KEMENTERIAN TENAGA DAN SUMBER ASLI

KERATAN SURAT KHABAR

SURAT KHABAR	:	STAR BIZ			
TARIKH	:	13/12/2021 (ISNIN)	MUKA SURAT	:	5
JABATAN	:	UMUM			

TOWARDS MORE EFFICIENT USE OF ENERGY

Energy-efficient measures can reduce power bills by as much as 25%

SOME of the earliest shophouses in Melaka were built in the late 18th century. The traditional shoplots used to house businesses on the ground floor while the family lived on the upper floor.

The architects of old constructed the buildings in such a way that they not only offered protection from rain, but could cope with the humid weather and scorching tropical heat.

Long before recycling and renewable energy became trendy, olden-day builders already knew how to make the most out of natural resources, conserve energy and be more fuel-efficient.

The ceilings were extra high, not only to give the perception of spaciousness, but to let in more natural light and ventilation.

Air wells were introduced to brighten and cool the interior, and was an avenue for the heat to dissipate.

Combed doors and louvred windows provided natural ventilation, while terracotta tiles on lime concrete bare floors allowed the ground moisture to rise and cool the room.

Fast forward to the 21st century when urbanisation is progressing at a rapid pace and smart cities are looked upon as a solution for better use of resources and a more sustainable environment; architects today might well take a page from the past.

Building sustainable smart cities

The United Nations predict that two thirds of the world population will be living in cities by 2050 – which means there will be a huge strain on resources and higher consumption of energy.

It makes sense then to develop a smart city vision and focus on more energy-efficient and sustainable buildings, especially considering how the building sector accounts for about 40% of primary energy usage.

In the long run, green buildings are projected to give better economic savings in terms of energy, maintenance and operational cost savings.

Energy-efficient buildings follow a bioclimatic architectural approach in which the shape, direction and in-built functions all work synergistically to improve energy consumption and maximise the building's energy performance.

By employing smart energy-efficient measures and renewable energy as a source of power, energy bills can be reduced as much as 25%.

Smart city solutions are also about intelligent town planning and management, and improving connectivity and quality of life for the residents.

This means incorporating sustainable infrastructure, environmental conservation and waste management to combat climate change and air pollution.

What is energy efficiency?

Efficient use of energy means using less energy to power the same equipment or services, and eliminating energy waste.

While it may seem like the same thing, there is a difference between energy conservation and energy efficiency.

Conserving energy is more about adopting behaviour that results in using less energy such as choosing to use the stairs instead of the elevator or switching off lights that are not in use.

We use energy for cooking, heating and cooling rooms, manufacturing, lighting, transportation and a host of other applications. By making a conscious choice to use more energy-efficient products and processes, energy costs are lowered, reliance on energy imports lessened and greenhouse gas emissions reduced.

For example, a 12-watt LED bulb can produce the same amount of light as a 60-watt regular bulb but uses 75-80% less energy. At home, small steps such as using LED light bulbs, energy-efficient cooling and heating systems, energy-efficient appliances and installing solar panels go a long way in lowering utility expenses.

On a larger scale, manufacturing facilities consume the most energy so it is imperative to evaluate energy usage to determine how consumption can be reduced.

Lighting, machinery and equipment, and air-conditioning are often the main energy guzzlers. To enhance energy efficiency and sustainability measures, smart grid technologies can help to improve operations, maintenance and power supply.

Apart from constructing new green buildings, retrofitting existing buildings is another way to bring energy costs down.

Repurposing buildings is the sustainable way to give older developments a new lease of life – thanks to energy-saving solutions such as maximising natural lighting and adding green spaces, installing rooftop photovoltaic solar panels for renewable energy, smart thermostats, energy-efficient window glazing and ventilation louvres.

Leading green countries

Generally, buildings and construction projects have been identified as key contributors to global carbon dioxide (CO_2) emissions, accounting for 39% of total emissions.

As such, government agencies and the private sector are paying more attention to green initiatives and making concerted efforts to draw up sustainability policies.

Under the Paris Agreement 2015, Asian countries have pledged to reduce emission intensity up to 65% by 2030. As one of the signatories, Malaysia has pledged to reduce greenhouse gas emissions by 45% (based on 2005 emission intensity levels) by 2030.

Malaysia was a participant in the recent 26th United Nations Climate Change Conference of the Parties (COP 26), and as part of our commitment, we are focusing on sustainability as one of the key drivers under the 12th Malaysia Plan.

As announced in the recent Budget 2022, a growing expenditure has been allocated for sustainability initiatives towards efforts to becoming a carbon-neutral nation by 2050.

Malaysia has also activated the National Energy Efficiency Action Plan 2016-2025 to encourage the adoption of energy efficiency through reducing electricity demand growth by 8% over a 10-year period – resulting in a total reduction in CO_2 emissions by 38 million tonnes.

SEVEN AREAS OF ENERGY EFFICIENCY



Improvement in energy efficiency in any of these areas would reduce the total energy consumed in a building.

The Green Investment Tax Allowance for the purchase of green technology assets and Green Income Tax Exemption on the use of green technology services have also been extended until 2023.

In Asia, Singapore leads the charge as it has managed to green 43% of its buildings as of December 2020 – an impressive effort towards the Building and Construction Authority (BCA)'s target of 80% by 2030.

On top of BCA's push for higher energy performance, there has been a 14% improvement in energy efficiency recorded for commercial buildings compared more than a decade ago. This translates to 1,000 gigawatt hours in energy amounting to S$200mil (RM617mil) in savings per year.

Among the top cities deemed energy efficient and recognised globally for their efforts in reducing carbon footprint and conserving resources are Copenhagen (Denmark) and Vancouver (Canada).

A third of Copenhagen's population commute on bicycles daily while widespread green roofs not only provide insulation for its residents, but slow down absorption of water into drains and sewers.

The city also sources part of its renewable energy from a large offshore wind farm.

Vancouver is on track to becoming the world's greenest city, having the lowest carbon emissions per capita in North America.

It uses hydroelectric power as 90% of its energy source, not to mention the host of incentives for its residents who take up energy efficiency programmes.

Unlike other loftier sustainability goals, energy efficiency is something which everyone can do as it is the easiest to achieve and the most effective.

If homeowners, offices and big industries all work together to bring about change, there is a realistic hope in a reduction in energy costs and greenhouse effect.

FINANCIAL SUPPORT TO DRIVE ENERGY SUSTAINABILITY

WHILE building owners and homeowners are ready to jump onboard energy efficiency projects to reduce energy consumption, there is often a lack of financing support and expertise to find the right energy service companies (ESCOs).

To drive the development and adoption of energy efficiency projects in the country, UOB Malaysia has launched Asia's first integrated financing platform, U-Energy, to help businesses and homeowners save on electricity bills, cut carbon emissions and achieve their sustainability goals.

The U-Energy platform features 10 ESCOs from which customers can tap into for energy efficiency projects. ESCOs play a key role in the ecosystem by providing technology and services such as project consultation, sustainable and cost-efficient design energy audit, as well as end-to-end implementation and management of the retrofits to buildings.

These U-Energy partners can support common energy efficiency projects such as improving chiller and air conditioning efficiency, installing solar panels on rooftops, switching to LED lights, optimising energy and power management systems, changing the building façade to reflect direct sunlight to reduce heat absorption, as well as replacing elevators with energy-regeneration technology.

On average, the ESCOs on the U-Energy platform can help customers cut at least 20% in energy consumption.

The financial programme is supported by government agencies such as the Sustainable Energy Development Authority (SEDA) Malaysia, Malaysian Investment Development Authority, and Malaysian Green Technology Corporation.

Under UOB Malaysia's green financing scheme, commercial and industrial building owners can opt for direct purchase of the energy-efficient equipment or system. This offer includes a loan of up to RM25mil with a maximum seven-year loan facility, subject to optimal equipment and system sizing by the U-Energy partners.

Loan applications of building owners by existing UOB Malaysia customers will be put on a fast-track approval process. They will also have a choice to take up the "energy-as-a-service" model whereby UOB Malaysia will provide green loans to the U-Energy partners at no upfront cost.

For homeowners, a 0% interest instalment plan of up to three years is available when UOB credit cards are used as the mode of payment for their energy efficiency retrofitting projects.

U-Energy is part of UOB's sustainable financing solutions under the UOB Smart City Sustainable Finance Framework. The other schemes are the Green Trade Finance Framework, Real Estate Sustainable Finance Framework and Green Circular Economy Framework.

Aligned with the UN Sustainable Development Goals, the objective of UOB's sustainable financing framework is to enable companies to apply for green banking products without having to go through the hassle of developing their own financing framework.

For more information on U-Energy, visit www.UOBgroup.com/u-energy

