

Energy in Connecticut

Presented by
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Institute for Sustainable
Energy
at Eastern Connecticut
State University



First a Survey....

- Do you pay an energy bill?

First a Survey....

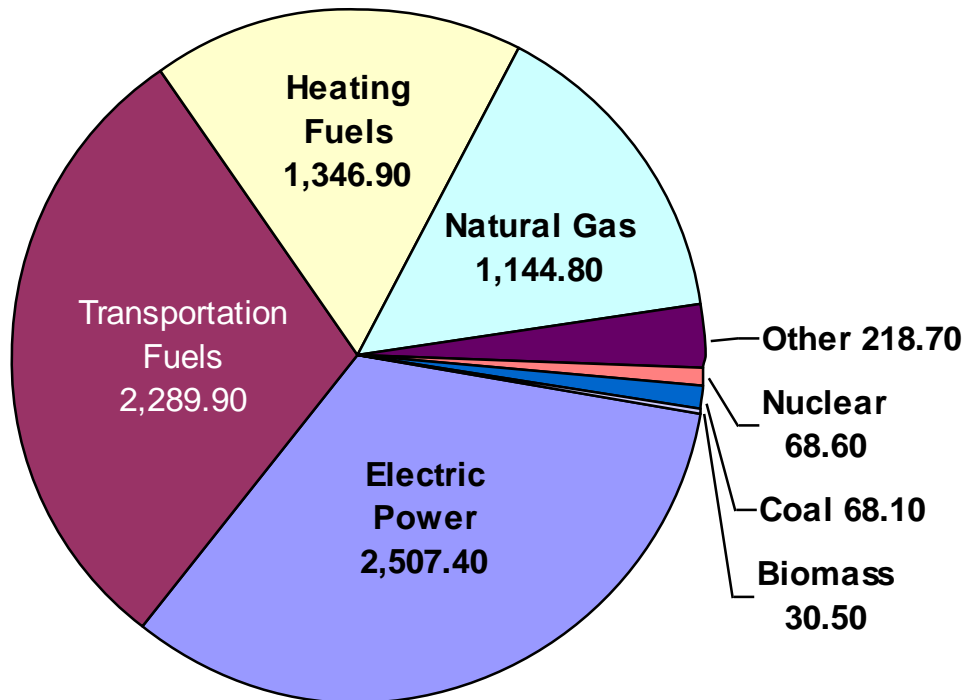
- Do you pay an energy bill?
- What does electricity cost in CT (\$/kWh)?

First a Survey....

- Do you pay an energy bill?
- What does electricity cost in CT (\$/kWh)?
- What is the biggest CT Energy problem?

Where CT's Energy Money Goes

**Connecticut Energy Expenditure Estimates
by Fuel Source, 2002 (Million Nominal
Dollars)**

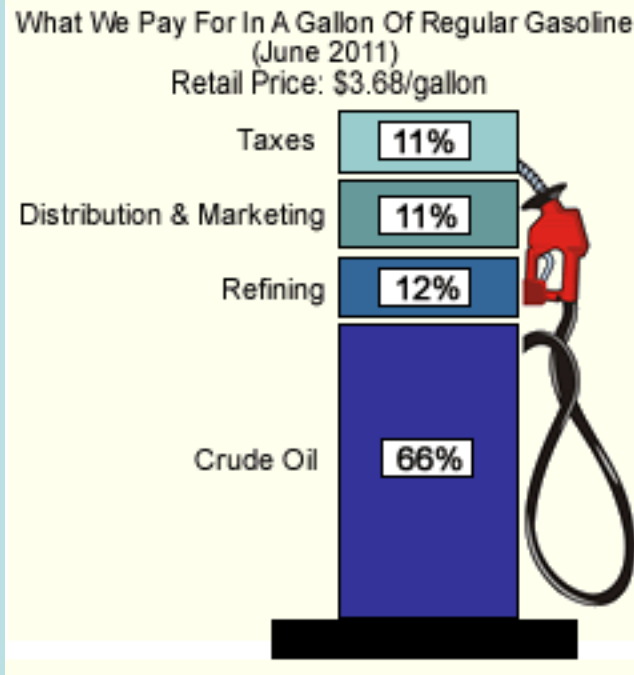


2002 total
expenditures:
\$7,674,900,000

2008:
\$16,460,000,000

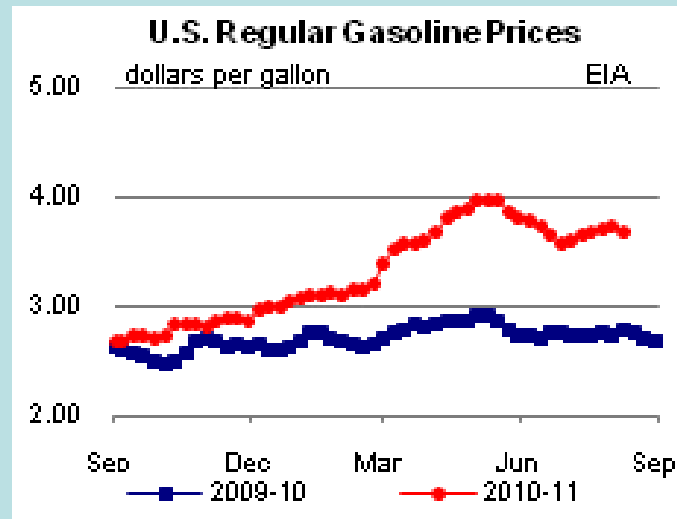
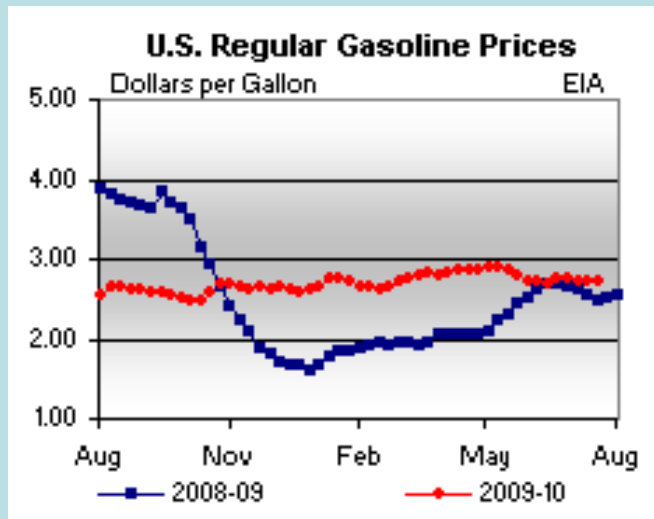
Most spent on electric
power, transportation
and heating.

Gasoline Prices

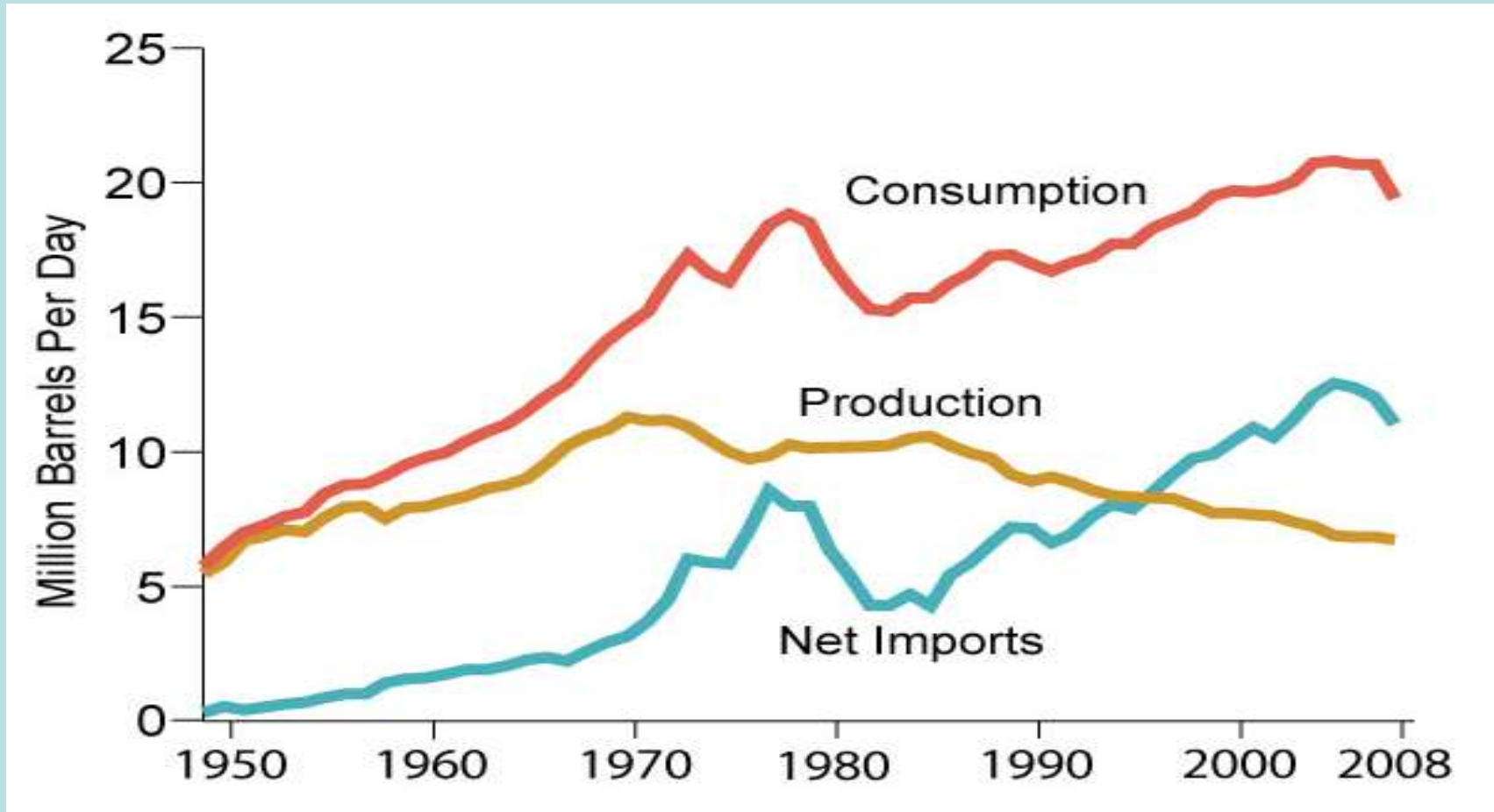


Prices

June 2008	\$4.12
Sept. 2008	\$3.65
Oct. 2008	\$3.22
Nov. 2008	\$2.15
Dec. 2008	\$1.61
Aug. 2011	\$3.68



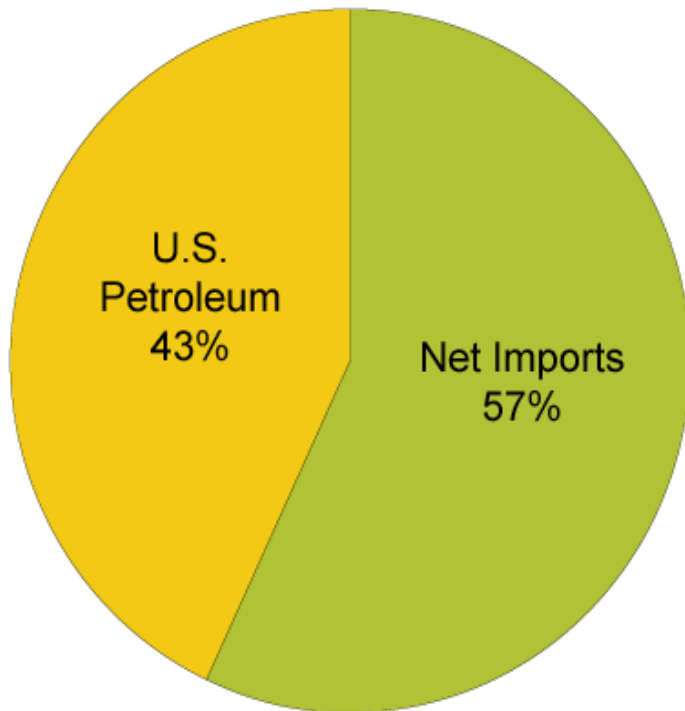
Have we always been dependent on foreign oil?



Where does US Oil come from?

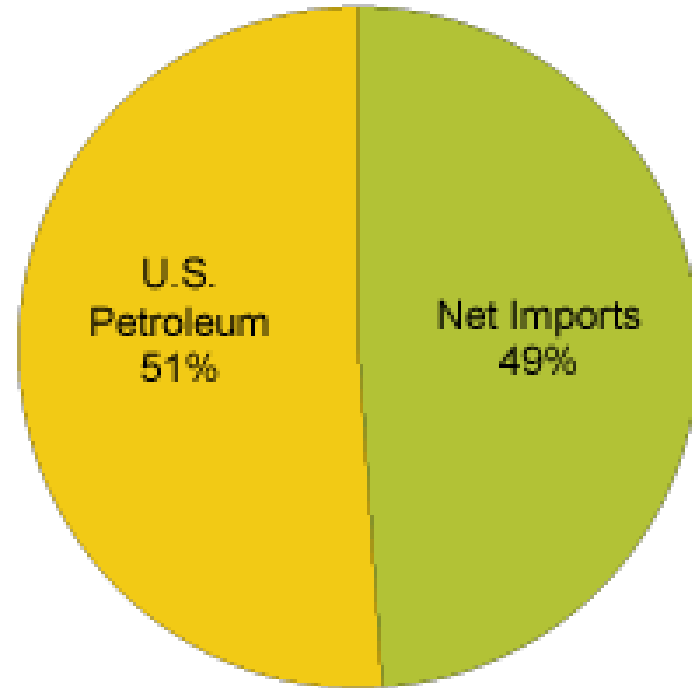


Net Imports and Domestic Petroleum as Shares of U.S. Demand, 2008



Source: U.S. Energy Information Administration.

Net Imports and Domestic Petroleum as Shares of U.S. Demand, 2010



Source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 3.3a (April 2011), preliminary data.

2010 US Oil Imports

Your choices:

- Algeria
- Angola
- Brazil
- Canada
- Columbia
- Ecuador
- Iraq
- Mexico
- Nigeria
- Saudi Arabia
- Venezuela

US Oil Imports

(million barrels per day)

2008 YTD

- Canada 1.91
- Saudi Arabia 1.52
- Mexico 1.18
- Venezuela 1.04
- Nigeria .94
- Iraq .65
- Angola .50
- Algeria .31
- Brazil .23
- Ecuador .21

2010 YTD

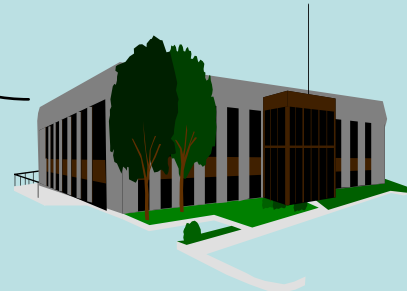
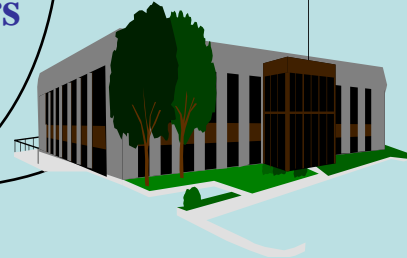
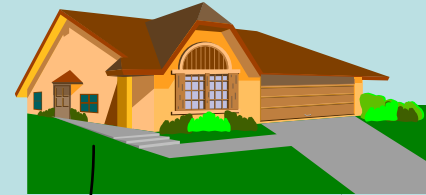
- Canada 1.92
- Saudi Arabia 1.06
- Mexico 1.06
- Venezuela .89
- Nigeria .98
- Iraq .50
- Angola .40
- Columbia .31
- Algeria .30
- Brazil .26
- Ecuador .18

Electric Industry Restructuring 1998

Deregulated

Remains Regulated

Competitive Market



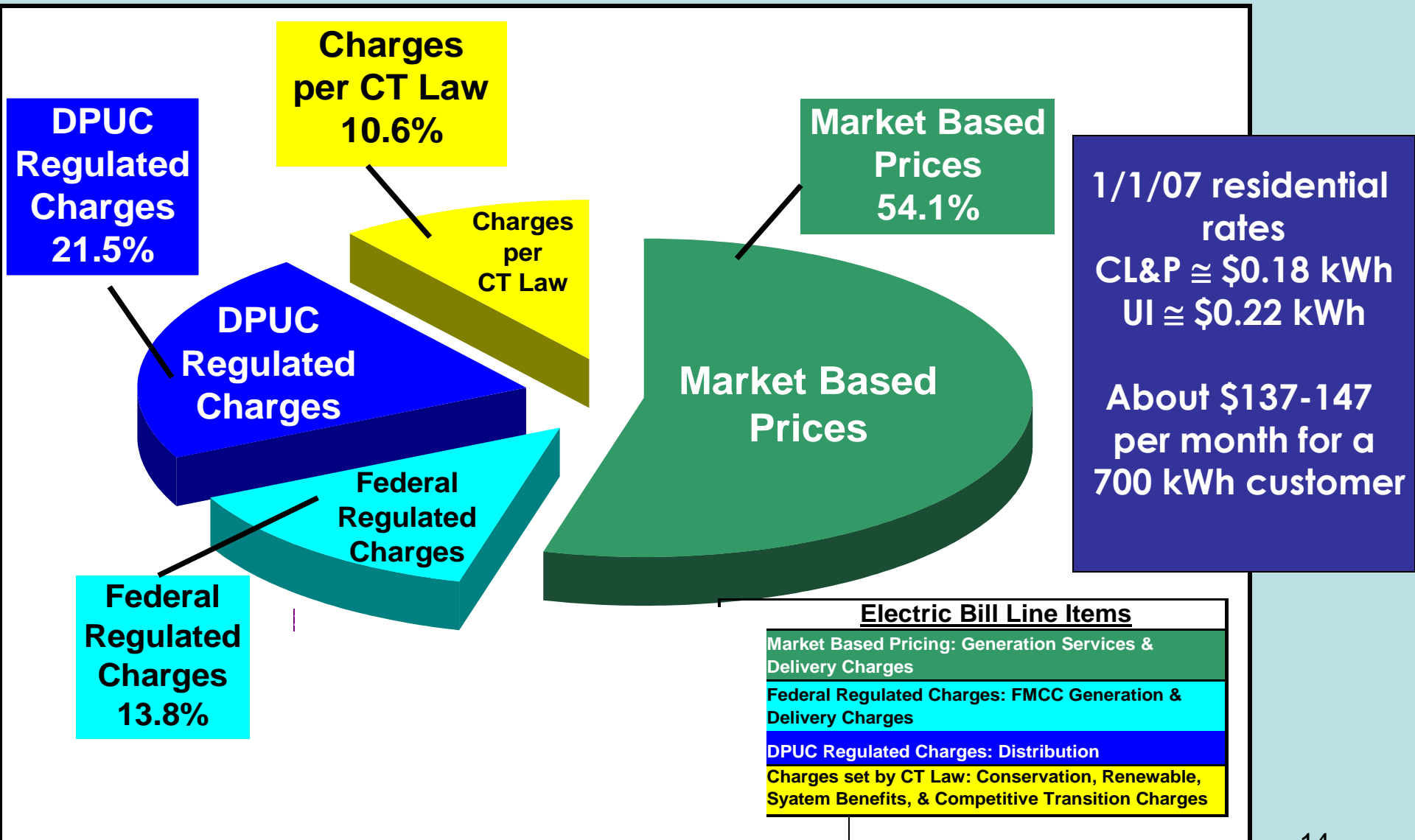
Retail Customers

Generation

Transmission

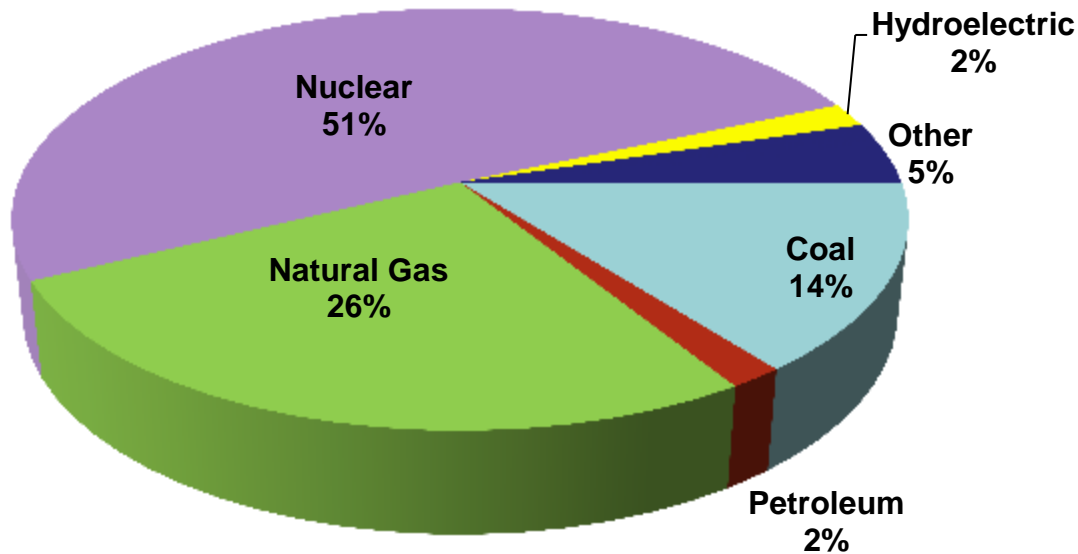
Distribution

How your electric cost is divided



Rise in Fuel Costs

CT Electricity Generation by Fuel Source 2008



Petroleum

1990 \$3.02/M Btu
2006 \$8.50/M Btu
2008 \$17.44/M Btu

Natural Gas

1990 \$2.70/M Btu
2006 \$7.33/M Btu
2008 \$10.33/M Btu

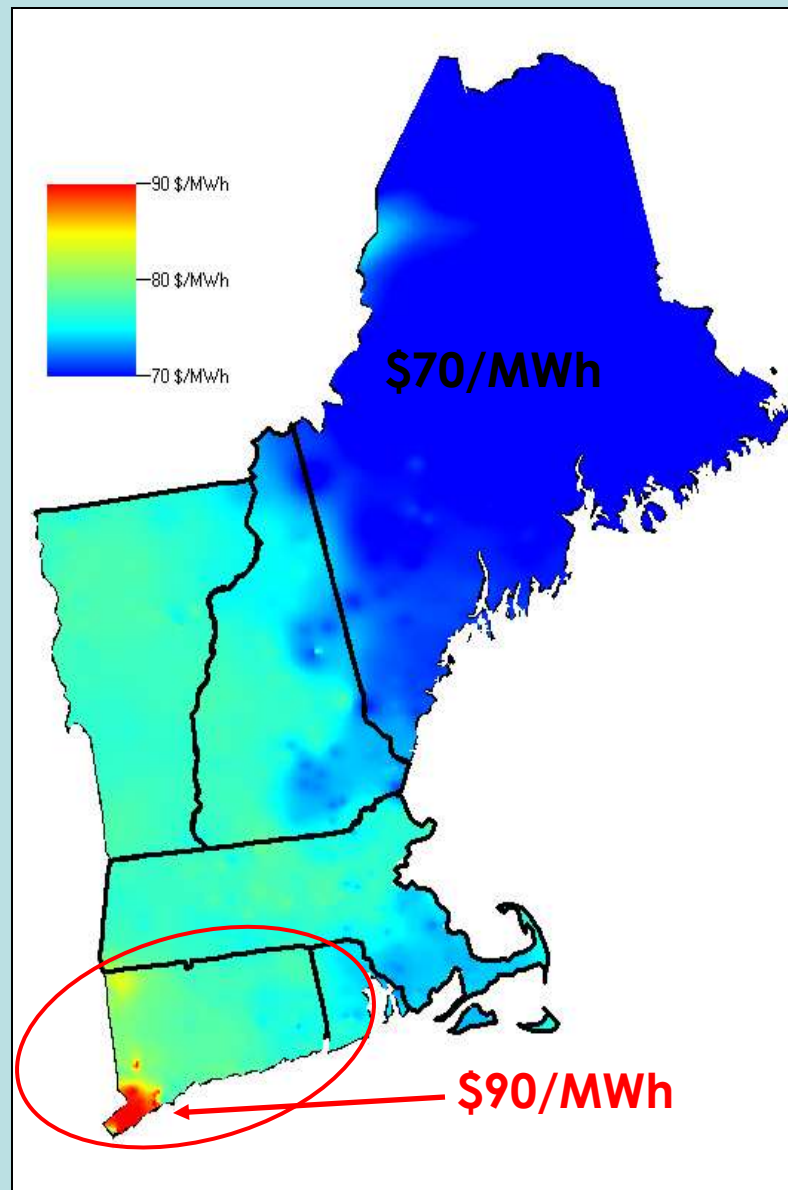
Coal

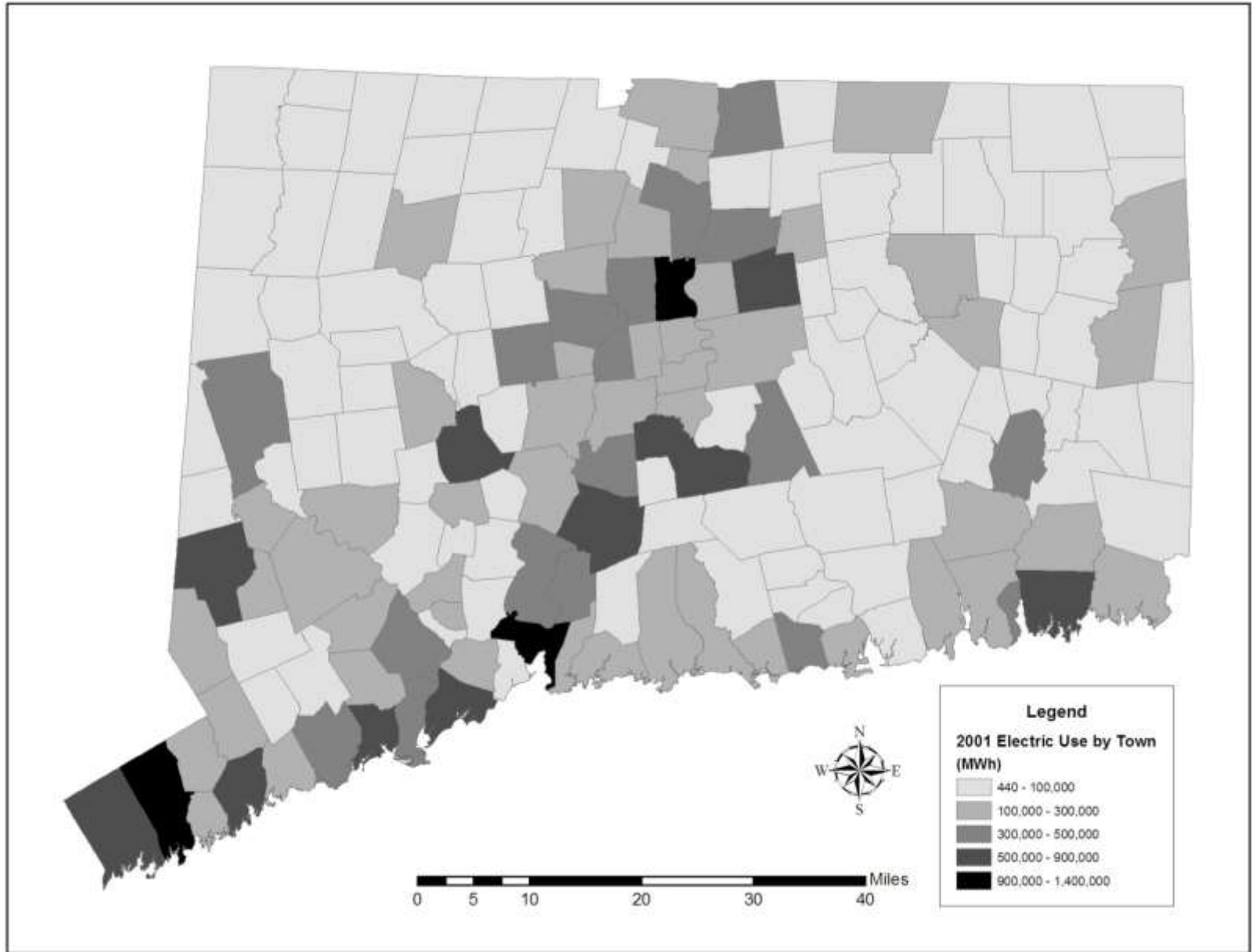
1990 \$2.12/M Btu
2006 \$2.60/M Btu

State and Regional Energy Supply and Demand Issues

The Red Zone!!!

“Connecticut could become a separate pricing zone for electricity if it does not control growth in electric use and demand and build 900 MW of generation and load control by the end of 2009”



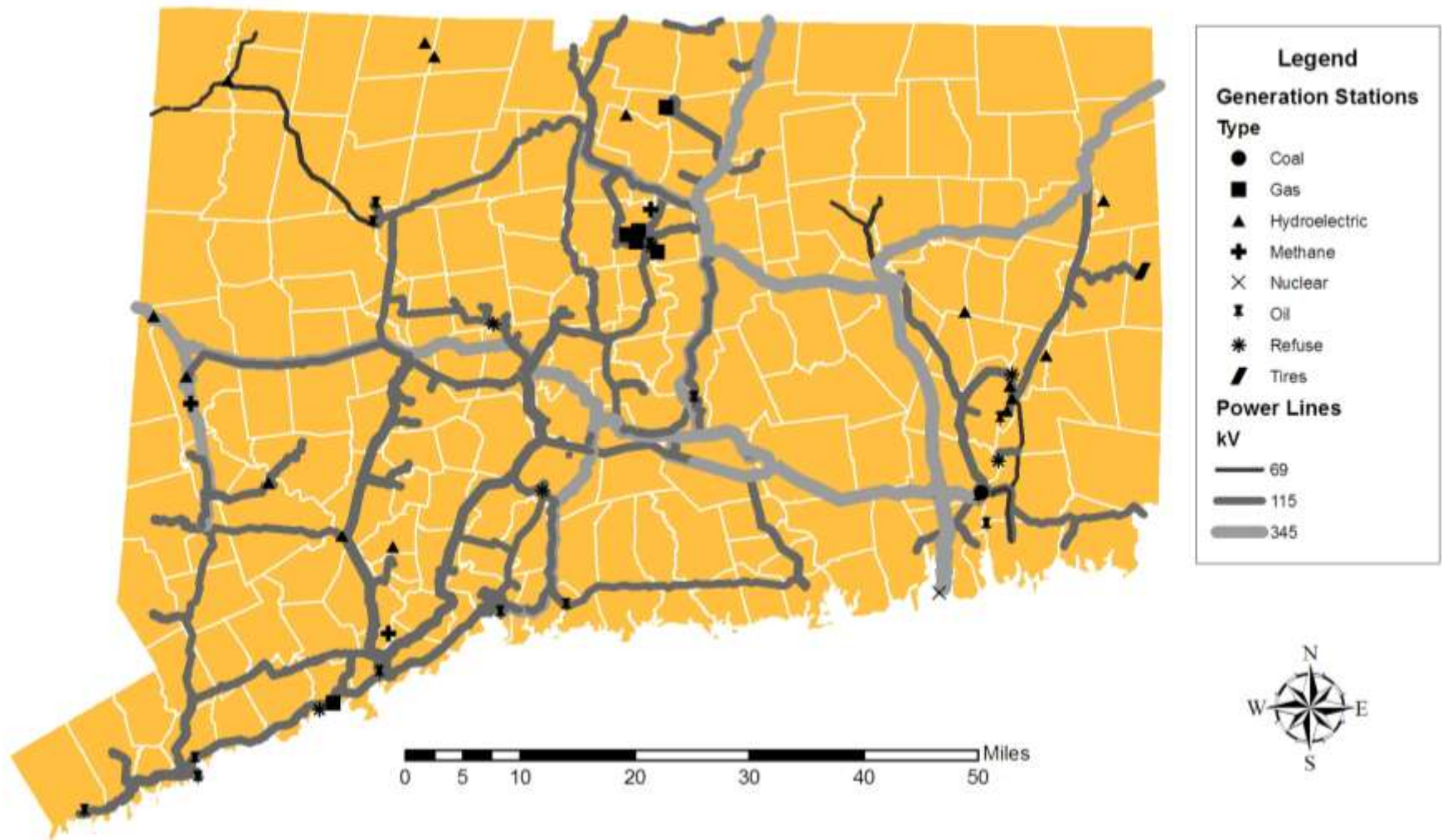


2001 Electricity Use in Connecticut Towns

source ISE

Connecticut's Ten Largest Plants 2009

Plant	Energy Sources	Net Summer Capability (MW)
1. Millstone	Nuclear	2,103
2. Middletown	Petroleum	770
3. Lake Road Generating	Gas	745
4. Bridgeport Harbor	Coal	532
5. Milford Power Project	Gas	511
6. Montville Station	Petroleum	496
7. Bridgeport Energy Project	Gas	454
8. New Haven Harbor	Petroleum	448
9. NRG Norwalk Harbor	Petroleum	342
10. PPL Wallingford Energy LLC	Gas	190



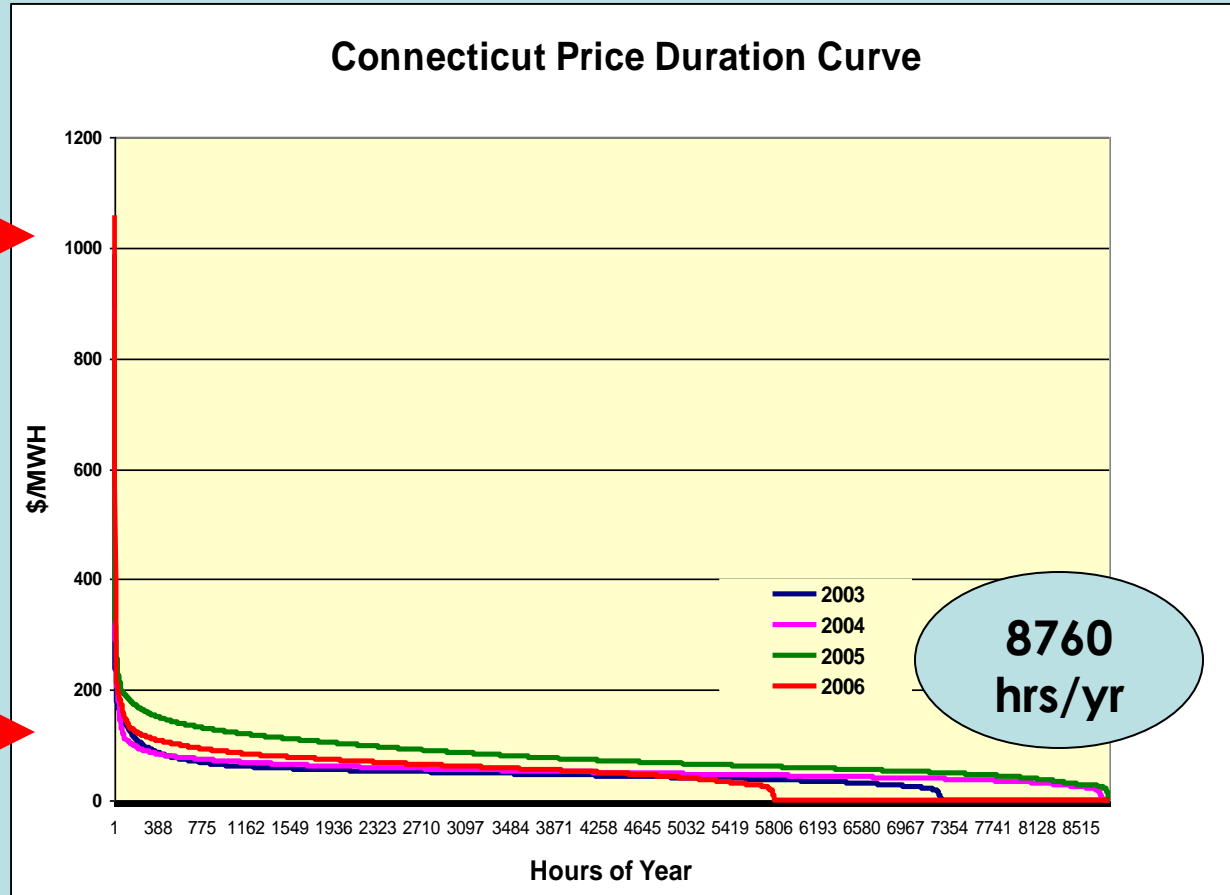
Connecticut Power Lines and Generation Stations, 2001,

source ISE

“How much are we willing to pay for unlimited electric use for less than 5% of the year?”

**\$1057/MWh on
7-2-06
(7250 MWh)**

**\$123/MWh for
6300MWh**



	Max \$/MWH	Max MW	\$/MWH at 6,300	Hours Above 6,300MW	
2006	\$1,057.08	7,367	\$123.18	70	
2005	\$865.94	7,012	\$181.54	101	
2004	\$893.00	6,357	\$110.46	6	20
2003	\$988.68	6,571	\$98.62	19	

www.ctcleanenergy.com/communities

Stonington

20% by 2010 Community

Select Your Town From the List :

Check your town's Clean Energy Points on our Program Progress Page [here](#).

Joined the 20% by 2010 Campaign:
May 2008 - [View Resolution](#)

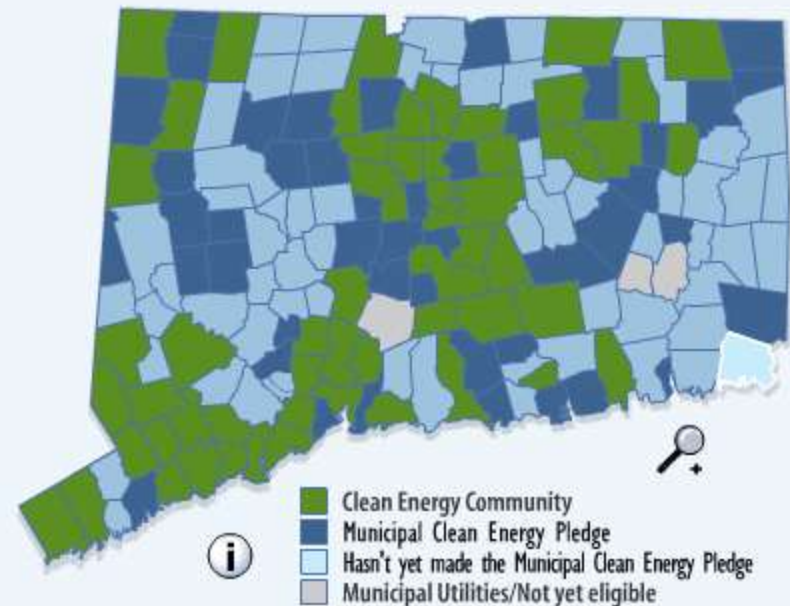
Local Clean Energy Contact:

Neil Mackillop

Phone: 860-535-1744

Email: mackillopneil@yahoo.com

Your town is eligible to receive a Community Innovation Grant. To find out more, please click [here](#).



Getting Help: Connecticut Energy Efficiency Fund



- Provides technical assistance and cash incentives to CL&P and UI customers designing or upgrading their facilities using energy-efficient equipment
- Provides **~\$4 in benefits for every \$1 invested**



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CONNECTICUT'S ENERGY INFORMATION CENTER

Providing consumers with the resources they need to:

- Reduce Energy Consumption and Cost
- Improve the Environment
- Promote Economic Development and Energy Security

CTEnergyInfo.com is supported by the Connecticut Energy Efficiency Fund and maintained by the Connecticut Department of Energy & Environmental Protection.

Home Energy Solutions

Low Cost In-Home Services
No Cost for Income-Eligible Customers

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Learn about ways you can save energy, money and help the environment.

CT Power/Air Quality Update

[24-Hour Graph & More Info](#)

Current Demand / Air Quality	Current Air Quality Map
4,560	

Today's Forecasted Air Quality is **Moderate**

■ Actual ■ Forecast
■ Past Average Peak Demand - 6,500 MW

Today, who wouldn't buy ENERGY STAR® central air?

ACT NOW to receive up to \$500 in total savings!

Need Help Financing Your Energy Saving Home Improvement Projects?

Find Out More About Low Interest Loans
Sponsored by the Connecticut Energy Efficiency Fund

ENERGY EVENTS CALENDAR

Getting Information

- Electric Rates
- Electric Suppliers
- Energy Programs
- Links to Services

What we know...

- Do you pay an energy bill?

What we know...

- Do you pay an energy bill?

We all pay—at the pump, in our electric bills, for heating and cooling, in every product and service we buy.

What we know...

- What does electricity cost in CT (\$/kWh)?

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Current average rates are

\$.18 to \$.22/kWh,

the highest in the continental US

What we know...

- What is the biggest CT Energy problem?

What we know...

- What is the biggest CT Energy problem?

It's not just one problem!

High costs affect consumers and businesses.

Energy resources are finite.

We need to diversify for our security.

We need to find ways to maintain lifestyles and the environment.

What we know...

- There's plenty we can be doing to help— our state, our pocketbooks, and the environment



Contact information:
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