

# Commercial Energy Audit Checklist

Preparation and on-site inspection | Vancouver and the Lower Mainland

Work through Sections 1 to 3 around the audit itself. Sections 4 to 6 track what gets examined on site. The highlighted panel in Section 4 marks the items that cannot be confirmed by visual inspection and require measurement to produce a defensible number.

## 01 Before the Auditor Arrives

- ☐ **Utility data, 2 to 3 years.** Every fuel source, every meter, every account. Separately metered retail or amenity space included.
- ☐ **Sub-meter data.** Where installed. This is what separates knowing the building uses too much from knowing which end use is responsible.
- ☐ **As-built drawings.** Architectural and mechanical. Not the permit set, and reflecting any renovation work.
- ☐ **Equipment schedule.** Boilers, chillers, rooftop units, pumps, fans and DHW plant, with nameplate data, install year and replacements.
- ☐ **BAS schedules and setpoints.** Occupied and unoccupied schedules, setpoints, deadbands, and any standing overrides currently in place.
- ☐ **Actual operating hours.** The hours mechanical systems run, by space type. Frequently longer than posted hours.
- ☐ **Maintenance records.** Two years, plus any recent capital work that may already have addressed a candidate measure.
- ☐ **Tenant mix and occupancy changes.** If mix, hours or plug load density have shifted, historical utility averages no longer describe the building.
- ☐ **Comfort complaint log.** Complaints cluster geographically, and those clusters usually mark a real defect.
- ☐ **Planned capital projects.** Envelope measures should be evaluated alongside a scheduled re-roof or recladding, not separately from it.

*Share utility data before the site visit. An auditor who has seen the consumption profile arrives with specific questions, and the visit becomes an investigation rather than an inventory.*

## 02 Benchmarking

- ☐ **Calculate EUI.** Total annual energy across all fuel sources per unit of floor area.
- ☐ **State the floor area basis.** Gross or conditioned. The two produce materially different results and the basis must travel with the figure.
- ☐ **Compare against typical values.** For the building type and climate. This sets audit scope before anyone is on site.

## 03 After the Audit

- ☐ **Sequence by disruption, not only payback.** Group work by access and by season, not purely by payback ranking.
- ☐ **Tie envelope measures to planned capital work.** Cheap when a roof or cladding assembly is already open, expensive as a standalone project.
- ☐ **Verify controls operate as designed.** A substantial share of findings are control failures rather than equipment failures.
- ☐ **Re-measure what was changed.** An envelope or control measure with no follow-up measurement leaves its value unverified.

## 04 Building Envelope

*The category most often reduced to a visual note, and the one where that matters most.*

- ☐ **Air barrier continuity.** Wall to roof, wall to foundation, and around window openings. Continuity at junctions outranks any single material.
- ☐ **Thermal bridging.** Balcony slabs, shelf angles, parapets, structural penetrations and window framing.
- ☐ **Glazing condition.** Seal failure, interpane condensation, frame and perimeter sealant, and glazing to opaque wall ratio.
- ☐ **Penetrations.** Mechanical and electrical penetrations, louvers, and abandoned openings never sealed after equipment removal.
- ☐ **Below-grade and parkade interfaces.** The boundary between heated parkade and conditioned space is frequently undefined in practice.
- ☐ **Roof assembly.** Insulation continuity, drainage, and the roof to wall transition.

### Requires measurement, not observation

Air leakage is invisible. It cannot be confirmed or ruled out by looking at a wall, because the paths that matter are inside the assembly. A measured leakage rate requires pressurising or depressurising the building. An envelope finding backed by a number carries weight in a capital plan; a visual note does not.

- ☐ **Whole-building airtightness test.** Produces the leakage rate the model and the capital plan can both use.
- ☐ **Thermographic survey under pressure.** Locates which junctions are producing that number, turning a figure into a scope of work.

## 05 HVAC Systems

- ☐ **Equipment age and condition.** Against expected service life.
- ☐ **Control sequences and overrides.** Standing overrides are among the most common findings and the cheapest to correct.
- ☐ **Economizer operation.** Fails silently and often.
- ☐ **Simultaneous heating and cooling.** Common and expensive in older VAV systems.
- ☐ **Ventilation rates against occupancy.** Including over-ventilation of unoccupied zones.
- ☐ **Distribution losses.** Duct leakage and pipe insulation condition.

## 06 Lighting, Hot Water and Loads

- ☐ **Lamp and fixture types by area.** Legacy technology flagged.
- ☐ **Occupancy and daylight controls.** Installed is not the same as commissioned and functioning.
- ☐ **Exterior and parkade lighting.** Frequently runs continuously.
- ☐ **DHW plant, temperatures and recirculation.** Including recirculation loop control and pipe insulation.
- ☐ **Plug and process loads.** Tenant density, server rooms, kitchen equipment, elevators and base building loads.

### Need the envelope items quantified rather than described?

Monolith performs ASHRAE-framework energy audits with in-house airtightness testing and thermography.  
[monohousing.com](http://monohousing.com) | (604) 723-1364 | [info@monohousing.com](mailto:info@monohousing.com)