



THE AGENCY  
FOR CO-OPERATIVE  
HOUSING

L'AGENCE  
DES COOPÉRATIVES  
D'HABITATION

# Information Sheet: Energy Audits

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An energy audit gives important information about your housing co-op's energy use. It also reveals the potential for significant savings.

Many co-ops see the need for a solid energy-management plan that will improve their energy efficiency for the benefit of current members and those who will live there in years to come. Completing an energy audit is a key step in developing an energy-management plan.

Here are the four main reasons for getting an energy audit:

1. To establish how much energy your co-op is using now, as a whole
2. To measure how much energy each of your co-op's various systems is using
3. To compare your co-op's energy use with that of similar buildings under similar weather conditions
4. To identify ways of cutting your energy costs, including any incentive programs.

## What is an energy audit?

An energy audit identifies all of the energy streams a building uses. The energy audit then determines where, when, why and how this energy is being used. Most energy audits will also review water usage and will recommend water-saving measures.

An energy audit not only shows your co-op's energy use, but also makes recommendations and gives you ideas on how to improve energy and water efficiency, decrease energy costs and lower your co-op's greenhouse gas emissions.

Your energy audit can demonstrate the effectiveness of the recommended measures and estimate the real costs of the work by including a simple payback period for each one.

Consulting firms use their own in-house format when preparing an energy audit. However, a good format should always follow the **Standard for Commercial Building Energy Audits** (ANSI/ASHRAE/ACCA Standard 211-2018), as adapted for residential buildings.

## What are the types of energy audit?

Energy audits vary in depth, depending on the project scope set by the co-op and the potential at a specific site for reductions in energy and water costs. As per ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Standards, there are three types of energy audits:

- ASHRAE Level 1 – Walk-Through Analysis / Preliminary Audit
- ASHRAE Level 2 – Energy Survey and Analysis
- ASHRAE Level 3 – Detailed Analysis of Capital-Intensive Modifications

TYPE OF ENERGY AUDIT	BRIEF DESCRIPTION
<p>ASHRAE Level 1 - Walk-Through Analysis / Preliminary Audit</p>	<ul style="list-style-type: none"> <li>■ Brief on-site survey of the building</li> <li>■ Savings and cost analysis of low-cost /no-cost energy-conservation measures (ECMs)</li> <li>■ Identification of potential capital improvements to be considered</li> </ul>
<p>ASHRAE Level 2 - Energy Survey and Analysis</p>	<ul style="list-style-type: none"> <li>■ More detailed building survey</li> <li>■ Breakdown of energy use</li> <li>■ Savings and cost analysis of all ECMs</li> <li>■ Identification of ECMs requiring more thorough data collection and analysis</li> </ul>
<p>ASHRAE Level 3 - Detailed Analysis of Capital- Intensive Modifications</p>	<ul style="list-style-type: none"> <li>■ Review of capital-intensive projects identified during the Level-2 audit</li> <li>■ More detailed field analysis</li> <li>■ More rigorous engineering analysis</li> <li>■ Cost and savings calculations with a high level of accuracy</li> </ul>

Source: <http://www.energyadvantage.com/blog/the-difference-between-ahsrae-level-1-2-3-energy-audits/>

## Home-Energy Audits

A basic home-energy audit may be completed for individual members who want to improve the energy efficiency of their home. (This mainly applies to households in a single detached house.)

The EnerGuide energy efficiency home evaluation by Natural Resources Canada is a basic home-energy audit that can help you understand how your home uses energy and which upgrades would help improve energy efficiency. The EnerGuide energy efficiency home evaluation is performed by a Certified Energy Advisor (recognized through Natural Resources Canada) who will examine your home and provide you with a personalized report, including recommendations for upgrades. Note that the basic home-energy audit will be tailored to the member’s home and not to all of the co-op’s building(s).

More information on EnerGuide energy efficiency home evaluations can be found here: <https://www.nrcan.gc.ca/energy-efficiency/energuide-canada/energuide-energy-efficiency-home-evaluations/20552>.

**Note:** It is important for your co-op to decide which level of energy audit meets your needs. We recommend a Level-2 energy audit for most housing co-ops.

## Who should prepare your energy audit?

An accurate, useful energy audit demands the services of a qualified consultant, such as a professional engineering or energy-consulting firm with experience in completing these reports.

## How much will an energy audit cost?

At the time of writing, a level-2 energy audit usually costs between \$4,000 and \$7,000. However, the cost will vary depending on your building type(s), where your co-op is located and the size of your property. It will also vary, of course, according to the level of energy audit required for your co-op. For example, the cost of a level-1 energy audit is likely to be lower than for a level-2 energy audit, while the cost of a level-3 audit (the most comprehensive) would be significantly higher.

A home-energy audit typically starts at a cost of \$400-\$600, but will vary depending on the Certified Energy Advisor's / Energy consultant's service costs. In some cases, the utility provider will pay for a home-energy audit through an incentive program.

## What information do I need to provide for an energy audit?

The consultant you have chosen will need a wide range of information, depending on the level of energy audit your co-op wants. For example, you may be asked for any earlier energy-audit reports, relevant utility reports and/or bills from utility providers over the previous two years (Level-2 audit), records of capital work completed within the past years and any as-built drawings.

Giving the consultant the fullest possible information will help ensure that their observations and recommendations reflect your co-op's current condition. This will also help the consultant decide which projects to recommend. Some firms may charge an extra fee for any missing blueprints / as-built drawings.

## How long will an energy audit take to complete from start to finish?

The time needed for an energy audit will vary depending on the level your co-op has decided on, as well as the size and complexity of co-op building(s). A level-2 energy audit would typically take approximately four to six weeks to complete.

## Agency service fee to commission a level-2 energy audit report

The Agency charges an administrative fee of \$500 + applicable taxes to assist the co-op in commissioning their energy audit (level 2) and reviewing the report.

## Contact Information

To commission a level-2 energy audit or get more information, please speak to your relationship manager or contact the Agency's Technical Services team directly at [mstdenis@agency.coop](mailto:mstdenis@agency.coop) (1-866-660-3140 x607).