

From: [REDACTED]
To: <info@njplines.state.nj.us>
CC: [REDACTED], <ron.hutchinson@stockton.edu>, [REDACTED], <...>
Date: 12/10/2013 3:53 PM
Subject: Comments - Proposed Memorandum of Agreement between the Pinelands Commission and the New Jersey Board of Public Utilities

Pineland Commissioners

I am a resident of Ocean City, NJ living down wind of the BL England Plant in Cape May County. I served in 2008-2011 on the Ocean City Utility Advisor Commission (USB). John McPhee's book on the Pine Barrens had a great influence on my career choices related to the environment and public good principles that seem at stake here.

I recommend that the Commission and the NJ BPU hold additional hearings, and not rush ahead with a decision without significant more independent and objective technical, economic, environmental impact, electric resource planning and transmission system analysis be connected on both the proposed natural gas pipeline and the proposed 570 MW BL England repowering project. Alternatives should be considered in the assessment of public good to the proposed BL England project and associated fuel supply for meeting the electric reliability requirements of the South Jersey shore summer tourism peak demand. Extremely reliable electric power is critical to the South Jersey Shore seasonal tourism, and I believe the BL England baseload project as designed, threatens current levels of reliability. Not enough information is on the table for intelligent discussion, and significant more public discussion is needed.

Further, a collaborative (perhaps led by objective parties such as Stockton/Rowan Universities) is needed to insure that all stakeholders impacted would be fully involved and represented in the process of objectively developing and comparing alternatives that would be the greatest "win-win" for all parties including union construction jobs, environmentalists, Upper Township tax payers, environmentally impacted municipalities (emissions, pipeline risks, land/water/visual impacts, etc), electric and gas rate payers at the Jersey Shore, representatives of Jersey Shore economic that would be impacted by reliability of electric and gas service, off-shore wind developers that might be impacted by transmission line constraints, owners of the BL England property, etc.

I am an MBA and Masters of Energy Resources with 35 years of experience in the electric and natural gas industries related to electric supply. I ran a California collaborative from 1989 to 1999 to examine options for "repowering" the 20,000 MW of aging natural gas fired, steam units (similar to BL England) in California, mostly located near San Francisco, Los Angeles and San Diego load centers. The design of the steam units was to provide local reliability as needed to match intermittent hydroelectric supplies far from load centers as well as seasonal fluctuations in electric demand. The conclusion of the effort was that "flexible" gas fired gas turbines that had high simple cycle efficiency, low first costs and could be turned on and off rapidly, were preferably to insure reliability in load centers and facilitate regional wind and solar energy development and keep regional transmission line capacity available to get regional wind, solar, geothermal, hydro and biomass energy into large urban load centers.

The summer peak electric needs of the Southern NJ Shore require extremely reliable electricity for those months. This is a capacity issues (megawatts), not an energy issue (megawatt-hours) related to how much a power plant operates. The natural gas pipeline proposed is to allow BL England to be shifted from a low capacity factor (level of utilization, say <10% or 500-1000 hours per year) seasonal coal fired power plant, to a baseload plant (6000-7000 hours per year) that will operate round the clock all year long thus requiring the new pipeline capacity. If 570 MW of high efficiency simple cycle turbines were installed in the park lots or on barges at the BL England site (NE Utilities installed 400 MW of leased, mobile barge

delivered simple cycle, 40% efficient GE LM6000 gas turbines to Connecticut fossil plant site in 1990s for transmission reliability purposes to greater New York area).

1) I strongly question the POWERGEM Study, funded by RC Cape May holdings, on the percentage of electricity from BL England to serve the Pinelands region. Most of the baseload power will clearly serve electric demand outside of the Pinelands, and perhaps even outside of NJ in the overall PJM system. Historically, the BL England capacity was designed in the old Atlantic City Electric grid system to meet the summer tourism peak electric needs of huge seasonal population increase on the barrier islands of Atlantic and Cape May County. These seasonal and annual barrier island electricity and natural gas demand loads can not be considered in anyway to be "in the Pinelands"..

2) The summer season economies of the South Jersey barrier islands (such as Ocean City 10000 year round population increasing to on average greater then 100,000 population in the summer, and much largely say on 4th of July) are very seasonal and require extremely high reliability of the power, which BL England site historically provides. Most of the year, and during the summers, low cost power can be brought in from anywhere in the PJM grid. However, if the Salem nuclear has an unplanned outage or a major transmission line into NJ or to the shore region goes down, the South Jersey shore is at great economic, public safety and other risks of power outages during the peak summer tourist season. The need for peaking low efficiency capacity (not energy) or "flexible" high efficiency simple cycle gas turbine projects at that location, that would not require a new natural gas pipeline to be build, and could be operated for extended periods of time by natural gas from existing pipelines, gas storage build onsite or distillate jet fuel (or store-able bio-fuels).

The General Electric LMS100 100 MW gas turbine with >46% efficiency might be an even more attractive choice. The high simple cycle efficiency would allow more hours of operation on a finite natural gas or stored fuel supply when the back-up power is most needed.

3) The environmental benefits of the proposed BL England projects are highly questionable. First, although natural gas produces much less CO2 and other emissions then coal per hour, this is overwhelming negated both by use of "fracked gas" and by the power plant operating on the order of 5-10 times the number of hours per year. Second, the BL England project as proposed commitments the region to perhaps another 50 years to the existing plant profile, and land and wetland/water, environmental impacts at that site. Modern simple cycle gas turbines require little water during 10% capacity factor levels of operation, and require only a fraction of the land currently dedicated to the power plant site. They could even be barge mounted and tied into the substation on a seasonal basis, perhaps serving Florida winter peak electrical needs. Large amounts of sensitive wet lands could be restored, used for recreational purposes as well as other land at the site used for solar/wind development and/or real estate development of high value.

4) The BL England baseload design would also tie up significant electric transmission line capacity during the non-peak summer periods that would make it difficult for future offshore wind developers, to transmit their power into the overall PJM system without significant new transmission line investment, making future off shore wind even more expensive. The BL England design is also not a good match to load follow or back up the intermittent off shore wind in the more distant future when natural gas is more expensive. Simple cycle gas turbines with quick start times that do not require a new gas pipeline, are ideal for back up wind and solar energy.

5) Wind and solar clearly do not match up with the electric reliability needs of the South Jersey Shore

seasonal tourism requirements, although they could be co-developed with simple cycle gas turbine requirement (small land footprint) site enhancing the value of the overall project. Liquid and gaseous biofuels brought in by rail coal could help South Jersey farmers in rural parts of Cape May, Atlantic and Cumberland Counties and would be a good match with a 10-30% capacity factor simple cycle gas turbines (e.g., GE LM6000 40 MW or GE LMS100 100 MW turbines).

6) Job and economic development wise, peaking or flexible low capacity factor simple cycle gas turbines at the BL England site would also create jobs and have same amount of tax ratables for Upper Township, as would codevelopment of solar and wind. Removal of the old plant completely and restoration of the site, should be factors in and would also create alot of jobs, and create major environmental benefits beyond lowering emissions, including wetland restoration, recreational uses, little cooling water needs, and eliminate a regional eye sore for Cape May County tourism. Real estate freed up by smaller project footprint of such gas turbines could also be useful for real estate development or marina's that would further increase tax ratables for Upper Township and Cape May County. But reliable electricity of peaking and flexible mid-merit options biggest economic and job benefits is to the South Jersey shore tourism economy and very short window during peak summer air conditioning electric demand.

Lastly, in the electric industry, it was long established that the old Nuclear Regulatory Commission could not both regulate and promote nuclear power and these Federal functions were split up in the 1970's. Similarly, the NJ Board of Public Utilities should not both regulate public utilities and promote/advocate particularly electric and natural gas supply solutions and economic development, which South Jersey Gas and Rockland Capital should be doing in this instance.

There does not appear to be any overwhelming clear public benefit or crisis to justify rushing the Pineland Commission to a decision, and on principle should at a minimum allow more hearings to consider both the specific pipeline issues, as well as the merit of the overall BL England project as proposed.

George Hay
[redacted] East Atlantic Biv
Ocean City, NJ 08226
[redacted]