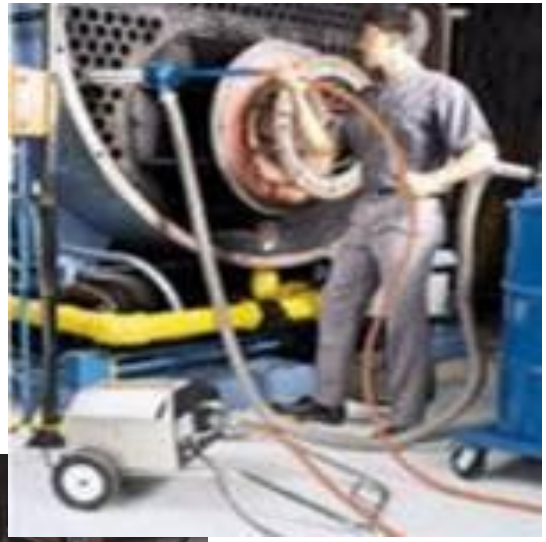
Combustion Equipment

- What type of equipment do you have?
- What are their sizes in output?
- What are their maximum firing rates in fuel?
- What are their current efficiencies?
- What is their annual fuel consumption?
- What are your annual BTUs/Sq. Ft?
- How can you reduce emissions and fuel cost through energy efficiency?

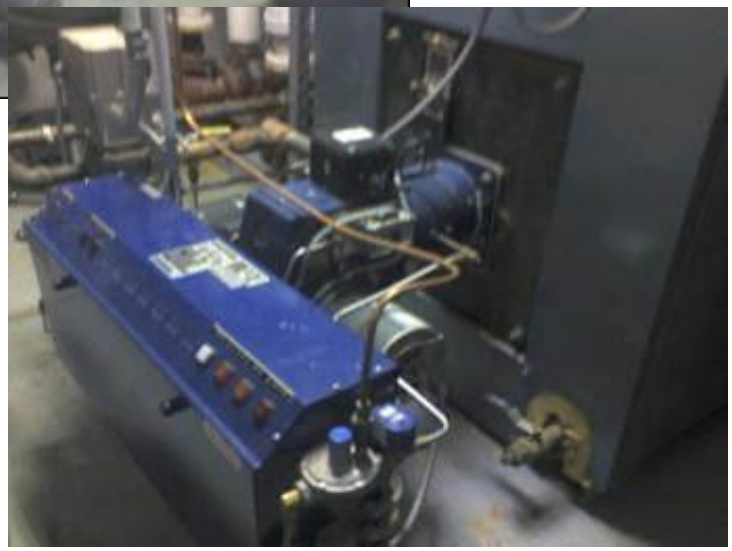
FIRE TUBE BOILERS



OLD SECTIONAL BOILERS

NEW SECTIONAL BOILERS

MODULATING DUAL FUEL BURNERS



SUMMER BOILER

CONDENSING BOILERS

90% Efficiency, Natural Gas, Small Foot Print

COMBUSTION EFFICIENCY

Combustion Analysis

- Flue Gas Temperature
- Excess Air
- CO2, O2
- Smoke
- Adequate Combustion Air
- Ambient Temperature
- Radiation and Convection Losses

HEATING PLANT OPPORTUNITIES

- Upgrade the original boilers
- Consider multiple sectional packaged boilers
- Separate Summer DHW load from Boilers
- Install new boiler burners and controls
- Tune and monitor on a regular schedule
- Upgrade building automation system
- Improve the thermal Efficiency of the Envelope.
- Consider Chilled Water from CHP and renewable energy

EMERGENCY GENERATORS

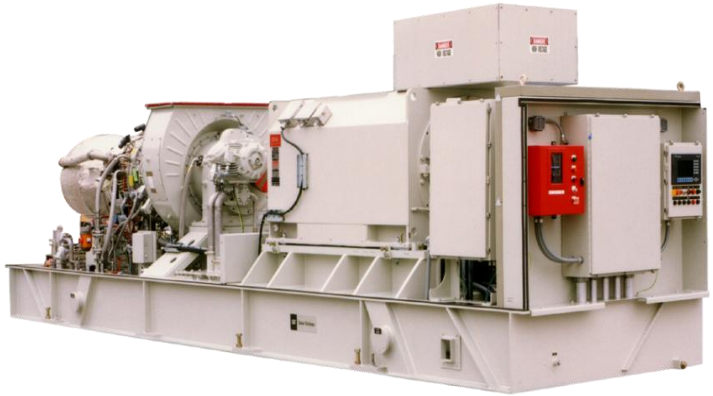
COMBINED HEAT AND POWER (CHP)

Combustion Turbines .5 – 10MW
Micro turbines 30 – 250 kW
IC Engines 30 kW – 5 MW
Fuel Cells 200 kW – 1 MW

25% - 40% Electricity

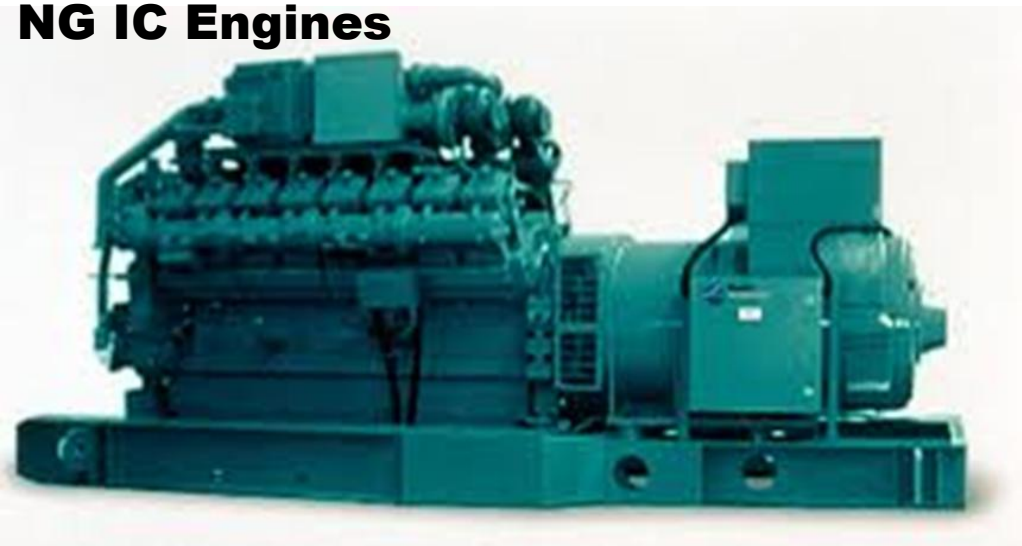
40% - 50% WASTE HEAT

A UTC PAFC Stationary Fuel Cell Unit



CHP FOR SCHOOLS

NG IC Engines



Tecogen

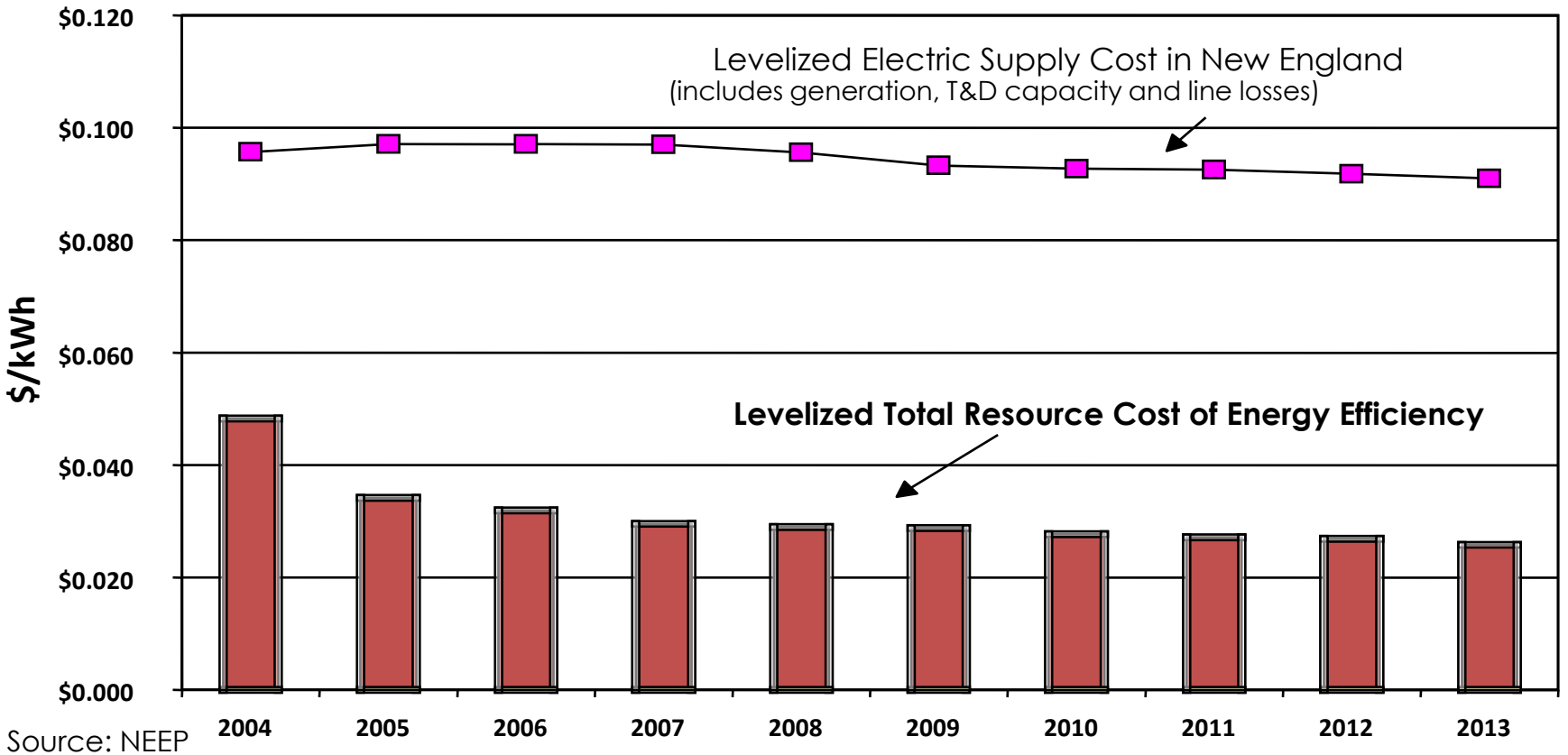
Micro Turbines

RENEWABLE ENERGY

A UTC PAFC Stationary Fuel Cell Unit

ENERGY EFFICIENCY

67% Cheaper than ANY Supply Option



Source: NEEP