



13 APR, 2026

## We want to be green but

The Star, Malaysia



The fuel crisis resulting from the Middle East conflict is making it even more imperative for Malaysia to switch to renewable energy. But realities on the ground are proving more difficult to overcome than most realise. 2&3

# Green reality bites



While renewable energy sources slide down in price and fossil fuels go up, it's difficult to break the oil habit, in part because of the technical and infrastructure challenges in greening the national grid. Top: Wind turbines and solar panels in Spain. Bottom: Archive photo of an oil rig in the Gulf of Mexico, off the coast of the US. — Bloomberg/AP



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OVER at one of the Malaysian channels of popular online forum Reddit, a debate has been ongoing. The topic: Would you consider buying an electric vehicle (EV) in Malaysia?

The vote at the time of writing was leaning towards “Yes” – but keep in mind that most of those who took part in the discussion reside in urban areas like the Klang Valley where EV chargers are aplenty, and also those living on landed property where it’s possible to install one’s own charger.

“For our use case, which is short range driving within KL, and occasionally to Johor (JB area), it fits our needs perfectly.

“However, there are definitely considerations to be made, especially for people living in rural areas where charging facilities are less accessible, and people don’t have easy access to cheap, if slower, charging at residential property electricity rates,” wrote one user, whose family converted to a China-made EV after years of using a petrol car.

Haters often cite the long charging times – between 30 and 45 minutes per charge – and the range anxiety that comes with it as points against these vehicles.

Curiously, no one cited reducing carbon emissions or saving the environment as a reason to get an EV.

Of course, the debate is heating up as a fuel crisis is unfolding around the world following the Strait of Hormuz blockade in the Middle East, along with the uncomfortable realisation that Malaysia has been over-reliant on fossil fuels to drive its economy.



While the Bakun Hydroelectric Plant in Sarawak has an installed capacity 2,400 MW contributing to the state’s grid, it came with much controversy over loss of wild lands and the displacement of indigenous people. — PowerChina

We are now a net importer of fuel, as Prime Minister Datuk Seri Anwar Ibrahim made a point of saying recently: “National oil company PETRONAS is now a net importer of fuel, no longer an exporter as previously understood.” However, while importing the finished oils Malaysia needs, the national oil company still sells certain types of crude oils and liquefied natural gas and so benefits from the current high energy prices. This means we are in a slightly better economic position than countries that do not export any oil at all.

But only slightly. Because don’t forget, the government subsidises fuel prices at the pump, and when prices soar, so does the subsidy bill. On April 5, Domestic Trade and Cost of Living Minister Datuk Armizan Mohd Ali said that the cost of diesel subsidies was estimated at RM2.2bil in March, nearly triple the previous month’s figure.

Here’s a different number: The International Renewable Energy Agency has reported that solar power is 41% cheaper than the lowest cost fuel alternative.

Add all this up and it raises the question: Will the current fuel crisis provide the final push for Malaysia to shift decisively to sustainable green power?

### Negative energy?

Well, some Malaysians are hoping that it will.

In an interview with *The Star* last month, Deputy Prime Minister II Datuk Seri Fadillah Yusof said the recent geopolitical developments have further reinforced Malaysia’s shift towards renewable energy.

“Electricity is becoming the dominant energy carrier across key sectors, fundamentally reshaping energy demand and reducing reliance on fossil fuels, particularly oil,” he was quoted

as saying.

Malaysia, he added, remains committed to achieving 35% renewable energy installed capacity by 2030.

The report also said that in 2020, Malaysia’s renewable energy accounted for about 23% of total installed capacity, of which 76% was from hydropower, 17% from solar power, and the remaining 7% was from other renewable sources.

“As of the end of 2025, renewable energy has increased to about 31% while fossil fuel-based generation stands at about 69%,” the DPM said.

Also, both Fadillah – who is also Energy Transition and Water Transformation Minister – and Science, Technology and Innovation Minister Chang Lih Kang have not discounted the possibility of including nuclear power in Malaysia’s future renewables mix.

But are practical realities on the ground matching our aspirations for a greener, renewable future?

For example, in China, where many were early adopters of EVs, reality is just now sinking in among those who bought their first vehicle some five to eight years ago.

While it’s still more affordable to charge one’s EV than buy petrol – especially with the current spike in fuel prices – media interviews with drivers in Harbin, in north-eastern China, reveal complaints about long charging times, the impact of extreme weather as well as the inevitable wear and tear on battery capacity, and the lack of support in software updates.

Similarly, while China now has the world’s largest renewable energy capacity – it added 198 GW (one gigawatt equals one billion watts) of solar power and 46 GW of wind energy

between January and May last year alone, according to the Asia Society Policy Institute – it continues to struggle with problems such as power grid congestions, storage and technical gaps, and the remote locations of large scale solar and wind farms which make it expensive to get the energy to the national grid.

Even after all this China still relies on coal to meet much of its energy demand.

### Burning questions

We must heed the clarion call to move to renewables if we want to survive climate change, of course, but the actual shift will take more than just a policy switch as it comes with structural, financial, and technical issues.

For instance, although rooftop solar panels may help offset electricity costs for businesses and homes, large-scale solar and wind farms that can power entire cities will require huge tracts of land as well as the construction of grid infrastructure that can transmit the energy generated to the wider network.

Furthermore, the intermittent nature of solar and wind power means that there must be adequate investments in energy storage systems like batteries.

There are also future environmental costs to consider: Photovoltaic panels can last decades but, eventually, they do become e-waste that needs proper disposal. Similarly, hydropower may look clean and sustainable but constructing dams has huge upfront costs, and the effect on the environment – flooding, community relocation, taking up agricultural and wild lands – can be damaging. And there is, of course, also the issue of rainfall dependency.



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When it comes to Malaysia's renewable energy ambitions, Association of Water and Energy Research Malaysia president S. Piarapakaran has an issue with the phrase "installed capacity" (ie, the total output of a power plant running at full power).

"As an average, solar photovoltaic generation is effective between four and six hours daily, and it is useful to supplement peak load if we have full smart grid operation.

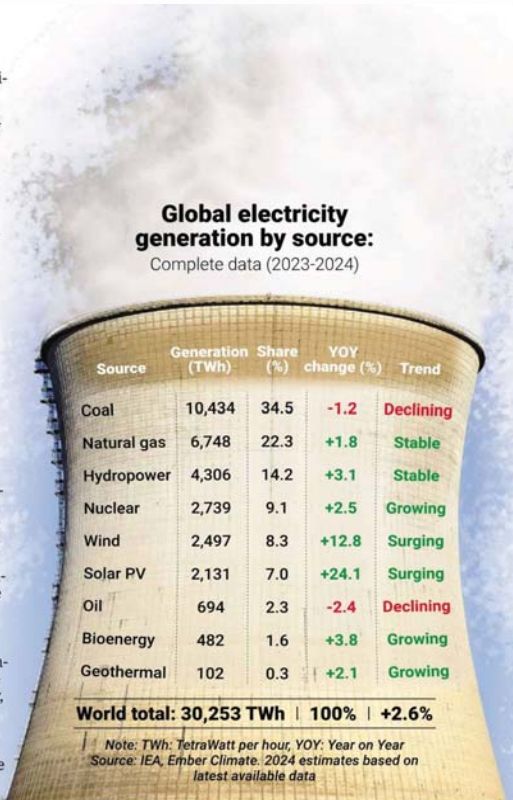
"Our actual challenge is to cater for the base load. At the moment, intermittent RE [renewable energy] is not able to do that," he explains in a recent interview.

Base load refers to the minimum level of electricity that is needed in the country at all times.

This is how Piarapakaran explains it:

If we need 10 MW (one megawatt equals one million watts) of continuous electricity supply for 24 hours, energy generated from solar power – during the hours when it is possible to generate it – must be stored for use later, which means we need a battery energy storage system, or BESS.

Taking into account inefficiencies, to provide 240 MWh (megawatt-hour) of useful electricity, we would need between 250 MWh and 270 MWh. The BESS must cover the 250 MWh to MWh range to safely deliver the 240 MWh that we need. This



means solar capacity must be scaled up significantly – to between 40 MW and 50 MW – to support both direct supply and storage needs.

"So to get 10 MW of continuous output from solar, we need up to five times the installed capacity," he says.

BESS, according to Piarapakaran, is just one type of energy storage, and with the battery industry having a "notorious" impact on the environment, Malaysia will "need to master other energy storage mechanisms as well", he says.

The manufacturing and supply chain of components for renewable energy, he points out, are still heavily reliant on fossil fuels, currently rising in price.

"The Middle East instability will further escalate the cost and it will take some time to stabilise that cost as there is oil and gas infrastructure being destroyed in the war," he says.

Malaysia, adds Piarapakaran, has also left out the biomass sector in its renewables mix, with some of the potential material actually being exported to foreign markets.

He also points out that the so-called "plug and play" renewable energy installations, such as solar photovoltaics, also produce e-waste.

"Back in 2011, when feed-in-tariff was overwhelmingly promoting solar photovoltaics we warned about the surge in e-waste from this sector. The government promised to manage it;

at the moment, it is still left unattended," he says.

### Long, winding road

None of this means renewable energy isn't the way forward.

"The current energy crisis gives us the example that we have been warning the government about for some time now," says Piarapakaran.

If Malaysia is going to carry out a proper energy transition, it needs to go back to the drawing board, he says.

"If we follow the current National Energy Transition Roadmap to meet the Net Zero targets, we are not going to reach them.

"Our policies are too focused on 'gung ho' solutions that are trending. We need to stock take and build on our strengths, only then we will achieve future-proof energy security."

Clean, renewable energy is the future and Malaysia is right to march towards it. It is even a requirement nowadays for corporations seeking to please their shareholders.

But getting there won't be a straight, easy road, and the government will need to step up by pouring in a lot more investment as well as dangling carrots in the private sector.

One Reddit user summed it up nicely when he/she replied no to buying an EV: "Because I don't trust the power grids in Sabah."