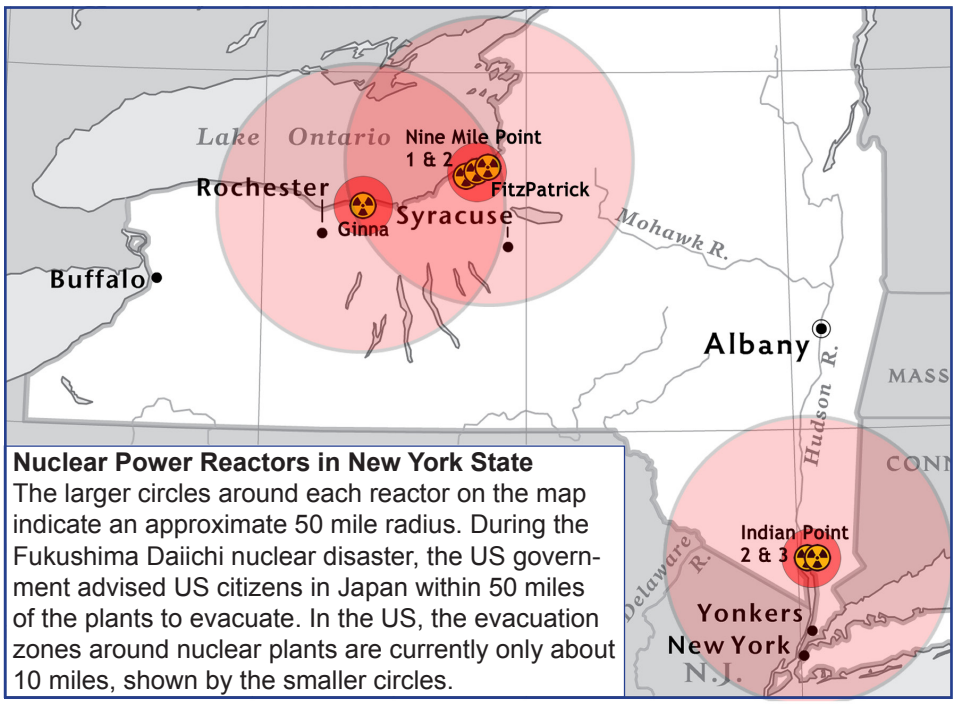
Know Your Nuclear Neighbors



Nuclear Power Reactors in New York State
The larger circles around each reactor on the map indicate an approximate 50 mile radius. During the Fukushima Daiichi nuclear disaster, the US government advised US citizens in Japan within 50 miles of the plants to evacuate. In the US, the evacuation zones around nuclear plants are currently only about 10 miles, shown by the smaller circles.

James A. FitzPatrick

Location: Oswego County
Owner: Entergy Corporation
Type: Mark I Boiling Water Reactor*
Age: 38 years in operation
Population within 50 miles: 909,798
Spent fuel in pools: ~434 tons

Mark I reactors like FitzPatrick have very small containment structures, making them especially vulnerable to large-scale accidents. In 1986, Dr. Harold Denton, an official at the Nuclear Regulatory Commission (NRC) acknowledged they had as high as a 90% chance of failure if challenged by severe accident conditions. FitzPatrick is the only Mark I in the US that does not contain a hardened vent system as was recommended by the NRC.*

Indian Point Unit 2

Location: Westchester County
Owner: Entergy Corporation
Type: Pressurized water reactor
Age: 38 years in operation
Pop. within 50 miles: 17,22,0895
Spent fuel in pools: ~514 tons

Indian Point is located just 25 miles from New York City in an area nearly impossible to evacuate in the case of an accident.

Nine Mile Point 1

Location: Oswego County
Owner: Exelon/Constellation
Type: Mark I Boiling Water Reactor*
Age: 43 years in operation
Pop. within 50 miles: 909,523

Nine Mile 1 is one of the two oldest operating nuclear plants in the US and it is showing its age. In 1997, severe cracks were discovered in the shroud surrounding the reactor.

Nine Mile 1 is thought to have about 510 tons of used up fuel sitting in cooling pools on site. Just like the reactor core itself, spent fuel pools must be kept cool with a constant supply of water cooled by electricity. In Mark I reactors like Nine Mile 1, these pools are high in the air near the reactor core, making them vulnerable to exposure from leaks or to explosions caused by problems within the core. Institute for Resource and Security Studies estimates that a spent fuel pool fire could render 33,000 square miles uninhabitable. New York State is 55,000 square miles.

The NRC has estimated the likelihood that an earthquake could do enough damage to the Indian Point 3 reactor to harm the public is one in 10,000, making it the most earthquake-prone plant in the country.

Indian Point Unit 3

Location: Westchester County
Owner: Entergy Corporation
Type: Pressurized water reactor
Age: 36 years in operation
Pop. within 50 miles: 17,22,0895
Spent fuel in pools: ~377 tons

Nine Mile Point 2

Location: Oswego County
Owner: Exelon/Constellation
Type: Mark II Boiling Water Reactor
Age: 25 years in operation
Pop. within 50 miles: 909,523
Spent fuel in pools: ~345 tons

The NRC estimates that a core meltdown at Nine Mile 2 could cause 20,000 cancer deaths within 12.5 miles of the plant and could cost $367 billion.

Robert E. Ginna

Location: Wayne County
Owner: Exelon/Constellation
Type: Two-loop pressurized water reactor
Age: 42 years in operation
Pop. within 50 miles: 1,269,589
Spent fuel in pools: ~361 tons

Ginna is the oldest reactor of its type in the US. The NRC estimates that a core meltdown at Ginna could cause 20,000 cancer deaths and 1,400 early fatalities within 12.5 miles of the plant.

** General Electric Mark I Boiling Water Reactors have been known to have flawed containment designs since the 1970s, when scientists at both the Nuclear Regulatory Commission (NRC) and GE raised concerns that their containment structures would not successfully withstand a nuclear accident. In 1989, the NRC advised Mark I operators to install a hardened vent, which was to be used as last resort if an accident occurred to relieve pressure and prevent hydrogen explosions within the reactor. In March of 2011, the Mark I design and the venting system were put to the test during the Fukushima Daiichi nuclear catastrophe. In each of the three reactors that were online at the time of the accident, the containment system failed.*

For more information or to get involved in efforts to replace nuclear power through conservation, energy efficiency, and clean, renewable energy, visit the Alliance for a Green Economy: www.agreenewyork.org.