James Lee Witt in 2003 concluded that the evacuation plan was inadequate to protect the public from radiological exposure. Common sense says that gridlock would occur throughout the region within minutes after the announcement of a severe accident or incident at Indian Point, and evacuation would become virtually impossible.

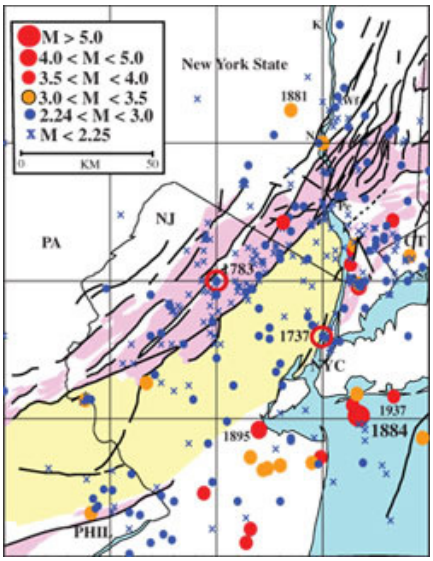
This map shows the **10-mile evacuation planning zone** (although currently only a small portion of this would actually be evacuated), the **17.5-mile peak fatality zone** and the **50-mile peak injury zone** surrounding Indian Point, which extends to Long Island, CT, NJ and includes most of Ulster and Dutchess counties. The Nuclear Regulatory Commission (NRC) recommended a 50-mile evacuation zone surrounding Fukushima – not 10.

Indian Point Relicensing: Clearwater, Riverkeeper, and the State of New York Attorney General's Office and Department of Environmental Conservation are the intervening parties in the Indian Point relicensing case, in which Clearwater has filed contentions regarding Indian Point leaks, on-site waste storage and Environmental Justice issues.

What is Environmental Justice? Environmental Justice (EJ) means that every person is entitled to equal environmental protection under the law: Also called, eco-equity, it includes the right to be free from ecological destruction and assures that environmental burdens are fairly distributed, with equal access to environmental goods. **Environmental injustice**, or **environmental racism,** includes the practice of frequently siting polluting industries and toxic waste facilities in communities of color, ethnicity and low income.

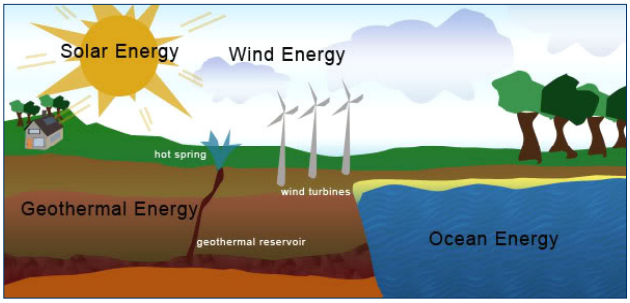
What are the EJ issues related to Indian Point Nuclear Power Plant? People of color and/or low income in the region have experienced disproportionate impacts, including increased cancer rates (e.g. prostate and thyroid) from radiation exposure.[1] Further, members of EJ communities and those with disabilities, including those in hospitals, nursing homes and prisons, may have difficulty accessing transportation in the event of evacuation. Other nuclear power plants in NY State, Fitzpatrick and Nine Mile Point in Oswego County, are located in areas potential environmental justice areas (PEJAs). As for ecological impacts, the 2.5 billion gallons a day that Indian Point uses for cooling water kills billions of fish, which are already in serious decline.

Could an Earthquake happen at Indian Point? A 2008 report issued by Columbia University's Lamont-Doherty Earth Institute noted two earthquake faults near Indian Point, the Ramapo fault and a fault going from Stamford, CT to Peekskill. The map at the right shows all known earthquakes in the greater New York-Philadelphia area from 1677-2004, graded by magnitude (M).



What about Health Impacts? Short-term exposure to high levels of radioactivity can lead to nausea, vomiting, hair loss, headaches, and diarrhea; long-term exposure leads to an increased risk of cancer. Strontium-90, one of the most dangerous radioactive isotopes, is deposited in the bones and teeth and continually emits cancer-causing radiation. Radiation and Public Health Project (RPHP) studies show that levels of strontium-90 are significantly higher in ***nuclear counties*** (located within 100 miles of nuclear reactors) than in ***non-nuclear counties***, coinciding with increased breast and prostate cancer mortality rates. RPHP also found that infant mortality and childhood cancer decrease significantly following the closing of nuclear plants.[2] In the event of a severe accident at Indian Point, radiological contamination of drinking water would extend to New York City, since a large portion comes from the Croton and Kensico Reservoirs. In the Fukushima disaster, the radiation extended 140 miles to the Tokyo reservoirs, where large numbers of residents are now reporting symptoms of radiation poisoning. To date, there has been no evaluation of the effect of the radioactive isotopes, currently leaking into the Hudson River from the groundwater under Indian Point, on the proposed desalination plant that would provide 10 million gallons per day of drinking water to Rockland County.

Will asthma rates increase in area cities if Indian Point is closed? If the only alternatives for replacing the electricity generated by Indian Point were to increase the use of gas-fired "peaker" plants in NYC and surrounding urban areas, the resulting emissions could cause increased asthma rates – however, there are many cleaner, safer alternatives readily available, including a variety of renewable energy sources and energy conservation and efficiency.



If Indian Point closes, what are the alternatives for replacement energy? According to a recent Stanford University study, we could convert the world to clean, renewable energy sources and forego the use of fossil fuels by using **solar, wind, water (hydroelectric, tidal and wave) and geothermal energy** to generate power – with wind and solar power contributing 90 percent of the needed energy.[3]

What can we do to ensure our safety? Please donate generously to Clearwater's Indian Point work and let Governor Cuomo and your other elected official know of your concerns. For more information about Indian Point, please contact mannajo@clearwater.org or call **845-265-8080 x 7113**. Let's not leave this to a *"What if…?"*

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[1] Joseph Mangano, Radiation and Public Health Project, declaration to Clearwater's Environmental Justice Contention, submitted to ASLB, December 10, 2007.
[2] Infant deaths decrease by up to 42%; childhood cancer by up to 36%. www.radiation.org
[3] Mark Z. Jacobson, Stanford Univ., *"The World Can Be Powered by Alternative Energy…"*