



Energy System Opportunities that Support Environmental Objectives

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Two things that are bad for people on hot days

1. Heat
2. Smog

The Boston Globe

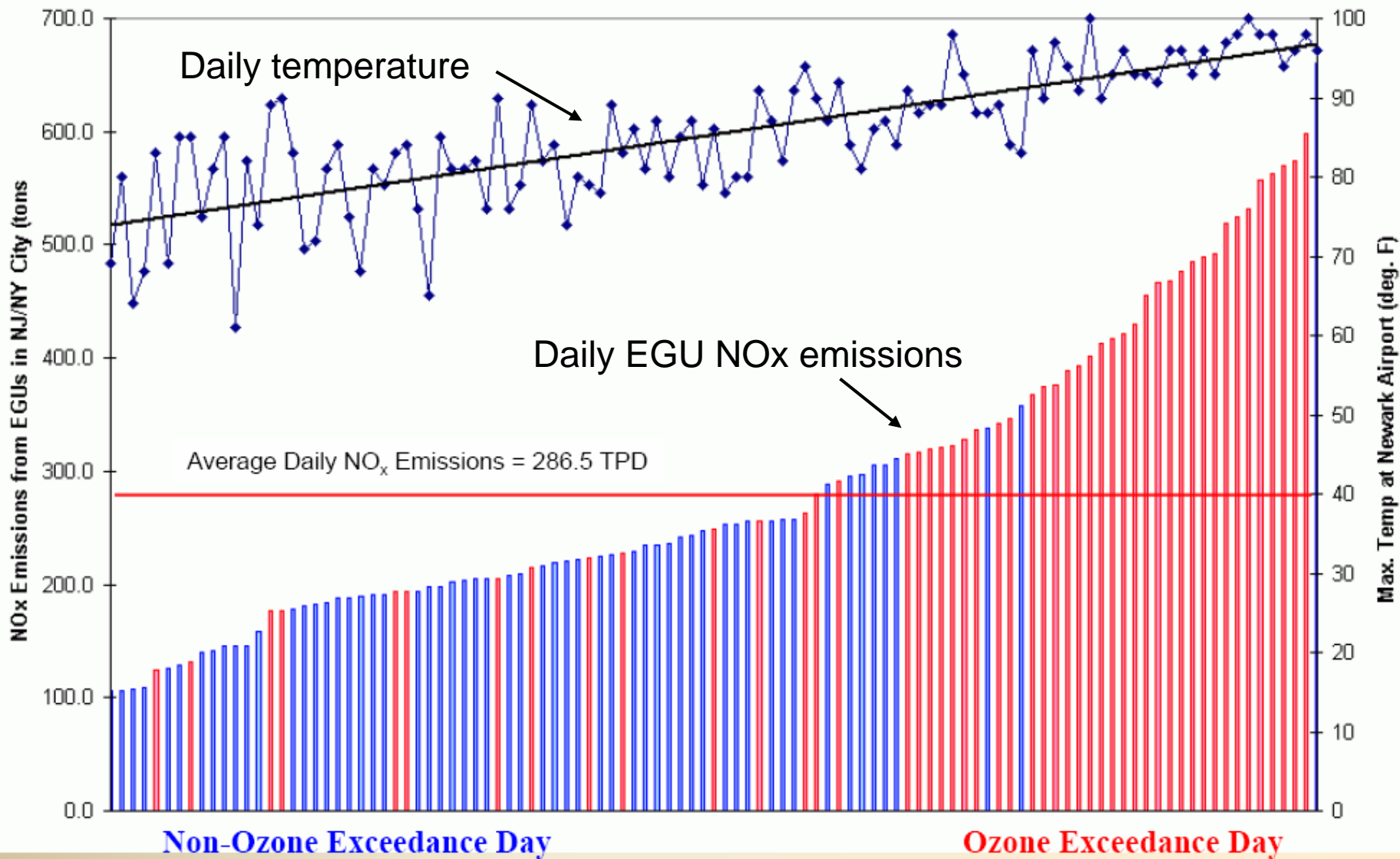
Wednesday, July 26, 2006

A less power-hungry New England

[T]here is a simple answer to help this region control soaring power costs, avoid potential shortages during peak power use periods, and cut emissions: ***Reduce the amount of electricity that is used.***

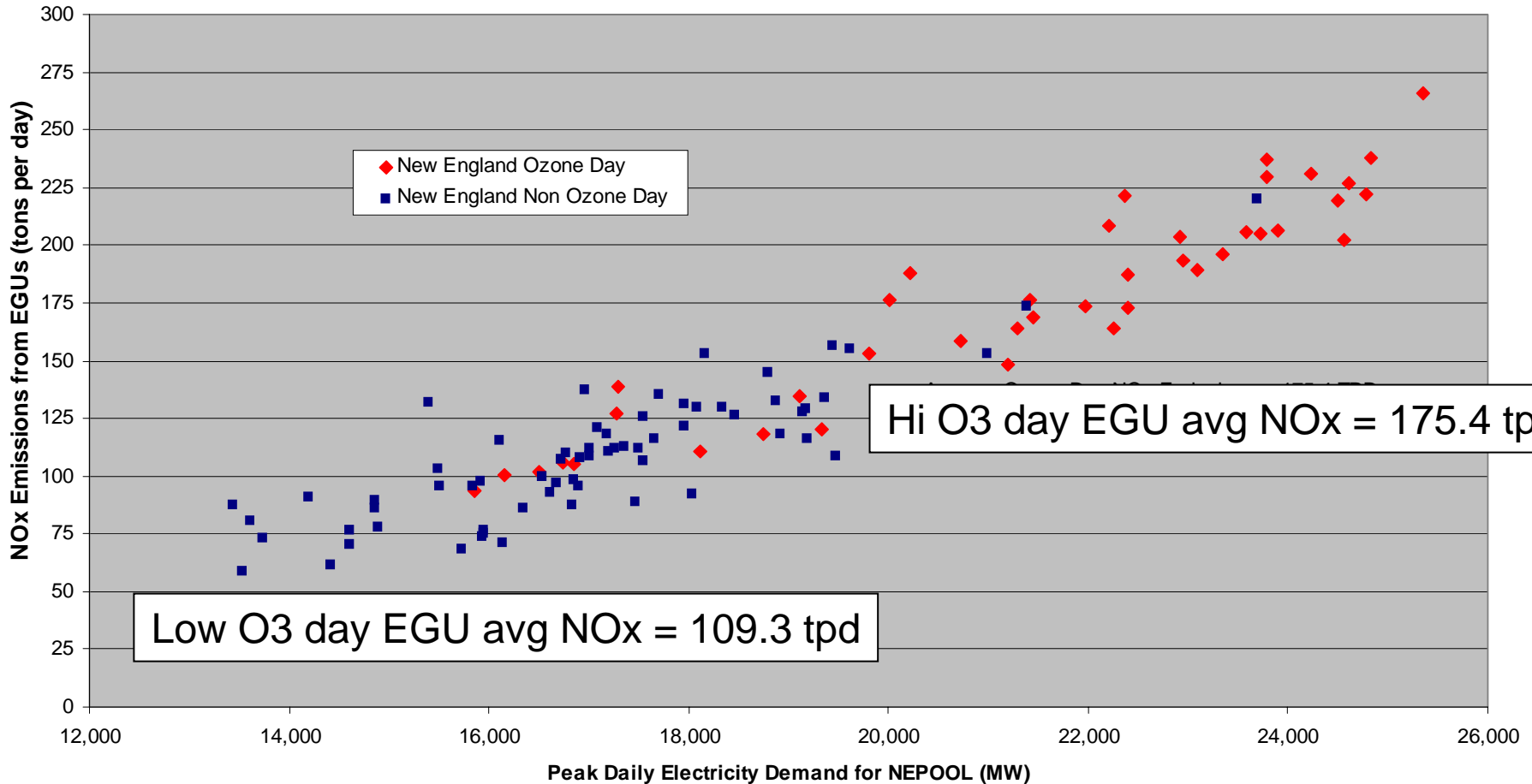
- Gordon Van Welie, President and CEO, ISO-NE

Daily NO_x Emissions from EGUs in NJ/NY City (June 1 - September 15, 2002)



EGU NO_x higher on high ozone days

Daily NO_x Emissions from EGUs vs. Peak Daily Electricity Demand
(June 1, 2002 - September 15, 2002)

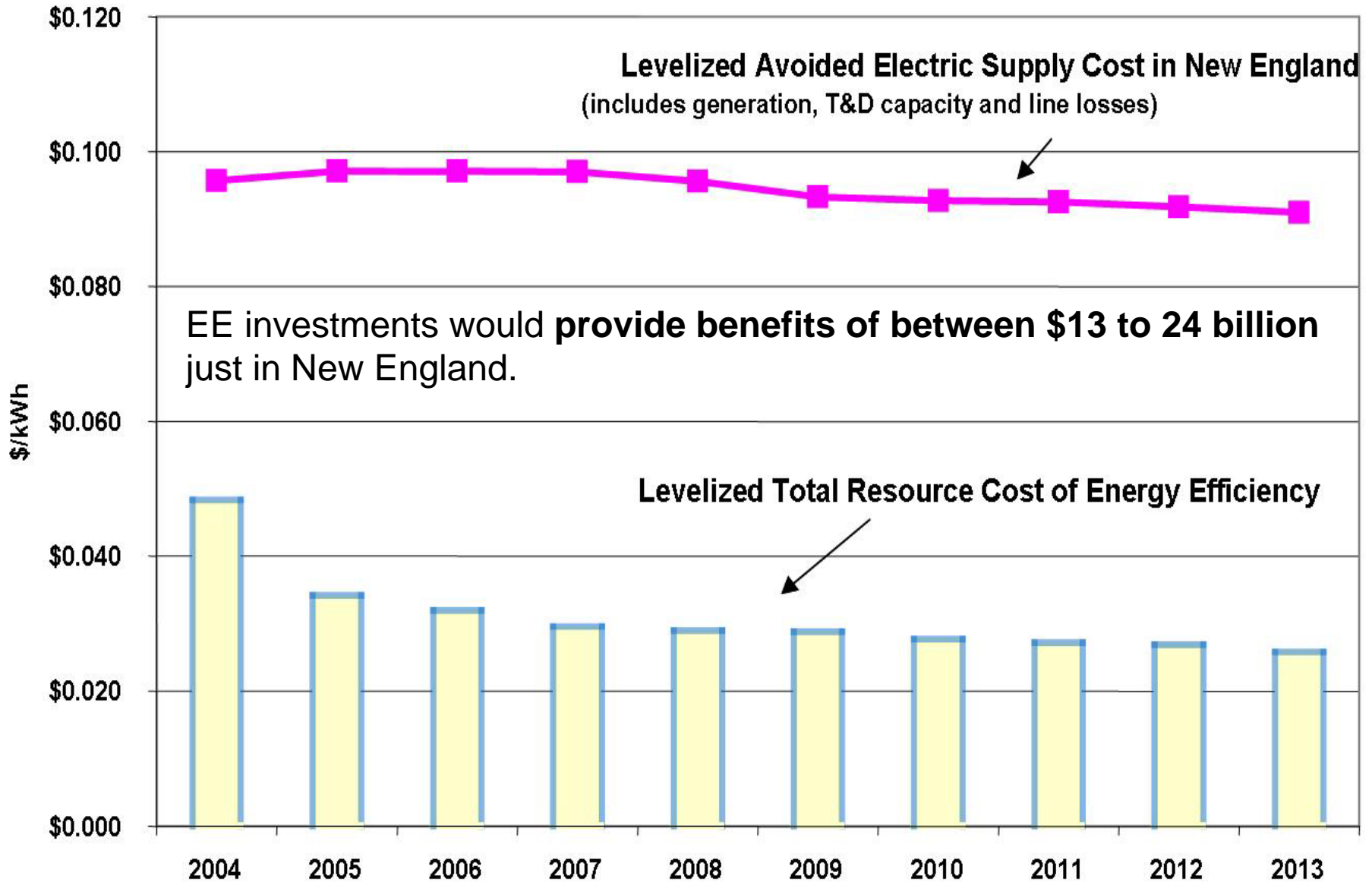


Choice is not whether, but how?

- More controls
- Hot day dispatching criteria
- Day-specific NO_x budgets
- Other stuff, and...

- *Opportunities on the demand side*
 - *reducing emissions by reducing consumption*

Energy Efficiency is 67% Cheaper Than Supply



And now even more incentives for demand-side resources

- **Forward capacity market (FCM)** – “other demand-side resources” to compete for capacity payments:
 - Energy efficiency
 - Distributed generation
 - Demand response measures
 - Load management

More Incentives (cont.)

- **EPACT05**

- DOE with states to explore demand-side in new ways (e.g., real-time pricing)

- **SIPs**

- Ozone attainment deadlines looming
- Low hanging fruit long gone

Cost Incentives

- Rising fuel and electricity prices:
 - Natural gas prices ↑ 150% in 6 years
 - Oil prices \$ > 2x in 3 years
 - Electricity rates in Northeast highest in US
- RGGI - will set CO₂ price signal

The Thinking Challenge

- “*Other demand-side resources*” are resources
- *They are not* smokestack controls

Mutual goals

- Every \$1 for fossil fuels leaves our region, but investing in demand-side resources generates economic benefits within ...
- ... and brings cleaner air

Trends in State Energy Planning

States still control content and nature of service

Two retail competition states:

- Rhode Island's *SB 2903*
- Maine's *Energy Independence Act*

Rhode Island & Maine

- Rhode Island's *SB 2903* now in effect
 - “Least-cost procurement” requires energy efficiency and conservation in addition to traditional generation
- Maine's *Energy Independence Act*
 - Favors “lowest cost” resources and prioritizes procurement of demand-side measures, EE, RE, and carbon-neutral capacity

Existing Revenue Stream

~\$630 million/year ratepayer funded state EE programs

State	Funds/year
NY	\$264 million
MA	\$135 million
NJ	\$103 million
CT	\$62 million
RI	\$22 million
NH	\$18 million
VT	\$17 million
ME	\$11 million

New Revenue Streams

- Forward Capacity Market settlement
 - Transition payments for EE 2006-2010
- RGGI
 - Minimum 25% allowance set aside req't for EE, RE, DG, other “public benefit purpose”
- New state energy funds
 - RI natural gas efficiency fund

Potential Reductions in Peak Generation from Demand-side

- New England:
 - ~200 MW by summer 2010 ~75% from EE
- New York:
 - ~1,200 MW by summer 2012 ~75% from EE
- NYSERDA estimates economically viable EE and RE could offset peak generation even more:
 - 12,300 MW - 15,000 MW in 2012 >85% from EE

Where Do We Go from Here?

We need more progress in

- **dismantling** market barriers
- **standardizing** measuring & verification of EE and AQ benefits

Heat & Smog

- Do we just control more of what's out there?
- Or do we work at:
 - Including new resources akin to generation capacity?
 - Quantifying air quality gains?

In Sum

- Heat, smog, and reliability challenges have common solutions
- Leveraging demand-side reductions is a low-cost approach to **improving air quality**
- Reducing energy use = significant **regional economic benefits**

The Clean Air Association of the Northeast States



www.nescaum.org