

# Wisconsin Reactors Set to Receive Second License Extension, Allowing 80-Year Run

Christine Manwiller

NextEra Energy, owner of two nuclear power reactors at Point Beach on Lake Michigan, has filed to extend their operating licenses by 20 more years. The reactors, 51 and 49 years old, are already operating well past their original 40-year limit.

The Nuclear Regulatory Commission (NRC) has a history of “rubber stamping” such license extensions. Between 2000 and 2017, the agency approved 61 reactor license extensions and denied none. Point Beach, in 2005, already got a 20-year extension from the NRC, and it’s expected that the second will be approved in spite of public opposition.

Furthermore, the NRC granted NextEra a 17% “power uprate” request in 2011, which allows NextEra to push the Point Beach units harder than ever, in spite of their age.

The threat of a 40-year-old machine running for 80 years has sparked protest by those living nearby and watchdog groups. Physicians for Social Responsibility-Wisconsin filed a formal petition with the NRC on behalf of residents and a hearing on the license application was granted.

Unsafe operations at Point Beach are numerous and some could have devastating consequences for the Great Lakes. (See: <https://nukewatchinfo.org/unsafe-operations-routine-at-point-beach/>)

One of the more serious problems with the reactors is degraded fuel cladding. “Cladding” is the zirconium tube that holds the uranium fuel in bundles inside the reactor core. This metal becomes brittle after years of bombardment by the neutrons created by the uranium’s chain reactions. According to Arnold Gundersen, a nuclear engineer and former reactor operator, the Point Beach reactors “do not meet basic licensing requirements.” He goes on to say, “Point Beach is the worst neutron-embrittled reactor pressure vessel in the country, at risk of fracturing like glass in an emergency.” The issue of cladding degradation was brought to the NRC in 2007, but 14 years later it has not yet acted on the proposed rule making.

Other concerns raised by the petition are environmental. Lake Michigan is already showing symptoms of climate chaos from increased rainfall, temperatures, and shoreline development. Point Beach adds to these issues, taking in over 800 million gallons of water per day. Most of this water is returned to the lake, now heated, killing aquatic organisms, and adding hot water to an environment already out of balance.

As if these reasons are not enough to shut down Point Beach, the argument that keeping the reactors functioning would be good for Wisconsin’s economy is flimsy. The cost of electricity produced by Point Beach is high; currently at \$55.82 per megawatt hour, a cost that will increase to \$122.45 by 2033. This is 63% higher than the average wholesale price for electricity in the area, and much higher than renewables.

What will it take to get the NRC to deny a reactor license extension? Critics of nuclear energy hope to find out soon.

## GLYPHOSATE, ROUNDUP AND RADIOACTIVE WASTE

Glyphosate, the ubiquitous agricultural herbicide and main ingredient in Bayer/Monsanto’s “Roundup,” causes deadly environmental and human health problems, and, to add insult to injury, leaves behind tons of radioactive waste.

Glyphosate contains 18.3% phosphorus, which is produced by extracting it from phosphate ore mined mostly in Florida. The mined phosphate, used largely in fertilizers, produces five tons of radioactive phosphogypsum for every ton of fertilizer. Containing this waste is problematic. Roughly one billion tons of radioactive phosphogypsum waste are kept in two dozen stacks in Florida — a state vulnerable to hurricanes and sea level rise. Earlier this year the Piney Point phosphate plant near Tampa made headlines when its over-full waste lagoon began spilling over, and threatened to flood the surroundings with contaminated waste water. More than 300 homes were evacuated and 215 million gallons of untreated waste water were pumped from the lagoon into Tampa Bay.

The hazards of glyphosate exposure are legend. A \$10 billion-dollar damage settlement against Bayer in June 2020 is only the latest in a long list. Recent studies show that the poison may “raise the risk of Non-Hodgkin’s lymphoma as much as 41 percent.” *Environmental Pollution* reports that measurable amounts of glyphosate were found in the urine of infants and children, and, “There is growing evidence linking glyphosate exposure with the epidemic of chronic kidney disease of unknown origin in farm workers in Central America, Sri Lanka, and central India.” Glyphosate in food is just part of its down side. — Organic Consumers Association, May 13; *The Guardian*, Apr. 11, 2021; *Environmental Health Journal*, Nov. 12, 2020; NPR News, June 24, 2020, *EP*, Oct. 23, 2019

## Retirement-Age Point Beach Reactors Court Disaster with Sirens Off, Engines Racing

By John LaForge

A change to “emergency response” has been made at the old Point Beach nuclear reactors south of Green Bay. The operator, NextEra Energy Point Beach, has turned off the site’s disaster warning sirens. No more will the familiar wail warn of potentially catastrophic radiation releases or spills from the two reactors — which are 51 and 49 years old.

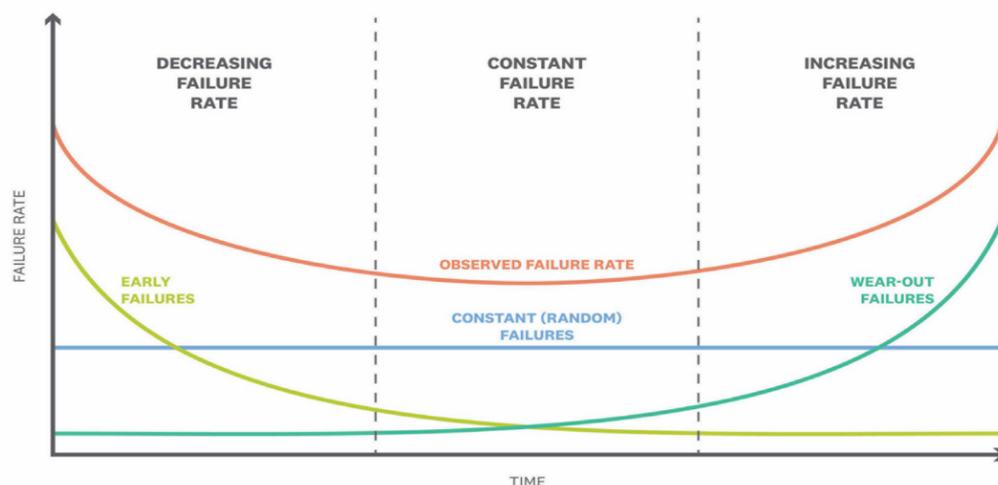
The siren system has been replaced with what’s called “IPAWS” for Integrated Public Alert and Warning System. NextEra says on its website, “The emergency alert system will broadcast official information on local radio stations. Alerts will be sent to your cell phone. If you have functional needs or do not own a cell phone, contact your emergency management agency to be registered for notification and assistance.”

That is, the system sends disaster warnings only to radios and cell phones. Are yours always on all night? Without sirens to wake sleeping nearby populations in the event of an overnight reactor disaster, potential victims can pretend that accidents only happen in daytime.

A quick search reveals:

- the 1986 Chernobyl explosions and meltdown began at 1:23 a.m.
- the 1979 Churchrock, New Mexico, uranium mine waste spill — the largest accidental radioactive material release in US history — broke at 5:30 a.m.
- the Three Mile Island, Pennsylvania, partial meltdown in 1979 started at 4:00 a.m.

Michael Keegan of Don’t Waste Michigan is a close watchdog of Point Beach and the 28 other reactors on



### Bath Tub Curve of Age-Related Malfunction Rate

The “bathtub curve” is derived from a tub’s cross-sectional shape. It’s a graphic representation of the failure rate of machines or technologies over the system’s operational life. The curve illustrates three periods: 1) the high failure rate of start-ups known as early failures; 2) the reduced failure rate of mid-life, known as random failures; and 3) an increasing failure rate due to aging known as wear-out failures. Failures and accidents during the wear-out period become increasingly more likely with age.

the Great Lakes. He wrote in an email to Nukewatch, “If they can afford them, I sure hope everyone has their TV, radio, computer, or cell phone on in the middle of the night when the [IPAWS] alarm is sounded.”

Paul Gunter, at Beyond Nuclear in Takoma Park, Maryland, specializes in reactor hazards and operations. He wrote in an email, “Removing the audible stationary sirens from within the emergency planning zone will significantly diminish the reactors’ early warning notification system and the radiological defense-in-depth strategy.”

Gunter points to the “bathtub curve” depicting failure rates over time in systems from toasters to nuclear reactors. “At startup, high rates of failures result from design flaws, mis-assembly and defects. A period of stable operations ensues, but over time, the aging of systems, structures and components leads to material degradation and a steeper rate of failures,” Gunter wrote.

In 2005, the Nuclear Regulatory Commission granted NextEra’s request to give the old reactors 20-year license extensions, letting them rattle and hum until

they’re 60. In November 2020, NextEra applied for a second extension that, if granted, would allow its two reactors to churn out radiation until they’re 80 years old. Adding even more risk to the reactors’ “golden years,” NRC in 2011 approved a 17 percent increase in power output from both units. These changes to original design and engineering limits are akin to dear old gramps gunning the engine of his vintage jalopy with the lousy breaks, racing down main street and running red lights with the whole family involuntarily along for the ride.

### Tragic warning from Germany

Germany’s deadly flooding in July with at least 210 fatalities is a tragic example of how retiring warning sirens can be catastrophic.

In some towns sirens failed when the electricity grid crashed, and elsewhere there were no sirens at all, the *Los Angeles Times* reported July 24. (“Residents of flood-stricken German towns say they got inadequate warning of deluge”) The German daily *Badische Neueste Nachrichten* reported August 6 that sirens were removed in many places or weren’t working. There had been some 80,000 sirens across Germany when the Cold War ended, but in the 1990s the federal government handed responsibility over sirens to local communities and, in cost-cutting steps, thousands of them, many in the flooded areas, then halted their regular maintenance or removed sirens altogether. In 2015, Germany’s Office of Civil Protection and Disaster Assistance said only 15,000 sirens still existed, Germany’s N-TV reported July 9.

Second only to the endless hazards of radioactive waste, disaster response preparedness has always been the bane of nuclear power systems — the only industrial machines required to have evacuation plans prior to start-up. Taking down warning siren systems only increases the likelihood of catastrophe. Running old reactors harder and without sirens amounts to reckless endangerment.