



Connecticut
Light & Power

The Northeast Utilities System



The United Illuminating Company



The Northeast Utilities System

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.

Connecticut Energy Efficiency Fund Home Performance Program Application (Tier II)

9111 05-10

This application is for energy efficiency retrofit proposals for existing residential unit(s). The application can include single family as well as multi-family project proposals. Program rules can be found on pages 5 & 6 of this application. For multi-family projects, fill in the application with information based on the typical dwelling unit. It may be necessary to include additional forms for each specific dwelling type as well as an overview of the multi-family complex.

Complete the application in its entirety, add any additional information, and mail/email/fax it to the appropriate addressee below:

The Connecticut Light and Power Company
626 Glenbrook Road
Stamford, CT 06906
www.cl-p.com
Contact: Margaret Kelly
Phone: (203) 352-5458
Fax: (203) 352-5444
Email: Kellymm@nu.com

The United Illuminating Company
157 Church Street, MS1-6B
New Haven, CT 06510
www.uinet.com
Contact: Robert Bartone
Phone: (203) 499-3676
Fax: (203) 499-2800
Email: bob.bartone@uinet.com

HOMEOWNER INFORMATION

CUSTOMER NAME (Please Print)	HOME PHONE	WORK PHONE	CELL PHONE
MAILING ADDRESS		EMAIL ADDRESS	

PROPOSER INFORMATION

NAME (Please Print)	COMPANY
PHONE	CELL PHONE
MAILING ADDRESS	EMAIL ADDRESS

RESIDENCE INFORMATION

SITE ADDRESS (City, State, Zip)		WHICH OF THE FOLLOWING BEST DESCRIBES THE PROJECT? <input type="checkbox"/> Single Family (Detached) <input type="checkbox"/> Duplex <input type="checkbox"/> Triplex <input type="checkbox"/> Multi-family	
OWNER OCCUPIED? <input type="checkbox"/> Yes <input type="checkbox"/> No	# OF OCCUPANTS LIVING IN HOME	HOME AREA IN SQ. FT.	YEAR HOME WAS BUILT
# OF STORIES	# OF BEDROOMS	FOUNDATION TYPE <input type="checkbox"/> Basement <input type="checkbox"/> Slab <input type="checkbox"/> Crawlspace <input type="checkbox"/> Other	
PRIMARY HEATING SYSTEM			
FUEL: <input type="checkbox"/> Natural Gas <input type="checkbox"/> Oil <input type="checkbox"/> Propane <input type="checkbox"/> Electric <input type="checkbox"/> Other _____		TYPE: <input type="checkbox"/> Boiler <input type="checkbox"/> Furnace <input type="checkbox"/> Electric Resistance <input type="checkbox"/> Electric Heat Pump <input type="checkbox"/> Other _____	
EXISTING COOLING SYSTEM		WINDOWS	WATER HEATER
<input type="checkbox"/> None <input type="checkbox"/> Window Air Conditioners, # Units _____ <input type="checkbox"/> Central Air Conditioning		<input type="checkbox"/> Single Pane <input type="checkbox"/> Double Pane <input type="checkbox"/> Single Pane/Storm	<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane <input type="checkbox"/> Electric <input type="checkbox"/> Oil <input type="checkbox"/> Other _____

BILLING HISTORY

ELECTRIC			NATURAL GAS		
Date	kWh	Cost	Date	CCF	Cost
Total			Total		

Fuel	YEAR 1 (Most Recent)		YEAR 2	
	Gallons (Annual)	Cost (Annual)	Gallons (Annual)	Cost (Annual)
Oil				
Propane				

TYPICAL MEASURES

LIGHTING						
Bulbs or Fixtures	Quantity	Existing Wattage	New Wattage	Type	Location (Room)	Total Cost
B or F						
B or F						
B or F						
B or F						
B or F						
B or F						
B or F						
B or F						
Project Total		N/A	N/A		N/A	

INSULATION						
Location (Wall, Ceiling)	Square Footage	EXISTING		PROPOSED		Total Cost
		R-Value	Type/Material	R-Value	Type/Material	
Project Total		N/A	N/A	N/A	N/A	

EQUIPMENT						
EXISTING						
	Area Served (Square Footage)	Type	Capacity/ Units	Age (Years)	Fuel	Efficiency Rating
<i>Example</i>	1,200	CAC	3 tons	10	Electric	10 SEER
1						
2						
3						
4						
PROPOSED						
	Type	Capacity/ Units	Fuel	Efficiency Rating	Total Cost	Comment
<i>Example</i>	CAC	2.5 tons	Electric	16 SEER	\$5,000	
1						
2						
3						
4						
Total						

Type (Boiler, Furnace, CAC-Central A/C, WAC-Window A/C, ASHP,GSHP) Capacity (MBH for Fossil Fuel, Ton for Electric)

OTHER MEASURES		
Measure	Existing Conditions	Proposed

Estimated Project Completion Date: Month: _____ Year: _____

Attach all supporting documents: (1) Itemized Cost Estimates, (2) Detailed savings calculations, (3) See Home Performance Program Project Process & Rules section for more details

Home Performance Program FAQ:

Question: I have electric heat; can I replace it with a natural gas system?

Answer: Yes, however, fuel switching cannot be funded by the program. The costs and savings between a standard vs. a high efficiency gas system can be considered.

Question: I am replacing the cooling system in my house and I am not interested in anything else; can I get rebates through the Home Performance Program?

Answer: No, however the Connecticut Energy Efficiency Fund has a rebate for residential HVAC.

Question: Can I submit measures not listed on application?

Answer: Yes, one of the advantages to the Home Performance Program process is creativity. It is important that the information provided clearly describes the measure as well as includes cost and savings details.

Question: What types of projects are eligible for Home Performance Program?

Answer: Retrofit projects that save electricity and/or natural gas are eligible. Oil and propane customers can submit proposals that will be reviewed using ARRA stimulus guidelines. To qualify a single-family project must have at least two electric end-uses.

Question: 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 programs, end uses are lighting, cooling, heating, process, refrigeration, water heating, motors, and other. The "other" end use is typically used to classify measures that affect more than one end use. Some measures may have energy savings in more than one of the common end uses.

Question: Are rental/non-owner occupied properties eligible?

Answer: Yes.

Question: If the site has all ready participated in an Energy Efficiency Fund program (e.g., Home Energy Solutions program) are they still eligible to propose a Home Performance Program project?

Answer: Yes, we anticipate that many of the multi-family sites will have had some type of Energy Efficiency Fund program participation, so they are still eligible. The exception is those multi-family sites that received WRAP program services within the last 18 months; these sites we will review on a case-by-case basis.

Question: What if the residents are limited income?

Answer: We advise them to submit the proposal and note clearly if the site has income requirements or restrictions. We will review all applications and apply the appropriate program rules.

Question: What other resources are available?

Answer: The state of Connecticut has information at www.CTEnergyInfo.com. Other energy-related sites include: www.cl-p.com; www.uinet.com; and www.energystar.gov.

Home Performance Program Project Process & Rules

Overview: Home Performance Program (or Tier II) is a process by which any type of valid residential energy efficiency project (including multi-family) can be submitted and considered for a Connecticut Energy Efficiency Fund incentive based on cost effectiveness criteria (value of the electric and natural gas avoided costs, and/or oil and propane for ARRA). This approach is not meant to supersede or replace any existing measures and incentives; it is anticipated it will be utilized for single family as well as for a variety of multi-family facility types such as apartment and assisted living complexes, condominiums with individual HVAC systems (stand alones) or served by one central system.

The approach described in this document is to maintain consistency from project-to-project without limiting creativity. The process is designed to be consistent with the custom measures employed in Commercial and Industrial (C&I) programs. It was chosen because it has been used and refined for years (best practices) and applying the same approach makes it easier for vendors to serve both residential and the C&I markets. However, in cases in which the markets are different, the process has been modified to take these differences into consideration.

Target: This program is meant for custom projects and site-specific measures. It is limited to one residence (i.e., large one family) or any type of multi-family complex. This approach is not meant to address products that might apply to 'every' residential customer, since these prescriptive measures are already available through existing Connecticut Energy Efficiency Fund channels (e.g., CFL bulbs). Vendors that are interested in submitting products for a more general approval should refer to the Energy Conservation Management Board (ECMB) Road Map process. For more information, please call the appropriate contact listed on page 1.

To Qualify for the Home Performance Program, a Project Must Meet the Following Criteria:

- Single family projects must have energy savings from at least three measures with at least two end uses (end uses defined as heating, cooling, water heating, lighting, refrigeration, other).
- No fuel switching (i.e., the new fuel and system will become the baseline, and measures will be evaluated based on incremental cost and savings).
- Submitted measures must meet "best practices" criteria. No "black boxes" or experimental measures (note the existing ECMB Road Map process).
- Projects that can be installed under existing programs are not permitted (no program shopping). However, individual program measures can be submitted as part of a comprehensive project and evaluated as such.
- Renewable measures that qualify for Connecticut Clean Energy Fund incentives are not permitted (i.e., these can be included in a project but their benefits/savings will not be valid towards the Tier II savings or incentive).
- Standard window replacements will not be considered; however windows can be part of a comprehensive package if they meet advanced criteria.
- The project/measures must be retrofit (replaced equipment must be operational). Lost opportunity measures will be evaluated based on incremental cost and savings.

Proposal Submittal: Submit proposal to the Program Administrator (PA). This proposal should be specific to a home or group of homes at one complex (multi-family site). The proposal must include the following:

- 1) Customer name or residential complex name.
- 2) Address of complex location.
- 3) A brief description of the home or complex, including number of units.
- 4) A description of the measures being considered; include existing conditions.
- 5) Itemized cost estimate. This estimate should not include items that are cosmetic in nature (e.g., putting a fence around a condensing unit).
- 6) For electric and gas projects, one year of customer monthly billing history (costs and consumption) is required. Sampling is acceptable for multi-family (10-20% depending on complex size). For oil and propane projects, two years of fuel purchase history (costs and gallons) are required.
- 7) Savings analysis including assumptions and calculations. If software is being used to analyze savings, all input variables and outputs must be submitted. Include all changes made to the input to estimate savings. Also, computer model should be calibrated or "trued up" to billing history. Savings can be calculated using a variety of tools and sources including the Program Savings Documentation (PSD), modeling software (REM Rate, TREAT), engineering calculation (UA calculations), etc. The utility companies reserve the right to review the savings calculations and adjust them if they are not deemed reasonable.

Measures: Single family projects must include at least three of the following qualifying measures (not including lighting, which is required) to be considered for an incentive under the Home Performance Program. However, savings from measures that do not meet the Home Performance Program criteria and lighting savings can still be valid towards the overall savings of a project.

REQUIRED FOR ALL PROJECTS (DOES NOT COUNT AS A HES HOME PERFORMANCE PROGRAM MEASURE)		
Measure	Baseline	HES Home Performance Program Criteria
Efficient lighting	Incandescent or existing	At least 80% of all eligible sockets must have efficient lighting.
QUALIFYING MEASURES (NEED AT LEAST THREE OF THESE)		
Measure	Baseline	HES Home Performance Program Criteria
Air sealing (shell)	Existing home	Must reduce by 25% to be valid as a measure. Need to reduce infiltration down to 1 cfm50 per square foot living space for geothermal projects.
Balanced ventilation	Exhaust only ventilation	"Net" fuel savings is considered.

Insulation	Existing home	All cost-effective insulation is installed in the home in order to count as a “measure”.
HVAC	Existing	Must be ENERGY STAR.
Appliances	ENERGY STAR	At least three appliances must be upgraded to ENERGY STAR to be valid as a measure.
Windows	ENERGY STAR	Units must be triple pane and exceed ENERGY STAR.
Water	Existing	ENERGY STAR or better.
MEASURES THAT DO NOT QUALIFY FOR AN INCENTIVE		
Measure	Baseline	HES Home Performance Program Criteria
Renewable Technologies	Home is evaluated without the renewable technology.	N/A
Fuel Switching	Baseline becomes the new fuel	N/A

First Review of Proposal: It is anticipated that many of these projects will be multi-family which typically includes common area measures, as well as individual unit measures. Since this may involve more than one “decision maker”, the analysis of these measures may need to be different. It is important to determine which of the two decision-making categories (single owner or multiple owners) to develop the desired packaged measure approach to multi-family complexes. For this program, the single owner would require only one owner (or one group of owners) to decide to move forward with the proposal. Examples of this would be a project that is only one residence such as a large house, an apartment building replacing equipment that the owner is responsible for (central heating system serving many apartments), and condominium common areas or equipment. Multiple-owner projects would require the approval of all owners for proposed measures therefore the entire project is contingent on many property owners’ decisions. An example of multiple owners is individual heating systems in a condominium complex. Each individual homeowner owns the HVAC and therefore makes the decision.

Process

Review of Proposal: The PA reviews the proposal for completeness.

Reasonableness Review: The submitted measures’ cost and savings estimates will be reviewed for reasonableness. This can be done internally if we have the expertise in-house or externally, if not. This process may include interfacing with the proposer. If numbers change significantly, the re-categorizing of measures may be necessary.

Determination of Incentive Level: Once the cost and savings are deemed reasonable, the appropriate program rules are applied to determine the incentive. The PA reserves the right to base incentive level on the “reasonableness review” for both the cost and savings.

Incentives: The incentive offer will be based on the following criteria. Note that the final “paid” incentive is based on the completed project and may vary from the preliminary incentive calculation.

Single Family (non-low income) project incentive will be the lesser of:

- 1) 50% of installed cost of Connecticut Energy Efficiency Fund measures.
- 2) 50% of the combined electric and natural gas benefit.
- 3) Buy-down of the project to a three-year payback (based on savings at the customer’s meter).
- 4) Incentive structure is the same as above for oil (not grouped with Connecticut Energy Efficiency Fund funded measures) and for propane with ARRA funding. Additionally, the incentive is capped at \$1000 per 10 million source BTU’s saved.

Multi-Family (non-low income) project incentive will be the lesser of:

- 1) 50% of installed cost of Connecticut Energy Efficiency Fund measures.
- 2) 50% of the combined electric and gas benefit.
- 3) Buy-down of the project to a two-year payback.
- 4) Traditional HES measures will be installed at 100% of costs.
- 5) Incentive structure is the same as above (not grouped with Connecticut Energy Efficiency Fund funded measures) for oil, propane with ARRA funding. Additionally, the incentive is capped at \$1000 per 10 million source BTU’s saved.

Low-Income Project (single or multi-family) will be the lesser of:

- 1) 100% of installed cost.
- 2) 75% of the combined electric and gas benefit.

Offer of Incentive: The incentive offer will be made depending on the number of decision makers (one vs. many).

- 1) In the case of one decision maker, a contract will be prepared utilizing the same format as used with Commercial & Industrial. Requirements will be based on efficiency, not vendor.
- 2) In the case of multiple decision makers, a limited-time rebate form will be offered to the complex. The rebate offer would be identified by efficiency, not by vendor or specific product.

Once installed, the typical inspection and payment process will follow.