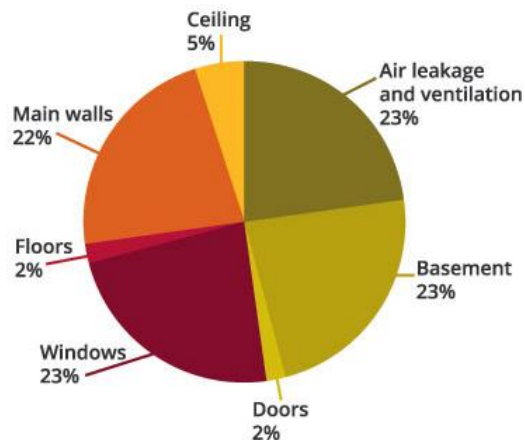


## Energy Bills and Heat Loss

### The biggest energy losses are space heating and cooling

If we are to fix the building energy losses, where are the major points of air infiltration, bad windows and where is the bad or missing insulation? What about heating /cooling equipment and appliances that are not doing their job to today's standards? Do we change both? This is where we help diagnose your situation.



The side chart shows what really saves you money and produces lasting benefits and comfortable working and living spaces. These are:

- Reducing air infiltration/exfiltration by proper sealing
- Fixing ductwork / airflow distribution issues in HVAC systems
- Improving our building envelope with properly installed insulation

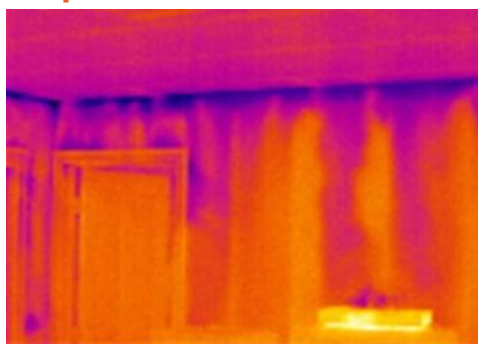
**Our job is to help diagnose your specific energy situation. We start by analyzing how your building actually performs.**

### Step 1: Energy Survey

Our physical inspections look at material weak points and evaluate the general character of the building or home including:

1. Thermal performance of the building enclosure (walls, windows, doors and roof)
2. Heat, ventilation and air condition systems and controls
3. Heating cooling distribution and balancing
4. Energy consumption e.g. appliances
5. Lighting fixtures, lighting power density and controls
6. Domestic hot /cold water systems
7. Occupant behaviours and operating practices
8. Heat /cool equipment efficiency

### Step 2: Blower Door Test and Infrared Scan



Infrared thermal imaging is utilized with blower door depressurization techniques to determine the quality and performance of your building enclosure.

Infrared thermal imaging is a proven diagnostic technique – it is ideal for exposing problems such as heat/cooling loss as depicted in the side image. IR scans provide details which are seldom exposed by other inspection techniques such as:

- Detect unwanted wall penetrations causing air infiltration and sound transmission
- Insulation defects: Voids, missing insulation, wet insulation – and measure R-value.
- Thermal bridges resulting in possible thermal comfort problems
- Non-functioning under floor heating circuits or solar heating
- Degraded seals around windows and doors
- Inadequate heating/cooling distribution and duct air leaks

### **Step 3: Heat Loss / Heat Gain Analysis**

We input the data specific to your building into an ASHRAE Manual J Energy Management Software tool to synthesize heat fuel energy demand and estimate your electrical consumption. We review your utility bills for the past 12 months to reconcile what you are using against what you should be using. This service allows you the building owner to understand how your building is performing against benchmarks.

### **What can you expect from us**

We look at your building as a complete system and prioritize:

- ◆ Where you can reduce building energy losses.
- ◆ How you could improve heating /cooling equipment
- ◆ Whether your appliances and lighting are doing the job,
- ◆ Explain if improvements can be achieved by repairing what you have now, as opposed to replacing something completely.

**Our evaluations will allow you to make informed decisions about your building.**

**Contact us and let us set you on the right path for your building to make it comfortable and save you money. Our recommendations have integrity because they are supported by diagnostics and analysis.**