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Palisades Nuclear Plant and Big Rock Point Plant Consideration of Approval of Transfer of Control of Licenses and Conforming Amendments

Comment On: NRC-2021-0036-0001

Palisades Nuclear Plant and Big Rock Point Plant Consideration of Approval of Transfer of Control of Licenses and Conforming Amendments

Document: NRC-2021-0036-DRAFT-0049

Comment on FR Doc # 2021-02357

Submitter Information

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Organization: Beyond Nuclear and Don't Waste Michigan

General Comment

(Beyond Nuclear's written comment #2)

Please consider the following attachments as public comment in this proceeding. This includes the Beyond Nuclear letter sent to Michigan Governor Gretchen Whitmer on December 7, 2020, concerning Palisades and Big Rock Point license transfer from Entergy to Holtec. Note that the letter cc'd Michigan Attorney General Dana Nessel, whose office has petitioned to intervene and requested a hearing before the NRC's Atomic Safety and Licensing Board in this transfer proceeding. In addition, a large number of additional State of Michigan agency officials, state legislators, the U.S. congressional delegation, and Indigenous Nations' leaders, were also cc'd on the letter.

Attached to the letter were these three documents:

Nuclear Plant Decommissioning, A New Crisis and New Opportunity for States;

Decommissioning Trust Funds, What States Can Do to Stop Waste, Fraud, and Abuse, and Protect their Citizens;

Background Supplement to Comments by Hudson River Sloop Clearwater on Indian Point License Transfer Application from Entergy to Holtec.

The package conveys our many concerns about the proposed license transfer from Entergy to Holtec at Palisades and Big Rock Point. The concerns raised in the Indian Point backgrounder can also serve as a cautionary tale re: the very same companies, only proposing license transfer at other nuclear power plant sites in Michigan, rather than at Indian Point in New York. For these reasons, the attached files are entirely relevant to this proceeding, and should be treated as such by NRC. Thank you for your

consideration.

Sincerely,

Kay Drey, Beyond Nuclear Board of Directors President, University City, MO

and Kevin Kamps, Beyond Nuclear Radioactive Waste Specialist, and Don't Waste Michigan Board of Directors Member, representing the Kalamazoo Chapter, Cell: (240) 462-3216, kevin@beyondnuclear.org

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Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abolish both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

Attachments

12 7 20 Letter to Whitmer

12 7 20 BN decommissioning fact sheet

12 7 20 BN DTF fact sheet final

12 7 20 CW Background Info on Holtec LTA.3.25.20 (5)-1

To: The Honorable Gretchen Whitmer, Governor of the State of Michigan, P.O. Box 30013 Lansing, Michigan 48909

Also submitted via email to: migov@exec.state.mi.us, [<governor@michigan.gov>](mailto:governor@michigan.gov), and [<governorsoffice@michigan.gov>](mailto:governorsoffice@michigan.gov)

December 7, 2020

Dear Governor Whitmer,

As you may know, Entergy has proposed selling the Palisades nuclear power plant in Covert Township, Van Buren County, to a subsidiary of New Jersey-based Holtec International, which would then be in charge of its decommissioning, radiological cleanup, and highly radioactive waste management.

(Palisades' sister reactor site, [Big Rock Point](#)

[<http://archives.nirs.us/reactorwatch/decommissioning/bigrockbackgrounder272007.pdf>](http://archives.nirs.us/reactorwatch/decommissioning/bigrockbackgrounder272007.pdf) in Charlevoix, would be included in the sale.) There is a meeting of the U.S. Nuclear Regulatory Commission on Tuesday, December 8th, to discuss the sale. State officials and concerned citizens can attend, ask questions, and make comments. Details of the meeting are posted [here](#).

[<https://www.nrc.gov/pmns/mtg?do=details&Code=20201345>](https://www.nrc.gov/pmns/mtg?do=details&Code=20201345) [Michigan Radio has reported on the meeting](#). [<https://www.michiganradio.org/post/public-meeting-about-ownership-change-palisades-nuclear-plant-comes-week>](https://www.michiganradio.org/post/public-meeting-about-ownership-change-palisades-nuclear-plant-comes-week)

Transferring Palisades' licenses to Holtec poses significant risks to Michigan -- in terms of health and safety, environmental impacts on the surrounding area and Lake Michigan, and in terms of its impact on the state's economy and fiscal health. [Holtec's track record](#) [<http://www.beyondnuclear.org/centralized-storage/2019/7/25/radioactive-skeletons-in-holtec-internationals-closet.html>](http://www.beyondnuclear.org/centralized-storage/2019/7/25/radioactive-skeletons-in-holtec-internationals-closet.html) -- as well as that of its decommissioning consortium partner, [SNC-Lavalin](#)

[<http://www.beyondnuclear.org/decommissioning/2019/7/26/radioactive-and-other-skeletons-in-snc-lavalins-closet.html>](http://www.beyondnuclear.org/decommissioning/2019/7/26/radioactive-and-other-skeletons-in-snc-lavalins-closet.html) of Montreal, Quebec -- includes bribery, fraud, and malfeasance, as well as serious shortcomings in terms of financial assurance, technical qualifications, and decommissioning experience. A comprehensive backgrounder prepared by Hudson River Sloop Clearwater, Inc., attached [linked below], written in the context of the Indian Point, New York decommissioning saga, clearly lays this out. Simply put, there's ample reason to worry Holtec could do a superficial job of decommissioning, exhaust Palisades' decommissioning trust fund and other public monies, walk away with no liability, and leave the Great Lakes State and surrounding communities, downwind and downstream, to bear the risks and costs of a radioactively contaminated site over the long term. It's happened to other reactor communities before. This is of great concern at Palisades, given its [significant radioactive contamination of soil and groundwater](#) [<http://www.beyondnuclear.org/reports/>](http://www.beyondnuclear.org/reports/), on the edge of Lake Michigan as well as an inland aquifer, both of which are used for drinking water by immediately adjacent communities, such as Palisades Park and South Haven.

But these risks are remediable. While the industry-captured U.S. Nuclear Regulatory Commission, unfortunately given its dereliction of duty, has sole, exclusive jurisdiction over radiological safety issues, states are not powerless. They can and should assert their authority over numerous other aspects of the license transfer and decommissioning decisions.

Attached are some briefing materials from my organization Beyond Nuclear explaining the risks that the current decommissioning business model and Holtec in particular pose to Michigan, and what the State can do to protect Michiganders from them.

It's a complex subject, but one well worth understanding. Beyond Nuclear is experienced in this area, and we're in very close touch with citizens' groups in Michigan working toward the same goal of protecting Michigan's residents, environment and economy. We'd welcome a dialogue with you on it.

I will follow up with your office in the near future. Meanwhile please see the attached, and please contact me with any questions.

Sincerely,

Kevin Kamps
Radioactive Waste Specialist
Beyond Nuclear
7304 Carroll Avenue, #182
Takoma Park, Maryland 20912

(and member of the board of directors of Don't Waste Michigan, representing the Kalamazoo chapter; as well as a member of the advisory board of Citizens for Alternatives to Chemical Contamination, headquartered in Lake Township, MI)

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cc:

Garlin Gilchrist II, Michigan Lieutenant Governor

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Kim Comerzan, Officer/Director, Monroe County Health Department

Jeffery L. Elliott, BBA, Health Officer/Administrator, Van Buren/Cass District Health Department

Liesl Eichler Clark, Director, Michigan Department of Environment, Great Lakes, and Energy

James Clift, Deputy Director, Michigan Department of Environment, Great Lakes, and Energy

Sally A. Talberg, Chairman, Michigan Public Service Commission

Daniel C. Scripps, Commissioner, Michigan Public Service Commission

Tremaine L. Phillips, Commissioner, Michigan Public Service Commission

Rachael Eubanks, Treasurer of Michigan

U.S. Senator Debbie Stabenow

U.S. Senator Gary Peters

U.S. Representative Jack Bergman (MI-1st District)

U.S. Representative Bill Huizenga (MI-2nd District)

U.S. Representative Justin Amash (MI-3rd District)

U.S. Representative John Moolenaar (MI-4th District)

U.S. Representative Daniel Kildee (MI-5th District)

U.S. Representative Fred Upton (MI-6th District)

U.S. Representative Tim Walberg (MI-7th District)

U.S. Representative Elissa Slotkin (MI-8th District)

U.S. Representative Andy Levin (MI-9th District)

U.S. Representative Paul Mitchell (MI-10th District)

U.S. Representative Haley Stevens (MI-11th District)

U.S. Representative Debbie Dingell (MI-12th District)

U.S. Representative Rashida Tlaib (MI-13th District)

U.S. Representative Brenda Lawrence (MI-14th District)

Michigan State Speaker of the House, Representative Lee Chatfield

Michigan State House Minority Leader, Representative Christine Greig

Michigan State Senate Majority Leader, Senator Mike Shirkey

Michigan State Senate Minority Leader, Senator Jim Ananich

Chairman Bryan Newland, Executive Council, Bay Mills Chippewa Indian Community

Chairman Thurlow "Sam" McClellan, Tribal Council, Grand Traverse Bay Band of Ottawa and Chippewa Indians

Kenneth Meshigaud, Tribal Chairman, Hannahville Indian Community

Warren C. Swartz Jr., President, Tribal Council, Keweenaw Bay Indian Community

James Williams Jr., Tribal Chairman, Lac Vieux Desert Band of Lake Superior Chippewa Indians

Larry Romanelli, Tribal Ogema, Little River Band of Ottawa Indians

Regina Gasco-Bentley, Tribal Chairperson, Little Traverse Bay Bands of Odawa Indians

Bob Peters, Tribal Chairman, Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan (Gun Lake)

Jamie Stuck, Chairperson, Naganijek/Tribal Council, Nottawaseppi Huron Band of the Potawatomi Indians

Matt Wesaw, Tribal Council Chairman, Pokagon Band of Potawatomi Indians

Tim J. Davis, Chief, Saginaw Chippewa Indian Tribe

Aaron A. Payment, Tribal Chairperson , Sault Ste. Marie Tribe of Chippewa Indians

Attachments/Enclosures:

Nuclear Plant Decommissioning, A New Crisis and New Opportunity for States;

<http://static1.1.sqspcdn.com/static/f/356082/28380493/1607401477833/12+7+20+BN+decommissioning+fact+sheet.pdf?token=3BRTDGksP%2BfdgJQUoOeiSLzv5hs%3D>

Decommissioning Trust Funds, What States Can Do to Stop Waste, Fraud, and Abuse, and Protect their Citizens;

<http://static1.1.sqspcdn.com/static/f/356082/28380492/1607401286137/12+7+20+BN+DTF+fact+sheet+final.pdf?token=vi%2FEsTPZfFu3bmNddHQGy%2FARyo8%3D>

Background Supplement to Comments by Hudson River Sloop Clearwater on Indian Point License Transfer Application from Entergy to Holtec.

<http://static1.1.sqspcdn.com/static/f/356082/28380497/1607401732930/12+7+20+CW+Background+Info+on+Holtec+LTA.3.25.20+5-1.pdf?token=yQ%2BIqJIFIB6JOWLBP%2F8HrFLwXDc%3D>



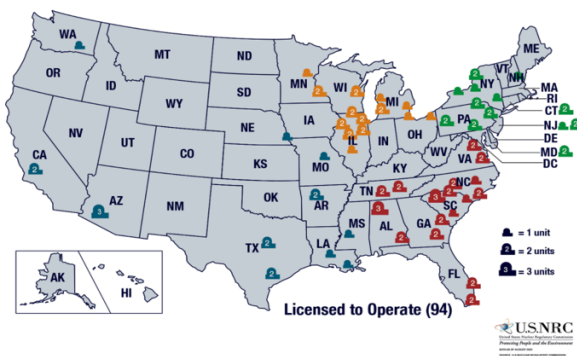
NUCLEAR PLANT DECOMMISSIONING

A New Crisis and New Opportunity for States

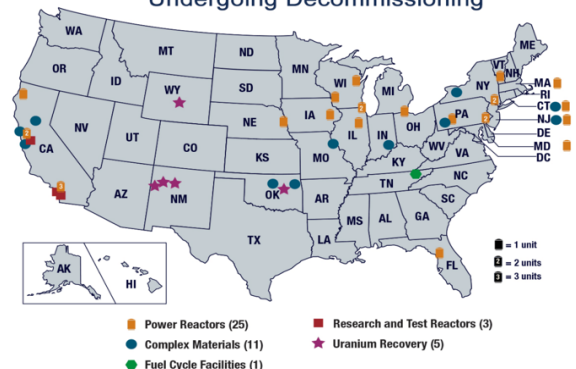
A Beyond Nuclear Fact Sheet

Nuclear plants are closing at an accelerating rate as they age and can't compete economically with natural gas and renewables, prompting nuclear owners to demand large subsidies. 20 reactors at 15 commercial nuclear power plants are either undergoing decommissioning now or will be decommissioned soon. Many more will follow in the years ahead.

U.S. Operating Commercial Nuclear Power Reactors



Locations of NRC-Regulated Sites Undergoing Decommissioning



Note: The NRC is in the final stages of the licensing process with the review of the final status survey reports of 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, and 2021 to determine the final status of the sites. The NRC is also in the final stages of the licensing process with the review of the final status survey reports of 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, and 2021 to determine the final status of the sites. The NRC is also in the final stages of the licensing process with the review of the final status survey reports of 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, and 2021 to determine the final status of the sites.

In theory, decommissioning is supposed to “restore” reactor sites to greenfield status, so they can be redeveloped. In practice, reactor sites’ land and water will remain radiologically contaminated long after decommissioning is “completed.” If reactor communities are counting on an economic boost from site redevelopment, they are likely to be disappointed. Condos or shopping malls or playgrounds will not materialize on reactor sites. In fact, they are much more likely to become *de facto* long-term storage sites for the highly radioactive nuclear waste that was generated there.

A SYSTEM OF PERVERSE INCENTIVES

Decommissioning companies have virtually no accountability to states or local governments for remediating sites to a high standard. The Nuclear Regulatory Commission, which is funded by nuclear plant owners, has jurisdiction over radiological safety issues, but NRC decommissioning requirements and oversight are already very lax, and becoming laxer. The reason decommissioning companies want to acquire closed nuclear plants, with all their problems, is because along with them, they also acquire hundreds of millions to billions of ratepayer dollars in the decommissioning trust funds (DTFs). The companies’ incentive is to remediate the sites as quickly, cheaply, and perfunctorily as possible, so they can claim DTF money left over as profit.

New actors in the market, positioning themselves as decommissioning “specialists” despite having little experience, operate on this business model, forming limited liability corporations to hold the licenses so they can insulate themselves from risk, and so parent companies won’t be responsible for bad outcomes and don’t have to put in any of their own money.

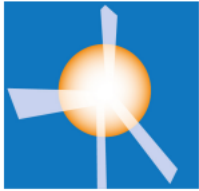
Some, such as Holtec International, have track records of failure and extensive malfeasance, as well as sidelines that encourage self-dealing and further incentivize them to make selfish, profit-driven decisions as opposed to protecting public health and safety. For example, Holtec is trying to license its own “consolidated interim storage facility” (CISF) in New Mexico where it proposes to ship high-level nuclear waste across the U.S., transferring title and liability to the Department of Energy, and profiting from federal funding for waste storage. It also has designed and is seeking licenses to build “small modular reactors” which might one day be fueled by reprocessing the nuclear waste it wants to acquire and consolidate. Given the lack of a permanent geologic repository for nuclear waste, such DOE-enabled CISFs aren’t legal under current law. But Congress is considering pending bills and allocating funds which would authorize and enable them.

WHAT STATES CAN DO TO PROTECT THEMSELVES

Suffice to say that trusting such leveraged, undercapitalized, compartmentalized companies with bad records to take responsibility for decommissioning and nuclear waste in a lax federal regulatory environment is fraught with risks and dangers. They could walk away with the job half done, leaving reactor communities and states with the costs and impacts of contaminated sites and de facto nuclear waste dumps. And their incentive to cut costs and corners could result in severe radiological accidents such as radioactive dust plumes, fuel pool fires, dry cask storage transfer accidents and leaks, or mishaps from transporting waste by barge, road or rail.

But states are far from powerless to protect themselves, and need not be at the mercy of the decommissioning companies and lax federal oversight. While the NRC has sole jurisdiction over radiological and safety issues, states have jurisdiction over how decommissioning impacts surface water, future land use, energy policy, local economies, recreation, and tourism. States also have some authority over hazardous material and toxic chemical contamination which applies to nuclear sites. Governors, comptrollers, attorneys general, public utility commissions, and other relevant state agencies can and should use their jurisdiction to assert authority over key decommissioning decisions, demand meaningful state and local input into the process, and maintain fiduciary oversight of the DTFs. States can also work with their Congressional delegations to improve oversight of the NRC, and pass laws to protect states and reactor communities.

For more details on states’ fiduciary risks from decommissioning and how they can manage them, see Beyond Nuclear’s “Backgrounder on Decommissioning Trust Funds.”



DECOMMISSIONING TRUST FUNDS

What States Can Do to Stop Waste, Fraud, and Abuse, and Protect Their Citizens

A growing number of civilian nuclear power reactors across the U.S. are reaching the end of their operating lives and entering the decommissioning phase, where their buildings and infrastructure get dismantled, and the reactor sites get remediated and radioactively decontaminated. Irradiated nuclear fuel, commonly known as “spent” fuel, the highly radioactive waste left by plant operations, gets removed from temporary fuel pools and put in dry storage canisters.

From the peak of 129 reactors in the U.S. civilian nuclear fleet, 35 have shut down permanently. Some are considered to have completed decommissioning, at others the process is still underway, while more plants are about to begin it. Nationally, some 20 reactors at 15 commercial nuclear power plants are either undergoing decommissioning or have ceased operating and will be decommissioned soon.

SHORTFALLS AND ABUSES OF DECOMMISSIONING TRUST FUNDS

The US Nuclear Regulatory Commission (NRC) and the Government Accountability Office analyses generally have argued that decommissioning trust funds (DTFs) are sufficient for decommissioning needs, or will be when the time comes to spend them. But independent analysis consistently shows large shortfalls. The independent investment consulting firm Callan Institute conducts an annual nuclear decommissioning funding study. Its most recent study (2019) found that private and public utility nuclear DTFs totaled \$68 billion, but that projected decommissioning costs totaled \$96 billion, leaving a shortfall of \$28 billion, or 30%. And that was before 2020’s economic upheavals, which stand to reduce the value of the funds.

Current practices give licensees virtual autonomy to decide how to spend the DTF, and how to approach decommissioning work. The NRC has to approve those decisions, but it has a record of especially lax oversight on decommissioning, rubber-stamping licensees’ filings and regulatory exemption requests, effectively giving them carte blanche. In fact, the NRC is in the process of a new rulemaking for decommissioning which would codify what are now routine granting of exemptions and waivers into new regulations, so that it won’t even be necessary to request exemptions.

Meanwhile, licensees often seek and obtain exemptions from NRC regulations which require DTFs be used exclusively for dismantling nuclear plants and cleaning up radiological contamination at reactor sites, and for no other purpose. There typically is no site characterization done before decommissioning starts, and therefore no objective way to determine what cleanup really means or to what standard a site will be remediated. Cleanup is generally whatever the licensee says it is, which the NRC inevitably approves. Watchdog groups often bitterly dispute licensees’ assertion that the level of cleanup they choose will be adequate to protect public health and safety and the environment.

But beyond the question of the adequacy of licensees' decisions about decommissioning, there's the compounding problem of licensees raiding the DTFs for purposes other than decommissioning, which exacerbates DTF shortfalls and violates NRC regulations. The NRC routinely waives those regulations and grants licensees exemptions to spend DTF money for other purposes, such as paying their local taxes and their lawyers and lobbyists, reimbursing themselves for the cost of transferring "spent" fuel from pools to dry storage, and for ongoing dry storage of "spent" fuel onsite, which can last for many decades.

Although now widespread and routine, this is an abuse of the regulatory framework, which was established to protect the integrity of the decommissioning process. Using DTFs for non-decommissioning purposes depletes the funds faster and creates perverse incentives for licensees to skimp on decommissioning and cleanup.

FAST-TRACK DECOMMISSIONING

Traditionally, decommissioning takes 20–50 years to complete, and onsite "spent" fuel storage and site monitoring can continue long after that. But several companies are positioning themselves to dominate the growing decommissioning market (including Holtec, NorthStar, and EnergySolutions) by greatly accelerating the timeline, promising they can complete the process in as little as five years.

Fast-tracking decommissioning seems like an attractive proposition for reactor communities. However, there are several catches. The accelerated approach cuts corners, entails a raft of regulatory waivers and exemptions, and raises many thorny public safety issues. For example, it exposes plant workers, and potentially the public, to higher doses of radiation since reactor sites have much less time for radioactivity to decay to before decommissioning begins.

The federal Nuclear Regulatory Commission has jurisdiction over nuclear plant radiological safety issues; state governments don't. But it has shown no interest in using its authority to regulate how licensees use the DTFs and apparently doesn't consider the economic impacts of decommissioning within its purview. As an NRC staff economist told a 2015 public meeting on decommissioning the Zion, Illinois nuclear plant, "The Nuclear Regulatory Commission does not regulate commerce, it regulates safety."

The NRC acknowledges that adequate funding is key to conducting successful decommissioning that meets NRC standards. "[The NRC] recognizes that in order to do anything safely, it takes money," the staff economist said. But the NRC has demonstrated studied indifference to how licensees use the money, and does not require their procurement and allocation processes to be transparent. In fact, it does not even require licensees to adhere to standard accounting practices and principles or hire an auditor for decommissioning projects. This creates ripe conditions for waste, fraud, and abuse. Licensees performing decommissioning work take over the DTFs as their own asset, with the intention of pocketing any leftover money, yet they have hardly any accountability for how they spend it. Even though DTFs are public monies, paid for by ratepayers through surcharges on their electric bills, licensees aren't required to seek state approval for expenditures, or even reveal how they have spent the money. In the case of the Zion nuclear plant, EnergySolutions did file a so-called "audit report."

But it fit on just two pages, one of which was a cover letter, with a handful of vague line items purporting to certify the legitimacy of roughly \$300 million in expenditures from the DTF. This is not transparency or accountability – quite the opposite.

In fast decommissioning, the licensee's incentive is to decommission a nuclear plant as quickly and inexpensively as possible, in order to maximize the money left over in the DTF, which it claims as profit. Decommissioning licensees are invariably structured as limited liability corporation subsidiaries of their parent companies. They bring no capitalization of their own to the project. That means that if there are insufficient DTF funds to complete decommissioning, the LLC can declare bankruptcy without harming the parent company, walk away, and leave the state and the reactor community stuck with the cleanup costs and ongoing impacts and risks.

BAD OUTCOMES ASSOCIATED WITH BAD DTF MANAGEMENT

The combination of licensees' own lack of capitalization, their dependency on leveraging public funds for profit, the risk of inadequacy of the DTF, and the perverse incentives and NRC permissiveness that lead the licensee to misuse the DTFs, have been a factor in bad decommissioning outcomes, where sites are left unremediated, radiological contamination persists, and the public is left bearing the ongoing impacts, risks, and costs.

At Massachusetts' Yankee Rowe plant, decommissioning plans were based on overly optimistic assumptions about the extent of site contamination, which turned out to be false. Tritium was found in groundwater at depths of 300 feet, raising concerns about it getting into the Deerfield River and residents' wells. As decommissioning cost estimates skyrocketed after the discovery, the licensee opted for "derubblization," scraping off the top few feet of topsoil at the site and calling it remediated. Radioactive and toxic contamination of the soil and water was left after decommissioning. Rowe has the fourth highest cancer rates in Massachusetts, and a significant Down's syndrome cluster.

The Zion, Illinois nuclear plant, located on Lake Michigan, closed in 1998, taking away 75% of the City of Zion's tax base. In 2015, the licensee EnergySolutions began to run out of money to complete decommissioning, and hurriedly transferred Zion's 2.2 million pounds of irradiated nuclear fuel from the fuel pools to dry storage onsite. The waste is now stored in dry casks critics say are unsafe and leak-prone, 300 feet from Lake Michigan. Lake Michigan is the nation's largest source of fresh water; it's also the headwaters for the rest of the Great Lakes. 40 million people in eight U.S. states, two Canadian provinces, and a large number of Native American First Nations depend on it for drinking water.

Zion was a thriving lakefront community before the plant shut down and the waste was stranded on the Lake Michigan shore. Afterwards, it had high unemployment, a disproportionate amount of Section 8 housing, and attendant effects on property values, schools, and crime. It's a prime illustration of the need for the STRANDED Act, introduced by U.S. Senators Tammy Duckworth (D-IL) and Susan Collins (R-ME). It would compensate former nuclear power plant host communities like Zion for the long-term dry cask storage of nuclear waste, and help reactor communities where waste from closed plants is stored make a just transition.

Michigan's Palisades and Big Rock Point nuclear plants are also located on Lake Michigan. When it acquired the Palisades reactor in 2007, Entergy raided the DTF, taking out about [] \$316 million that ratepayers had paid into it. Entergy gave around \$100 million to the previous owner, kept around \$100 million for itself, and kicked back around \$100 million to ratepayers as a deal sweetener, albeit an illusory one. If the remaining money in the DTF proves inadequate to complete decommissioning (as is likely) ratepayers will still have to pay that \$100 million back through new surcharges on their utility bills. In addition, Michiganders might also have to pay higher taxes to finance the completion of decommissioning.

Despite an outcry from the ratepayers, the Michigan Public Service Commission approved Entergy's raid, which needlessly depleted the DTF. By 2019, the DTF had recovered somewhat, but was still inadequate compared to the estimated cost of decommissioning. Then the covid-19 crisis hit, subjecting the DTF to stock market volatility.

Big Rock Point, a 67 Megawatt-electric (MWe) experimental reactor, started as a commercial power reactor, then produced medical isotopes. It was plagued with operational problems, including emitting more than 3 million curies of radiation, which led to health effects downwind, including hypothyroidism and statistically significant spina bifida in newborns. It was closed in 1997. Despite its relatively small size, decommissioning it cost \$390 million. High-level radioactive waste remains on site, in the form of "spent" fuel in dry storage, and soil and water contamination.

The NRC approved unrestricted use of the supposedly fully decommissioned Big Rock Point site. Yet highly hazardous plutonium, and very likely other radionuclides, remain in the site surface and subsurface environment. Neither the discharge canal entering Lake Michigan, nor the shoreline sediments, have ever been checked for contamination levels, despite 35 years of radiological discharges into the surface water.

A BAD ACTOR IN THE DECOMMISSIONING MARKET

Now Palisades and Big Rock Point are in the process of being acquired by Holtec, a company that wants to be a dominant player in the growing decommissioning market. Holtec and its partner SNC-Lavalin have a long history of malfeasance, including bribery, fraud, and disbarment from doing business with the Tennessee Valley Authority or from bidding on World Bank contracts, as well as a track record of conflict and litigation with state governments where it operates.

Holtec's business model involves a sort of vertical integration, where it seeks to profit from public money all along the decommissioning and "spent" fuel value chains. Its decommissioning LLCs will use DTFs to dismantle reactors quickly and keep the money left over as profit. It is seeking, and will likely obtain, exemptions to pay for spent fuel management costs out of the DTF, then will turn around and sue the US Department of Energy (DOE) to recover those same costs and pocket that money, too, effectively using public funds to get paid twice (this much is true of other decommissioning companies as well). Meanwhile, these licensees decline to spend the money to implement vitally necessary safety and security upgrades for on-site or near-site "spent" nuclear fuel storage, such as hardened on-site storage (HOSS), arguing they're too expensive.

Holtec's "integrated" business model proposes to leverage profits for itself in ways that violate public safety and current law. Part of the reason Holtec seeks to acquire closed or soon-to-close reactors, including Big Rock Point and Palisades, is because it seeks ownership of their "spent" fuel as a source of more profits. It intends to ship the fuel across the country to its proposed consolidated interim storage facility (CISF) in New Mexico, for which it would be paid by the federal government to store the waste in shallowly buried casks.

CISFs are putatively temporary, but they are "interim" in name only. Nuclear experts including former NRC Chair Gregory Jaczko acknowledge that they would be *de facto* permanent storage sites. Their licensing is advancing in the absence of a permanent geological repository, but they are no solution for permanent disposition of "spent" fuel. Transporting highly radioactive "spent" fuel from reactor sites across the country to CISFs in New Mexico and Texas is fraught with dangers known and unknown. Consequently, Holtec is working concertedly, with NRC cooperation, to change existing laws and upend the protections in the Nuclear Waste Policy Act, so that the DOE would be permitted to take title to the "spent" fuel before it leaves the reactor site. This would relieve the licensee of title and liability for the waste, so it could be transported across the country to CISFs without nuclear owners being responsible for what happens to it *en route*.

If current applicable laws were changed in this way, liability for the waste would fall on federal taxpayers, and that would be a fundamental reversal of decades of settled law. Under existing law, interim storage of a nuclear plant's "spent" fuel, short of repository disposal, is the responsibility of the private owner.

The Nuclear Waste Policy Act of 1982 (as Amended) explicitly states the federal government cannot take title to the waste, which means the licensees cannot be relieved of their liability for it, unless and until a permanent repository is licensed, open, and operating. Yucca Mountain is not licensed, hasn't opened, and will never operate, since the site was declared "unworkable" by the Obama administration. Current estimates put 2048 as the soonest a geological repository could open elsewhere, and that's probably overly optimistic. Until a geologic repository exists — decades from now or likely longer — the DOE can't legally take title to a nuclear plant's spent fuel.

Nonetheless, Holtec, as well as its competitor (a partnership between an Orano subsidiary and Waste Control Specialists which owns the other CISF in Texas), are counting on the DOE to do just that, in the next few years. They are looking to the DOE, which is to say to federal taxpayers, to assume liability for the waste and all costs related to CISFs, including a generous profit margin for themselves. The NRC has so far rubber-stamped their CISF permit applications, which nuclear watchdog and environmental groups are currently suing to overturn in the US Court of Appeals for the DC Circuit.

Holtec is also working to build small modular reactors (SMRs), another gambit for accessing federal money for R&D. Its focus on SMRs has raised speculation it may intend to have its "spent" fuel reprocessed into high-assay low-enriched uranium fuel for reuse in those reactors. Reprocessing entails chopping up solid "spent" nuclear fuel, and then liquifying it. That process, combined with uranium and/or plutonium extraction, generates large-scale hazardous radioactivity emissions to air and water. Waste generated by reprocessing is some of the most dangerous radioactive waste there is

-- even harder to contain and control than solid "spent" fuel. Enriching "spent" fuel also aggravates the risk of nuclear weapons proliferation.

Holtec is under criminal investigation for lying to state officials in New Jersey, where it has acquired the shuttered Oyster Creek plant and has begun dismantling it — its first decommissioning job. Already it has been accused of cutting corners, hiring unskilled workers to save money, and ignoring safety and local concerns, prompting the state to set up an Oyster Creek Safety Advisory Panel. It flouted local zoning laws and regulations by doing demolition work without seeking a permit, which required a local judge to issue a temporary restraining order.

When the NRC approved license transfer of the shuttered Pilgrim nuclear plant in Plymouth, Massachusetts to Holtec, Massachusetts Attorney General Maura Healey sued because the state was cut out of the process and denied even the opportunity to participate in hearings. Healey objected to Holtec's cavalier attitude toward financing Pilgrim's decommissioning. Her petition stated, "Holtec's attempt to account for contingencies and uncertainty risk is woefully deficient," and warned the exemption granted Holtec allowing it to use the DTF for spent fuel management "poses a significant risk that insufficient funds will exist" to clean the site, leaving "taxpayers to bear the financial burden and responsibility for finishing the work."

Other state AGs filed an amicus brief supporting Healey's suit (spearheaded by New York Attorney General Letitia James and joined by the AGs of Connecticut, Illinois, Iowa, Maryland, Michigan, Minnesota, New Jersey, New Mexico, Oregon, Pennsylvania, and Vermont). These AGs cited "significant concerns about Holtec's ability to successfully oversee the facility's decommissioning," and charged that the NRC's approval of transferring Pilgrim's license to Holtec without adequate state participation violated the NRC's own rules as well as the federal Atomic Energy and Administrative Procedure Acts.

The Massachusetts suit was settled in exchange for Holtec's agreement to send monthly reports to the state, maintain minimum funding levels for cleanup and site restoration and onsite "spent" fuel storage, carry pollution liability insurance, secure bonds for certain contracts and fund emergency management preparedness in case of a radiological emergency. That may sound like a victory, and it's better than nothing, but it doesn't resolve the issues the AGs raised, because the dollar figures are modest and won't adequately protect the state. To secure their interests, other states with nuclear plants undergoing decommissioning will need to do better.

In New York, where Holtec is seeking to acquire the Indian Point nuclear plant and its DTF worth more than \$2 billion, the same concerns about lack of financial assurance and potential abuse of the DTF have been raised. Attorney General James also expressed serious doubts about Holtec's competence to hold Indian Point's licenses: "I have multiple, grave concerns about the application now before the Nuclear Regulatory Commission that would hand off the responsibility for Indian Point's decommissioning to a company with absolutely no experience in such an enormous, complex, and consequential undertaking," she said.

STATES CAN AND SHOULD ASSERT THEIR AUTHORITY

The above examples illustrate the stakes of getting decommissioning right (or wrong), and states 'vital interests in overseeing it. They also show that the economic, environmental and public health and safety dimensions of decommissioning overlap, and ultimately aren't separable.

Although the NRC has jurisdiction over radiological safety issues, states have jurisdiction over other, related issues, including surface water protection (i.e. from thermal heat pollution and non-radiological impacts), impacts on future energy policy and future land use, impacts on tourism and recreation, and other broad economic impacts. States also have some authority over hazardous material and toxic chemical contamination which applies to nuclear sites. States have the authority to oversee and intervene in decommissioning activities and outcomes at nuclear power plants. They also have an obligation protect their jurisdictional interests on behalf of their own residents and citizens.

The fact that the NRC declines to regulate "commerce" (i.e. the economic impacts of decommissioning) in effect leaves that power to the states. Since the adequacy of DTFs and how they are spent affect public health and safety and the environment, and since states have authority over economic impacts of decommissioning, they are not powerless to affect safety outcomes, either, despite "federal preemption" (i.e., the NRC's established jurisdiction over nuclear safety issues).

For example, the NRC directly acknowledges that state public utility commissions have jurisdiction over any funds in the DTF left over once decommissioning is completed. That means states have something to say about decommissioning companies 'emerging business model, which seeks to maximize leftover DTF money in order to claim it as profit. Through their authority over economic dimensions of decommissioning, states can also have some influence over its public health and safety outcomes.

It's imperative that they exercise it. State Comptrollers, Attorneys General, public utilities commissions and other relevant state officials and agencies have a compelling interest and responsibility to assert their authority over decommissioning -- particularly over decommissioning trust funds -- and demand accountability from licensees.

www.BeyondNuclear.org
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BACKGROUND SUPPLEMENT TO COMMENTS SUMMITTED BY HUDSON RIVER SLOOP CLEARWATER ON INDIAN POINT LICENSE TRANSFER APPLICATION FROM ENTERGY TO HOLTEC

In New York, Indian Point's reactors will shut down in 2020 and 2021, and its owner Entergy has applied to transfer the licenses to subsidiaries of Holtec International. Holtec has already acquired the shuttered Oyster Creek plant in New Jersey. It has also been awarded the license for the closed Pilgrim plant in Massachusetts via a contested process over which the Massachusetts Attorney General has sued the NRC.

Holtec and partners have other deals pending to acquire Palisades Nuclear Generating Station in Michigan as well as Entergy's decommissioned Big Rock Point Nuclear Power Plant site in Michigan, which also hosts an Independent Spent Fuel Storage Installation (ISFSI). Holtec is contracted to handle transfer of spent fuel from fuel pools to dry storage at the San Onofre Nuclear Generating Station (SONGS) in California, owned by Southern California Edison.

Risks of Holtec's Decommissioning Approach

Nationally, some 20 reactors at 15 commercial nuclear power plants are either undergoing decommissioning or have ceased operating and will be decommissioned soon. Traditionally, the decommissioning process takes many decades to complete. Many decommissioning projects start with a process called SAFSTOR, in which the plant is monitored for up to 45 years to give the radioactive materials time to decay and to allow the decommissioning trust funds to grow.¹ For example, before it announced its intention to sell Indian Point to Holtec, Entergy planned to delay decommissioning for 50 years after IP3 shut down, arguing "the delay will result in lower working area dose rate (from natural decay of the radionuclides produced from plant operations)."²

But Holtec and other decommissioning companies have created a new private market for their services by promising to dismantle shuttered plants in five to eight years, or in some cases even faster. In Indian Point's case, Holtec has filed plans to decommission it in 15 years.

These newly formed companies use a "rip and ship" [approach], which saves time and limits worker exposure to dangerous levels of radiation. "They used to decontaminate the floor drains and it was hard to do," said Bruce Watson, who heads the NRC's decommissioning branch and has overseen shutdowns at Maine Yankee and Rancho Seco. "Now you go up, you hit it with a hammer, break the concrete, yank the pipe out and put it in a low-level waste bin. You don't waste your time cleaning it. You just measure it and put it in the bin."³

¹ "Changing Hands at Indian Point?" by Brian PJ Cronin, *Highlands Current*, December 21, 2019.

<https://highlandscurrent.org/2019/12/21/changing-hands-at-indian-point/>

² PRELIMINARY DECOMMISSIONING COST ANALYSIS for the INDIAN POINT ENERGY CENTER, UNIT 3, December 2010.

<https://www.nrc.gov/docs/ML1035/ML103550608.pdf>

³ "Dismantling nuclear plants is a gold mine for some, but at what risk to you?" by Thomas C. Zambito, *Rockland/Westchester Journal News*, June 19, 2017.

This accelerated approach is a key part of Holtec's business model, which requires decommissioning nuclear plants as quickly and inexpensively as possible, in order to maximize the money left over in the ratepayer-funded decommissioning trust funds, then claim that money as profit. Holtec is also setting up a "consolidated interim storage" site in New Mexico to accept nuclear waste from its decommissioned plants, which would be another source of profit for it, and entail shipping nuclear waste across the country.

On its face, license transfer to Holtec for fast, cheap decommissioning seems like an attractive proposition for reactor communities. It's definitely attractive to nuclear plant owner/operators like Entergy, because after the lucrative operations phase during which massive amounts of radioactivity built up on site with nowhere to go (since a geological repository for nuclear waste at Yucca Mountain never materialized), license transfer relieves the owner of the responsibility and liability for decommissioning and remediating the site. But license transfer to Holtec also raises vital questions that New York communities, officials and citizens need to grapple with and resolve.

What will fast-track decommissioning that keeps costs down and private profits up mean for public health and safety, and for the state's economy? Private, for-profit nuclear plant decommissioning is a new market, and Holtec is in effect learning on the job. It has never decommissioned a nuclear plant before; its first decommissioning job is Oyster Creek, which it acquired in July 2019. The bulk of its experience is in spent fuel handling, where its performance has been poor. It is also working to build and export small modular reactors (SMRs). Its entire nuclear "fleet" was acquired less than a year ago. Does it have the experience and expertise to deliver fast decommissioning of such a complex, sensitive nuclear plant as Indian Point safely and cost-effectively? Or will it leave the job half done or undone, stranding the region and the state with unmet costs for ongoing remediation and spent fuel storage?

Holtec's Partner and Subsidiary Structure

The entity seeking to acquire Indian Point is commonly referred to as "Holtec," but it's more complicated than that, and involves several subsidiaries and joint ventures.

Holtec Decommissioning International (HDI) is a wholly owned subsidiary of Holtec International, headquartered in Camden, New Jersey. HDI functions as the licensed operator for Holtec-owned nuclear power plants. HDI provides the licensee oversight for decommissioning and also manages the decommissioning trust fund and other owner interests, such as licensing strategy, insurance, land and government interface.⁴

Comprehensive Decommissioning International, LLC (CDI), also headquartered in Camden, New Jersey, is a new jointly-owned decommissioning general contractor – the one doing the actual decommissioning work – formed in 2018. CDI is a joint venture between Holtec International (USA) and SNC-Lavalin. According to a self-description on its website, CDI "seeks to become an industry-leading decommissioning company by providing comprehensive project solutions for retiring nuclear power plants... [and] is committed to the enhancement of the communities in which it operates, and employing financially sustainable business practices that ensure the upholding of obligations made as a trusted steward of legacy nuclear materials."⁵ CDI's first contract is to decommission Oyster Creek in New Jersey, which Holtec acquired in July 2019.

Holtec International is a privately held energy technology company with operation centers in in the US, Brazil, Dubai, India, South Africa, Spain, UK and Ukraine. Its boilerplate says it is specialized in the handling spent fuel, including what it calls "densifying" or reracking fuel pools to store more waste in them than they were originally designed to hold, "deferring the need for and expense of alternative measures by as much as two decades," putting spent fuel into dry storage, and transporting it. It also points out Holtec is "pioneering...the world's first

<https://www.lohud.com/story/news/investigations/2019/06/19/nuclear-plant-decommissioning-is-a-gold-mine-for-some-but-at-what-risk/1269407001/>

⁴ <https://holtecinternational.com/productsandservices/decommissioning/>

⁵ www.cdi-decom.com

below-ground Consolidated Interim Storage Facility being developed in New Mexico and a 160-Megawatt walk away safe small modular reactor, SMR-160.” It emphasizes financial stability: “Holtec has no history of any long-term debt and enjoys a platinum credit rating from the financial markets.”⁶

SNC-Lavalin Group Inc. is a Canadian company based in Montreal that provides engineering, procurement, and construction (EPC) services in various industries.⁷ It specializes in building demolitions, something Holtec has no experience in. SNC-Lavalin describes itself as “a global fully integrated professional services and project management company and a major player in the ownership of infrastructure... Our teams provide comprehensive end-to-end project solutions – including capital investment, consulting, design, engineering, construction management, sustaining capital and operations and maintenance – to clients across the EDPM (engineering, design and project management), Infrastructure, Nuclear and Resources businesses.... SNC-Lavalin maintains exceptionally high standards for health and safety, ethics and compliance and environmental protection.”⁸

Holtec’s Pattern of Corruption, Bribery and Fraud

Yet Holtec and SNC-Lavalin, the two companies behind the Indian Point decommissioning contractor CDI, are embroiled in ongoing corruption scandals and controversies that weigh against their claims of high standards in ethics, compliance, financially sustainable business practices and trusted stewardship of nuclear materials.

In 2010, SNC-Lavalin was part of the consortium that won a \$1.3 billion contract to design, build and maintain the McGill University Health Centre’s Glen Site. That contract became the subject of a criminal investigation, and was called “the biggest fraud and corruption investigation in Canadian history” by a Quebec provincial police detective. Three SNC-Lavalin employees were charged with offering bribes.^{9,10}

An investigation by CBC News and The Globe and Mail found SNC-Lavalin used a secret internal accounting code that former employees said was for bribes on projects across Africa and Asia.¹¹

In 2013, the World Bank found SNC-Lavalin was engaged in a pattern of bribery and corruption in several countries, and banned it for ten years from bidding on any contracts funded by the Bank, “following the company’s misconduct in relation to the Padma Multipurpose Bridge Project in Bangladesh, as well as misconduct under another Bank-financed project.... in relation to the World Bank-financed Rural Electrification and Transmission project in Cambodia.... SNC-Lavalin’s misconduct involved a conspiracy to pay bribes and misrepresentations when bidding for Bank-financed contracts.”¹²

In February 2015, Canadian police charged SNC-Lavalin and two of its subsidiaries with corruption and fraud in connection with its dealings in Libya. After raiding SNC-Lavalin’s Montreal headquarters, Canadian police alleged that between 2001 and 2011, the company offered Libyan government officials under the Moammar

⁶ www.holtecinternational.com

⁷ <https://en.wikipedia.org/wiki/SNC-Lavalin>

⁸ <https://www.snclavalin.com/en/investors/corporate-overview>

⁹ “A closer look at SNC-Lavalin’s sometimes murky past” CBC News, February 8, 2019, <https://www.cbc.ca/news/canada/snc-lavalin-corruption-fraud-bribery-libya-muhc-1.5010865>

¹⁰ “Justin Trudeau Faces Calls to Resign” by Chantal da Silva, *Newsweek*, February 28, 2019. <https://www.msn.com/en-us/news/world/justin-trudeau-faces-calls-to-resign/ar-BBUcCnQ?li=BBnbfcL&ocid=iehp>

¹¹ “SNC-Lavalin International used secret code for ‘bribery’ payments” by Dave Seglins, CBC News, May 15, 2013. <https://www.cbc.ca/news/canada/snc-lavalin-international-used-secret-code-for-bribery-payments-1.1386670>

¹² “World Bank Debars SNC-Lavalin Inc. and its Affiliates for 10 years,” April 17, 2013. <https://www.worldbank.org/en/news/press-release/2013/04/17/world-bank-debars-snc-lavalin-inc-and-its-affiliates-for-ten-years>

Gadhafi regime bribes worth \$47.7 million to influence decisions. They also charged that the company defrauded the Libyan government and other entities of "property, money or valuable security or service" worth approximately \$129.8 million. Three former SNC-Lavalin employees were charged.¹³ A former SNC-Lavalin vice president with close ties to the Gadhafi family in Libya went to prison in Switzerland, charged with "fraud, money-laundering, and corruption of officials." Another SNC-Lavalin consultant who worked to get members of the Gadhafi family into Mexico went to prison there under charges of "consorting with organized crime, falsifying documents, and human trafficking."¹⁴

Despite its track record of corruption, bribery and fraud, in 2015 Canada's then Conservative government led by Prime Minister Stephen Harper put SNC-Lavalin and its corporate partners (also accused of corruption) in charge of cleaning up Canada's radioactive waste, as well as all federally owned nuclear facilities. The consortium is paid about a billion dollars in public money each year. In its role as steward of Canada's nuclear waste, it attracted the opposition of 140 municipalities, NGOs and nuclear experts for its plan to permanently store a million cubic meters of mixed radioactive wastes on the surface next to the Ottawa River at Chalk River National Labs. Opponents of the proposal include former senior Chalk River scientists.¹⁵

The same consortium is actively working to build, test and deploy a whole new generation of "Small Modular Reactors" (SMRs) using Canadian federal lands and facilities. The Canadian Nuclear Safety Commission actively lobbied the government to exempt most of these new SMRs from any independent environmental assessment under Canada's Impact Assessment Act. In November 2018 Natural Resources Canada (NRCan) published a "Road Map" for SMRs, which envisions hundreds of such small modular reactors deployed widely in Canada. But they face public opposition. "I ask you: If experimental, unproven nuclear reactors don't have to undergo impact assessment, then what's the point?" said Green Party MP candidate Keller-Herzog. "In other words, the Liberal government, Minister McKenna and senior public servants are lining up their ducks to pave the way for the plans of SNC-Lavalin and its American partners. Does that sound familiar?"¹⁶

Revelations of SNC-Lavalin corruption did become familiar to Canadians, and did not end with the World Bank disbarment or the charges stemming from the Libya scandal. For example, the company is facing criminal charges for its tactics to win a new hospital construction contract in Montreal,¹⁷ and another criminal probe related to a Montreal bridge contract. A former Canadian federal official pleaded guilty in 2017 to accepting more than \$2.3 million in payments from SNC-Lavalin in connection with the bridge project, and court documents lay out a \$127 million bribery scheme.¹⁸

In 2018, Canada's federal election watchdog reported SNC-Lavalin made more than \$117,000 in illegal political contributions to both parties. A former SNC-Lavalin executive was charged with soliciting employees to make the contributions and concealing their identities.¹⁹ He pleaded guilty this year before the case went to trial and

¹³ "A closer look at SNC-Lavalin's sometimes murky past" CBC News, op. cit.

¹⁴ <https://columbusfreepress.com/article/dark-dawning-age-nuclear-waste-begins>

¹⁵ Information from Dr. Gordon Edwards, nuclear consultant, scientist and President of the Canadian Coalition for Nuclear Responsibility

¹⁶ "Greens talk radioactive waste, Chalk River and SNC-Lavalin – and why Ottawans should care" by Taylor Blewett, *Ottawa Citizen*, September 5, 2019. <https://ottawacitizen.com/news/local-news/greens-talk-radioactive-waste-chalk-river-and-snc-lavalin-and-why-ottawans-should-care>

¹⁷ <https://www.theglobeandmail.com/canada/article-former-snc-lavalin-ceo-pleads-guilty-in-fraud-case/>

¹⁸ "SNC-Lavalin could face criminal charges over Montreal bridge contract, court documents reveal," by Christopher Reynolds, *National Post*, February 12, 2019. <https://nationalpost.com/news/canada/snc-lavalin-faces-criminal-probe-over-montreal-bridge-contract-documents-reveal>

¹⁹ "Former SNC-Lavalin exec charged with illegal federal political contributions" by Ross Marowitz, May 17, 2018. <https://business.financialpost.com/pmnl/business-pmnl/former-snc-lavalin-exec-charged-with-illegal-federal-political-contributions>

no others were charged, even though there is evidence other executives were involved. A compliance agreement signed by SNC-Lavalin refers to the involvement of "certain former senior executives" in a scheme to encourage employees to donate to federal political parties, then get reimbursed by the company through "false refunds for personal expenses or payment of fictitious bonuses."²⁰

Allegations of the Trudeau administration acting to protect SNC-Lavalin prompted calls from Trudeau's political opponents for him to resign as Prime Minister. In a new report, ethics commissioner and political scientist Mario Dion found Trudeau violated the Conflict of Interest Act in 2018 when he tried to pressure Canada's Minister of Justice and Attorney General, Jody Wilson-Raybould to overrule a federal prosecutor's decision to send SNC-Lavalin to trial on corruption charges.²¹ Wilson-Raybould described a coordinated effort by senior officials close to Trudeau to discourage her from prosecuting SNC-Lavalin for fraud and corruption around government contracts in Libya. If convicted of the charges, SNC-Lavalin could face a decade-long ban from competing for federal government contracts. Wilson-Raybould said she was barraged with demands and even veiled threats asking her to shut down the case and pursue a deferred prosecution agreement instead, which would have allowed SNC-Lavalin to pay a fine to address the allegations. She refused and pursued the corruption case. But after four months, she was demoted to veteran affairs minister.²² The scandal threatened to bring down the Trudeau government and swing the 2019 election toward conservatives.²³ Trudeau was returned as prime minister in 2019, but with a minority government.

SNC-Lavalin did manage to avoid going to trial on the charge of bribing Libyan officials to get contracts. In December 2019, after a former top SNC-Lavalin executive was found guilty of fraud and corruption charges related to the Libya case, the company decided SNC-Lavalin's Construction unit would plead guilty to fraud, and reached a settlement. SNC-Lavalin Construction will pay a C\$280 million (US\$211 million) fine over five years, and it is subject to three years' probation. As part of the settlement, all other charges against SNC-Lavalin Group Inc. and its international marketing arm, SNC-Lavalin International, Inc, were withdrawn. A court conviction would have barred SNC-Lavalin from bidding on government contracts for 10 years. SNC-Lavalin was quoted as saying it does not expect the guilty plea to affect its ability to compete for future projects.²⁴

Like SNC-Lavalin, Holtec's track record is also problematic. It includes scandal, bribery, lack of transparency, lying to officials, attracting public opposition and pushing private agendas. Holtec is a family-owned company founded by India-born CEO Krishna 'Kris' Singh. Singh and Holtec were involved in a bribery scandal at the Tennessee Valley Authority (TVA).

Holtec had been awarded a contract to build a storage facility for spent nuclear fuel at TVA's Browns Ferry Nuclear Plant in Alabama. John Symonds, a TVA supervisor pleaded guilty in 2007 to a federal charge of failing to disclose the receipt of about \$55,000 in payments from a Holtec contractor.²⁵ As a result of a criminal investigation, the TVA created a formal suspension and debarment process and in 2010, in an unprecedented move, barred Holtec from doing business with it for 60 days. Holtec was also reportedly forced to agree to pay a

²⁰ "Key figure in illegal election financing scheme quietly pleads guilty" by Elizabeth Thompson, CBC News, January 19, 2019. <https://www.cbc.ca/news/politics/election-financing-snc-lavalin-charbonneau-1.4984823>

²¹ "SNC-Lavalin report vindicates Jody Wilson-Raybould, says political scientist" CBC Radio, August 14, 2019. <https://www.cbc.ca/radio/asithappens/as-it-happens-wednesday-edition-1.5246796/snc-lavalin-report-vindicates-jody-wilson-raybould-says-political-scientist-1.5246798>

²² "Justin Trudeau Faces Calls to Resign" by Chantal da Silva, *Newsweek*, February 28, 2019. <https://www.msn.com/en-us/news/world/justin-trudeau-faces-calls-to-resign/ar-BBUcCnQ?li=BBnbfcL&ocid=iehp>

²³ *The Guardian*, March 4, 2019. <https://www.youtube.com/watch?v=Cjq1ccXV6hE>

²⁴ "Canada's SNC-Lavalin unit pleads guilty to fraud charge in Libya case," by Alison Lampert, Reuters, December 18, 2019. <https://www.reuters.com/article/us-snc-lavalin-court/canadas-snc-lavalin-unit-pleads-guilty-to-fraud-charge-in-libya-case-idUSKBN1YM1V0>

²⁵ <https://columbusfreepress.com/article/dark-dawning-age-nuclear-waste-begins>

\$2 million “administrative fee” and to submit to independent monitoring of its operations for twelve months. Holtec subsequently restored its relationship with the TVA and continues to hold contracts with the agency.²⁶

While Holtec remains privately held and little is known about its finances, published reporting and other information do show that Holtec has sought to leverage public money in questionable and sometimes illegal ways.

In 2017 then New Jersey Governor Chris Christie announced Holtec had been awarded a \$260 million “Grow NJ” tax credit from the state’s Economic Development Authority (EDA), to be paid out in ten annual installments of \$26 million. It was the second-largest tax break in New Jersey’s history. But it was put on hold after the first installment when investigative reporting by WNYC and ProPublica found Singh’s sworn certification in the application to EDA claimed Holtec had never been barred from doing business with a state or federal agency. In fact, it had been barred from doing business with the TVA due to the bribery scandal.

Holtec’s tax break applications and the response to the suspension were handled by the law firm Parker McCay where Philip Norcross is managing partner. He is the brother of Democratic Party leader George Norcross, one of the wealthiest people in New Jersey,²⁷ who sits on Holtec’s board. He is also the brother of Congressman Donald Norcross (D-NJ). Emails obtained under a public records request show that Parker McCay and Philip Norcross were involved in rewriting tax break laws in 2013 that gave special advantages to companies that moved to Camden,²⁸ including Holtec, where George Norcross is on the board, the insurance company Conner Strong & Buckelew where George Norcross is executive chair, and Cooper University Health Care System, where George Norcross is board chair and Philip Norcross is a trustee. WNYC and ProPublica found that companies linked to George Norcross and Philip Norcross’ law firm Parker McCay received at least \$1.1 billion worth of tax breaks from New Jersey.²⁹

The New Jersey tax break program is now under investigation by the New Jersey Attorney General and a task force appointed by Governor Murphy. Recently the EDA, which administers the program, received a state grand jury subpoena to provide information about several tax breaks awarded to companies with ties to George Norcross. Norcross filed a lawsuit challenging the task force’s authority, and sued to prevent its report from being made public.³⁰ However, that suit failed and the report was published with harsh criticism of the treatment Norcross-linked firms received, including taking EDA staff to task for not pointing out Holtec had been disbarred from doing business with a government entity, which could have been discovered through a mere Google search.³¹ Norcross is also the focus of new investigative reporting showing that he and his business partners used tax breaks Norcross helped establish to buy up and profit from valuable real estate in Camden.³²

During the task force proceedings, it also came to light that Singh personally had been investigated by the TVA’s Office of the Inspector General, which convinced an employee there to allow it to secretly record a call with Singh. “The OIG report found, based on witness testimony, that this unnamed Holtec representative

²⁶ *ibid.*

²⁷ https://en.wikipedia.org/wiki/George_Norcross#Insurance

²⁸ “Emails Reveal Norcross Family’s Pull Over NJ Tax Breaks” by Nancy Solomon and Jeff Pillets, WNYC News, May 21, 2019. <https://www.wnyc.org/story/emails-reveal-norcross-familys-pull-over-nj-tax-breaks/>

²⁹ “The Norcross Connections,” by Nancy Solomon and Jeff Pillets, WNYC, May 3, 2019. <https://www.wnyc.org/story/norcross-connections/>

³⁰ https://en.wikipedia.org/wiki/George_Norcross#Insurance *op cit.*

³¹ “EDA task force issues scathing report with heavy focus on Norcross-linked firms” by Matt Friedman and Katherine Landergan, Politico, June 17, 2019. <https://www.politico.com/states/new-jersey/story/2019/06/17/eda-task-force-issues-scathing-report-with-heavy-focus-on-norcross-linked-firms-1065486>

³² <https://projects.propublica.org/graphics/camden>

engaged in the funneling of money to Mr. Symonds and courting him with future employment in order to secure the TVA nuclear contract for Holtec," task force Counsel Jim Walden said during the hearing. "Essentially, the OIG found a bribe." Walden said the report makes clear Singh "played a role in, or at least at a minimum, had been aware of the underlying activity" involving payments to Symonds.³³

Holtec and Parker McCay had argued that failing to mention the TVA debarment in Singh's sworn application to the New Jersey EDA for tax breaks was just an "inadvertent mistake." Yet it was not the only misleading omission: Singh also claimed that number of other states, including Ohio and South Carolina, had offered "robust proposals" to persuade Holtec to leave New Jersey and move to them. But he didn't mention that just weeks before he submitted the New Jersey application, Ohio stripped Holtec of state tax credits for failing to create the jobs it had promised as part of a similar tax break program.

According to records obtained by WNYC and ProPublica, none of the 200 jobs Holtec had pledged in 2009 to bring to Orrville, a small town outside Akron, Ohio, ever materialized. Holtec, in a letter to Ohio regulators, blamed it on the failure of new manufacturing equipment that led to a "major setback." The company also said it was suffering an overall "decline in orders" caused by "lower quality overseas competitors." Ohio and South Carolina officials and economic development staffers said in interviews that they knew of no approved package of incentives their states had offered Holtec. New Jersey EDA officials confirmed that Holtec did not disclose its Ohio troubles to them. "This was not reported in Holtec's application or legal questionnaire," said Virginia Pellerin, a spokeswoman for the authority.³⁴

Oyster Creek: Holtec's Inauspicious Decommissioning Debut

New Jersey's Oyster Creek nuclear plant is CDI's first decommissioning job. When the sale of Oyster Creek to Holtec was completed in July 2019, Singh said in a press release, "Our primary goal is to decommission Oyster Creek safely and with the community's best interests in mind. Many of the excellent plant staff will join our exceptionally qualified engineers as we set a new bar in decommissioning excellence."³⁵

But since then, multiple unions have objected to Holtec hiring lower-wage, lower-skilled workers to do the decommissioning work, accusing the company of endangering workers and neighbors thereby. Oyster Creek Vice President Jeff Dostal admitted labor costs are being considered in Holtec's decisions, because the company must complete all cleanup and demolition using Oyster Creek's nearly \$1 billion decommissioning trust fund. But Dostal said that safety was an integral focus of Holtec and its staff. "You can't say 'safety' when you have people (working) who have never touched a pipe before," said Randall Davis, who worked inside Oyster Creek for years as a member of the United Association of Plumbers & Pipe Fitters Local 9. In addition to holding various technical and safety certifications, Davis said he had to pass a background check and a week of testing before he was permitted to work on pipes and valves inside the plant.³⁶

³³ "Task force uncovers bombshell report on Holtec," by Ryan Hutchins, *Politico*, July 10, 2019.

<https://www.politico.com/newsletters/new-jersey-playbook/2019/07/10/task-force-uncovers-bombshell-report-on-holtec-454824>

³⁴ "A Huge Tax Break Went to a Politically Connected Company in New Jersey Despite Red Flags," by Jeff Pillets and Nancy Solomon, WNYC, and Alex Mierjeski, ProPublica June 26, 2019. <https://www.propublica.org/article/a-huge-tax-break-went-to-a-politically-connected-company-in-new-jersey-despite-red-flags>

³⁵ "Oyster Creek nuclear plant sale to Holtec is complete" by Amanda Oglesby, *Asbury Park Press*, July 2, 2019. <https://www.app.com/story/news/local/land-environment/2019/09/24/unions-oyster-creek-cuts-corners-risks-safety-hiring-cheap-labor/2379570001/>

³⁶ "Unions: Oyster Creek cuts corners, risks safety by hiring cheap labor" by Amanda Oglesby, *Asbury Park Press*, September 24, 2019. <https://www.app.com/story/news/local/land-environment/2019/09/24/unions-oyster-creek-cuts-corners-risks-safety-hiring-cheap-labor/2379570001/>

For more than a year, local residents around Oyster Creek have been calling for an advisory panel to oversee to Holtec's decommissioning activities. Recently Governor Murphy responded to the call and announced the creation of a new Oyster Creek Safety Advisory Panel headed by New Jersey Department of Environmental Protection Commissioner Catherine R. McCabe will head the new Oyster Creek Safety Advisory Panel, which will also include members of the New Jersey State Police, the Office of Homeland Security and Preparedness, and the Board of Public Utilities. "Providing the public with an opportunity to participate in the robust public input process is critical to ensuring transparency during the decommissioning process," Murphy said. Citizens' groups generally welcomed the announcement, but some noted the panel was composed of officials (it does have one independent scientist) and didn't include advocacy groups or concerned citizens.³⁷

Pilgrim License Transfer to Holtec Strongly Opposed by State Officials

Holtec's acquisition of the Pilgrim nuclear plant in Plymouth, Massachusetts was recently approved by the NRC, over strong objections of state environmental officials and the Massachusetts Attorney General's office. They had petitioned the NRC to hold a hearing on their concerns about Holtec's lack of experience, qualifications and finances before ruling on the sale.

The NRC declined and approved the sale to Holtec without giving state officials a hearing. Along with the license transfer, NRC approved a regulatory exemption Holtec had requested to be allowed to use \$541 million of the \$1.1 billion decommissioning trust fund for spent fuel management – for example building canisters and pads to store spent fuel and roads to transfer it. Ordinarily the trust funds are strictly reserved for decommissioning activities per se, such as dismantling and clean-up of the facility.³⁸ Experts say that allowing Holtec to use the fund for nuclear spent fuel expenses as well threatens to deplete the trust fund before decommissioning is complete. The procedure would allow Holtec to reimburse itself in advance for what it spends on spent fuel management from the decommissioning fund, then turn around and sue the Department of Energy for breach of contract (DoE had undertaken to remove spent fuel to a geologic repository, but Yucca was suspended so DoE never took the fuel) to recover that money, in effect getting paid for twice for the same work. NRC staff confirmed that any funds Holtec recovers from DoE for spent fuel management would not go back into the decommissioning trust fund, but into Holtec's pocket.³⁹

The NRC's action to approve the Pilgrim license transfer to Holtec without hearing state officials' concerns drew strong opposition from Governor Baker's administration, Senator Ed Markey and Attorney General Maura Healey. Healey's office filed suit in federal court against the NRC to challenge the decision.

The AG's complaint says the NRC "acted arbitrarily and capriciously, abused its discretion" and violated the law in failing to provide Massachusetts with a "meaningful opportunity to participate in the process." "The NRC has repeatedly rubber stamped Holtec's plans, despite serious concerns about the company's financial capacity, technical qualifications, and competency to safely decommission and clean up the Pilgrim site," said Healey in a statement. "We are asking the Court to exercise its authority to vacate the NRC's misguided and unsupported actions."⁴⁰

³⁷ "Murphy panel ordered to ensure Oyster Creek decommissioning won't be dangerous," by Amanda Oglesby, *Asbury Park Press*, October 3, 2019. <https://www.app.com/story/news/local/land-environment/2019/10/03/oyster-creek-nuclear-plant-decommissioning-phil-murphy-panel/3843335002/>

³⁸ "NRC could get earful on Pilgrim nuclear plant license transfer" by Christine Legere, *Cape Cod Times* September 9, 2019. <https://www.capecodtimes.com/news/20190909/nrc-could-get-earful-on-pilgrim-nuclear-plant-license-transfer>

³⁹ Information from presenters at the October 10, 2019. [Regional Nuclear Decommissioning Forum](#), including Mary Lampert, director of Pilgrim Watch, and Bob Alvarez, former senior policy advisor to the US Department of Energy and senior scholar, Institute for Policy Studies.

⁴⁰ "Healey sues federal nuclear regulators over Plymouth plant transfer" by Danny McDonald, *Boston Globe*, September 26, 2019. <https://www.bostonglobe.com/metro/2019/09/26/mass-healey-sues-federal-nuclear-regulators-over-plymouth-plant-transfer/iIoDF9bwYAjNI9bULYiJPL/story.html>

In legal briefs filed with the NRC, Attorney General Healey and other Massachusetts officials expressed skepticism about Holtec's plan to "decommission Pilgrim on an expedited schedule never before achieved," despite having never owned a nuclear plant nor managed a decommissioning start to finish.⁴¹

In her petition to the NRC, Healy also pointed out that Holtec set aside only a very small portion of the decommissioning fund for contingency planning. "Holtec's attempt to account for contingencies and uncertainty risk is woefully deficient," she said. She also warned the exemption allowing Holtec to use the decommissioning trust fund for spent fuel management "poses a significant risk that insufficient funds will exist" to clean the site, leaving "taxpayers to bear the financial burden and responsibility for finishing the work."⁴²

In January 2020 New York Attorney General Letitia James led a coalition of 12 states in supporting Massachusetts Attorney General Healy's suit, citing the coalitions "significant concerns about Holtec's ability to successfully oversee the facility's decommissioning." It filed an amicus brief⁴³ in the US Court of Appeals, District of Columbia Circuit, arguing that the NRC's failure to hear from Massachusetts before approving the license transfer violates Nuclear Regulatory Commission rules, and the federal Atomic Energy and Administrative Procedure Acts. Joining Attorney General James in this action were the Attorneys General of Connecticut, Illinois, Iowa, Maryland, Michigan, Minnesota, New Jersey, New Mexico, Oregon, Pennsylvania, and Vermont.

Attorney General James also expressed "grave concerns" about Holtec's competence to hold Indian Point's licenses: "I have multiple, grave concerns about the application now before the Nuclear Regulatory Commission that would hand off the responsibility for Indian Point's decommissioning to a company with absolutely no experience in such an enormous, complex, and consequential undertaking," she said.⁴⁴

Four Massachusetts state senators and six state representatives -- Sens. Viriato deMacedo, Julian Cyr, John Keenan and Patrick O'Connor along with Reps. William Crocker, Josh Cutler, Dylan Fernandes, Sarah Peake, Kathleen LaNatra and Tim Whelan -- issued a statement in support of Healey and the Baker administration challenging the NRC and its fast-track license transfer to Holtec.⁴⁵

US Senator Edward Markey also weighed in, saying the NRC "is abdicating any responsibility for protecting public health and safety with its rushed and uninformed license transfer for the Pilgrim nuclear power plant. The opaque process that disregarded local resident and state input reflects the Commission's choice to prioritize industry timelines over due diligence and transparency. Holtec's math on how it will pay for decommissioning does not add up. Holtec's unwillingness to even negotiate an agreement with local stakeholders -- the ones who will be living next door to nuclear waste for years to come -- is unacceptable. I have repeatedly called on Holtec to be a good neighbor and for the Commission to be a good regulator, but those calls of concern were ignored."⁴⁶

⁴¹ "Risks, Rewards Accompany Faster Cleanup of Closed Nuclear Reactors" by Bob Salsberg, May 22, 2019. <https://www.claimsjournal.com/news/national/2019/05/22/291057.htm>

⁴² "Investors see huge profits from old nuclear plants, but it could cost taxpayers" by Chris Maag, *North Jersey Record*, June 19, 2019. <https://www.lohud.com/story/news/watchdog/2019/06/19/nuclear-plant-decommissioning-holtec-other-firms-see-profit/1456809001/>

⁴³ https://ag.ny.gov/sites/default/files/2020.01.17_-_massachusetts_v_nrc_amicus_br.pdf

⁴⁴ <https://www.wamc.org/post/nrc-reviewing-application-transfer-indian-point-decommissioning>

⁴⁵ "Regulators approve nuclear transfer over governor, AG protests" by Colin A. Young, STATE HOUSE NEWS SERVICE, August 23, 2019. <https://www.masslive.com/news/2019/08/regulators-approve-nuclear-transfer-over-governor-ag-protests.html>

⁴⁶ *ibid.*

Lack of Financial Assurance

Being privately held, Holtec's finances remain undisclosed,⁴⁷ and some of its subsidiary and liability structures are mysterious.⁴⁸ "[Little] is known about Holtec's decommissioning venture Comprehensive Decommissioning International, which is co-owned with SNC-Lavalin, a large Canadian engineering firm," according to *The North Jersey Record*. "The company is secretive about its finances, refusing to disclose basic information about its revenue, assets or ability to handle contingencies."⁴⁹

As such, it's unknown whether Holtec has the financial depth or accountability to take responsibility for decommissioning and nuclear waste stewardship if decommissioning trust funds and other public moneys prove insufficient.

"If a plant's decommissioning trust fund goes broke before the site is clean, utilities in states with regulated electricity markets can seek money from ratepayers to make up the deficit, according to the Nuclear Energy Institute," *USA Today* reports. "If the trust fund goes broke in a deregulated state, taxpayers may be on the hook to cover additional cleanup costs, experts say."⁵⁰ (In the Northeast, all states except Vermont are "deregulated" as far as electricity generation is concerned. This includes New York.⁵¹)

"The financial and attendant safety, health, and environmental risks associated with the [license transfer to Holtec] are further increased by the corporate structure of the proposed transferee and new site operators," the Massachusetts Attorney General's lawsuit challenging the transfer of Pilgrim's license to Holtec argued. "Holtec Decommissioning International and Holtec Pilgrim, the proposed licensee and new site operator, respectively, are both structured as Limited Liability Companies ("LLCs"). . . This raises a significant risk that the owner and operator could at some point have liabilities that outstrip their assets and could therefore choose to file for bankruptcy before site decontamination and restoration are complete.... Nor can anyone necessarily assume that Holtec can obtain additional funds from a parent company because, as the NRC has said previously, a "parent company is not an NRC licensee" and the "NRC does not have the authority to require a parent company to pay for the decommissioning expenses of its subsidiary-licensee, except to the extent the parent may voluntarily provide" a parent company guarantee."⁵²

Even if the parent companies gave such a guarantee to CDI for the cost of Indian Point decommissioning, it's not clear that they would have the funds to back it up. Although SNC-Lavalin's stock price rose, lifting off 14-year lows, when it settled the Libyan bribery charges in December 2019, it remains on shaky ground financially, and has junk security status. Standard & Poors and DBRS downgraded it in 2019 to the lowest tier of investment grade: BBB-.⁵³ In 2019 it reported a quarterly loss of \$2.1 billion, cut its quarterly dividend twice and lost half its market capitalization.⁵⁴

⁴⁷ *Rockland/Westchester Journal News*, *op. cit.*

⁴⁸ <https://miningawareness.wordpress.com/2019/07/06/another-cyprus-mystery-company-related-to-holtec-international-nuclear-jupiterics-ltd/>

⁴⁹ "Investors see huge profits from old nuclear plants, but it could cost taxpayers" by Chris Maag, *North Jersey Record*, June 19, 2019. <https://www.lohud.com/story/news/watchdog/2019/06/19/nuclear-plant-decommissioning-holtec-other-firms-see-profit/1456809001/>

⁵⁰ "We investigated what nuclear plant shutdowns mean for your wallet and your safety. Here's what we found." *USA Today*, June 19, 2019. <https://www.lohud.com/story/news/investigations/2019/06/19/nuclear-plant-decommissioning-findings-usa-today-network/1372318001/>

⁵¹ <https://www.electricchoice.com/map-deregulated-energy-markets/>

⁵² <https://www.law.nyu.edu/sites/default/files/19-02.20%20-%20NRC%20Petition%20to%20Intervene.pdf>

⁵³ <https://business.financialpost.com/news/fp-street/snc-lavalin-cut-to-junk-on-heightened-credit-risk-profile>

⁵⁴ <https://www.theglobeandmail.com/canada/article-evening-update-ottawa-responds-to-drug-shortage-fears-snc-lavalin/>

Unsafe Canisters, Incompetent Spent Fuel Management, Coverups, and Lies

Holtec's activities in related fields outside of decommissioning proper point up additional concerns for how it will approach decommissioning at Indian Point. Those activities have also drawn strong opposition from state and local officials and citizens' groups.

At the San Onofre Nuclear Generating Station (SONGS) in southern California, Holtec is contracted with owner Southern California Edison to transfer spent fuel into dry storage, just above a popular surfing beach, inches above the water table, 100 feet above current sea level, located in an earthquake and tsunami zone. Holtec makes the dry-storage canisters for the project, which are welded shut and designed for interim storage, not approved for shipment off site. It has been revealed they are getting scratched and gouged in the loading process. Edison says the scratches are inconsequential, but watchdog groups say they accelerate corrosion in the moist salt air and could lead to early failure.⁵⁵

In 2014 Holtec's CEO Kris Singh said publicly he didn't believe it was practical to repair the canisters if they were damaged.⁵⁶ Theoretically, damaged canisters could be unloaded and reloaded in a robotically operated dry transfer facility or "hot cell." Hot cells are expensive and there are no plans to build one at SONGS. Asked about reloading damaged canisters at a meeting of the San Onofre Citizen Engagement Panel, an Edison executive said it was possible to do, but had never been done yet, and would require research. He also cast doubt on the safety or feasibility of attempting it inside a fuel pool. That leaves no clear provision for dealing with a damaged canister at SONGS.

Yet Holtec canisters are not immune to damage and safety problems. Around the time of the TVA scandal, Holtec was the subject of scathing safety reviews by Oscar Shirani, a U.S. quality assurance engineer who was later terminated for suspected whistleblowing. Shirani was the lead QA inspector on a national Holtec Users Group (HUG) QA inspection, which consisted of an inspector from each of a dozen different nuclear utility companies. They all signed onto Shirani's concerns.⁵⁷ A federal Nuclear Regulatory Commission specialist in nuclear cask safety, Dr. Ross Landsman, said at the time, "As far as I am concerned, Holtec has no quality assurance. This is the same kind of thinking that led to the NASA Space Shuttle disaster."⁵⁸

Shirani and Landsman were both offered lucrative jobs at Holtec by Krishna Singh himself, where they could determine their own salaries, in the multiple hundreds of thousands of dollars per year. But it was understood that to accept them, they would have to be silent about the QA violations. They both refused Singh's offer. Shirani was terminated by Exelon for blowing the whistle on safety concerns, and evidently black-listed from the nuclear power industry. It wasn't until the end of his life he was able to get a job in the industry, and even then only in France.⁵⁹

⁵⁵ <https://nonukesca.net/halting-holtec-a-challenge-for-nuclear-safety-advocates/>

⁵⁶ https://www.youtube.com/watch?time_continue=1&v=euaFZt0YPi4

⁵⁷ <http://www.beyondnuclear.org/centralized-storage/2017/4/5/summary-of-oscar-shiranis-allegations-of-quality-assurance-v.html>

⁵⁸ <https://theenergymix.com/2019/03/10/hot-garbage-grifters-snc-lavalins-plan-to-turn-nuclear-waste-into-long-term-gold/>

⁵⁹ Information from Kevin Kamps of Beyond Nuclear. His public comments on Holtec's job offer amounting to bribery are posted at <https://miningawareness.wordpress.com/2018/07/29/holtec-nuclear-waste-cans-kris-singh-apparent-bribery-and-allegation-of-bribery/>. Here's an excerpt: "Shirani also confided in me that at one point, during his distress at Exelon, the CEO of Holtec International, Chris Singh – who still serves in that capacity, by the way – attempted to bribe him into silence. Singh approached Shirani, and offered to hire him. He told Shirani that he could write his own paycheck. All Shirani had to do was name the six-figure salary he wanted, and Shirani was hired. The quid pro quo, of course, was that Shirani remain silent about Holtec's QA violations. Shirani, a man of absolute integrity, declined the attempted bribe." From FC1119 public comment opposing Exelon takeover of Pepco, re: Exelon's abuse of whistleblowers," December 7, 2015.

<http://static1.1.sqspcdn.com/static/f/356082/26721045/1449520345260/12+6+15+DC+PSC+comment+re+Shirani.pdf>

In February 2018 SONGS workers were preparing a Holtec canister for loading when they discovered a loose, stainless-steel bolt inside, about four inches long. An investigation revealed that Holtec had altered the canister design without permission from the NRC,⁶⁰ adding pins to the canister bottoms to facilitate the flow of cooling. Holtec considered the change too minor to require NRC scrutiny. The NRC disagreed and called the unauthorized changes “safety significant.” “Holtec’s design review process for the change did not adequately consider all potential impacts that could adversely affect the safety-related functions,” the NRC said. Nevertheless, the NRC declined to fine Holtec, and let the unauthorized changes stand.⁶¹

In August 2018, a whistleblower revealed a near miss at SONGS as a 50-ton Holtec canister was being loaded into an 18-foot concrete silo. Holtec’s Hi-Storm UMAX system canisters at SONGS are thicker than the ones workers practiced loading. Thicker canisters mean a tighter fit and less room going into the silos. One of the 50-ton canisters got stuck on a shield ring near the top of the vault. Workers didn’t realize the slings supporting the canister’s massive weight went slack, and it hung there unsupported for close to an hour, in danger of dropping.

Holtec and Southern California Edison failed to report the incident for several days. It was finally revealed by a whistleblower, OSHA inspector David Fritch, who spoke out at a SONGS Community Engagement Panel meeting. “There were gross errors by two individual operators, and the rigger, which are inexplicable. So what we have is a canister that almost fell 18 feet. Bad day. Bad. And we haven’t heard about it, and that’s not right,” Fritch said. “Public Safety should be first. I’ve been around nuclear for many years. It’s not behind that gate.”⁶²

“What scared me is that we would not have been told about the incident unless a whistleblower had come out in public hearing to tell the world that he couldn’t stand by [silent],” said Rear Admiral Len Hering (USN-Ret.), who as the Southwest regional commander was responsible for the nuclear safety of naval operations, and is fiercely critical of Holtec’s and the NRC’s actions at SONGS. “If it were not for him, we would not have been made aware that this situation had occurred. Since that time I focused my attention on learning more [about safety issues at SONGS] and what I’ve uncovered is, to be honest, astounding. I have come to realize that the most hazardous material on the face of the earth was in fact being handled like any other commercial waste product. I have found that basic safety requirements have been waived or contorted in favor of expediency and cost.”⁶³

“The big lesson is, we need to be more intrusive over all our contractors and we will be more intrusive,” said Ron Pontes, Southern California Edison’s environmental decommissioning strategies manager. “This is nuclear and industrial safety. We lost sight of that a little bit in this process. We didn’t demand that rigor out of our contractors.”⁶⁴ The NRC fined Edison \$116,000 for the incident, then after a brief investigation, allowed loading to resume. But critics say the dangers have not been resolved.

There are new reasons to fear that the safety lesson has not been learned. Most recently, in late January 2020, Southern California Edison announced that Holtec would begin tearing down buildings at SONGS, including the spent fuel pool buildings, even while the spent fuel is still in the pools. Holtec and Southern California Edison anticipate seven months of overlap during which dismantling of the buildings will be underway and the transfer of

⁶⁰ “Moving nuclear waste at San Onofre sparks war of words between contractor, community panel,” by Teri Sforza, *Orange County Register*, May 15, 2019 <https://www.ocregister.com/2019/05/15/moving-nuclear-waste-at-san-onofre-sparks-war-of-words-between-contractor-community-panel-spar-over/>

⁶¹ “At San Onofre, NRC rejects fine against Holtec for changing design of nuclear waste canisters without permission” by Teri Sforza, *Orange County Register*, April 29, 2019 <https://www.ocregister.com/2019/04/29/nrc-decides-holtec-does-not-deserve-fines-for-canister-violations-at-san-onofre/>

⁶² <https://www.kpbs.org/news/2018/aug/10/san-onofre-community-panel-discusses-transportatio/>

⁶³ Adm. Hering’s remarks at a Congressional briefing on May 13, 2019, broadcast on C-SPAN <https://www.c-span.org/video/?460643-1/nuclear-power-oversight>

⁶⁴ “Edison makes changes at San Onofre, ready to resume loading nuclear waste” by Teri Sforza, *Orange County Register*, March 18, 2019. <https://www.ocregister.com/2019/03/18/edison-makes-changes-at-san-onofre-ready-to-resume-loading-nuclear-waste/>

the spent fuel to dry storage canisters will not be completed.⁶⁵ That creates a hazardous condition and raises unnecessary risks of a spent fuel accident, incurred to speed up the timeline for dismantlement.

Dismissing and Denigrating Citizen Oversight and Concerns

Mishandling of SONGS' spent fuel has sparked intense community concern and criticism. The SONGS Community Engagement Panel chair and two of its members wrote a memo to Edison, with a copy to Holtec, expressing their "increasing concern about a key variable in the process: Holtec" and its role in the cascade of recent problems.

"Such events—in effect, unforced errors—are not acceptable," the CEP members wrote. "Along the way, [Holtec's] most senior management has been tone-deaf in how it deals with the public." The memo went on to complain that "the corporate governance of Holtec is opaque, with some pretty significant warning signs," including lack of relevant experience among Holtec's board members, and spreading itself too thin.

"The new business lines for Holtec are REALLY different from the traditional engineering business," the memo argued. "Taking over licenses here in the USA—as Holtec is doing by purchasing the Oyster Creek plant, for example—is much more management intensive and requires skill sets that are completely different from the core engineering business. Moreover, these tasks come with a lot of community and regulatory exposure—areas where Holtec has not excelled in the past... The company is investing in a small modular reactor (SMR), along with dozens of other firms—yet another business that will draw management attention and capital. And the list goes on."⁶⁶

This drew a vitriolic personal response from Holtec CEO Kris Singh, making clear the disdain he had for the Citizen Engagement Panel and its concerns: "Our nuclear program is the envy of the world, your cheap shots notwithstanding. We note that you have held a string of CEP meetings without Holtec's participation, where the antinuclear activists have repeatedly filled the air with irresponsible attacks on our company. Your memo is very much in the tradition of irresponsible claptrap that dominates your CEP meetings. An inflammatory memo unsupported by facts is little more than a hatchet job."⁶⁷

Perverse Incentives and Misrepresentations Surrounding Holtec's Side Businesses

Another of Holtec's new business lines that has drawn strong opposition is Consolidated Interim Storage (CIS) of high-level radioactive waste at a facility it owns in southeast New Mexico and is in the process of getting NRC licenses for, named HI-STOR CISF. Located on a 1,000-acre property outside Carlsbad and Hobbs and near the Eddy-Lea county line, it would hold up to 120,000 metric tons of spent nuclear fuel about 40 feet underground in large steel casks. The Eddy-Lea Energy Alliance (ELEA), a joint venture with numerous local organizations, owns the surface rights, the New Mexico State Land Office owns the mineral estate beneath the surface.

The HI-STOR CISF site is located in the oil- and gas-rich Permian Basin. The International Atomic Energy Agency (IAEA) has warned against co-locating high-level radioactive waste storage or disposal facilities in areas also hosting fossil fuel extraction, as too high-risk. For example, certain fracking activities can induce significant artificial earthquakes, that can damage CISFs.

Up to 2,500 oil, gas and mineral wells or sites are operated in the area by 54 businesses within a 10-mile radius of the site, says New Mexico State Land Commissioner Stephanie Garcia Richard, who opposes the CIS project,

⁶⁵ "SoCal Edison to Begin Dismantling SONGS in Late February" by Shawn Reymundo, *San Clemente Times*, January 30, 2020. <https://www.sanclementetimes.com/socal-edison-to-begin-dismantling-songs-in-late-february/>

⁶⁶ "Moving nuclear waste at San Onofre sparks war of words between contractor, community panel," by Teri Sforza, *Orange County Register*, May 15, 2019. <https://www.ocregister.com/2019/05/15/moving-nuclear-waste-at-san-onofre-sparks-war-of-words-between-contractor-community-panel-spar-over/> and <https://columbusfreepress.com/article/dark-dawning-age-nuclear-waste-begins>

⁶⁷ <https://scng-dash.digitalfirstmedia.com/wp-content/uploads/2019/05/Holtec-Letter-to-David-Victor.pdf>

citing “serious safety concerns.” “We are talking about storing over 120,000 metric tons of nuclear waste in an extremely active oil field without a clear picture of the potential hazards of that combination.” She questioned any contention that hydraulic fracturing can occur safely beneath a nuclear storage site, or that the waste can be safely transported through New Mexico.⁶⁸

According to Garcia Richard, Holtec “falsely” stated it secured agreements with nearby oil and gas operators to restrict extraction operations near the proposed site and assured the NRC that oil and gas drilling would only occur at depths greater than 5,000 feet. But Garcia Richard said no such agreements exist for the mineral estate owned by the Land Office, except for one with Intrepid Mining that had yet to be approved. She accused Holtec of making misleading statements on the matter in submissions to the NRC including its environmental reports. “I understand that we need to find a storage solution,” she said, “but not in the middle of an active oil field, not from a company that is misrepresenting facts and unwilling to answer questions, not on our state trust lands.”⁶⁹

In addition to citizens’ groups, active opponents of Holtec’s HI-STOR CISF project include New Mexico’s Governor Michelle Lujan Grisham. In a letter to the NRC and DoE, she argued it would be “economic malpractice” to open such a site in an oil-rich region that’s also home to agricultural operations, that the project poses significant risk to New Mexico’s environment and economy, and that transporting the spent fuel could place a financial burden on both the state and local communities. “Transporting material of this nature requires both well-maintained infrastructure and highly specialized emergency response equipment and personnel that can respond to an incident at the facility or on transit routes,” she said in her letter. “The state of New Mexico cannot be expected to support these activities.”⁷⁰

Recently in the licensing procedure for HI-STOR CISF, NRC’s Atomic Safety Licensing Board dismissed all 50 objections brought by intervenors, including the contention that U.S. law clearly prohibits nuclear waste being moved to interim facilities before a permanent storage site has been identified.⁷¹ With the way cleared for licensing the New Mexico facility, Holtec now says construction could start in 2021, it could be ready to accept spent fuel shipments beginning in 2023.⁷²

If that happens, it would give Holtec an additional economic incentive to seek to ship spent fuel from the US reactors it is acquiring to its HI-STOR CISF facility as fast as it can, perhaps as soon as 2023. Nuclear plant operators keep spent fuel in fuel pools for at least five years, and 10 years is the industry norm, according to the Nuclear Regulatory Commission. That allows time for the rods to cool radioactive isotopes to decay before fuel assemblies are moved. But Holtec asserts it can move spent fuel out of fuel pools and into dry storage in as little as two years. Regulators, activists and others question whether the accelerated timetable is safe.⁷³ Spent fuel transport offsite is fraught with unsolved problems and safety dilemmas, both for the reactor communities and the thousands of communities along the transport routes.

There’s some question whether Holtec’s investment in its other sideline, small modular reactors, could affect its plans for Indian Point, Oyster Creek, and Pilgrim. At the ribbon-cutting ceremony for its Krishna P. Singh

⁶⁸ “New Mexico State Land Office: Holtec mislead federal government on nuclear waste site near Carlsbad” by Adrian C. Hedden, *Carlsbad Current-Argus*, June 20, 2019 <https://www.abqjournal.com/1330808/new-mexico-state-land-office-holtec-mislead-federal-government-on-nuclear-waste-site-near-carlsbad.html>

⁶⁹ *ibid.*

⁷⁰ “Gov. slams planned nuclear waste storage site,” by Dan Boyd, *Albuquerque Journal*, June 7, 2019 <https://www.abqjournal.com/1325681/gov-lujan-grisham-against-planned-nm-nuclear-storage-facility.html>

⁷¹ <https://nukewatch.org/2019/05/08/6369/>

⁷² “Holtec clears hurdle for proposed nuclear-waste storage facility” by Jim Walsh, *Cherry Hill Courier-Post*, May 9, 2019. <https://www.courierpostonline.com/story/news/2019/05/09/holtec-lea-county-new-mexico-storage-site-uranium-nuclear-waste/1155441001/>

⁷³ “Speedy reactor cleanups may carry both risks and rewards” by Bob Salsberg, Associated Press, May 21, 2019 <https://www.apnews.com/651923b9359b4d64a807aa677999dc03>

Technology Campus in Camden, NJ last year, Singh declared it to be Ground Zero for the renaissance of nuclear energy and heavy manufacturing in America. "We will build nuclear reactors here, and they will sail from the port of Camden to hundreds of places around the world."⁷⁴ According to *Power* magazine, "Entergy officials had said they were not interested in redevelopment of the Indian Point site, but Holtec officials said they may revisit that decision."⁷⁵ Holtec's plan to build SMRs in Camden "has led some to speculate whether Holtec is looking to put the reactors into use at the nuclear power plants it plans to purchase" [i.e., Indian Point, Oyster Creek and Pilgrim] according to *The Journal News*. "For now, though, the reactors are being marketed overseas." Holtec plans to build its first SMR for Ukraine.⁷⁶

Looming Indian Point Decommissioning Dangers Previewed in Holtec's PSDAR

Although Holtec has not yet acquired Indian Point's licenses, it recently filed a Post Shutdown Activities Report (PSDAR)⁷⁷ describing its plans, and projected costs and schedule, for decommissioning the plant. It currently plans to store spent fuel on site until 2061, making the quality assurance problems with its dry storage casks a critical concern for Indian Point. The timetable is preliminary and subject to change.

The PSDAR also envisions shipping the large radioactive components of Indian Point via barge down the Hudson, subject to a Waste Management Plan that hasn't been written yet: "The waste transportation process will be fully defined in the WMP to include the number of shipments, the disposal facilities and applicable requirements. HDI may elect to ship large plant components by barge." Barge shipments from Indian Point would raise critical concerns over risks of terrorist attacks at or near New York City, contamination of the Hudson, overburdening infrastructure for loading and unloading the barges, and the lack of contingency plans to deal with accidents or attacks. "We've seen barges sinking in rivers and if a barge sinks with some serious radioactive material on it we've got a major problem," said Richard Webster, legal director of Riverkeeper.⁷⁸

Other aspects of Holtec's PSDAR are based on the assumption that Holtec will receive a slate of regulatory exemptions, many of which it has not applied for yet.

One exemption it has applied for, and expects to receive, is a license modification to increase worker radiation exposure, which would permit using its cranes to load spent fuel into dry storage canisters. At issue is the weight of the spent fuel transfer cask which takes spent fuel from fuel pool to dry cask. The transfer cask has a water-filled jacket, which provides a protective radiation shield around the spent fuel, reducing the amount of radiation escaping. But the water makes it too heavy for Holtec's cranes, so they are proposing to move the casks without the protective layer of water, which will significantly increase workers' radiation exposure. Holtec has therefore requested a safety exemption to raise allowable radiation exposure for workers to 3500 millirems per hour, well above industry norms.

⁷⁴ https://www.indiawest.com/news/global_indian/indian-american-entrepreneur-opens-camden-facility-offers-fast-track-mini/article_b3a3d540-ad56-11e7-822d-4331c45b3a26.html

⁷⁵ <https://www.powermag.com/holtec-adds-indian-point-nuclear-plant-to-decommissioning-portfolio/>

⁷⁶ "Dismantling nuclear plants is a gold mine for some, but at what risk to you?" by Thomas C. Zambito, *Rockland/Westchester Journal News*, June 19, 2017.

<https://www.lohud.com/story/news/investigations/2019/06/19/nuclear-plant-decommissioning-is-a-gold-mine-for-some-but-at-what-risk/1269407001/>

⁷⁷ <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B34A2B4E0-F9CE-40E3-A0C5-2A6102626557%7D>

⁷⁸ "Barges to take Indian Point's radioactive waste down the Hudson? Company considers it" by Thomas C. Zambito, *Rockland/Westchester Journal News*, January 6, 2020.

<https://www.lohud.com/story/news/local/indian-point/2020/01/06/holtec-weighing-barges-remove-contaminated-parts-indian-point/2803570001/>

Holtec's PSDAR for Indian Point states that "During demolition, above-ground structures will be removed to a nominal depth of three (3) feet below the surrounding grade level." But soil contamination and groundwater contamination go much deeper than that. For comparison, at the Yankee Rowe decommissioned nuclear plant in Massachusetts, a similar "derubblization" approach was used that scraped off the top few feet of topsoil, but the contamination of soil and groundwater went down 300 feet. Radioactive and toxic contamination of the soil and water was left behind after decommissioning, and Rowe has the fourth highest cancer rates in Massachusetts. In addition to the soil, at Indian Point, there is also proven radioactive contamination of Indian Point's groundwater, not only with tritium, but also with one of the most lethal isotopes, Strontium-90. The radioactive waste is also leaking into the Hudson River.⁷⁹

"A plume of radiologically-contaminated ground water associated with the IP1 and IP2 spent fuel pools was discovered in 2005, fully investigated and subject to an ongoing Long-Term Monitoring Program (LTMP)," Holtec's PSDAR notes. "The primary contaminants in the plume are tritium and strontium-90. The selected remedy is Monitored Natural Attenuation (MNA) being addressed under the oversight of the NRC. NRC has concluded that the LTMP has been effectively implemented and conforms to regulatory requirements that protect public health and safety and the environment (SEIS, Vol.5; Reference 16). HDI will continue the LTMP, including provisions of the program intended to detect inadvertent releases that may affect ground water, until the objectives of the selected MNA remedy are achieved." In other words, Holtec has no intention to remediate groundwater contamination at Indian Point, only to monitor it. Groundwater contamination would therefore remain a threat to the public and the environment long after Holtec is gone.

The PSDAR asserts there is adequate money in the decommissioning trust fund (DTF), including for spent fuel management. But since site characterization will only take place after Indian Point shuts down, there is currently no site characterization, no adequate assessment of the contamination, and therefore no way to know how much decommissioning will cost. Nor is there any information or assurance about Holtec's own capitalization and its ability to make up shortfalls in the DTF, or any clear mechanism to avoid Holtec's subsidiary HDI from going bankrupt and leaving municipalities and states to absorb the costs and risks if the DTF runs out. Since the decommissioning timeline at Indian Point has gone from Holtec's original estimate of seven or eight years to 15 years, spent fuel management costs will be incurred for twice as long, eating up more of the trust fund, possibly as much as a third of it.

Why Holtec's Application for License Transfer Should Be Rejected

When nuclear plants were sold off to private, for-profit owners under utility deregulation, the fundamental social contract meant that companies which profited from operating the plants would also retain liability and be responsible for securing the waste after the plants closed. Changing laws and regulations designed to accommodate new decommissioning companies like Holtec now risk bending that basic deal past the breaking point. Lax oversight, coupled with the company's control over the ratepayer-financed decommissioning trust fund and complex subsidiary structure limiting its liability, threaten to foist more of the risks and costs onto reactor communities and the state.

It's the Nuclear Regulatory Commission and (under certain conditions) the Department of Energy that have jurisdiction over nuclear plant safety and spent fuel, not state or local governments. But New York has some authority over decisions that impact its economy, and it has a basic responsibility to protect its citizens and environment. What ultimately happens to the waste, the site, the workers and the surrounding communities, including the New York metropolitan area where 20 million people live and work within 50 miles of Indian Point, has important consequences for the economy as well as for public health and safety and the environment.

Holtec and SNC-Lavalin, CDI's parent companies, have a long track record of corruption, bribery and fraud. They have raised the ire and opposition of public officials across the US, Canada, and overseas. Holtec lacks

⁷⁹ https://www.eesi.org/files/Nuclear_Plant_Decommissioning-Background.pdf

experience and relevant performance data, never having completed decommissioning of a nuclear plant before. The experience it has in spent fuel management is not positive, involving inferior, damaged canisters, near misses with spent fuel accidents, unnecessarily risky approaches, hiring unqualified low-wage, low-skilled workers, dismissing and denigrating public oversight and citizen concern, and lack of transparency. Holtec's lack of financial transparency or assurance, its presumable undercapitalization and leveraging of public money, its reliance on NRC regulatory exemptions and lax oversight, and its complicated subsidiary structure all serve to minimize its liability and maximize its profits at the expense of the public.

State officials share many of these concerns. "To anyone looking at this from a common-sense perspective, [Holtec is] not incentivized to do a thorough job, they're incentivized to maximize profit," a state government official recently told Gothamist/WNYC.⁸⁰

Given its subsidiary structure, side businesses in consolidated interim storage and small modular reactors, and its dependence on leveraging the ratepayer-financed decommissioning trust fund and other public money for its capital and profit, Holtec is also subject to strong, perverse incentives for self-dealing, dangerous transport of nuclear waste to its CIS facilities, shoddy and risky decommissioning work, and leaving the public to shoulder ongoing risks and costs of inadequate cleanup and spent fuel management.

This makes Holtec an unacceptable choice to be the Indian Point licensee. It contradicts the claim that Holtec and its affiliated companies will be trustworthy partners with New York and the communities around Indian Point in serving the public interest. In fact, it strongly suggests the opposite – that they will be adversaries, serving their own interest to the detriment of the public's.

These are compelling reasons why Holtec and its partners and subsidiaries should be disqualified from holding Indian Point's licenses. On financial, technical and ethical grounds, Holtec has demonstrated clearly it is not qualified to be the licensee.

It's not as if there are no other, better candidates. More qualified companies more worthy of trust to undertake something as consequential as the decommissioning of Indian Point do exist. There are decommissioning companies that have not been officially accused or convicted or sanctioned or barred from doing business with public entities for bribery, corruption, improperly seeking subsidies, as Holtec and SNC-Lavalin have. There are decommissioning companies that have not shown contempt for citizen advisory bodies and lied to public officials, as Holtec and SNC-Lavalin have.

Some decommissioning companies actually have gained a measure of public trust and achieved positive working relationships with state and local officials. The Vermont Public Utilities Commission had jurisdiction over the transfer of Vermont Yankee's license to NorthStar, and approved it, citing "financial assurances," "oversight by Vermont agencies during cleanup," and "support for the deal by the public, the state, and regional bodies." Supporters included the nuclear watchdog group the New England Coalition.⁸¹

Holtec neither has nor deserves such support. It is possible to find companies qualified to decommission Indian Point which could be viable, accountable partners with New York and New Yorkers, but only if the license transfer approval process is meaningful, and not a rubber stamp. It's imperative that the process reject Holtec's application for Indian Point's licenses, and clear the way for more qualified candidates to apply to become the licensee.

⁸⁰ "Is The Company Poised To Dismantle Indian Point Too Radioactive?" by Fred Mogul, WNYC/Gothamist, January 15, 2020. <https://gothamist.com/news/company-poised-dismantle-indian-point-radioactive>

⁸¹ "Vermont Yankee Transfer Approved, NorthStar Will Decommission Plant" by John Dillon, Vermont Public Radio, December 6, 2018. <https://www.vpr.org/post/vermont-yankee-transfer-approved-northstar-will-decommission-plant#stream/0>