

NESCAUM Stationary Sources & Permits Committee Meeting and Training

April 2–3, 2014

Hotel Northampton

36 King Street | Northampton | Massachusetts

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The NESCAUM Stationary Sources and Permits Committee met in Northampton, Massachusetts from Wednesday April 2 through Thursday April 3, 2014 to discuss issues relevant to air permitting in the northeast region. Representatives from all eight NESCAUM states and from EPA Region 1 attended the meeting. In addition, off site trainings were provided by personnel at Chicopee Electric Light, Waste Management, Ameresco, and ISO-New England.

This document is a summary of the topics discussed. For further information, please contact the meeting coordinator, Leiran Biton at NESCAUM.

Meeting attendees:

- Patrick Bird, EPA Region 1
- Leiran Biton, NESCAUM
- Donald Dahl, EPA Region 1
- Doug Elliott, VT DEC
- Jane Gilbert, ME DEP
- Ruth Gold, RI DEM
- Eric Kennedy, ME DEP
- Christopher LaLone, NYS DEC
- Gary Milbury, NH DES
- Todd Moore, NH DES
- David Owen, NJ DEP
- Marc Simpson, MassDEP
- Kiernan Wholean, CT DEEP
- Marc Wolman, MassDEP

Wednesday, April 2, 2014

The meeting began at 10:00 a.m. with opening remarks and introductions.

Proposed Carbon Pollution Standard for New Power Plants: Developments and Implications for the Region *(Shutsu Wong, EPA Region 1)*

Ms. Wong presented information on the EPA's proposed new source GHG standard for new natural gas and fossil fuel power plants. See her slides. Items raised during the discussion of her presentation were:

- EPA is seeking feedback on how to address the applicability of the Tailoring Rule in cases where the NSPS applies.

- The biomass exemption applies to actual fuel use, not permitted fuel use.
- Fuel oil turbines are exempt from the standards because EPA was concerned with reliability. [FR announcement, 1446 footnote 83]

EPA Region Updates; EPA Rules Updates (*Donald Dahl, EPA Region 1*)

Donald Dahl (EPA Region 1) presented an update on upcoming rules and actions at the federal level. EPA is working on new significant impact levels (SILs), which may be more like 400 tons than 40 tons for addressing secondary PM formation. EPA is also working on electronic notification rules, and an oil and gas extraction rule. Finally, EPA is working on general permits to provide the permitting authority to allow case specific requirements for modeling under minor NSR programs.

Black Starts (*States, moderated by NESCAUM*)

States engaged in a discussion with EPA about black start capabilities sought by ISO-New England at power plants in the region. Donald Dahl prompted states with discussion questions and states provided feedback on elements of the program that were desirable and other elements that presented challenges.

It was the understanding of the group that most changes sought by ISO-New England would not require changes to the actual emission devices but only at the switch yard (not part of the emission facility). The question of whether a black start represented a distinct change in operation type was raised, and several of those attending felt that it was not a change in operation. Whether an additional test would be needed aside from the initial test was an open question. If no new emission units are required for black start, and if operation as a black start unit is actually constrained to less than 100 hours per decade (rolling basis), it is possible that this may not be a change in operation. States requested a clear definition of what constitutes a black start.

At 1:00 p.m., the group left the meeting site to visit the Chicopee Electric Light (municipal owned electric department) and discuss their diesel reciprocating engine generators. From there, the group attended a presentation by Waste Management and Ameresco at the Chicopee Landfill and LFG to energy facility. An agenda for that meeting is provided in the meeting materials.

The meeting adjourned for the day at 5:00 p.m. after the off-site trainings and return to the Hotel Northampton.

Thursday, April 3, 2014

9:30 a.m. **TRAINING - Site Visit (via van):**
ISO-New England control room
Holyoke, Massachusetts
Eric Wilkinson, ISO-New England

The group met at ISO-New England's command center in Holyoke, Massachusetts at 9:30 a.m. Eric Wilkinson of ISO-New England's external affairs group presented to the group. During the presentation, the operations manager John Norton provided a detailed overview of the ISO's operations and we were given a visual tour of the operations floor of the command center. Patricio Silva also gave a presentation and engaged in a discussion on black start and other issues.

- ISO's Responsibilities include:
 - Operate regional power system
 - Administering wholesale electricity markets
 - Energy market (daily)
 - Forward capacity market (3 year forward)
 - Ancillary services
 - System planning
- 6.5 million households/businesses, 14 million people
- New England is a power importer, generally
- Capacity 31750 MW generating capacity
- Interconnected to neighboring power system in US: 9 ties to NY, 2 ties to Hydro Quebec, 2 ties to New Brunswick
- Demand resources in NE capacity market:
 - "Passive" demand response = energy efficiency
 - Charge for energy efficiency on bill
 - Energy efficiency measures are embedded into the system regardless
 - States questioned how long EE activities counted as demand response, ISO-NE said they would look into that but thought it was 10 years.
- Annual auctions for 3 year forward market
- Emergency Generators capped at 600 MW, less in 2017-18 for unknown reasons
 - There are reconfiguration auctions
- Planning
- Annual Regional System Plan (RSP) provides a 10-year planning horizon for transmission system needs
- Needs are determined for system reliability
- System designed for 90/10 (1 day in 10 year peak load)... pretty conservative → point of disagreement with some states
 - ISO has seen some of the peak load levels so they feel that the design is warranted
- 2013 capacity to provide power is >40% natural gas
 - Production is 46% natural gas in 2013 up from 15% in 2000
- There are currently 3 active nuclear plants in New England
- Power plant emissions have declined significantly since 2000
 - 2013 declines were not as dramatic
 - Because we had to rely on old coal and oil units a lot during last 2 winters
 - Very reliant on natural gas for now

- Northeast states rank very high on national energy efficiency: Massachusetts is #1, CT = 5, RI = 6, VT = 8, ME = 16, NH = 21
- In 2013, wind was 1.5% of annual energy production, growing quickly in the region
- Solar is the largest component of distributed generation growth
- Black start
 - ISO-New England is seeking seven units (1500 MW) of combined cycle power plants enrolled in black start by 2017
 - Low load characteristics, get SCRs online to reduce emissions
 - Black start units would ramp up the system unit by unit, ramping up and backing off as each additional unit comes on, making sure that system reliability is maintained
 - 48 hour period for running a unit in black start conditions
 - Emission analyses show higher emissions of CO and NOx. CO spike at 1000 ppm but data is limited
 - Load levels show that operation is stable between 15-30 MW, unstable between 30-60 MW, and okay above 60 MW. Units essentially stall out in 30-60 MW. General Electric is concerned about this for their turbines.
 - ISO-NE has been working with Donald Dahl to get the black start system addressed. Currently there's one candidate facility, still in initial stages of getting an agreement.
 - Would only be looking for 1 turbine to enroll for each resource.
 - The ISO is seeking combine cycle units that would operate as simple cycle during blackout conditions rather than simple cycle units mainly because those are the units of the proper size that are available in this region.
 - Testing would be akin to an initial stack test
 - Akin to initial stack test
 - Patricio will share the black start definition with the group

State updates

State updates were conducted as two separate sessions over two days, but the summary presents these consolidated updates here.

Massachusetts

- Retook delegation of PSD a few years ago, and just issued the first permit for new construction since then (Footprint Power Salem Harbor Station) through it
 - 2 CC units at that site
 - CLF appealed through Energy Facility Siting Board certificate claiming that Massachusetts had failed to implement its Global Warming Solutions Act. CLF dropped appeal after negotiating GHG cap and hard shutdown date for new units
 - Several more PSD projects in the pipeline
- Solid waste master plan

- New ban on landfill disposal of organics from one ton per day or greater facilities This has created a feedstock anaerobic digestion-to-biogas-to-energy facilities
- What's the appropriate technology for control? MassDEP likes SCR for NOx control. Source = digester, biogas to energy.
- One big supermarket chain received approval for AD-to-energy at distribution center. DEP accepted proposed engine-only NOx control (no SCR) on basis of economic cost.

New Jersey

- High Electric Demand Days (HEDD)
 - EGUs subject to the rule are those EGUs capable of creating 15 MW or more after 2005 operating less than 50% of the O3 season
 - 1400 MW controlled
 - 4700 MW new generation ← mostly natural gas
 - Based on the demand from PJM projections
- Slight capacity issues with natural gas, but not significant
- Comments from Sierra Club on GHG limits to new EGUs; comments are identical to other comments issued around the country.
- Approved 450 MW CC plant.
- 425 MW project in Gloucester Co (across from Philly airport), already have 2 turbines, but adding a 3rd
- Just approved SC turbine, took capacity factor to issue as minor source permit
- Sewage sludge incinerators
 - Need to come into Title V because of new rule
 - State specific plan for SSI units? Sunila is working on it.
- Cost for retrofit: \$5.5 million, \$7.8 million for 20 MW facility. \$ per ton is high, but very effective ton.

Connecticut

- Digestors meeting with DEEP but no applications are being submitted
- 6 resource recovery facilities
- Most new permits are through modifications rather than new sources
- Pyrolysis: sources argue that there are no emissions, but applications have not been submitted

Maine

- Natural gas conversions still proceeding
- Title 5 renewals backlog
- Changes in paper industry – accident at Lincoln recovery boiler, blew out the side of the boiler

- Torrefied wood plant has not constructed, but they have decided to use a conventional steam pressure digester type process without chemical to make torrefied wood product
- Mill to add 2 new tissue machines in Woodland.
- Oldtown Fuel and Fiber to make ethanol from biomass
- Federal Land Managers notified of Class I impacts using Q/D method at Acadia National Park. Acadia is looking at license allowed level rather than the change from previous levels.
- Inquiries about source categories under boiler MACT, especially hybrid suspension grate boiler category
 - Wet biomass for burning biomass in suspension
 - PM is higher than stoker boiler
 - Working with Susan Lancey to put them into one category or another
 - 40% or higher MC fed above the grate by air or augur. Combustion occurs in suspension taking place on the grate.
- Distributed generation
 - Cogen unit comes onsite to replace onsite license
 - Owner not operator is the permit holder

New Hampshire

- 2 municipal waste combustors
 - Claremont combustor shut down
 - Power contracts and waste provision contracts ended
- Title 5 processes
 - Schiller St in Portsmouth
 - 126 petition for SO₂
 - 1 week away from finalizing decision on renewal
 - Installation of controls under MATS
- May 16 deadline for EPA to respond to petition?
- Bethlehem Landfill Title 5
- Hearing from large industrial facilities who used to use No 6 oil heading in the direction of No 4, No 2, and ULSD, mostly driven by transitions in neighboring states
- “1Stop”: Online permitting systems
 - User ID + PIN, and make all sorts of typical transactions
- NH took delegation of ZZZZ for RICE

Vermont

- Natural Gas conversions finishing up
- Most kept fuel oil backups
- Issues related to landfills
 - Part 98 GHG reporting
 - 1 not reporting engines, 1 reporting engines separately

- EPA's website is a little confusing on the matter
 - Formaldehyde emissions at landfills are extremely significant
 - Not a big deal for NESHAP, but it's a state air toxics issue
- Low sulfur fuel going down to 500 ppm for No 2 July 1, 2014 then 15 ppm 2018.
- State didn't take delegation for ZZZZ/III, but finding a lot of diesels so working with Susan Lancey (EPA Region 1)
- JJJJ boiler area source rule, informing sources
- Facility converted to LNG, now considering putting in refueling station ("Omya" nonmetallic mineral facility)
 - State looking at potential emissions from such stations
- There has been talk of constructing a couple biomass pellet plants
- Vermont Yankee will be closing
 - In December
 - Maybe natural gas situation will keep them open?
- A rock crushing operation was proposed for a location that has natural asbestos. Need to consider a policy prohibiting this type of activity in this rock type.

Rhode Island

- Public comment for lower S content in fuel, same dates as Vermont and Connecticut
 - Residual fuel S content going down to 0.5%
- Algonquin Spectrum Energy pipeline company is expanding capacity of pipelines
 - New turbines, 1 in RI, 2 in CT, 2 in NY
 - Minor source permit, application received
 - At a Title 5 facility
- Meetings with food waste digestors to energy, but none of them submitted for permits
- WWTP, synthetic minor, off-site generators at pump stations
 - Want to include all EGs in the permit
 - EPA mentioned a similar case from Michigan: aggregation is not required, pumping stations can be considered a separate facility

New York

- 5-6 compressor station projects
 - At least 1 will be a major NSR project
- 3-4 coal boilers trying to come back to life, for long enough at least to get a natural gas line put in to their facility. Asking for extension for MATS rule.
 - In one case a unit is FIPed under BART and given limits that they can't meet for NOx and SO₂.
- Rail terminal transport of crude oil (Port of Albany)
 - Concerns about safety similar to Quebec explosion
 - May want to accept tar sands in the future

- State requested information of scope normally required in an environmental impact statement even though the state previously stated the project would not have a significant environmental impact
 - VOC threshold is 40 tons for each NO_x and VOC, increases are much lower than threshold
- Cooling towers
 - Modeling submitted by a nuclear plant for a proposed cooling tower showed PM_{2.5} in excess of NAAQS.