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# Energy Efficiency for Small and Medium Commercial Customers

**National Symposium on Market Transformation**  
*Large-Scale Transformation*

Washington, DC  
April 20-22, 2015





Empowering you to make  
smart energy choices

## Energize Connecticut –

Energize Connecticut<sup>SM</sup> is an initiative dedicated to empowering Connecticut citizens to make smart energy choices, now and in the future. We provide Connecticut consumers, businesses and communities the resources and information they need to make it easy to save energy and build a clean energy future for everyone in the state. It is an initiative of the Connecticut Energy Efficiency Fund, the Connecticut Green Bank, the state, and your local electric and gas utilities. The initiative has funding support from a charge on customer energy bills.

# Objective

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- PROVIDE > COST-EFFECTIVE, turn-key CONSERVATION and LOAD MANAGEMENT SERVICES to SMALL C&I CUSTOMERS.

## What qualifies as a SMALL BUSINESS?

- A “Mom & Pop” store with a **\$150 monthly electric bill** to a mid size manufacturer with a **\$20,000 monthly electric bill**.
- **Examples:** convenience stores, houses of worship, professional offices, non-profits, gas stations, restaurants, common areas of apartment buildings, warehouses, retail, sport facilities.

# UI Customer Base

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- **~325,000; Total Customers**
- **~30,000; Commercial, Industrial, Municipal**
- **~16,800; Small Businesses**
- **~4,970; Small Businesses (29%) have participated**



# Program Statistics 2000 - 2014

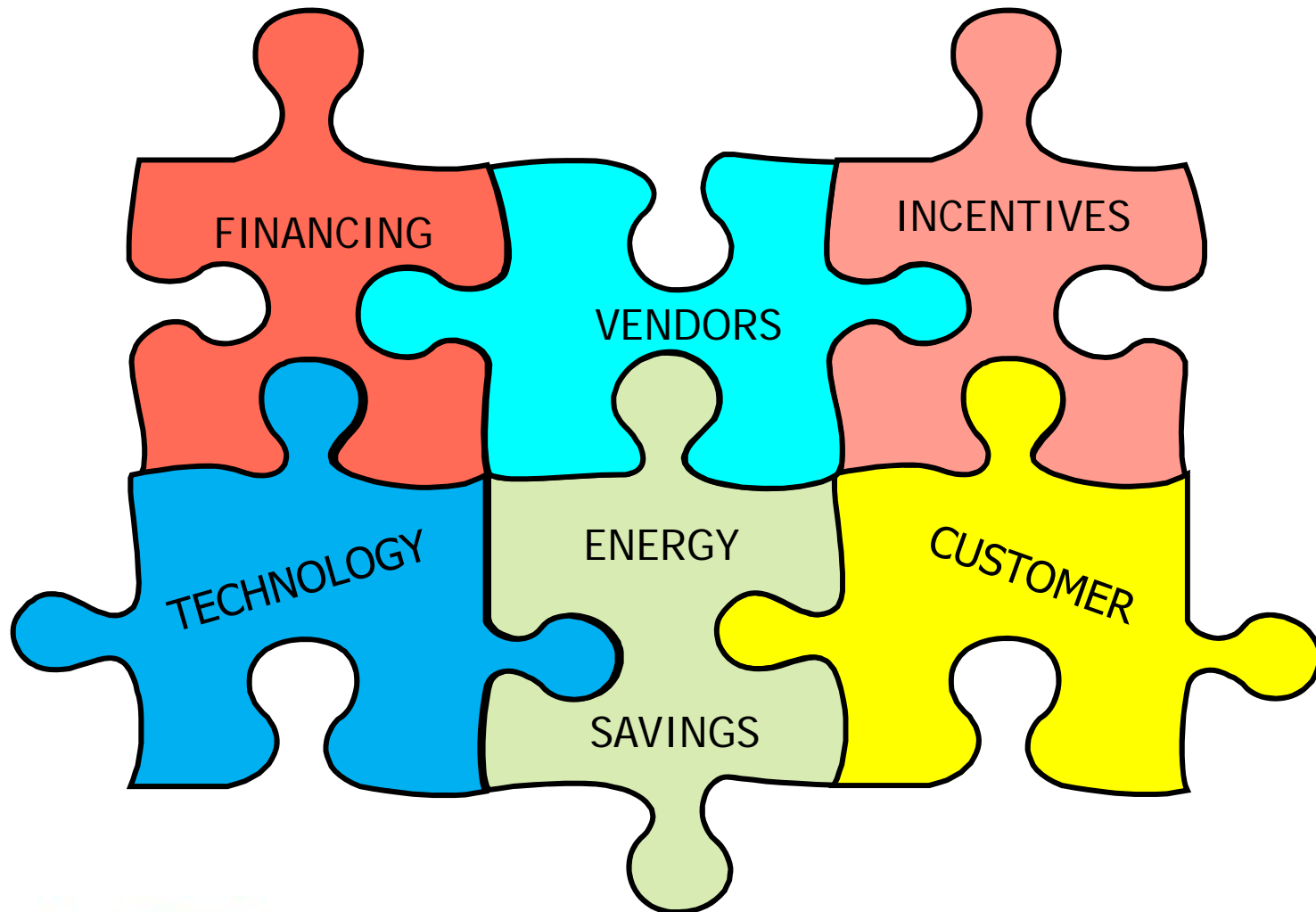
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- **>Over 4,970 Installed Small Business Projects**
  - **Averaging between 20 to 25% reduction**
- **994m Lifetime kWh Saved =**
  - **> 614,000 TONS of REDUCED CARBON DIOXIDE!**
- **\$23.8m Incentives Paid by Energize CT**
- **\$41.2m in 0% Financed Loans**



# Critical Pieces of the Program

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# Financial Solutions

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- **NO OBLIGATION ENERGY EVALUATION**
- **NO UP-FRONT COSTS**
- **INCENTIVES: up to 40% for lighting & non-lighting measures, up to 50% for Comprehensive**
- **COMPREHENSIVE BONUS; 2 or more end uses with no 1 end use accounting for more than 85% of savings value**
- **ZERO 0% ON-BILL FINANCING; to qualified customers**

# Sample Bill

SC4AC5FE@uinet.com\_20100412\_162320.pdf - Adobe Reader

File Edit View Document Tools Window Help

1 / 1 125% Find

Next Meter Reading (on or about): 5/06/10

WWW.NEWENERGY.COM

Have a question for UI?  
Click on Customer Care on UI's website at www.uinet.com.

Expect the expected with our free Budget Billing Plan. Your UI bills are evenly distributed throughout the year. Call UI to sign up today.

MONTHLY MONEY-SAVER  
Make sure lighting dimmer switches are turned off when not in use. Sometimes a light that appears to be off is still consuming electricity.

**Previous Charges & Credits**

Amount of Previous Bill	3/08/10	\$	3,120.16
Payment Received. Thanks!	4/06/10	\$	3,120.16 cr
<b>Balance Forward</b>		\$	<b>0.00</b>

**New Charges & Credits**  
PO (CYCLE 02)

Current Supplier: CONSTELLATION NEW ENERGY

Generation Services Charge	16800 kWh X \$.095700	\$	1,607.76
<b>Total Generation Services Charges</b>		\$	<b>1,607.76</b>

Transmission per kwh on-peak	3720 kWh X \$.051975	\$	193.35
Distribution Basic Service		\$	66.82
Distribution per kw on-peak	37.4 kW X \$.3630000	\$	135.76
Distribution per kw off-peak	0.0 kW X \$.3630000	\$	0.00
Distribution per kwh on-peak	3720 kWh X \$.015347	\$	57.09
Distribution per kwh off-peak	13080 kWh X \$.015347	\$	200.74
Combined Public Benefits Charge	16800 kWh X \$.007375	\$	123.91
Competitive Transition Assessment per kwh	16800 kWh X \$.015222	\$	255.73
Non-Bypassable FMCC per kwh on-peak	3720 kWh X \$.002235-	\$	8.31 cr
<b>Total Delivery Charges</b>		\$	<b>1,025.09</b>

CT Sales Tax on Electricity (6.0%)		\$	148.98
Small Business Program		\$	473.87
<b>Total New Charges</b>		\$	<b>3,255.70</b>

**Amount Now Due: \$ 3,255.70**

**Actual Account Balance: \$ 18,419.76**

kWh Per Day Delivery Daily Usage Chart

MONTHS

c/kWh Effective Generation Rate

MONTHS

8.42 x 10.97 in

Slide 7 of 13

Blends English (U.S.)



Time: 13:14:58  
System: EnerNet

**PROFESSIONAL** 36 Month Historical Analysis and 12 Month Credit Report

- 2/ This is a tenant report as opposed to a premise report.
- 3/ Rebilling did not affect past usage/billing - before 11/01/2003.
- 4/ Special adjustments not included. Taxes not included.
- 5/ CT Gross Rcp. tax credit included.

Rep: NOT ASSIGNED

Phone: (203)772      Rate/ID: 420/112      Cycle: 03  
Group: none      Riders:  
SIC: 5413      Tax XMT: Yes      Meters: (

06511

Date read	Road Code	Days	kWhrs				% Change from last yr	Actual kW			Hours Use	Billed Amount (\$)	Unit Cost	Rolling 12 % Change	
			On-Peak	Shoulder	Off-Peak	Total kWh		On-Peak	Shoulder	Off-Peak				kWh	\$ Amount
02/05/2014		30	2,118	1,365	1,450	4,933	-39.3	17.532	15.396	10.548	285	1,310	0.26556	-3.2	-1.2
01/06/2014		32	1,851	1,203	1,617	4,671	-39.4	15.468	13.452	10.992	287	1,044	0.22351	-3.0	-2.2
12/05/2013		30	3,137	1,741	1,352	6,230	-20.6	24.624	21.012	17.556	257	1,323	0.21236	-1.6	-0.6
11/05/2013		29	3,635	1,896	1,451	6,982	-7.4	26.808	24.792	20.592	273	1,408	0.20166	-0.5	0.5
10/07/2013		29	4,341	2,215	1,712	8,268	-9.1	37.608	32.556	21.324	231	1,871	0.22629	-0.8	1.1
09/08/2013		32	4,803	2,458	2,210	9,471	-11.6	36.276	31.332	23.256	248	2,047	0.21613	-1.0	0.1
08/07/2013		30	5,535	3,132	2,508	11,175	2.8	40.044	37.572	26.484	283	2,366	0.21172	0.3	7.5
07/08/2013		32	5,157	2,769	2,517	10,443	-2.7	39.156	35.532	25.548	254	2,144	0.20530	-0.3	1.3
06/06/2013		30	4,718	2,400	1,726	8,844	-7.7	38.064	33.132	21.720	236	1,760	0.19900	-0.7	0.3
05/07/2013		30	4,486	2,554	2,013	9,053	7.7	33.276	26.712	24.900	276	1,706	0.18845	0.6	0.7
04/07/2013		31	3,815	2,111	1,826	7,752	-5.1	27.660	24.540	21.672	275	1,418	0.18292	-0.4	-0.1
03/07/2013		30	3,836	2,266	1,745	7,847	-7.5	26.004	24.012	22.824	306	1,453	0.18517	-0.6	0.0
02/05/2013		30	4,080	2,380	1,663	8,123	-3.7	26.880	24.912	21.984	306	1,555	0.19143	-0.3	0.1
01/06/2013		32	3,635	2,213	1,854	7,702	-3.8	26.556	24.828	22.188	276	1,492	0.19372	-0.4	-0.1
12/05/2012		30	3,862	2,237	1,747	7,846	-6.0	29.940	26.340	22.320	266	1,453	0.18519	-0.4	-0.6
11/05/2012		32	4,039	2,296	1,985	8,320	-12.0	32.568	28.848	27.792	243	1,468	0.17644	-1.0	-1.4
10/04/2012		29	4,732	2,540	1,827	9,099	-9.4	36.156	34.104	26.052	264	1,649	0.18123	-0.9	-1.2
09/05/2012		29	4,947	2,575	2,186	9,708	-12.9	38.112	34.308	24.516	267	1,859	0.19149	-1.4	-1.2
08/07/2012		30	5,604	2,876	2,393	10,873		39.072	35.316	25.608	282	948	0.08719	-1.8	-6.8
07/08/2012		32	5,300	2,803	2,632	10,735	-14.7	39.672	34.200	26.208	257	1,898	0.17680	-1.4	-2.4
06/06/2012		30	4,850	2,695	2,041	9,586	-9.5	39.060	32.268	24.492	249	1,695	0.17682	-0.9	-1.7
05/07/2012		29	4,076	2,288	1,761	8,125	-12.7	33.264	29.616	21.660	256	1,524	0.18757	-1.0	-1.0
04/08/2012		32	4,320	2,419	1,695	8,434		31.524	27.288	23.016	254	1,484	0.17595	-1.7	-2.1
03/07/2012		30	4,083	2,622	1,782	8,487		26.652	25.524	23.640	323	1,462	0.17226	-1.3	-1.9
02/06/2012		32	4,110	2,861	2,028	8,999		29.952	25.032	23.568	286	1,643	0.18258	-1.8	-2.0
01/05/2012		29	3,495	2,032	1,732	7,259		25.920	24.972	23.220	294	1,358	0.18708	-3.0	-3.0
12/07/2011		31	4,196	2,468	1,963	8,627		32.364	27.336	22.332	262	1,608	0.18639	-2.8	-2.9
11/06/2011		32	4,519	2,524	2,415	9,458		32.148	28.860	25.440	280	1,731	0.18302	-3.0	-3.4
10/05/2011		29	4,990	2,707	2,351	10,048		37.332	32.436	29.316	282	1,875	0.18660	-1.2	-1.4
09/06/2011		30	5,586	3,122	2,827	11,535		39.756	35.964	30.360	294	2,139	0.18544	0.6	0.2
07/26/2011		20	0	0	0	0		0.000	0.000	0.000	720	0	0.00000	-16.3	-16.3
08/07/2011		12	6,274	3,721	3,542	13,537		41.844	40.020	31.680	820	2,463	0.18195	25.4	23.3
07/06/2011		29	5,499	3,136	2,765	11,400		41.664	38.004	31.380	287	2,240	0.19649	5.4	6.4
06/07/2011		30	5,356	2,815	2,417	10,588		40.296	37.020	29.352	266	2,072	0.19569	4.8	7.3
05/08/2011		32	4,819	2,717	2,738	10,274		34.284	29.220	26.064	285	1,919	0.18678	999.0	999.0
04/06/2011		999	4,212	2,687	1,987	8,886		35.136	27.408	23.148	8	1,699	0.19098	0.0	0.0

**SUMMARY DATA**

	YTD Days	Metered kWhr	Change YTD kWhr	% Change	Billed Amt	Changed YTD Billed	% Change	Avg. Unit Cost
2014	62	9,604	-6,221	-64.7	2,354	-693	-29.4	0.24510
2013	365	101,890	-5,876	-5.7	20,543	2,051	9.9	0.20161
2012	364	107,471			18,441			0.17159

# Before

- Obsolete lighting
- No lighting controls
- Obsolete refrigeration
  
- 24/7 Refrigeration
  
- Inefficient existing HVAC equipment

= \$3,000 monthly bill

# After

- New lighting tech.
- Occupancy sensors
- New refrigeration technology
- Refrigeration controls
  - /night shutoffs
- HVAC upgrade to high efficiency /Programmable Thermostats

= \$1,800 monthly bill

# Side by Side Comparison



# Default Loan Term

<b>Project Cost:</b>	Material costs	\$9,204.20
	Labor costs	\$6,571.03
	Project Subtotal	\$15,775.23
	Tax (CT 6%)	\$946.51
	<b>Total Cost</b>	<b>\$16,721.74</b>
	Approved UI Incentive	\$7,886.52
	<b>Net Total Cost</b>	<b>\$8,835.22</b>
	<b>Monthly Payment (16)</b>	<b>\$552.20</b>
	-> <i>Annual Energy Savings</i>	42,301 kWh
<i>Estimated:</i>	-> <i>Annual Dollar Savings</i>	<b>\$6,927 = \$577.25/monthly</b>
<i>(may include adjustments)</i>	->	
	<i>Pay Back</i>	1.2 years

**Cash Positive \$25.05**



# Loan Extension – 24 months

<b>Project Cost:</b>	Material costs	\$9,204.20
	Labor costs	\$6,571.03
	Project Subtotal	\$15,775.23
	Tax (CT 6%)	\$946.51
	<b>Total Cost</b>	<b>\$16,721.74</b>
	Approved UI Incentive	\$7,886.52
	<b>Net Total Cost</b>	<b>\$8,835.22</b>
	<b>Monthly Payment (24)</b>	<b>\$368.13</b>
	-> Annual Energy Savings	42,301 kWh
Estimated: ->	Annual Dollar Savings	<b>\$6,927 = \$577.25/monthly</b>
(may include adjustments) ->	Pay Back	1.2 years

**Cash Positive \$209.12**



# Contact Information

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