

# Connecticut's Energy Plan

## NAESCo NE Regional Meeting September 28, 2006



At Eastern Connecticut  
State University

## e-Alerts

Receive news updates by e-mail.

- [Subscribe now](#)
- [Update your e-Alerts](#)

## Welcome to CEAB

In 2003, An Act Concerning Long-Term Planning for Energy Facilities (PA 03-140) reconstituted the Connecticut Energy Advisory Board (CEAB) and revised its mission. The primary goal for the new entity is to encourage competing energy solutions and to provide the opportunity to review multiple energy solutions simultaneously.

The CEAB is responsible for identifying and coordinating state energy needs and recommending strategies and solutions to meet those needs in a manner that is not only environmentally responsible, but also meets reasonable cost and reliability criteria.



## CEAB Guiding Principles

Citizens and businesses in Connecticut must have access to a safe, affordable, diverse and reliable energy supply.

Connecticut's policy makers must act in forums where the state's energy interests can be advanced.

Connecticut's policy makers must act in a coordinated fashion on both a state & regional basis to address energy issues using CEAB's energy plan as a blueprint for action.

## What's New:

CEAB has issued its first proactive request for proposal. (See [RFP 0001](#).) You can find both the board's preferential criteria and all open RFPs by clicking on [Requests for Proposal](#) link along the top of this page.

## Board Activity

- [Meeting Agendas](#)
- [Calendar](#)
- [Meeting Minutes](#)
- [Schedule](#)
- [News Releases](#)



*Pursuant to Public Act 03-140, the Connecticut Energy Advisory Board (CEAB) will submit a **comprehensive energy plan** each year to the joint standing committees of the **Connecticut General Assembly** having cognizance of matters relating to energy, environment and transportation.*

*CEAB's goal is to outline the initiatives that will be key to achieving our long-term visionary goals and will help us to create a successful **state energy policy**.*



## Who is on the CEAB?

**Chairman Donald W. Downes,**

Chairman, Dept. of Public Utility Control

**Vice Chairman Ms. Mary J. Healey,**

CT Consumer Counsel

**Commissioner Ralph Carpenter,**

Dept. of Transportation

**Mr. John Mengacci,**

Office of Policy and Management

**Commissioner Gina McCarthy,**

Dept. of Environmental Protection

**Ms. Marie O'Brien**

*Governor's appointee*

**Commissioner F. Philip Prelli,**

Dept. of Agriculture

**Attorney James Sandler,**

*President Pro Tempore of the Senate appointee*

**Carl J. Schiessl**

Speaker of the House

**CEAB's recommends a two part,  
five year, state-wide  
Energy Goal:**

- **Reduce the state's peak  
electric demand by 10% by 2010  
and**
- **Reduce fossil fuel  
consumption by 10% by 2010**

## **8 Key Strategies:**

- 1. Promote Energy Efficiency and Conservation,**
- 2. Manage the State's Electric Load Shape to Reduce Federally Mandated Congestion Charges,**
- 3. Promote Distributed Generation and Combined Heat and Power,**

**4. Promote Clean, Renewable Energy Technologies,**

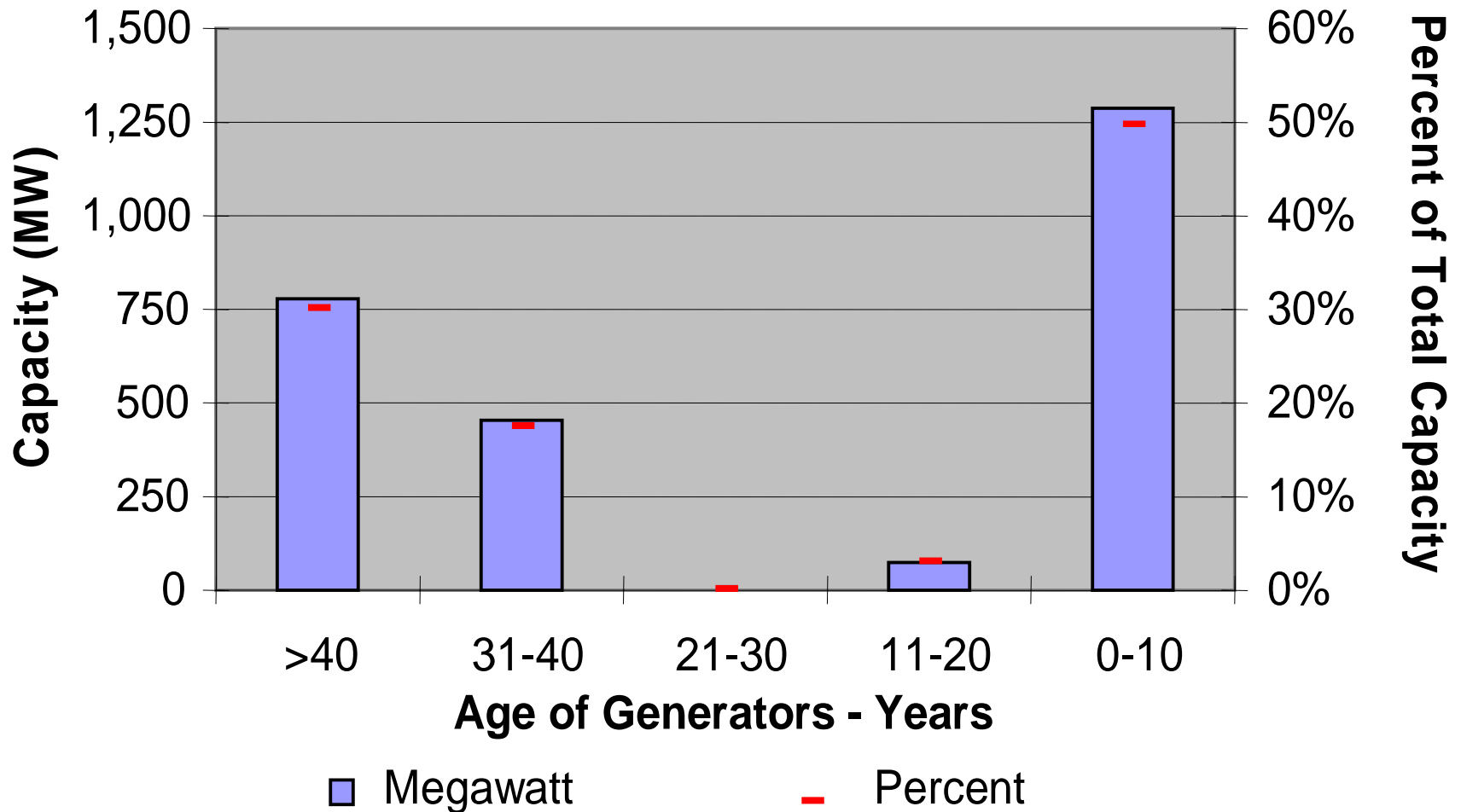
**5. Create Fuel Diversity and Reduce Dependence on Fossil Fuel,**

**6. Develop Transportation and Land Use Policies that Reduce Energy Use,**

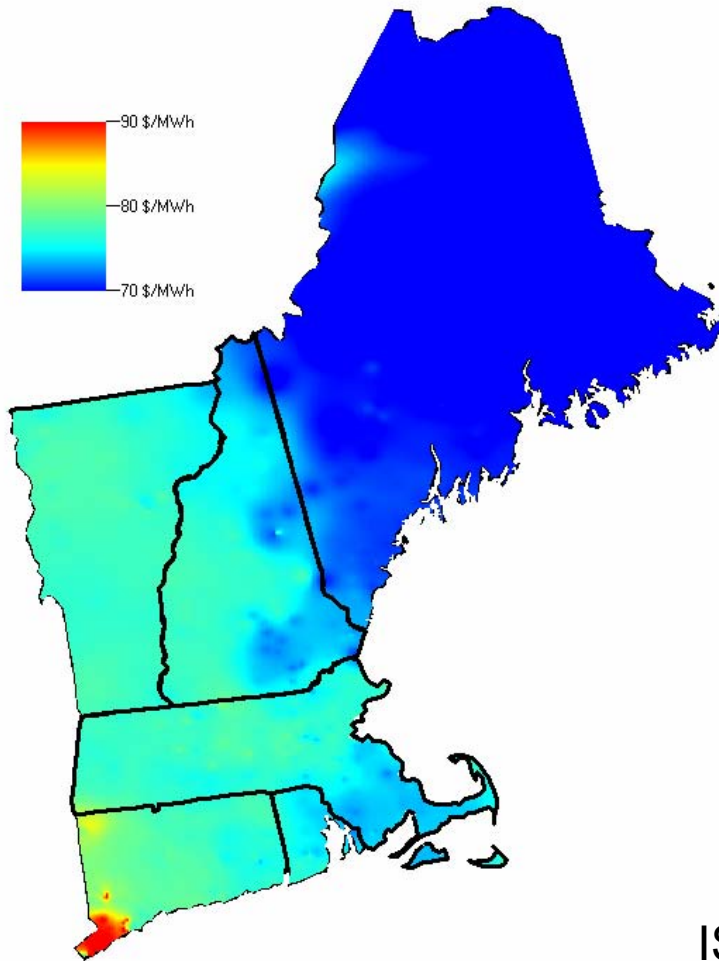
**7. Launch an Effective Public Education Program and Assist in Legislative Efforts to Support the 2006 CT Energy Plan, and**

**8. Explore the creation of an “*Energy Supply and Demand-side Technology Business Cluster*”**

# Age of Generators in Southwest Connecticut



# The Red Zone!!!

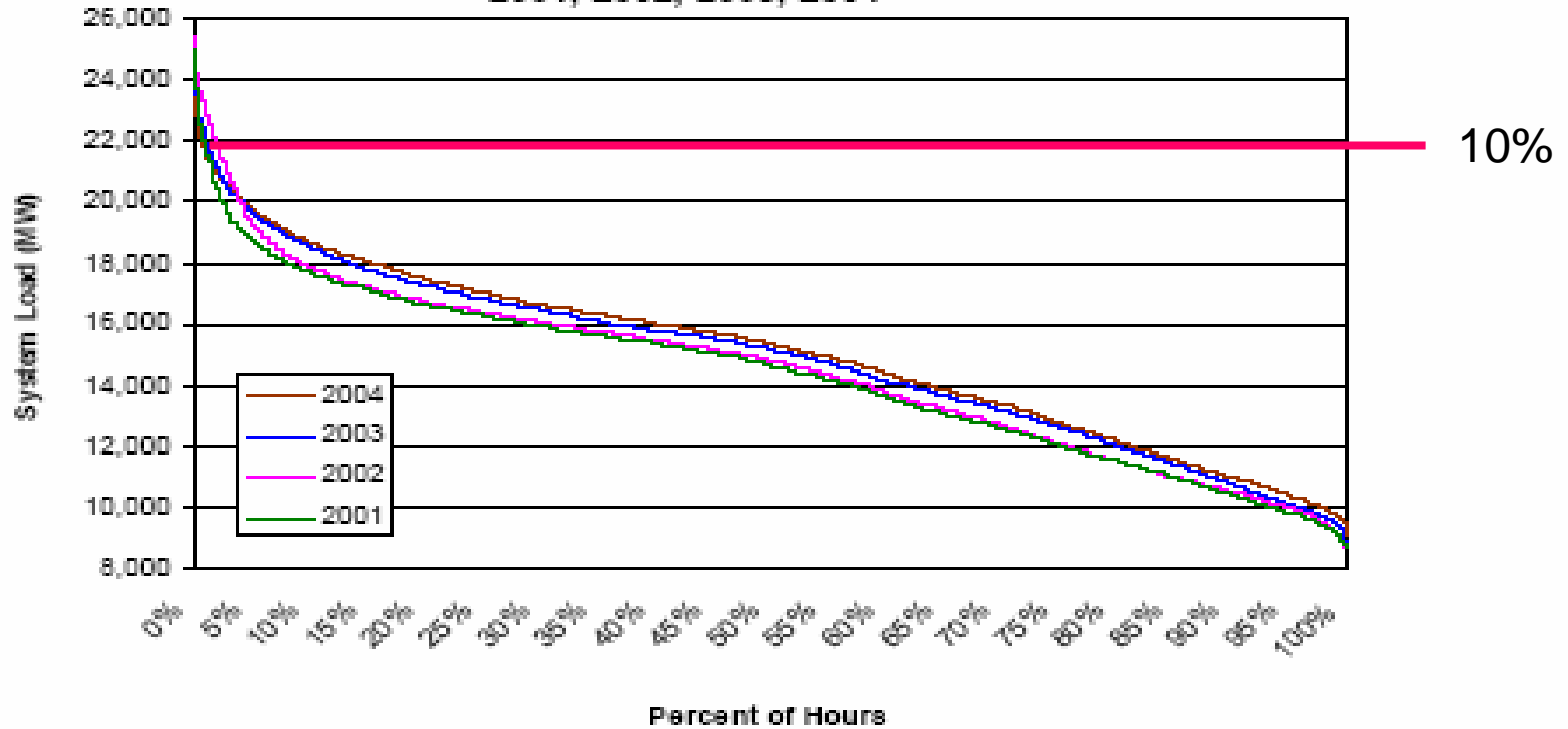


ISO Day-ahead Pricing

# Load Duration

Figure 3

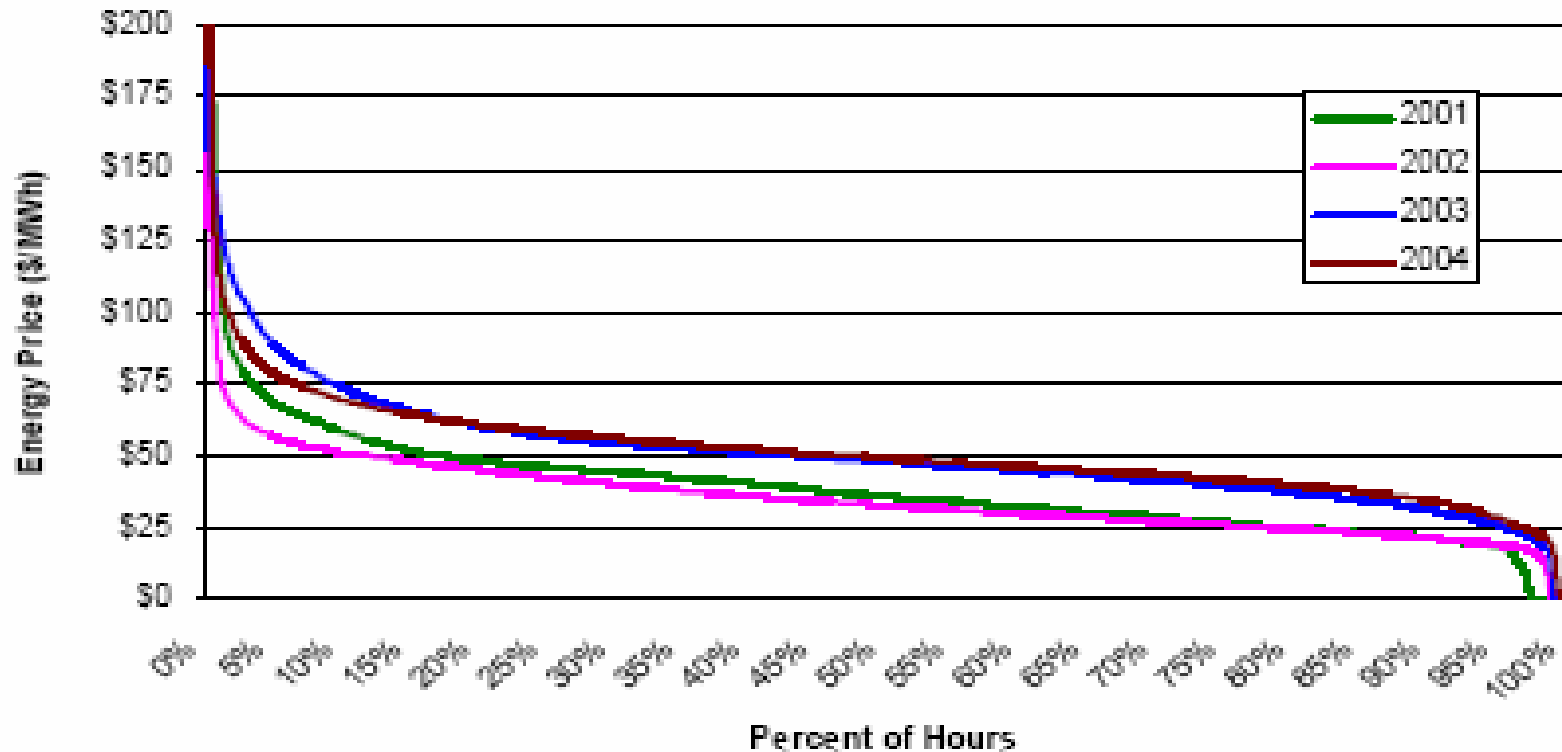
New England Hourly Load-Duration Curves  
2001, 2002, 2003, 2004



# Price Impact

Figure 17

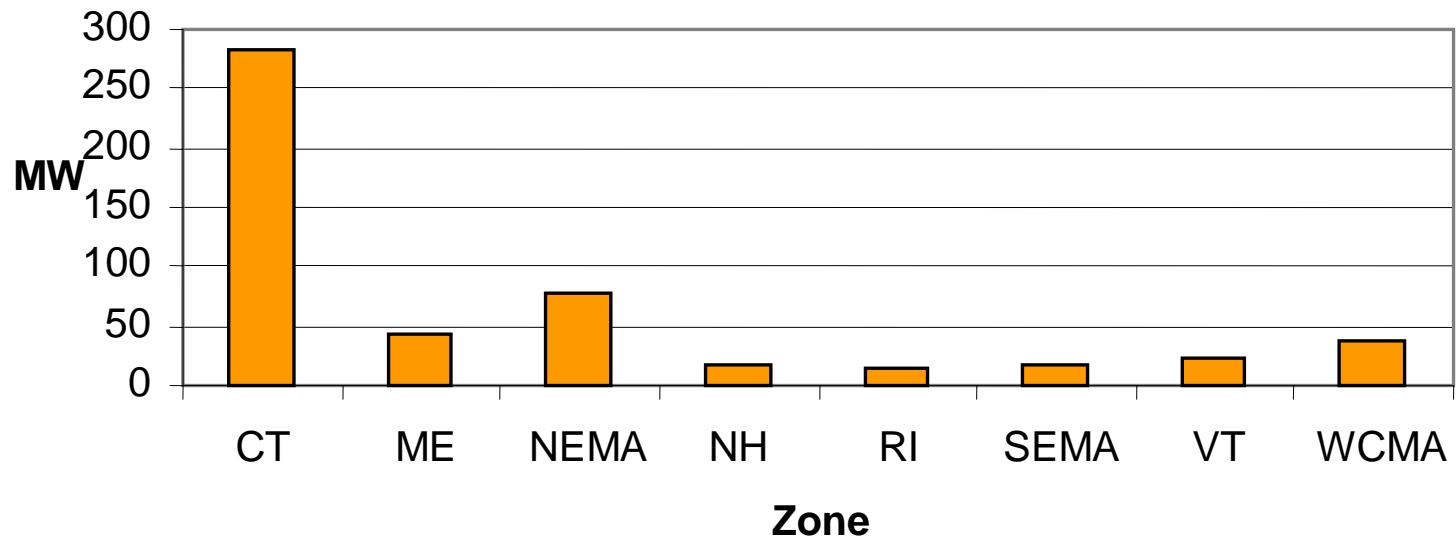
System Price Duration Curves, Prices < \$200  
2001-2004



System Price is single Energy-Clearing Price for Interim Market Period ending Feb. 28, 2003, and load-weighted Real-Time Energy Market LMPs for Mar. 2003 - Dec. 2004.

# Load Management Counts

Demand Response as of May 1, 2006



# **PA 05-1 Act Concerning Energy Independence Encourage Distributed Resources**

## **Customer side Distributed Generation**

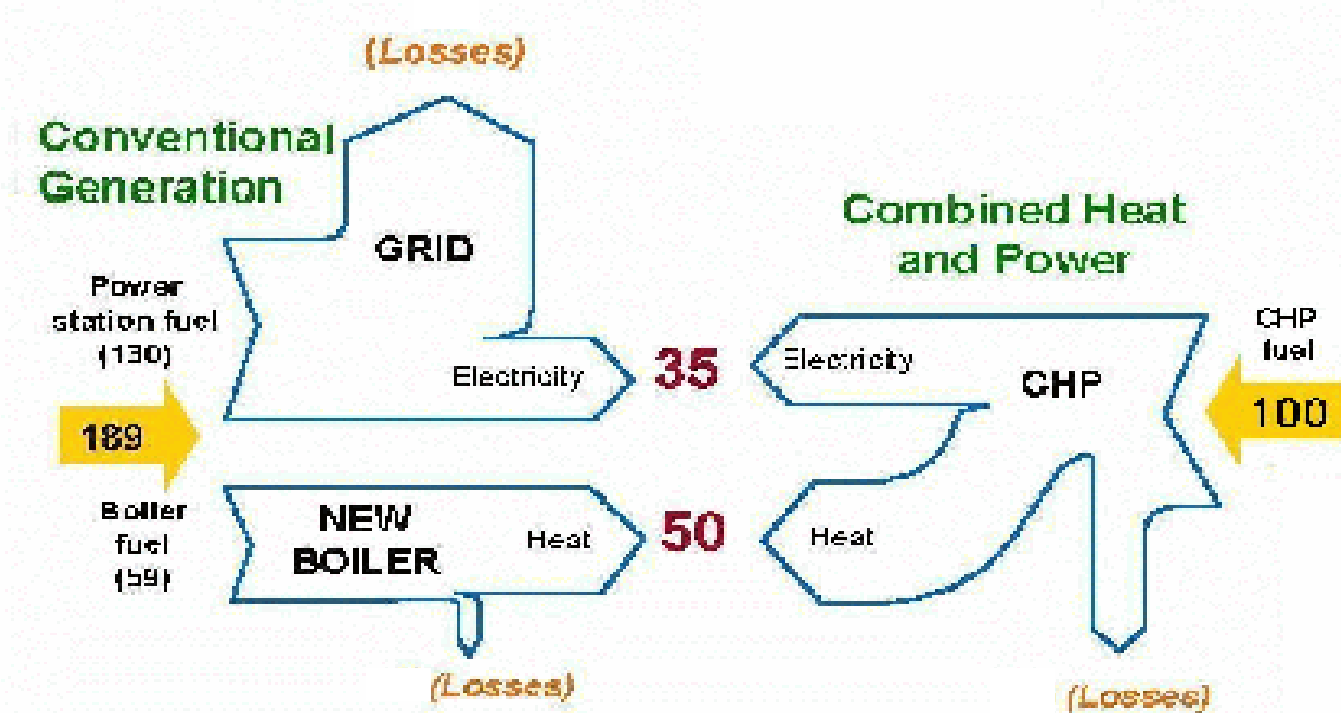
**The generation of electricity from a unit not more than sixty-five megawatts on the premises of a retail end user, including; CHP, quick start units, fuel cells, photovoltaic systems or small wind turbines,**

# Key DPUC Dockets for DG

- Docket No. 05-07-16  
Establishes incentives for customer side distributed generation.
- Docket No. 05-07-17  
Establishes monetary grants for capital costs of customer side distributed generation.
- Docket No. 05-07-19  
Includes distributed resources as Renewable Portfolio Standard - Class III.

# Combined Heat and Power (CHP)

**CHP: Onsite coincident production and use of electrical or mechanical power and thermal energy with 85% availability on system peak and 50% annual efficiency**



# CHP Prime Movers

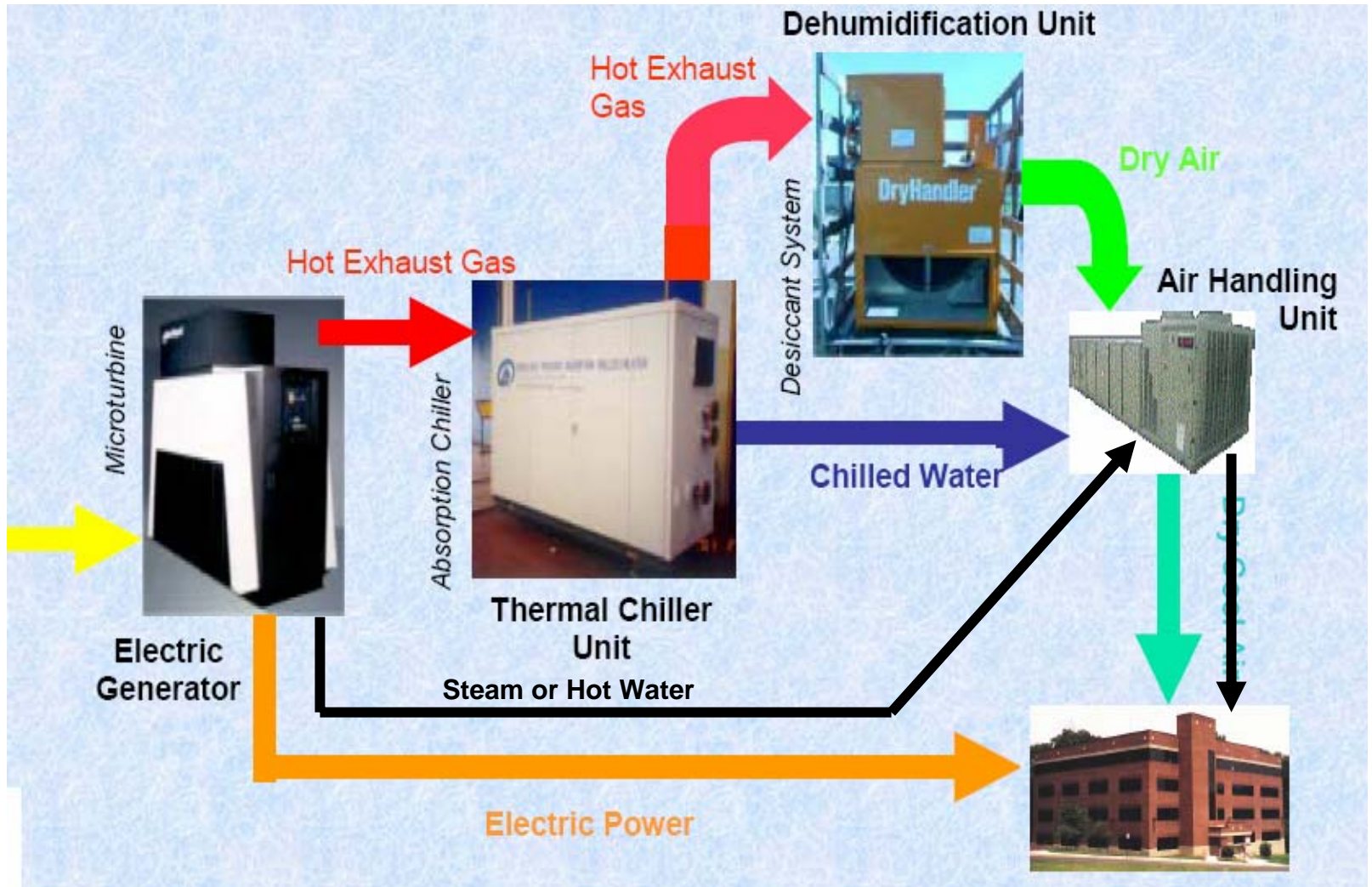


- Combustion Turbines 0.5 – 10MW
- Microturbines 30 – 250 kW
- IC Engines 30 kW – 5 MW
- Fuel Cells 200 kW – 1 MW

65% - 50% WASTE HEAT  
25% - 40% Electricity



# Advanced CHP System



# Grants for Customer- Side DG

- **\$200/kW Emergency Generators.**
- **\$450/kW Base load generation including Combined Heat and Power.**
- **Projects in Southwest Connecticut are eligible to receive an additional \$50/kW.**
- **Apply at Connecticut DPUC.**
- **40 project have requested funding.**
- **Renewable energy generation projects are eligible through the Clean Energy Fund.**

# Eligibility

- **Emergency generators must participate in the ISO-NE load response program.**
- **Base load generators must operate at an 85% load factor or greater, 12:00 pm to 8:00 pm weekdays, in the months of January and February and June through September. Grant can be prorated**
- **Grants are available for customer-side projects up to sixty-five megawatts.**
- **There is no minimum size.**

# Eligibility

- **Only new or incremental capacity is eligible for grants. Existing capacity is not eligible.**
- **Grants not available for emergency generation for hospitals, or other facilities required to have emergency generation.**
- **Gas air conditioning and gas chillers are not eligible for grants.**
- **Customers that receive funding from the CT Energy Efficiency Fund are eligible for DG grants.**

# Long-Term DG Financing

- **Banc of America Leasing & Capital, LLC (BAL) provides long-term financing for customer-side DR projects.**
- **Total amount of financing for projects up to \$150 million.**
- **The interest rate will be prime -1% fixed rate**
- **Available for new customer-side distributed resources through CT Gen. Stat. Section 16-1.**
- **Project financing is for capital cost and project development costs.**
- **The maximum size of the project is sixty-five megawatts / minimum project size is fifty kilowatts.**

# Eligibility

- **Eligible projects include distributed generation projects such as combined heat and power systems, emergency generation, fuel cells, photovoltaic systems, small wind turbines, peak reduction systems and demand response systems.**
- **The generator must begin operation after January 1, 2006.**
- **Financing will be available to the owner of a qualified customer distributed resource project.**

# Eligibility

- **Financing is available to customers of CL&P and UI for projects located in their respective service territories.**
- **Financing is not available for emergency generation for facilities that are required to have emergency generation under state and federal law.**
- **Gas air conditioning and gas chillers are not eligible for financing.**
- **Financing is available to customers also receiving funded from the CT Clean Energy Fund or CT Energy Efficiency Programs.**

# Utility Discounts

- Natural gas rates will be reduced for Customer-side generation projects that use natural gas by waiving as distribution charges.
- Electricity rates for power used when base load customer-side generators are out of service will be reduced by eliminating backup rates and eliminating demand ratchets for these projects.

# Benefits of DG to CT

- Improves System Reliability
- Lower FMCC and Energy Costs
- Lower Emissions (including CO<sub>2</sub>)
- Conserve Natural Resources
- Offers Price Stability
- Support Grid Infrastructure
- Defer Costly Grid Upgrades
- Utilizes Existing Infrastructure
- Facilitates Deployment of New Clean Energy Technologies

Questions?

[www.state.ct.us/dpuc/](http://www.state.ct.us/dpuc/)

[www.ct-energyinfo.com](http://www.ct-energyinfo.com)

[www.sustainenergy.org](http://www.sustainenergy.org)