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OFFICE OF SECRETARY RULEMAKINGS AND **ADJUDICATIONS STAFF**

I am writing to urge the Nuclear Regulatory Commission to deny the Entergy's application for a 20-year license extension for the two operating nuclear reactors, IP-2 and IP-3, at Indian Point Energy Facility in Buchanan, NY. Located in the most densely populated region of the country, Indian Point is one of the most dangerous nuclear plants in the nation, according to the Nuclear Regulatory Commission (NRC) itself. These plants are at the end of their designed 40-year lifespan. During these years we have witnessed serious nuclear accidents at Chernobyl and Three Mile Island, and most recently at Fukushima. In August 2011, New York experienced the effects of an earthquake, Hurricane Irene, and a tornado all in one week. Last week, there was an earthquake in Stamford, Connecticut, along one of the two fault lines that converge within a mile of Indian Point. It is no longer prudent to believe that "It can't happen liere."

There are many factors that make Indian Point's relicensing flawed, and make denying it imperative, including:

Severely Narrowed Relicensing Process: Over the years the relicensing process for nuclear power plants has been severely narrowed to exclude critical information and criteria for public health and safety that common sense dictates should be addressed, such as increased population density, the lack of a viable evacuation plan that can actually be implemented and can serve populations in 50-mile radius as was recommended in the Fukushima disaster (the current plan covers only 10 miles and excludes the vast majority of the 20 million people living downwind of the plant), or the health impacts of ongoing releases of radioactivity into the air and water. The Atomic Safety Licensing Board's decision to exclude from consideration the two earthquake faults documented in 2008 by Columbia University's Lamont-Dohtery Earth Observatory seismic experts is baffling.

A History of Serious Problems: Relicensing depends solely on the physical condition of the reactor and supporting equipment, which is aging, deteriorating and leaking radioactive isotopes from the groundwater under the plant into the Hudson River. In the case of buried piping, corrosion is difficult to detect. In addition the plant has a history of multiple transformer explosions, a major steam pipe rupture, clogged cooling system intakes, repeated siren failures - and is a sitting target for terrorism.

Dangerously Over-Crowdird Fuel Pools: The plant's spent fuel is highly radioactive and dangerous. Indian Point's spent fuel pools contain about three times the radioactivity as Fukushima's spent fuel pools. Spent fuel assemblies are densely packed into severely over-crowded fuel pools, which are housed in totally unprotected metal storage buildings, and they are leaking radioactivity into the Hudson. Because of the dense packing and the layer of debris that covers the bottom of the fuel pools, Entergy is unable to even see or inspect 60% of the fuel pool liners. The Boraflex panels, which are meant to absorb neutrons and prevent the rods from going critical, are degrading over time, with no information about whether they will function after the current license expires. As a result, the possibility of a spontaneous fuel pool fire and major release of lethal radioactivity cannot be ruled out.

De Facto On-Site Waste Storage: When the plant was first licensed it was widely believed that the federal government would open a national waste depository at Yucca Mountain to which spent fuel from Indian Point would be sent. That option is no longer under consideration and there is no other repository on the horizon. Indian Point is now storing 1,500 tons of highly-radioactive spent nuclear waste on site and would add an additional 1,000 tons if the plant is relicensed for another 20 years, posing an ongoing and unnecessary threat to the region. It functions as a de facto long-term nuclear waste repository, which it was never designed to do, in the midst of the

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most populous region of the US, and on the shores of the Hudson. As the reactors continue to operate and make more spent fuel, we are daily compounding the dangers of these fuel pools.

Health and Environmental Impacts: Although health impacts are not being considered in the relicensing hearings, studies have shown increased rates of cancer and other illnesses related to exposure from planned and unplanned releases of radioactivity. Indian Point's once-through cooling system uses 2.5 billion gallons of water a day from the Hudson River, seriously impacting its still declining fish population. Rising sea level, warmer water temperatures, and increasingly severe storms and flooding due to climate change will further reduce the safety of Indian Point.

Evacuation is Impossible. Experts argue over the probability of an earthquake, a terrorist attack, or a fuel pool fire or other accident at Indian Point that would release large amounts of radioactivity. Whatever the probability of such an event, it's clear the consequences would be devastating. Approximately 20 million people live or work within 50 miles of Indian Point. There is no evacuation plan for New York City or for other populations outside a ten-mile radius. Within minutes of an accident or incident at Indian Point gridlock would occur and evacuation quickly become impossible. People without personal transportation, the elderly, handicapped and other institutionalized populations would be disproportionately affected. Since no truly adequate evacuation plan exists or is possible in our congested region, the only remedy for protecting public safety and avoiding a preventable catastrophe is closing and decommissioning the plant as originally scheduled.

Replacement Energy is Readily Available: When Indian Point was built most of its electricity was used by local utilities. Now it is delivered to the grid and most of it is sold nationally. Less than 25 percent of Indian Point's 2,000-MW capacity is used in New York State. This nuclear power is rapidly being replaced by energy efficiency and renewable, repowering and improved storage and transmission capability. Until recently 98% of the research, development and infrastructure investment went to nuclear and fossil fuel, and less than 2% to renewables and energy efficiency, but now this sector is experience rapid growth. In fact 4,000 megawatts of wind is being developed, mostly in the western part of the state, and Governor Cuomo's Energy Highway is currently addressing ways to bring this excess power more efficiently to the greater NY metropolitan area.

Studies have shown that there would be enough power available from existing and approved generating units in New York State and neighboring grids, through import over existing transmission lines, to meet the area's electricity needs with the permanent retirement of Indian Point at the end of its current licenses. In January 2012, the Assembly Committee on Energy and the Committee on Corporations, Authorities and Commissions concluded that coordinated investments in the existing transmission system, energy efficiency, and the completion of projects already in the planning process would provide more than enough resources to allow Indian Point to close without overburdening ratepayers or threatening reliability standards. Power New York Act 2011, an energy and jobs bill, established a new Article X power plant siting makes it easier to permit smaller renewable projects and includes provisions to help make energy retrofits of homes and businesses more affordable-saving money and creating green-energy jobs. The October 2011 report by Synapse Energy Economics, a Cambridge-based research company, confirmed that closing Indian Point would not cause economic problems or electricity shortages in the State. Their report found that Indian Point now makes up only 12 percent of Con Ed's contracted capacity, down from 26 percent in recent years, and provides only 3 percent of New York City's total energy requirements - and just 16 percent of the total amount of electricity that New York City can receive from outside the five boroughs.

In addition to denying Entergy's relicensing application for Indian Point, I recommend the following interim steps:

- Require Entergy to move as much fuel out of the spent fuel pools as possible and into hardened dry cask storage at Indian Point to reduce the risk of an accident or spontaneous fire in the pool. This simple mitigation measure will make the nuclear waste storage safer in the short-term. Denying the plants relicensing application will prevent the accumulation of additional high-level nuclear waste.
- Congress should hold hearings or establish an independent commission to review nuclear safety and to expand what is considered in the relicensing process. This should include hearings on the NRC's ability to oversee safety at Indian Point, the storage and disposal of spent fuel, and evacuation planning.

The NYS Department of Environmental Conservation should continue to withhold a water permit that the agency withheld in April 2010 because IP does "not and will not comply with existing New York State water quality standards." The current cooling system releases radioactive material (including tritium,

strontium-90, and desium) from spent fuel pools, pipes, tanks, and other systems into the Hudson River and

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Indian Point could never be licensed in its present location or condition today, so it defies logic to extend its current licenses for another 20 years. To do so is playing a dangerous game of Russian roulette with our lives and future, when safer, cleaner alternatives are immediately available.

Thank you for considering these comments.

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Administrative Judge Lawrence G. McDade cc: c/o Anne Siarnacki, Law Clerk

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kills billions of organisms every year, including endangered species.

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