IPRenewalCEmails

From: Shaylah Reagan [sr551@bard.edu]
Sent: Tuesday, March 17, 2009 2:56 PM
To: IndianPointEIS Resource
Subject: Indian Point Draft EIS comments
Attachments: Indian Point Draft EIS comments.doc

Dear Chief, Rules, Directives and Editing Branch,

Attached hereto are comments regarding the Indian Point Draft Environmental Impact Statement. Thank you for your time.

Sincerely,

Bard Center for Environmental Policy, Class of 2010
Attn: Shaylah C. Reagan

Federal Register Notice: 73FR80440
Comment Number: 81

Mail Envelope Properties (20090317145559.u7aqag5xick00cos)

Subject: Indian Point Draft EIS comments
Sent Date: 3/17/2009 2:55:59 PM
Received Date: 3/17/2009 2:56:05 PM
From: Shaylah Reagan

Created By: sr551@bard.edu

Recipients:
"IndianPointEIS Resource" <IndianPoint.EIS@nrc.gov>
Tracking Status: None

Post Office: webmail.bard.edu

Files	**Size**	**Date & Time**
MESSAGE	269	3/17/2009 2:56:05 PM
Indian Point Draft EIS comments.doc	55872	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

The Graduate Class of 2010
Bard Center for Environmental Policy
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March 18, 2009

Chief, Rules, Directives and Editing Branch
Divisions of Administrative Services
Mailstop T-6D59
U.S. NRC
Washington, DC 20555

Dear Nuclear Regulatory Commission staff:

Subject: Re-licensing Indian Point Nuclear Power Plant, Comments on Draft EIS

This letter contains comments and concerns that we, the graduate students attending Bard Center for Environmental Policy, have with the draft Environmental Impact Statement (EIS) submitted on December 22, 2008 for the license renewal of Indian Point nuclear power plant. We compose of a group of individuals from local, regional and international communities with a vested interest in improving this draft EIS. On February 12, 2009 we attended the pubic license renewal meeting held in Cortlandt, New York . Afterwards, we had a class assignment to evaluate and discuss section 8 of the draft EIS on alternatives to Nuclear Energy. From this evaluation and following class discussion we generated the following comments for the NRC to consider.

Nuclear power is a valuable resource for the United States, providing over 20% of the total electric energy consumption. Nuclear power has many environmental, economic, and social benefits; these benefits include an elimination of air pollution, tax revenues for the local communities, and the creation of jobs. These benefits were clearly extolled at the public meeting held in Cortlandt New York on February 12, 2009 and should not be discounted. However, there are many impacts of nuclear power that have been overlooked in the submitted draft EIS. We contend that the negative consequences of the nuclear power generated at Indian Point are not inevitable or unavoidable and through a more comprehensive Environmental Impact Statement can be mitigated.

We feel that Indian Point nuclear power plant should not be granted a renewed license until these discrepancies are properly addressed in the draft EIS and remediated. Chief among our concerns is the disposal and storage of nuclear waste produced at Indian Point. Secondly we submit that the safety procedures and systems installed to protect surrounding citizens are inadequate and must be revised.

Over 15,000 tons of on site nuclear waste are stored in pools and dry casks at the Indian Point facility, and we maintain this posses a much greater threat to human health than the submitted draft EIS suggests. As this facility has had previous incidents of radioactive leakage, we submit that a further and much more detailed inspection of the effects and sources of nuclear waste leakage on current and future human health, the effects to the ecology and the effects on water use and quality must be done. In addition, the threat of earthquakes has become apparent as Columbia University's Lamont-Doherty Earth Observatory has recently identified a seismic zone extending from Stamford, Connecticut, to Peekskill. We propose that this poses a much greater threat than realized in the draft EIS and must be further examined and mitigated for.

Emergency sirens are intended to warn citizens within a 10 mile radius in the case of a plant related emergency, and a back-up power system is essential for this operation if Indian Point were to lose power. We know from the draft EIS and from our independent research that Indian Point has been fined for not developing an emergency siren plan and for failing to ensure that public warning systems have back-up power. Both of these measures are vital to protecting the health and safety of the community around Indian Point in the event of an emergency. We submit that this must be more adequately addressed in this draft EIS.

Furthermore, we contend that this draft EIS has not adequately addressed the ecological impacts of the existent once through cooling system. We call for a more serious environmental review of the effects of the current system. With this in mind, we feel that the EIS does not sufficiently address all possible alternatives. An additional alternative should include the re-licensing, conditioned upon Entergy installing a closed-cooling system at Indian Point nuclear power plant. While this would require a large financial input from Entergy, it would greatly decrease the plants impact on the aquatic environment of the Hudson River. Closed-system cooling is a mature and feasible technology. Requiring this investment by Entergy would enable the public at large to benefit from Nuclear generation while mitigating negative side-effects and protecting the popular sport fishing industry of the Hudson River.

8.2 Comments on No-Action Alternative

In its consideration of the impacts of the No Action Alternative, the EIS document fails to address the fact that 'no-action', has implicit effects. The selection of this alternative does

not occur in a vacuum; it has substantive repercussions. For one, it means that there will be less electricity supply on the grid. This shortfall may have environmental and economic impacts beyond those that are discussed in this section. Any alternative that is brought on-line in order to replace Indian Point will be a direct result of the closure and should be considered an impact of 'no action'. For instance, building a new coal plant in a pre-existing non-attainment area would definitely be considered an adverse environmental impact. And should no replacement of Indian Point be installed, then the higher energy costs of energy for residents of New York that may arise as a result, are a socio-economic impact. Any alternative that is brought on-line in order to replace Indian Point will be a direct result of the closure and should be considered an impact of 'no action'. Even if it is redundant to repeat information contained in other sections that deal with alternatives, it is worth mentioning that 'no action' does not preclude other actions, in fact, it invites a response. This means adjudications of the impacts of 'no action' would depend on the cascade of events that follow the selection of that alternative. Even though there is no knowing what the future might bring, it seems misleading to suggest that no action has no impacts beyond those currently indicated.

The socioeconomic effects described under the "no action alternative," section 8.2, do not accurately address the negative impacts the denial of the relicensing request would have on local communities. In fact, the NRC labels the socioeconomic impacts as "small to moderate." We believe this is a misrepresentation. The impacts of the loss of 1255 full-time jobs and $21.2 million in tax payments to the towns of Cortlandt and Buchanan (8-29) are not small, and surely should not be labeled as moderate either, as these towns would be depressed by such economic losses. This point is demonstrated in numerous examples of similar Northeast communities that have become impoverished after a local factory or plant closes. Additionally, the increase in taxes households would be required to pay as a result of the shutdown of IP2 and IP3 are only addressed as having a "noticeable effect on some homeowners and business, (8-30)." This point should be clarified and it should be noted that the financial security of many households would be further harmed from their potential loss of employment from the shutdown of these plants. The income and employment losses to the towns, businesses, and individual households are far-reaching. Higher taxes would hurt local business and depress household expenditures, which would indirectly effect the business sector. Furthermore, this effect could be disastrous as businesses fold, thus again increasing taxes. None of these possibilities are addressed in the socioeconomic section, but we think they are critical in fully assessing the situation of a no action alternative.

8.3.1 Comments on Coal-Fired Generation

Under the Air Quality section of 8.3.1 Supercritical Coal-Fired Generation, it is mentioned that an alternative site would most be built in an ozone non-attainment area. The effects of NOx are taken into account, but in the entire section of air quality there is no mention of the other ozone precursor, VOCs. Despite the probable small percentage of total emissions, the role of VOCs in ozone formation is problematic and should be considered in the option of a coal-fired power plant.

Recent research indicates that of the two ozone precursors, VOCs are the more reactive

precursor, so even with low levels of VOC emissions, ozone formation could be multiplied to levels beyond original thought (Guarismo et. al 2004; Webster et al 2007; Keller et al 2008). Placing a coal-fired power plant in an already non-attainment area will not improve the air quality situation, despite the carbon offsets mentioned in the Indian Point draft.

The NRC concluded that the impact to aquatic ecology would be SMALL from Supercritical Coal-Fired Generation power alternative. However, the NRC did not take into consideration the effects coal mining would have on aquatic ecology. Discharge volume, pH, total acidity, and concentration of dissolved metals all effect aquatic ecology. When pH falls below the tolerance range, respiratory or osmoregulatory failure occurs in fish and macroinvertebrate species. Low pH can also affect fish growth and reproduction. Zinc, cadmium, and copper are toxic at extremely low levels. Precipitated iron andaluminum hydroxide decrease oxygen availability and the precipitate coats gills and body surfaces, smother eggs, and covers the stream bottom.

It is crucially important to consider the health impact of operating coal-fired power plant if we want to employ it as an alternative to nuclear power plant. First, coal-fired power plant requires coal from coal mining, which has a severe health impact on coal miners. Coal dust from mining creates hazardous health problems to coal minors. For instance, black lung disease, heart disease and respiratory diseases. The intensity can vary from minor to chronic; in extreme case, it can lead to fatal disease.

Second, dust released from coal mining can harm the health condition of the nearby communities. By inhaling the dust, people, especially children, can suffer from either acute or chronic diseases, such as kidney disease, chronic lung disease and high blood pressure.

Third, once coal is transported to the power plant from the mine, burning coal creates several health problems to the communities, which live near the power plant, by impairing the air quality. The impact can vary depending on the location that the power plant is built. For instance, the closer the power plant is built to the communities, the larger the health impact can be. People can suffer from asthma attacks, respiratory disease, heart attacks and premature death.

8.3.2 Comments on Natural Gas Fired Combined-Cycle Generation

We felt that the natural gas section was comprehensive and well composed. On the whole the document was very informative, with most areas adequately addressed. However, we would like to comment on several points that we feel, if addressed, will enhance the argument for natural gas as an option to replace nuclear power.

1. Enhancement of the Introduction section

We feel that the introduction could be a little more informative by providing information about gas supplies in the United States and in particular New York State and the viability of adding a natural gas plant into the network grid. Additionally, it is ambiguous whether

or not a closed-cycle cooling system will be used. In one sentence it says it is assumed that it would be used and in the very next sentence it is stated that it is likely a closed-cycle cooling system will be used. As we see it, a natural gas plant as an option would only be environmentally viable if a closed cycle cooling system was ensured. This needs to be clarified in the document

2. Ambiguous language

We have concerns about the conditional language used in the NGCC section as this creates a sense of ambiguity. Due to this, the NRC creates implicit assumptions that are not fully clear. For example, in many places you use the conditional terms "likely or unlikely." Where this conditional language is used we would like them to be adjusted to indicate more certainty (i.e. would or would not). Or make the assumption clear to the reader by beginning with a conditional word, such as "if." For example, you say on page 8-46 line 6; "This replacement natural gas-fired plant would likely use combined-cycle technology." We think it should read either as "If the replacement natural gas-fired plant would use combined-cycle…," or "The natural gas-fired plant would use combined-cycle…" Your statement makes it unclear whether an NGCC plant would actually be the alternative natural gas facility. In addition, even though the section title refers to an NGCC plant, the use of "gas-fired alternative" would make it unclear if the NRC is actually referring to a NGCC plant or not. If it is possible that an NGCC type plant will not be the "gas-fired alternative" then an additional section assessing the impacts of a single-fire natural gas plant is needed. Otherwise, please use the acronym "NGCC" when referring to a "gas-fired alternative." In another example of conditional language, under the NGCC ecological section beginning on page 8-48 line 25 you use conditional language (unlikely) to describe the impacts of construction. We would prefer it if this section was addressed separately from overall aquatic ecology assessment by using more direct language to describe the environmental impacts of construction that are consistent with the draft EIS's terminology of small, moderate, large. There is another example on page 8-51 line 30 with the use of "expected" when referring to health impacts. Either health impacts "will be controlled" or they "will not be controlled." We understand the use of conditional language at time is appropriate, since the NRC does not have control over Entergy or its hired contractors. Nevertheless, the use of conditional language exudes a lack of coordination between Entergy and the NRC; causes the NRC to seem presumptuous; and opens loopholes that Entergy could exploit.

3. Clarity on plant location

The draft states that the NRC staff finds it possible that a gas-fired alternative could be constructed and operated on the IP2 and IP3 site, but they need a more convincing term (as opposed to possible). How likely is it that the natural gas plant could be constructed on-site? If it is feasible to have the location on-site, what would the land impacts be? Would the environmental impacts be double what they are now? Can the NGCC plant be constructed while IP2 and IP3 are continually operating? If not, where will the energy supply come from while it takes three years to get the NGCC plant up and running? How feasible is that?

4. Land use

The draft mentions the pipeline upgrades needed for a combined-cycle alternative. What are the land and other impacts of this upgrade? What are the land impacts, specifically for the proposed mechanical-draft cooling tower?

8.3.4 Comments on Efficiency and Renewable Energy Sources

While we understand that the NRC is necessarily limited in the number of combinations of efficiency and renewable energy sources that it may assess, we feel that the two such combinations presented in section 8.3.5 are overly limited in scope and may be strengthened via the explicit incorporation of more local renewable options. For example, we feel that the renewable energy capacity in New York State at this time is not adequate to compensate for the loss of capacity that would result from shutting down both Indian Point plants. This conclusion is supported by the fact that "combination alternative 2," presented in section 8.3.5, includes the construction of massive transmission lines to bring power from upstate New York and Canada. The EIS fails to specify the source of this additional energy, which limits the ability of NRC to accurately assess the impact of the proposed combination. We propose that the EIS specifically state that this energy would come from offshore wind farms, as this would strengthen the renewable energy alternative and allow for more specific assessments of the impacts of combination alternative 2.

In addition, we feel that the emphasis on biomass, in particular wood waste, in the two combinations is somewhat counterproductive to the goal of promoting clean renewable energies. While New York is admittedly rich in wood resources, according to the EIS the burning of wood creates pollution similar to that of a coal-fired power plant. This pollution would have an unacceptable adverse effect on populations around the proposed plant, and we feel that such pollution would not be an improvement over the current nuclear energy plant at Indian Point.

Finally, the issue of location of proposed facilities is integral to production of an accurate assessment of the environmental impact of the proposed alternative combinations. While it is true that innumerable variables affect the ultimate decision of where to site a natural gas plant, wind farm, or other energy-generating facility, the draft EIS makes the misleading assertion that it is currently impossible to predict where such a facility would be sited in New York. We contend that it should be possible for the NRC to include an assessment of the environmental impact of proposed energy generation projects, many of which are already permitted but have not been constructed due to difficulties accessing credit and/or the recent downturn in demand for renewable energy. In addition, the capacity to generate energy in New York from renewable sources has increased in the three months since the publication of the draft EIS; for example, the New York Independent Systems Operator (ISO) reported in February that the state now produces over 1,000 MW of energy from wind alone, more than double the capacity at the beginning of 2008. Assessment of the land use impacts of these sites (both newly built and potential) would be significantly more helpful than the vague assertions of SMALL TO LARGE effects found in the draft EIS.

Yours Sincerely,

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