

6 In the Office

Saving energy in the office doesn't need great investment, just for employees to adopt some simple energy saving measures that cost little or nothing in time and money. In this chapter, a list of these measures is included, especially those regarding office equipment (computers, monitors, photocopiers and so on). Also, the suitability of carrying out an energy audit in the office and the implications of this are discussed. Clarification of the different energy rating labels and their meaning is also included in this chapter.

6.1 Energy Audits

Whether one is constructing a new building or remodelling an existing space, a business energy audit is a great way to implement eco-friendly company values. Save energy, cut back on carbon dioxide emissions, and create a more comfortable workplace with this relatively inexpensive procedure.

How to conduct an energy audit:

- Do-it-yourself energy audit: Consider conducting your own business energy audit. Start by checking the list of information commonly requested on audit questionnaires to get an idea of the kinds of data you will have to collect
- Professional energy audits: Alternatively, hire a professional to do the job
- Hire an energy efficiency contract specialist: Once the audit is complete, start improving the energy efficiency of the building

Information commonly requested on audit questionnaires:

- Number of employees (full-time and part-time)
- Primary business activity
- Average number of business hours per day

- Average number of business days per week
- Year building was constructed and occupied
- Average ceiling height
- Total square footage of building and percentage used regularly
- Number of floors in the building
- Percentage of exposed walls, walls shared with other buildings, and walls with windows (and whether windows are single-, double-, or triple-paned and if they have tints or reflective coatings)
- R-values of exterior walls and ceiling/roof (for this you will need to have information about the type of materials used in the building's roof/ceiling and their estimated heat flow resistance values). The R-factor (also known as R-value) indicates the insulating value of a product, or put another way, the product's resistance to heat flow. The higher the R number, the higher its insulating effectiveness
- The kind of energy used in building (natural gas, electricity and so on) and the age, efficiency, and type of system used to cool and heat facility (central air, window air conditioners, hot water, boiler, furnace, unit heaters, baseboard heaters, radiant heaters and so on)
- Average setting on thermostats throughout the building while open and closed and whether thermostats are programmable
- Type and condition of water heating units (including those in pools and hot tubs)
- Number, type, location, age, condition, efficiency, use-patterns, and size of refrigerators and freezers, laundry equipment, microwaves, dishwashers, and stoves/ovens
- Number, type, age, efficiency, use-patterns, and size of all electronic equipment (computers, printers, copiers, monitors, servers and so on)
- Number, type, wattage, and average operational time of indoor and exterior lights
- Number, type, age, and use-patterns of all elevators and escalators
- Information about any equipment used seasonally (dehumidifiers, irrigation systems, special events equipment and so on)