KEY POINTS FOR POINT BEACH NUCLEAR REACTORS
DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS

Listed below are critical points regarding Point Beach Nuclear Reactors (PBNP) and the draft generic Environmental Impact Statement (EIS). This list was created by Physicians for Social Responsibility Wisconsin. More information at www.closepointbeachnuclear.org.

We welcome the use of the information and details provided below, but we highly encourage you to make your comments your own. ***Please do NOT directly copy and paste all the points directly without changing or adding anything of your own.***

If you need further assistance, click here to download a handout providing general tips for writing EIS comments.

PUBLIC PARTICIPATION

1. **NRC Public Participation Deficiencies:** For the general public concerned with the potential license extension for the two reactors at PBNP, participation is difficult and fraught with obstacles for adequate public participation:
    - Common sense and seemingly logical thinking and expression by the general public is most often met with such concerns being relegated to some other part of the regulatory body's apparatus, at some other time, so that instead of having a meaningful discussion of the important issues at hand, like reactor vessel embrittlement and additional high level waste being created on the shore of Lake Michigan, public concerns are channeled into a 'regulatory' process gap that obscures the public voice. Our concerns regarding embrittlement dangers, climate change, truly renewable alternative energy options, and the economic impact related to Power Purchase Agreements somehow are seemingly irrelevant, as their purview is someplace else than this licensing proceeding.
    - On the micro level, the technological level for public participation is sadly lacking. Instead of the ease and convenience of the many Zoom like communication programs available today, the agency charged with being fully up to date in an important regulatory capacity asks the general public to participate in an antiquated two step communications process, which requires both an internet computer connection and an active telephone line for the hours long proceedings.

CLIMATE CHANGE

2. It is worth noting that the section on **climate change needs to be completely rewritten** so that it is based on the most current data from the Intergovernmental Panel on Climate Change - the IPCC 2021 report.

- Specifically, the report is the "AR6 Climate Change 2021: The Physical Science Basis," published August 2021. Since the current PBNP licenses extend until 2030 and 2033, there is plenty of time for the NRC to get up to speed with the latest in climate science, produced by the United Nations IPCC, a significant collaboration of hundreds of the world's leading climate scientists. This is a conservative, rigorously science based organization, and the 2021 report is eye-opening.
- The most recent IPPC Report referenced in the climate change section of NRC's Draft Generic EIS is from 2007. It is unacceptable for the NRC to present *fourteen-year-old data* as a sound scientific basis for projecting what climate conditions will be at PBNP 32 years into the future – that is **a 46 year knowledge gap**. Data from this year, 2021, is available on the internet; using it makes it only a **32 year knowledge gap** about actual climatic conditions at the site of the two atomic reactors operating on the shore of Lake Michigan, a precious Wisconsin asset.
- The immediate and imminent impacts of climate change on operations at PBNP are **new categories** of consideration for an EIS, and much of the science and observed changes are recent phenomenon, which underscores why the most current data must be used and why this topic must receive a fresh and new appraisal of conditions. Fourteen year old data is not acceptable.
- The number of extreme weather events has increased dramatically in the last decade. The August 2020 derecho event in Iowa damaged the Duane Arnold Nuclear Reactor facilities, which narrowly escaped a catastrophic nuclear accident. Point Beach is similarly vulnerable to derechos, tornados and extreme weather events.
- Lake level fluctuations and larger storm surges contribute to an increase in erosion along the shores of Lake Michigan, threatening reactor operations. Meanwhile, over 1,000 metric tons of nuclear waste are stored onsite at PBNP, on the shoreline of Lake Michigan. Lake Michigan recorded a record low lake level in 2013, and only seven years later, recorded a record high lake level in 2020.

ALTERNATIVE ACTIONS

3. The section on "**Alternatives Actions"** to be considered is completely inadequate for two reasons: if the license at PBNP is not renewed, the alternatives considered do not include the use of wind power, either onshore or offshore, or energy conservation.
    - Two of the three proposed alternatives require implementation of Small Modular Reactors (SMRs), reactors which do not exist and are not currently available.
    - In fact, SMRs do not exist as a viable source of electricity,as they require decades of research and development to find out if the new designs will even work and then even more time to scale up mass production of SMRs. Safety concerns of SMRs would also need to be considered.
    - There must be at least one Alternative Action plan based on 100% renewable energy sources. As with climate change science and knowledge, many developments in solar, wind, storage and energy conservation have taken place

and proven themselves in recent years; this knowledge is available and must be considered as reasonable replacement alternatives.

LAKE MICHIGAN

4. **Environmental damage** to the ecosystem in Lake Michigan related to intake of almost one billion gallons of Lake Michigan *per* day, and the discharge of over 900 million gallons of heated water (24 degree F above ambient lake temperature) **daily** from the reactors is not scientifically addressed in the draft EIS.
    - Water intake kills fish, fish larvae, fish eggs and other aquatic organisms. The NRC's EIS authors must include updated quantitative data on PBNP's damage to the aquatic ecosystem and cumulative effects on Lake Michigan now and in the "foreseeable" future.
    - Heated water discharge from PBNP's 'once through' cooling system is not the Best Technology Available (BTA). Installing cooling towers, long the industry standard, would reduce use of lake water by 85%.
    - More information on thermal pollution >>

TIME CONSIDERATION

5. The "**foreseeable future**" was considered by NextEra and the NRC to be only until 2053 and does not take into account that the radioactive waste needs to be safeguarded for thousands of years nor the effects on the environment from PBNP's eventual decommissioning. This limited scope of the foreseeable future does not adequately account for the cumulative effects and extended effects of the operation of the Point Beach Nuclear Reactors.
    - Foreseeable future in the EIS document is defined as "Reasonably foreseeable future actions are those that would occur through the end of power plant operation, including the period of extended operation. Therefore, the cumulative impacts analysis considers potential effects through the end of the current license term, as well as through the end of the 20-year subsequent license renewal term" (page page 247/369 of the EIS).

SAFETY

6. The EIS contains an **inadequate assessment of risk to human health** in the event of a severe nuclear accident at PBNP (particularly if unmitigated, ie. a reactor core meltdown). The current EIS for PBNP references NRC's The State of the Art Reactor Consequences Analysis (SOARCA). See Appendix F 4.2, pp 354-355/369.
    - We do not agree with the EIS conclusion "As a result, the calculated risks of public health consequences of severe accidents modeled in SOARCA are very small." P. 355/369
    - PSR WI's issues with the NRC's 2012-3 assessment of human health consequences from a severe accident include:

- The modeling SOARCA uses is greater than 15 years old. Additionally, MELCOR from 1991 (and last reviewed by the NRC in 2006) assesses an accident at Surry, another Westinghouse Pressurized Water Reactor similar to Point Beach Units 1 and 2, but this is not an assessment of PBNP specifically.
- SOARCA assesses only the risk of individual cancer deaths, not cancer morbidity. Cancer morbidity is the risk of contracting cancer from excess radiation exposure.
- It does not include estimates of excess deaths in individuals who would be evacuated from their homes and die from lack of accessible diagnosis and treatment of chronic conditions or the increase in significant mental illness for those displaced, some of what is being noted for the declining health of US populations during the Covid-19 pandemic. (see https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900560-2)
- SOARCA does not address accidents related to stored fuel.