

## Guidelines for Energy Audit Requirement

As part the Recharge New York Program, this guide has been developed to assist customers with the Energy Audit requirement. An Energy Audit is to be performed within each facility in the Recharge New York Agreement at least once during a 5 year term commencing on the first day of their accepted allocation. The Energy Audit shall be submitted to NYPA along with the Checklist attached. The Checklist will serve as a guide to ensure that all of the required parts have been performed and are included in the Energy Audit, before submission to NYPA.

The Energy Audit is a report that includes five sections and each section is described below.

- 1. Benchmarking Report** – This is the first step in determining the efficiency of the building by measuring the energy performance. The Benchmarking Report will provide one number, the energy utilization index (EUI) to gauge the efficiency of the building. EUI is typically the “annual total energy consumption of all fuel types” divided by the “square footage of the facility.” A manufacturing facility may use one of the following: Btu / unit of production; annual energy cost / unit of production; Btu / man-hour worked; annual energy cost / man-hour worked. There are programs in the industry that are used to determine EUI such as Energy Star Portfolio Manager ([www.energystar.gov/benchmark](http://www.energystar.gov/benchmark) ) as well as working with an Engineer.
- 2. Benchmarking Score** – A comparison of the building’s energy utilization index (determined in Step 1) to similar buildings. Programs, such as Energy Star Portfolio Manager, can be used to conduct a comparison to similar buildings and provide a Benchmarking Score, such as 68%.
- 3. Low-Cost / No-Cost Measures** – Identify low-cost/no-cost measures for improving energy efficiency. This includes energy saving measures such as reducing operating hours of equipment by optimizing equipment schedules, replacing incandescent light bulbs with compact fluorescent lights, installing controls on lighting such as occupancy sensors, installing programmable thermostats, and repairs to equipment to correct inefficient operation. For a manufacturing facility, some typical low-cost/no-cost improvements include repair/replace steam traps and repair leaks in compressed air system.

For each measure, include the cost of the measure, the projected annual cost savings, and the simple payback period of each measure. Simple Payback Period is the project cost divided by annual energy cost savings.

- 4. Energy Improvement Projects** – Provide a list of potential capital improvement projects for improving energy efficiency. An energy audit of the facility will provide a list of recommended energy saving projects or energy conservation measures (ECMs). These recommended energy saving projects shall each be described with a one-page description, which includes a description of the existing equipment and the recommended equipment to be installed.
- 5. Energy Project Assessment** – For each Energy Improvement Project (listed in Step 4 above) provide an initial financial evaluation of potential costs and savings of each project. The financial evaluation of each Energy Improvement Project must include: the cost of the project, the projected annual cost savings, and the simple payback period of each project. Simple Payback Period is the project cost divided by annual energy cost savings. On the Checklist, on last line, please write the page number of the Energy Audit which shows the total energy saved.

## Definitions for Energy Audits

**BENCHMARKING:** The process of capturing a building's current energy performance and comparing it with its baseline energy performance, or the energy performance of similar buildings (such as comparing the energy performance of a hospital to that of other hospitals). Benchmarking is used to compare a building's energy performance over time, and assess performance amongst similar buildings.

**ENERGY STAR PORTFOLIO MANAGER:** A web-based benchmarking tool that enables users to track building energy use and compare energy efficiency performance to similar buildings.

**ENERGY AUDIT:** An engineering study that quantifies how energy is used in a building and identifies opportunities to improve the building's energy efficiency and reduce utility expenses.

**ENERGY USE INTENSITY (EUI):** EUI expresses the energy consumed by a typical building as a function of the building's size. EUI is commonly measured in thousands of Btu (kBtu) per gross square foot of building area. Manufacturing facilities will use a different type of EUI.

**GROSS FLOOR AREA:** Gross floor area is considered the total square foot of building space as measured from the principal exterior surfaces of the enclosing fixed walls. It should include main activity space, entrance ways, stairways, elevators, hallways, occupant kitchens, storage area, and any other common spaces the building.