

ENERGY EFFICIENCY —

The first fuel of the energy transition

IN August 2023, the Trinidad and Tobago Electricity Commission (T&TEC) announced that the country had recorded its highest-ever consumer electricity demand of 1,400 megawatts on August 24th.

Just days later, the state utility revealed the record was surpassed again, with demand climbing to 1,410 MW the following week.¹ Unseasonably high temperatures were blamed for the increase, as citizens ratcheted up their air conditioning and kept their units running for longer to combat the heat.

As the mercury continues to rise due to global warming, it is expected that demand for cooling will increase further. This will in turn drive overall electricity demand higher. In Trinidad and Tobago, where power generation is fueled by natural gas, this presents a challenge. Given its maturing hydrocarbon reserves, the country must now source its gas from deeper water at higher costs. With a hungry hydrocarbon-based industrial sector to feed, the country can ill afford to direct more molecules into power generation.

So, how can power demand be met without consuming more gas? The introduction of renewable energy (RE) into the grid is one option, but RE projects have extended gestation periods. In the interim, an immediately available and low-to-no cost solution is energy efficiency.

BEING ENERGY SMART

Energy efficiency is often called the 'first fuel' of the energy transition, because it represents a source of power that essentially adds no additional carbon into the atmosphere. It is simply a mechanism by which existing energy supplies are used more optimally, through thoughtful consumption and reduction of waste. By using more efficient products and practices, consumers expend less energy - and money - to achieve the same tasks. This is not only valuable from an emissions and economic standpoint, but it helps bolster energy security, as unused energy can be redirected to meet demand in other areas.

At the domestic level, consumers may be familiar with the approach of switching appliances and fixtures to models that have been certified as energy efficient, such as Energy Star appliances and LED bulbs. However, there are other useful - and in some cases innovative - ways to use energy more efficiently at home.

Save energy



Adjust the temperature on your air conditioner

While estimates vary on the precise savings, it is generally accepted that raising the temperature on your unit can result in reduced energy bills. The logic is simple - the higher you set the temperature, the less the unit needs to work to achieve it. For many people, increasing the temperature by one or two degrees does not make a perceptible difference, yet it can yield appreciable savings over the long run.

On your days out, set a timer for your air conditioner

If your model allows, or you have smart home devices, set your air conditioner to turn on just a few minutes before you expect to be home. If you enter a warm room, you may be tempted to turn the unit on high to cool the room quickly, and run the risk of leaving it at that level for longer than you need to make the space comfortable.

Service your air conditioner regularly²

Replacing and cleaning filters in your unit can ensure they work at peak efficiency and can reduce energy consumption by up to 15%.

Cook intelligently

Whenever possible, plan your meals to make best use of your appliances. If you intend to turn on your oven, try to plan a menu that allows you to bake as many of your dishes as possible. Pre-heating the oven to cook one item uses the same energy as it would take to cook multiple items.

Keep a thermos handy

If you are a frequent coffee or tea drinker, consider boiling water in the morning then keeping it in an insulated vacuum bottle or thermos. That way, you do not need to turn the kettle on for every brew.

Wash with cold water

If your clothes are not excessively dirty, choosing a cold wash will allow you to save some power. Also, some laundry detergents are now engineered to work just as well in cold water as hot.

Use décor to your advantage

In some homes, lights go on as soon as the sun dips. However, you can eke extra sunshine out of the day by installing mirrors in strategic locations to reflect the sunlight at its evening angles. This would allow you to leave the lights off for longer.

Dry your clothes in the sun

Clothes dryers guzzle electricity. Take advantage of warmer temperatures and hang your laundry out to dry in the sun. Clothes dry quicker and can sometimes smell fresher for longer when air-dried. Be sure to check weather forecasts regularly so you can schedule your laundry days to coincide with sunny days.

Take cold, short showers

When it is hot outside, it makes sense to take cold showers, not just to cool you down, but also save on energy costs. Water heaters account for a significant share of domestic energy bills, so using less hot water is an easy way to cut expenditure. Where possible, don't leave your showers for the coolest times of day, so you avoid the temptation of turning on the hot water.

If you are given to taking long showers, try using one of your favourite songs to help you mark the time. Limit your shower time to just one encore if possible.

Reduce standby power or phantom loads

Even when not in use, appliances and devices that are plugged into outlets still draw electricity. This 'phantom load' is wasted energy. To eliminate this loss of power, unplug anything that is not being used, including chargers. An even more practical option would be to install smart power strips which are capable of detecting when an appliance is not being used, and can simply stop the flow of electricity to that device.

Spend leisure time outside

To reduce runtime on your air conditioner and other appliances on days off, try scheduling an activity that takes you outside. A beach getaway, a hike or even a day at the mall are all options for a cool outing that will take some burden off your energy bill.

Share the load

Family gatherings can help strengthen bonds and at the same time, reduce energy bills. Consider planning weekend potluck lunches that bring separate households - be it family or friends - together in one location. This would mean cooling one home or running one entertainment system instead of multiple on a given day. Alternating the hosts from one weekend to the next means the energy expense is shared.

This list is by no means exhaustive, but is a good point of departure for consumers wishing to cut down their energy use. What is most important is that every individual audit his or her consumption patterns and make a conscious effort to use less and use wisely.

² <https://www.washingtonpost.com/climate-solutions/2023/06/25/air-conditioner-energy-savings/>

¹ <https://newsday.co.tt/2023/08/30/update-ttec-records-highest-electricity-demand-again/>