**MEMORANDUM**

DATE: September 18, 2014

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

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

SUBJECT: September 4, 2014 Meeting Regarding Proposed Carbon Power Plan for Existing Power Plants

**SUMMARY**

A meeting was held between EPA and the attendees listed below on September 4, 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 York Independent System Operator:**

Mr. Peter Carney

Mr. Benjamin Cohen

Ms. Mollie Lampi

Mr. Cuong Nyugen

Questions Submitted for September 4, 2014 call

1. **Does the proposed rule allow NY to include existing hydro generators as affected entities in the state plan and therefore be included in the calculation used to meet the state goals?**
2. EPA uses nameplate capacity to compute the capacity factor which in the case of the NY NGCC fleet underestimates the capacity factor used by NYISO based on the summer and winter Demonstrated Maximum Net Capability (DMNC) values by at least 15%. **Is it possible to accept this different definition for computing capacity factor, basing it on DMNC instead of nameplate?**
3. Under the NGCC redispatch building block the generation from OGST would decrease from 12,503 GWh to 83 GWh by 2020 and beyond. This value is concerning from a reliability standpoint given historic and future projections and constraints of generation and capacity makeup in downstate NY. For example, during Q1 of 2014 about 3,000 GWh was produced from oil firing at OGST generators to meet increased demand during the cold late winter experienced throughout much of the Northeast. If this increased generation offsets assumed NGCC generation we would need an additional 4,250 GWh of zero emissions generation to offset the increased oil burn using the equation in the goal computation TSD. **Will the EPA consider some consolation for reliability concerns such as this in the goal computation procedure?**
4. NY has made significant strides in emission reductions, particularly since 2005, and also since 2009 under RGGI (of which NY comprises approximately 1/3 of the 9 state market), by taking 2012 as a baseline year NY is precluded from getting credit as an early adopter of lower carbon policies and programs. **Has the EPA considered including reductions from early adoption activities and how would these be added to the current calculation?**
5. The proposed rule discusses different ways to account for interstate transport of electricity and accounting of the associated emissions, however does not address the international import or export with our neighboring countries. **NY imports power from Canada, much of it hydropower; however it is not clear how we should account for imported power in the state plan and to meet our goal?**
6. A portion of the power that flows through NY is not ultimately consumed in NY, but generally there will be a measureable difference between wheeled imports and exports due to in-state transmission losses, which would show up as a net consumption charged to NY. **How would transmission losses from wheeled power be handled under the proposal and would we need to discuss ways to account for the associated emissions?**
7. Our internal modeling shows vastly different zonal generation projections for upstate and downstate when compared to the output from the IPM modeling done by EPA. EPA overestimates generation (nearly by a factor of two) in zone J and K compared to our internal models and underestimates generation particularly in zone C&E and F. This difference, averaging nearly 20,000 GWh/yr from 2016-2030, highlights the need for a better representation of NYCA in EPAs model to more accurately reflect resource and transmission constraints moving forward. It appears this difference stems from the difficulty in dynamic limit modeling of the most constrained interfaces in central east and upstate downstate, which are not captured in the IPM model. **Can you discuss how these interfaces are modeled and what type of revisions would be possible?**
8. EPA has projected the national fleet wide average of nuclear plants which are “at-risk” of retirement and imposing on each state with nuclear capacity in 2012 a 5.8% requirement. It is not clear which of the NY nuclear units would be operated differently to make up (or maintain) the associated zero emission generation of 2,411 GWh. At present it is unclear to the NYISO how this applies to NYs nuclear fleet or if it would need to be offset by additional RE generation. **Would this require specific nuclear units to be considered an affected entity in the state plan?**
9. **If nuclear plants were to close, would this action add a significant generation requirement to make up for the loss of energy through additional zero emission generation?**
10. Using 2012 as a baseline year raises several issues for NY. First, at the end of 2012 Superstorm Sandy had significant impact on electrical grid operations in the demand centers of NY for a relatively extended period of time. The NYISO has estimated that an approximate 500 GWh of energy and 7.5 GW of capacity was impacted in 2012 alone. **Is there openness to accepting other timeframes as a baseline if anomalous events make the data uncharacteristic of past performance?**
11. The large zero emission generation associated with existing hydro should be included in the state goal setting. **Is this something that the EPA has discussed and how would it be accounted for in the goal setting procedure if acceptable?**
12. **How would emission and generation at units that were offline during a portion of 2012 and return after a repowering or fuel conversion project count towards the state goals?**
13. For states with final rate goals below the value of the nominal emission rate of NGCC plants (934 lbs/MWh in NY), increased dependence on NGCC units will not ultimately achieve emission rate reductions that would allow compliance under the proposed rule. How can we reconcile then increasing dependence on NGCC for states with goals below their emission rate?
14. In the proposed definition of affected units, Section 60.5795 we seek several clarifications;
	1. Is the base load rating of 250MMBtu/hr criterion in (b)(1) and (2) both on a heat input of the fuel basis? This is explicit in (b)(1) but perhaps unclear in (b)(2). What is meant by “base load rating”?
	2. Is it the case that stationary combustion turbines that have greater than 10% heat input by fossil fuel but less than 90% from natural gas would not be considered affected units under the proposed rule based on the wording of (b)(2)? Was this the intent of the EPA when drafting the proposed rule?
	3. What is the definition of “utility distribution system” as used in (b)(1) and (2)?
15. For net importing states only fractional credit is given to EE measures resulting in demand destruction in the state based on the percent of instate generation compared to sales. On the other hand net exporting states do not receive credit for these EE reductions either. What happens to the credit for this reduced demand in net importing states?
16. How would a newly constructed NGCC plant’s emissions count towards the state goal?
17. IPM modeling done by EPA
	1. General
		1. Did this study do any historical benchmark to tune the model before doing forecast? If so what year was it benchmarked against?
		2. What is the source for the load forecast?
		3. What is the source for the emission and fuel forecasts?
	2. Transmissions constraints
		1. Details on each of the transmission paths in Table 3-4 of the IPM Base Case Documentation, i.e. what individual transmission lines are in each of the path “From” to “To”
		2. What is the source for these path limits?
		3. Are the values in this table normal transfer limits or emergency transfer limits, and in what year?
		4. Is the IPM model reflecting transmission build-out in each of the regions in the forecast? If so what are the inclusion rules?
	3. Generation
		1. To what level of details (e.g. heat rate, emission rate, outage rate, unit capacity) does the IPM model the generators? Does it do both security constraint unit commitment and economic dispatch?
		2. Is it a full year 8760 hourly chronological model or typical month/week/day model?
		3. How does the IPM model energy sources like hydro, pumped storage, wind, and solar?
		4. What are the criteria for generation build-out to maintain reliability in the bulk system in the forecast period? if so what are the inclusion rules?

8-15-2012: I am looking for some information to help compute the demand-side energy efficiency building block. On Page 5-40 of the Greenhouse Gas Abatement TSD you show an example calculation for South Carolina, which has a 1.1% annual growth rate (for SERC). I have tried to reproduce this number from the AEO 2013 data but have been unsuccessful. Could you please provide me with the regional growth rates for all the regions or explain how you were able to obtain 1.1% annual Growth rate for SERC.

8-18-2012: You mentioned in Section 2 of the Goal Computation TSD that EPA had considered averaging fossil fuel generation and emission rates over other baseline periods, namely 2009-2012, but found that there was little difference among these baseline years due to the rate-based nature of the goal. Could you provide the data to back up this finding; the emission and generation data used for 2009-2012.

8-19-2012: I am trying to look at different baseline year calculations using available eGRID data from 2010 however am lacking unit level data for eGRID from 2012 that the EPA used to compute the historic generation and emissions at the unit level from affected units. Would it be possible to share the 2012 eGRID data set used to compute the baseline values for 2012 so that I can compare my methods to those used by the EPA?