

# Critical Public Health and Safety Impacts of Decommissioning Indian Point • Expert Forum Series

Thursday, February 16th, 4:00 p.m. EST

## Agenda:

**Welcoming Remarks:  
Westchester County Executive George Latimer**



**Purpose:** This forum series presents experts in their respective fields addressing important aspects of public health and safety that should be considered in decommissioning a nuclear facility and the handling of nuclear waste.

Holtec International, the owner of the Indian Point nuclear facility conducting decommissioning operations, is seeking to discharge one million gallons of treated but still radioactive water into the Hudson River from which seven municipalities source their drinking water and others rely on as a backup source.



**Welcome:** **George Latimer, Westchester County Executive**

**Moderator:** **Dr. Courtney Williams**, Cancer researcher and Co-founder of Safe Energy Rights Group (SEnRG)

**Potential Health Impacts of Environmental Exposures to Children:** **Dr. Kathy Nolan**, Pediatrician, President of Physicians for Social Responsibility of New York, Co-Founder of Concerned Health Professionals of New York, Ulster County Legislator.

**Radioactive Fuel Pool Water Treatment System Issues:** **Arnie Gundersen**, Chief Engineer at [Fairewinds Associates](#), former nuclear industry executive

**Disproportionate Harm From Radiation Exposure Tied to Biological Sex:** **Mary Olson**, Biologist and Founder and Director of the Gender and Radiation Impact Project (GRIP)

## QUESTION & ANSWER PANEL

**Action Steps:** **Dr. Courtney Williams**

**Co-Sponsors:** Grassroots Environmental Education, Federated Conservationists of Westchester County, Hudson River Sloop Clearwater, Physicians for Social Responsibility-NY, Safe Energy Rights Group, Sierra Club Atlantic Chapter, Sierra Club Lower Hudson Group, United for Clean Energy, Upper Nyack Green Committee, WESPAC Foundation.



## **BACKGROUND**

In the effort to close the Indian Point Nuclear Power Plant in Buchanan, NY and ensure the safest possible decommissioning, our co-sponsoring organizations have convened an Expert Forum Series on Health and Safety Issues related to the Decommissioning of Indian Point.

Located 25-miles north of New York City along the Hudson River, the plant, which closed in April 2021 after 59 years of operation, remains an ecological and public safety threat to the region. Given the sustained danger the facility poses, the Indian Point/United for Clean Energy Convergence championed the need for a Citizen Oversight Board.

**9-11:** One of the two planes that took out the World Trade Center in the 9/11 disaster flew directly over Indian Point. If it had gone down 60 seconds sooner we would have indeed experienced Fukushima on the Hudson. The Indian Point Safe Energy Coalition (IPSEC) was formed immediately after 9/11 to better understand the health and safety issues related to the operation of a nuclear plant in this densely populated area.

### **Relicensing:**

- By the time it came up for its second Relicensing Application, Indian Point had a long history of serious problems ranging from siren failures and transformer explosions to O-ring failures and loosened baffle bolts in the reactor itself.
- Some of the contentions included Clearwater's unique Environmental Justice contention, Aging Management failures and the fact that relicensing was inconsistent with Coastal Management
- A major concern is the NRC's history of granting waivers and exemptions that favor the industry at the expense of public health and safety.

**Settlement Agreement and PSDAR:** As it was losing its relicensing attempt, in Jan. 2017, Entergy signed a Settlement Agreement with the New York State Attorney General's office and Riverkeeper to close Indian Point: Unit 2 in and Unit 3 in April 2020 and 2021 respectively. Later the NRC approved Entergy to transfer the license for Indian Point to Holtec for Decommissioning in Nov. 2020, and the NYS Public Service Commission gave its approval in May of 2021.

**COB > DOB:** Knowing that Indian Point would soon be closing, in 2017 the United for Clean Energy Convergence developed a proposal for a Community Oversight Board (COB) and submitted it to New York State Senator Peter Harckham and former Assembly Member Sandy Galef, who [drafted legislation to create a New York State Decommissioning Oversight Board for Indian Point](#) and other reactors in Western New York, which are due to close in the coming decade. The DOB Legislation passed both houses, but was then modified by Governor Cuomo who issued an Executive Order directing the Public Service Commission to establish the [Decommissioning Oversight Board in December 2020](#).

See:also: [TIMELINE-Entergy N.Y. Indian Point nuclear plant relicensing | Reuters](#)

Tom Congdon, Executive Deputy and Deputy Chair of the NYS Department of Public Service, who chairs and facilitates DOB, has been very open to public comment, however experts that are needed to further enhance the body of knowledge necessary to ensure the best possible outcome have not yet been brought in. This series of Forums on Health and Safety will provide expertise to the process and to the DOB member agencies that working together have the jurisdiction to try to ensure the safest possible decommissioning with the least impacts on Public Health and the greatest protection of Public Safety. Watch for future public forums, which will focus on Emergency Planning and other Safety issues.

## Decommissioning Glossary

**Citizen Advisory Boards:** Active public participation, with effective input and citizen oversight and independent inspections, should be part of decommissioning planning and monitoring to ensure accountability and to advocate for public health and safety. The NRC rules allow for Citizen Advisory Boards, but do not require them.

**Consolidated Interim Storage (CIS) vs. Permanent Repository:** Two currently proposed options for offsite storage, which require transporting highly radioactive waste, are Consolidated Interim Storage, currently proposed for Texas and New Mexico, and a permanent repository at Yucca Mountain in Nevada, which has been deemed unsuitable, but is currently being considered again.

**Decommissioning Funds:** The total cost of decommissioning a reactor facility depends on many factors, including the timing and sequence of the various stages of the program, type of reactor or facility, location of the facility, radioactive waste burial costs, and plans for spent fuel storage. The NRC estimates costs for decommissioning a nuclear power plant range from \$280-\$612 million. The NRC requires nuclear power plant licensees to report to the agency the status of their decommissioning funds at least once every two years, annually within five years of a planned shutdown, and annually once the plant ceases operation.

### **Decommissioning Options**

- DECON: Immediate dismantling and clean-up of contaminated plant systems and structures and removal of radioactive fuel.
- SAFSTOR: Safe Storage or delayed DECON – maintenance and monitoring to allow radioactivity to decay and/or decommissioning funds to grow.
- ENTOMB: Entombment is permanent encasing, with ongoing maintenance and monitoring, as was done in Chernobyl.
- PD&SR: Planned Decommissioning & Site Restoration, combines the best features of immediate decommissioning (DECON) for portions of the facility, with deferred decommissioning (SAFSTOR), to maximize benefits and avoid liabilities of the first two options. Can be done for economic reasons, to promote public health and safety, or both.

Under Nuclear Regulatory Commission regulations, the decommissioning process must be complete within 60 years after the end of operations, unless an extension is required to protect public health and safety.

**Decommissioning Rule** – NRC is currently seeking comment on the basis for rulemaking and will be seeking comment on decommissioning rulemaking in 2018; also see Nuclear Waste Policy Act (NWPA) of 1982: a federal law which established a national program to address the permanent disposal of highly radioactive wastes resulting from using nuclear fuel to produce electricity.

**Deregulation:** In the 1990s some states, including New York, required utilities to sell their power-generating facilities and focus on transmission and distribution, and added additional Energy Service Companies (ESCOs) to promote competition. At that time Con Ed and NYPA sold Indian Point Units 2 and 3 to Entergy. Instead of utility ownership these reactors became merchant plants and the NYS Public Service Commission lost its jurisdiction to regulate these facilities, which is now reserved for the NRC. In other states, such as California, their Public Utility Commission retained regulatory jurisdiction over utility-owned reactors.

**Dry Cask Storage:** Fuel assemblies are removed from spent fuel pools and set into metal canisters then placed into concrete casks.



**Hardened On-Site Storage (HOSS)** is typically a system of dry cask storage, in which the casks are distributed and often earthen-bermed to ensure greater safety and security – as compared with the current configuration of casks clustered like bowling pins on a concrete pad, which could provide a vulnerable target for terrorism.

**High burnup fuel:** Nuclear fuel is encased in metal cladding. In the reactor, this cladding reacts with cooling water. The reaction forms oxide on the outside (similar to rust) and releases hydrogen. These processes begin slowly, and then start to accelerate as the fuel reaches burnup of 45 GWd/MTU. Anything higher is considered high burnup. High burnup fuel must be kept in fuel pools longer. When spent fuel is placed into dry cask storage, the



temperature of the fuel increases and the fuel cladding can become less “ductile,” or pliable, as it cools, presenting unique challenges for storage and/or transportation.

**High level nuclear waste:** The highly radioactive materials produced as a byproduct of the reactions that occur inside nuclear reactors. Spent (used) – but still highly radioactive – reactor fuel is first stored in fuel pools, then after some of the radioactivity has cooled, transferred to dry cask storage.

**Just Transition:** Just Transition is a framework that has been developed by the trade union movement to encompass a range of interventions needed to secure workers' jobs and livelihoods when economies are shifting to more sustainable means of production.

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**For further information:** Ellen Weininger, Grassroots Environmental Education (914) 422-3141 or (646) 210-0200; Manna Jo Greene, Hudson River Sloop Clearwater (845) 807-1270 [mannajo@clearwater.org](mailto:mannajo@clearwater.org)