Clean Approaches to Distributed Generation in the Mid-Atlantic and Northeast States: OTC's Model Rule and Related Efforts

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Overview

- I. Air quality importance of distributed generation
- II. OTC's model rule on small distributed generation (DG) sources
- III. Related efforts including energy efficiency

I. DG and Air Quality

- * State Implementation Plans (SIPs) are based on projected emissions, including growth, and expected controls
- * SIPs must include attainment demonstrations, showing emission reductions, to reach health-based standards
- * Mid-Atlantic and Northeast States work through OTC to coordinate on regional transport controls (especially NOx)

I. DG and Air Quality: OTC NOx MOU

- * OTC States agreed in 1994 to develop a regional NOx emission reduction cap-and-trade program covering major stationary sources of NOx (already covered by RACT)
- * At the time, sources covered about 80-90% of stationary source NOx inventory
- * “Phase II” was implemented in 1999-2002; roughly 60% reduction in covered sources compared to base of 1990

I. DG and Air Quality

- DG adds to the “noncovered” sources under the OTC NOx MOU (too small)
- Diesel generators generate NOx at a rate many times that of centralized generating stations with controls
- “Clean” DG versus “dirty” DG therefore can have a profound effect on air quality, particularly if growth rates are high (as they are expected to be)

II. OTC DG Model Rule

- Started as a part of OTC's effort to identify potential incentives for clean technology
- Development paralleled and coordinated with, OTC's effort to develop regional model rules to deal with one-hour ozone SIP emission reduction "shortfalls" in 1999-2000

II. OTC DG Model Rule

- Focused on permitting program
- Much more thorough analysis required for diesel generators

* Cleaner units have a more limited review as a part of the permitting process

II. OTC DG Model Rule

- In March 2001, both a new resolution and a new MOU were approved
- The resolution included the DG model rule, and indicated a new initiative on the part of OTC to encourage clean DG
- The MOU included a commitment to propose new regulations on larger NOx stationary sources

II. OTC DG Model Rule

- DG resolution and new MOU on NOx sources were designed to work together
- Need for a seamless transition between NOx source MOU and smaller sources addressed in DG resolution in terms of source coverage
- New MOU on larger sources went beyond original OTC NOx MOU

II. Summary

- Phase II of the OTC NOx MOU (1994) has been implemented; Phase III/EPA's NOx SIP call starts in 2003(largest sources); an overall budget is in place
- OTC States proposing/adopting additional NOx control measures beyond NOx MOU for additional emission reductions in their SIPs

II. Summary (cont.)

- Large growth in DG, especially uncontrolled diesel generators, has the potential to disrupt long term success of NOx controls in ozone SIPs, because they are relatively “uncontrolled” and high growth rates are not in SIPs
- SIPs are a “zero sum game;” emission growth in one place must be offset someplace else

II. Summary (cont.)

- State air quality agencies are reviewing options for DG
- Some States have started permitting reviews and regulations for DG (e.g. NY, CT, and MA)
- Other options, especially energy efficiency, are also being considered

III. OTC's Current Energy Initiative

- Looking at both cleaner generation (including clean DG) and energy efficiency
- High load pockets and other areas of potentially minimal energy supply margins can look at energy efficiency approaches as a substitute for DG
- OTC has worked with State energy and PUC official organizations (NASEO and NARUC)

III. OTC's Current Energy Initiative

- Identification of Programs that Work
- Creation of Methodologies that can Identify "Win-win" Scenarios for Energy and the Environment
- Encouragement of Information/Technology Transfer
- Connection Eventually to More Effective SIPs

III. OTC's Current Energy Initiative

- I. Program definition- Southwest Connecticut Pilot Project
- II. Emission reduction assessment- OTC's "workbook"
- III. Information exchange- October 2002 energy conference- Westbrook, CT