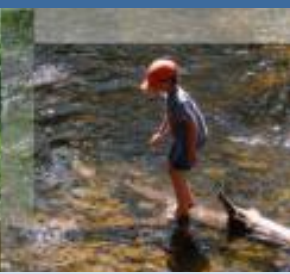




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Stationary RICE Regulations in Connecticut

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June 12, 2013



Connecticut Department of Energy and Environmental Protection

Overview

- Permitting requirements

- RICE

- 22a-174-3a NSR

- NON-EMERGENCY RICE

- 22a-174-42

- EMERGENCY RICE

- 22a-174-3b or

- 22a-174-3c



Overview

- Control of NOx – 22a-174-22
- State Definition of Emergency Engine
- Federal vs State EE comparisons



New Source Review

Reciprocating Engine with potential emissions of any individual air pollutant ≥ 15 tpy

- Application and permit fee
- Public participation
- Meet BACT
- other requirements



Permitting- Non-Emergency RICE 22a-174-42

Distributed Generation (DG)

Any new or existing generator with a nameplate capacity less than 15 MW that generates electricity for other than emergency use. Electricity generated may be used either on-site or for sale under an agreement with a utility, other market participant or system operator. Such a generator may also generate electricity for use during an emergency but is not defined as an emergency generator. Such a generator may burn two fuels simultaneously but is not defined as a dual-fuel generator.



DG requirements:

- Submit notification no later than 30 days prior to operation
- Perform initial test within 180 days or use CARB or EPA approved Mfg Certification
- Use fuel with a Sulfur content of motor vehicle fuel
- Make and keep records and report on request



DG requirements:

- Restrict operating hours such that CO emissions ≤ 15 tpy
- Achieve output-based emission limits

	Emissions limitations (lb/MWh)			
	NOx	PM	CO	CO ₂
Installed prior to 1/1/05	4.0	0.7	10	1900
On or after 1/1/05	0.6	0.7	10	1900
On or after 5/1/08	0.3	0.07	2	1900
On or after 5/1/12	0.15	0.03	1	1650



Permitting-Emergency RICE 22a-174-3b

- Limit emergency and maintenance/testing hours of operation to 300 hrs/12 month rolling aggregate
- Use fuel with a Sulfur content of motor vehicle fuel (<15 ppm)
- Make and keep records of the hours of operation for each month and each twelve (12) month rolling aggregate. Maintain records of fuel purchases.
- No fee or application is required



Permitting-Emergency RICE 22a-174-3c

- Limit premise wide calendar year fuel purchases to:
 - 3.36 MMcuft of gaseous fuel
 - 100, 000 gallons propane
 - 21,000 gallons distillate/biodiesel
- Make and keep fuel purchase records.
- No fee or application is required



Control of NOx-22a-174-22

Amended June 3, 2013

Applicability

≥ 3 MMBtu/hr at a Major Source for NOx; or

RICE with potential emissions of NOx

> 137 lb/day in severe AQCR

>274 lb/day in serious AQCR



Control of NOx-22a-174-22

Applicability- Historic Actual Emissions

premise actual emissions since January 1, 1990

>25 tpy in Severe AQCR

>50 tpy in Serious AQCR Or;

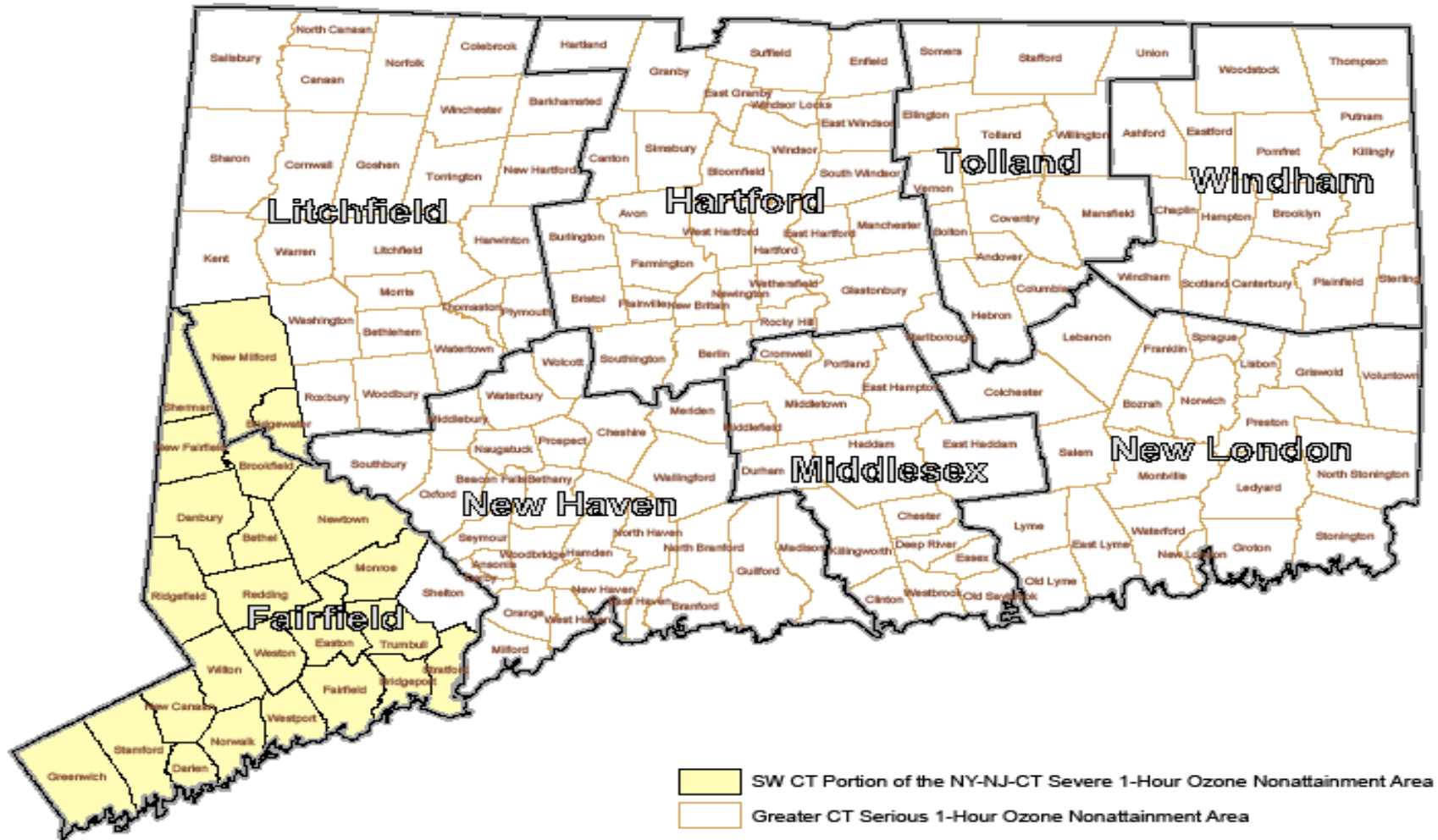
premise actual emissions since May 31, 1995

>137 lb/day May-Sept in Severe AQCR

>274 lb/day May-Sept in Serious AQCR



Connecticut's One-Hour Ozone Nonattainment Areas



Control of NOx-22a-174-22

- Requirements
- Limits –8.0 g/hp-hr oil
2.5 g/hp-hr gas
- Submit a Compliance Plan within 4 months
- Emission test within 1 year of becoming subject
- Make and keep records



Control of NO_x- EE Exemption

- Emergency Engines are exempt from the limits, and emissions from Emergency Engines operating during an emergency are not included in daily premise applicability test (ie 137 or 274 Lb/day).



Control of NO_x- NEW exemptions

- Engines and turbines used to test and provide power: (provided NO financial arrangement)
 - At NRC facilities licensed under 10 CFR 50
 - At Hospitals or Healthcare Facilities
 - During construction, facility maintenance or repairs
 - For production operations and transmission of radio and television messages associated with an event identified by the State of Connecticut under Chapter 517 of the CGS or a missing persons alert under chapter 528 of CGS.



Control of NOx- operating restrictions

- Operation of Emergency Engines for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups," or worse is expressly prohibited
- Daily AQ forecast "hot -line"
(800) 249-1234 or (860) 424-4167
http://www.ct.gov/deep/cwp/view.asp?a=2222&q=320646&deepNav_GID=1744



Emergency Engine

A stationary reciprocating engine used to provide mechanical or electrical power only:

- During testing and scheduled maintenance or during an emergency
- In accordance with a contract intended to ensure an adequate supply of electricity for use within the state of Connecticut during the loss of electrical power derived from nuclear facilities.
- Does not include an engine for which the owner/operator is party to any other agreement to sell electrical power from such engine to an electricity supplier, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability.



Emergency

- interruption of electrical power from the electricity supplier to the premises;
- voltage deviation from the supplier of +3% or -5% below standard
- interruption of electrical power from the supplier for emergency repairs
- Operation needed to minimize damage from fire, flood, or any other catastrophic event, natural or man-made
- RTEG (ISO OP-4 Action 6) events



Federal vs. State EE Operations

	FEDERAL	STATE
Emergencies	No limit	No limit unless by permit: 3a NSR 3b 300 hrs/year 3c Fuel purchase limit
Maintenance & testing	100 hrs/yr for Existing Engines Starting May 3, 2013 for CI Oct 19, 2013 for SI	Included in Emergency hours or limited by permit. Prohibited on ozone forecast days
RTEG (ISO-4 act 6)	100 hrs/yr in combination with maintenance/testing	Included in Emergency hours
RTDR	Not allowed for emergency engines.	Not allowed for emergency engines.
Non-emergencies	Major Source NESHAP-50 of the 100 hrs/yr if no financial arrangement. Area Source NESHAP and NSPS- 50 of the 100 hrs/yr if no financial arrangement, except for local reliability if criteria is met.	Not allowed for emergency engines.
Peak Shaving	Area Source Existing Engines -50 of the 100 hrs/yr until May 2, 2014	Not allowed for emergency engines

Contact Information

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