

**Comments on the Draft Environmental Assessment and
Draft Finding of No Significant Impact**

Background:

The U.S. Nuclear Regulatory Commission (NRC) staff published a notice in the *Federal Register* requesting public review and comment on the draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) on December 10, 2010 (75 FR 77010), and established January 10, 2011, as the deadline for submitting public comments. Comments and supplemental information were received from NextEra Energy, LLC (NextEra, the licensee); from the Wisconsin Public Service Commission (PSC); and from members of the public. The correspondence associated with the comments is provided in the Agencywide Documents Access and Management System (ADAMS), and available as a matter of public record. A summary of each correspondence is provided in Table 1, including the name of each commenter, their affiliation, a document letter code, the ADAMS accession number, and the number of comments.

Table 1
Comments Received on the Point Beach EPU Draft EA and Draft FONSI

Last Name	First Name	Affiliation	Document Letter	ADAMS Accession Number	Number of Comments
Dums	Dennis	Citizens Utility Board	A	ML110110353	5
Nekola	Katie	Clean Wisconsin	A	ML110110353	5
LaForge	Christopher	Great Northern Solar	B	ML110100330	9
Anonymous		Self	C	ML110130278	1
Hale	Steve	NextEra Energy	D	ML110130279	2
Meyer	Larry	NextEra Energy	D	ML101340103	*
Meyer	Larry	NextEra Energy	D	ML101610711	*
Michetti	Susan	Self	E	ML110110352	9
Michetti	Susan	Self	E	ML110130280	7
Timmerman	Don/Roberta	Self	F	ML110130281	4
LaForge	John	Nukewatch	G	ML110140553	4
Giese	Mark	Self	H	ML110130283	3
Giese	Mark	Self	H	ML110030698	3
Kleppin	Julia	Self	I	ML110180663	5
Loveland	Holly	Self	I	ML110180663	5

Komba	Michael	“Catholic Worker House of Hospitality”	J	ML110130282	3
Kitsembel	Jeff	Wisconsin PSC	K	N/A	**
*	Provided supplemental information		**	Telephone communication	

Comment Review:

The NRC staff reviewed each comment letter, and all comments related to similar issues and topics were grouped together. This attachment presents the comments, or summaries of comments, along with the NRC staff’s responses. When comments have resulted in a modification to the draft EA, those changes are noted in the NRC staff’s response.

Major Issues and Topics of Concern:

The comments were grouped within the following categories: supplemental information provided to the NRC; terrestrial resources; the need for power; opposition to the license amendment; aquatic resources; in support of the license amendment; the license amendment process; alternative energy sources; radioactive waste; human health; and nuclear safety (Table 2). Next to each set of grouped comments is a four-component code corresponding to: the powerplant (“PB” for Point Beach); the document letter (A – J) that corresponds to the document submitter from Table 1; the number of the comment from that particular commenter; and the two-letter category comment code from Table 2.

Table 2
Draft EA Comment Categories and Comment Codes

<u>Comment Category</u>	<u>Comment Code</u>
Supplemental Information	SI
Terrestrial Resources	TR
Need for Power	NP
Opposition to License Amendment	OA
Aquatic Resources	AS
Support of License Amendment	SA
License Amendment Process	LA
Alternative Energy Sources	AS
Radioactive Waste	RW
Human Health	HH
Nuclear Safety	NS

Disposition of Public Comments on the Draft Environmental Assessment

Supplemental Information (SI)

Comment: PB-D-2-SI

In a December 10, 2010, e-mail to the NRC, NextEra suggested changes to the draft EA based on supplemental information provided in its letter to the NRC dated May 13, 2010 (ADAMS Accession No. ML101340103). The draft EA indicated that 727 additional truck deliveries will be needed to support extended power uprate (EPU) modifications for the spring 2011 outage, and approximately 774 additional truck deliveries will support the EPU modifications during the fall 2011 outage. NextEra indicated that Enclosure 1 of the May 13, 2010, letter, specified an additional 888 truck deliveries will support the EPU modifications for the fall 2011 outage. A subsequent comment from NextEra reiterated the above changes to the number of truck deliveries.

NRC Response:

The NRC staff reviewed the information and incorporated the change from 774 truck deliveries to 888 truck deliveries to support the fall 2011 outage. Consideration of the above comment does not change the conclusion of the FONSI.

Comment: PB-C-1-SI

A member of the public commented that additional construction work was performed at the Point Beach Nuclear Plant (PBNP) but not identified in the draft EA, and noted the inclusion of 22 trailers for office space at PBNP, and the construction of two additional parking facilities.

NRC Response:

The NRC staff reviewed the information from the commenter as well as supplemental information provided by NextEra in its December 10, 2010, e-mail to the NRC verifying the additional construction work, and incorporated the information related to additional construction

into the final EA. Consideration of the above comment does not change the conclusion of the FONSI.

Terrestrial Resources (TR)

Comment: PB-K-1-TR

A representative from the Wisconsin PSC provided comments to the NRC staff during a phone conversation, regarding proposed modifications to the PBNP transmission system. The Wisconsin PSC representative indicated that potential upgrades to the transmission facilities may be required to support the proposed EPU, and that the corresponding environmental impacts may need to be evaluated in the EA.

NRC Response:

The NRC conveyed this information to NextEra, regarding the potential need for additional work along the transmission line corridors to support the proposed uprate. In a letter to the NRC dated June 10, 2010 (ADAMS Accession No. ML101610711), NextEra provided additional information about future transmission system upgrades. In the December 10, 2010, letter to the NRC, NextEra stated that network upgrades are recommended for long-term stability of the transmission system. NextEra stated that these specific upgrades were not required to support the proposed EPU. These upgrades are provided in Table 2 of the June 10, 2010, letter, and have been summarized in the EA. NextEra states that the estimated time required to design, procure, and construct these upgrades is 8 to 10 years. Consideration of the above information does not change the conclusion of the FONSI.

Need for Power (NP)

Comments: PB-A-1-NP through PB-A-5-NP

One commenter stated that much of the information provided in the section justifying the need for additional power is outdated and inaccurate as the commenter describes below, and made recommendations for revising this section. The need for the additional power based upon earlier recommendations from the State of Wisconsin for maintaining an 18 percent energy planning reserve margin is outdated and inaccurate as described in the draft EA. The forecasted energy annual growth rate in Wisconsin of over 2 percent is outdated and inaccurate. Wisconsin has excess electrical generating capacity. The statement that the proposed EPU will reduce Wisconsin's dependence on obtaining power from Illinois is outdated. The proposed update would actually result in the need to build more transmission in Wisconsin. The NRC should update the draft EA statements such that the proposed EPU is not needed to reduce congestion on Wisconsin's transmission grid connection. The final EA should state that Wisconsin does not have a goal of promoting nuclear power. The comments express doubt of the need for additional electrical power in Wisconsin, and cite more recent documents from the Wisconsin PSC than provided by the licensee which do not indicate the same need for power as stated by the licensee in the Environmental Report (ER).

NRC Response:

The staff agrees with the comments. The staff changed the final EA to reflect the licensee's need for power, and to not include any references to the strategies of the State of Wisconsin for maintaining an electrical power margin. Consideration of the above comment does not change the FONSI.

Opposition to License Amendment (OA)

Comments: PB-B-1-OA; PB-B-5-OA; PB-B-8-OA; PB-E-7-OA; PB-E-16-OA; PB-F-3-OA;
PB-H-6-OA; PB-I-1-OA

The comments are in general opposition to the EPU and continued operation of the plant, based upon the age and physical condition of the plant, its operating performance, its history of repairs, and general accident and safety issues.

NRC Response:

The comments relate to past operational events at PBNP that are outside the scope of this EA. However, the staff offers the following about the NRC's oversight of nuclear power plants. To ensure that nuclear power plants are operated safely, the NRC licenses the plants to operate, licenses the plant operators, and establishes license conditions for the safe operation of each plant. The NRC provides continuous oversight of the plant through its Reactor Oversight Process (ROP) to verify that they are being operated in accordance with NRC regulations. The NRC has full authority to take whatever action is necessary to protect public health and safety. The PBNP Units 1 and 2 received a license renewal from the NRC in 2005 to operate for another 20 years, which extends the operating life of Units 1 and 2 to 2030 and 2032, respectively. During this time period, the licensee will need to comply with all health, safety, and environmental requirements contained within the license as well as comply with all other Federal, State, and local requirements for continued operation of PBNP Units 1 and 2.

Therefore, no change was made to the EA based on the comments.

Aquatic Resources (AR)

Comment: PB-E-1-AR

One commenter indicated that the NRC's draft EA does not state explicitly any effects on aquatic communities in Lake Michigan from the proposed EPU.

NRC Response:

The EA evaluated the potential impacts to aquatic biota from the proposed action, including potential impacts from impingement, entrainment, and chemical and thermal discharge effects. The potential impacts were discussed in the section "Aquatic Resources Impacts". To summarize, the proposed EPU would have no impact on aquatic biota from impingement or entrainment, and the proposed EPU would not increase thermal or chemical discharges beyond the permitted limits.

Therefore there are no significant impacts and no change was made to the final EA based on the comments.

Support of License Amendment (SA)

Comment: PB-D-1-SA

One commenter agreed with the conclusions of the report and the FONSI.

NRC Response:

No change was made to the final EA based on the comment.

License Amendment Process (LA)

Comments: PB-E-10-LA; PB-E-8-LA

One commenter noted that she and several others initially were unable to electronically submit their comments. The commenter also requested that comments she submitted during the relicensing evaluation of PBNP be re-evaluated during the evaluation of the proposed EPU.

NRC Response:

All comments received within the thirty (30) day comment period per Title 10 of the *Code of Federal Regulations* (10 CFR) 51.33 have been reviewed. Additionally, comments submitted after the comment period had expired were also addressed. All commenters that had a

technical difficulty and then contacted the NRC project manager for PBNP were able to successfully submit their comments by e-mail. The licensee's ER and their additional information submitted to the NRC, information contained in the FESs and SEIS-23, and public comments received were evaluated by the NRC staff. After a thorough evaluation, NRC staff determined that the proposed EPU would not have a significant impact on the environment.

Therefore, no change was made to the final EA based on the comment.

Alternative Energy Sources (AS)

Comment: PB-F-4-AS

One commenter requested that alternative forms of energy be used in the State of Wisconsin.

NRC Response: The NRC staff performed a thorough evaluation of alternative forms of power generation in the SEIS-23. The NRC staff used information in the SEIS-23 and the licensee's ER to perform the EA for the proposed EPU. As stated in the draft EA, construction and operation of such a fossil-fueled plant or alternative-fueled plant may cause impacts to air quality, land use, and in waste management significantly greater than those identified for the proposed EPU at PBNP.

Therefore, no change was made to the final EA based on the comment.

Radioactive Waste (RW)

Comments: PB-B-4-RW; PB-E-13-RW; PB-F-2-RW; PB-G-1-RW; PB-G-3-RW; PB-H-1-RW; PB-H-4-RW; PB-I-3-RW; PB-J-1-RW

Seven members of the public commented upon the proposed 17 percent increase in the radioactivity in the gaseous and liquid waste produced by the reactors. The comments express doubt that the existing radioactive waste treatment system at PBNP will be able to handle the

increased amount of radioactive gaseous and liquid wastes generated by the proposed EPU without improvements or alterations. One commenter stated that the current radioactive waste (spent nuclear fuel) generated at the plant cannot be stored on site, and adding more radioactive waste would lead to a bigger problem. There will be insufficient storage capability in the future and there may not be a place to send the waste.

NRC Response: The NRC staff's environmental assessment of the proposed EPU addressed the potential impacts associated with the increase in radioactivity in the reactor coolant system, waste processing systems, and radioactive effluents released from the plant. The NRC staff concluded that the radioactive waste processing systems at PBNP would be capable of handling the projected increase in radioactivity and that projected radiation doses to members of the public would remain within the dose limits of 10 CFR 20.1301 and the dose objectives in Appendix I to 10 CFR Part 50 and would not pose a significant impact to public health, safety and the environment.

The draft EA evaluated the potential impact of the EPU on spent nuclear fuel and found that the licensee's fuel reload design goals will maintain the fuel's enrichment and burnup parameters within the impact values contained in the NRC's uranium fuel cycle environmental data contained in 10 CFR Part 51. Additionally, the NRC's Waste Confidence Rule, found in 10 CFR 51.23, states that "the Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient

mined geologic repository capacity will be available to dispose of the commercial high-level radioactive waste and spent fuel generated in any reactor when necessary.”

Therefore, no change was made to the final EA based on the comments.

Human Health (HH)

Comments: PB-B-3-HH; PB-B-6-HH; PB-E-3-HH; PB-E-5-HH; PB-E-11-HH; PB-E-14-HH; PB-G-2-HH; PB-H-2-HH; PB-I-4-HH; PB-J-2-HH

Six members of the public expressed their concern regarding radiation exposure to the public as related to the proposed power uprate. Namely, the commenters believe the proposed EPU will increase the radioactive exposure to the local population. All exposure to ionizing radiation, internal or external, increases one’s chances of cancer, birth defects, immune system dysfunction, and other illnesses. The consequences of radiation exposure are known to be far more severe in the case of women, children, infants, fetuses and person with compromised immune systems than in the case of “Reference Man”, the archaic, gender-biased and unscientific standard still used by the NRC to estimate radiation risk. One commenter indicated the EA did not discuss the effects of the proposed EPU on the plant workers.

NRC Response: The NRC’s primary mission is to protect the public health and safety and the environment from the effects of radiation from nuclear reactors, materials and waste facilities. The NRC’s regulatory limits for radiological protection are set to protect workers and the public from the harmful health effects of radiation on humans. The limits are based on the recommendations of standards-setting organizations and reflect extensive scientific study by national and international organizations. The NRC actively participates in and monitors the work of these organizations to keep current on the latest trends in radiation protection. The calculation models recognized by the NRC for use by nuclear power reactors to calculate dose

incorporate conservative assumptions and account for differences in gender and age to ensure that workers and members of the public are adequately protected from radiation.

The draft EA evaluated the potential impacts from the proposed EPU to plant workers. The evaluation discussed that the licensee has a radiation protection program to protect the workers. The radiation protection program at PBNP monitors radiation levels throughout the plant to establish appropriate work controls, training, temporary shielding, and protective equipment requirements.

In addition to the work controls discussed above, PBNP uses permanent and temporary shielding throughout the plant to protect plant personnel against radiation. The draft EA concluded that implementation of the proposed EPU would not change the licensee's ability to maintain worker doses within the limits of 10 CFR Part 20.

All nuclear plants were licensed with the expectation that they would release radioactive material to both the air and water during normal operation. NRC regulations require that radioactive gaseous and liquid releases, including inadvertent releases due to leaks in piping containing radioactive liquids, from nuclear power plants must meet radiation dose-based limits specified in 10 CFR Part 20, and the as low as is reasonably achievable [ALARA] criteria in Appendix I to 10 CFR Part 50, and 40 CFR Part 190. Regulatory limits are placed on the radiation dose that members of the public might receive from all of the radioactive material released by nuclear plants. Nuclear power plants are required to report their radioactive gaseous and liquid releases as well as the results of their radiological environmental monitoring program annually to the NRC. These publically available reports discuss the radiological impacts associated with the operation of PBNP. The annual effluent release and radiological environmental monitoring reports are available to the public through the ADAMS electronic

reading room available through the NRC website (www.nrc.gov). To ensure that nuclear power plants operate safely and maintain radioactive effluent releases within regulatory limits, the NRC licenses the plants to operate, licenses the plant operators, and establishes license conditions for the safe operation of each plant.

The NRC provides continuous oversight of the plant's radiation protection program through its ROP to verify that plant workers are being adequately protected in accordance with NRC regulations. The NRC has full authority to take whatever action is necessary to protect public health and safety.

The NRC staff evaluation in the draft EA concluded that the radioactive waste processing systems at PBNP would be capable of handling the projected increase in radioactivity and that projected radiation doses to members of the public would remain within the dose limits of 10 CFR 20.1301 and the dose objectives in Appendix I to 10 CFR Part 50, and would not pose a significant impact to public health, safety and the environment.

Therefore, no change was made to the final EA based on the comments.

Nuclear Safety (NS)

Comments: PB-B-2-NS; PB-B-7-NS; PB-B-9-NS; PB-E-2-NS; PB-E-4-NS; PB-E-6-NS; PB-E-9-NS; PB-E-12-NS; PB-E-15-NS; PB-F-1-NS; PB-G-4-NS; PB-H-3-NS; PB-H-5-NS; PB-I-2-NS; PB-I-5-NS; PB-J-3-NS

Seven commenters were concerned about safety issues at the plant. Most notably, these comments were related to the age of the reactor with faulty old systems; the inability of the reactor to operate even at low power; losses of safety system functions; leaking pipes and other equipment leaks; the record of operating failures at PBNP; and numerous violations in a relatively short period of time. The commenters also mentioned a loss of electrical power

resulting in an “Unusual Event” notification to the NRC, and a subsequent “Red Finding” made by the NRC due to a safety failure.

Additional comments included statements regarding past fines, falsifying information, discrimination, operator error, safety violations and other past violations at PBNP Units 1 and 2.

NRC Response:

The PBNP Units 1 and 2 were granted, consistent with NRC regulations, 40-year operating licenses in 1970 and 1973, respectively. The NRC requires licensees to test, monitor, and inspect the condition of safety equipment and to maintain that equipment in reliable operating condition over the operating life of the plant. The NRC also requires licensees to continuously correct deficiencies that could impact plant safety (e.g., leaking valves, degraded or failed components due to aging or operational events). Over the years, the licensee has replaced or overhauled plant equipment as needed. As appropriate, the licensee has also upgraded equipment or installed new equipment to replace or supplement original systems. The testing, monitoring, inspection, maintenance, and replacement of plant equipment provide reasonable assurance that this equipment will perform its intended safety functions during the 40-year license period. This conclusion applies both to operations under the current license and operations under EPU conditions.

In December 2005, the NRC approved renewal of the operating licenses of the PBNP Units 1 and 2 for a period of 20 additional years, extending the operating licenses of the PBNP Units 1 and 2 to 2030 and 2033, respectively. The safety evaluation report documenting the NRC staff’s technical review can be found in NUREG-1839, “Safety Evaluation Report Related to the License Renewal of the Point Beach Nuclear Plant, Units 1 and 2” (ADAMS Accession Nos. ML053420134 and ML053420137). The NRC staff’s review concluded that the

requirements of 10 CFR 54.29(a) were being met, including the licensee's management of the effects of aging during the period of extended operation on the functionality of structures and components subject to review as described in 10 CFR 54.21.

The NRC's safety regulations are based on the Atomic Energy Act of 1954 as amended, and require a finding of reasonable assurance that the activities authorized by an operating license (or an amendment thereto) can be conducted without endangering the health and safety of the public, and that such activities will be conducted in compliance with the NRC's regulations.

With respect to the proposed EPU and as discussed in Section 9.0 of the safety evaluation report, the Commission has concluded that there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner and that the authorized activities will be conducted in compliance with the NRC's regulations. The margin of safety is related to confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant pressure boundary, and containment) to limit the level of radiation dose to the public. The NRC staff evaluated the impact of the proposed EPU on the fission product barriers and concluded that the structural integrity of the fission product barriers would be maintained under EPU conditions. As such, the proposed amendment would not degrade confidence in the ability of the barriers to limit the level of radiation dose to the public.

The NRC staff evaluated the impact of the expected changes to plant parameters (e.g., increase in temperatures, flow rates, vibration) as a result of the proposed EPU for the applicable systems or components as described in the relevant sub-sections of the SE, and concluded that there was reasonable assurance that plant systems and components would continue to perform their intended safety functions under EPU conditions. Furthermore, the

staff concluded that the structural integrity of the fission product barriers would be maintained under EPU conditions (i.e., even given the increased stress to plant components). The staff concluded that, since there is reasonable assurance that the fission product barriers will limit the level of radiation dose to the public, the proposed EPU would not involve a significant reduction in a margin of safety.

Past events and violations have been reviewed under the NRC's inspection and enforcement programs. The NRC's ROP integrates the NRC's inspection, assessment, and enforcement programs. The operating reactor assessment program evaluates the overall safety performance of operating commercial nuclear reactors and communicates those results to licensee management, members of the public, and other government agencies. The assessment program collects information from inspections and performance indicators in order to enable the agency to arrive at objective conclusions about a licensee's safety performance. Based on this assessment information, the NRC determines the appropriate level of agency response, including supplemental inspection and pertinent regulatory actions ranging from management meetings up to and including orders for plant shutdown. The NRC conducts follow-up actions, as applicable, to ensure that the corrective actions designed to address performance weaknesses were effective.

The NRC developed requirements to ensure adequate protection or no undue risk to public health and safety through design, construction operation, maintenance, modification, and quality assurance measures. Consistent with that purpose, enforcement actions have been used as a deterrent to emphasize the importance of compliance with these requirements and to encourage prompt identification and prompt, comprehensive correction of violations. The NRC enforcement program supports the overall safety mission in protecting the public health and

safety and the environment. The enforcement program: (1) assesses the significance of individual inspection findings and events; (2) formulates the appropriate agency response to these findings and events; (3) emphasizes good performance and compliance; (4) provides incentives for performance improvement; and (5) provides public notification of the NRC's views on licensees' performance and actions. As such, past (and future) events have received a thorough programmatic review and evaluation to ensure the licensee has successfully implemented corrective actions to minimize the potential for recurrence.

Therefore, no change was made to the final EA based on these comments.