Ministry of Sustainability
& Climate Resiliency
Cayman Islands Government

DO IT YOURSELF: Home Energy Audit

A guide to using less energy and saving more money

Who is this guide for?

Do you want to reduce your monthly utility bills? There are many small changes you can make to your home and personal habits that will have a big impact on your energy consumption and the carbon footprint of the Cayman Islands.

This 'do it yourself' home energy audit can help you save money and energy at the same time.

What is a Home Energy Audit?

A home energy audit is a room-by-room assessment of your house that can help identify wasteful energy issues or practices in your home and highlight opportunities for increased energy efficiency.

How can I use this guide?

This guide includes simple checklists that will show you what to look out for in each room of your home. You can complete it section by section or all at once.

Simply tick off the action when you have completed it to start saving energy today!

We also have tips and tricks to make the process easier and the issues more identifiable.

Follow our simple checklists to identify the areas in your home where you could be saving energy and money!

1. Air Conditioning Systems & Equipment

For most Cayman Islands residents, home cooling systems make up the biggest proportion of monthly electricity usage. That's why it's the top focus of our DIY home energy audit.

- [ ] Ensure your equipment is checked annually by a professional.
- [ ] Check your ductwork for leaks.
  Dirt streaks, especially near seams, can indicate air leaks which should be sealed with a duct sealant.
- [ ] Regularly clean your air filters.
  These should be changed every 3 months or more often based on manufacturer's recommendations.
- [ ] Keep your ventilation fan clean and maintained.
- [ ] Consider upgrading your cooling system.
  Upgrade window units to a split system and choose units with a higher SEER rating.

2. Insulation & Air Sealing

The next biggest opportunity for home energy savings is preventing air leaks around the home through insulation and air sealing.

- [ ] Insulate your attic to keep cool air inside your home.

Look for gaps or feel for air flow in these areas of your home:

- [ ] Baseboards and edge of flooring
- [ ] Electrical outlets and light switches
- [ ] Windows and doors
- [ ] Recessed lights
- [ ] Attic hatch/trap door
- [ ] Around AC vents or wall units
- [ ] Plumbing coming into the house

Save more energy by...

- Keeping doors and windows closed when the air-conditioning is on.
- Turning your thermostat up when your home is not occupied.
  You can use a smart thermostat to automatically adjust the temperature based on when your home is occupied.
- Use fans to circulate cool air.
- Never using regular duct tape to repair holes in your duct work.
  The adhesive used in general purpose duct tape is not built to withstand the hot and cold temperatures and moisture of an air conditioning system.
- Using caulk and weatherstrips to air seal your home.
  Caulk is generally used for cracks and openings between stationary home components such as door and window frames. Weatherstripping is used to seal components that move, like doors and operable windows.

TOP TIPS

Not sure how to check for air leaks? Here are two different methods to check for air flow or gaps:

Hand Test: Hold your hand up to the area you are checking. If you have an air leak, you will feel air coming through the affected area.

Dollar Bill Test: Test your door and window seals with the dollar bill test. Shut a door or window on a dollar bill. If you can easily pull the dollar bill out, you're losing energy.

3. Ventilation

- ☐ Ensure your bathroom exhaust fan is clean.
  Make sure the exhaust fan isn't blocked with lint.
- ☐ Ensure your kitchen exhaust fan is clean.
  Make sure the exhaust fan isn't blocked with grease.
- ☐ Ensure your dryer vent and exhaust pipe are clean.
  A clogged dryer vent can be a fire hazard and makes your dryer less efficient.
- ☐ Make sure your attic is properly ventilated.
  If you have moisture in your attic, it's not ventilated properly. Check to ensure that your soffit vents (around the edge of the roofline) aren't blocked with insulation.

The average bathroom fan will remove humidity within 15 to 20 minutes. Adding a timer switch to your fan allows it to do its job without wasting energy.

4. Lighting

- [ ] Upgrade any old lightbulbs to energy efficient, LED lightbulbs.
- [ ] Consider using sensors, dimmers or timers to reduce light use.
- [ ] Make sure outdoor light fixtures have reflectors, deflectors, or covers to make more efficient use of the light source and reduce light pollution.
- [ ] Use outdoor solar lighting where applicable.

Old lightbulbs should not be disposed of in general household waste. Please take these to the landfill for proper disposal.

5. Appliances

- [ ] Consider replacing old appliances with more energy efficient ones.
  Many appliances come with an Energy Guide label which provides an estimate of the average energy consumption and cost to operate the specific appliance model.
- [ ] Ensure your fridge seal is in good condition and the temperature is at an appropriate setting.
- [ ] Clean your refrigerator coils once a year.
  When lint builds up on coils, the engine works harder and uses more energy.
- [ ] Consider if you really need a second fridge/freezer in the garage.
  These are typically older, less efficient units which will have to work even harder in a hot garage.
- [ ] (If applicable) Check the efficiency of your pool pump and filter; and ensure they are serviced regularly. Consider installing a pool cover.

Save more energy by...

- Only running your dishwasher, washing machine and dryer when they are fully loaded.
- Air drying dishes instead of using the dishwasher's drying cycle.
- Unplugging appliances when not in use or using a smart power strip.
- Turning your thermostat up when your home is not occupied or using a smart thermostat.
- Switching off lights when not in use, both indoors and outside.
- Using task-specific lighting like lamps instead of ambient lighting.

6. Water Heating

- [ ] Set your water heater temperature to 120 degrees F.
- [ ] Consider putting a timer on your water heater.
- [ ] Consider replacing your old water heating system.
  If your water heater is more than 15 years old, it could be time to replace it.
- [ ] Consider switching to a propane or tankless heater.
- [ ] Consider insulating your water heater and any exposed plumbing.
  Wrapping your water heater in an insulation blanket or 'tank jacket' can help retain energy.

7. Windows & Doors

- [ ] Check for gaps around windows and doors.
  Gaps around windows and doors are a major factor in energy loss. See page 2 for more details on how to check for air leaks.
- [ ] Consider tinting your windows.
- [ ] Consider installing awnings on west-facing windows.
  Awnings allow you to use natural light while creating shade.

Save more energy by...

- Closing curtains or blinds on west-facing windows in the afternoon to reduce the burden on your cooling system.
- Washing clothes in cold water.
- Installing low-flow water fixtures.
- When washing dishes by hand, using a separate bowl of warm water for rinsing instead of running the tap.
- Repairing leaks in fixtures - like faucets and showerheads - and pipes.
  A leak of just one drip per second can waste 1,661 gallons of water per year.

Once you've gone through the do-it-yourself home energy audit, you should have a pretty good idea of how efficiently your home is running and what areas could be improved.

Make a plan to start saving energy and money by asking yourself a few questions:

- [ ] **How much money do you spend on energy each month?**
- [ ] **Where are your greatest energy losses and how can you fix them?**
- [ ] **Can you do the job yourself or do you need professional support?**
- [ ] **What is your budget for making energy efficiency improvements?**
- [ ] **Considering the cost of improvements and potential savings over time, which areas of energy waste should you prioritise?**
- [ ] **Can you reduce waste by donating or reselling any working appliances you are choosing to upgrade?**