

Guidelines for preparation of Energy Audit Reports

Structure of the Energy Audit Report

Each report should include:

1. Title Page

- Report title
- Client name (company for which facility has been audited)
- Location of the facility
- Date of Report
- Audit contractor name

2. Table of Contents

3. Executive Summary

All information in the Executive Summary should be drawn from the more detailed information in the full report. The Executive Summary should contain a brief description of the audit including:

- Name, plant(s), location(s) and industry of the company audited
- Scope of the audit
- Date the audit took place
- Summary of baseline energy consumption presented in table form. Baseline energy consumption refers to the energy used annually by the facility/system audited.
- Results:
 - Assessment of energy-consuming systems
 - identification of EMOs and the estimated energy, greenhouse gas (GHG), and cost savings associated with each option along with the related cost of implementing the measures and the expected payback period. This material should be presented in table form. In the event that an audit covers more than one facility, the statistics for each facility should be reported on an individual basis to the extent possible.
- Recommendations summarized in table form.

4. Introduction

The Introduction should include:

- **Audit Objectives:** a clear statement that defines the scope of the energy audit in clear and measurable terms - example, space(s), systems and/or process(es) to be audited
- **Background Information:** a description of the location of the facility where the audit will be conducted, as well as information regarding facility layout, products/services produced/distributed, operating hours including seasonal variations, number of employees and relevant results of previous energy initiatives.

5. Audit Activity and Results

This section should make reference to:

- Description of the audit methodology (techniques - e.g. inspection, measurements, calculations, analyses and assumptions)
- Observations on the general condition of the facility and equipment
- Identification / verification of an energy consumption baseline in terms of energy types, units, costs and greenhouse gas (GHG) emissions for the facility/system being assessed
- Results of the audit including identification of EMOs and the estimated energy, GHG, and cost savings associated with each measure as well as the required investment and payback period associated with each of the EMOs identified.

6. Recommendations

This section should list and describe the recommendations that flow from the identification of EMOs and may include details concerning implementation. An explanation should be provided for recommending or not recommending each EMO identified in the results.

7. Appendices

Appendices include background material that is essential for understanding the calculations and recommendations and may include:

- Facility layout diagrams
- Process diagrams
- Reference graphs used in calculations, such as motor efficiency curves
- Data sets that are large enough to clutter the text of the report.

General Points on Report Writing

- **Grammar and Style:** The report should be grammatically correct. The language should be clear, concise and understandable by all readers. The writer should avoid jargon.
- **Documentation:** All numbers related to the results should be supported by information indicating how they were derived. This includes all savings, investment and payback information.
- **Mathematical Accuracy:** All calculations should be checked for mathematical accuracy. Where, for example, a table showing the breakdown and total of energy use or costs is included in the report, the total of the numbers in the breakdown should equal the amount shown as the total. If, for some reason, this is not the case, there should be a note explaining why the discrepancy is appropriate. Similarly, if numbers used in the full report differ from corresponding numbers shown in the Executive Summary, the report should contain a note or notes explaining why the discrepancy is appropriate.
- **Logical Consistency:** The results should be logically consistent. For example, separate summaries in the report may use different bases for calculating energy savings. One summary might be based on energy savings related to the recommended measures while a second summary might be based on energy savings related to both recommended and non-recommended measures. If such a logical inconsistency is considered necessary by the auditor, it should be explained in a note and in the example above, both tables should be referenced to the note.
- **Illustrations:** Graphs and charts may be used to spark interest in the report and implementation of the recommendations but should not be used as a substitute for numerical data.

Tables for the Executive Summary

Baseline Energy Use and Cost							
Audited Facility/System Description	Electricity		Natural Gas		Other (Specify)		Total Cost
	Units (kWh/yr)	Cost (Rs.)	Units (m3/Yr)	Cost (Rs.)	Units	Cost (Rs.)	(Rs.)
TOTAL							

Recommendations							
Rec. #	Description	Potential Electricity Savings (kWh/yr)	Potential Natural Gas Savings (m3/Yr)	Other potential energy savings (specify type and units)	Potential savings (Rs./yr.)	Cost to implement (Rs.)	Simple Payback (Yrs.)
TOTAL							

Reference:

http://cetc-varenes.nrcan.gc.ca/fichier/6510/Audit_Report_Guidelines_e.pdf