

2010 Electric & Gas Conservation Programs

PROGRAM UPDATE

Connecticut Energy Efficiency Fund Programs for Commercial & Industrial Customers

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Background on the Connecticut Energy Efficiency Fund

- Created by Legislature in 1998
- Designed to provide cost-effective electric energy efficiency and load management programs
- Expanded to include natural gas programs in 2005
- Electric and gas programs are fully integrated

Mission

- Advance the efficient use of energy
- Reduce air pollution and negative environmental impacts
- Promote economic development and energy security.

Challenges

- Fund Uncertainty
 - Current actions should not deter businesses from participating in Energy Efficiency Fund programs
 - We are open for business!
 - Incentive caps currently not being applied in 2010
- Future year funding may require invoking incentive caps*
 - **\$300K** Incentive Cap for each meter per year
AND
 - **\$750K** per year Per Federal Tax ID

*Incentive Caps not applicable for natural gas projects

2010 C&I Program Customer Incentive Budgets

Utility	Incentive Budget
Connecticut Light & Power	\$ 38,899,000
United Illuminating	\$ 9,315,557
Yankee Gas	\$ 1,932,262
Connecticut Natural Gas	\$ 1,120,746
Southern Connecticut Gas	\$ 1,064,104
Total	\$ 52,331,669

Funded primarily by electric and natural gas utility customers

- Electric customers pay three mills
- Natural gas programs are funded through firm gas customers
- Other Revenue Sources
 - Regional Greenhouse Gas Initiative (RGGI)
 - Forward Capacity Market (FCM)
 - American Recovery & Reinvestment Act (ARRA)
 - Class III Renewable Energy Credits

American Recovery and Reinvestment Act of 2009 (ARRA)

- ARRA Grant from Connecticut to CL&P and UI
- Available for retrofits & equipment replacement
 - CL&P: \$4.60M
 - UI: \$ 1.15M
- Fuel blind funding
- ARRA funding contains additional requirements:
 - Davis-Bacon (Prevailing wage law)
 - Weekly time sheets
 - Other provisions (ex. DOL wage posters)
 - Buy American (Public Buildings requirement)

Commercial & Industrial Programs



New Construction, Major Renovation & Equipment Replacement

(incremental cost-
based incentive)



Retrofit Projects & Small Business

(pays 40-50% of cost)



Operations & Maintenance Projects

(pays 40% of cost)

Program Overview

Energy Conscious Blueprint

- New Construction, Major Renovation, New / Replacement Equipment
- Most effective before the blueprint stage
- Focuses on all aspects of energy-efficient building techniques, systems and equipment including:
 - Lighting*, HVAC, building envelope, refrigeration, water heating, and process equipment
- Covers up to 95% of the incremental cost of installing measures

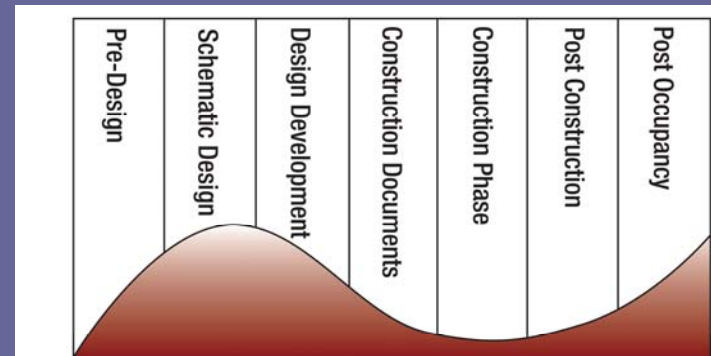


Figure 1 - Impact of Integrated Design Process

* Lighting projects use watts/sq.ft. calculations relative to ASHRAE 90.1-2004 baselines

Energy Conscious Blueprint Program

- Prescriptive rebates for:
 - CT Motor Up Rebate for Motors (\$ per motor)
 - CT Cool Choice for HVAC Equipment (\$ per ton)
 - Gas Food Service Equipment (\$ per unit)
- Utility prescriptive caps apply to the following:
 - VFDs (\$ per hp)
 - Gas Boilers (\$ per MBH)
 - Window Glazing (\$ per sq.ft.)
 - Pool Covers (\$ per sq.ft.)
 - Cool Roofs (White Roofs); (\$ per sq.ft.)
 - Air Compressors (semi-prescriptive)
 - From 5 hp to 100 hp (\$ per hp)

New Construction/Major Renovation Lighting Incentives

- Design is below code by $\geq 10\%$:
 - Incentive will be the lesser of \$0.15 sq.ft or \$50 per fixture
- Design is below code by $\geq 30\%$:
 - Incentive will be the lesser of \$0.50 sq.ft or \$50 per fixture
- Occupancy sensors:
 - \$20 per fixture controlled
 - However:
 - Buildings $> 5,000$ sq.ft. must have lighting control strategy (as required by code)
 - Occupancy sensors can get incentives if another control system turns them on/off
 - i.e., Energy Management System

Program Overview

Energy Opportunities

- Existing Buildings, Retrofit Projects
- Through replacement of still-functioning equipment with more energy-efficient options businesses:
 - save energy and
 - reduce monthly electric and natural gas bill
- Incentives available for upgrades in lighting, HVAC, refrigeration, water heating, and process equipment.



Energy Opportunities Program

- Encourages replacement of functioning equipment with more energy-efficient options
 - excludes equipment that is $\geq 75\%$ of its useful life
 - (use ECB rules)
- Covers up to 40% of the installed cost for **lighting** and non-lighting measures
- Prescriptive incentives are used where available
- Incentive Enhancements for:
 - Comprehensive Approach
 - Energy Management Systems
 - Lighting
 - Financing

Program Incentive Enhancements

Custom Lighting Incentives

- Can be earned if lighting system redesign exceeds ASHRAE 90.1-2004 by 15%
 - Must use watts/sq.ft. methodology
 - Must submit dimensioned floor plans
- Lesser of 40% of installed cost or Utility Caps
- Qualifying solid state or induction lighting eligible for up to 50% of installed cost
- T12 / HID Lighting Targeted Replacements
 - Pays up to 50% of cost and 2.99% financing if completed in 2010

Comprehensive Initiative

A **Comprehensive** project must meet the following criteria:

- Energy savings from at least two electric end uses and at least two measures
- At least 15 percent of the value of the project's electric energy savings and peak summer demand reduction must be in a non-lighting end use (based on \$0.50 per annual kWh and \$700.00 per kW)
- No one measure can have 85 percent or greater of the value of the project's energy savings and peak summer demand reduction (based on \$0.50 per annual kWh and \$700 per kW)

Comprehensive Incentives

- Lesser of:
 - 50% installed cost (electric portion only)
 - Buy-down of project to 2-year payback based on customer electric metered savings
 - Energy savings caps of up to \$0.50/annual kWh + \$700.00/summer peak kW combined
- Additional Comprehensive incentives for firm gas customers:
 - 10% added to all qualifying gas measures (unless capped at Utility energy savings caps)

Installed Three Measures

<u>Measure</u>	<u>End Use</u>	<u>Calculated Energy Savings</u>	<u>Calculated Demand Savings</u>
M1	Lighting	24,000 kWh	6 kW
M2	Cooling	12,800 kWh	16 kW
M3	Other - Pump/Fan Motors	16,000 kWh	4 kW
Total		52,800 kWh	26 kW

Value based on \$0.50 kWh and \$700.00 kW

		<u>Energy Value</u>	<u>Demand Value</u>
M1	Lighting	\$ 12,000	\$ 4,200
M2	Cooling	\$ 6,400	\$ 11,200
M3	Other - Pump/Fan Motors	\$ 8,000	\$ 2,800
Total		\$ 26,400	\$ 18,200

		<u>Total Energy + Demand Value</u>	<u>Percent of Savings</u>
M1	Lighting	\$ 16,200	36%
M2	Cooling	\$ 17,600	39%
M3	Other - Pump/Fan Motors	\$ 10,800	24%
Total		\$ 44,600	

Energy Management Systems (EMS)

- Existing EMS may be upgraded or replaced regardless of system age.
- No incentives offered for repair or replacement of pneumatic controls with pneumatic controls.
- Incentives calculated based on the lesser of:
 - 40% of the installed cost
 - \$500 per point (total system points impacted)
 - avoided energy cost (1yr) - up to \$0.30/Annual kWh and \$700.00/ summer peak kW combined

Program Overview

Operations & Maintenance

- Improve the Efficiency of Operating Equipment
- Improves electrical and natural gas efficiency:
 - changes and repairs that can be classified as maintenance procedures rather than capital investments
- Not intended for normal preventive maintenance, repetitive procedures
- Incentives for repairs or replacements for defective steam traps, condensate return, compressed air systems (i.e., repair of leaks) and EMS maintenance, such as: replacement of defective sensors, relays, actuators and reprogramming
- Incentives of up to 40% of the installed cost for qualified O&M measures



Financing Opportunities

- Municipal
 - ZERO % interest loans to municipalities
 - On-bill financing
 - Utilities provide the funding source
 - Maximum loan amount of \$100,000
 - Maximum loan term -- three years
- Small Commercial & Industrial
 - Low Interest Loan (7%)
 - Average monthly demand > than 10 kW and < 350 kW during the past year
 - In business at least three years
 - Qualify via third-party lender's business credit review process (starts with the loan application process)
 - Loan amount between \$2,000 and \$250,000 providing interest subsidies on the first \$100,000
 - Maximum loan term not to exceed five years

Other Financing Opportunities

Connecticut Hospital Association (CHA)

- Helps Connecticut hospitals finance major energy efficiency projects
 - Contact Bob Sandler at (203) 294-7312

Department of Public Utility Control (DPUC)

- Loans to commercial and industrial customers for installing distributed generation equipment and energy efficiency projects that reduce system demand
- Third-party -- Bank of America
- 1% below customer's applicable rate or no more than the prime rate
- Minimum loan amount \$1,000,000
 - Contact Courtney Guzman at (617) 434-2888, Bank of America courtney.guzman@bankofamerica.com
 - Contact Maureen Hoffman (DPUC) at (860) 827-2811 maureen.hoffman@po.state.ct.us

Important Reminders

- Contact us early
- Letter of Agreement(s) must be signed prior to purchasing energy-efficient measures (except rebates)
- Agreement Milestone Dates
- Project Scope Changes
- Project Close Out Documentation
 - Invoices, Permits, Disposal Fees, etc
- Other programs available:
 - Small Business Energy Advantage (customers < 200kW)
 - PRIME (Lean manufacturing techniques)
 - Multifamily Initiative (packages C&I and residential incentives)

Web Information

- Connecticut Energy Efficiency Fund/DPUC www.CTEnergyInfo.com
- CL&P www.cl-p.com
- UI www.uinet.com
- Yankee Gas www.yankeegas.com
- CNG www.cngcorp.com
- SCG www.soconngas.com
- CCEF www.ctcleanenergy.com

QUESTIONS???



Connecticut
Light & Power

The Northeast Utilities System



The United Illuminating Company



Connecticut's Energy Efficiency Programs are funded by a Charge on Customer energy bills.
The Programs are designed to help customers manage their energy usage and cost.