

# Homeowner's Guide to **Energy Efficiency**





## Homeowner's Guide to **Energy Efficiency**



برنامج كفاءة الطاقة وترشيد المستهلك  
Energy Efficiency & Conservation Program

Empower Your  
House

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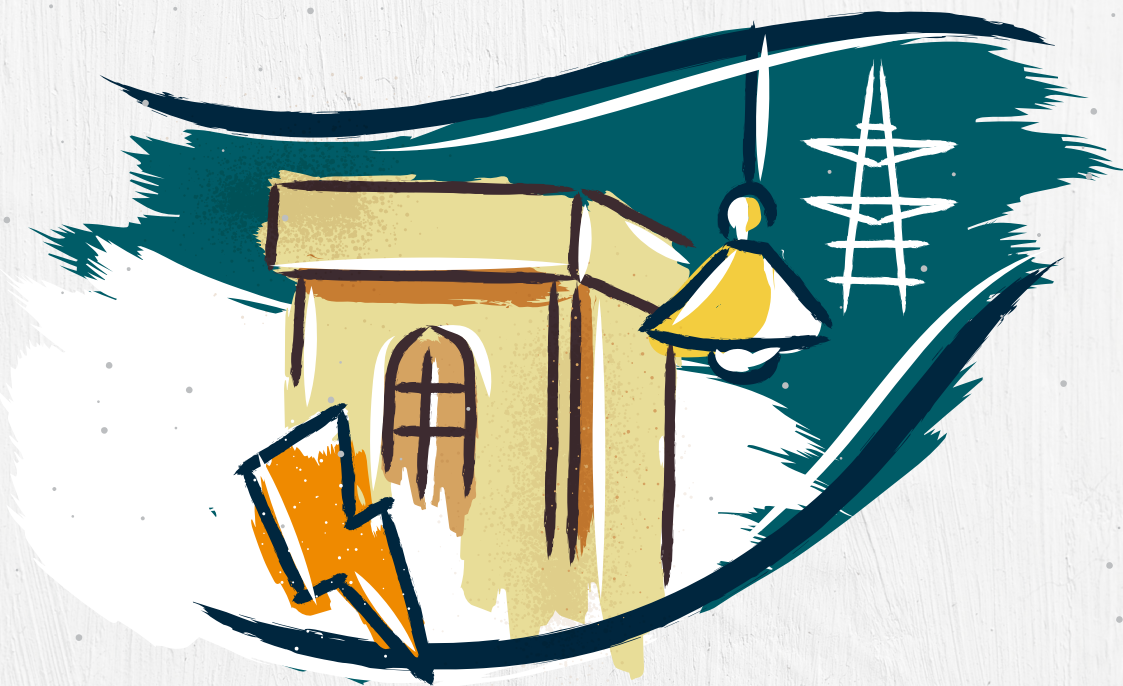
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EMPOWER  
YOUR HOUSE

**START SAVING  
ENERGY AND  
MONEY TODAY!**



Our houses are where our family members come and spend a lot of time together in a comfortable and loving environment. To add even more joy to their life, smart families aspire to be efficient in their household management by saving money for more important matters. 'Energy Efficiency' is a key step towards this goal, and we would like to help you get there!

An energy-efficient house saves money by reducing energy consumption and providing a higher level of comfort to its occupants. Energy-efficient houses also fight against increasing greenhouse gases and global warming. The benefits therefore are many, to you as a home owner, to Oman and to the environment.

This guide shows you just how easy it is to reduce your energy consumption at home. You will find easy tips to start saving right away, as well as information on larger projects that will help you save money in the long term.

**Interested? Let's get started!**



## SECTION 01

# START BY ASSESSING YOUR HOUSE'S ENERGY USE

Now that you've decided to improve the comfort and efficiency of your house, let's start with an energy assessment. You could employ a certified 'Energy Auditor' to evaluate your house and recommend energy-saving improvements – or you start with a basic do-it-yourself energy audit.

## Professional Energy Audits

A professional home energy audit determines how much energy your house consumes and evaluates steps you can take to make it more energy efficient. The energy auditor should do a room-by-room examination of the house as well as a thorough examination of past energy bills. The energy auditor will help you develop an action plan to improve your house's energy efficiency by informing you of the recommended measures, costs, and required time.

## Do It Yourself (DIY) Energy Assessment

This simple checklist will help you identify and fix some common problems and save on energy bills. Make sure to follow safety measures while conducting your assessment.



## AC Systems

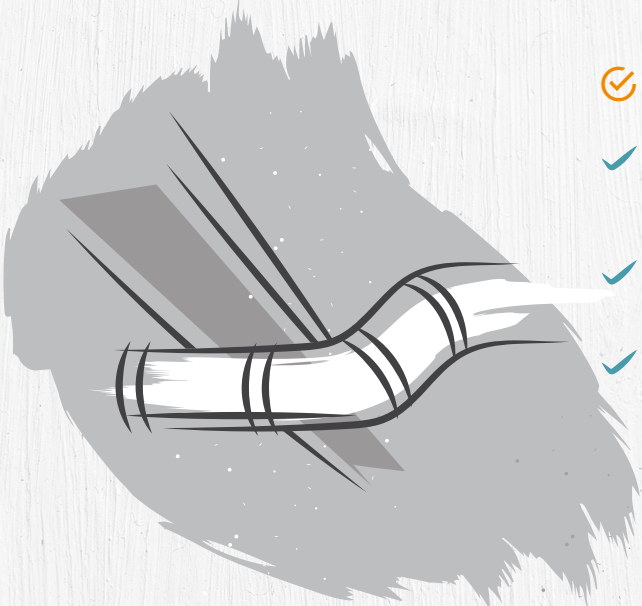
- ✓ Check and clean filters as needed
- ✓ Have your AC equipment checked by a professional annually
- ✓ Check ductwork for signs of leaks and seal them
- ✓ Insulate ducts that pass through unheated (uncooled) spaces
- ✓ Consider replacing units more than 10 years old with energy efficient models

## Lighting

- ✓ Use LED or CFL light bulbs whenever possible
- ✓ Use dimmer switches to reduce lighting when appropriate
- ✓ Put lamps on a timer to switch them off when not needed







### ✓ Insulation

- ✓ Ensure openings around pipes and duct works are sealed
- ✓ Seal gaps with expanding foam
- ✓ Check if the inside walls have proper amount of insulation

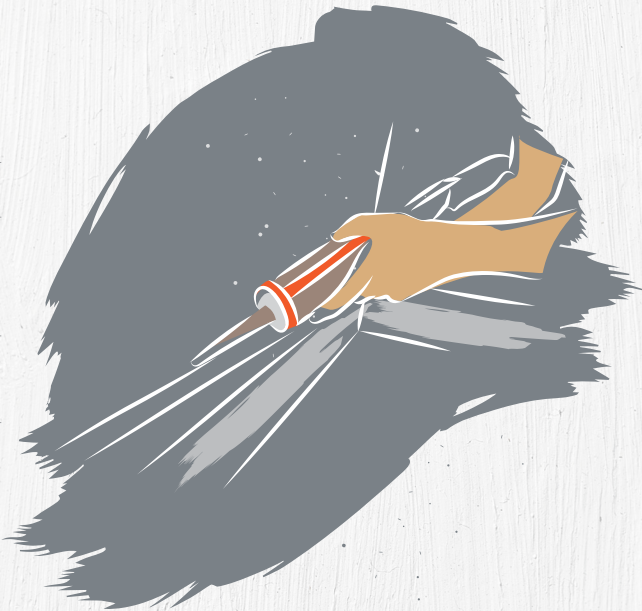


### ✓ Windows & Doors

- ✓ Use tinting on windows that are not shaded by trees or overhangs
- ✓ Inspect windows and doors to ensure they close properly and don't have gaps
- ✓ Use weather stripping around the edges of doors and windows

### ✓ Air Sealing

- ✓ Locate any air leaks
- ✓ Check for cracks in walls
- ✓ Examine for cracks around fixtures and electrical outlets
- ✓ Seal any leaks with appropriate materials




### ✓ Water heating

- ✓ Consider replacing units more than 10 years old with energy efficient models



## SECTION 02



# COOL YOUR HOUSE EFFICIENTLY

Imagine it is the hottest day in summer. No matter how many ACs you turn on, your house is still hot! Not only that, you've just received your energy bill – and it is twice what it was last month! Perhaps you didn't know, **but just cooling your house makes up about 60%-70% of your energy use.**

No matter what kind of cooling system you have in your house, you can save money and increase your comfort by properly using, maintaining and upgrading your equipment.

Compare your cooling options

Since ACs are such an integral part of every house, it is important to make the right choice.

AC options include window units, ductless mini-split units and central AC.

|                        | Advantages / Pros  | Disadvantages / Cons  |
|------------------------|--|---|
| Window AC              | Relatively small<br>Easy to install<br>Affordable<br>Does not require professional installation      | Noisy<br>Blocks view of the outside<br>Higher energy bills                  |
| Ductless mini-split AC | Energy efficient<br>Quiet operation<br>Flexible cooling for individual rooms or zones<br>Unobtrusive | More expensive than window units<br>Needs to be installed by a professional |
| Central AC             | Best for whole house cooling<br>Energy efficient   | Higher upfront costs<br>Needs to be installed by a professional             |

What to consider while choosing your AC


- How many rooms do you need to cool?
- What is the room size?
- What is the efficiency of the AC?

You can look for energy-efficiency labels on ACs. The higher the number of stars on an AC, the more energy efficient it is.


Energy-Efficiency Label  
In air conditioners

| Split-unit ACs | Window ACs |
|----------------|------------|
|----------------|------------|


More Stars means more of



Money Saving on energy bills



Appliance Efficiency



Energy Saving

1

Appliance Efficiency

2

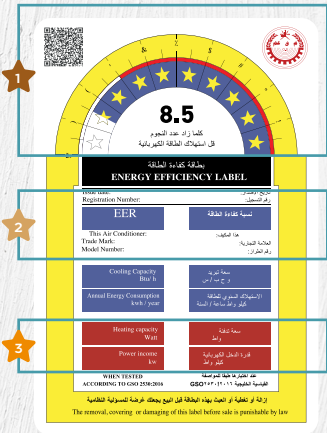
Appliance name in English and Arabic

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Energy Efficiency Level

**Dear Subscriber**

The more stars you choose on the Energy Efficiency Card, the more energy will be saved in the air conditioner.





Purchase an air conditioner that is sized correctly for your room's dimensions. Selecting the correct size will enable the unit to operate more effectively and work efficiently to cool your house. Follow the steps below to guide you in selecting the correct AC size:

Step 1

Multiply the length of the room by its width (Length x Width = floor area m<sup>2</sup>)

E.g. 6m x 4m = 24 m<sup>2</sup>

Step 2

You can use the table below as an approximate guideline of the size of AC you require for your room.

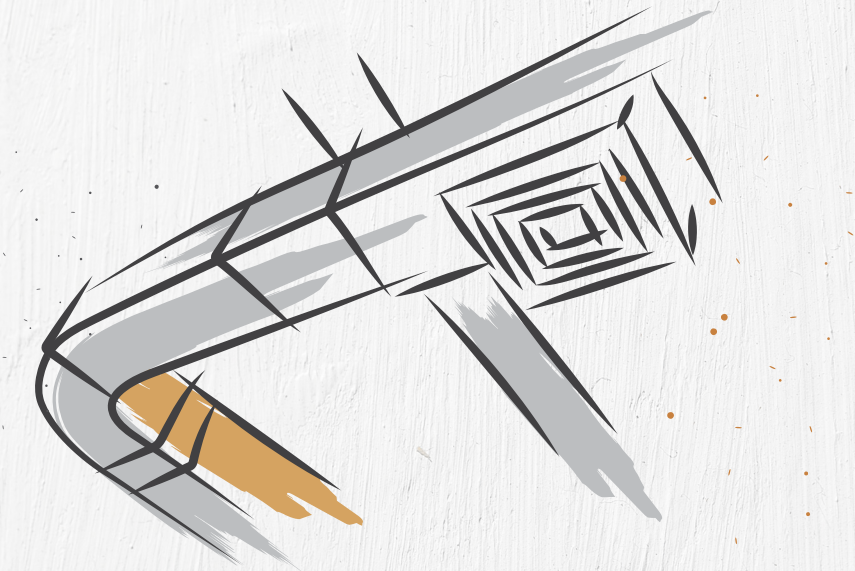
| Room Floor Area (m <sup>2</sup> )      | AC Tonnes  |
|--|--|
| Up to 20 m <sup>2</sup>                | 1.5 tonnes   |
| 20 m <sup>2</sup> to 28 m <sup>2</sup> | 2 tonnes   |
| 28 m <sup>2</sup> to 35 m <sup>2</sup> | 2.5 tonnes   |
| 35 m <sup>2</sup> to 40 m <sup>2</sup> | 3 tonnes   |
| Larger than 40 m <sup>2</sup>          | Consult a professional for selecting the correct AC size |

When buying a new unit, be sure to check for any energy efficiency label and select an energy efficient air conditioner. It is best to select newer models that consume less energy. They may cost a little more to buy but could save you much more in reduced energy bills during the next few years.

As an alternative and cost-effective cooling option that doesn't compromise on comfort, consider using fans. **Fans make you feel cooler by circulating air and creating a wind chill effect.**

Air Ducts

You barely notice them – but they are one of the most important systems in your home, as they carry the air from your home's central conditioner to each room. If the ducts are poorly sized, improperly sealed or inexpertly insulated, they are probably contributing to higher energy bills.



If you have central cooling in your house, hire a qualified professional to perform changes and repairs to the duct system. All duct sealing should be tested to ensure combustion safety and proper air flow.

Smart houses use smart thermostats

New technology allows you to control your temperature settings; saving you money and helping you stay comfortable in your house. For each degree of extra cooling you set below 25°C, your energy usage will increase by 6-8% and your bill will increase by at least the same amount, possibly more if additional units are charged at a higher rate.





A smart thermostat is a Wi-Fi enabled device that automatically adjusts heating and cooling temperature settings for optimal performance.

Smart thermostats provide convenience, insight, and control. While system designs vary, the following are common smart thermostat features:

- ✔ Learn the temperature you like and establish a schedule that automatically adjusts to energy-saving temperatures when you are asleep or away.
- ✔ Provide data on home energy use that you can track and manage.
- ✔ Allow you to control home cooling remotely through your smartphone or tablet, so you can switch it on in time to cool the house before you get home and not leave it on all day.

A programmable thermostat is another option that can automatically turn on the air conditioner at times to suit your schedule. Programmable thermostats can store multiple daily settings that you can manually override without affecting the rest of the daily or weekly program.

Smart thermostats are generally easier to use and have more reporting and interactive features than programmable thermostats.

## Help your coolers stay cool!

- ✔ It is highly important to clean air conditioner' filters once a month or as recommended by a professional
- ✔ Except for fans that are designed for continuous operations, turn off kitchen, bath and other exhaust fans within 20 minutes after you are done cooking or bathing. When replacing exhaust fans, consider installing high-efficiency models.
- ✔ Turn off ceiling fans when you leave a room. Remember that fans can't actually cool the air in the room; they only make you feel cooler by creating additional air circulation, so there is no point in leaving them on if you are not there.
- ✔ Set the fan switch on your AC thermostat to 'Auto'.
- ✔ Keep the window curtains closed during the day to block the sun's heat.



Although air conditioners are the main cooling system in our houses especially during summer months, there are other alternatives you can consider to help your AC perform better or reduce its use in more pleasant weather conditions. A combination of proper insulation, energy-efficient windows and doors, shading, and fans can help keep your house cool. We will discuss these separately in later sections.

## SECTION 03

# LIGHT UP YOUR LIFE WITH LESS



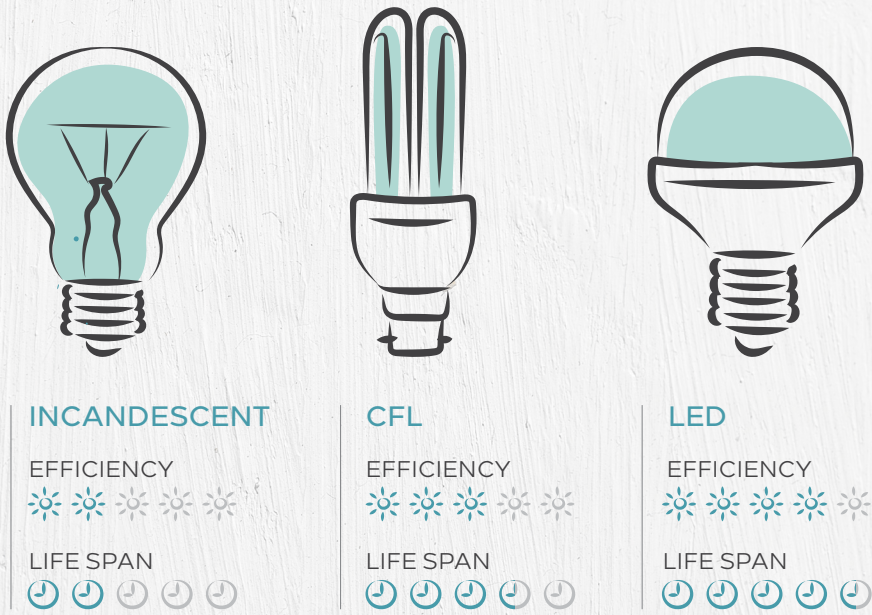
The right lighting doesn't just enhance your mood; it can cut your costs as well! Switching to energy efficient lighting is one of the fastest ways to cut your energy bills. Light bulbs are easy and inexpensive to replace, while compatible light fixtures consume less energy, produce less heat, and can prolong the life of your efficient bulbs. You can also select lights that come with features such as timers and motion sensors which will help you save money by remotely turning off lights that you are not using.



### Know your light bulbs

Energy efficient LED bulbs consume about 25%-80% less energy than traditional incandescent bulbs and they even last 15-25 times longer. This means choosing LED Lights will not only save you money on the energy bill but will also require less changing of lamps.

While you may find it cheaper to buy incandescent bulbs, they will cost you more in terms of energy consumption and frequency of change. On the other hand, the high efficient bulbs such as LED and CFL will cost you less to operate, saving you money over the life of the bulb.

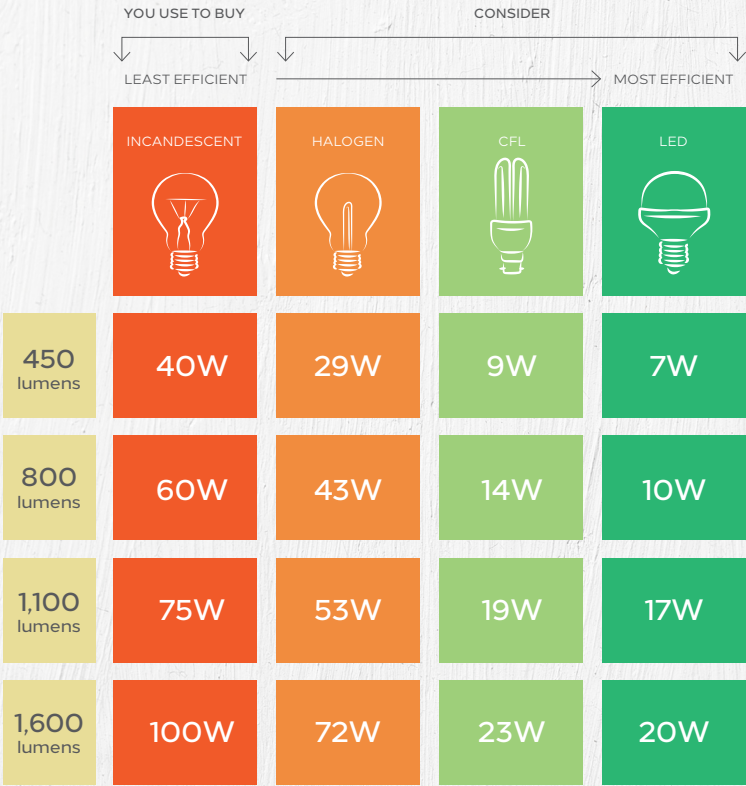


One of the greatest features of LED bulbs is that they can be dimmable so you can control the brightness to suit your need and consume less energy. You can find efficient lights options that have daylight or motion sensors; therefore, make sure to check the lightbulb packaging and choose a lighting option that is suitable for your lifestyle and your mission to use less energy.

### Better, Brighter Bulbs

Think of bulb brightness in terms of lumens. The higher the number of lumens, the brighter the bulb is. You can find the number of lumens on the lightbulb packaging.

Replacing your inefficient incandescent bulb with efficient LED lights is a great step towards a more efficient house. To ensure that you will enjoy the same level of brightness from your new lights, check the below guide to determine the best replacement options.



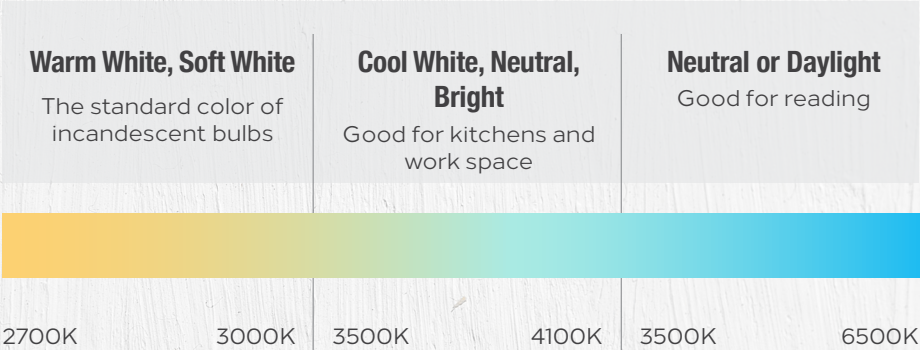
If you want to replace an inefficient 100 watt (W) incandescent bulb, choose an energy-saving bulb that puts out about 1,600 lumens. Similarly, to replace a 60 W equivalent, look for a bulb with about 800 lumens.



You can also choose if you want warm or cool lights through the Kelvin (K) temperature scale shown on the lightbulb package.

Refer to the below guide to choose the right color for your needs:

- ✔ For soft, white, warmer light, look for bulbs marked 2700-3000 K.
- ✔ For a whiter light, look for bulbs marked 3500-4100 K.
- ✔ For bluer white light or daylight, look for bulbs marked 5000-6500K



Fix Your Light Fixtures

Choosing efficient light bulbs is a great step forward in improving the efficiency of your lighting system. Another important step is to improve your light fixtures. Choosing **efficient fixtures can save you 70%-90% of energy use on lighting**, produce about 70% less heat than other models, and will last about 15-20 times longer. Efficient light fixtures are also great in distributing light more efficiently and evenly.

Start today by identifying your most-used fixtures and lamps and replace them with more efficient choices. This will be your first step towards a greener & energy-saving lifestyle.

Some ‘enlightening’ tips:

- ✔ Replace at least five of your house’s most frequently used light fixtures or bulbs with energy-efficient models.
- ✔ Controls such as timers and sensors save electricity by turning lights off when not in use.
- ✔ Dimmers save electricity when used to lower brightness levels.
- ✔ Keep your curtains or shades open in winter to take advantage of daylight instead of turning on lights. For more privacy, use light-colored, loose-weave curtains. Make sure to close those curtains in summer to keep the heat away.
- ✔ Choose small-energy efficient task lights for computer work, reading, or other focused work on desks and tables.
- ✔ Look for LED products and fixtures for outdoor use such as pathway lights, step lights, and porches. Many have features like automatic daylight shut-off and motion sensors. You can also find solar-powered outdoor lighting.





## SECTION 04

# CHOOSE EFFICIENT APPLIANCES

Every appliance comes with two price tags: the initial purchase price and the cost of operating the appliance during its lifetime. You will pay for the energy to operate the appliance every month for the next 10 to 20 years, depending on the appliance. The right choice of appliances as well as your efficient use can save you money on your next energy bills.





## Refrigerators

If your refrigerator is more than 10 years old, you could save significantly over the next 5 years by replacing it with an energy efficient refrigerator.

Follow these tips to reduce the amount of energy your refrigerator consumes:

- ✓ Set your fridge temperature between 3-5 degrees and your freezer between -15 to -18 degrees.
- ✓ Make sure your refrigerator door seals are airtight. Test them by closing the door over a piece of paper so it's half in and half out the refrigerator. If you can pull the paper out easily, the latch may need adjusting, the seal may need replacing, or you may consider buying a new unit.
- ✓ Keep your freezer full to make it consume less energy. You could fill it with water bottles, or bags of ice to achieve this. When your freezer is full, there is less room for warmer air to take up space, and the items that are in there help to cool down any air that does sneak in. So, keeping it full means less energy consumed.
- ✓ Defrost your freezer at least every 6 months to ensure it runs efficiently. There should not be more than 5mm of frost build up. Modern freezers usually have a mechanism to remove the frost without your help, but older freezers

and some cheaper models may need to be manually defrosted.

- ✓ Cool hot food before placing it in your fridge or freezer, otherwise your fridge or freezer has to work extra hard to cool the food down.
- ✓ Cover liquids and wrap foods stored in the refrigerator. Uncovered foods release moisture and make the compressor work harder.
- ✓ Keep the door closed as much as possible
- ✓ Place the refrigerator away from the oven and out of direct sunlight.
- ✓ Leave a few inches between the wall and the refrigerator, and keep the condenser coil clean on older models.
- ✓ If you have an old, second refrigerator or freezer, get rid of it, particularly if you don't store very much in it.

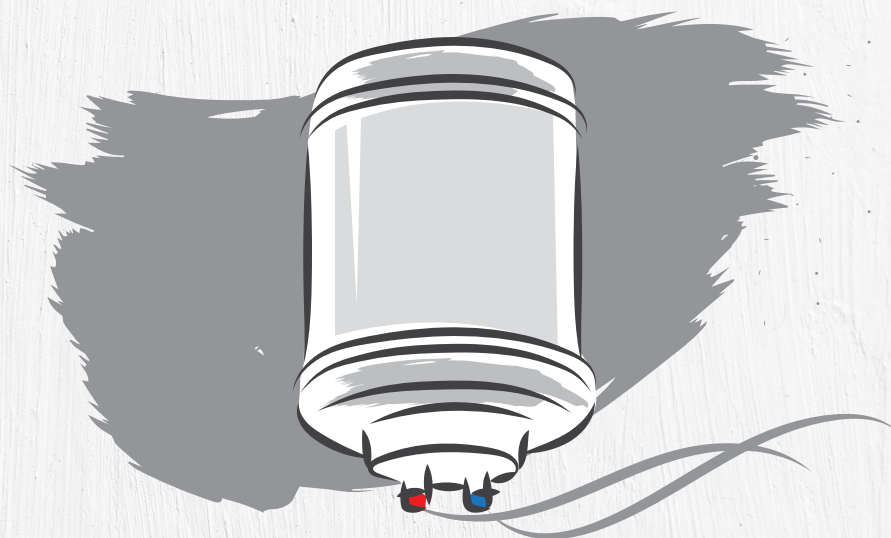
## Other Kitchen Appliances:

- ✓ Use small appliances such as toasters, ovens, electrical pressure cookers, microwave ovens, or convection ovens for small meals rather than your large stove or oven. They will consume less energy and save on cooling costs in the summer because they generate less heat.
- ✓ Replace light bulbs and light fixtures with energy-efficient products. Kitchen lights are some of the most used in a house. See the lighting section for more information.
- ✓ Turn the oven off a few minutes early and the heat will continue to cook the food as you plate up. This also applies to the stove when cooking food.





- ✓ Run the dishwasher only when full to reduce usage, but not to the point where you can't get the door shut! Over-stacking can prevent dishes getting clean and result in you having to wash them again, therefore consuming more energy and water.
- ✓ Dry your dishes the old-fashioned way. Forget about using the dry cycle, just open the dishwasher door and let your plates air-dry.



## Water Heaters

Did you know that water heating is one of the largest energy expenses in your house? It typically accounts for about 12% of your energy bills. This is a convenience we cannot do without, especially during winter months. However, there are three primary and practical ways to cut your water heating consumption and reduce your energy bill: 1) use less hot water, 2) insulate your water heater and pipes or 3) buy new, more efficient models.

### A tip to reduce water heating costs:

Consider insulating your water tank. Doing so could reduce standby heat losses by 25%–45% and save you about 7%–16% in water heating costs. If your water tank is new, it is likely to be already insulated.

## Time to buy a new water heater?

While a new, energy-efficient water heater may cost more initially than repairing an old model or buying a new, less efficient model, the energy savings will continue during the lifetime of the appliance. Most water heaters last 10–15 years. If yours is more than 7 years old, maybe it's time to think about replacing it.



## Washing Machine

Washing machines and dryers are amongst the largest energy consumers among home appliances. You can save money while doing laundry by consuming less water, using water that is cooler or at room temperature, and taking steps to consume less energy.

Washing machines have seen a 70% drop in energy use since 1990. If your washer is more than 10 years old, consider buying a new energy efficient clothes washer. These washers consume less energy, less water and have greater capacity, allowing you to wash the same amounts of laundry in fewer loads. New technologies move clothes in the washer without a central agitator, and rinse clothes by spraying instead of filling the tub with water, resulting in a gentle wash that consumes less water.



Warm or cold water is generally sufficient to clean your laundry; most of the energy used by washing machines goes to heat water when the option 'hot water' is selected. Using warm water instead of hot can cut a load's energy use in half, using natural cold water in the winter will save even more.

Try to wash full loads and use appropriate water setting if you must wash a small load. Use the high-speed or extended spin cycle to remove as much moisture as possible before drying.

**Work smarter in your home office**

We live in the Electronic Age. All of us use various kinds of electronics and home office equipment every day, for work, leisure, entertainment and communication. Using efficient products and taking steps to save energy can save money as well as extend the life of your products.



**Energy-saving tips for computers, home office equipment and electronics:**



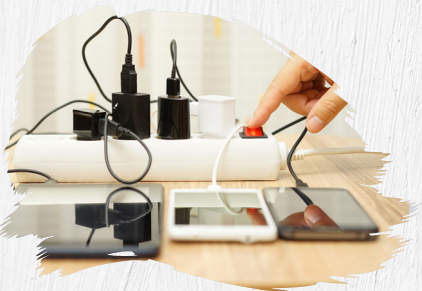
Turn off computers and other equipment when they are not in use.



Use power management settings on computers and monitors, which will send your equipment into low-power 'sleep modes' after periods of inactivity. Avoid using screen savers.



Use advance power strips that can prevent electronics from drawing power when they aren't being used. Features such as timers, activity monitors, and remotes provide options that make it easy to save energy. Many devices continue to draw power even when they are switched off which could add an extra 10% to your monthly energy bill.



Unplug battery chargers when the batteries are fully charged or the chargers are not in use.



## SECTION 05

# UNDERSTANDING PASSIVE COOLING

Want a natural cooling option or want to help your ACs save even more energy? Passive solar cooling is the least expensive way to cool your home. Simply put, this is achieved by introducing some home designs to keep out unwanted heat during the day. Through non-mechanical ventilation, passive solar cooling exchanges warm interior air for cooler exterior air when possible, storing the coolness of the night to moderate warm daytime temperatures.



## Effective Shade

To reduce unwanted heat gain in the summer, all windows should be shaded by an overhang or other devices such as awnings, shutters and trellises. If an awning on a south-facing window protrudes to half of a window's height, the sun's rays will be blocked during the summer, yet will still penetrate the house during the winter, for maximum comfort.

## Intelligent Landscaping

Well-designed landscaping can create effective shade, reduce heat gain from the sun and cut air conditioning costs. For low-maintenance, healthy, energy-saving landscaping, use indigenous plants, which are adapted to the local climate. Also consider ways to save water when planning and maintaining your landscape.

Where there are windows or doors installed on the west or east sides of a house, trees and shrubs can be positioned to block the sun at the hottest times of the day. If the trees are deciduous, they may work even better for controlling heat gains.

During the warm months, the trees will be leafy enough to block out sunlight. During the cooler months, the trees will shed their leaves and allow more heat into the house.

Trees, shrubs, and groundcover plants can shade the ground and pavement around your home, cooling the air before it reaches your walls and windows. Shrubs and trellised vines can also shade walls and windows.



## Plants & Water Conservation

When choosing plants, keep in mind how much water they actually need. Plants that are native to the area will usually need less water. The best time to water plants is early morning, when evaporation rates are low. Another good tip to save water is to avoid over-watering.





## Window talk

Windows are one of your house's most attractive features. Unfortunately, heat moving in and out of your home through windows can increase your need for air conditioning and therefore result in higher energy bills. Energy efficient windows help you control the temperature within your house and make the interior space cooler during hot summer days. The right windows will allow sunlight to pass through, but block heat, helping you save both energy and money on air conditioning.

If you are looking to reduce the amount of heat passing through your windows and improve the comfort of your home, you have two options:

### 1) Improve the efficiency of existing windows

If your windows are in good condition, taking steps to improve their efficiency may be the most cost-effective option to increase the comfort of your home and save money on energy costs. There are several things you can do to improve the efficiency of your existing windows:

- ☑ Check existing windows for air leaks
- ☑ Caulk and weatherstrip
- ☑ Add window treatments and covering
- ☑ Add exterior shading, such as awnings, exterior blinds, or overhangs

### 2) Replace your windows

You should consider replacement if any of the following apply to your existing windows:

- ☑ Installed 15-20 years ago
- ☑ Don't have double glazing
- ☑ Locks aren't working
- ☑ Glass has been smashed
- ☑ Not opening properly

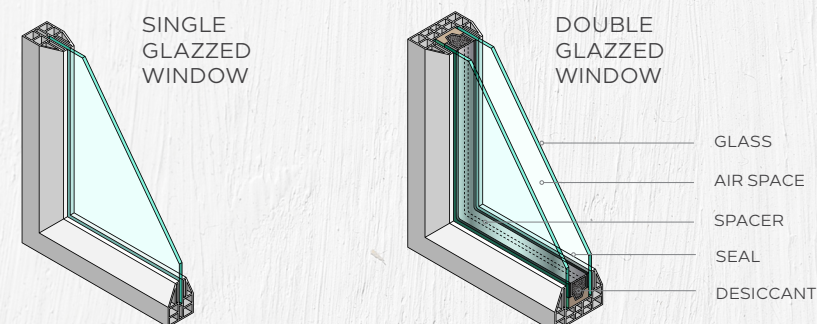
Should you decide to replace your windows, you will have to make some decisions about the type of windows you purchase:

#### ☑ Selecting Window Frames

The type of window frames you use will have a great impact on the energy efficiency of your windows. Aluminum frames, though widely used in modern construction, are the least energy efficient. Fiberglass frames are moderately efficient. Wood and Vinyl frames are highly efficient.

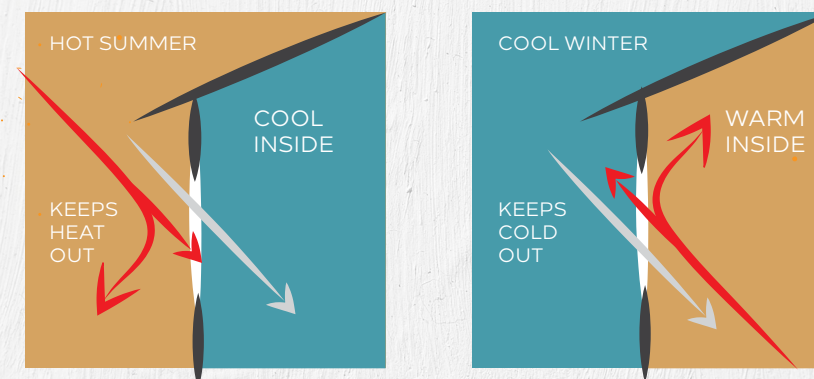
#### ☑ Window Glasses

Single pane glasses are highly inefficient. Use of double or triple pane glass is recommended for energy efficiency.



#### ☑ Low Emissive Glasses

Low emissive glasses reduce the incoming heat and therefore are the best energy efficient windows for hot climates.



## SECTION 06

# WEATHERIZE YOUR HOUSE

'Weatherizing your house' means taking measures to protect your house against the impact of weather. This makes your house more comfortable while also helping you save money by saving energy. Home weatherization includes sealing air leaks and adding insulation. By investing in these simple measures, you can reduce your energy bill significantly.



## Air Sealing

Air leaks in the house can cause considerable energy loss. One of the quickest energy and money-saving tasks you can do is caulk, seal, and weatherproof all seams, cracks, and openings to the outside. By sealing uncontrolled air leaks, you can save an average of 11% on total energy cost.

Here are a few tips on how to do so:

1. Make sure individual circuit (supply) of these outlets is switched off from the main distribution board while checking.
2. Check around your walls, ceilings, windows, doors, and lighting fixtures, switches, and electrical outlets.
3. Look for gaps, doors and windows that don't close tightly.
4. Install window film over windows that seem to be allowing hot air inside.



Once you have identified all air leaks, do the following:

- ✓ Weatherstrip doors and windows by applying a strip of appropriate material to cover the joint of the door/window and the sill
- ✓ Seal air leaks where plumbing, ducting, or electrical wiring comes through walls, floors, and ceilings.
- ✓ Use foam sealant on larger gaps around window trims and other places where air might leak out.



## Insulation

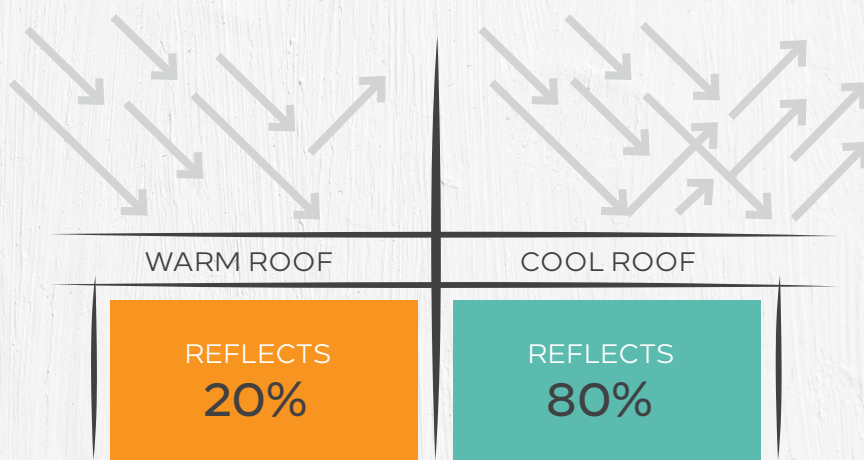
Insulation is a cost-effective and practical way to keep your house warmer in winter and cooler in summer. It protects against heat gain and loss in ceilings, roofs, floors, and walls. Insulation may also reduce condensation, decreasing your chances of damp and mold.

### Cool Roofs and Walls

Cooling works best when it's 'top down', so let's start with the roof. A cool roof is one that has been designed to reflect more sunlight and absorb less heat than a standard roof. A Cool Roof minimizes solar heat gain keeping roof surfaces cooler under the sun. This is due to the materials used, which both reflect the solar radiation (solar reflectance) and release the absorbed heat (infrared emittance). Cool roofs can be made of a highly reflective type of paint, a sheet covering, or highly reflective tiles or shingles.



This applies to walls as well. For best results, thermal or insulating paint can be painted on the exterior side of a house that is facing the hot summer sun. Generally, any white or light-colored paint will perform better than a dark paint on exterior house walls, because light-color paint reflects heat away rather than absorbing it.



## Green Roofs

Green roofs can include anything from basic plant cover to a full-fledged garden! Green rooftops have been gaining popularity worldwide in recent years. That's hardly surprising, considering how many ecological advantages they have. Green rooftops can potentially keep away 27% of incoming solar radiation from your home. Plants will use the majority of this incoming solar energy in their growth processes.

The general advantages of a green roof are:

- ☑ **Insulation against heat and cold:** green plants will keep it nice and cool inside your home during the summer while in the winter it will be pleasantly warm.
- ☑ **Longer lifespan of the roofing:** a green layer protects the roofing against UV radiation. By avoiding exposure to extremely high and low temperatures, the roofing will last two to three times longer than with a traditional roof.

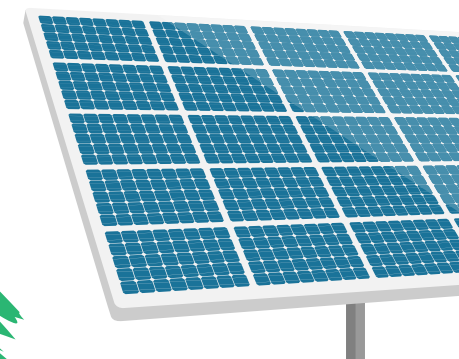


- ☑ **Increased biodiversity:** green roofs contribute to the increase of fauna in the city, such as butterflies, pollinating insects and birds, etc.
- ☑ **Aesthetic advantages:** green roofs increase the aesthetic character of both buildings and neighborhoods. They also provide a nicer view for residents who live above them.



## SECTION 07

# RENEWABLE ENERGY: THE WAY FORWARD

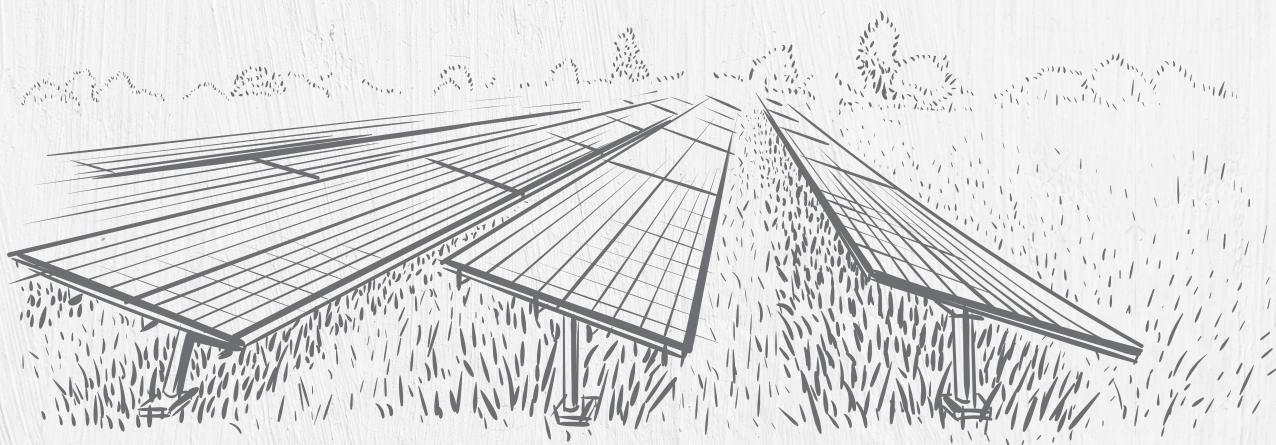




مبادرة الطاقة المتجددة  
A Renewable Energy Initiative

## Towards a brighter future with Sahim

Solar energy is the cleanest and most abundant renewable energy source available. Through capturing the energy from the sun and converting it into electricity, we can then use this electricity to light up our homes, streets, and businesses, and power our machines.



The Authority launched its Sahim initiative to allow households and businesses to install rooftop PV solar systems on their premises.

Sahim initiative is structured in two phases:

**Sahim I:** Allows large households and business to install small grid connected PV systems at their own cost to be compensated for any exported electricity via approved tariff.

**Sahim II:** Aims to drive large scale deployment of small grid connected PV systems (3-5 kWp) for around 10-30% of residential premises in Oman. Unlike Sahim I, private developer's will enter into competition to build, own and operate PV systems at residential premises selected by the Authority.

Visit <https://aer.om/ar/sahim> for more information on installing solar energy systems.



## CONCLUSION

If you have resolved to live an eco-friendly lifestyle this year, you might feel a little overwhelmed just thinking about the process. Rest assured, you have already completed the most difficult step – deciding to make a change. Just take it one step at a time. You will see how incorporating a few lifestyle changes can help you live a smarter, more sustainable lifestyle.

As you are now aware, there are many ways to reduce your energy use in your house. You can start with zero to low cost measures and observe how that impacts your energy bills, savings, and the comfort of your house. That is a win for you and a win for the Earth. We hope you find this guide helpful in creating your energy-efficient, eco-friendly house that is a credit to you and Oman.



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