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Utility Sector
Quantification and Reporting of Emissions
for the OTAG NO_x SIP Call

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Introduction

This document represents a summary of the discussions among members of the mini-workgroup for the utility sector. Participants have not had the chance to formally approve this summary, and all mistakes are the author's. The document begins with some clarifying remarks and then a recommendation. Next is a summary of the discussions of the six questions presented to each mini-workgroup. Finally, a list of mini-workgroup members is included.

Sector Definition and Issues

The SIP NPR defines the utility sector as units affected by Title IV plus analogous independent power producers (IPPs). Title IV affects units connected to generators which have a capacity equal to or greater than 25 MW, but exempts certain types of sources, such as simple cycle turbines and IPPs. The SIP call does not make the IPP distinction/exemption when calculating sector budgets or determining control strategies. Also, reasons for exemptions from an SO₂ program may not be valid for a NO_x program. This definition is picked for ease in addressing the remainder of the issues, for data collection and reporting requirements for Title IV units are already outlined in 40 CFR Part 75 and should not be changed for the SIP call. If the sector were to include IPPs exempt from Title IV, the Title IV reporting provisions may be still appropriate. It should be noted that this definition is different from the "core" sources of the model trading rule EPA will propose later this spring. (The core sources are all power generating units with a capacity of 25 MW or more plus all other boilers and turbines with a capacity of 250 mmBtu/hr or more). If the definition of this sector were to change, there would be a natural size cutoff where a source would be considered an area source rather than a point source for sector inventory determinations.

Recommendation

It is recommended that the infrastructure already in place for 40 CFR Part 75 reporting requirements be used in State quantification of utility sector emissions. A value should be recorded for each source and the sector budget should be determined annually. Issues to consider are the reporting of seasonal values, the determination of NO_x mass emissions (only rate and heat input are currently required), implementation (currently the data is submitted directly to the U.S. EPA, not States), etc.

Question 1

How are the emissions estimates generated?

- what are the information sources
- how often is the information updated
- what is the lag time between the ozone season the information represents and when the information is available
- how reliable is the information (measurements, estimates, etc.)
- typically what are the State and EPA roles in generating the information

Discussion for Question 1

The easiest way for a State to track compliance, whether using the tonnage or enforceable measures approach, might be to record a NO_x emission rate (tons/activity) and an activity level for each source. This way mass can be calculated and achievement of control strategies can be demonstrated. There are a variety of existing programs and requirements to measure and/or track either rate or activity. They include: Title IV (Acid Rain), many Title I programs (Emissions Statements, RACT, BACT, LEAR, etc.), State inventory programs (existing and proposed), DOE FERC forms, etc. These vary greatly in the type of information collected and reported to State and federal agencies.

Question 2

- What are the existing reporting requirements for the sector and how might they be used for tracking the SIP call budget?
- Do the current reporting requirements apply Statewide or just in certain designations/classifications?
- What other emissions information do States routinely gather?

Discussion for Question 2

As mentioned in #1, there are a variety of existing reporting requirements that vary in temporal, geographic, and source classification details.

One State program mentioned is the *Advanced Planning Process* where sources are required to project and report fuel usage, operations, generation, and emissions to their State.

It was decided not to pursue developing a list of additional State-by-State reporting requirements for the utility sector.

Question 3

What are some workable options for reporting requirements for the sector?

- frequency (annual, periodic)
- emissions vs. indicators
- State vs. EPA role
- would the option be suitable for regulatory decisions

Discussion for Question 3

The utility sector is in a unique situation: if the State adopts the model rule, all large sources are required to participate in a market program. The data monitoring and reporting requirements of this program will likely be similar to those of Title IV. Namely, CEMS to monitor NO_x rate and heat input, mass would then be calculated and reported (to the USEPA?) at the end of the season. If a State chooses to modify the model rule or propose an entirely different SIP, the situation may change slightly or drastically.

Depending on how we define the sector, and whether a State adopts the model rule, there could be consistency problems. For example, there are many power generation sources exempt from existing programs, such as new gas turbines, co-generators, existing simple cycle turbines (some are covered by some programs and exempted from others). Sources too small to be covered by existing programs also represent a potential data gap. Finally, questions about the accuracy of emissions factors for some small unit types have been raised. Sources could be broken down into four categories, based on fuel type and size:

	Fuel Type	
Size	Fossil, >=250 mmBtu	Non-fossil, >=250 mmBtu
	Fossil, <250 mmBtu	Non-fossil, <250 mmBtu

Given the in-place monitoring requirements, though, it would be reasonable to require electric generating sources to report actual emissions on a seasonal (annual) basis regardless of the State approach. The data required could range from hourly to monthly averages depending on the size (capacity or emissions) of the source. All data should meet some minimum quality assurance criteria appropriate to the collection and reporting method (for example, default emission rates for small sources would not require as much QA as CEMS). Data should be reported in a format that is easily assimilated; Title IV and the Title I NO_x budget program require electronic reporting. The data from the power generation sector would likely be among the most accurate (because of the measurement methods and individual source accountability) of those included in a State overall inventory.

It is unlikely that States would propose, nor should the EPA require, any additional data collection burden which would increase the amount of work for the States beyond the effort currently expended for existing (e.g., RACT) or proposed (e.g., the Consolidated Emission Inventory Reporting Rule) federal programs. The EPA could assemble data from sources reporting to the feds for the market program or other programs and coordinate with the State to develop an inventory for the entire sector.

Question 4

Under the Consolidated Emission Inventory Reporting Rule (to be proposed), States will be required to submit Statewide periodic inventories on 3-year cycles (e.g., 2002, 2005, 2008.). To have an inventory that will represent the NOx budget target year, presumably the 2005 inventory would need to be adjusted to represent 2007. What is your estimate of when this 2007 adjusted inventory could be ready for the specific sector?

Discussion for Question 4

For reasons given in #3, this question is probably moot for the power generation sector.

Question 5

What would you recommend as the reporting requirements for the sector for:

- A) year 2007 - budget reconciliation
- B) other years - annual or periodic reports

Discussion for Question 5

The reporting should be the same for all compliance years (a State must meet its budget every year after the program starts). Sufficient data to calculate NO_x mass (rate and activity or mass itself) for all sources included in this sector should be reported.

Question 6

6. What would you recommend as the reporting format?

Discussion for Question 6

Title IV and the Title I NO_x budget program require submissions in the “electronic data reporting” (EDR) format. Almost all sources report directly to a server via modem or Internet connection with no need for any physical transfer (diskette, paper, etc.). The EDR consists of different “record types” designed to contain different emissions, operations, test, and physical configuration information. Some States have proposed additional record types that could be added to the EDR to handle data relevant to State programs. Thus, a data file could be generated by a source and submitted to the EPA for federal programs and to the State for State programs (or different files could be generated by the source, each containing only the data relevant to the recipient). A sophisticated data handling system is *not* required for electronic reporting. If the reports for small units are kept short and simple, States can use a template file into which the necessary information can be typed.

States should report electronically to the EPA, with source (boiler/turbine) specific rates and activity (mass).

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