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# Solar panels Are they worth it?

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LIKE other countries near the equator, Malaysia tends to feel like an oven cranked up to high heat. On the bright side, being bathed with an abundance of sunshine can be a blessing.

The country has been gradually embracing solar energy as a sustainable alternative to traditional power sources. As we rapidly approach a greener future, it is fascinating to reflect on how far we have come in our energy journey.

According to the Energy Commission, the history of electricity in Malaysia began during the colonial era, when the British played a significant role in developing the country's electrification infrastructure. In 1882, the world's first coal-fired power station made its debut in London, paving the way for similar developments elsewhere.

Following suit, the Sempam Hydroelectric Power Station was established in Raub in 1900, mostly to serve the local mines and surrounding communities. This was an incredibly significant step in harnessing natural resources to fuel progress for the first time in our little country.

**Law and order**

During this time, the colonial administration laid down a regulatory framework that included various laws and standards to ensure a systematic approach to electricity generation. However, they focused mainly on urban

centres and often left more rural areas in the dark.

The same remains today like a legacy, reminding us that consistent and reliable access to energy is still a challenge for some communities in Malaysia.

Fast forward to the present day and Peninsular Malaysia is barrelling on an ambitious path toward renewable energy (RE), with solar energy taking centre stage.

Realising the need to be more environmentally sustainable, the Malaysian government introduced several initiatives designed to encourage more Malaysians to adopt solar panels.

Programmes like the Feed-in Tariff (FIT) and the Large-Scale Solar initiative are the key drivers behind the higher pick-up rate because of the attractive incentives for both individuals and businesses to invest in solar energy.

The FIT scheme, in particular, has empowered many Malaysians to produce their own RE and sell the excess back to the national grid at fixed rates. This not only helps households and businesses save on electricity bills but also contributes positively to the environment by reducing dependency on fossil fuels.

These payments are guaranteed for a substantial period from the system's operational start date.

The Sustainable Energy Development Authority Malaysia has highlighted several incentives. The fundamental FIT rates are determined by the installed capacity of the solar system.

For installations with a capacity of up to 4kW, the owner receives RM0.3197 per kilowatt-hour (kWh). For systems larger than 4kW but not exceeding 12kW, the rate is currently set at RM0.3118 per kWh.

In addition to these basic rates, homeowners can qualify for bonus FIT rates, which are awarded based on specific characteristics of their solar setup.

If the solar PV installation is integrated into the building's structure, such as being part of the roof or facade, an extra RM0.0601 per kWh is added.

Furthermore, if the solar panels serve as actual building materials, an additional RM0.0178 per kWh can be claimed.

Promoting local industry is also incentivised. Using solar PV modules or inverters manufactured or assembled within Malaysia each contributes an extra five sen per kWh to the FIT rate. These bonus rates are cumulative, allowing property owners to maximise their earnings from their solar PV system over the duration of the contract.

The Net Energy Metering (NEM) scheme further encourages this trend, allowing homeowners and businesses to generate solar energy for personal use while selling excess electricity back to the grid.

Additionally, initiatives like SelCo, or self-consumption, cater specifically to businesses looking to harness solar energy for their own needs. This motivates companies to take charge of their energy consumption while promoting sustainability.

On a broader scale, programmes such as the Green Electricity Tariff and the Corporate Green Power Programme are growing a corporate culture that values green solutions and sustainability.

of below 250kWh a year is best.

This regulatory push has driven around 300 government buildings to adopt energy efficiency measures, resulting in very significant reductions in energy usage.

Additionally, the Energy Efficiency and Conservation Act plans to expand these requirements to include hotels, hospitals and other commercial properties, promoting a culture of energy conservation throughout the sector.

Besides the BEI, Malaysia employs a star rating system for buildings that encourages energy efficiency. Buildings are rated from one to five stars based on their energy performance.

This system serves as a powerful incentive for property owners to invest in energy-efficient technologies, ultimately influencing property values and marketability.

**FIT rate incentives:**

- > RM0.3197 per kWh for 4kW solar capacity system.
- > RM0.3118 per kWh for systems larger than 4kW but less than 12kW.
- > RM0.0500 extra for Malaysian solar PV modules or inverters.

**The chess pieces**

A critical piece of Malaysia's RE puzzle is the Building Energy Index (BEI). It benchmarks and evaluates energy consumption in buildings, promoting awareness and accountability in energy use.

It also measures annual energy consumption relative to the building's size, encouraging property owners to become more energy efficient.

For office buildings larger than 8,000 sq m, a minimum BEI rating

**Energy-efficiency a must**

In today's eco-conscious market, many homebuyers are now on the lookout for energy-efficient properties, understanding the long-term savings and environmental benefits they will receive in return.

As a result, buildings with higher star ratings tend to attract buyers and tenants compared to those without, especially for high-end properties. This shift in buyer preferences reflects a growing awareness of sustainability and its importance in the property market.

Investing in solar energy has some pretty significant economic benefits. By tapping into these renewable resources, Malaysia can cut down its dependence on fossil fuels, which have long been the backbone of its energy industry. Shifting to solar power not only boosts energy security but also opens the door to new job opportunities in what is becoming a growing field.

As countries around the world turn to RE to tackle climate change, Malaysia actually has a pretty great chance to build a strong solar sector.

Investors both local and international are becoming increasingly interested in nations that prioritise sustainability, which puts Malaysia in a good spot in the global clean energy market.

**Liberalising electricity**

The government has outlined several key moves to liberalise the electricity market.

A major step involves updating the Electricity Supply Act of 1990 to modernise the legal framework and enhance regulatory structures.

Reforming the electricity tariff structure is also on the agenda. This means tweaking tariff mechanisms to reflect current market conditions, ensuring fair pricing for consumers while encouraging competition.

Another important move is to separate the single buyer from Tenaga Nasional Bhd.

By creating an independent entity to handle electricity procurement, the aim is to push for greater competition and efficiency within the market.

Malaysia is not just investing in cleaner energy by embracing solar energy and focusing on sustainability. It is investing in the health and well-being of its people and the world.

