



New York's DG Rule

Demand Response Provisions

Draft – for discussion purposes only



Rule Status

- Current Status of Rulemaking Process
- Target Effective Date: May 1, 2007
- Guidance Document for implementing the demand response provisions under review by DEC staff.



Overview of DEC's Regulatory Approach for DG Sources

- New Sources
 - Diesel Engines: 40 CFR 60 Subpart IIII
 - Gas-fired Engines: 40 CFR 60 Subpart JJJJ
 - Turbines: 40 CFR 60 Subpart KKKK
 - Backstop Provision: Subpart 222-2
- Existing Sources
 - Subpart 222-1



Subpart 222-1

- Severe Ozone Non-attainment Areas:
 - DG sources 200 hp and greater
- Rest of State
 - DG sources 400 hp and greater
- Sources subject to an EPA NSPS Rule are not subject to Part 222.



“Three Baskets”

Must notify DEC Regional Office by 8/1/07:

- Emergency Only
- Demand Response
- All Other Applications



Emergency Generators

- May be operated up to 500 hours per year (less if subject to Subpart 231-2):
 - usual supply of electricity not available
 - routine maintenance (1 hour per week)
- Subpart 222-1 Provisions:
 - Ozone Season limitation: routine maintenance
 - annual tune-up
 - record keeping

A photograph of a geothermal pool, likely a hot spring or geyser, with vibrant green and blue mineral deposits. The pool is surrounded by a rocky, light-colored shoreline. The text "Demand Response Sources" is overlaid in blue at the top.

Demand Response Sources

- May be operated up to 500 hours per year (less if subject to Subpart 231-2):
 - usual supply of electricity not available
 - routine maintenance (1 hour per week)
 - in addition – may operate for up to 30 hours per year when called upon by a demand response program sponsor
- Must have a valid DEC Permit.



Demand Response Sources

- Emergency Generator Requirements
- Emission Limits (January 1, 2009):
 - NO_x: 9.0 g/bhp-h
 - PM: 0.10 lb/mmBtu or 85% control
- Annual Operation Limit:
 - 30 hours per year when called upon by a program sponsor
- Capacity Cap



Capacity Caps – May 1, 2007

- NYC Metropolitan Area: 271.9 MW
 - NYISO: 58.6 MW
 - NYPA: 73.1 MW
 - Con Ed: 54.6 MW
 - LIPA: 85.6 MW
- Upstate: 111.4 MW (NYISO)

Why are Capacity Caps Proposed?

- NOx Emissions from DR Sources – NYCMA
 - Actual Emissions (7/30/02): 16.2 tons
 - Potential Emissions (2002): 32.6 tons/day
 - Potential Emissions if all Emergency Generators Enrolled: **158 tons/day**



Balancing Act

- Need to maintain the electric grid....
 - Demand Response Program
- Need to bring the State into attainment with the ozone NAAQS by 2009....
 - Reduce emissions from the Demand Response Program



Reducing Emissions from Demand Response Sources

- Emission Limits – January 1, 2009
- Reductions in the Capacity Caps
- 2011: NYCMA: 150 MW; Upstate: 100 MW
- 2014: NYCMA: 50 MW; Upstate: 50 MW



Growth of Demand Response Programs

- The capacity caps will not apply to sources subject to the following:
 - NSPS Rules
 - Subpart 222-2
 - NOx emission limits that apply to sources in the third “basket” – ‘all other sources’.



“All Other Sources”

- NOx (effective January 1, 2008):
 - Microturbines: 0.54 g/bhp-h
 - Rich Burn Engines: 2.0 g/bhp-h
 - Lean Burn Engines: 3.0 g/bhp-h
 - Diesel Engines: 7.5 g/bhp-h
 - Turbines:
 - Gas: 50 ppmv @ 15% O₂
 - Oil: 100 ppmv @ 15% O₂



Emission Testing – Subpart 222-1

- Emergency Generators: no testing
- Biogas-fired Sources: 12/31/09
- Demand Response Sources: 12/31/08
- All Other Sources: 12/31/07



NSPS Rules

- Sources subject to one of the following NSPS Rules are not subject to Part 222:
 - Subpart 4I: Compression Ignition Engines
 - Effective Date: July 11, 2005
 - Subpart 4J: Spark Ignition Engines
 - Effective Date: June 12, 2006
 - Subpart 4K: Turbines
 - Effective Date: February 18, 2005



Subpart IIII

- NO_x, CO and PM
 - NO_x Emissions: F(engine size, model year)
 - 3.0 – 4.8 g/hp-h (2007)
 - 0.3 – 2.6 g/hp-h (2012)
 - 0.3 – 0.5 g/hp-h (2015)
 - PM: G(engine size, model year)
 - 0.05 – 0.1 lb/mmBtu (2008)
 - 0.001 – 0.0074 lb/mmBtu (2015)



Subpart JJJJ

- NO_x, CO, and NMHC
 - NO_x:
 - 2.0 g/hp-h (2007-2010)
 - 1.0 g/hp-h (2010 -)
 - CO:
 - 4.0 g/hp-h (2007-2010)
 - 2.0 g/hp-h (2010 -)
 - NMHC:
 - 1.0 g/hp-h (2007-2010)
 - 0.7 g/hp-h (2010 -)

Subpart KKKK

- NO_x
 - H(turbine size, fuel used)
 - 0.15 – 0.78 g/hp-h (natural gas)
 - 0.44 – 1.86 g/hp-h (other fuels)



Backstop Rule – Subpart 222-2

- Would be triggered if one or more of the NSPS rules are stricken, etc.
- Analogous to January 1, 2005 draft of Part 222 (New Sources).
- Effective Date: January 1, 2009



Future Actions

- Rule to be sent to GORR
- Guidance Document for Implementing Demand Response Provisions
- Questions/Comments?
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