

June 28, 2023

Dear Legislator,

The undersigned 79 individuals and 43 organizations, representing hundreds of thousands of Michiganders, implore you to oppose the \$300 million bailout Holtec International has requested from the State of Michigan for the unprecedented, very high risk scheme to restart the closed Palisades atomic reactor in Covert Township, on Van Buren County's Lake Michigan shoreline.

This subsidy is but one of many Holtec is seeking. The company has already applied to the U.S. Department of Energy (DOE) for a billion dollar nuclear loan guarantee under the 2022 Inflation Reduction Act. It may yet still apply for another \$1.2 billion subsidy from the 2021 Infrastructure Investment and Jobs Act's Civil Nuclear Credit program fund. In addition, Holtec has applied to DOE for another \$7.4 billion in nuclear loan guarantees under the 2005 Energy Policy Act, for design certification, construction, and operation of four so-called Small Modular Nuclear Reactors (SMNRs) — more than one of which Holtec intends to site at Palisades, according to a Holtec spokesman at a [meeting with the U.S. Nuclear Regulatory Commission \(NRC\) on March 20, 2023](#). (1)

Even after the massive subsidies listed above, Palisades would still need rate relief to operate in a competitive market. Holtec is seeking State of Michigan approval for a Power Purchase Agreement (PPA) with an unnamed area utility. Palisades' previous PPA, between former owner Entergy and area utility Consumers Energy (itself the initial owner of Palisades), from 2007 to 2022, 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 PPA was the reason why Entergy decided several years ago to retire Palisades by May 31, 2022.) Cheaper alternatives exist, and Michigan ratepayers should not be forced to bear the burden of paying higher electricity bill costs just to subsidize the exorbitant expense of Palisades' resumed operations.

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 than the many billions of dollars Holtec seeks for the 56-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 opportunity costs and other failures of nuclear power as a solution to the climate crisis, see [a congressional briefing hosted by the Samuel Lawrence Foundation](#) on June 2, 2023. (2)

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 any yet to be announced scheme for another license extension out to 80 years of operations.

Rather than supposedly priming the pump for bailing out Holtec's restart of the dangerously age-degraded Palisades reactor, \$300,000,000 of state 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 transit system's initial planning, as but a few preferable examples.

As important as these monetary and energy policy issues are, our primary concern is safety, security, health, and 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. The problem is, Entergy never made 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.

To those multiple 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. These include the admittedly age-degraded steam generators themselves, as well as the turbine-generator. The latter, to the best of our knowledge, has not been rotated. 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 into safety-significant SSCs throughout the facility. 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 \$163.5 billion in current dollar values. 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 in the past four decades, meaning casualty figures downwind, downstream, up the food chain, and down the generations would be significantly worse now.

Holtec’s addition of multiple Small Modular Nuclear Reactors at the site would represent both extremes of the safety risk spectrum. Breakdown phase risks at the age-degraded 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 failures.

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. 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 rubber-stamp Holtec's every request, no matter how dangerous, nor how much of a mockery this restart scheme makes of NRC's own regulations.

Holtec's request for \$300,000,000 from the State of Michigan can be regarded as a ticket purchase in the Holtec lottery, betting 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, 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. (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 (3); see an [annotated bibliography](#) compiled by Beyond Nuclear (4); and, 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.)

Holtec's multiple demands for state-level and federal bailouts, if approved, will be used as leverage for regulatory approval of restart, and vice versa. 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 \$300 million subsidy request, as well as the Power Purchase Agreement Holtec seeks.

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

Sincerely,

MICHIGAN ORGANIZATIONS (arranged alphabetically by group name):

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Rev. Edward Pinkney, President-CEO, *Benton Harbor Community Water Council*, Benton Harbor, 49022

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Megan Douglass, Managing Editor, *Riverwise Magazine*, Detroit, 48214

Tim Minotas, Deputy Legislative and Political Director, *Sierra Club Michigan Chapter*, Lansing, 48906

Lizbeth Estes, Leadership Team, *Statewide Indivisible Michigan (SWIM)*, Milford, 48380

Rita Mitchell, Co-Founder, *Washtenaw350*, Ann Arbor, 48104

NATIONAL ORGANIZATIONS (on behalf of their Michigander members and supporters)

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Tim Judson, Executive Director, *Nuclear Information and Resource Service*, Takoma Park, MD

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Christine Flagler, Kalamazoo, 49008

Artis Freye, Kalamazoo, 49008

Keith and Tada Gunter, Livonia, 48151

Ladislav and Jana Hanka, Kalamazoo, 49008 (Self-employed artists, and in the case of Ladislav Hanka, former environmental impact monitor of the St. Vrain nuclear power plant in Colorado)

Peggy Harp, Ferndale, 48220

Dayle Harrison, Saugatuck, 49453

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Dr. Robert R. Johnson, Houghton, 49931

Theresa Landrum, Community Advocate, River Rouge, 48218

Dr. Ross Landsman, Skokie, IL (retired dry cask storage safety inspector at Palisades, U.S. Nuclear Regulatory Commission, Region 3)

Adrian Laurenzi, Detroit, 48206

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Professor Rosalie Riegle, St. Helen, 48656

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Harvey Wasserman, Ann Arbor (Author of *Solartopia*, U. of Michigan, BA, 1967; Senior Editor, *Michigan Daily*, 1966-7—REMEMBER FERMI!!!)

Jeremy V. Whitmore, Port Huron

Endnotes:

- (1) 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.
- (2) <<https://www.samuellawrencefoundation.org/>>
- (3) <<https://static1.1.sqspcdn.com/static/f/356082/28258075/1582115755427/2+16+20+Holtec+SNC-L+Profiles+2-16-20.pdf?token=KA6AP03m7JjDD5kNEMcNG8K5QD0%3D>>
- (4) <<https://archive.beyondnuclear.org/centralized-storage/2019/7/25/radioactive-skeletons-in-holtec-internationals-closet.html>>
- (5) <<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23044A471>>