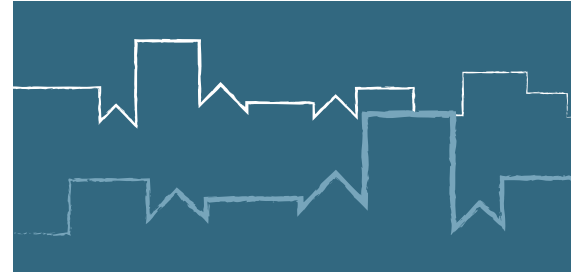


WHAT IS AN ASHRAE AUDIT?

An ASHRAE building audit is a detailed evaluation of a building's energy performance and systems, conducted in accordance with guidelines from ASHRAE (the American Society of Heating, Refrigerating and Air-Conditioning Engineers).

The purpose of the audit is to identify opportunities for improving **energy efficiency**, **reducing operating costs**, and **enhancing overall building performance**.



FINANCIAL INCENTIVES & MUNICIPAL REQUIREMENTS

Here's what typically happens during an ASHRAE building audit:



An ASHRAE building audit helps building owners and managers understand their building's energy performance and make informed decisions to enhance efficiency, reduce costs, and improve comfort and sustainability.

ASHRAE defines three primary levels of energy audits, each offering different depths of analysis and detail. These levels are designed to provide progressively more comprehensive insights into a building's energy performance and opportunities for improvement.

LEVEL 1

Level 1 is a basic audit involving a brief site visit to observe the conditions, identify obvious issues, and collect preliminary information. Data collection is generally limited to visual inspections and discussions with building staff to understand how it operates. The resulting report is an overview of potential energy savings opportunities and a general assessment of the buildings performance. A list of low or no-cost energy improvement measures may be included.

LEVEL 2

Level 2 audits involve a more thorough site visit and more detailed data collection. This may include measurement of equipment performance, inspecting usage schedules, collecting historical utility data, and energy use monitoring. A Level 2 report includes an analysis of energy use, identification of specific energy-saving measure, and estimated costs and savings for each. A building energy model may be included in the report.

LEVEL 3

Level 3 audits are the most comprehensive, sometimes referred to as an Investment Grade Audit. Extensive investigations are done during site visits, including detailed measurements of energy use. Energy modeling simulation may be prepared to identify the best opportunities for energy savings. A Level 3 report includes detailed recommendations for energy saving measures including cost-benefit analyses, financial projections, and implementation strategies. This level is designed to support major investment decisions and detailed planning for energy efficiency improvements.

Each level of audit builds on the previous one, offering increasing detail and accuracy. The choice of audit level depends on the specific needs of the building owner, the goals of the audit, and the resources available for the audit process.



CONSULTING | TESTING | ENERGY AUDITS | CERTIFICATION

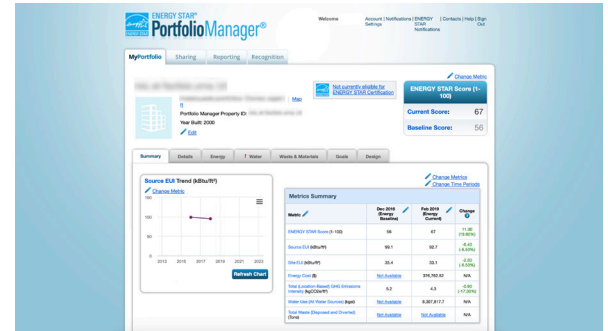
 404.480.6400  INFO@SKCOLLABORATIVE.COM  WWW.SKCOLLABORATIVE.COM   


COLLABORATIVE
MAKING BUILDINGS BETTER

THE ENERGY STAR SCORE

ENERGY STAR, a program of the US Environmental Protection Agency (EPA), provides a free product called Portfolio Manager which allows building owners to benchmark their energy use against similar buildings around the country and set goals for overall energy performance. Existing or projected building and energy use information are entered into Portfolio Manager, creating an ENERGY STAR score. The score is between 1 and 100, the higher score indication a better performing building. A score of 75 shows that a building performs better than at least 75% of similar buildings.

An ASHRAE energy audit can provide data to create an ENERGY STAR score of an existing building, and recommendations and projected energy savings from the audit can provide a projected score that a building will be expected to meet after improvements are completed.



WHAT AN AUDIT REPORT TELLS YOU

SK Collaborative prepared a Level 2 audit for a 1950's era apartment complex that was planning a major renovation. The audit provided information on the anticipated savings for a variety of Energy and Water Efficiency Measures (EWEMs) to justify the expenses and confirm there would be a suitable ROI. Energy models were prepared to identify energy savings and water use was calculated using nationally accepted usage pattern data.

The table below lists the recommended measures we recommended for the project, the estimated cost, and expected cost, energy, and water savings for each.

If the full scope were implemented, this project would achieve:



Nearly 30% reduction in energy use



Over 38% reduction in water use



A total combined cost savings of \$237,621 a year

EWEM Description	Installed Cost	Owner Annual Cost Savings	Tenant Annual Cost Savings	Annual Electricity Savings	Annual Natural Gas Savings	Annual Water Savings	Source Energy Savings	Water Savings
	\$	\$	\$	kWh	therms	CCF	%	%
Replace windows	\$ 204,000.00	-	\$ 9,321.00	43,179	11,003	-	6.30%	0.00%
Install attic insulation	\$ 102,000.00	-	\$ 2,676.00	6,618	3,246	-	1.60%	0.00%
Replace lighting	\$ 244,800.00	-	\$ 2,225.00	185,442	-	-	7.70%	0.00%
Replace HVAC	\$ 816,000.00	-	\$ 45,151.00	-365,765	61,926	-	10.00%	0.00%
Replace refrigerators	\$ 122,400.00	-	\$ 815.00	67,932	-	-	2.80%	0.00%
Replace showerheads	\$ 28,800.00	\$ 50,306.00	-	-	966	2,302	0.40%	11.00%
Replace lavatory faucets	\$ 20,400.00	\$ 23,756.00	-	-	358	1,087	0.10%	5.20%
Replace toilets	\$ 96,000.00	\$ 63,349.00	-	-	-	2,899	0.00%	13.80%
Replace kitchen faucets	\$ 17,340.00	\$ 23,476.00	-	-	537	1,074	0.20%	5.10%
Replace clothes washers	\$ 2,250.00	\$ 16,545.00	-	8,208	327	757	0.50%	3.60%
Total Savings	\$ 1,653,990.00	\$ 177,433.00	\$ 60,188.00	-54,386	78,363	8.12	29.60%	38.70%

Table 1: Energy and Water Efficiency Measures (EWEM) with projected costs and savings.

An energy audit provides property owners with the data they need to determine how to best improve the performance of their buildings. It helps guide important decisions when make improvements to the structure and equipment.

FINDING A STRATEGIC PARTNER

At SK Collaborative, we bring extensive experience in guiding projects nationwide toward successful green building and healthy housing certification. Our team is at the forefront of certification program and policy advancements, ensuring you have access to the most current and accurate information—saving you both time and money.

Our award-winning professionals provide green building, energy audit, and building enclosure consulting services, all delivered on time and within budget. With our accredited verifiers, we have certified tens of thousands of homes and dwelling units across 13 green building and healthy housing programs.

By working closely with the project team throughout the design and construction process, we are committed to making sustainable building certification as effortless as possible.