

Study Description	An Energy Conservation Report identifies opportunities for energy conservation and how a project contributes to the City of Barrie's interest in reducing greenhouse gas.
Purpose	<ul style="list-style-type: none">• Early identification of opportunities to integrate local energy solutions that are efficient, low carbon, and resilient
Who should prepare this?	Certified Energy Manager licenced by the Association of Energy Engineers or Leadership in Energy and Environmental Design (LEED) Associated Professional. All reports and drawings must be stamped and/or signed and dated by a qualified professional, licensed in the Province of Ontario.
When is this required?	An Energy Conservation Report is required when an industrial development proposing a building over 5,000 m ² , a commercial building over 2,500m ² , or a residential development proposing greater than 50 units in a single building.
Required Contents	Identify and evaluate opportunities to achieve very low energy use and reduced energy demands, through: <ul style="list-style-type: none">• Building orientation and solar controls; thermal effectiveness of the building envelope; daylighting design strategies; and• High efficiency mechanical systems (e.g. efficient HVAC systems, heat recovery, lighting solutions)

Identify and evaluate opportunities for low-carbon energy solutions on-site (i.e. within the proposed development site), and off-site through connection to nearby existing or planned buildings and infrastructure. This can include, but is not limited to:

- Renewables, such as rooftop solar PV, geo-exchange in a nearby park, and heat recovery from sewer lines;
- High efficiency combined heat and power (CHP);
- Connection to an existing thermal network;
- Rough-in for a future connection to nearby existing/in-development thermal energy networks (i.e. "district energy-ready"); and
- A new thermal network connecting several planned developments in an area

Analysis and Recommendations

- Calculate energy consumption, demand, and emissions for the proposed development. Include in calculations the energy performance of existing buildings (if any are part of the development site) using available utility data.
- Estimate the contribution(s) of the identified on-site and off-site low-carbon solutions towards achieving zero emissions.
- Compare energy savings of the proposed buildings built to minimum Ontario Building
- Code standards to the same project with the proposed energy saving mitigation measures in equivalent kilowatt hours per square metre.
- Based on the completed analysis, state the preferred scenario and conclude with recommendations and next steps to facilitate establish the overall value proposition(s).

Format of the Report

1. Executive summary
2. Energy calculations, including data and assumptions, for existing buildings and new development (soft copy spreadsheet – Microsoft Excel format)
3. Graphs of expected energy performance (Microsoft Excel format)
4. Conclusions / Recommendations
5. Appendices: supporting documentation, references, etc.

What other resources are there?

City of Barrie Energy Efficiency:

barrie.ca/EnergyEfficiency

City of Barrie Conservation & Demand Management Plan:

barrie.ca/Conservation-and-Demand-Management-Plan.pdf

City of Barrie Official Plan:

barrie.ca/OfficialPlan

Notes

If the proposed development is revised, the study/report shall reflect the revisions by an updated report or letter from the author indicating the recommendations and conclusions are the same.

Please note that a peer review may be required. The cost of the peer review will be borne by the applicant.

Please note that the requirements of this study may vary depending on the nature of the proposal. This will be determined through the pre-consultation process and in consultation with any applicable external agencies.

If the submitted study is incomplete, is authored by an unqualified individual, or does not contain adequate analysis, the application will be considered incomplete and returned to the applicant.