

# *Regional Control Measures - Glass Furnaces*

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Ozone Transport Commission  
Meeting

November 15, 2006



# *Glass Furnaces*

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- ★ Located in 5 states in the Ozone Transport Region including:
  - NJ, NY, MD, RI, and PA.
- ★ Major types of glass:
  - Container.
  - Flat.
  - Fiberglass.
  - Pressed and blown.



# *Glass Furnaces*

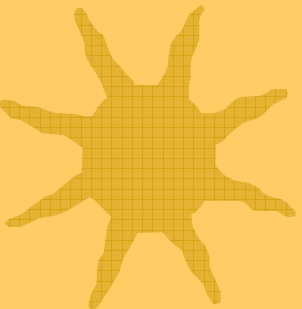
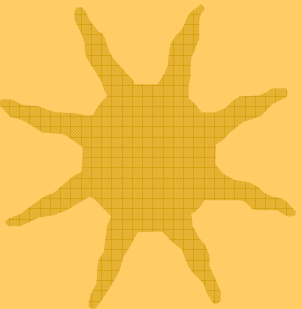
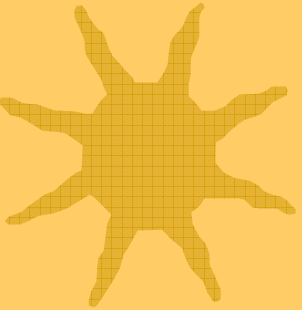
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## ★ Major types of melting:

- Electric.
- Natural gas or fuel oil fired.

## ★ Fuel firing:

- Recuperative.
- Oxy-firing.





# *Glass Furnaces*

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## ★ Emission reduction options:

- Cullet preheat.
- Electric boost.
- Add-on controls-
  - SCR.
  - SNCR.
- Low-NOx burners.
- Oxy-firing.



# *Glass Furnaces*

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## ★ OTC Draft NO<sub>x</sub> limits:

### – Flat glass

- 9.2 lbs NO<sub>x</sub> per ton of glass pulled (24 hour).
- 7.0 lbs NO<sub>x</sub> per ton of glass pulled (30 days).

### – Container glass

- 4.0 lbs NO<sub>x</sub> per ton of glass pulled (24 hour and (30 days).

## ★ NO<sub>x</sub> limits proposed for the next furnace rebuild.

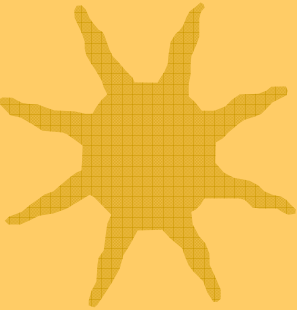
## ★ Install and operate a continuous emission monitoring system not later than May 1, 2009.



# *Glass Furnaces*

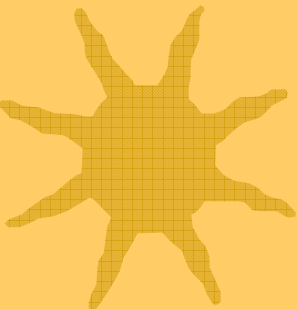
## *Compliance Options*

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### ★ Emissions averaging.

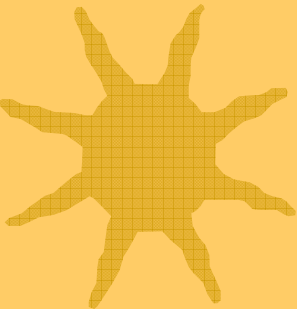
- Furnaces in battery.
- Plants/furnaces under common ownership.



### ★ Purchase allowances

### ★ Major Issues

- Compliance deadline.
- Phase-in of allowance purchases for excess emissions in 2009 and later.
- Sunset of the allowance purchase option.





# *Questions?*

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