

**NYS DEPARTMENT OF  
ENVIRONMENTAL  
CONSERVATION**  
REGULATORY DEVELOPMENTS  
AFFECTING POWER PLANTS

November 2004

# AIR PERMITS PRIMER

- Primary Permit Regulations for New Facilities
  - State Operating Permit Program
    - State Facility Permit – 6 NYCRR 201-5
    - Title V Permit – 6 NYCRR 201-6
    - “Synthetic Minor Source” Permit – 6 NYCRR 201-7
  - Federal Prevention of Significant Deterioration (40 CFR 52.21)
    - Sources Located in “Attainment Areas”
    - 250 TPY Nox, Sox
  - State New Source Review (6 NYCRR 231)
    - Sources Located in “Non-attainment Areas”
    - 100 TPY Nox, 50 TPY VOC, 100 TPY CO (Manhattan)

# TITLE V PERMITS

## Implementation Changes

- Compliance Certifications
- Prompt Reporting of Exceedences
  - Modeled after 40 CFR 71.6(a)(3)(iii)(B)
  - 800 call in number
- Excuse Provision
  - 201-1.4 State-only condition
  - 201-6.5(c)(3)(ii) Federal condition
- Permit Review Report

# PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY AND NON-ATTAINMENT NEW SOURCE REVIEW

- EPA Final Rule December 31, 2002:
  - Established “Minimum Program Requirements” States must adopt
  - Significantly revised criteria for determining PSD/NSR applicability, recordkeeping and reporting requirements
  - Establishes “minimum program requirements”
  - PSD provisions effective in delegated States on March 3, 2003
  - SIP-approved States submit SIP revisions by March 2006

# NSR REVIEW IN NEW YORK STATE

- Program Implementation
  - EPA implements PSD (March 3, 2003)
  - DEC implements 6 NYCRR Part 231
- Legal Challenges
  - Consortium of States, municipalities and environmental groups have sued EPA
  - Oral argument in DC Circuit Court of Appeals January 25, 2005

# STATUS OF ERP RULE

- Consortium of States, Municipalities and Environmental Groups Sued EPA
- District Court Granted Stay (December 2003)
- EPA Granted Reconsideration of Discrete Issues
  - EPA Determination Expected December 2005
- Briefing Schedule to Follow EPA's Determination

# NSR REFORM IN NEW YORK

- DEC Initiated NSR Reform Workgroup
  - Seek input from interested persons on key issues
  - Written statements filed November 19, 2004
- Representatives From Industry, Business, Government, Environmental Organizations
- DEC will consider all viewpoints in its rule development

# NSR REFORM

## Workgroup Meetings

- July 8, 2004: Clean Unit Exemption & Pollution Control Projects
- July 22, 2004: Baseline Determination & Past Actual to Future Actual Methodology
- August 5, 2004: Demand Growth & Recordkeeping
- October 1, 2004: Equipment Replacement Provision & Routine Maintenance, Repair, and Replacement
- October 22, 2004: Plant-wide Applicability Limits, Continuation of ERP, RMRR



# NSR REFORM

## “Pollution Control Projects”

- How to Establish/Revise “List” of Approved PCP Projects
- Evaluation of Collateral Emission Increases
- Air Quality Analyses
- Additional Review for Listed PCP Projects
- Additional Reporting and Recordkeeping
- Projects Not Primarily Focused on Air Pollution Control

# NSR REFORM

## “Clean Units”

- Applicability and Scope of CU Exemption
- Emissions Impact of Modifications
- Automatic Renewal for 10 Year Term?
- Definition Invested Cost
- Effect of Change in Designation
- CU Netting Process – Credit Generation
- “Substantially As Effective”

# NSR REFORM

## “Baseline Emissions”

- Length of Baseline Period
- Different Periods for Different Pollutants?
- Inclusion of Fugitive, Startup, Shutdown, Malfunction Emissions?
- Adjust Past Rates for Current Requirements
- Non-applicability Determination
- “New” units

# NSR REFORM

## “Past Actual To Future Actual”

- Methodology for Estimating Emission Increases
  - demand growth allowance
- Reporting Requirements and Triggers
  - Emissions projections
  - Notice and Recordkeeping
    - “Reasonable Possibility”
  - Monitoring data
  - Actual emissions

# NSR REFORM

## “Plantwide Applicability Limits”

- Utility of the PAL
- Duration of the PAL (20 years)
- Renewal level
- PAL Baseline

# NSR REFORM

## “Equipment Replacement Rule”

- ERP Rule Allowed
  - Replacement of a process unit with:
    - Identical components, or
    - Functionally equivalent components
  - Provided the project:
    - Cost is less than 20% of the replacement cost of the “process unit”
    - Does not change the “basic design parameters”
    - Does not exceed emissions and operational limits

# NSR REFORM

## “Equipment Replacement Rule”

- Alternatives to Cost-Based Approaches
  - Developing List of Activities that Qualify/Don't Qualify
- Cost-Based Approaches
- Case by Case Determinations
- Title V Permit Process
  - Develop facility specific lists of exempt ERP activities
  - Op flex plans

# NSR REFORM

## “After the Workgroup”

- Review Workgroup Comments
- Develop Express Terms
- Pre-Proposal Public Outreach
- Draft Express Terms for Proposal
- SAPA Rulemaking Process



# NSR REFORM

## “Projected Adoption Schedule”

- Summer 2005
  - Publication of draft NSR/PSD rule in ENB
  - State-wide public hearings
- Fall 2005
  - Review comments
  - Prepare responsiveness summary
  - Environmental Review Board approval

# REGIONAL GREENHOUSE GAS INITIATIVE (RGGI)

- Cooperative Effort by Northeastern and Mid-Atlantic States to Reduce Carbon Dioxide Emissions and Reduce Effects of Global Warming
  - Participating States: Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont
  - Observer States: Maryland, the District of Columbia , Pennsylvania, the Eastern Canadian Provinces and New Brunswick

# RGGI GOALS AND PRINCIPALS

## Program Goal

- Design a multi-state cap-and-trade program covering greenhouse gases emissions from power plants by April 2005
- Maintain energy affordability and reliability and accommodating, to the extent feasible, the diversity in policies and programs in individual states

# RGGI GOALS AND PRINCIPALS

- Guiding Program Design Principals:
  - Uniformity to facilitate interstate trading in GHG allowances
  - Expendable and flexible to facilitate other states joining initiative
  - No interference with national, state or regional emissions trading programs and initiatives

# RGGI PROGRESS TO DATE

## RGGI WEBSITE:

- [www.rggi.org](http://www.rggi.org)
- New York's Website:  
[www.dec.state.ny.us/website/dar/rggiannounce.html](http://www.dec.state.ny.us/website/dar/rggiannounce.html)
- New York's E-mail:
  - [nyrggi@gw.dec.state.ny.us](mailto:nyrggi@gw.dec.state.ny.us)

## 6 NYCRR PART 237

# “Acid Deposition Reduction NO<sub>x</sub> Budget Trading Program”

- Full Implementation October 1, 2004
  - State budget 0.15 lbs/MMBtu/hr times 1999 heat input grown to 2007 (39,908 tons/season)
- Applicable to all electric generating units 25 MW or larger
- Non-ozone season program (October to April)

## 6 NYCRR PART 237

# “Acid Deposition Reduction NO<sub>x</sub> Budget Trading Program”

- 5% New Source and 3% Energy Efficiency Set-asides
- Allocation Methodology Very Similar to 6 NYCRR Part 204

## 6 NYCRR PART 237

# “Acid Deposition Reduction NO<sub>x</sub> Budget Trading Program”

- Early Reduction Allowances (ERAs):
  - Awarded for reductions in NO<sub>x</sub> emissions at a NO<sub>x</sub> budget unit below allowable and past actual NO<sub>x</sub> emission rates
  - Must be achieved during the early reduction control periods of 2001-02, 2002-03 and 2003-04
  - ERAs are usable for compliance in control periods 2004-05 and 2005-06



## 6 NYCRR PART 237

# “Acid Deposition Reduction NO<sub>x</sub> Budget Trading Program”

- Supplemental Allowances from Upwind States Reductions:
  - Reduction below potential, historic baseline and past actuals
  - Discount ratio of 3 to 1 applied

## 6 NYCRR PART 237

# “Acid Deposition Reduction NO<sub>x</sub> Budget Trading Program”

- Supplemental Allowances From Upwind States Reductions:
  - Amount of supplemental allowances limited to:
    - 10% for control period 2004-05
    - 8% for control period 2005-06
    - 6% for control period 2006-07
    - 5% for control period 2007-08
    - 4% for control period 2008-09, beyond

## 6 NYCRR PART 238

# “Acid Deposition Reduction SO<sub>2</sub> Budget Trading Program”

- Annual Program Starts January 1, 2005
  - State Budget 25% below 2010 Title IV allocation (197,046 tons/year)
- Full Implementation January 1, 2008
  - State Budget 50% below 2010 Title IV allocation (131,364 tons/year)
- Applicable to all Title IV Electric Generating Units
- 3% New Source and 3% Energy Efficiency Set-Asides

## 6 NYCRR PART 238

# “Acid Deposition Reduction SO<sub>2</sub> Budget Trading Program”

- Allocation Methodology:
  - For 2005 to 2007
    - The lowest of unit’s potential to emit, past actual emissions and 0.9 lbs/MMBtu for coal units
    - The lowest of unit’s potential to emit, past actual emissions and 0.45 lbs/MMBtu for oil/gas units
  - For 2008 and Beyond:
    - The lowest of unit’s potential to emit, past actual emissions and 0.6 lbs/MMBtu for coal units
    - The lowest of unit’s potential to emit, past actual emissions and 0.3 lbs/MMBtu for oil/gas units

## 6 NYCRR PART 238

# “Acid Deposition Reduction SO<sub>2</sub> Budget Trading Program”

- Early Reduction Allowances (ERAs):
  - Awarded for reductions in SO<sub>2</sub> emissions at a SO<sub>2</sub> budget unit below allowable and past actual SO<sub>2</sub> emission rates
  - Must be achieved during the early reduction control periods of 2002, 2003 and 2004
  - ERAs are usable for compliance in control periods 2005 and 2006

## 6 NYCRR PART 238

# “Acid Deposition Reduction SO<sub>2</sub> Budget Trading Program”

- Early Reduction Allowances (ERAs):
  - ERAs created by reductions below past actual SO<sub>2</sub> emissions rate and above the target collective emission rate (0.9 lbs/mmbtu for coal and 0.45 lbs/mmbtu for oil/gas) discounted by 50 %
  - ERAs created by reductions below the target collective emission rate have no discount applied

## 6 NYCRR PART 238

# “Acid Deposition Reduction SO<sub>2</sub> Budget Trading Program”

- Supplemental Allowances From Upwind States Reductions:
  - Reduction below potential, historic baseline and past actuals
  - Discount ratio of 3 to 1 applied
  - Federal SO<sub>2</sub> allowances equal to reductions used to create supplemental allowances must be retired

## 6 NYCRR PART 238

# “Acid Deposition Reduction SO<sub>2</sub> Budget Trading Program”

- Supplemental Allowances From Upwind States Reductions:
  - Amount of supplemental allowances limited to:
    - 10% for control period 2005
    - 8% for control period 2006
    - 6% for control period 2007
    - 5% for control period 2008
    - 4% for control period 2009 and subsequent control periods



# REGULATION OF MERCURY

- EPA Proposed Rulemaking (Docket No. OAR-202-0056)
  - Delist Utility Units as CAA § 112(c) Source Category
  - Cap and Trade Program under CAA §§ 112(n), 111(d)
- March 2005 Adoption?
- Significant Opposition from States and Environmental Groups
- Commissioner Crotty Submitted Comments to the Docket Opposing EPA's "Entire Proposal"

# CLEAN AIR INTERSTATE RULE

- Proposal for Year Round NO<sub>x</sub> Reductions from Power Plants
- Establishes Year Round Allowances
  - Need for summer allowance program to deal with ozone episodes
- Eliminates NO<sub>x</sub> SIP Call
  - SIP call includes industrial sources, CAIR only power plants
  - SIP call is effective now, CAIR would delay reductions

# STATE FACILITY PERMIT

- State Facility Operating Permits
  - Authorize Construction and Operation at New Major and Minor Sources
  - Incorporate All Applicable Requirements
  - Compliance Certifications for Major Sources
  - 30 Day Public Notice and Comment If Major Source or “Synthetic Minor”

# SYNTHETIC MINOR PERMITS

- Authorized Under 201-7
- Allows Source to Accept Voluntary Limits on Emissions to Avoid Federal Permitting Requirements (T-V, PSD, NSR)
- Public Notice and Comment
- Recordkeeping, Reporting And Compliance Certifications

# SYNTHETIC MINOR PERMITS

- Authorized Under 201-7
- Allows Source to Accept Voluntary Limits on Emissions to Avoid Federal Permitting Requirements (T-V, PSD, NSR)
- Public Notice and Comment
- Recordkeeping, Reporting And Compliance Certifications

# NEW SOURCE REVIEW

## Attainment Areas

- Prevention of Significant Deterioration (PSD)
- Applies Upstate for all PSD Pollutants (SO<sub>x</sub> No<sub>x</sub>, H<sub>2</sub>SO<sub>4</sub>, Sulfuric Acid, Fluoride, Lead.....) and Downstate for Attainment Pollutants (SO<sub>x</sub>, NO<sub>2</sub>)
- As of March 3, 2003, Implemented by EPA  
Pursuant to:
  - CAA § 165
  - 40 CFR 52.21 (Substantive Regulations)
  - 40 CFR 124 (Procedural)

# NEW SOURCE REVIEW

## Non-Attainment Areas

- State Regulatory Program Implemented by DEC Pursuant to:
  - 6 NYCRR Part 231 (in fulfillment of CAA § 172)
- Applies State-wide for VOCs and NO<sub>x</sub>
- LAER Review -
- Emission Reduction Credits – amount depends on where project located

# PSD PROGRAM ELEMENTS

- Pre-construction Review Program for New Major Sources and Major Modifications to Existing Sources (as defined under CAA and 40 CFR 52.21)
- BACT Review Ambient Air Quality Analysis – Increment Consumption and Standards Compliance
- Federal Review Process



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November 2004