When Indian Point Closes:  
A Regional Forum on Workforce Transition  
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Age

Oyster Creek
- Oldest operating nuclear plant in the U.S.
  - Single unit completed in 1969
  - Flawed Mark 1 design

Indian Point
- Slightly younger than Oyster Creek
  - IP1 completed in 1962 (now in SAFSTOR)
  - IP2 completed in 1974
  - IP3 completed in 1976
Size & Generating Capacity

**Oyster Creek**
- Single 673 MW reactor
- 662 MGD intake
- ~700 Acre Plot
- Roughly 550 workers
- Local taxes and fees estimated at $13.5 million

**Indian Point**
- Two reactors produce 2,000 MW
- 2,420 MGD intake
- ~224-Acre Plot
- Over 1,000 workers
- Taxes and payments estimated at $30 million
Location

Oyster Creek

Indian Point
Groundwater Contamination

Oyster Creek

Tritium leak
In 2009, 180,000 gallons of water containing tritium, a radioactive isotope, leaked from the Oyster Creek Generating Station in Lacey Township into the Cohansy Aquifer. The contaminated water is in a plume that is moving at a rate of 1 to 3 feet per day. At this rate, it will take 14 to 15 years to reach the nearest residential wells in Lacey Township. The map shows how far the plume could move if nothing is done to clean up the spill.

Indian Point

- Plumes of contamination leaching towards and into the Hudson River:
  - Tritium
  - Strontium-90
  - Cesium-137
  - Cobalt-60
  - Nickel-63
MAXIMUM STRONTIUM (Sr) PLUME\(^1\) CONCENTRATIONS IN GROUNDWATER

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**Legend**
- **Probable Legacy Release Locations**
- **Utility Tunnel**
- **Water Level Data**
  - **Depth**
  - **Plume Data**
    - **Bar Graphs:** Maximum Sr, µg/L
    - **No Depth Specific Samples**
    - **Detected (ND)**
    - **2.0 - 4.0**
    - **≥ 6.0**
    - **≥ 25**
    - **≥ 75**
    - **≥ 175**
- **Groundwater Elevation Contours**
  - **2D/2007** (10 ft Interval)
  - **Contours Other Than 10 ft Interval**

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1. The 10 foot plume deposition represents the upper bound concentrations in the groundwater at the time of plume deposition. All other plume concentrations are based on plume data sampled through 2/12/2007. As such, the plume data presented is not applicable for the current concentrations, which are based on 2010 and 2011 sampling.

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**Source:**してはくタカラエンタープライズ, Inc.

**Date:** 2/12/2007

**Scale:** 1 inch = 5 feet

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**INDIAN POINT ENERGY CENTER**
**BUCHANAN, NEW YORK**

**MAXIMUM STRONTIUM (Sr)**
**PLUME CONCENTRATIONS IN GROUNDWATER**
Safety Concerns

**Oyster Creek**
- Electromatic relief valve failure
- Emergency generator cooling fan malfunction
- Sand bed region of drywell liner corroded

**Indian Point**
- Baffle bolts impaired
- Malfunctioning O-rings
- Transformer explosions, fires, and oil spills
- No legitimate evacuation plan
Closure Agreement Background

Oyster Creek

- Permitting fights at end of Governor Corzine’s tenure:
  - State to require closed-cycle cooling system
- Chris Christie brokered deal to keep status quo for 10 years
- Exelon has agreed in writing to close plant in 2019

Indian Point

- Permitting fights:
  - State to deny 401 Water Quality Certification and Coastal Consistency Determination
- Deal struck in early 2017 to close IP2 in 2020 and IP3 in 2021
Agreement Terms

**Oyster Creek**
- Operation: 10 yrs (2019)
- Environmental Fund: $1 million
- PSDAR must be filed in 2018
- No agreement for spent nuclear waste transfer to dry cask storage
- No requirement to begin decommissioning

**Indian Point**
- Operation:
  - IP2: 3 yrs (2020)
  - IP3 4 yrs (2021)
- Community Fund: $15 million
- PSDAR must be filed 2 years after closure
- Transfer of 4 dry casks per year of spent nuclear waste
- Requirement to commence decommissioning “as soon as reasonably practicable”
Transition

**Oyster Creek**
- Advisory Panel on safety only, not economic concerns
- No measures for workers
- Push for natural gas replacement plant (30 jobs)
- Hope for immediate decommissioning
- Working towards zoning plan to spur economic growth
- $750 million fund (one reactor)

**Indian Point**
- Task Force on replacement energy, safety, and economic issues
- Task force members meeting with union leaders and individual workers
- Site reuse study
- Development initiatives
- $1.7 billion fund (three reactors)
Thank you!

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