

**Alliance for a Green Economy**  
**Citizens' Environmental Coalition**

September 15, 2012

Office of the Secretary, Rulemakings and Adjudications  
Staff, U.S. Nuclear Regulatory Commission,  
Washington, DC 20555-0001  
Fax: (301) 415-1101  
Email: [hearing.docket@nrc.gov](mailto:hearing.docket@nrc.gov).

Re: Application for License Extension for two operating nuclear reactors at the **Entergy** Indian Point Energy Facility in Buchanan, NY.

We are writing to urge the NRC to finally put safety first and deny the relicensing of Indian Point 2 and 3 reactors.

Even prior to the Fukushima disaster we were expressing serious concern that the nuclear industry was heading for a catastrophe of major proportions. We did not know that the catastrophe would occur in another country. Nor did we know the magnitude of the disaster, the continuing emissions and the ongoing serious threats to the globe posed by the unstable Unit #4 spent fuel pool. Since March of 2011 we have been closely following the actions of the NRC post-Fukushima including the Near Term Task Force Report and Agency plans to implement the report's recommendations.

NRC actions related to safety are of the utmost priority. We partly understand that in the face of a major loss, the normal emotional response is denial. However, denial is normal as an individual, personal response, but not for an entire agency. Yet the Nuclear Regulatory Commission has proceeded to deny that serious safety threats exist and to generally behave in an identical manner to Japan's regulators pre-Fukushima. NRC has the benefit of the Japanese experience, but is failing to act with appropriate speed to make necessary course corrections that will dramatically improve safety at the nation's nuclear reactors. The Agency must move out of denial and begin to grapple with the newly reinforced reality of the dangers of nuclear power.

**We recommend that NRC take major definitive safety action by denying a license extension for the two Indian Point reactors. The discussion below provides our rationale for denying the license extension.**

1. The Near Term Task Force Report was the primary NRC response to Fukushima in order to ensure that the lessons learned are applied to US reactors. However, the NRC has just begun to address the Tier 1 recommendations in the Near Term Task Force Report and it will be many years before even 1/3 of the work has been done.

The NRC should not renew reactor licenses without ensuring that all the lessons learned from Fukushima can reasonably be implemented at reactors proposed for relicensing. All Agency attention should be focused on ensuring safety, not proceeding to relicensing by ignoring many critical lessons from Fukushima. If there is any one, single lesson from Fukushima, it is not to repeat the Japanese government's denial of the danger of earthquake activity in the vicinity of nuclear power plants. Yet, despite the NRC's acknowledgment that Indian Point is at the greatest risk of core damage due to seismic events of any plant in the United States – and in the face of new scientific evidence indicating that earthquakes exceeding the reactors' seismic qualifications are possible – the agency has refused to consider the issue in deciding whether the reactor operating licenses should be extended.

Following the waste confidence court decision, we know that any decision on relicensing cannot be finalized until an environmental review has been completed by the NRC. The Agency has been given two years to complete that review. So there is no reasonable rationale for rushing relicensing ahead of this schedule for nuclear waste.

**Relicensing should involve very careful decision-making, including adequate time to evaluate all relevant safety issues, especially the lessons learned from the worst nuclear disaster the world has ever known. Blindly rushing ahead to relicense Indian Point, will only further serve to convince the public that the NRC is serving primarily to protect the nuclear industry over the public's safety and welfare.**

2. Recommendation #1 in the Near Term Task Force report was the single most important recommendation made by the Task Force. The priority placement of this recommendation and the extensive discussion of the problematic current "patchwork" of regulatory approaches demanded immediate rather than deferred attention and delay. This is the recommendation that would have addressed significant safety issues that are 1) "Beyond Design Basis" 2) only addressed via guidance or voluntary initiatives rather than requirements 3) not single events but multiple or interacting events, or 4) fires, since a design basis fire has not been established, despite the commonality of this type of event.

Not only has the Commission and the Agency delayed Recommendation #1, the approaches used for all of the work being done under the Near Term Task Force Report continues to use the very same "patchwork" of regulatory approaches that was so heavily criticized in Recommendation #1. Continuing the patchwork approach will severely constrain the effectiveness of all the work being done to make nuclear reactors safer.

In the case of Indian Point, the continuing patchwork approach means that the newly discovered fault line, which makes Indian Point the highest earthquake-prone reactor in the nation, will not be considered for relicensing.

Ignoring new facts and science, the Atomic Safety Licensing Board's decided to exclude from consideration the two earthquake faults documented in 2008 by Columbia University's Lamont-Doherty Earth Observatory seismic experts. Indian Point has never been adequately evaluated for its current earthquake risk.

**Relicensing reviews should be comprehensive and deal with all relevant issues concerning the ability of a plant to stay in operation without any serious events for the entire period of the license extension. Relicensing cannot successfully address public safety if is not comprehensive, but is instead piecemeal. This decision to ignore science and proceed with relicensing without consideration for earthquake risks tells us clearly that the patchwork regulatory approach continues after Fukushima. It also tells us whose interests are being served and it is not the public's. The Licensing Board apparently feels no obligation to serve the interest of over 20 million people, many of whom would have no ability to evacuate in a timely fashion from a nuclear disaster at Indian Point.**

3. Entergy reactors have demonstrated a disturbing pattern of operation  
The Union of Concerned Scientists identified 11 Near Misses in 2010, four of the eleven occurred at Entergy Plants. Two of these were at the Palisades reactor and two were at Pilgrim. In other words Entergy was responsible for 36% of the near misses in 2010 (The NRC and Nuclear Power / Plant in 2010: A Brighter Spotlight Needed, 2011.

[http://www.ucsusa.org/assets/documents/nuclear\\_power/nrc-2010-full-report.pdf](http://www.ucsusa.org/assets/documents/nuclear_power/nrc-2010-full-report.pdf)

The UCS report also cited lax NRC oversight associated with problems at three nuclear reactors, two of which were Entergy plants, Vermont Yankee and Indian Point. At Indian Point the refueling cavity liner has been leaking since 1993. This liner was installed to provide protection from leaks in the event of an earthquake and is part of the design basis of the plant. Given the Licensing Board's decision to exclude earthquake risks from evaluation, it appears that this ongoing leak will also not be part of the licensing decision.

Entergy's safety performance has been seriously deficient at another New York State reactor, Fitzpatrick in Oswego, NY. As a result of serious and willful worker safety violations and a problematic safety culture the NRC issued a confirmatory order requiring safety culture assessments be performed at all 9 Entergy reactors in the US. Those assessments are to be completed within 360 days of the January 2012 Order. We do not know whether a safety culture assessment has been completed for Indian Point at this time.

If the assessment for both Indian Point reactors has been completed, it needs to be fully disclosed to the public and their public officials immediately as well as all information pertaining to action steps to be implemented as a result of the assessment.

What the January 2012 Order did tell us is that Entergy's performance is significantly degraded, creating systemic risk for the nuclear reactors under this company's charge.

**The NRC must develop a mechanism to evaluate and handle systemic risks for companies that display very poor performance across multiple plants. This should include special means of dealing with relicensing that are different from and much more stringent than typical review processes. We recommend that the first NRC decision should be whether the Indian Point facility and its two reactors should be eligible to even begin the process toward relicensing.**

Ultimately, our recommendation is that license renewal application be denied and both reactors at Indian Point be permanently closed when their current operating licenses expire. The risk posed by operating aging reactors in such a heavily populated area is unacceptable for the reasons stated above and many others that have been highlighted by other intervenors in the licensing process. It is also not a risk that needs to be taken. Multiple studies have now shown that the power generated by Indian Point is not needed. There is enough power available from other existing and approved sources, and the New York Assembly Committee on Energy and the Committee on Corporations, Authorities and Commissions has concluded that Indian Point can close without overburdening ratepayers or compromising reliability. The case for closing Indian Point will become stronger still as more renewable energy sources come online in the coming years.

**The NRC cannot continue to operate in a vacuum without taking into account other new post-Fukushima developments, in which the world is turning away from nuclear power and toward safer, cleaner alternatives. It also cannot continue to deny the very real threats to public health and the environment posed by the Indian Point reactors. If the NRC does not begin to take its responsibility for nuclear safety more seriously, the Agency will become irrelevant.**

Thank you for considering these comments.

Sincerely,



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Citizens' Environmental Coalition  
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DOCKETED  
USNRC

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c/o Anne Siarnacki, Law Clerk  
Atomic Safety and Licensing Board Panel, Mail Stop T-3F23  
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September 17, 2012 (8:30 a.m.)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

## **Docket, Hearing**

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**From:** Barbara Warren [warrenba@msn.com]  
**Sent:** Saturday, September 15, 2012 2:03 PM  
**To:** Docket, Hearing  
**Cc:** Siarnacki, Anne  
**Subject:** Comments on Indian Point relicensing  
**Attachments:** Final NRC Letter re Indian Point relicensing AGREE CEC.doc

Attached are Comments on Indian Point relicensing from the Alliance for a Green Economy and Citizens' Environmental Coalition.

CEC is a founding member of the Alliance along with several other organizations.

Thank you for your attention.

Sincerely,

Barbara Warren  
Executive Director  
Citizens' Environmental Coalition  
[www.cectoxic.org](http://www.cectoxic.org)

September 12, 2012

Office of the Secretary, Rulemakings and Adjudications  
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Washington, DC 20555-0001  
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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 here."

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-Doherty Earth Observatory seismic experts is baffling and contrary to the scientific evidence.

**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-Crowded 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 visualize 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, however 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 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 cesium) from spent fuel pools, pipes, tanks, and other systems into the Hudson River and kills billions of organisms every year, including endangered species.

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.

Sincerely,

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