



GENERAL TIPS

Conserve Electricity & Water For A Better Tomorrow



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INTRODUCTION

Water and energy resources on our land are God's gift to all mankind. Clean water flowing from our taps, electricity illuminating our homes and guiding our way on the streets at night, cooking our meals with gas, these are some of the blessings and comforts that we should not take for granted.

Energy and water resources in the UAE and around the world are slowly depleting as demand increases, and it is up to us to work hard to conserve what we have.

The UAE is one of the major consumers of electricity and is the world's third largest per capita water consumer after the USA and Canada. The UAE has planned strategies to conserve our resources over the years, increase the efficiency of water and electricity consumption and develop and promote the use of renewable energy sources such as solar power.

Contrary to what many think, our resources will not last forever. So it is in every individual's hand to be responsible and do his or her part in helping us conserve our water and energy, so that generations after us can have what we have.

Whether you are a doctor, engineer, labourer, waiter, salesman or student, let us work hand in hand in creating a better tomorrow for everyone. Remember that every person counts. Every drop counts. Every light switch counts. Every action no matter how small counts.



SOME UAE FACTS AT A GLANCE

- The UAE is the world's third largest per capita water consumer after the US and Canada
- The UAE is also one of the major consumers of electricity. Air conditioning is one of the main power consumers
- Dubai's electricity and power demand will double by 2015
- In the UAE, the cost of buying one litre of petrol and one litre of water is almost the same
- UAE's electricity is estimated to require around \$80 billion in investment over the next 8 years to meet increasing demand. The government is planning to expand its installed capacity of 9,500 megawatts by more than 50% over the next ten years

THE IMPORTANCE OF WATER IN THE QURAN AND HADITH



- Water plays a vital role in Islam and is an issue mentioned in many verses in the quran and prophetic sunna. One of the most well-known verses is **"And we made from water every living thing" (21:30)**. Islam encourages us to preserve and conserve God's many resources to mankind, and misuse of His resources can be seen as disrespecting God's creations
- Conserving water and electricity and other luxuries on earth is not only positive behaviour for our future but it is an act of worship as well. As another verse states **"Consider the water which you drink. Was it you that brought it down from the rain cloud or We? If We had pleased, We could make it bitter (56:68-70)"**
- The Prophet Mohammed (PBUH) was very particular about wasting water. A hadith relates that the Prophet (PBUH) used to perform ablution using 0.5 litres of water (equivalent to around a small bottle of water) and would shower using 2 litres of water (equivalent to around 4 small bottles of water)
- The Prophet Mohammed (PBUH) also recommended that people should not perform ablutions more than three times before a prayer, even if they were near to a flowing spring or river
- Just because water is abundant, we should not use it excessively and carelessly, so let us all think twice before wasting God's gift to us

IMPORTANT TIP

- Encourage your imam at your local mosque to give a Friday sermon on water and energy conservation with a religious angle; it will help raise awareness.

IMPORTANT TIPS TO FOLLOW DURING PEAK TIME IN THE UAE

- The peak time for electricity and water load in the UAE is from 12 pm to 5 pm, especially in the summer months (June - September). To help us save energy during those hours and not put a burden on the load, try and delay tasks until after 5 pm or get them done before 12 pm, especially during the summer months. Try and limit using devices during those hours. Summer sees the highest number of accidents as well, so try and not run too many devices around your house simultaneously
- Air conditioning during summer consumes a large amount of energy, so it would be advisable to put it off when you are going out of the house. If

you are at home, avoid leaving the air conditioning units on in rooms that are not being used. Always be alert for any unusual performance or odd smells, smoke etc., emanating from the air conditioning units or vents and other devices around the house. If you notice anything out of the ordinary switch the device off immediately and call DEWA on 991 for assistance

IMPORTANT TIP

- Instead of sitting at home during the summer, why not make use of your time by taking advantage of many of the activities and events at various malls and other places?



IMPORTANT CONSERVATION TIPS TO FOLLOW AT HOME

Turn your lights and air conditioning off when you step out of the house.

ROOMS

- Use task lighting; put your light where you need it most instead of brightening the whole room
- Use fluorescent lamps instead of 20-watt lamps
- Clean your light bulbs regularly. Dirty and greasy light bulbs can reduce the light output by around 10%
- Install dimmers in areas like the dining room or the bedroom
- Use table lamps rather than turning on the lights for the whole room
- When buying ceiling lights or chandeliers, try to choose ones that do not have a large amount of lamps
- Make sure all your house windows and doors are properly shut when air conditioning is on; this will make the air conditioners more energy-efficient
- Replace air conditioner filters at regular intervals
- Ensure air conditioners, even if they are a central system, have individual switches/controls in each room

- Set your thermostats to 24°C in the summer, and make sure you set it on automatic mode, so that it shuts and restarts at intervals
- Caulk and weatherstrip doors and windows that leak air
- Re-use fish tank water on household plants-it also acts as a good fertiliser
- Keep blinds and curtains closed to reflect heat away from the house. During late afternoons or early evenings, open your blinds or curtains to let light in so to minimise the need for switching on indoor lights for young children who don't like sleeping in the dark, use a night light in the room
- Watch TV together as a family instead of separately, it will save you energy and promote a healthy family relationship
- Make sure you unplug your mobile phone charger when it is not in use
- Unplug personal computers, electronic devices and chargers when they aren't in use; most electronics use electricity even when switched off
- When buying a monitor, consider getting an LCD screen as it is 66% more energy efficient
- Switch off your computer at night
- Use one large multi-socket powerstrip to plug your computer, monitor, speakers, scanner, modem, and printer. Switch it off after you are done using your computer

BATHROOMS

Avoid long showers. Shortening your shower by a minute or 2 can save you up to 150 gallons a month.



- To minimise the amount of water used for a bath, plug the drain first and fill the tub only 1/3 full. Initially there will be a burst of cold water, but that will be warmed when hot water comes through
- You can save more than 100 gallons a week if you keep the tap closed while you shave
- Replace tap filters and showerheads around the house with water flow reducers. Water flow reducers on taps save 50-70% of water
- When adjusting water temperatures, turn the water flow down instead of increasing it to balance the temperature
- Close your water heaters in the summer. The water gets naturally heated at that time of year
- Place a plastic bottle filled with water or sand in your toilet tank to reduce the amount of water used in each flush
- Don't throw waste down your toilet. It leads to unnecessary flushing and increases the risk of your toilet getting blocked
- Upgrade your toilet to newer improved models with a dual flush system. It will save you water and money long term
- If your toilet flush handle regularly sticks in the flush position letting water run constantly, consider fixing or replacing it
- By turning off the tap when you brush your teeth, you can save approximately 3 gallons of water! Filling a cup to rinse your mouth saves about 4 gallons
- When you wait for water to heat up after turning on the tap, save it in a bucket or empty bottle and use it to water your house plants
- Invest in a good quality exhaust fan and do not leave it on for long hours

KITCHENS

When washing dishes by hand, use the least amount of washing liquid possible. This reduces water needed for rinsing. If you have an automatic dishwasher, operate it only when it is fully loaded. If your dishwasher is new, cut back on rinsing your dishes before you put them in the washer. Newer models clean more thoroughly.



- Don't let the tap run when you are cleaning your fruits or vegetables. Fill a pan or half the sink with water and use it for rinsing. After you're done, don't throw the water down the drain; use it to water your plants
- Reduce the number of times the refrigerator or freezer door is opened
- While cooking or boiling water, cover your cooking pan with a lid, this makes water boil at a faster rate and your food gets cooked in a shorter time
- Try and do all your cooking in one go instead of at intervals. Pans that are flat instead of rounded at the bottom are better conductors of energy
- When baking breads, pre-heat the oven or pan 5-8 minutes before placing the bread. As for frying and roasting, don't

- pre-heat your pan or oven for a long time
- Turn off the oven 5 to 10 minutes before cooking time is up. The trapped heat will finish the cooking
- Avoid opening the oven door repeatedly to check on your food. Use a clock or timer instead
- Wrap food and cover liquids in the refrigerator.
- For small meals, use toaster ovens, small electric pans or the microwave rather than large ovens. You will save a third to half as much energy
- Use high-pressure cookers as they use less energy than normal cookers
- Self-cleaning ovens are more energy efficient than normal ovens

- Keep the refrigerator full if possible. It takes less energy to cool a full refrigerator or freezer than an empty one
- Make sure you clean your fridge and freezer often and defrost it. Frost build-up increases the amount of energy to keep the motor running
- When buying a fridge or freezer, buy one that is efficient rated or has the best energy rating
- Don't keep your refrigerator or freezer too cold. It is recommended to keep the fresh food compartment of your fridge 4°C and the freezer -10°C
- Regularly check the rubber strip around the door of the refrigerator
- Clean the cooling filters behind the refrigerator every six months at least

- If you accidentally drop ice cubes when taking some from the freezer, don't throw them in the sink. Drop them in a house plant instead
- Invest in a good quality exhaust fan
- Try to use appliances that are small in size rather than large appliances
- Appliances consume energy even while switched off. Make sure you unplug your mixers, grinders, juicers, blenders, pressure cookers etc., from the power supply after your use
- Don't use running water to thaw frozen meat and food. Defrost it overnight in the refrigerator or if you have a microwave use the defrost setting
- Install an instant water heater on your kitchen sink so you don't waste water while you wait for it to heat up



LAUNDRY

- When doing your laundry, try and operate the washing machine only when you are doing full loads. Set the water level to the appropriate size of load you are using
- When buying a washing machine, try to go for high-efficiency models. These use less than 27 gallons per load
- Wash your clothes in warm rather than hot water; this will decrease your consumption by 50%
- Wash dark clothes in cold water. It will help clothes keep their colour and also saves on water and energy
- Don't dry your clothes in the dryer more than necessary. You will save 15% in energy consumption. When possible, use a clothesline instead and let your clothes dry naturally in the sun
- Dry heavy and light fabrics separately since it will minimise drying time
- Always check and clean the lint filter in your dryer before each load
- When buying a dryer, look for one with a moisture sensor that automatically shuts off the machine when your clothes are dry
- Squeeze your washed clothes out of excess water before loading them in the dryer or hanging them on the clothesline
- Consider buying an iron that has an auto switch-off in case you forget to turn it off. It is easier to iron creases on clothes using a steam iron or spraying water on your clothes while ironing
- Powder or liquid detergents are generally better than laundry soap bars because they are better performers in various types of water. Some are also combined with bleach or fabric softeners so they perform more than one task, and save time and energy

GARDENING

Water your garden in the morning or evening when temperatures are lower and help reduce evaporation. Recommended watering time is before 8am or after 6pm.



- To help plants retain moisture, spread a layer of organic mulch around them. This will save water, time and money
- Your garden does not need to be watered daily. Check the soil moisture 2 to 3 inches below the surface, if the top 2 or 3 inches of soil are dry then it requires watering
- Use drip irrigation system for shrubs and trees so that water goes straight to the roots, preventing run-off
- Regularly check your sprinkler system valves for leaks
- Houses that use sprinklers consume 35% more water than houses that don't
- Re-set the flow of your automatic sprinkler systems over the various

seasons to suit the needs of plants and your lawn

- Put an automatic shut-off valve on the sprinkler system so that it shuts off when it rains
- Water your plants at short intervals to help it soak up the moisture
- Avoid growing plants in areas where it will be difficult to water them. Consider planting in spring, autumn or winter when requirement for watering is less
- Place moisture readers in your garden to determine which plants or areas need to be watered
- When watering your garden, use a kitchen timer to remind you when to stop

- Ask your local nursery about plant selection and placement; certain plants require less water than others
- Group plants that require similar amounts of water together, so that some plants are not over watered or others under watered
- Don't cut off lower branches on trees and shrubs. Allow leaf litter to accumulate on the soil. This minimises evaporation and keeps the soil cooler
- Aerate the soil in your garden at least once a year so to help it retain moisture
- When mowing your lawn, don't cut the grass shorter than 2.5 cm, so that it is protected from the blazing sun and reduces evaporation

- Water roots, not leaves
- Position sprinklers so that your lawn gets all the water, not your sidewalk, driveway or paved areas
- Compost your yard trimmings. It helps to retain moisture in the soil so you will not need to water as much
- Remove weeds or dead plants from your garden; they unnecessarily take up water
- You can use recycled sewage water to your lawn and plants. Call the municipality to obtain water for this use
- Consider using garden lights or spotlights that run on solar energy

OUTDOORS

- Insulate your water-heater and water pipes. You will get hot water faster and minimise wastage from waiting for it to heat up
- If you have a pool, use a pool cover. This will help cut down on evaporation, and will leave your pool cleaner and minimise the need of chemicals
- Run your pool pump during off-peak hours and not during the afternoon
- If you use an inflatable pool, make sure you re-use the water later on plants around your house
- If you have a fountain at home, make sure it is equipped with recirculating pumps so that water is re-cycled
- Use a bucket of soapy water to wash your car or place a shut-off nozzle on the end of your hose. It's a good idea to wash your car on the lawn; your grass will get watered as well
- Wash your pets outdoors on the lawn so that the grass gets watered as well
- Use a broom to clean your driveway or sidewalk of sand or dry leaves, instead of washing it off with a hose
- Make sure you clean water tanks in the house regularly so that they stay clean and hygienic
- Choose a fuel-efficient car. It takes 44 gallons of water to refine one gallon of crude oil

LEAKS

- Monitor your water bill and meter. Unusually high bills may mean you have leaks that need to be checked. Call DEWA Customer Care Centre on 04-6019999 for help
- Leaky faucets that drip at the rate of one drop per second can waste up to 2,700 gallons of water per year. Plug them immediately



How to check if you have a leak:

If you're unsure whether you have a leak, read your water meter before and then again after 2 hours when no water is being used. If the meter does not give exactly the same reading, you probably have a leak.

A leaky toilet can waste about 200 gallons of water every day. If you're unsure your toilet has a leak, place a drop of food coloring in the tank; if the color shows in the bowl without flushing, you have a leak.

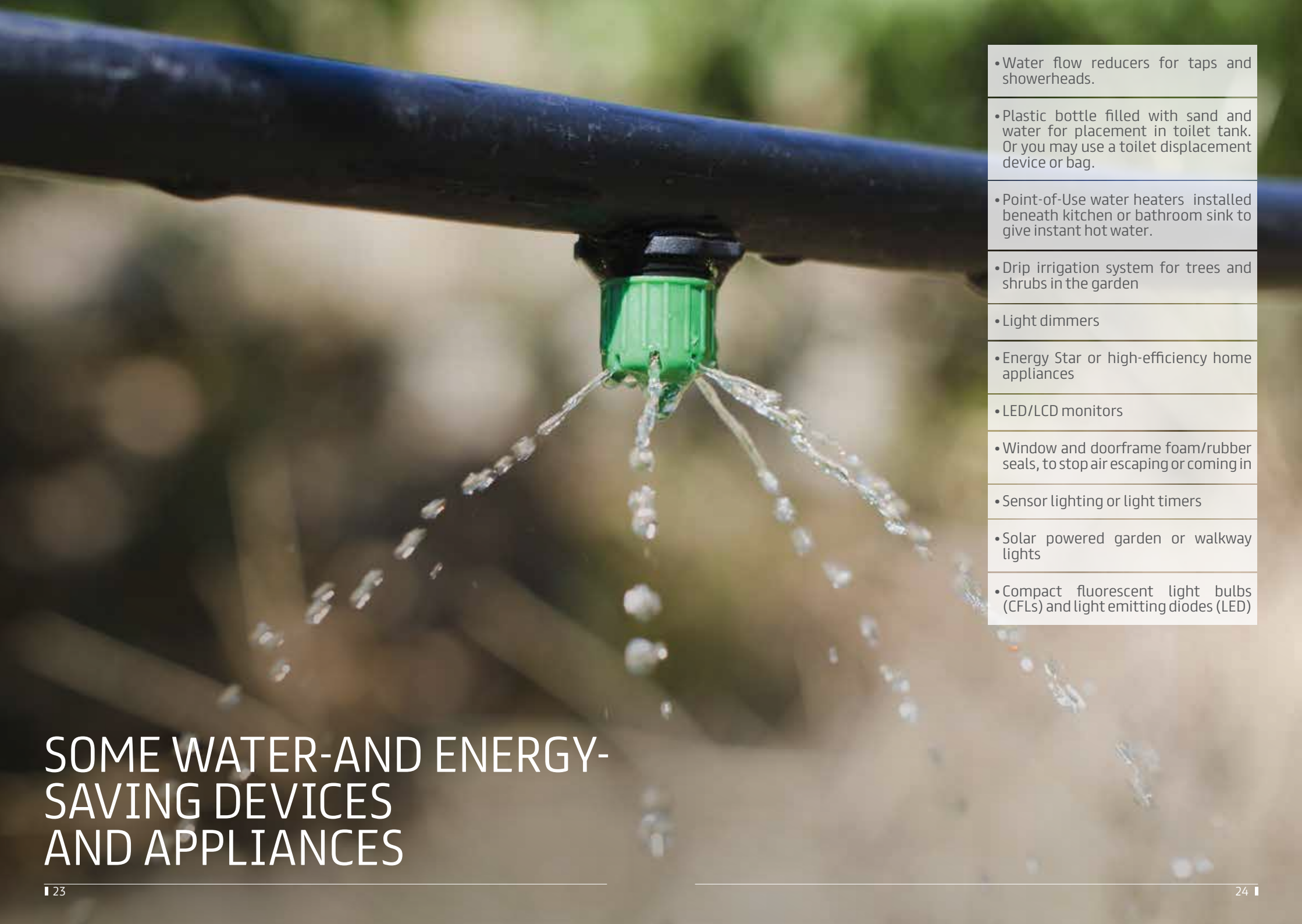


CONSERVATION TIPS WHEN BUILDING A NEW HOME

When planning on building a new house, consider taking steps to make it as green and energy-and water-efficient as possible.

- Talk to Dubai Municipality as well as your contractor about measures to make your home energy-efficient and choosing green building materials and design. Ask about the different types of walls, pipe systems, wiring, insulation, heating and cooling systems, windows, lighting and interior materials that will help in energy efficiency. It might cost a little more but it will pay off in energy savings and conservation
- If you are building a new home or are replacing your windows, consider installing windows with double-glazing and spectrally selective coatings that reduce heat gain and help maintain the house's temperature. Select windows with air leakage ratings of 0.3 cubic feet per minute or less
- Don't have large windows all around the house - they will let in a lot of heat
- If you are considering having a central air conditioning system, make sure you have a separate operation switch in each room
- Get appliances (such as refrigerators, washing machines, dishwasher's etc.) that are efficient or have the best energy rating
- Invest in good-quality exhaust fans
- Make sure taps and shower heads are fitted with flow reducers or invest in taps or showerheads that have restricted flow
- When planning out your garden, make sure it is landscaped keeping in mind water and energy consumption





- Water flow reducers for taps and showerheads.
- Plastic bottle filled with sand and water for placement in toilet tank. Or you may use a toilet displacement device or bag.
- Point-of-Use water heaters installed beneath kitchen or bathroom sink to give instant hot water.
- Drip irrigation system for trees and shrubs in the garden
- Light dimmers
- Energy Star or high-efficiency home appliances
- LED/LCD monitors
- Window and doorframe foam/rubber seals, to stop air escaping or coming in
- Sensor lighting or light timers
- Solar powered garden or walkway lights
- Compact fluorescent light bulbs (CFLs) and light emitting diodes (LED)

SOME WATER-AND ENERGY- SAVING DEVICES AND APPLIANCES



CONSERVATION TIPS AT THE OFFICE

- To save electricity, put your computers, printers, copiers and fax machines on 'standby' or 'sleep' mode after about half an hour of inactivity. The shorter the period, the more energy you save
- When everyone has left for the day, switch off lights and unused computers
- Don't keep unnecessary or extra equipment; share as much as you can between each other to reduce energy consumption
- Only print or photocopy whenever there is need for it and always re-cycle discarded or unused paper
- Recommend the installation of taps in the washrooms that operate through sensors
- If your building has a rotating door, use that instead of a standard swinging door. Rotating doors allow less cold air to escape
- Instead of taking the elevator, take the stairs. You'll save energy and get some exercise as well. If you are a group, go in the elevator together instead of waiting to take a separate one
- If you have half-used bottles of water lying around the office, consider using it to either watering any office plants or using it to make your morning tea or coffee. The water boiled gets rid of bacteria and is healthy to drink
- When it's the weekend, make sure that all equipment and lights are switched off and unplugged, and that nothing is running unnecessarily. Equipment could include computers, copiers, projectors, coffee makers, kettles in the pantry, etc. Also make sure that all taps are tightly closed in the washrooms and not dripping imagine how much water would be wasted over the weekend!



CONSERVATION TIPS WHEN YOU ARE AWAY ON HOLIDAY

- Make sure you switch off all air conditioning and lights in the house, and it is very important to check taps and pipes for any dripping or leaks before you go away. A leaky tap or faulty pipe can possibly cause flooding in the house if left unattended
- Unplug all power outlets and switch off the main switch
- Close the water supply to your appliances. Make sure the main water line valve is shut off
- Turn your water heater off
- Install sensor or light timers, so that boundary lights and other lighting that need to be turned on in the house are switched on during the hours that are needed only



SOME ECO-FRIENDLY TIPS

WATER POLLUTION

- Many household chemicals are toxic, so try and choose less toxic or non-toxic alternatives if available
- Do not throw unwanted household chemicals and cooking oil down the drain. It can disrupt your septic and drainage system
- Use phosphate-free detergents

GREEN BUILDINGS*

Be an advocate of developing Green Buildings and houses around the UAE!

Green Buildings are based on environmentally responsible design and resource-efficient space that cut down on maintenance and operation costs. They inflict minimal impact on the environment by using minimum resources and boosting comfort and productivity of its occupants

Other benefits of such buildings include reduced air and water pollution, limited waste production, energy-efficiency and renewable power and reducing the destruction of natural areas

The UAE is promoting the concept of Green Buildings and we hope that some day the majority of buildings and houses in this country will be eco-friendly

*Refer to Green Building regulations in Dubai

WORK TOGETHER WITH US

No matter who you are be a role model and help promote conservation at your workplace

- If you notice any water leakage, broken pipes or open hydrants when you are out, or any electrical wiring that is sticking out or not in place, be a helpful green citizen and report it to Dubai Electricity and Water Authority, so that swift action can be taken to repair the faults and save our water and energy
- If you see civil personnel engaged in repair work around your house or in your area, please be considerate to them; they are working for you and for your benefit

BE THE EDUCATOR

- Share conservation tips with family and friends and help spread awareness
- Kids learn fast, so teach them how to implement energy and water saving measures in their daily life. Praise and reward them when they follow your directions, it will encourage them to repeat it. Discuss with them topics on the environment and the effects of conservation
- Talk to domestic staff about water- and energy-saving techniques. They may not be aware of conservation methods
- Distribute leaflets or put up posters in your mosque wudu (ablution) area to educate worshippers about water conservation and how their acts and behavior can help them get closer to God
- Be effective. Participate in events and important dates such as World Environment Day or Earth Day. Visit the conservation stand at WETEX (Water Electricity Technology & Environment Exhibition)
- If you have any new suggestions to help conserve our water and electricity please share it with us, we would love to hear from you

CONSERVATION SUGGESTIONS FROM OUR CONSUMERS DEWA BEST CONSUMER COMPETITION

- **Samson Albert recommends:** "The installation of motion detectors in corridors to have light illumination when necessary."
- **Dr George John and Mrs. Linda George recommend:** "We sweep and mop the house instead of using a vacuum cleaner. We light a scented candle to clear cooking smells from our kitchen instead of continuously using the exhaust fan. We never have the stereo playing in the background while we are falling asleep."
- **Jayprakash T Ashar recommends:** "Putting the timer for adjusting the time to shut off TV or DVD player. If you forget to put off the power it will automatically do so."
- **M.D. Sasi Achry recommends:** "Iron fabrics that require lower temperatures and work up to those requiring higher heat. An iron heats faster than it cools and can save lots of energy."
- **Subramaniam Nambeesam recommends:** "Use rubber slippers while ironing or using grinder, mixer, washing machine, dryer, etc."





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