Indian Point Closure FAQ
January 2018

I. Indian Point Is Growing Increasingly Old and Dangerous

When will the Indian Point reactors be shut down?

In January 2017, Riverkeeper entered into an agreement with Entergy and New York State for the planned shutdown of Indian Point. Two reactors currently operate at Indian Point: Unit 2 and Unit 3. Under the shutdown agreement, Unit 2 will permanently cease operations no later than April 30, 2020, and Unit 3 will cease operations by April 30, 2021. Former Westchester County executive Rob Astorino dropped his politically motivated lawsuit after he lost the election, meaning that the agreement is not subject to any further challenge.

Why did Riverkeeper fight to shut down Indian Point?

1. Indian Point’s antiquated once-through water cooling system kills over one billion fish and fish larvae each year. The system withdraws 2.42 billion gallons per day from the Hudson and heats it up to a deadly temperature before discharging. Fish are killed when they are impinged on filter screens, entrained through the cooling system, and scalded by hot water. Evidence indicates that over 40 years, such slaughter and habitat degradation have contributed to the decline of numerous important fish species in the river.

2. Pools at the plant that house spent nuclear fuel have been leaking toxic, radioactive water into the ground since the 1990s, contaminating the local soil and the Hudson River.

3. Recurring emergency shutdowns have proven Indian Point unsafe. In 2016, it was discovered that 27% of the “baffle bolts” that hold the reactor core together were damaged in Unit 2, and a subsequent inspection of Unit 3 revealed 31% were damaged, contrary to Energy’s prediction. Most recently, problems with the “O-ring” seal between the reactor vessel and the reactor head have recurred for at least the eighth time. It’s very clear that this is an aging reactor with multiple ongoing problems.

4. The scale of potential damage from an accident at the nuclear plant is simply unfathomable. Indian Point is situated in an ecologically important area and a far more densely populated area than any nuclear reactor in the country. The evacuation plan in case of an accident is unrealistic and would have disproportionate impact on people of color.

5. In August 2013, the New York State Comptroller’s office found that the plant is vulnerable to a potential terrorist attack.

6. Indian Point is not prepared for a major earthquake of magnitude 6.2 or above, which Columbia University believes is “quite possible” in the region.
7. The federal **Nuclear Regulatory Commission** has repeatedly acted to protect the nuclear industry rather than vigorously and transparently enforce safety requirements. For example, the NRC recently allowed Indian Point more time to improve cyber-security even though attempts to hack nuclear power plants have already been in the news.

8. No solution has ever been developed for disposal of spent nuclear fuel, meaning that **all spent fuel waste will remain onsite for the foreseeable future**, posing the risks of radioactive release and interdicting large areas of the site for reuse. Newly spent fuel held in the spent fuel pool is especially dangerous, as an accident could cause a zirconium fire and radiological release which would devastate the region. Even fuel that has been transferred to dry cask storage poses an unacceptable risk until Entergy adopts the principles of Hardened on Site Storage, which requires thicker casks, larger spacing, and berms to protect the casks.

9. Indian Point's continued operation holds us back from creating newer, safer and more sustainable power sources.

10. With the closure of Indian Point, we can reduce these dangers and start to turn the page to a clean energy future in New York.

**What will happen to the nuclear waste being stored at the plant?**

The spent fuel will remain onsite until the federal government approves and constructs an interim or permanent storage facility, which is unlikely to happen within the next two decades. Entergy, the operator of Indian Point, has committed to a timetable for transferring Indian Point's spent fuel rods — highly radioactive nuclear waste — from overfilled, leaking storage pools to more secure, dry “cask” storage by the end of 2021. Riverkeeper remains concerned that the dry cask storage remains vulnerable and should be fortified in what is called “Hardened On-Site Storage” to reduce its vulnerable to attack or accident.

**How will the plant be decommissioned and site restored?**

When a nuclear plant is retired, the facility goes through a lengthy decommissioning process, removing it from service and reducing residual radioactivity of all materials except spent fuel to a level that is supposed to permit release of the property and termination of the operating license. There is a decommissioning fund that accumulated during the life of the plant that is held in trust by Entergy. For all three Indian Point units, the fund is currently $1.7 billion. Entergy has warned that unless it is allowed to offload liabilities onto a third party, this is unlikely to be sufficient. However, third party entities, such as a specialty company called Northstar, to which Entergy is applying to hand over the Vermont Yankee decommissioning, does not have deep pockets and will be incentivized to do a cheap job. Making the fund even less likely to be adequate, recently the Nuclear Regulatory Commission has allowed other reactor operators to raid the fund for spent fuel management and has reduced oversight in other ways.

The Nuclear Regulatory Commission loosely oversees the process with lax regulations that allow the operator -- in this case Entergy -- up to 60 years to complete decommissioning. Unfortunately, federal pre-emption means that States have limited authority over nuclear power plants and cannot regulate safety at all, despite lax supervision of decommissioning.

The purpose of decommissioning is to protect both public health and safety and the environment from accidental releases of the remaining radioactivity. Cleaning up any chemical
contamination of the site, an area of state authority, will occur only after the radiological cleanup has concluded under NRC authority.

Riverkeeper is opposed to transfer of the license away from Entergy and opposes use of the decommissioning fund for spent fuel management. However, the NRC has been largely impervious to external pressure, limiting our ability to obtain effective federal oversight. Our goal is to create a coalition of states, municipalities, and public interest organizations to closely monitor the process to ensure Entergy lives up to its obligation to complete a safe, expeditious, and just decommissioning process protective of communities and the environment.

The state is currently undertaking a study regarding the reuse of the site, which is highly constrained by the presence of the spent fuel, the radiological contamination, and major gas pipelines that traverse parts of the property. Preliminary conclusions from the consultant point to battery storage as one plausible option for using a portion of the site during decommissioning.

II. Clean Energy Future

What is Riverkeeper’s position on energy development in New York State?

Riverkeeper fights every day for a clean, safe and secure energy future, without which our precious drinking water supplies and the iconic Hudson River will never truly be protected. This means opposing all new fossil fuel infrastructure projects, which are unnecessary and threaten both the climate and the Hudson; promoting the enormous opportunities associated with energy efficiency and renewable power; and ensuring on-time closure of the increasingly dangerous Indian Point nuclear power plant, whose most recent leak due to a failed reactor vessel seal occurred less than a month ago.

Riverkeeper’s position on energy development is summed up in this blog post by Paul Gallay:

https://www.huffingtonpost.com/entry/why-we-say-no-to-new-fossil-fuel-projects-like-the_us_5a4fe9ace4b0cd114bdb330b

How will the energy grid remain secure?

The simple answer is that there is enough energy on the grid to shut down Indian Point today. It can and must be closed without additional natural gas or other carbon based fuel.

When operating, Indian Point has the capacity to provide about 5% of New York State’s power. As evidenced by the reliability of the electric grid during Indian Point’s many unplanned emergency shutdowns, the grid would remain intact even if the plant shut down permanently tomorrow.

New York Independent System Operator (NYISO), New York State’s grid operator, confirmed that, in 2021, when Indian Point closes, other power sources coupled with energy efficiency improvements are already set to take up virtually all the slack resulting from the plant’s shutdown. Analysis by an independent consultant working with Riverkeeper and NRDC concludes that, when Indian Point’s 2,000 megawatts go offline in 2021, measures already in place put us less than 50 megawatts away from full replacement energy.

One project alone could provide 1,000 megawatts of hydropower – 50 percent of Indian Point’s capacity – and that project has all its approvals. The Champlain Hudson Power Express would
bring existing surplus hydro power from Quebec to New York City via a high voltage direct current cable. Riverkeeper is supporting its construction because it could provide rapid replacement of half of Indian Points capacity with no additional greenhouse gas emissions.

Riverkeeper’s position on replacement energy is summed up in this blog post:

https://www.huffingtonpost.com/entry/checking-it-twice-grid-operator-says-electric-system_us_5a33e8a6e4b0e1b4472ae5bb

Will Indian Point’s closure increase electric bills?

Independent consultants from Synapse Energy Economics found that with a focus on using energy efficiency and renewables to replace the plant, the increase would be only 1 to 2 percent. Rapidly falling prices for renewables and energy efficiency mean that even this estimate is conservative making it likely that electric bills will go down. On the other hand, an accident at Indian Point would bring immeasurable costs.

III. Just Transition for Workers and Communities

How will the 1,000 jobs lost by the closing of Indian Point be replaced?

The state Indian Point Closure Task Force is working with labor leaders to achieve a just transition for the workforce. According to state Labor Department Deputy Commissioner Mario Musolino,

- nearly 40% of the workforce will be eligible for retirement in 2021, though it is unknown how many will choose that option;
- 35% are trained utility workers whose skills are easily transferable to other plants;
- 20% are Teamsters who should be able to get other union assignments; and
- Many other employees work in the trades and have transferable skills.

Riverkeeper is advocating for a prompt and safe decommissioning and dismantling of the plant, which will allow a significant portion of workers to stay on during the many years-long and labor intensive process.

More info on Mario Musolino’s presentation here:

Is the Clean Energy Sector a Viable Source of New Jobs?

According to E2, a group of of business leaders, investors and others who advocate for policies that benefit the economy and the environment, there are over 85,000 clean energy jobs in New York State, with a growth rate of roughly 6%. New York City alone has 57,000 residents working in clean energy. Energy efficiency accounts for the lion’s share of the state’s clean energy workers, employing roughly 80% of the sector.

And when the state doubles the amount of clean electricity generated under the new 50 percent Clean Energy Standard, the economic benefits and jobs will grow even more rapidly. New job opportunities will come from renewable energy, like wind, solar, and fuel cells, in addition to energy efficiency.
How can the public advocate for a safe, expeditious, and just decommissioning of Indian Point?

1. Call your federal representatives in the Senate and House of Representatives to let them know that the Nuclear Regulatory Commission regulations for decommissioning plants are too lax, and ask your representatives to weigh in on the forthcoming rulemaking on the issue to demand strict, protective oversight.

2. Call Governor Cuomo and ask him to “walk the walk” on clean energy. In his policy proposals leading up to the 2018 State of the State address, Governor Cuomo committed to set a target for energy efficiency by Earth Day 2018. We need a strong target, but that alone won’t be enough. Demand that Governor Cuomo mandate strong energy efficiency requirements for utilities and implement market mechanisms to help utilities create jobs and lower utility bills by achieving high efficiency rates.

3. Call your state Senator and Assemblyperson to ask for citizen oversight of the Indian Point decommissioning process. Citizen oversight is essential to ensure that the process is safe and the $1.7 billion dollar fund is utilized efficiently.

4. Call your City Councilman and Mayor De Blasio to ask them to commit to strong energy efficiency measures for NYC. The City should lead the nation in energy efficiency.

5. Talk to your landlord and your employer about solar power and energy efficiency measures that could save money over the long term.

6. If you own a building or home, make it as energy efficient as possible and look into whether rooftop solar is an option.