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Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement NextEra Energy Point Beach, LLC; Point Beach Nuclear Plant, Unit Nos. 1 and 2

Comment On: NRC-2020-0277-0001

Notice of Intent To Conduct Scoping Process and Prepare Environmental Impact Statement; NextEra Energy Point Beach, LLC, Point Beach Nuclear Plant, Units 1 and 2

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Submitter Information

Name: Kristin Womack

Address:

San Anselmo, CA, 94960

Email: kristinwomack@yahoo.com

Phone: 4155788268

General Comment

Point Beach Unit 2 has the worst-embrittled reactor pressure vessel of any pressurized water reactor in the country. Decades of additional neutron radiation bombardment will only increase the risk of a pressurized thermal shock, through-wall fracture, core meltdown, and catastrophic release of hazardous radioactivity. el radioactive waste generation) in this country. This additional 800 metric tons of irradiated nuclear fuel would represent a catastrophic risk in and of itself, to public health, safety, security, and the environment, and would be a curse on all future generations. High-level radioactive waste remains hazardous and deadly for more than a million years. 20 years of electricity generation at Point Beach is not worth the more than a million years of hazard associated with the high-level radioactive waste that would be generated. This is especially outrageous, when clean, safe, secure, affordable, and reliable renewables, such as wind and solar, combined with efficiency and storage, can readily displace Point Beach in terms of electricity supply.

Attachments

Point Beach

Point Beach Unit 2 has the worst-embrittled reactor pressure vessel of any pressurized water reactor in the country. Decades of additional neutron radiation bombardment will only increase the risk of a pressurized thermal shock, through-wall fracture, core meltdown, and catastrophic release of hazardous radioactivity. To give an idea of how catastrophic, in terms of casualties and property damage, consider the U.S. Nuclear Regulatory Commission's (NRC) own CRAC-II report. CRAC is short for Calculation of Reactor Accident Consequences. It is also known as "Technical Guidance for Siting Criteria Development," the 1982 Sandia (National Laboratory) Siting Study, NUREG/CR-2239, and/or SAND81-1549. In the event of a core meltdown at Point Beach 2, CRAC-II predicted: 500 peak early fatalities (acute radiation poisoning deaths); 9,000 peak early (radiation) injuries; and 7,000 cancer deaths (latent cancer fatalities). In terms of property damages, CRAC-II predicted \$43.8 billion, expressed as Year 1982 dollar figures. When adjusted for inflation alone, this figure would now be \$119 billion, in Year 2020 dollar figures. And as Associated Press investigative journalist Jeff Donn reported in June 2011, in the aftermath of the beginning of the Fukushima Daiichi nuclear catastrophe in Japan, in his four-part series "Aging Nukes," populations have soared around U.S. nuclear power plants like Point Beach, so casualty figures would now be even worse than CRAC-II predicted nearly 40 years ago. Donn also cited neutron radiation embrittled reactor pressure vessel pressurized thermal shock risk as the top example of NRC regulatory retreat in the past number of decades. And as Fukushima has also

shown, reactor meltdowns can proceed domino effect at multi-reactor sites. A meltdown at Unit 2 could lead to a meltdown at Unit 1, or vice versa, in which case those casualty and property damage figures above would have to be doubled. Point Beach's OE leaves a lot to be desired. This century, the two reactors at Point Beach, in certain years, had a majority of the NRC's "red findings" -- the agency's highest safety violation designation, amongst the entire U.S. fleet of operating reactors -- then numbering 104 -- combined. Similarly, at the very same time, WI's Kewaunee reactor -- a short distance from Point Beach (about the same distance as between the now infamous Fukushima Daiichi and Daini nuclear power plants in Japan) -- had a majority of the NRC's "yellow findings," the agency's second highest risk designation, more than the rest of the 103 operating reactors combined. Kewaunee's permanent closure was announced in late 2012, and implemented in early 2013. In fact, Kewaunee's closure commenced a record-breaking number of atomic reactor shutdowns across the U.S. since.

Another such reactor that has closed for good, Fort Calhoun in Nebraska, was given a red finding in the aftermath of a climate change-induced natural disaster: historic flooding on the Missouri River in the spring and summer of 2011. Fort Calhoun never recovered, and was permanently shut down. Given Point Beach's very bad OE, and the ever increasing risks of breakdown phase age-related degradation accidents and disasters, shouldn't Point Beach simply be shut down for good, and replaced

with safer, cleaner, more secure, more affordable renewables sources, such as wind power and solar power, as well as efficiency and energy storage, such as batteries and compressed air energy storage? This is readily achievable, considering the decade or longer left on the two Point Beach reactors' 60-year operating licenses. A decade or longer is plenty of time to achieve such a just energy transition in WI. Especially so, when considering that WI hosts the cutting edge Midwest Renewable Energy Association. Wind power as an alternative to 80 years of extended operations at Point Beach nuclear power plant is readily achievable, and should be the preferred alternative. Both onshore and offshore wind power potential should be considered. It is ironic that NextEra (formerly Florida Power & Light) would not include wind power as a viable alternative in its Environmental Report (ER) and license application, considering that if you go to NextEra's website homepage, featured there is a beautiful, powerful photo of large-scale wind turbines filling a vast landscape. Such a visionary scenario is most doable in Wisconsin, both on-land and in Lake Michigan, and should be done, instead of allowing the dangerously age-degraded Point Beach reactors to continue operating for three more decades, or longer. The only alternative sources of electricity considered in NextEra's ER are, inexplicably, solar backed up by natural gas, and small modular nuclear reactors. What about solar and wind backed up by batteries and compressed air energy storage? Why aren't such cleaner, safer, more secure, more affordable, just as or more reliable, and more realistic energy options considered? It is not surprising

that NextEra has done this though. In its home base of the Sunshine State, Florida Power & Light has -- contrary to its greenwashing PR campaigns -- long neglected the tremendous potential for solar power (as well as wind power), instead preferring nuclear power, as well as the combustion of fossil fuels to generate electricity. The latter are most ironic, as burning fossil fuels contributes to climate chaos, global warming, melting ice caps, and rising sea levels. Florida is facing inundation in the decades ahead, making nuclear power plant operation on its coastlines, ever more dangerous and unrealistic. This is especially true at FP&L's own two-reactor Turkey Point nuclear power plant in southern Florida, which, ironically enough -- throwing caution to the wind (and waves) -- NRC has already rubber-stamped for 80 years of operations. Turkey Point already suffered a very near miss with a major catastrophe in 1992 during Hurricane Andrew. FP&L/NextEra, and NRC, have unwisely ignored that cautionary tale.

In addition to renewable sources of electricity being ready to affordably displace Point Beach, energy efficiency should be maximized. In fact, nega-watts, as dubbed by Amory Lovins of the Rocky Mountain Institute, and the cheapest kilowatt-hours to be had -- those that never had to be generated in the first place.

Dr. Arjun Makhijani of the Institute for Energy and Environmental Research concluded in his 2007 book *Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy*, that the U.S. economy -- the largest of any

country on Earth -- could readily and affordably go nuclear power-free and fossil fuel-free, relying entirely on renewables and efficiency, within just a few decades, if only we chose to.

Since, Dr. Makhijani has done multiple state-level analyses -- such as in Maryland -- showing how to practically accomplish this carbon-free and nuclear-free energy economy. The same could readily be done in Wisconsin as well. After all, WI hosts the Midwest Renewable Energy Association, a national leader in its field. Each reactor would generate at least 20 metric tons of irradiated nuclear fuel (highly radioactive waste) per year. 20 metric tons X 20 years (the extension on the already rubber-stamped 60-year license) = 400 metric tons per reactor.

400 metric tons X 2 reactors = 800 metric tons.

Thus, two decades of additional operations at Point Beach, on top of what NRC has already approved, would mean yet another 800 metric tons, or more, of additional high-level radioactive waste that would be generated, for which we still have no safe, sound solution, after 64 years of commercial/civilian nuclear power (and high-level radioactive waste generation) in this country. This additional 800 metric tons of irradiated nuclear fuel would represent a catastrophic risk in and of itself, to public health, safety, security, and the environment, and would be a curse on all future generations. High-level radioactive waste remains hazardous and deadly for more than a million years. 20 years of electricity generation at Point

Beach is not worth the more than a million years of hazard associated with the high-level radioactive waste that would be generated. This is especially outrageous, when clean, safe, secure, affordable, and reliable renewables, such as wind and solar, combined with efficiency and storage, can readily displace Point Beach in terms of electricity supply.