

NEW CONSTRUCTION & MAJOR RENOVATIONS

(10/22/2020)

Memorandum of Understanding for Path 2: Whole Building Energy Use Intensity (EUI) Reduction

The Whole Building Energy Use Intensity (EUI) Reduction Program (“Program”) is intended for customers with larger and/or fairly complex projects,¹ who are interested in setting an EUI² reduction target that represents at least 10% improvement over a baseline building EUI. The intent of the incentives and technical assistance offered in this pathway is to provide a holistic energy reduction approach that shifts customer and design team focus to expected performance outcomes as they work through the project design.

Project Eligibility:

1. Projects must have a minimum of 30,000 square feet (sf) of comfort conditioned (heated and cooled) space.³
2. Customer should engage The Connecticut Light and Power Company (CL&P) and/or Yankee Gas Services Company each dba Eversource Energy (Eversource) and The United Illuminating Company (UI), The Southern Connecticut Gas Company (SCG), and Connecticut Natural Gas Corporation (CNG), subsidiaries of AVANGRID, Inc. (collectively The Companies) during the project’s conceptual or schematic design phases, but before 100% Design Development
3. Projects must be new buildings, building additions or complete renovations of existing buildings.⁴ Qualifying major renovations are such that occupancy is not possible during construction and where the project scope includes at least 3 of the following systems: (1) HVAC, (2) domestic hot water (DHW), (3) lighting, and (4) envelope
4. Buildings should be comfort-conditioned (heated and cooled), but partially conditioned buildings such as warehouses and industrial facilities, may be eligible on a case by case basis
5. Core and shell and high-rise multi-family projects may participate, provided they meet the requirements above
6. Participants must be a customer of one of The Companies

Key Customer Commitments:

1. Participating project teams commit to setting an EUI target⁵ in early design (at least a 10% EUI reduction from the Energize CT baseline) and working toward it throughout the remainder of design
2. Customers agree to including the EUI target in project documents such as Owner Project Requirements (OPR)

¹ Examples of complex projects might be labs, health science centers, grocery stores, etc.

² Energy Use Intensity (EUI): A measure of a building’s gross annual energy consumption relative to its gross square footage (excluding parking garages; penthouse square footage should also not be included, as it is not conditioned space). EUI is calculated as kBtu per square foot per year.

³ The Companies may allow participation in this pathway for energy intensive projects even if they are less than 30,000 sf in size. Please contact us for more details.

⁴ Tenant fit outs are not eligible to participate in this pathway.

⁵ Neither combined heat and power (CHP) nor electricity generating renewables, such as photovoltaic (PV) or wind turbine technology, contribute towards the site EUI target. The EUI target may evolve throughout the design process.

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3. Customers agree to establishing a plan for determining the building's post occupancy EUI and identifying a responsible party
4. Customers must commit to a 25% cost share of the services of a third-party Technical Assistance (TA) vendor (services include energy charrette facilitation, EUI target setting, energy modeling, and mid-design review/feedback).

Key Commitments of The Companies:

1. Cost share services of a TA vendor (up to 75% of fee)
2. Assist customer and design team in identifying and evaluating EUI reduction strategies
3. Offer construction and post occupancy incentives on a dollar per square foot basis, supporting projects with deeper EUI reductions with higher incentive rates (see Table 1 that follows)
4. Offer Design Team Incentives to qualifying projects (see Table 2 that follows)
5. Offer an optional Verification Incentive to help customers and their teams achieve the predicted EUI once the building is operating (see Table 1 that follows)

This document outlines the roles and responsibilities of each party to set transparent expectations for all parties participating in the Program. Under no circumstances does this Memorandum require customers or design teams to incorporate any particular EUI reduction strategy, nor does this document bind the customer or design team to a particular EUI target. Further, this Memorandum does not bind the Companies to any particular EUI strategy and/or any Incentive and any and all assistance offered by The Companies through this Program is offered in an advisory capacity only.

The Companies understand that the following customer:

_____ (“the Owner”):
will undertake the following (check one)

- new construction
- major renovation,
- addition

_____ (“Premises Address”)

This project is being designed by the following design professionals (collectively, the “Design Team”):

_____ (“Architect” or “Design Firm Official”)

_____ (“Electrical Engineer”)

_____ (“Mechanical Engineer”)

Participating Companies:

_____ (“Electric Utility Provider”)

_____ (“Gas Utility Provider”)

IMPORTANT:

Customers participating in this pathway may not also participate in the Energize CT upstream programs where incentives for HVAC, domestic hot water and lighting equipment are offered directly to distributors or post-installation rebates. To ensure participation in only one Energize CT program pathway for this equipment, designers must include language in project documents informing contractors that this project is participating in a Energize CT downstream program pathway, and that they may not pursue or accept any HVAC, domestic hot water or lighting upstream incentives for this project.

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Detailed Process:

Step 1—Coordination with The Companies

During schematic design or in pre schematic design, inform The Companies of your new construction/major renovation project. The Path 2 Whole Building EUI Reduction Program is only available when The Companies are engaged and an energy charrette is scheduled before the end of Design Development. The earlier you contact The Companies, the better the opportunity for energy savings and incentives.

All customers and design firm officials must sign this Memorandum of Understanding (MOU) and agree to the following steps.

Step 2 – Energy Charrette, EUI Target Setting and Developing a Roadmap to Meeting the EUI Target

Customer and design team participate in an energy charrette with The Companies and their TA vendor.

- All projects participating in this Program must establish an EUI target that represents at least a 10% EUI reduction from the Energize CT baseline at or shortly after the energy charrette, with the understanding the EUI target may evolve over the course of design.
- The Companies will bring on an approved TA vendor who will:
 - Assist the project team in establishing a preliminary EUI target for the project, if one has not already been determined by the project team
 - Help the design team develop a set of strategies that will lead to a reduction in site EUI for the project relative to the Energize CT baseline EUI
 - Prepare a proposal to develop a baseline energy model (per Energize CT baseline requirements) and two phases of as-designed models:
 - TA vendors will produce the first as designed model and iteration of the baseline model based on either the 50% or 100% Design Development (DD) set. TA vendors will provide a report with feedback and further EUI reduction recommendations for the customer and design team at this time.
 - TA vendors will produce a final baseline and as-designed model based on the 90% Construction Documents (CD) set.

Step 3 – Customer Agrees to Cost Share TA Services

- The Companies will cover the fees for TA services in this Program at up to 75% cost share (each project is capped at \$20,000).
- Customer must commit to 25% of the fee for TA services and must sign a Whole Building Performance Integrated Design Agreement (DA) committing to this cost share.
- If the customer engages an energy modeler not on the TA Provider list, The Companies will only cover fees for TA services in this Program at up to a 25% cost share (each project is capped at \$20,000).

Step 4 – Customer Must Develop a Plan for Measurement and Verification of the Project's Operational EUI

Setting an EUI target and working toward it during design is an important step toward reducing operational energy use, however customers must establish a plan to evaluate energy use post occupancy to be successful in truly achieving a low site EUI. Customers must determine how EUI data will be collected and evaluated post occupancy and assign a responsible party.

Thought should be given to corrective action if at post occupancy the project is straying from the final design EUI. The Companies strongly recommend that the project team consider submetering at minimum

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in accordance with the LEED BD&C v4 Energy and Atmosphere Advanced Energy Metering credit, which requires submetering of any individual energy end uses that represent 10% or more of the total annual consumption of the building.

An optional Verification Incentive is available to help customers identify issues that may arise related to energy savings post construction (please request the scope of work for the Verification Incentive from The Companies for more detail). The Companies will reimburse 50% or up to \$10,000 of the fee associated with this work. Customers must decide during design if they wish to pursue this incentive so that a contract can be put in place.

Step 5 – Design

Once the EUI target is established, it should be written into the project documents, including the Owner Project Requirements (OPR), where it will serve as a touchstone throughout the rest of design and construction. The project team will pursue the EUI target throughout design and should conduct the iterative energy modeling necessary to ensure that the design remains on track to achieve the target EUI.

Step 6 – Interim Report and Consultation

The TA vendor will produce a model and report based on the 50% or 100% Design Development set, showing measures that are producing site energy savings relative to the Energize CT baseline as well as the predicted EUI of the project. The customer, design team and The Companies will meet at this time with the TA vendor to review results and recommendations for further reducing the project EUI.

The Companies will lock in the target EUIs at each incentive tier at this time, based on the interim report. The target EUIs will remain locked for purposes of incentives unless there are major design changes between 100% Design Development and 100% Construction Documents, including, but not limited to HVAC system type changes and space type changes. Customers are not required to hit any particular target, however at this time, they will know for certain the EUI targets they must hit to achieve each tier of incentive rates.

Step 7 – Incentive Pre-Approval from The Companies

At 90% Construction Documents (CDs), the TA vendor will prepare the final Energize CT energy model and report documenting the final predicted EUI and the percent EUI reduction from the Energize CT baseline. The Companies will issue customer offer letters in accordance with the incentive rates shown in Table 1 below.

Table 1. Customer Incentive Rates*	
% EUI Reduction	Rate
10.0% - 14.9%	\$1.00/sf
15.0% - 19.9%	\$1.50/sf
20.0% - 24.9%	\$2.00/sf
25.0% and above	\$2.50/sf
Optional Verification Incentive	50% up to \$10,000

*Customer incentives are capped at 95% of the combined incremental cost of the EUI reduction strategies included in the project. Projects must be cost-effective to receive the full customer incentive and are subject to each utility provider’s program budget.

The Companies will require customers to sign a Whole Building Performance Integrated Design Agreement and MOU, formally requesting Energize CT incentives, and customers must also sign the Letter of Agreement (LOA) that lays out the energy-saving equipment and system details, based on 90%

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Construction Documents, that will lead the project to achieve the final design’s predicted EUI. Customers must commit to building the building as it was designed and as it was documented in the LOA and Whole Building Performance Template (WBP Template). Major deviations from the design and changes in energy system components, equipment efficiencies and control strategies as documented in the WBP Template could jeopardize the project’s ability to achieve the target EUI and could jeopardize the customer’s opportunity to obtain full incentives.

At this point in the design process, The Companies and customers will finalize all payments to the TA vendor since the modeling and EUI reduction consultation phase of the project is complete.

Step 8 – Construction Completion, Construction Phase Incentive Payment, Design Team Incentive Payment

A few weeks before substantial completion, customers must provide a set of approved submittals, invoices and photographs corresponding with energy reducing equipment and systems per the WBP Template. The Companies may also request a copy of the project’s schedule of values.

All projects participating in the Program are subject to inspection by each participating utility provider. Customers may be asked to arrange for these post inspections to take place once the building is ready for occupancy.

After completion of the review of submittals, photographs, and invoices, and upon completion of the post inspection, The Companies will make the construction incentive payment to the customer. Where equipment and systems installed deviate substantially from equipment and systems shown in the design documents and WBP Template, The Companies reserve the right to adjust the customer and design team incentive amounts.

Select projects are subject to 20% incentive hold-back pending receipt of trend data or other information stipulated in the WBP Template.

The design team is eligible for a Design Team Incentive if the modeled EUI reduction is at least 10% to encourage the integrated design and continuous iterative energy analysis that is necessary to achieve the EUI target.⁶ It is payable at the end of construction in accordance with the rates in Table 2 that follows. The Companies pay the Design Team Incentives to the design team lead who may disperse them to other team members as appropriate.

Table 2. Design Team Incentives		
Whole Building EUI Reduction	10.0% to 19.9% EUI Reduction	\$0.05/sf, capped at \$10,000
	20.0% and 24.9% EUI reduction	\$0.10/sf, capped at \$12,500
	≥ 25.0% EUI reduction	\$0.20/sf capped at \$15,000

⁶ Where the project has a contract that may restrict payments to the design team (as can happen with some municipal projects), it is the responsibility of the design team lead to work with the customer to ensure that the design team can obtain design team incentive payments per this Program offering.

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Step 9 – Verification Incentive (optional)

Customers that have chosen to pursue a separate Verification Incentive from The Companies must ensure that their selected consultant completes the scope of work during the post occupancy period. This incentive is offered to help customers achieve their EUI targets not only in the design, but upon occupancy as well. Provide copies of consultant reports generated at each stage of review to The Companies. Contact The Companies for details on requirements for this optional incentive.

Engagement with The Companies after Design Development

Project teams and customers who engage with The Companies on qualifying projects after the end of design development, may participate with The Companies as follows:

- Engagement with The Companies after 100% Design Development and before the end of Construction Documents:
 - Project teams may still participate in the modeling-only portion of the Path 2 Whole Building EUI Reduction Program at up to 50% Energize CT and 50% customer model cost share.
 - The early EUI benchmarking support, the additional modeling cost share and the design team incentives will not be available
 - Customer incentive rates will vary from those published in this document.
- Engagement after 100% Construction Documents:
 - The Path 2 Whole Building EUI Reduction Program as described above is not available, but teams may participate with The Companies by completing appropriate prescriptive and custom applications via the New Construction Systems Path.

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By signing below, the owner represents that he/she (1) shall be the sole and lawful owner of the Premises and (2) has read, understands, accepts and agrees to the terms and conditions for participation in the Program outlined above.

Customer Signature: _____

Customer Printed Name: _____

Date: _____

Email: _____ **Phone:** _____

Design Firm Official Signature: _____

Design Firm Official Printed Name and Company Affiliation: _____

Date: _____

Email: _____ **Phone:** _____

AGREED:

_____ **Date:** _____

The Companies (specific Utility and its representative to be identified)

_____ **Date:** _____

The Companies (specific Utility and its representative to be identified)

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Process Checklist

Whole Building EUI Reduction Program

Early Design

- During concept design or early schematic (but before the end of Design Development), engage The Companies and schedule an energy charrette
- Sign Energize CT Memorandum of Understanding (MOU)
- Sign a Whole Building Performance Integrated Design confirming customer is willing to cost-share the services of a TA vendor
- Establish EUI target. Insert site EUI target here if known: _____
- Include EUI target in the Owner Project Requirement (OPR) and provide The Companies with a copy
- Establish a plan for calculating site EUI once the building is operational; identify responsible parties and consider tools that will flag unexpectedly high energy use at post occupancy (e.g., submetering)
- If pursuing the Verification Incentive, establish a contract with the Verification Team to complete this work and provide a copy of the contract that includes the scope of work necessary to obtain the incentive from The Companies

Mid Design

- Provide 50% or 100% Design Development set to TA vendor for review and team feedback/discussion
- Designers must include language in project documents informing contractors that this project is participating in an Energize CT downstream program pathway, and that they may not pursue or accept any HVAC, domestic hot water or lighting upstream incentives for this project. Upstream incentives for food service equipment are allowed and encouraged.

End of Design – Upon Completion of Energy Modeling

- Provide 90% Construction Documents to the TA vendor to provide a final report showing the predicted EUI of the project's final design. The EUI results will determine the level of incentives to be paid.
- Sign the Letter of Agreement (LOA) affirming intent to build in accordance with the equipment and system specifications stated in the LOA
- Finalize payment to the Energize CT TA Vendor once energy model and report are complete

Construction/End of Construction Phase

- Maintain focus on the project components such that the predicted EUI is maintained as a target throughout construction
- Provide submittals, invoices, photographs and possibly a contractor schedule of values at the end of construction to affirm that equipment and systems were installed as stated in the LOA
- Schedule a post installation walk-through with The Companies
- Sign the Measure Verification forms to confirm project is complete and ready for occupancy and to confirm that equipment and systems have been installed as expected to contribute to the predicted EUI. Note any changes.
- The Companies will pay customer's construction incentive if equipment is installed as expected

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- The Companies will pay the Design Team Incentives if equipment is installed as expected

Post Construction

- If pursuing the Verification Incentive, provide copies of the Verification Team’s reports at each reporting interval indicated in the scope of work to The Companies

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