

June XX, 2024

Dear State of Michigan Legislator,

The undersigned XX individuals and XX organizations, representing hundreds of thousands of Michiganders, implore you to oppose the second installment of \$150 million in bailouts Holtec International has requested from the State of Michigan for its unprecedented, extremely high risk, and insanely expensive scheme to restart the closed Palisades atomic reactor in Covert Township, on Van Buren County's Lake Michigan shoreline.

**INSANE EXPENSE FOR THE PUBLIC**

Our coalition similarly wrote you last year, but alas, the first installment of \$150 million was approved by the State Legislature as part of the state budget bill on June 28, 2023, and signed into law by Governor Whitmer a month later. We urge you to not let this mistake be repeated this year. As the Associated Press reported on June 13, (1) the State of California Legislature is now suffering buyer's remorse, as the price tag for just five years of extended operations at the Diablo Canyon nuclear power plant there has skyrocketed by many billions of dollars.

This second subsidy for \$150 million from the State of Michigan is but one of many that Holtec is seeking for the unprecedented, high risk Palisades reactor restart. On March 27, 2024, the U.S. Department of Energy (DOE) announced approval for a \$1.5 billion nuclear loan guarantee for the reactor restart scheme, under the federal Inflation Reduction Act of 2022 — \$500 million more than Holtec had been requesting for the previous two years.

Holtec may well still apply for another \$2 billion subsidy from the federal Infrastructure Investment and Jobs Act (IIJA) of 2021's Civil Nuclear Credit program. Its previous application attempts have been rejected, after a large coalition of environmental organizations warned that Palisades is not legally eligible for the funding under the IIJA's provisions. (2)

But the list of bailouts already taken by Holtec, or still sought by the company from ratepayers and taxpayers, associated with the Palisades restart scheme, unfortunately goes on. Tens, and perhaps even hundreds, of millions of dollars has apparently been misspent on the restart scheme by Holtec from the Palisades Decommissioning Trust Fund (DTF), funded by Michigan ratepayers. Although watch-dogs have called for the U.S. Nuclear Regulatory Commission (NRC) to take immediate action to protect the DTF — vital for the ultimate clean up of more than a half-century worth of hazardous radioactive contamination at the Palisades site — since April 2023, the federal agency has yet to do so. (3)

Even after the massive subsidies already listed above, Holtec is still seeking rate relief in order to operate Palisades in a competitive market. Thus, the reactor restart would further burden Michigan ratepayers, in the form of a large surcharge (57%, or more, above market rates) on the electric bills of households and businesses. Over a quarter-century, Holtec's price gouge could cost members of the Wolverine rural electric cooperative, headquartered in Cadillac and extending across Michigan, as well as into Indiana (Hoosier rural electric co-op) and Illinois, several billion dollars in charges excess to market rates. Apparently in an attempt to soften that sticker shock on its own members, Wolverine has applied to — of all places — the U.S. Department of Agriculture, for a nearly billion dollar, federal taxpayer funded bailout, to defray 25% of the Power Purchase Agreement's (PPA) uncompetitive costs.

Palisades' previous PPA, from 2007 to 2022, between former owner Entergy and area utility Consumers Energy (itself the initial owner of Palisades, from 1967 to 2007), at times gouged service area residents, businesses, etc., up to 57% above market rates on their electric bills. In fact, the end of that previous lucrative (for the company, not ratepayers!) PPA was the reason why Entergy decided, as early as December 2016, to retire Palisades by May 31, 2022. As documented in its secret bailout application and strategy document, submitted to DOE on July 5, 2022 (and obtained from the State of Michigan via a Beyond Nuclear Freedom of Information Act request), Holtec seeks at least a 57%, or even higher, above market rate premium on Palisades' electricity sales from captured ratepayers, from 2025 to 2051. (4)

Much more cost effective alternatives exist. Michigan ratepayers should not be forced to bear the burden of paying exorbitantly higher electricity bills, just to subsidize the extreme expense of Palisades' resumed operations, not to mention feed Holtec's greed.

Yet additional federal bailouts would include whatever cut Holtec will take from a billion dollar U.S. Department of Energy (DOE) Hydrogen Hub grant to Michigan.

All told, Holtec's numerous requests for subsidies from taxpayers and ratepayers, associated with the Palisades restart scheme, add up to \$8.3 billion, and still counting. (5) \$8.3 billion, divided by just 280 jobs to be restored at Palisades associated with the reactor restart, means each restored job will cost the public nearly \$30 million! Shockingly, this is *a thousand times* more expensive than the average cost of State of Michigan-subsidized new job creation last year! (6)

But Holtec has also applied to DOE for another \$7.4 billion in nuclear loan guarantees under the federal Energy Policy Act of 2005, for design certification, construction, and operation of two so-called Small Modular Nuclear Reactors (SMNRs) which Holtec intends to site at Palisades. (7)

Yet more SMNRs could be built at Palisades' sibling closed and decommissioned nuclear power plant site, Big Rock Point, in Hayes Township, between Charlevoix and Petoskey on Charlevoix County's Lake Michigan shoreline. (8) Significant hazardous radioactive contamination has been abandoned on the Big Rock Point site, risking spread into the wider environment over time, and eight casks of highly radioactive waste are still stored there.

Note that from early April 2022, to early December 2023, Holtec had touted its SMR-160s. (9) But in early December 2023, Holtec abruptly changed its plans to SMR-300s. 300 Megawatts-electric is not a "small reactor." Each one is 4.5 times larger than both Big Rock Point and Fermi 1. Big Rock Point, which operated from 1962 to 1997, was one of the worst radioactive polluters of any reactor in the country, despite its relatively small size. (10) And the Fermi 1 partial reactor core meltdown on October 5, 1966 meant "we almost lost Detroit." (11) Two SMR-300s would nearly double the nuclear megawattage at Palisades. And Drs. Allison Macfarlane and Rodney Ewing, President Obama's former chairs of the NRC and U.S. Nuclear Waste Technical Review Board, have reported that depending on the specific design, SMRs will generate two to 30 times the amount of highly radioactive waste as do current reactors, per unit of electricity generated, due to loss of economy of scale. This would greatly exacerbate the radioactive waste crisis at Palisades, where more than 800 metric tons of irradiated nuclear fuel have already piled up since 1971, two-thirds still stored in the indoor wet storage pool, and the rest in outdoor dry cask storage on the beach. So too would restarting the old "zombie" Palisades reactor, for that matter.

\$8.3 billion for old "zombie" reactor restart at Palisades, and another \$7.4 billion for SMNR new builds at Palisades and perhaps also Big Rock Point, amounts to \$15.7 billion, and still counting, in public bailouts for Holtec, just on the Lake Michigan shoreline.

As ratepayers, as well as state and federal taxpayers, we and our organizational members and supporters regard these many billions of dollars of proposed public giveaways as unacceptable. The opportunity costs alone are outrageous. An equivalent amount of electricity could readily be generated by brand new renewables, such as wind and solar power, as well as storage and efficiency upgrades, sooner and more cost-effectively (not to mention genuinely cleanly, safely, securely, and reliably) than the more than \$8 billion, and still counting, Holtec seeks from the public for the 57-year old reactor restart scheme. (Construction began on Palisades in 1967; the reactor operated for 51 years, from 1971 to 2022.) To learn more about the significant opportunity costs, and other failures of nuclear power as a supposed solution to the climate crisis, see a presentation by Amory Lovins about how nuclear power fails the climate mitigation market test, (12) and a declaration by Dr. Mark Jacobson, an expert witness for environmental

intervenors opposed to the Palisades restart, about how nuclear power fails the greenhouse gas emissions-reduction test. (13)

Palisades' current extended 60-year license expires in 2031, meaning the massive public subsidies listed above would buy only six short years of electricity generation. 60 years of operations would be too dangerous, let alone Holtec's recently announced scheme to apply for another license extension for 80 years of operations, out to 2051.

Rather than supposedly priming the pump for bailing out Holtec's restart of the dangerously age-degraded Palisades reactor, a grand total of \$300,000,000 of State of Michigan taxpayer support could create significantly more good paying jobs by instead expanding community college programs to train solar and wind power technicians, developing corporate and governmental energy efficiency and storage programs, installing LED lighting across Michigan, and providing seed money to match for an intrastate interurban public transit system's initial planning, as but a few preferable examples.

### **EXTREME RISKS TO SAFETY, SECURITY, HEALTH, AND THE ENVIRONMENT**

As important as the public pocketbook and energy policy issues above are, our primary concerns are safety, security, health, and the environment. Palisades has long been infamous for its many dire safety risks. In 2006, Consumers Energy cited several needed major safety repairs and replacements, to the Michigan Public Service Commission, as its reason for selling the nuclear power plant to Entergy: reactor vessel head replacement; steam generator replacement; reactor vessel embrittlement concerns; fire protection requirements; containment coatings and sump strainers. (14) The problem is, Entergy never made any of those promised fixes.

Entergy closed Palisades for good 11 days earlier than planned, on May 20, 2022, due to its latest control rod drive mechanism (CRDM) seal leak. Uniquely bad in all of industry, Palisades has never determined the root cause, nor performed more than BAND-AID fixes, on these CRDM seal leaks that date back to 1972. (15)

To those multiple risk pathways to catastrophic reactor core meltdown listed above must now be added safety-significant systems, structures, and components (SSCs) that have not been properly maintained since Palisades was permanently shut down more than two years ago. These include pumps and valves that have not been operated to test for reliability, the admittedly age-degraded steam generators themselves (which have not been placed into chemically preservative "wet layup," meaning already severe corrosion and degradation has accelerated since), as well as the turbine-generator. The latter, to the best of our knowledge, has not been regularly rotated since

the May 20, 2022 “permanent” shutdown. If this is the case, it is gradually and inevitably bending under its own immense weight of hundreds of tons, risking a mechanical explosion during resumed operations that could hurl large chunks of metal shrapnel into safety-significant SSCs throughout the facility, and potentially also injure or even kill vital personnel such as control room reactor operators. Just such a turbine-generator mechanical explosion, due to a bent shaft, took place at the Fermi Unit 2 atomic reactor in Frenchtown Township, in Monroe County, on Christmas Day, 1993, resulting in two million gallons of radioactive wastewater being dumped into Lake Erie.

What could be the consequences of a core meltdown at the age-degraded Palisades reactor? A 1982 report commissioned by NRC, and carried out by Sandia National Laboratory — CRAC-II (short for Calculation of Reactor Accident Consequences, also known as the Sandia Siting Study, or NUREG/CR-2239) — predicted very shocking casualty and property damage figures. They included a thousand peak early fatalities (acute radiation poisoning deaths), 7,000 peak early radiation injuries, 10,000 peak cancer deaths (latent cancer fatalities), and \$52.6 billion in property damage.

Adjusting for inflation alone would increase property damages to \$168.6 billion in current dollar figure values. (16) Economic and real estate development since 1982 is not even accounted for. And as Associated Press investigative journalist Jeff Donn reported in his 2012 four-part series “Aging Nukes,” populations have soared around U.S. atomic reactors like Palisades in the past four decades, meaning casualty figures downwind, downstream, up the food chain, and down the generations would be significantly worse now. Donn also cited reactor pressure vessel embrittlement as a top example of NRC regulatory retreat. (17) Palisades happens to have the worst embrittled reactor pressure vessel in the country, (18) and perhaps the world, one of its many pathways to reactor core meltdown, and catastrophic release of hazardous radioactivity into the Great Lakes environment.

Holtec’s addition of multiple Small Modular Nuclear Reactors at the site would then represent both extremes of the safety risk spectrum. Ever worsening breakdown phase risks at the age-degraded, currently 57-year old Palisades reactor, and break-in phase risks at the SMNR new builds, would mean that domino effect multiple core meltdowns are possible, as happened at Fukushima Daiichi, Japan in 2011. The Chernobyl nuclear catastrophe in 1986 in Ukraine, the Three Mile Island Unit 2 core meltdown in Pennsylvania in 1979, and the Fermi Unit 1 “We Almost Lost Detroit” partial core meltdown in Michigan in 1966, are infamous, real world examples of break-in phase reactor disasters.

Given Palisades' Lake Michigan shoreline location, such risks imperil the Great Lakes downstream. 21% of the world's, 84% of North America's, and 95% of our country's surface fresh water cannot be put at risk by this reckless "game" of radioactive Russian roulette, which the public is being forced to pay for, no less!

The Palisades restart scheme represents an undue risk to public health, safety, and the environment, as well as our common defense and security. For this reason alone, NRC should not permit it. But this agency is completely captured by the industry it is supposed to regulate, and can be counted on to ultimately rubber-stamp Holtec's every request, no matter how dangerous, nor how much of a mockery this unprecedented restart scheme makes of NRC's own regulations.

NRC's complicity and collusion flies in the face of the Japanese Parliament's warning about the root cause of the 2011 Fukushima Daiichi nuclear catastrophe. An independent investigation determined that the root cause was collusion, between the safety regulatory agency, the nuclear industry, and government officials, both elected and appointed. (19) Such potentially catastrophic collusion exists in spades at Palisades.

Holtec's request for a grand total of \$300,000,000 from the State of Michigan (\$150 million already granted last year, and now another request for a second installment of equal amount) can be regarded as a ticket purchase in the Holtec lottery, betting the farm on a firm with zero experience in the unprecedented scheme of bringing back a "zombie reactor" from the dead, much less actually operating such a high-risk reactor as Palisades (or any other reactor, for that matter), on which Holtec will have cut maximum corners to get it back online. Entergy itself blew off a series of safety-significant upgrades and restorations, but compared with Holtec has vastly more reactor operating experience, and a better reputation. Thus, Entergy's decision to close Palisades for good in May 2022 speaks volumes about the safety risks at Palisades, which Holtec seems oblivious to.

See a ["rap sheet"](#) – by Nancy Vann of the Safe Energy Rights Group in Peekskill, NY, a watchdog on the company's Indian Point nuclear power plant decommissioning – on Holtec's, and its former consortium partner, SNC Lavalin's, past misdeeds (20); and an [annotated bibliography](#) compiled by Beyond Nuclear, on the many skeletons in Holtec's closet. (21) Since early 2021, the [Office of the Attorney General of the State of Michigan](#) has challenged Holtec's takeover of Palisades in the first place, due to its critical lack of financial assurance to carry out its own Post-Shutdown Decommissioning Activities Report (PSDAR), citing a \$200 million shortfall in the Decommissioning Trust Fund. (22) As mentioned above, Holtec has further looted Palisades DTF since, including for restart scheme spending, which is illegal, but NRC has done nothing about it, despite public protest and clamor.

But scandals have plagued Holtec regularly for many years, including just this month. On June 17, its long-serving advisory board member, George E. Norcross III, was indicted by the Attorney General of the State of New Jersey on 13 felony racketeering counts. (23) And on June 11, the latest in whistle-blower revelations at Holtec's Pilgrim nuclear power plant decommissioning project on Cape Cod Bay in Massachusetts revealed the company is potentially endangering its own workers, as well as local residents, with hazardous radioactivity exposures via air. (24) Whether this is due to its own incompetence, or worse, due to carelessness, is the question. Either way, Holtec is showing little to no regard for the impacts on health, as it first secretly, and now quietly, evaporates radioactive wastewater as an end run, after being blocked by popular resistance and government action from dumping it in liquid form into Cape Cod Bay.

### **CONCLUSION**

Holtec's multiple demands for State of Michigan, federal, and ratepayer bailouts, if approved, will be used as leverage for regulatory approval of restart, and vice versa. This house of cards would have not only significant monetary, but perhaps even nuclear safety, consequences for the Great Lakes State if it comes crashing down. Due to the unacceptably high safety risks, as well as the onerous financial impacts on Michiganders, we urge you in the strongest possible terms to oppose both the latest \$150 million subsidy request, as well as to investigate the Power Purchase Agreement Holtec seeks with the Wolverine rural electric cooperative.

Thank you for your consideration. Representatives from our coalition would like to meet with you, and/or your staff, in person, or virtually online, to further discuss our concerns. To arrange such a meeting, please contact Kevin Kamps at (240) 462-3216, or [kevin@beyondnuclear.org](mailto:kevin@beyondnuclear.org). He serves as radioactive waste specialist at Beyond Nuclear, as well as a board of directors member at Don't Waste Michigan, representing his hometown Kalamazoo chapter. Kamps has watchdogged Palisades for more than three decades, and would also be happy to answer any questions you may have, or provide any further documentation you may require.

Sincerely,

### **Endnotes:**

- (1) <https://apnews.com/article/diablo-canyon-nuclear-newsom-reactors-california-45f15ac6e3a39f4fe7bbd05a9fd30d8b>

- (2) <https://beyondnuclear.org/coalition-letters-to-doe-re-palisades-ineligibility-for-cnc-bailouts/>
- (3) <https://beyondnuclear.org/beyond-nuclear-dont-waste-michigan-to-nrc-request-for-investigation-into-misuse-of-decommissioning-trust-fund-at-palisades-nuclear-plant/>
- (4) <https://beyondnuclear.org/5775-2/>
- (5) <https://beyondnuclear.org/breakdown-of-bailouts-at-holtecs-palisades/>
- (6) [https://www.bridgemi.com/business-watch/corporate-subsidies-cost-michigan-335m-40-deals-create-low-paying-jobs?utm\\_source=Bridge+Michigan&utm\\_campaign=bffe75ef88-Bridge+Newsletter+3%2F14%2F2024+afternoon&utm\\_medium=email&utm\\_term=0\\_c64a28dd5a-bffe75ef88-73876273](https://www.bridgemi.com/business-watch/corporate-subsidies-cost-michigan-335m-40-deals-create-low-paying-jobs?utm_source=Bridge+Michigan&utm_campaign=bffe75ef88-Bridge+Newsletter+3%2F14%2F2024+afternoon&utm_medium=email&utm_term=0_c64a28dd5a-bffe75ef88-73876273)
- (7) <https://holtecinternational.com/2022/07/20/a-7-4-billion-nuclear-build-program-submitted-to-the-loan-programs-office-of-the-doe-to-bring-forth-the-first-batch-of-smr-160s-and-a-massive-expansion-of-holtecs-domestic-manufacturing-capacity/> and <https://holtecinternational.com/2023/12/04/first-two-smr-300-units-slated-to-be-built-at-michigans-palisades-site-for-commissioning-by-mid-2030/>
- (8) <https://holtecinternational.com/2022/06/28/palisades-and-big-rock-point-are-the-latest-nuclear-plants-to-join-holtecs-decommissioning-fleet/>
- (9) See, for example, the transcript posted online at <<https://beyondnuclear.org/wp-content/uploads/2023/04/3-20-23-Transcript-Holtec-NRC-Pathway-Mtg-Exh-B-Transcript-Holtec-NRC-Pathway-Mtg.pdf>>. See Page 6 of 32 of the transcript. Also see endnote #7, above.
- (10) <http://archives.nirs.us/reactorwatch/decommissioning/decommissioninghome.htm>; see top six entries, especially the backgrounder entitled “Say Yes to Michigan, Say No to the Plutonium State Park”; also see <https://beyondnuclear.org/letter-to-hayes-township-advisory-focus-group-and-planning-commission-re-the-need-for-zoning-at-the-former-big-rock-point-nuclear-plant-to-absolutely-minimize-human-exposure-to-hazardous-radioactive/>
- (11) <https://archive.beyondnuclear.org/nuclear-power/2016/9/26/october-5-2016-50-years-since-the-we-almost-lost-detroit-par.html>
- (12) <https://www.eesi.org/briefings/view/033021nuclear>
- (13) <https://beyondnuclear.org/environmental-coalition-intervenes-against-palisades-zombie-reactor-restart/>
- (14) <http://archives.nirs.us/reactorwatch/licensing/kampsconsbrifeinf051806.htm>; see particularly page 2.
- (15) <https://beyondnuclear.org/headaches-at-palisades-broken-seals-and-failed-heals/>
- (16) <https://westegg.com/inflation/>
- (17) <https://www.ap.org/media-center/press-releases/2012/aging-nukes-a-four-part-investigative-series-by-jeff-donn/>
- (18) <https://www.nrc.gov/docs/ML1310/ML13108A336.pdf> (see page 5 of 15 on the PDF counter, point #4)
- (19) <https://www.reuters.com/article/idUSBRE8640K4/>



- (20)<https://static1.1.sqspcdn.com/static/f/356082/28258075/1582115755427/2+16+20+Holtec+SNC-L+Profiles+2-16-20.pdf?token=pqJxwBnoNAWWgz%2F3dMQC8qnzOXY%3D>
- (21)<https://archive.beyondnuclear.org/centralized-storage/2019/7/25/radioactive-skeletons-in-holtec-internationals-closet.html>
- (22)<https://archive.beyondnuclear.org/decommissioning/month/february-2021>
- (23)<https://beyondnuclear.org/long-serving-holtec-board-member-indicted-on-racketeering-in-new-jersey/>
- (24)<https://myemail-api.constantcontact.com/NEW-HOLTEC-WHISTLE-BLOWER-LETTER-CITES-AIRBORNE-CONTAMINATION.html?soid=1117009498084&aid=J4IczayUIFg>