



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.

## Comprehensive Project: Q&A

Energy Opportunities (EO) and Small Business Energy Advantage (SBEA) programs' Comprehensive Initiative is designed to increase the depth and breadth of energy efficiency projects being contemplated and implemented by customers. The Initiative includes:

- Financial incentives based upon the lesser of:
  - 50% of installed cost;
  - buy-down of the project to a 2-year payback (based on savings at the customer's meter);
  - avoided energy cost (1 year) – up to \$0.50 per annual kWh and \$700.00 per summer peak kW combined
- “Comprehensive” is defined as projects having at least 2 electric end-uses with at least 15% of the project's energy savings and summer peak demand savings (kWh + kW) resulting from non-lighting end-uses and with no one measure having more than 85% of the project's energy savings and summer peak demand savings (kWh + kW).
- If the project also includes any gas efficiency measures (firm gas customers only), the customer may also receive up to an additional 10% incentive for eligible gas measures.

Note: All projects are subject to a \$300K incentive cap for each meter per year and \$750K per year per Federal Tax ID incentive caps.

The following are answers to some common questions.

### Question #1:

What types of projects are eligible for the Comprehensive Initiative?

#### Answer

Retrofit projects that save electric energy in an existing commercial or industrial facility are eligible to participate in the Comprehensive Initiative. To qualify, a project must have at least two measures that save electric energy in at least two different end uses.

### Question #2:

What is an “end use”?

#### Answer

End uses are categories or classifications used to report energy savings. For the purposes of the Connecticut Energy Efficiency Fund (CEEF) programs, end use categories are lighting, comfort cooling, comfort heating, process, refrigeration, water heating, EMS and other. The end use category of “other” is typically used to classify measures that affect more than one end use, like heating and cooling. A common example of “other” is motors in an air handler with hot water and chilled water coils. EMS is also a measure that typically has energy savings in more than one end use. As such, for Comprehensive Initiative projects, EMS will be classified as its own separate end use.

Question #3:

What types of projects or measures are **NOT** eligible for the Comprehensive Initiative?

Answer

- new construction
- major renovation (replacement of building systems)
- replacement of non-functioning equipment, components or devices (even if the system can function without it.)
- equipment replacements or upgrades that are being made to increase output/throughput or to meet new emissions or discharge requirements
- new roof
- change in occupancy use classification

Question #4:

Are there any minimum efficiency requirements for equipment, components or systems?

Answer

- Package air conditioning equipment must meet the minimum efficiencies identified on the Connecticut Cool Choice rebate application form as posted on the CL&P and UI websites. Call the CEEF utility program administrator for efficiency requirements on larger units.
- Three-phase motors must meet the minimum efficiencies on the CEEF Connecticut Motor Up rebate application form as posted on the CL&P and UI websites. Call the CEEF utility program administrator for efficiency requirements on larger motors.
- Electric Chillers
  - Water-cooled centrifugal

Size (tons)	IPLV (kW/ton)
≤149	0.610
150 to 299	0.570
≥300	0.530
  - Water-cooled screw and scroll

Size (tons)	IPLV (kW/ton)
<100	0.640
100 to 149	0.610
150 to 199	0.590
200 to 224	0.570
225 to 349	0.540
350 to 524	0.530
525 to 624	0.520
≥625	0.510
  - Air-cooled

Size (tons)	IPLV (EER)
<100	12.100
100 to 110	12.010
111 to 120	11.910
121 to 130	11.810
131 to 140	11.710
141 to 150	11.610
151 to 170	11.510
171 to 180	11.410

181 to 190	11.310
191 to 200	11.210
201 to 210	11.110
211 to 220	11.010
221 to 230	10.910
231 to 240	10.810
241 to 250	10.710
251 to 260	10.610
261 to 270	10.510
271 to 280	10.410
281 to 300	10.310
301 to 310	10.210
311 to 320	10.110
321 to 330	10.010
≥331	9.910

- All other equipment, components or systems must meet the minimum requirements of ASHRAE/IESNA Standard 90.1-2004 with all published addenda.

Note: These values may change for 2010.

Question #5:

How are the installed costs allocated for measures that have electric savings only and measures that have both electric and fossil fuel savings?

Answer

The installed cost for measures with electric savings only will be the installed cost for the measure.

The installed cost for measures with both electric and fossil fuel savings will be based on an allocation of the percentage of the electric savings and the fossil fuel savings. The allocated percentage of the installed cost for a measure that saves both electric and fossil fuel energy is calculated by multiplying the total installed cost of the measure by the billed value of the electric energy savings and dividing by the total billed value of the fossil fuel and electric savings.

Example: A new energy management system (EMS) with an installed cost of \$66,000 is proposed as one measure of a comprehensive project for an electric customer on CL&P's Rate 55. The EMS is estimated to generate savings of 6,500 gallons of oil, 25,000 kWh of on-peak energy and 55,000 kWh of off-peak energy. There is no demand reduction associated with the EMS. The installed cost for the electric portion of the EMS will be calculated in the following manner:

<u>Energy Savings</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Billed Savings</u>
Fossil Fuel			
Oil (gallons)	6,500	\$2.50	\$16,250.00
Electric			
On-peak Electric (kWh)	25,000	\$0.01750	\$437.50
Off-peak Electric (kWh)	55,000	\$0.01250	\$687.50
P/T Demand Reduction (kW)	0	\$6.44	-
Dist Demand Reduction (kW)	0	\$4.69	-
On-peak Generation (kWh)	25,000	\$0.14422	\$3,605.50
Off-peak Generation (kWh)	55,000	\$0.11422	\$6,282.10
Total Electric Savings			\$11,012.60

Billed value of energy savings = \$27,262.60 (16,250.00 + 11,012.60)

Electric percentage = 40% (11,012.60/27,262.60)

Oil percentage = 60% (16,250.00/27,262.60)

Allocated installed cost, electric = \$26,660.00 (40% of \$66,000.00)

Therefore, \$26,660 would be the electric portion of the installed cost for the EMS measure that saved both electric and fossil fuel energy. The energy savings used for determining the payback is from the electric savings only.

Question #6:

What will the Comprehensive Initiative incentive be if the payback of the project is less than two years?

Answer

If the project's payback is two years or less, the Comprehensive Initiative incentive will be \$0 and the incentive for the project will be the sum of the normal program incentives for the individual measures calculated in accordance with CEEF program rules.

Question #7:

Can a gas measure be combined with an electric measure to qualify for a Comprehensive Initiative project?

Answer

No, the Comprehensive Initiative is designed around the electric energy savings. To qualify, a project must have a minimum of two electric measures that save electric energy in a minimum of two end uses. No single end uses can be more than 85% of the total project electric energy savings. A measure that saves natural gas (firm gas customers only) may receive up to an additional 10% of the normal program incentives for the individual measures calculated in accordance with CEEF gas program rules.

Question #8:

Can the cost and savings of replacing fossil fuel boilers be included in a comprehensive project?

Answer

No, this is a stand alone fossil fuel measure. All cost and savings for this stand alone measure would not be included in the Comprehensive Initiative evaluation. If the boiler is on a firm gas account, it may qualify for an incentive under the CEEF natural gas programs and up to an additional 10% incentive if submitted with a Comprehensive Initiative project. Should funding become available from ARRA (Federal Stimulus Funding), then other fossil fuels will be handled the same way as firm natural gas measures (i.e. the project may receive up to an additional 10% similar to what the natural gas program offers for individual measures calculated in accordance with CEEF gas program rules.)

Question #9:

When are other fuels used to qualify a Comprehensive Initiative project?

Answer

The installed cost and energy savings of a fossil fuel measure are used to determine the allocated costs of a combined electric/fossil fuel measure. See Question #5 for an example of an energy management system (EMS) measure that has both electric and fossil fuel savings and how to split the cost relative to the estimated billed energy savings.

Question #10:

Will the additional 10% still be added to the natural gas CEEF program incentive if the electric portion of the project qualifies as a comprehensive project but the Comprehensive Initiative incentive is \$0? (As in the case when the payback is less than 2.0 years.)

Answer

Yes, as long as it is supported by the energy savings.

Question #11:

Does a retrofit project in a grocery store have two end uses if it proposes to retrofit the motors in the refrigerated cases with ECM motors and to retrofit the air handlers with VFDs?

Answer

Yes. The motors in the refrigerated cases are considered “refrigeration” and the air handlers are considered “comfort cooling,” “comfort heating,” or “other” (since it may provide both heating and cooling to the space.)

Question #12:

Are operation and maintenance measures included in the Comprehensive Initiative?

Answer

Operations measures and maintenance measures may be considered. Projects that are part of the CEEF Retro Commissioning process are not included in the Comprehensive Initiative.

Question #13:

Can equipment replacement be part of the comprehensive project?

Answer

Like-for-like replacement of functioning equipment is eligible. (See question #4 for the minimum efficiency requirements.)