

## STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



February 3, 2011

EPA Docket Center EPA West (Air Docket)

Attn: Docket ID No. EPA-HQ-OAR-2009-0491

U.S. Environmental Protection Agency

Mail Code: 2822T

1200 Pennsylvania Avenue, N. W.

Washington, DC 20460

Re: Connecticut Department of Environmental Protection Comments on Notice of Data Availability for Federal Implementation Plans To Reduce Interstate Transport of Fine Particulate Matter and Ozone

Dear Docket Administrator:

The Connecticut Department of Environmental Protection (CTDEP) appreciates the opportunity to comment on the "Notice of Data Availability for Federal Implementation Plans To Reduce Interstate Transport of Fine Particulate Matter and Ozone: Request for Comment on Alternative Allocations, Calculation of Assurance Provision Allowance Surrender Requirements, New-Unit Allocations in Indian Country, and Allocations by States" (76 FR 1109, January 7, 2011), hereafter referred to as the "3rd NODA." CTDEP is pleased that 1) the Environmental Protection Agency (EPA) proposed alternative allocation methodologies that more accurately represent unit operations and 2) that EPA proposed that states have the option of submitting State Implementation Plans (SIPs) for state allocation of allowances in the Transport Rule trading programs. CTDEP has four general comments as well as three Connecticut-specific comments on the 3<sup>rd</sup> NODA.

### **General Comments**

#### Alternative allocation methodologies: Option 1 vs. Option 2

At 76 FR 1116, EPA asks if the alternative allocation methodologies are clear and easy to understand. CTDEP agrees that Option 1 of the alternative heat input allocation methodologies is clear and easy to understand, but does not agree that Option 2 of the alternative heat input allocation methodologies is clear and easy to understand. Option 2 is cumbersome and does not necessarily result in significant differences in allocations compared with Option 1, at least in Connecticut. Among the three options EPA provides – the proposed Transport Rule allocation methodology and Options 1 and 2 in the 3<sup>rd</sup> NODA - CTDEP recommends that EPA choose Option 1 in the 3<sup>rd</sup> NODA for its ease of understanding and decreased emphasis on high allocations to high emission rate units.

Although EPA did not open the question of allocation methods more broadly, CTDEP feels obligated to suggest that an energy output-based allocation is preferable because it would reward more efficient units and support a more efficient electric generation system overall.

Transport Rule 3<sup>rd</sup> NODA comments Docket ID No. EPA-HQ-OAR-2009-0491 February 3, 2011

Provisions for states to submit SIPs or abbreviated SIPs providing for state allocation of allowances CTDEP supports EPA's provisions for states to submit SIPs or abbreviated SIPs providing for State allocation of allowances in the proposed Transport Rule trading programs. CTDEP agrees with the concept of providing the opportunity for states to allocate allowances in order to address state-specific needs or policies.

## Allocation methodologies and goals of Clean Air Act (CAA) section 110(a)(2)(D)(i)(I) At 76 FR 1114 EPA claims:

"Regardless of the allocation methodology used, all emissions in each covered state that significantly contribute to nonattainment or interfere with maintenance in another state will be prohibited. In sum, the allocation methodology has no impact on the rule's ability to satisfy the statutory mandate of CAA section 110(a)(2)(D)(i)(I) to eliminate significant contribution and interference with maintenance in downwind states."

EPA's claim is not entirely supported in all circumstances. For example, a geographically large state, such as New York, is upwind of Connecticut, a much smaller state that is most impacted by emissions from the greater New York City metropolitan area on high ozone days due to wind direction and other factors. Two different allocation methodologies could result in large differences in emissions from the sources in the upwind corner of the larger state, with corresponding differences in impacts on the smaller state – potentially "not eliminating significant contribution". This is especially the case for sources located near state borders. EPA should ensure that any allocation methods chosen by states don't result in unintended consequences with respect to CAA section 110(a)(2)(D)(i)(I).

### Allocations to New Covered Units in Indian Country in the Future

At 76 FR 1118, EPA states that presently there are no covered sources located in Indian country in the region covered by the proposed Transport Rule. At 76 FR 1119, EPA suggests that the owner or operator of units in Indian country in the proposed Transport Rule region could request allocations from the EPA-administered new unit set-aside by a specified deadline each year. EPA requests comment on all aspects of how allowances for covered units locating on tribal lands should be allocated.

Any provisions to accommodate units locating in Indian country in the proposed Transport Rule region in the future should not be detrimental to state programs, especially where there are limited state budgets. Removing allowances from new unit set-asides removes allowances available for newer, cleaner units in individual states.

#### Connecticut specific comments

In Attachment B of CTDEP's September 30, 2010 comments on the proposed Transport Rule (see Appendix 1 to this letter), CTDEP requested the following:

 That Norwich be removed from the Transport Rule Allocation Table as the unit has a nameplate capacity less than 25 MWe and therefore does not meet EPA's proposed Transport Rule applicability criteria. Transport Rule 3<sup>rd</sup> NODA comments Docket ID No. EPA-HQ-OAR-2009-0491 February 3, 2011

- That the qualification requirement date for solid waste incineration units be changed to a more recent year, such as 2002. If EPA changes the qualification requirement date and if Exeter Energy (Exeter) is determined to combust "solid waste," it is CTDEP's understanding that Exeter would be considered a solid waste incineration unit and would not be subject to the Transport Rule.
- That the Pratt & Whitney cogeneration unit be removed from the Transport Rule Allocation Table as the annual data since 2003 show that Pratt & Whitney has consistently sold energy in amounts less than the 219,000 MWh cogeneration exemption threshold.

CTDEP again requests EPA to take action to remove Norwich and Pratt & Whitney from the existing unit list and to remove Exeter from the existing unit list if EPA changes the qualification requirement date for solid waste incineration units and if Exeter is determined to combust "solid waste".

In furtherance of future rules developed on a sound technical base, CTDEP appreciates the opportunity to comment on the 3<sup>rd</sup> NODA. If you have any questions regarding this letter, please do not hesitate to contact Wendy Jacobs of my staff at 860-424-3457.

Very truly yours,

Gary S. Rose, Director

Engineering & Enforcement Bureau of Air Management

Appendix 1 Attachment B of CTDEP's September 30, 2010 Transport Rule comments

### **APPENDIX 1**

Attachment B of CTDEP's September 30, 2010 Transport Rule Comments

### Attachment B: CTDEP source-specific comments on the Transport Rule FIPs

- Non-applicable Units. The proposed Transport Rule FIPs apply to stationary, fossil-fuel-fired boilers or stationary, fossil-fuel-fired combustion turbines serving at any time, since the later of November 15, 1990 or the start-up of the unit's combustion device, a generator with nameplate capacity of more than 25 MWe producing electricity for sale. Yet in EPA's proposed Transport Rule FIPs Allocation Table, EPA has included several Connecticut sources that are less than 25 MWe: Cos Cob 13, Cos Cob 14, Norwich, Waterside Power, LLC and CMEEC. These sources do not meet EPA's proposed applicability criteria and must be removed from the proposed Transport Rule FIPs Allocation Table and their ozone season NOx allocations should be redistributed to the remaining sources.
- <u>Missing Units.</u> The proposed Transport Rule FIPs Allocation Table does not include several units that started operating in 2010 (GenConn Devon 15-18) or that are scheduled to start operating in 2011 (GenConn Middletown 11-14). EPA needs to add the missing units to the proposed Transport Rule FIPs Allocation Table and allocate additional allowances accordingly.
- Exeter Energy. Exeter Energy Limited Partnership (Exeter) is a waste tire incineration facility. In the past, Exeter was not included as an applicable source in the Acid Rain and NOx Budget Programs. However, Exeter was included as an applicable source in the Clean Air Interstate Rule (CAIR) NOx Ozone Season Trading Program and is the only source of its kind, to our knowledge, that is subject to the Transport Rule.

EPA recently issued a CAIR applicability determination in response to a request from Exeter. In the CAIR applicability determination, EPA indicates that "...if the boilers at the Exeter facility are determined to combust "solid waste" as defined pursuant to the ongoing EPA rulemaking proceeding to identify which non-hazardous secondary materials are solid wastes when combusted in a unit, the boilers will not be CAIR NOx Ozone Season units." However, since Exeter was a qualifying small power production facility until March 30, 2001, it would not qualify for the solid waste incineration unit exemption under the proposed Transport Rule.

In the proposed Transport Rule FIPs, EPA requested comment on whether the qualification requirement for solid waste incineration units should be restricted to more recent years by imposing the qualification requirement every year starting the later of a date (e.g., January 1) of a more recent year (e.g., 2000, 2005, or 2009) or the date on which the unit first produces electricity. It is CTDEP's understanding that if the qualification requirement date is changed to a date later than March 30, 2001, and if the Exeter boilers are determined to combust "solid waste", then Exeter would be considered a solid waste incineration unit and would not be subject to the Transport Rule FIPs. CTDEP requests that the qualification requirement date for solid waste incineration units be changed to a more recent year, such as 2002. Although Exeter is currently included in CTDEP's CAIR SIP, removing Exeter from the CAIR SIP eliminates unnecessary administrative costs with no added environmental benefit since Exeter is also subject to enforceable standards (equivalent to the NOx Budget Program) set forth in CTDEP's Municipal Waste Combustor regulation (Regulations of Connecticut State Agencies section 22a-174-38) since 1999 and in a New Source Review permit with the following controls: thermal de-NO<sub>x</sub> system with injected urea, electrostatic precipitator, wet lime scrubber, and

fabric filter. If the qualification requirement date for solid waste incineration units is not changed and Exeter is subject to the Transport Rule FIPs, EPA must allocate to Exeter annual NOx allowances and SO2 allowances, as well as ozone season NOx allowances (see Table B-2 for data and Attachment D for the 2009 emission statement).

- Montville Power Unit 5. Montville Power LLC Unit 5 has recently been permitted to convert to a biomass unit. The permit also allows the unit to fire natural gas and distillate oil to not exceed a 7% annual capacity factor at maximum rated capacity for all modes of operation. Furthermore, in order to be considered a renewable energy source in Connecticut, this unit must fire sustainable biomass as its fuel and meet an average NOx emission rate of equal to or less than 0.075 lbs/MMBtu heat input. The unit is not defined as a cogeneration unit under the proposed Transport Rule, so it does not appear that energy input from biomass fuel can be excluded when calculating allocations. Under CAIR, cogeneration units can exclude energy input from biomass making it more likely that units co-firing biomass will be able to meet the efficiency standard and qualify for a cogeneration unit exemption. As the proposed Transport Rule is intended to only address fossil-fuel fired EGUs, CTDEP recommends that EPA include provisions in the Transport Rule to address biomass-fired EGUs similar to that in CAIR.
- Kleen Energy. EPA's proposed Transport Rule FIPs Allocation Table includes NOx allocations for Kleen Energy. It is unknown when the Kleen Energy units will be operational, but they will not likely be operational until at least mid-2011. If the Kleen Energy units are not operational before January 1, 2012, EPA should allocate NOx allowances to Kleen Energy from Connecticut's new unit set-aside rather than from the main budget.
- Pratt & Whitney Cogeneration Unit. The Pratt & Whitney cogeneration unit was upgraded to 32 MW in 2002. The cogeneration unit provides a portion of the electrical power required by the facility and also provides steam for process and building heating and cooling. If at any time the cogeneration unit creates more power than the facility is using at the moment, the difference is sold to the grid. The annual data since 2003 show that Pratt & Whitney has consistently sold below the 219,000 MWh cogeneration exemption threshold:

Table B-1 Power sold to the grid by Pratt & Whitney

Year	2003	2004	2005	2006	2007	2008	2009
MWh	8,962	1,948	848	8,987	13,462	7,112	16,363

Pratt & Whitney's cogeneration unit should be removed from the proposed Transport Rule FIPs Allocation Table and their annual and ozone season NOx allocations be redistributed to the remaining sources in Connecticut.

• South Meadows and Exeter Energy allocations. Several of the units in EPA's proposed Transport Rule FIPs Allocation Table received NOx ozone season allocations but did not receive NOx annual allocations (South Meadow Station, Exeter). If the Transport Rule FIPs do apply to Exeter, the facility operates year-round rather than just during the ozone season and should also receive SO<sub>2</sub> allowances. The following table provides annual NOx 2009 emission statement data reported to CTDEP, 2009 NOx ozone season data reported to CAMD, and 2009 SO<sub>2</sub> emission statement data reported to CTDEP (see Attachment D):

Table B-2 Annual and ozone season NOx data for South Meadows and Exeter Energy

Unit	2009 annual NOx tons	2009 ozone season	2009 SO2 tons -
	<ul> <li>emission statement</li> </ul>	NOx tons - CAMD	emission
			statement
So. Meadow 11A	1.3	0.4	0.08
So. Meadow 11B	1.3	0.3	0.08
So. Meadow 12A	1.3	0.4	0.09
So. Meadow 12B	1.2	0.4	0.09
So. Meadow 13A	1.5	0.4	0.09
So. Meadow 13B	1.4	0.4	0.09
So. Meadow 14A	1.2	0.4	0.08
So. Meadow 14B	1.1	0.3	0.08
Exeter Unit 1	39.4	21.2	37.4
Exeter Unit 2	42.3	21.4	41

EPA needs to correct the NOx allocations to cover both ozone seasonal and annual operational needs as well as the SO2 allocations in the final rule.

• Algonquin Windsor Locks allocations. The proposed Transport Rule FIPs Allocation Table lists 3 tons of annual and 3 tons of ozone season NOx allocations for Algonquin Windsor Locks. The 2007-2009 NOx emissions and heat input for Algonquin Windsor Locks from the CAMD database are as follows:

Table B-3 CAMD NOx and heat input data for Algonquin Windsor Locks

Year	Ozone Season NOx Emissions (tons)	Ozone Season Heat Input (MMBtu)	Annual NOx Emissions (tons)	Annual Heat Input (MMBtu)
2007	106.6	1,558,755	264.9	3,793,565
2008	107.8	1,550,997	265.9	3,802,900
2009	105.6	1,531,598	259.1	3,723,099

The 2012 Integrated Planning Model (IPM) operational projection for this source is invalid. The source is a cogeneration plant and operates to provide steam for the facility. EPA's IPM-based allocation is incorrect and CTDEP requests that EPA review the data and make adjustments.

• AES Thames allocations. AES Thames was allocated 847 SO<sub>2</sub> allowances in 2012 based on IPM projections because AES Thames does not have reported SO<sub>2</sub> data in the Clean Air Markets Division data system. However, AES Thames reported 2298 tons of SO<sub>2</sub> emissions in 2009. The AES Thames units are permitted with flue gas desulfurization accomplished by in-bed injection of limestone into the boilers for a minimum 75% SOx control efficiency. AES Thames operates under a long-term power purchase agreement that contractually obligates them to deliver their electrical output under a fixed price through 2015. IPM projection data for AES Thames are inaccurate and actual emissions data should be used in determining SO<sub>2</sub> allocations (see AES Thames emissions statement submitted to CTDEP in Attachment D).

- <u>LFB allocations.</u> IPM appears to project that Connecticut's 9 LFBs (see Table A-4) shut down in 2012 and the LFBs were not allocated any NOx allowances. However, the LFBs were allocated 634 SO<sub>2</sub> allowances in 2012. The IRP model (see Attachment C) projects that 4 of the LFBs will shut down in 2013 and an additional 2 LFBs will shut down in 2016. **CTDEP requests that EPA** utilize the IRP model and revise NOx and SO<sub>2</sub> allocations accordingly since IPM is a regional model without the benefit of full understanding of the Connecticut system constraints. If EPA does not take the IRP model into consideration, CTDEP requests that the NOx and SO<sub>2</sub> allowance methodology be consistent for the LFBs such that if no NOx allowances are allocated, no SO<sub>2</sub> allowances are allocated.
- <u>Bridgeport Energy allocations.</u> The proposed Transport Rule FIPs Allocation Table lists 3 units at
  Bridgeport Energy Project: GEN1, GEN2 and STG (steam turbine generator). However, there
  are only 2 units listed in the Clean Air Markets Division database. CTDEP requests that STG be
  removed from the proposed Transport Rule FIPs Allocation Table and its NOx allocations be
  redistributed to GEN1 and GEN2.
- Inconsistency between Connecticut budgets and EPA's Allocation Table. The total SO<sub>2</sub> and NOx allocations for Connecticut from EPA's Allocation Table, after subtracting new unit set-asides, do not match the Connecticut budgets in the proposed Transport Rule FIPs. There is a 1 ton difference between the 2012 and 2014 SO<sub>2</sub> allocations and Connecticut budget, a 3 ton difference between the annual NOx allocations and Connecticut budget, and a 2 ton difference between the ozone season NOx allocations and Connecticut budget. CTDEP requests that EPA's Allocation Table and Transport Rule FIPs budgets be aligned so that the numbers match.