**MEMORANDUM**

DATE: September 16, 2014

TO: Carbon Power Plan for Existing Power Plants; Docket Id: OAR–2013-0602

FROM: Gavin Lau, EPA Region 2/CASD-APB

SUBJECT: July 16, 2014 Meeting Regarding Proposed Carbon Power Plan for Existing Power Plants

**SUMMARY**

A meeting was held between EPA and the attendees listed below on July 16, 2014 to discuss the proposed Carbon Power Plan for Existing Power Plants. The Carbon Power Plan for Existing Power Plants was proposed on June 2, 2014.

**ATTENDEES**

**New Jersey Department of Environmental Protection:**

Mr. William O’Sullivan, Director, Division of Air Quality

Mr. Robert Marshall, Assistant Commissioner, Sustainability and Green Energy

Mr. Kenneth Frank

Ms. Sarah Gentile

Mr. John Gorgol

Mr. Michael Hogan

Mr. Steven Jenks

**New Jersey Board of Public Utilities:**

Ms. Anne Marie McShea

Mr. Michael Winka

Questions Submitted for July 16, 2014 call

**Attachment 1**

NJ question/discussion topics regarding Clean Power Plan Proposal.

Set #1

From Email WOS-NJDEP to John F. –EPA 6/5 7:53 PM

Questions

* How is performance determined with the numerical emission goals set for 2020 and 2030?
* The logical compliance determination method is to sum up all the CO2 emitted from all the power plants in a state in a year and then divide by the sum of all the MWhrs of electricity produced in that state in the same year. Is there a different formula in the proposal?
* Are there any adjustments to this basic equation to determine performance, and if so, where in EPA proposal documents can this be found?
* One logical adjustment is to give a state credit for renewables funded in another state. Does the proposal address that circumstance?
* For a nuclear power plant that is scheduled to shut down before 2020, because of adverse environmental impacts, does EPA assume continued operation in 2020 and 2030, in setting a state’s goals? If so, why?
* For states with few coal EGUs and much combined cycle gas EGUs does EPA’s goal setting procedure assume there will be no coal use in 2020 or 2030, if the coal provided electricity can be provided by the combined cycle gas units? Might this result in some states having no coal and all the coal use further concentrating in the states with the most coal use now?
* For coal units, did EPA determine which units already have been rebuilt and/or modified to improve efficiency? Or was the 6% efficiency improvement assumption made for all coal units, regardless of age and current efficiency?
* Why do states that have already reduced GHG emissions substantially have greater % reduction goals than states that have made little progress?
* If State 1 installed 20% renewables before 2012, does this generate credits to meet the performance goal? If state 2, with no renewables today, installs 20% renewables after 2012, does this generate credit towards the goal? If the amount of credits are different, why?
* Is NJ limited to the facilities that EPA used to derive NJ’s proposed goal in calculating whether goals are met?

Set #2

From Email WOS-NJDEP to John F. –EPA 6/12 2:05 PM

John - I missed some of the EPA calls to answer questions, so don’t know which of these have been answered already. Any specific feedback on these? [This question references set #1 questions above, actual question next paragraph-GL]

I did get an opportunity to ask a question on the ECOS call last week, which Joe G answered. My question was whether a state can include other EGU’s in the calculation of whether the goal is met, or whether we were limited to the 21 facilities in NJ that EPA used to derive the NJ proposed goal. Joe explained that other EGUs can and should be included in the compliance determination. That is what I expected, but I’m still unclear as to whether EPA expects to limit what units a state can include in the compliance calculation. I believe that the proposed rule text enables states to have the flexibility to include all their EGUs, for both CO2 emissions and MWhrs, in determining conformity with the goal, but the preamble language is unclear in this regard. I’d like clarification that states can include all it’s EGUs, and are not limited to including only certain EGUs in the numerator and denominator, when calculating lb CO2/MWhr. (My thought is EPA should encourage this, for various reasons, and need to know whether EPA’s intent is different, so we can determine if this is an area we should focus on in our comments.)

Set #3

From Email WOS-NJDEP to John F. –EPA 6/18 4:21 PM

AA Janet said EPA staff could sit down with each state and review in detail how their goals were derived.   We would like to do that for NJ, perhaps in mid-July.  We understand in general the intent of the building blocks and goal calculation.  We want to review the technical detail for each EGU included.   Also, we want to discuss the consequences of at least the following EPA assumptions in calculating NJ goal.  We will refine, correct and supplement this list as we learn more.   Please let me know when would be good for meeting with EPA experts.

1.     Assumption - Nucs can be uprated after 2012

Start of discussion - NJ nucs (except Oyster Creek) were uprated about 2008.   This is a baseline issue.  EPA’s stated flexibility to use 2005 as baseline where justified might address.

2.       Assumption - Oyster Creek is an at risk nuc, which can have its shutdown date extended.

Start of Discussion - Oyster Creek in NJ is the oldest nuclear plant in the nation.   There is a consent decree to shut down in 2019, because of thermal impacts on Barnegat Bay.  Consequently, the NJ goal should be adjusted to delete a presumed lifecycle extension for this nuc.

3.      Assumption - All coal and oil use in NJ can be replaced by increased use of natural gas.

Start of Discussion - Does the NJ goal actually assume this?  Is there a minimum percentage of coal capacity that the EPA building block does not convert to CC gas?     Does conversion of coal and oil to CC gas consider annual or daily capacity needs?  Annual capacity calculations miss daily needs.  For example, oil and coal units are needed during the cold winter days, to keep the lights on when gas is being used to heat homes.   Also, 4 coal plants have billions in modern air pollution control and already meet MAT and NOx RACT.    These are the type of coal units which should continue to operate for their useful life, not units without good NOx control.   Coal use at 2 small NJ plants did cease in 2010, because of NJ’s criteria pollutant requirements.   A change in baseline date would provide credit for these.

4.      Assumption – All coal units can achieve a 6% increase in heat rate.

Start of Discussion -   4 NJ coal fired power plants (6 units) are relatively new or rebuilt.  For these 6 units have they already undergone energy efficiency improvement?   Is there any further ee improvement reasonably feasible?  Can the NJ goal be adjusted to reflect the actual ee feasible, rather than the assumed 6% improvement in heat rate?

5.      Assumption - A significant amount of existing gas fired “affected units” in NJ can be replaced with nuclear, energy efficiency or RE?

Start of Discussion - Given the difficulties of 1, 2, 3, and 4; the NJ goal if not adjusted might this result in the shutdown of some existing combined cycle units in NJ.   Can the goal not include combined cycle units, especially those that meet 111(b).  Our NOx rules will result in the shutdown of about 3700 MW of gas and oil peakers in 2015, which are not “affected units”.  How can we get credit for the CO2 reductions?  (not large because these are peakers)

6.       Comparison – NJ with Kentucky.  Does Kentucky get credit for new CC gas and NJ does not?   Are the surviving Kentucky coal plants less efficient than the at risk, and probably better controlled for criteria pollutants, NJ coal plants?

Set #4

From Email B. Marshall-NJ to G. Lau-EPA 7/14 5:46 PM

Please explain the mutual benefits or disadvantages that might be realized if a multi-state approach were taken by NJ and select states within the PJM region.  For example, what specific advantages and disadvantages might be realized for NJ, Pennsylvania, Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, North Carolina, Ohio, Tennessee, Virginia, West Virginia and the District of Columbia to have a common plan for the entire PJM electric grid?