

# Proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource

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Susan Amarello

Supervising APCE, SSCG

October 11, 2007

# Public Act 07-242

## An Act Concerning Electricity and Energy Efficiency

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- DEP Required to Issue a General Permit
  - New or Existing Emergency Engines and Distributed Generation Resources
  - Generate No More than 2 MW of Electricity
  - Specifically for Engines that are Approved Under DPUC Pilot Program
- General Permit Shall Expire No Later than December 31, 2010 or 90 Days after the Energizing of the Middletown-Norwalk Transmission Line (May be Renewed)

# Public Act 07-242

## An Act Concerning Electricity and Energy Efficiency

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- General Permit Shall Include:
  - Minimum Setback Provisions
  - Limitations on Hours of Operation
  - Air Pollution Controls – 90% NO<sub>x</sub> Reductions
  - Directionally Correct Offsets
  - Required Control Equipment
  - Monitoring, Reporting, Record Keeping
  - Other Provisions as Deemed Necessary

# Emergency Generators in CT

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- ISO-NE Believes there to be More than 600 MWs of Diesel Emergency Generation Capacity in Connecticut
- If All 600 MWs Run (uncontrolled) they would Produce NOx Emissions at the Rate of *9 Tons per Hour!*
- Clearly Conflicting with our OTC Commitment to Reduce Peak Day Emissions by 25%

# General Permit Objectives

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- Allow Quick Start Diesel Emergency Generators to Provide Capacity
- Only Allow these Engines to Provide Power if Controlled
- Obtain Measurable Emissions Reductions Commensurate with SIP Obligations and OTC HEDD Commitment (e.g., a 25% reduction)

# Process Undertaken

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- Request for Information Notice August 3, 2007
- Close Comment Period September 7, 2007
- Comments Posted on the Web
- DEP Consulted with: DPUC, Office of Consumer Counsel, Environmental Groups, ISO-NE and Energy Aggregators, Generator Owners, Control Equipment Manufacturers, Engine Manufacturers

# Process Undertaken

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- Gained Valuable Insight on Complex Issues
- Opportunity for Wide Range of Input
- Incorporate Legislative Mandates
- Commitment to Clean Air Goals

# Setback Requirements

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- Addressed Through
  - Particulate Matter Controls
  - MASC Compliance
- Engine Exhaust Located Away From
  - Fresh Air Intakes
  - Air Conditioners
  - Windows

# Hours of Operation

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- 300 Hours – Emergency Use
- 200 Hours – Forward Reserve Market
- Total 500 Hours During Each and Every Consecutive Twelve Months

# Air Pollution Controls - NOx

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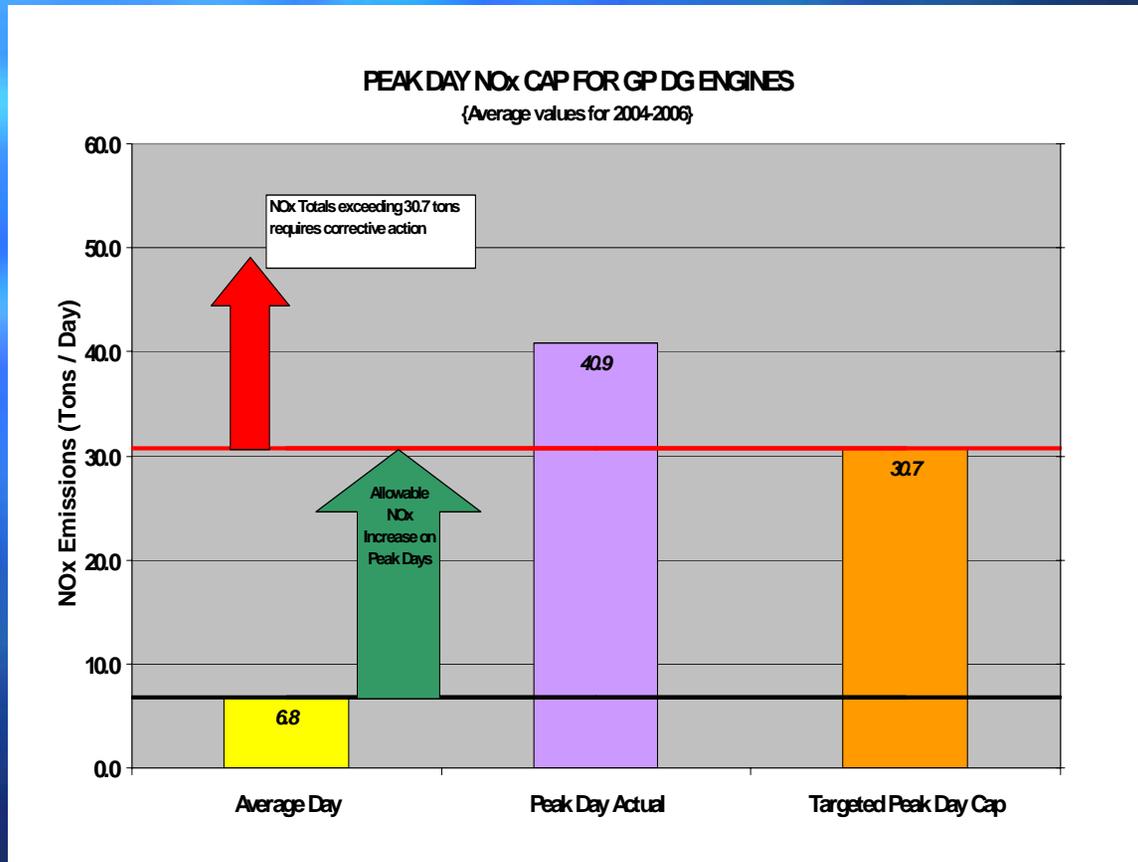
- Selective Catalytic Reduction or
- Equivalent Controls with a Design Control Efficiency of 90%

# Offsets

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- Registration Requires Documentation of the Transfer of Two Ozone Season Allowances from the CAIR NO<sub>x</sub> Ozone Trading Program to the CT State NO<sub>x</sub> Retirement Account
- Basis – 2 MW Engine, 200 Hours per Year Over Three Years – 2.15 Tons NO<sub>x</sub>

# Proposed HEDD Daily Cap



# Proposed Daily Cap Basis

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- Cap Based On
  - 2004-06 Actual Seasonal and Peak Day Operation of RMR Boilers and Aero Jets
  - RMR Boilers (e.g., Middletown 2, 3 & 4; Montville 5&6; Norwalk; New Haven Harbor & Bridgeport 2)
  - Average Values then Reduced by 25% Consistent with the DEP's Commitment to OTC HEDD Effort

# How the Cap Will Work

- Ozone Season Average NOx Emissions are 6.8 Tons per Day over Last Three Years
- Average Actual Peak Day Emissions were 40.9 Tons per Day over Last Three Years
- OTC Reduction Target is 25% from the Peak Day (e.g., 30.7 tons per day)
- Propose Corrective Actions for Those Sources Registered under the General Permit that Operated on Any Day that Exceeds 30.7 Tons of NOx During the Ozone Season
- Other Units Operating on HEDD Days will be Addressed by a Different Regulatory Action

# Proposed Corrective Procedure

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- Notify Affected Operators by November 1<sup>st</sup>
- Corrective Action
  - Retire Ozone Season Allowances from CAIR NO<sub>x</sub> Ozone Season Trading Program or
  - Other Means Approved by the Commissioner
- Certification Corrective Action Complied with Due November 30<sup>th</sup>

# Air Pollution Control - PM

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Based on CARB Standards Set to Protect Sensitive Groups

- New Engines – 0.0086 lb/MMBTU (0.0295 lb/MW-hr)
- Existing Engines - 0.0086 lb/MMBTU (0.0295 lb/MW-hr) or
  - 85% Control if  $\leq 328$  ft from Sensitive Receptor
  - 20% Control if  $> 328$  ft,  $\leq 500$  ft from Sensitive Receptor
  - No Control if  $> 500$  ft from Sensitive Receptor

# Sensitive Receptor

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- Those locations that may have a gathering of individuals susceptible to air quality related health risks.
- Locations include, but are not limited to
  - Hospitals
  - Schools
  - Daycare Facilities
  - Elderly Housing and
  - Convalescent Facilities

# Monitoring, Record Keeping, and Reporting

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- Monitor Fuel Use, Control Equipment
- Record Keeping Fuel Use, Hours, Type of Hours, Emissions, Kilowatts Produced
- Report by October 1<sup>st</sup> Each Year Hours, Fuel Use, NO<sub>x</sub> and PM Emissions, Kilowatts Produced

# Other Key Provisions

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- Applicable Throughout Connecticut – Linked to DPUC Program
- Ultra Low Sulfur Fuel (15 ppm)
- Renewal Contingent Upon DEP Assessment Concluding that Environmental Goals are Achieved

# Time Line

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- October 9, 2007 - Tentative Determination Notice Published
- October 16, 2007 - Status Conference DEP, Russell Room, 2:00 PM
- November 9, 2007 – Hearing DEP, Russell Room 10:00 AM
- December SIPRAC – Input on Forms/Guidance
- By December 31, 2007 –Anticipated Issuance
- By February 1, 2008 – Report to the Legislature

# Questions?

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- Susan Amarello - DEP
  - (860) 424-3442
  - [Susan.Amarello@PO.state.ct.us](mailto:Susan.Amarello@PO.state.ct.us)