

BUSINESSTODAY

# netZERO

towards a sustainable nation 2050

EDITION 02

| YEAR 2023

Go to [www.businessday.com.my](http://www.businessday.com.my)  
for latest news features

**EXCLUSIVE**

**ECONOMY MINISTER: NETR TO  
DRIVE MALAYSIA TOWARDS  
HIGH VALUE GREEN ECONOMY**

**CLIMATE CHANGE  
ENERGY SECURITY TAKES  
CENTER STAGE**

# ECO TOURISM

## MALAYSIA TO BE TOP SUSTAINABLE DESTINATION

Dato' Dr Ammar Abd Ghapar  
Director General Malaysia Tourism Promotion Board  
(Tourism Malaysia)



[www.businessday.com.my](http://www.businessday.com.my)



# Now is the Time!

## Cuti-Cuti Malaysia

YOLO. You Only Live Once

Kota Belud, Sabah

Explore the beauty of nature.  
Now is the time!

cuti-cuti  
MALAYSIA



Scan for Interactive  
Digital Brochures



www.malaysia.travel



Follow Us: Malaysia Truly Asia



# FOREWORD

## Reenergizing Biodiversity For Mother Earth

Environment concerns have taken on leading discussions in both emerging and developed economies as a result of environmental degradation. In its complex nature, many countries face excesses in the amount of carbon dioxide in the atmosphere which is dramatically rising because of energy use and economic development. Fossil fuels such as coal and natural oil and gas as energy sources have 'long-overstayed their welcome' resulting in an increased amount of CO2 emissions.

The call for Energy Transition refers to the global energy sector's shift from fossil-based systems of energy production and consumption to renewable energy sources like hydro, wind, solar, or geothermal energy and hydrogen, as well as lithium-ion batteries. Regulation and commitment to decarbonisation have received a mixed standpoint due to the factors of economics and profiteering, but the energy transition will continue to increase in importance as investors prioritise environmental, social and governance (ESG) factors.

As more investors and companies seek greater clarity and confidence in accounting for long-term climate risks and opportunities, businesses are adapting to the "energy transition." Switching from nonrenewable energy sources to renewable energy is made possible by technological advancements and a societal push toward sustainability. Spurred by structural, permanent changes to energy supply, demand, and prices, energy transition also aims to reduce energy-related greenhouse gas emissions through various forms of decarbonisation. Energy transition refers to much more than power generation. It includes the sector's shift from burning fossil fuels to generate electricity, to using renewable resources but the wider goal is to cut CO2 emissions while developing energy storage and electrifying major industry and transportation systems. A carbon footprint is the total amount of greenhouse gases (including carbon dioxide and methane) that are generated by people's actions. The most obvious reason why reducing carbon footprint is important is that it is adversely affecting the planet. Rising temperatures, year-long rain showers, tropical storms, wildfires, melting ice caps, and other unusual climate changes are a result of increasing CO2 emissions. Shifting precipitation patterns are affecting the growing patterns of plants. As a result, indigenous vegetation is moving to cooler climates. While sea levels are rising, shores are eroding, and ecosystems are getting destroyed.

The importance of reducing carbon footprint can also be attributed to the fact that it poses a significant threat to the economy. Additionally, rising water temperatures are threatening the survival of coral reefs putting a major dent in the economy.

Malaysia's National Energy Transition Roadmap (NETR) is the strongest signal yet of the Malaysian government's commitment to achieve the country's aspirations for net-zero emissions by 2050. It sets the goal to accelerate energy transition and change the way energy is generated to improve climate resilience. NETR has developed the Responsible Transition (RT) Pathway 2050 to shift Malaysia's energy systems from fossil fuel-based to greener and low-carbon systems. The plan provides a clear view for investors and stakeholders on the efforts needed to achieve green power generation and grid integration of renewable energy sources.

Best,  
K. Harinderan  
Editor, BusinessToday

# THE TEAM

**PUBLISHER /  
MANAGING EDITOR**  
Selva Rajan

**EDITOR**  
K. Harinderan

**WRITER**  
Cynthia Ignatius  
Chong SM

**CONTRIBUTORS**  
Jomo Kwame Sundaram  
Dr Afzanizam Mohd Abdul Rashid  
Prof. Evelyn Devadason  
Dr Rais Hussin  
Gregory Kong  
Dato' Narendra Kumar Jasani  
Girish M Ramachandran  
Ts Dr Saraswathy Sharmini  
Prof Dr Suhaiza Hanim Mohamad  
Zailani  
Ir. Dr. Nahrizul Adib Kadri  
Prof. Dr. Mohammad Tariqur  
Rahman  
Prof. Datin Sri Dr Suhaiza Hanim  
Dato Mohamad Zailani  
Collins Chong Yew Keat  
Sanjay Brahmawar  
Prof Hew Gill  
Jason Loh Seong Wei

**EDITORIAL**  
editor.btoday@reach.com.my

**DESIGNER**  
Eswarannk

**PHOTOGRAPHER**  
Sean Lam

**ADVERTISING**  
Moon Leong  
Afiah Dimyati  
Khairul Anwar  
Kathy A

**ADVERTISING EXECUTIVES**  
sales@reach.com.my

**CIRCULATION**  
circulation@reach.com.my

**PRINTER**  
Superior Press Sdn Bhd (032092-H)  
Lot 2063A, Jalan Kusta Sg. Buloh,  
Kawasan Industri Taman Jaya,  
47000 Sg. Buloh, Selangor, Malaysia.





EXCLUSIVE

# ECONOMY MINISTER: NETR TO DRIVE MALAYSIA TOWARDS HIGH VALUE GREEN ECONOMY

By K. Harinderan



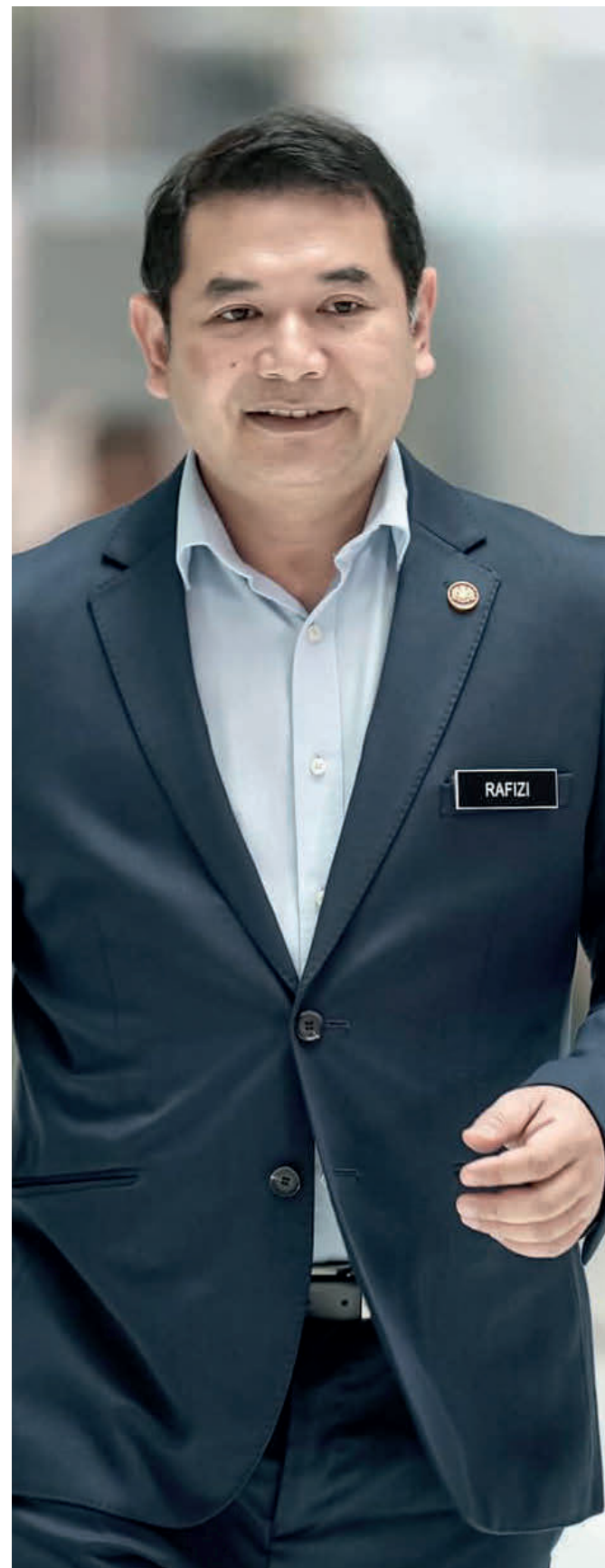
Malaysia is one of the world's megadiverse countries (terrestrial biodiversity). We are a small open economy, with a population of 32.7 million and GDP of RM1.79 trillion. Economic and population growth is expected to drive a rise in energy demand (2% annually until 2050). During the UN climate summit COP26 in Glasgow in 2021, Malaysia announced its aspiration to achieve net-zero GHG emission target by 2050.

We have also committed to reduce carbon intensity against GDP by 45% by 2030 compared to 2005 levels, maintain forest cover of at least 50% and support the Global Methane Pledge, of which Malaysia is a member. Economy Minister Rafizi Ramli told **BusinessToday** exclusively that the National Energy Transition Roadmap 2023 (NETR 2023) was launched on 29 August 2023 to steer Malaysia's shift from traditional fossil fuels-based economy to a high-value green economy through the whole-of-nation approach. NETR Part 1 launched on 27 July 2023 introduced 10 flagship catalyst projects across six energy transition levers among them being: energy efficiency (EE), renewable energy (RE), hydrogen, bioenergy, green mobility, and carbon capture, utilisation and storage (CCUS).

The final NETR launched on 29 August 2023 features 50 initiatives under the six energy transition levers and five enablers namely financing and investment; policy and regulation; human capital and just transition; technology and infrastructure; and governance and implementation. NETR has also developed the Responsible Transition (RT) Pathway 2050 that outlines the energy sector's low carbon pathway to reduce 32% GHG emission from 259 MtCO<sub>2</sub>eq. (2019) to 175 MtCO<sub>2</sub>eq (2050).

## The Set Course of NETR 2023

The pathway is designed to accelerate Malaysia's energy transition journey while balancing the energy trilemma. Towards this, the RT pathway will achieve the following by 2050:





- Increase use of RE in the power generation mix;
- Phase-out coal from the power generation mix;
- Broad based energy efficiency initiatives pursued, particularly from the demand side management that include optimising energy consumption across key sectors, namely residential, commercial, industrial, and transport to prevent wastage and indirectly prolong the lifespan of indigenous resources and
- The shift to electrification and biofuels expedited in the transport sector.

RT Pathway reinforces Malaysia's commitment to net-zero emission as early as 2050 through the shift from traditional, fossil fuel-based energy systems to a greener, low- carbon energy framework. The Total Primary Energy Supply (TPES) Modelling indicated that by 2050 natural gas will account for 56% of TPES. RE share will increase from 4% in 2023 to 22% in 2050. The successful implementation of NETR will uplift GDP value from RM25 billion in 2023 to RM220 billion and generate 310,000 jobs in 2050.

Malaysia has earned recognition as the best country in Southeast Asia on the Energy Transition Index by the World Economic Forum (WEF). This acknowledgement is attributed to our diverse and reliable energy supply. We have high electricity accessibility in both rural and urban regions, and our household electricity rates rank among the lowest globally. Furthermore, production from our oil and gas reserves have reduced our dependence on energy imports, Rafizi said.

However, we face challenges in environmental sustainability. Although Malaysia contributes a mere 0.8% to global GHG emissions, our current CO<sub>2</sub> emissions intensity in the energy sector remains significant at 7.5 MtCO<sub>2</sub>eq per capita. Notably, the energy sector is the primary source of greenhouse gas (GHG) emissions in the country, accounting for 78.5% of Malaysia's total emissions.

Implication of this can be felt by Malaysia's corporations and enterprises, where they confront a rapidly changing market landscape with carbon costs reshaping business dynamics and potentially straining competitiveness. It is estimated that the EU's Carbon Border Adjustment Mechanism (CBAM), aimed at reducing carbon leakages in trade, will affect 57% of Malaysia's total exports. Additionally, the USA's Inflation Reduction Act (IRA) introduced in 2022 emphasises the production and demand for domestically produced clean energy products and services over foreign imports.

"NETR is the main policy document to accelerate our energy transition efforts. This roadmap is vital to achieve a high-value green expected to deliver 32% economy. By 2050, NETR initiatives are expected to deliver 32%

reduction in GHG emissions for the energy sector compared to the 2019 baseline – reaching 4.3 MtCO<sub>2</sub>eq emission per capita," he said. To make it economically viable, the NETR was designed to leverage on Malaysia's various advantages such as a strategic location, diverse RE sources and a high level of skills to become a regional leader in energy transition. This can be seen embedded in the NETR's six energy transition levers. For example, bioenergy lever leverages Malaysia's abundant biomass resources, particularly from agriculture, offering both economic value and a cleaner energy source.

The NETR not only charts a sustainable energy future for Malaysia but also presents significant economic opportunities. Through strategic investments, diversification of energy sources, and effective governance, the energy transition can be both environmentally beneficial and economically viable for Malaysia. Beyond the energy sector, the investments in energy transition are expected to significantly benefit several sectors, with the services industry leading the way, followed by manufacturing and construction. The services sector stands to gain primarily from projects in CCUS, biofuels, and RE generation.

Concurrently, the manufacturing sector will see a boost, particularly from the emphasis on EV production, public transport, and green hydrogen plants. The construction sector will not only benefit from these projects but will also see growth opportunities from the development of EV charging infrastructure, the integration of smart grids, and advancements in energy storage solutions. These sectors are also expected to see growth in job opportunities catalysed by projects as mentioned above, contributing to increased household incomes as well.





Household incomes are expected to directly benefit from income gains arising from investment opportunities across all six energy transition levers which requires a highly skilled workforce. This is expected to be realised through the generation of 310,000 jobs in these pivotal sectors, subsequently elevating household incomes across the nation, Rafizi stated.

The projected rise in NETR's contribution to GDP is driven by investments in the energy sector. The NETR highlights potential investment avenues in government co-funded facilities dedicated to energy transition, with projections reaching RM1.2-1.3 trillion by 2050, further bolstering the nation's GDP.

Addressing the workforce, the NETR underscores the importance of strengthening energy literacy and awareness to all levels of society. Concurrently, there's an emphasis on refining the skill sets of the workforce through green skilling programs, especially in capitalising nascent technologies such as CCUS, green hydrogen and energy storage. This indicates a proactive approach to equip Malaysians with the necessary skills acknowledging the need for continuous learning and adaptation in the face of the energy transition.

On the commercial front, the NETR presents investment opportunities for businesses interested to pursue green growth across the energy transition value chain. Investments in RE power generation, along with grid enhancements, are categorised as commercially viable or with market-rate returns. These projects typically possess the capacity to secure funding from capital markets and domestic financial institutions but require robust policy support to accelerate adoption.

At the same time, we are mindful that SMEs form approximately 97% of business establishments in Malaysia. It is encouraging to see many of our companies are really striving to reduce the environmental impact of business activities, ensure fair labour practices throughout the supply chain and distribute the economic benefits to all stakeholders. However, as in many other countries, Malaysian enterprises grapple with resource limitations (e.g. funding, skills, talents). Drastic transition without clear direction on the path forward could threaten our social safeguards, especially given the low share of CE to GDP.

In mitigating the risks of transition, the entire Government network has put into action the necessary tools to help our businesses which in return will help the households. For instance, MITI has launched the National ESG Industry Framework to support Malaysia's manufacturing sector towards embracing ESG and strengthen Malaysia's economic resilience. In the oil and gas realm, the Malaysian Petroleum Resources Corporation (MPRC) is developing the National OGSE Sustainable

developing the National OGSE Sustainable Roadmap for OGSE players. It is intended to facilitate their transition towards sustainable practices and clean energy and have better adoption of ESG reporting. Given that NETR modelling points to natural gas making up 56% of our total primary energy supply (TPES) in 2050, oil and gas industry too needs to step up efforts to continue producing responsibly and sustainably.

However, Malaysia welcomes all the support we can get to build the whole-of-society capacity right down to the households as a means to future-proof our talent pipeline. We need to develop energy knowledge platforms tailored for SMEs and businesses to tackle Scope 1, 2 and 3 reporting capacity and capability.

Furthermore, investment for green education and training programmes could be lengthy and expensive which might be discouraging to our local industries. I would like to call on the potential investors, perhaps among the philanthropies, to come forward and support Malaysia's efforts in producing and developing the pipeline of productive talents to implement NETR projects and initiatives. Rafizi said the 10 flagship projects demonstrated 19 different modalities to show their varied technological readiness, state of development as well as challenges surrounding Malaysia's choices of projects and initiatives to reduce the energy sector GHG emissions. Each of the 10 flagship projects and 50 initiatives is designed to reach our ambitious targets of improving RE installed capacity to 70%, energy efficiency savings to 22% and EV penetration to 80%.

In reaching these targets, we anticipate an estimated uplift of 10%-15% in GDP and a 32% reduction in GHG emissions in the energy sector. This will coincide with 350,000 jobs being created in HGV industries and 70% of income gains being flown into low and medium-income households. An estimated inflow of investments of RM435 billion to RM1.85 trillion by 2050 will be a catalyst to jumpstart economic activities in line with the global transition to clean and renewable energy sources. Energy pricing and public awareness must come hand in hand. NETR has identified the Malaysia Energy Literacy Programme (MELP) as one of the mechanisms to increase energy literacy of the people.

Rafizi stressed Malaysia must ramp up investments into exploration and production. Having experienced a tight LNG supply in 2022, it is imperative for us to open more areas and access a wider range of operators that could provide not only more efficient solutions, but also catalyse the development of innovative skills and technologies, including CCUS. The Honourable Minister commended **BusinessToday** for enhancing greater awareness while providing clarity to questions raised by many Malaysians on NETR 2023.





## RECYCLING PLASTIC ALONE NOT ENOUGH, WARNS UN ENVIRONMENT CHIEF



With the production of plastic on the rise worldwide and creating ever more pollution, the United Nations environment chief warned that humanity cannot just recycle its way out of the mess, and she called for a total rethink about the way we use plastics.

"There are different sort of onramps to the highway to solutions. But I think everybody recognises that the status quo is just not an option," said Inger Andersen, director of the UN Environment Program, in an interview on Thursday (Sep 21) with AFP on the sidelines of the General Assembly in New York. Andersen was talking two weeks after the publication of the first draft of a future international treaty on plastic pollution, which is expected to be finalised by the end of 2024. It reflects the wide range of ambitions of the 175 countries involved, notably the gap between those who argue for a reduction in the production of raw polymers and those who insist on reuse and recycling.

First, Andersen said the aim was to get rid of as many single-use plastics as possible, "eliminating what's frankly not necessary: That thing that is wrapped in plastic that's completely mindless, that is maybe even wrapped by nature itself", like an orange or a banana.

**Then, "there is thinking about the product itself".**

"Does the product need to be liquid? Can we rethink the product ... can it be powder, can it be compressed, can it be concentrated?" she said, saying that when entering a supermarket, she goes straight to the soap aisle to see if solid versions are available.

For sure, "we have to recycle as much as we can, but as we look at it now, plastic uses is increasing", Andersen told AFP.

"So what is clear is that we cannot recycle our way out of this mess."

Annual production of plastics has more than doubled in the past 20 years, to reach 460 million tonnes. It could triple by 2060 if nothing changes.

However, only 9 per cent is recycled. Plastic waste of all sizes is found today at the bottom of the oceans, in the stomachs of birds and on the tops of mountains, while microplastics have been detected in blood, breast milk and placentas.

"If we continue to pump into the economy all this new raw polymer, there is no way that we will stop the plastic flow into the oceans," she said.

And the health of the oceans is crucial for the future of humanity.

The future treaty on plastic pollution would complement the global arsenal to protect the oceans, including the new historic treaty to protect the high seas signed this week by about 70 countries.

"The fact that we're going to move forward and protect that piece of the ocean that is beyond national boundaries is mind-blowingly important," Andersen said.

"And something that I'm just very, very happy about. And the whole world should be because this is our common heritage."

-AFP





# GOVT TO ALLOCATE RM2 BIL SEED FUND FOR NATIONAL ENERGY TRANSITION FACILITY

By Chong SM



Prime Minister Anwar Ibrahim said that in the early 1990s, Renewable Energy (RE) was named the fifth fuel under the National Energy Policy. Now the RE sources are solar, mini hydro, biomass and biogas.

"RE supply in Malaysia is now at 25%, and we are on the right track to source 31% of its power capacity from renewables by 2025 and 40% by 2040," he said during the launch of the National Energy Transition Roadmap (NETR) at the Kuala Lumpur Convention Centre. With the implementation of initiatives under the NETR, Malaysia is set to be at the forefront of becoming a regional leader in the energy transition and RE industry. The NETR has identified six energy transition levers, along with 10 flagship projects and 50 initiatives. The champions of the projects and initiatives are among public sector, government-linked companies and industry players signifying a whole-of-Malaysia approach.

Anwar said the government will launch a major retrofit programme to enhance eight energy efficiency in government buildings. In this regard, an ESCO (energy service companies) platform will be established to connect private ESCOs, which are mainly SMEs, with government projects. The central role of the platform would be to serve as an intermediary that pools government building retrofitting projects and encourages public-private coordination in ESCO market.

"In May this year, the Government set out an ambitious target to achieve 70% renewable energy installed capacity by 2050 and lifted the ban on cross-border trade in renewable energy," he said, adding that a renewable energy exchange will be established and launched in 2024 to act as a market aggregator that will enable price discovery and monetise excess power.

As the paramount challenge in energy transition is financing, it is estimated that an investment of at least RM1.2 trillion between 2023 and 2050 is needed to enable responsible energy transition.

Within this decade alone, the government requires between RM60 billion and RM90 billion to be allocated for crucial projects, among others, expansion of public transportation, strengthening grid infrastructure, and reskilling of human capital.

Considering Malaysia's current state of immature decarbonisation technologies, our progress will significantly hinge on alternative energy sources and robust regional and international collaboration. In this regard, the government will allocate RM2 billion as seed fund for the National Energy Transition

Facility. This facility will enable catalytic blended finance, to ensure a seamless flow of financial resources towards energy transition projects that are marginally bankable or yielding below-market returns," he said.

Anwar said Malaysia's strategic position as the ASEAN Energy Hub enables the nation to play a pivotal role in advancing the region's sustainable energy future towards Net Zero ASEAN. Notably, utility companies such as TNB and Sarawak Energy are progressing in the cross-border business, leveraging the ASEAN Power Grid.

"This will improve broader energy security prospects and further enhance economic integration with neighbouring countries. TNB is leading discussions with ASEAN utilities and governments for resource-sharing and flexibility solutions at scale. The move will accelerate the energy transition pace in a responsible manner while balancing the elements of the energy trilemma," he said.



# NETR PHASE 1 IMPLEMENTATION SUPPORTS NRECC'S 70% RE IN ELECTRICITY SUPPLY COMMITMENT: NIK NAZMI



The Ministry of Natural Resources, Environment and Climate Change (NRECC), as the Ministry responsible for planning and regulating the development of electricity supply and the country's climate change policy, welcomes the implementation of the National Energy Transition Roadmap (NETR) and Phase 1 of its implementation will be realised through the implementation of 10 flagship projects and initiatives.

Natural Resources, Environment and Climate Change Minister Nik Nazmi Nik Ahmad said the projects and initiatives which have been identified to be implemented until 2040 include 6 flagship projects that are expected to support NRECC's desire to increase the mix of renewable energy capacity (RBC) in electricity supply to 70% and achieve the country's aspirational goal of net zero greenhouse gas emissions by year 2050.

The minister, in a statement today (July 30), said the related flagship projects and initiatives are as follows:

a. The Energy Efficiency Initiative will reduce the intensity of energy use as well as the carbon footprint of electricity users and will be implemented through the presentation of the Energy Efficiency Bill and the implementation of an energy audit for the rail transport sector under the Conditional Energy Audit Grant 2.0;

b. The Renewable Energy (RE) Zone Project is expected to increase RE capacity in electricity supply and is implemented through four (4) methods, namely the development of an integrated zone based on the concept of self-reliance & self-contained, the development of solar parks in five (5) locations across the country, project development floating solar on TNB's hydroelectric dam and the implementation of solar leasing on residential roofs;

c. The Energy Storage Project is expected to increase the resilience of the national grid system to allow for the inclusion of higher RE capacity as well as more regular operation of the distributed generation system. This project will be implemented through the development of a utility-scale energy storage system;

d. The Hydrogen Project for Electricity Supply is expected to be able to explore alternative low-carbon electricity generation technologies and be implemented through the application of hydrogen and ammonia mixed fuel combustion technology in coal-fired power plants to reduce greenhouse gas emissions;

e. The Biomass Demand Creation Initiative is expected to be able to increase RE capacity from biomass sources and is implemented through the development of centralised power generation plants in biomass clusters; and the application of biomass fuel combustion technology in coal-fired power plants; and

f. The Future Mobility Initiative is expected to reduce the transport sector's carbon footprint and is implemented through the increased installation of electric vehicle charging stations along highways and identified commercial areas; development of hydrogen refuelling stations; electrification of public transport; and the installation of a solar system to generate electricity for non-traction operation needs of rail transport system operators.

The implementation of flagship projects and initiatives that have been identified under the NETR will be focused on realising their implementation in support of the energy transition commitment led by this Ministry, Nik Nazmi added.







# IRENA: THE CRITICAL VARIABLE IN ENERGY TRANSITION IS TIME

By K. Harinderan



There exists clear inequality in renewable energy (RE) investments as deployments continue to grow despite global organisations posting a record year in capacity additions in 2022.

Speaking at the Energy Transition Conference 2023 organised by Tenaga Nasional Bhd (TNB) in Kuala Lumpur on Aug 28, International Renewable Energy Agency (IRENA) Director General Francesco La Camera said by increasing energy efficiency measures and use of renewables, Malaysia can reduce 25% and increase its share of the RE mix from 5% today to almost 60% by 2050.

"In the 1.5°C Scenario (1.5-S), electricity will make up to 40% of final energy consumption by 2050 from 21% today - doubling electricity demand to 348 TWh by 2050. The majority of new capacity will need to be from renewables. In the near term to 2030, Malaysia will need to scale up its solar PV to 17 GW and EVs to over 3 million. Overall, the investment in energy transition technologies will amount to USD50 billion to 2030.

The success achieved this decade in reducing greenhouse gas emissions will determine whether global temperature rise can be limited to 1.5°C of pre-industrial levels this

century, in line with the objectives of the Paris Agreement. Irena's 1.5°C Scenario, set out in the World Energy Transitions Outlook, presents a pathway to achieve the 1.5°C target by 2050, positioning electrification and efficiency as key transition drivers, enabled by renewable energy, clean hydrogen and sustainable biomass.

La Camera said, in the longer term to 2050, cumulative energy transition investment in Malaysia will reach to USD375 billion, including installing RE capacity, infrastructure and Energy Efficiency (EE) - phasing out the need for fossil fuel subsidies.

Transitioning towards the energy transition technologies in the 1.5-S will save Malaysia between USD13 billion annually in avoided cumulative energy, climate and health costs. Energy-related energy emissions be reduced up to 60% in the 1.5-S compared to present levels. La Camera added that Circular Economy practices are one of the most important pillars for achieving emission reduction targets and accelerating the energy transition. In Malaysia, projections show that recyclable materials from solar PV waste can exceed 7 million tonnes by 2040 and 17 million tonnes by 2450 in the 15C Scenario.



The steel sector is one of the most significant contributors to climate change responsible for about 7% of global energy related carbon emissions

La Camera stressed transition will be a main driver of demand for critical minerals, as “no country can fulfil its demand for all critical materials alone which allows global organisations and governments alike a chance to rewrite the legacy of the extractive industry.

It’s important to note that Global RE capacity addition rose to 295GW (gigawatts) in 2022, compared with just slightly above 150GW as recently as in 2018, according to Irena’s World Energy Transition Outlook Report 2023. However, RE investments have been unequal across regions, with more than half of the world’s population receiving only 15% of such investments.

Disparities in per capita investments in the sector “have more than doubled” in 2021, compared with 2015 levels, La Camera said, pointing to per capita capacity of around 1.2MW (megawatt) in Oceania and Europe, compared with as low as 0.04MW in Africa, and 0.1MW in the Middle East.

“85% of this investment benefits less than 15% of the population. We need to address this imbalance urgently, by quadrupling annual investment and more equitable financial flow,” La Camera said during the plenary session at The Energy Transition Conference 2023.

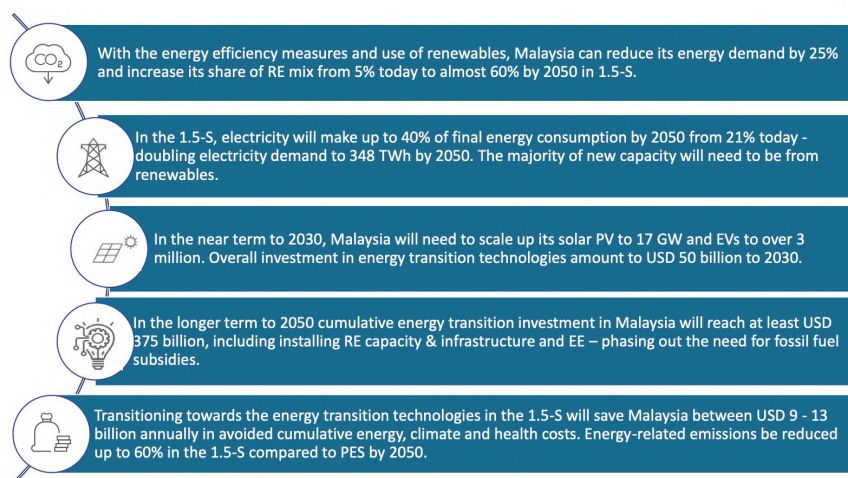
While Irena studies found that RE costs have been decreasing, equitable energy actions must be ensured.

“Expanding RE deployments to developing nations being deprived of access, is a moral imperative,” he said. According to the Energy Transition Commission, the transition would require 6.5 billion tonnes of end-use materials from 2022 to 2050, of which 95% would be steel, copper and aluminium, with the remaining 325 million tonnes or 5% derived from critical minerals such as lithium, cobalt, graphite and other rare earth minerals.

The trends expected by Irena in the foreseeable future of energy transition include physical constraints, as demand for critical materials like rare earth elements rise, aside from development of disruptive innovations, and potentials of scaling up circular economy both to address consumption of such materials. “The energy transition will be the main driver of demand for critical minerals, and no country can fulfill its demand for all critical materials alone. This is a chance to rewrite the legacy of the extractive industry,” La Camera said. At the same time, key geopolitical risks loom over the supply of such materials, ranging from resource nationalism to export restrictions, presence of mineral cartels and market manipulations.

“The most important variable in energy transition is time,” La Camera said, adding, “We need to triple the existing RE capacity to meet the 1.5°C pathway (by 2050). And if we do not do it now (the annual commitment increases over time), we will not have the capacity to do all this. The costs will rise dramatically, and we simply cannot get the results done (in addressing the temperature rise).

## Malaysia Energy Transition Outlook





# CLIMATE CHANGE, ENERGY SECURITY TAKES CENTER STAGE

**A total integrated effort is needed for the renewable energy (RE) industry to ensure a just and systematic transition, considering the energy trilemma of affordability, security and sustainability**



his is at the Government forefront mission towards energy transition, said Natural Resources, Environment and Climate Change Minister Nik Nazmi Nik Ahmad, adding, a new investment of approximately RM637 billion up until 2050 in RE is required, which includes

investments in RE generation sources, strengthening of grid infrastructure including transmission lines enhancement, energy storage systems integration and grid system network operation augmentation.

"Taking into account the Malaysia Energy Transition Outlook (METO) report, the government has announced an enhanced commitment to undertake an aspirational low-carbon energy pathway to accelerate our RE deployment in the power sector to 70 per cent, or 55 gigawatts (GW) by 2050, compared to the current level of 25 per cent, or 10GW, and the existing target of 40 per cent in 2050.

He said a robust and flexible grid is critical as the intended ramping up of RE will be very much solar-based.

"This is part of the commitment I made during the unveiling of METO, in which I had pledged to put comprehensive, competitive, and aspirational power generation and supply planning policies in place," he said in his keynote address at the Energy Transition (ET) Conference 2023 powered by Tenaga Nasional Bhd in Kuala Lumpur, today (Aug 28).

This, he said, enables Malaysia to decarbonise and leverage its competitive advantage to draw in high-value yet environmentally-friendly investment that is sustainable and energy-centric.

Nik Nazmi said the government has also decided to allow cross-border trade of RE as a two pronged-strategy for Malaysia Malaysia to capitalise and explore new higher-

Malaysia to capitalise and explore new higher-value RE demand in neighbouring countries, which will enable Malaysia to offer and enjoy greater grid flexibility with higher RE integration under the Asean Power Grid (APG) initiative.

"Certainly, the APG is a goal worth pursuing. As a multilateral undertaking, its achievement would result in a totally integrated Southeast Asian power grid. It would promote interconnectivity across the ten Asean member states with our combined population of more than 670 million and counting, allowing cross-border electricity trade across the region.

"The government invites all interested energy players, especially our local energy companies such as Telekom Nasional Bhd, to continue and facilitate the discovery of new and renewable sources of energy across the nation and our borders," he said, adding, cross-border RE trading will be part of Malaysia's contribution to the creation of the APG and, one would argue, towards strengthening Asean integration as a whole.

Nik Nazmi said the recently concluded 41st Asean Ministers on Energy Meeting (Amem-41) in Bali, Indonesia, has resulted in, among others, Malaysia, Indonesia, Brunei and the Philippines deciding to embark on a sub-region focus group to ramp up existing interconnectivity for green energy.

"Asean is an integral part of Malaysia's future. Hence, it is crucial for us to achieve a just and comprehensive energy transition as an interconnected region, with the APG as a key component," he said.

The Energy Transition concept emerged as a pivotal step in addressing these intertwined challenges, fostering a shift towards a low-carbon trajectory. He said Malaysia is committed to achieving net-zero greenhouse gas emissions by 2050, in alignment with its Nationally Determined Contributions (NDC) under the Paris Agreement.

The Minister underscored the significance of a resilient







grid system, which is pivotal for successful renewable energy integration. He called upon Tenaga Nasional Berhad to leverage its extensive experience in grid development to modernise and digitalise the National Grid, supporting Malaysia's transition and the realisation of the ASEAN Power Grid initiative.

Nik Nazmi further discussed the role of energy transition in supporting smart cities, emphasising the importance of optimising energy usage in buildings and promoting the circular economy. He also highlighted the commitment to green mobility, including the development of the electric vehicle industry and the exploration of green hydrogen as a fuel alternative.

The Minister expressed confidence in Malaysia's ability to achieve its sustainable energy goals through partnerships, knowledge exchange, and collective efforts. He lauded the Energy Transition Conference for providing a platform for valuable perspectives and partnerships that will drive the acceleration of the energy transition journey.

The conference, powered by Tenaga Nasional Berhad (TNB), brought together prominent industry leaders, experts, and distinguished guests to deliberate on the urgent need for an energy transition and to discuss strategies for its acceleration.

### Addressing the Energy Transition Challenges

TNB chairman Dato' Abdul Razak Abdul Majid, at the launch said the ongoing transformation of the global energy system amidst significant challenges such as climate change and energy security. He highlighted the necessity of a balanced approach that considers the trilemma of energy security, sustainability, and affordability while also ensuring equity and inclusiveness in the transition process.

### TNB's Commitment to Energy Transition

TNB, with more than 70 years of experience in the energy industry, reaffirmed its commitment to shaping the nation's energy future. The company's strategy revolves around three key focus areas: generation decarbonisation, flexible renewable energy adoption, and cross-sectoral electrification. Dato' Razak stressed that TNB is dedicated to increasing renewable energy capacity, enhancing energy efficiency through smart technologies, expanding solar and emerging renewable technologies, and fostering regional collaboration in green energy exchanges.

### The Energy Transition Conference's Role

Dato' Razak highlighted that the conference's discussions are categorised into the sectors of Power, Transportation, and Cities, aligning with TNB's strategies for cleaner power generation, sustainable cities, and transportation electrification. He underscored the urgency of the energy transition post-COVID-19, given the escalating impact of extreme weather events.

He reiterated that the energy transition is a collaborative effort involving policymakers, suppliers, and customers, and conferences like this serve as platforms for these vital conversations.





A portrait of a middle-aged man with dark hair, wearing a dark blue checkered suit, a white shirt, and a purple tie. He has a name tag that says 'AMMAR' and a Malaysian flag pin on his lapel. The background is a plain, light-colored wall.

# ECOTOURISM – TOURISM MALAYSIA RE FOR NATION TO BE TOP SUSTAINABLE DESTINA

*By K. Harinderan*



# RESOLUTE OP ATION



he future course of Malaysia's total tourism endeavour –which is to aspire to be the lead global tourist destination relies mainly on sustainable and responsible tourism, where instances of these include ecotourism.

The Director General of Malaysia Tourism Promotion Board (Tourism Malaysia), Dato' Dr. Ammar Abd Ghapar told **BusinessToday** exclusively that the National Energy Transition Roadmap 2023 (NETR 2023) have several positive impacts on the tourism sector where clean energy initiatives can enhance the overall attractiveness of a destination, reduce its environmental footprint, and offer unique experiences for tourists.

**Eco-Tourism Opportunities:** Transitioning to clean energy sources like solar and wind power can reduce the carbon footprint of tourist facilities and activities. This initiative aligns with the growing demand for eco-friendly tourism, where travellers seek destinations prioritising sustainability and environmental conservation. Malaysia can promote itself as a sustainable and eco-friendly tourist destination, attracting a segment of environmentally conscious travellers.

**Clean and Healthy Environment:** Clean energy sources can lead to reduced air and water pollution, making the environment more attractive for tourists. Cleaner air and water can enhance outdoor activities such as hiking, water sports, and wildlife watching, all of which are popular tourist activities in Malaysia.

**Improved Infrastructure:** Developing clean energy infrastructure can also lead to improvements in overall infrastructure. For example, better roads, transportation, and energy-efficient buildings can enhance the overall visitor experience and encourage tourists to explore more areas within the country.

**Cost Savings:** Adopting clean energy sources can lead to cost savings for businesses in the tourism sector. Lower energy costs can result in reduced operational expenses for hotels, restaurants, and attractions, which could offer lower prices or better amenities to tourists.

**Diversified Tourism Offerings:** Malaysia can leverage its clean energy initiatives to diversify its tourism offerings. For example, it can develop eco-friendly tours and activities related to clean energy production, such as guided tours of solar farms or wind energy installations. These unique experiences can attract tourists; interest in learning about sustainable energy practices.

**Marketing Advantage:** Malaysia can use its commitment to clean energy transition as a marketing advantage. Promoting the use of clean energy in promotional materials and tourism campaigns can attract environmentally conscious travellers and set Malaysia apart from competitors in the region.

**Long-Term Sustainability:** Clean energy transition contributes to long-term sustainability, ensuring that the natural beauty and resources that attract tourists are preserved for generations to come. This long-term commitment to sustainability can enhance the country's reputation as a responsible and forward-thinking destination.





Dato' Dr. Ammar said: "It all boils down to the effectiveness of implementation and promotion of clean energy initiatives within the tourism sector. Collaboration between the government, tourism industry stakeholders, and environmental organisations is now crucial to ensure that the NETR 2023 positively impacts the tourism sector. And, this is the future that many world travellers seek. As an example, ecotourism or green tourism means we cannot interrupt Mother Nature's makeup where any form of development has to be strictly regulated and abided by without destroying any part of nature, which is most important."

"Malaysia's sustainable tourism or the development of the industry today has to be centred on the 'tourism assets' Malaysia already has, like the long list of tourist spots highlighted over decades, to ensure that we do not fall behind neighbouring countries. So, when we're talking about ecotourism, it is not only about greenery or the beauty of an eco-system, but it is also about the sustainability of the way of life, our multiracial society and culture which has not eroded over time," Dato' Dr. Ammar added.

He also highlighted that Tourism Malaysia's role is to align with the National Tourism Policy towards the United Nations Sustainable Development Goals (UNSDG) by reinforcing the role of tourism as a catalyst for economic development in a sustainable, responsible and inclusive manner. This includes advocating responsible tourism in the management of fragile tourism destination areas (UNSDG Goal 12), managing the development of tourism islands in synergy with conservation by repositioning the tourism islands as premier marine ecotourism destinations, practising inclusive tourism development to include women, youth and disadvantaged groups, including reinforcement of the role of tourism as a catalyst for rural empowerment (UNSDG Goal 8), and developing a data reporting mechanism for sustainable tourism that is aligned with the UNSDGs (Goals 8, 14 & 15).

### The Paradigm Shift

There is a constant need to educate people, awareness of the correct traits must be there as it involves all Malaysians and this process is well underway with the ministry. My task is for us to be number one, and the critical point is to ensure that there is a high-level awareness and spirit in every Malaysian to help achieve the aim. We have to know that tourism is a major contributor to the economy. And value is built up with greater conservation means to protect nature, for example, knowing about how using less detergent or recycling benefits environmental sustainability.







## “Take Only Memories, Leave Only Footprints”

- Chief Seattle-

### Tourism Today – Family Bonding

We must understand the need for tourism today. After the COVID-19 pandemic, the tourism landscape and travel trends have changed. People now seem to travel in smaller groups and many don't want to spend much time in big cities.

Tourism today is also an important means for family bonding, consciously or unconsciously this creates value. This bond also takes care of teaching other values like cleanliness. They also pass down the need to recycle.

Sustainable tourism does not mean that you don't develop tourism infrastructure. If there's no demand, there are no new hotels or theme parks. We must also push surrounding sectors like using electric vehicles to reduce emissions. Sustainability is balance. So, this must be controlled so as not to destroy nature.

### Volunteer Tourism

Cleaning up beaches and caring for wildlife are parts of volunteer tourism which gives credence to sustainability. This is one result of education and awareness.

Dato' Dr. Ammar said Tourism Malaysia is driven by the number of tourist arrivals. We need to be sustainable or the world will shun us. We believe we have set achievable targets, of 24.6 million tourist arrivals for 2025 and 26.1 million for Visit Malaysia Year 2026 and we all must work together to achieve these goals.

As Malaysians, we should be proud of our country being multi-racial and we have a lot of culture to offer, and history shows travellers appreciate these.

The issue now is how we go about enhancing knowledge within our people of what is green tourism all about and how they can contribute. Promoting Malaysia's tourism cannot be shouldered solely by the government as it must be a collective effort by all.

Again, it is important that we express our strengths, which takes the form of the multiracial people, with diverse background living in harmony in a united Malaysia.

### Collective Involvement

Different races and ethnic groups working together, to promote the nation is a blessing. This is what people have to understand when talking about community-based tourism. Each of us has the responsibility to promote the nation. This is one of our pillars for Visit Malaysia Year 2026, the main being educating the people. So, in order for us to be the number one destination, we have to ensure the environment is way beyond the mark.

Mind you, we are not against any development in the course of promoting tourism, but we have to abide by government policies. Now, for example, glamping is something new. The concept is not to disturb any of the trees and leaves nature as it is.



# LAND BELOW THE WIND ENLIVENS SUSTAINABILITY MEASURES TO PROTECT ITS ENVIRONMENT



Sabah continues to emphasise the importance of sustainable practices especially in tourism as these practices help to protect Sabah's environment, water sources, flora, and fauna, which make Sabah one of the best ecotourism destinations in Malaysia and the region.

Nestled strategically along the Danum River in Lahad Datu, lies Borneo Rainforest Lodge, where an eco-conscious approach can be seen in the architectural design of their main lobby and chalets. Their design concept leverages the principle of cross ventilation to harness natural breezes as demonstrated by the high ceilings of their main lobby and coupled with expansive windows in their chalets, strategically positioned to reduce reliance on artificial lighting as it allows for more natural light in the chalet – all with the initiative to reduce energy usage.

Also dedicated to empowering the local communities, they actively seek out enthusiastic individuals from the local community, providing them with educational and hands-on training in the intricacies of the hospitality industry. This not only enhances their value in the hospitality industry but also encourages them to pursue long-term careers in this field.

Borneo Rainforest Lodge also places a strong emphasis on nature education, particularly for Nature Guides. Guides are the front-liners of information dissemination in the tourism industry, and given their location in one of the world's most biodiverse environments, they prioritize ongoing nature education to refine their interpretative skills.

Joining a global effort to promote sustainable tourism is Hyatt Centric Kota Kinabalu, which is committed to advancing sustainability actions in line with Hyatt's World of Care objectives to ensure the resilience of its destination and local communities.

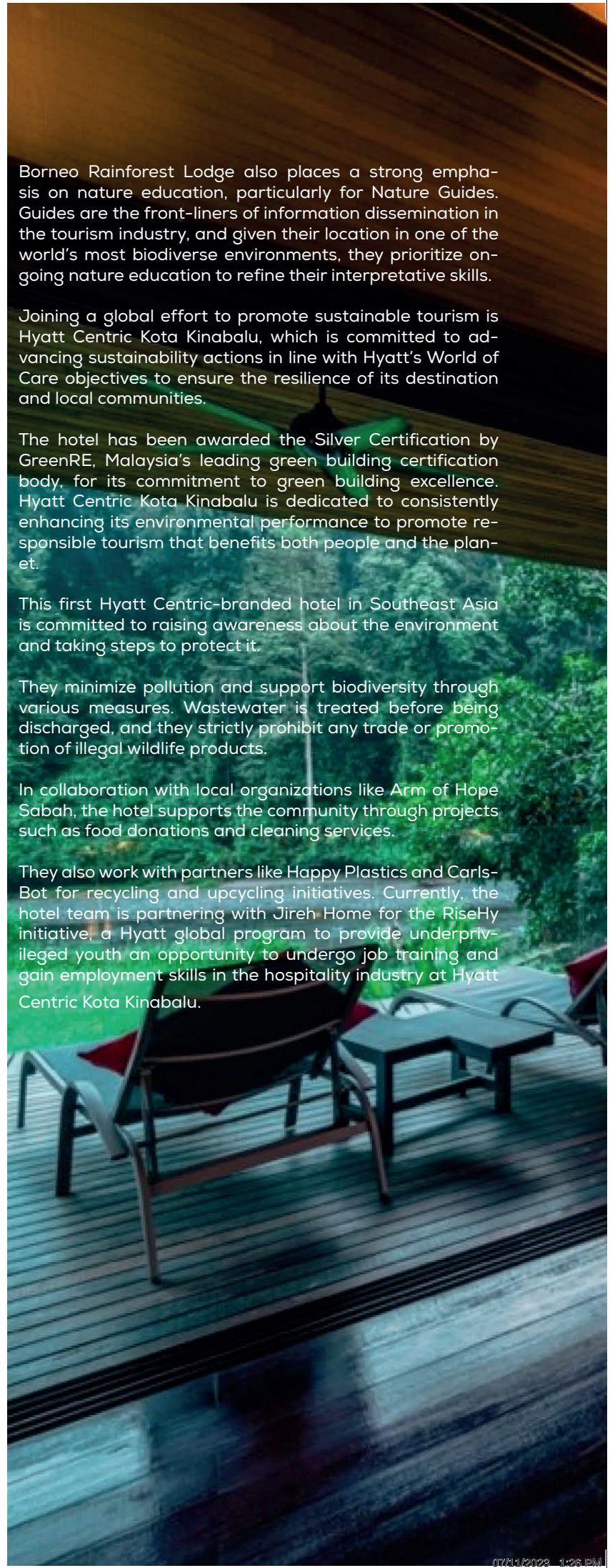
The hotel has been awarded the Silver Certification by GreenRE, Malaysia's leading green building certification body, for its commitment to green building excellence. Hyatt Centric Kota Kinabalu is dedicated to consistently enhancing its environmental performance to promote responsible tourism that benefits both people and the planet.

This first Hyatt Centric-branded hotel in Southeast Asia is committed to raising awareness about the environment and taking steps to protect it.

They minimize pollution and support biodiversity through various measures. Wastewater is treated before being discharged, and they strictly prohibit any trade or promotion of illegal wildlife products.

In collaboration with local organizations like Arm of Hope Sabah, the hotel supports the community through projects such as food donations and cleaning services.

They also work with partners like Happy Plastics and Carls-Bot for recycling and upcycling initiatives. Currently, the hotel team is partnering with Jireh Home for the RiseHy initiative, a Hyatt global program to provide underprivileged youth an opportunity to undergo job training and gain employment skills in the hospitality industry at Hyatt Centric Kota Kinabalu.





# GOVT TO EXPLORE GREEN HYDROGEN AS ALTERNATIVE FUEL

By Chong SM



The government is eager to explore the potential of green hydrogen as a fuel alternative towards the nation's green mobility agenda. Minister of National Resources, Environment and Climate Change (NRECC) Nik Nazmi Nik Ahmad said the government in collaboration with utilities like Tenaga Nasional Berhad (TNB), will explore the prospect of harnessing the new energy carrier and its economic effects, sustainable asset management practices. "We aim to unlock the hydrogen economy through the National Energy Transition Roadmap (NETR) and the Hydrogen Economy and Technology Roadmap (HETR) that are targeted to be rolled out later this year.

"This includes how we can attract investments towards its production and ultimately pave the way for Malaysia to become a main export hub for green hydrogen by 2027. Increasingly, we are seeing the value in cooperation to drive the transition domestically, regionally and internationally," he said in his opening remarks at the Energy Transition Conference launching ceremony, in Kuala Lumpur, today (Aug 28).

Moreover, he said the energy transition and climate change action requires the involvement and contribution of various sectors to ensure that humanity continues to thrive. "We also hope that the businesses and civil society will continue to put sustainability at the forefront of their work," he said. On the Energy Efficiency and Conservation Act (EECA) that will be tabled at the upcoming Parliament sitting, Nik Nazmi said heavy electricity consumers will be required to conduct an energy audit and a higher requirement will be given for buildings of a certain size.

"And as a result of our tariff reform, we already see some of them already took their own initiative because now they (heavy electricity consumers) have to pay a higher bill. So they already took their measures to store more solar energy and practice energy efficiencies," he said. Touching on the development of the policy framework for rare earth elements (REE), Nik Nazmi said his ministry will convene a committee chaired by him under the National Minerals Council soon.





# CIMB LAUNCHES RM3 BILLION SUSTAINABILITY LINKED FINANCING FOR SMES



IMB Bank Berhad has enhanced its GreenBizReady proposition with the launch of Sustainability-Linked Financing for small and medium enterprises with a total allocation of RM3 billion through 2030 for the Programme

The SLF aims to incentivise SMEs to achieve credible greenhouse gas emission reduction targets through attractive financing rebates of up to 0.50% per annum, as they secure financing to meet their capital or expansion needs. Once sustainability performance targets have been agreed with CIMB, SMEs only need to input data such as energy and fuel consumption into Malaysian Green Technology and Climate Change Corporation's Low Carbon Operating System platform, a simple and user-friendly web-based tool. Additionally, by combining the SLF with Bank Negara Malaysia's Low Carbon Transition Facility SMEs can also benefit from better financing rates.

The SLF Programme is the latest extension of CIMB's award-winning GreenBizReady proposition that was launched in 2021 as a complimentary one-stop sustainability solution for SMEs. Through GreenBizReady, CIMB helps SMEs to achieve their sustainability targets through training and advisory services, as well as matching them with suppliers and associates.

Through LCOS, MGTC envisions a greener, more resilient country, where businesses, communities, and policy makers work hand in hand to create a legacy of environmental stewardship, leaving a lasting impact for generations to come," he added. SLFs are a popular transition finance mechanism, but are usually highly bespoke and costly due to verification requirements to meet global standards. CIMB's SLF Programme helps SMEs to overcome these long-standing challenges of measurement and verification of sustainability targets in a holistic and cost-effective manner providing access to incentives that have generally only been available to corporates in the past. The SLF is also aligned with the globally

recognised Loan Market Association's Sustainability-Linked Loan Principles. Besides reducing negative environmental impact, the Programme also aims to ensure SMEs' business resilience and continued access to export markets by improving their sustainability performance. This will help them to adapt to rapid market and regulatory developments such as the EU Carbon Border Adjustment Mechanism, upcoming local regulations and the transition towards sustainable supply chains within the global economy.

Besides reducing negative environmental impact, the Programme also aims to ensure SMEs' business resilience and continued access to export markets by improving their sustainability performance. This will help them to adapt to rapid market and regulatory developments such as the EU Carbon Border Adjustment Mechanism, upcoming local regulations and the transition towards sustainable supply chains within the global economy. sustainability of its global operations and providing sustainable solutions to meet the growing demand of the digital world.







## INVEST M'SIA 2023 – ENLARGES SUSTAINABILITY AGENDA: MAYBANK IB



The recent Invest Malaysia 2023's Special Series on the National Energy Transition Roadmap (NETR) provided a clear narrative and practical pathway towards driving the country's next phase of economic growth and long-term sustainability agenda, especially Malaysia's commitment to achieve carbon neutrality by 2050 in the digital world.

The transformative thinking underpinning the NETR Part 1 underscores and reinforces the laudable ambitions of the recently articulated MADANI Economy framework which emphasises the leveraging of Malaysia's many inherent strengths to be a leading Asian economy, by becoming a competitive and world class investment destination.

Maybank Investment Bank (Maybank IB) said today (July 31) key highlights of the NETR, is that it contains 10 flagship-cum-catalytic initiatives that have a total investment value of between MYR435b to MYR1.85tr by 2050, and will be offering 23,000 high-impact jobs.

A cornerstone project is a 1GW large scale integrated RE zone (powered by solar) by UEM-INTRAMAS JV, to be the largest in ASEAN and having attracted MYR6b in foreign investments to-date.

In addition to solar power, the NETR also opens up the hydrogen gateway in Sarawak, and puts in place the framework for carbon capture, utilisation & storage (CCUS), hence laying the foundations for the development of new, high value-add GDP growth drivers. Particularly noteworthy, Maybank IB added, is the NETR's explicit inclusion of households via offering an income opportunity from leasing out their rooftops for solar power generation regarding its detailed, broadly income generative plans to

opportunity from leasing out their rooftops for solar power generation regarding its detailed, broadly income generative plans to integrate solar solutions into its township projects.

### Reinforcing the MADANI Economy framework

The innovation and pragmatism demonstrated by the NETR dovetails nicely with the ambitions of the MADANI Economy, principally to develop new secular growth engines for both broad economic growth as well as the creation of high-paying jobs by building on the country's competitive strengths such as its' abundance of natural resources, strategic geographic location and a pioneering, world-class energy industry.

Pending policy updates such as NETR Part 2, National Industrial Master Plan (NIMP) 2030, 12th Malaysia Plan mid-term review and Budget 2024 are expected to build on the positive leading-edge tone set by NETR.

### Reaffirming a positive 2H23 equity market outlook

Maybank IB remains optimistic on improved market traction over 2H23 despite still-mixed earnings guidance. Besides peaking interest rates / inflation and softening USD, China's growth outlook is seen to stabilise and US Fed's narrative has turned more dovish.

Against KLCI's post-millennium forward PER low of c.12x, 2024E market earnings growth is forecast to accelerate to +13.3% (2023E: +6.5%) as ASP-driven sectors (Plantations, Gloves, Petrochem) improve while laggards like Telcos, Aviation extend on their earnings recovery.

End-2023 KLCI target is 1,520 (13x fwd. PER; +5% upside), our preference being Financials, Tech (Software, EMS) and selective SMID capitalisations.



## Sunway University Selected To Host The Prestigious Planetary Health Summit 2024



The event taking place in April 2024 will see Sunway University playing an essential role not only as the official venue but also for international delegates to convene and share insights on planetary health from various aspects of governance. Sunway Education Group Chief Executive Officer, Professor Dato' Elizabeth Lee and Pro Vice-Chancellor (Research Engagement and Impact) Professor Mahendhiran were utterly ecstatic at the university hosting such a prestige event that resonates with the education group's philosophy and belief.

Not many are aware, but Sunway University plays host to the regions United Nations Sustainable Development Goals office. According to Professor Dato' Elizabeth Lee it was the vision of the chairman Tan Sri Jeffrey Cheah who enabled the setting of the United Nations Sustainable Development Solutions Network to be headquartered in Malaysia. This forward-thinking notion of sustainability has helped Sunway University become the foremost varsity when it comes to planetary health, in fact, it's the vision that led to the formation of the Planetary Health Centre led by Tan Sri Dr Jemilah Mahmood.



According to him, over many years, Malaysia and many developing countries have grown significantly from an economic perspective, and this has an impact on the environment.

"With climate change, there's a big discussion on the role of humans on the environment. The forces that have an impact on the climate system, and one of the big forces, are human beings themselves! Everything that we do economically has an impact on the environment and that's having an adverse impact on the environment. It's time to reassess the way we conduct ourselves in every facet of our life."

As startling as that may seem, the truth is human activities over the century have largely contributed to the degradation of our environment that has led to climate change. According to the US Environmental Protection Agency, among the harmful causes are greenhouse gas emissions through industrial manufacturing, deforestation for agriculture, energy production, and transportation. While most of these activities cannot be completely stopped, mitigation efforts are underway with world leaders agreeing to come together and find ways to halt the impact and next to reverse it.

Here in Malaysia discussions are already under with the government setting the target of achieving net zero emissions by 2050. While the policymakers set goals and outline policies, there must be strong communication in mindset change, as to achieve the goals we must act as a whole nation.

Sunway University has been imparting valuable lessons on the environment early on, according to Professor Mahendhiran the visionary leader of Tan Sri Jeffrey Cheah, saw from early on adopting the 17 SDGs where he believed economic development needs to be incorporated the environment and that it is not a zero-sum game."What is the best way to know, inform, to educate people on sustainable development than to teach the next generation? So, there is considered effort to ensure that sustainable development becomes core to our education, research, and also engagement with the community."Getting an education is not only about the qualification but other key values as well, essentially on sustainable development, and planetary health, which are incorporated in every course at the university, Professor Mahendhiran adds. Sunway University is not only about education it is also preparing the students beyond the campus realm, arming them with entrepreneurial skills. Professor Mahendhiran quips, "At the end of the day, to have a vibrant ecosystem, you need to have a vibrant, entrepreneurial acumen and mindset, the whole Sunway ecosystem has emerged an entrepreneurial insight."

**Sunway Education Group Chief Executive  
Officer ,Professor Dato' Elizabeth Lee**

### Concerns For Planetary Health

With both the Sustainable Development Sustainable Solutions Network and The Jeffrey Sachs Centre of Excellence housed within the Sunway University and now the Planetary Health Centre, students and educators are constantly engaged and attuned with studies on the environment, sustainability, climate change, and planetary health. These pioneering institutions and increased student community engagements have led to Sunway being acclaimed as the nation's **#campuswithaconscience**.







These centers are not only for research, but they're also undertaking research-inspired teaching and learning. Professor Mahendhiran said there's a lot of advocacy work with policymakers, helping the government develop policies, in fact, Sunway University is currently developing the planetary health action plan for the Malaysian Government.

In the past, when we mentioned top centres of research and educational excellence, you probably would say, a university in an OECD country. But today nations around Southeast Asia including Malaysia are developing solutions for the developing world, for example, solutions that come out from the Sunway ecosystem are now getting published in top journals. In fact, in the recent Stanford University Ranking, Sunway School of Engineering and Technology achieved the highest number of top 2% Researchers than any other private universities.

Professor Mahendhiran adds, "Sunway University is committed to nurturing the next generation leaders that know what it takes to build sustainable development agenda. winnable means in solving problems of climate change, designing better agricultural products, and systems that will meet the needs of people.

**"Everything that we do economically has an impact on the environment and that's having an adverse impact on the environment. It's time to reassess the way we conduct ourselves in every facet of our life."**

Professor Mahendhiran

**Pro Vice-Chancellor (Research Engagement and Impact) Professor Mahendhiran**



# SHANGRI-LA KUALA LUMPUR: A BEACON OF SUSTAINABILITY IN THE EVOLVING HOTEL INDUSTRY



**I**n recent years, the global hospitality industry has undergone a profound transformation driven by a growing awareness of environmental concerns and a commitment to sustainability. The hotel industry, in particular, has been at the forefront of this green revolution. Hotels around the world are increasingly adopting eco-friendly practices and innovative technologies to reduce their carbon footprint. In this article, we will explore the evolving energy transition and sustainability initiatives in the hotel industry, with a focus on the exemplary efforts of Shangri-La Kuala Lumpur.

## The Energy Transition in the Hotel Industry

The energy transition in the hotel industry is ushering in a new era of sustainability. Today, hotels are taking significant steps to reduce their reliance on conventional energy sources and embrace renewable alternatives. One notable example is the widespread adoption of energy-efficient technologies. LED lighting, smart HVAC systems, and energy management software have become standard features in many hotels. These technologies not only reduce energy consumption but also enhance guest comfort.

Shangri-La Kuala Lumpur is a prime example of a hotel that has embraced this transition. The establishment has implemented rigorous water conservation practices, including low-flow water fixtures and rainwater harvesting. These initiatives have led to substantial reductions in water consumption, contributing to a more sustainable operation.

## Reducing the Carbon Footprint

Kuala Lumpur has taken several remarkable steps in this direction. Waste reduction is a key focus, with recycling programs and composting initiatives in place. Single-use plastics, a major environmental concern, have been significantly reduced through the elimination of plastic straws, cutlery, and toiletries. In their place, eco-friendly alternatives like bamboo utensils have been introduced, helping to minimise plastic waste.

Engaging guests in sustainability efforts is another crucial aspect of reducing the carbon footprint. Shangri-La Kuala Lumpur encourages guests to participate in eco-friendly initiatives and make choices that minimise their environmental impact during their stay. This not only raises awareness but also empowers guests to contribute to a greener future.



# UEM EDGENTA FORGES A SUSTAINABLE FUTURE: UNVEILING PATHWAY TO NET ZERO



UEM Edgenta Berhad (UEM Edgenta) the region's leading Asset Management and Infrastructure Solutions company, today launched its groupwide Net Zero Targets and announced its commitment to achieve net zero greenhouse gas (GHG) emissions by 2050.

Graced by Minister of Natural Resources, Environment, and Climate Change (NRECC), Nik Nazmi Nik Ahmad, the launch is a long-term testament to combating climate change and advancing a greener future for Malaysia and beyond.

UEM Edgenta has set forth a goal to reduce its operational GHG emissions by 26% by 2030 in the medium term. In the long term, UEM Edgenta aims to achieve net-zero emissions by 2050. These commitments align with the International Energy Agency's (IEA) Net Zero Emissions by 2050 Global Pathway (published in 2022).

The targets are set against the company's 2022 groupwide global baseline GHG carbon footprint of 17,577 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). UEM Edgenta's decarbonisation strategy is based on a multifaceted approach, reliant on energy efficiency solutions, the generation of renewable energy sources, and the electrification of its fleet of vehicles.

In an era of heightened climate urgency, UEM Edgenta firmly supports Malaysia's commitment to sustainability in the economy, society, and the environment toward achieving net zero by 2050.

The company proudly aligns ourselves with the 12th Malaysia Plan (12MP) for 2021-2025, which prioritises sustainability in the economy, society, and the environment. Guided by the Finance Ministry's Economic 2023 Outlook Report, we embrace the National Policy on Climate Change and related policies, working towards a sustainable future. Our commitment includes exploring eco-friendly materials, adopting renewable energy models, and integrating

We're dedicated to contributing to Malaysia's goal of achieving 20%- 23% energy efficiency savings by 2050 as outline in recently unveiled in the National Energy Transition Roadmap (NETR). Malaysia's target to reduce carbon intensity by 45% against 2005 levels by 2030 is commendable, and UEM Edgenta is proud to play a role as a responsible corporate citizen in advancing Malaysia's sustainable development goals.

In line with the 'Edgenta of the Future 2025 vision, UEM Edgenta is launching OPUS Consultants' Sustainable Solutions, a holistic approach to enhance asset performance and value through sustainability, technology, and data analytics.

In line with the 'Edgenta of the Future 2025 vision, UEM Edgenta is launching OPUS Consultants' Sustainable Solutions, a holistic approach to enhance asset performance and value through sustainability, technology, and data analytics.

Building on the success of the previous RM100 million allocations under the 'Sustainable Zero-Capex Programme' for Sarawak, UEM Edgenta is pleased to announce the extension of a similar initiative amounting to RM100 million in Peninsular Malaysia, in collaborating with NRECC focusing on sustainable asset life cycle management and built environment. This expansion encompasses various sectors, including healthcare, industrial, commercial, and residential. The transformative initiative is designed to empower building and asset owners to expedite their sustainability agendas with minimal to no upfront costs through a one-stop solutions provider. Serving as the one-stop solutions provider, OPUS offers a comprehensive range of end-to-end sustainability solutions. With OPUS at the helm, the commitment is to facilitate and advance sustainable practices across various industries in Malaysia. These end-to-end solutions encompass initial consultancy and baseline assessment of greenhouse gas emissions, as well as the conversion of buildings into environmentally certified structures either for new development or existing buildings.



Additionally, these services include comprehensive operations and maintenance, and a real-time monitoring through centralised command and contact centre. Cutting-edge technologies, such as IoT (Internet of Things) and digital twin, are integrated into our solutions through our sister company, EdgentaNxt, and strategic partners.

In his keynote speech, Nik Nazmi said, "The Net Zero Target initiative stands as a momentous stride toward a more environmentally conscious future. UEM Edgenta's unwavering commitment is not only commendable but serves as an inspiring example for the broader business community. I hold firm in my belief that this initiative will play a pivotal role in expediting Malaysia's transition to a low-carbon economy. It brings us immense pleasure to learn of UEM Edgenta's resolute dedication to achieving Net Zero Scope 1 and 2 emissions by 2050, a commitment that extends beyond our borders to encompass their global operations. UEM Edgenta's remarkable endeavours in enhancing energy efficiency, exemplified by initiatives like the Green Building Certification (GBI) program for their clients, will undoubtedly cast a positive green hue over our national built environment."

"Through UEM Edgenta's Energy Efficiency solutions, clients were able to achieve more than a 50% reduction in energy consumption and more than a 10% reduction in water use. The Ministry also welcomes the fact that three (3) of UEM Edgenta's hospitals in the northern part of the country achieved prestigious LEED certification.

"Sultanah Maliha Hospital was the first hospital in the world to receive Gold LEED status in 2020. Recently, Slim River Hospital and Kepala Batas Hospital were accredited with Platinum LEED standards in 2022 and 2023, respectively. These achievements also helped the Ministry of Health (MOH) record savings of RM90.0 million in energy consumption between 2017 and 2022 at the 32 government hospitals in the Northern Region of Malaysia, translating into a carbon reduction of 165 million kg of CO<sub>2</sub>," he added.

The unveiling of UEM Edgenta's Net Zero Targets initiative marks an important step in the company's journey towards a more sustainable future.

UEM Edgenta Managing Director/Chief Executive Officer Syahrudin Samsudin said, "Our Property and Facilities Solutions (PFS) division partners with Edgenta NXT for data-driven facilities management.

Benefiting clients such as the Prime Minister's Office and the Petronas Twin Towers. We are expanding to offer Emission Baseline and Carbon Roadmap services, aligning with our net-zero by 2050 goal. OPUS Consultants, a subsidiary of UEM Edgenta, will commercialize Sustainability Services, offering the Sustainable Zero-Capex Program and committing a total of RM200 million to support clients in achieving their net-zero ambitions. We are well-prepared to support the NETR with our expertise, collaborating with Khazanah and UEM Group to become a global sustainability services provider. We envision a National Adaptation Plan that bolsters our nation's resilience against climate change."

The event featured the signing of three Memorandum of Business Exploration (MOBE) with partners Earth Finance Inc., Honeywell International Sdn. Bhd, and Yinson Green Technologies, aiming to strengthen strategic partnerships for sustainable solutions and green financing.

These MOBEs will align UEM Edgenta with international standards and provide decarbonization solutions.

Notable attendees included Garrett Kephart, President of Earth Finance; Sharad Yadav, Vice President & General Manager, Rest of APAC, together with Lim Yeong Chuan, Regional/Country General Manager from Honeywell International and Srinivas Tati, Senior Vice President of Yinson.





# RE:THINK, RE:DUCE, RE:USE, RE:CYCLE – BMW PROMISING CLEANER, MORE

By Cynthia Ignatius

**I**n a rapidly evolving automotive landscape, electric vehicles (EVs) have emerged as the future of transportation, promising cleaner, more sustainable mobility. BMW Group Malaysia, under the leadership of Hans de Visser, the Managing Director, has been at the forefront of this transformation. Hans de Visser sheds light on BMW's perspective on the challenges and opportunities presented by the energy transition, the role of government policies, initiatives reduce carbon footprints, the vision for electric vehicles, and the importance of a reliable supply chain for key components like batteries, in an exclusive interview with **BusinessToday** recently.

## Challenges and Opportunities in Energy Transition

The energy transition presents both challenges and opportunities within the automotive industry, according to de Visser. Beyond the common hurdles of market competition, consumer acceptance, and dealer network transition, BMW Group faces specific challenges:

- 1. R&D and Investment Costs:** Developing competitive EV technology demands substantial research and development investments, including a focus on rapidly evolving battery technology. BMW Group emphasises sustainability and responsible sourcing to stay competitive in this field.
- 2. Supply Chain Transformation:** Shifting from internal combustion engine production to EVs necessitates an overhaul of the supply chain. BMW Group sees this as an opportunity to create a more sustainable and resilient supply chain by working closely with suppliers to promote responsible sourcing practices and eco-friendly production processes.
- 3. Regulatory Compliance:** Meeting stringent emissions standards and regulatory requirements is crucial. BMW Group views regulatory compliance as a catalyst for positive change, driving innovation and encouraging cleaner and more efficient vehicles.

## Government Policies and Collaboration

Government policies and incentives play a crucial role in accelerating EV adoption. BMW Group Malaysia actively collaborates with the government to align their strategies with national goals, particularly the Ministry of Investment, Trade and Industry's (MITI) initiative to review the National Automotive Policy. They aim to create a supportive framework for the growth of energy-efficient and electric vehicles in Malaysia.

## Reducing the Carbon Footprint

BMW Group's commitment to sustainability extends throughout the entire lifecycle of their vehicles. Their approach revolves around the principles of the circular economy: RE:THINK, RE:DUCE, RE:USE, RE:CYCLE. This involves:

- *Substantially increasing the use of secondary materials like recycled steel, plastics, and aluminum.*
- *Prioritising the use of secondary materials wherever feasible to reduce reliance on newly extracted raw materials.*
- *Integrating recycling considerations into product development, ensuring materials are extracted in a pure form to facilitate recycling.*
- *Establishing partnerships and collaborations to address issues across the entire lifecycle of EVs, giving EV batteries a new life and repurposing automotive waste.*







**“We aim to extend  
our leading position in  
resource efficiency in  
production to the entire  
life cycle of our vehicle  
.The new class is the  
latest large stride in this  
process”**

- Oliver Zipse

#### The Vision for Electric Vehicles

At BMW Group Malaysia, the vision is clear – to drive electric mobility forward in the country by offering a diverse range of electrified models. They have introduced a fleet of fully-electric vehicles and continuously invest in local charging infrastructure to ensure convenient charging options for BMW and MINI EV owners. Additionally, BMW Group Malaysia is cultivating expertise in electric mobility through its BMW High Voltage Expert Certification program, supporting the development of a mature EV ecosystem.

#### Ensuring a Reliable Supply Chain

A reliable supply chain for key components like batteries is critical to BMW Group’s long-term sustainability strategy. They conduct a multi-stage due diligence process to ensure their supplier network adheres to social and environmental standards. Factors like market demand, government policies, infrastructure readiness, and partnerships with local entities play a vital role in establishing a successful EV ecosystem.

# A BREWER'S JOURNEY – CONVERTING WASTE INTO VALUE

By K. Harinderan



With thousands of years of history, beer has undergone significant transformation in its brewing process. Yet, what has remained constant are its four main ingredients: malt, hops, water, and yeast. As brewers perfected the process over the years, its byproducts, such as spent grain, yeast, and packaging materials, emerge as the lesser-known characters in this story, holding their own potential for sustainable use. Let's explore the waste-to-value journey of HEINEKEN Malaysia as the brewer takes a progressive approach to transform their production waste into sustainable value.

HEINEKEN Malaysia's Managing Director, Roland Bala explained, "At HEINEKEN Malaysia, we are guided by our **Brew a Better World (BaBW)** global sustainability strategy, aiming for sustainable excellence from 'Barley to Bar'. We've set an ambitious goal for ourselves: achieving net-zero carbon emissions in our production by 2030 and across our entire value chain by 2040."

"Our mission? We are committed to ensuring that zero waste from production ends up in a landfill. At the end of the day, our responsibility to our people and planet is not just about brewing better beer – it's about brewing a better world," Roland added.

## Maximising Circularity in the Manufacturing Line

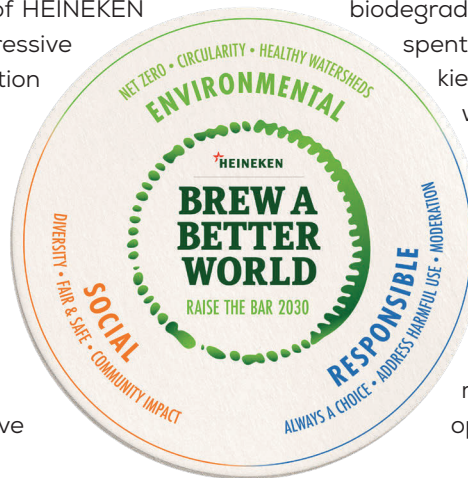
HEINEKEN Malaysia has been on a journey that transcends conventional manufacturing practices. The company decided it was not enough to just 'do less harm' – they wanted to 'do more good'. Hence, the brewer shifted from a linear to a circular economy and took on the bold mission to close the loop in their manufacturing process, giving its brewery waste a second chance at life. A significant milestone highlighting their commitment is that the brewer

has achieved zero waste to landfill since 2017, responsibly recycling and upcycling their by-products and production waste. Just last year, the company managed to recycle 100% of the 35,423 tonnes of waste it produced and generated RM1.9 million in revenue. The funds received are then reinvested into the brewer's future sustainability initiatives.

HEINEKEN Malaysia's waste consists of biodegradable components such as discarded malt, spent grain, spent yeast, spent kieselguhr, and anaerobic sludge from wastewater as well as inorganic waste such as cartons, glass, and mixed steel scrap. The brewer segregates the waste and ensures zero waste is sent to the landfill. To do so, HEINEKEN Malaysia collaborates with local waste management partners to ensure seamless and successful circular management throughout their operations.

The brewer turns waste into value by providing discarded malt, spent grain, spent yeast, and spent kieselguhr to their partners for bioconversion. The bioconversion process utilises the brewer's spent grain to cultivate black soldier fly larvae which are processed into two main ingredients, insect meal and insect oil, serving as sources of protein for animal feed. These insect proteins are then used to feed pets and farm animals in particular, swine, and as a substitute for fish meals. This process transforms the waste into high-protein animal feed, giving the spent grain a second life.

Apart from that, the brewer also invested in anaerobic digestion systems to convert organic waste into biogas, a renewable energy source that powers the facility. Last year, HEINEKEN Malaysia successfully generated five million megajoules of thermal energy from wastewater, covering 5% of their total thermal energy needs.





All waste in HEINEKEN Malaysia is managed and disposed through their certified waste management partners.

## Maximising Circularity in Packaging Waste

Since its transition to a circular economy, HEINEKEN Malaysia has extended its sustainability value to its packaging waste as well. The brewer applies the reduce, reuse, and recycle method in managing their bottles, kegs, and crates waste. They collaborate with trade partners through a deposit system and ensure reusable kegs, bottles, and crates are returned to the brewery. As a result, their efforts have led to impressive return rates of 95% for kegs, 82% for bottles, and 92% for plastic crates in 2022.

HEINEKEN Malaysia is also continuously improving its packaging materials, achieving thinner, lighter, yet more durable solutions that require fewer resources to produce. The result – creating and scaling efficient and sustainable packaging. The brewer has successfully eliminated single-use plastics in the primary packaging of their products by procuring scale-efficient and sustainable packaging. They are also continuing to explore innovative packaging solutions to shift to recyclable materials such as paper collars made from recyclable paperboard. They ensure that this packaging utilised the least number of materials while keeping the beer cans safe and secure throughout the supply chain.

The brewer strives to reduce our environmental footprint by innovating, recycling, and reusing the materials it uses in its packaging, while at the same time ensuring that the packaging designs stand out from the crowd.

Reflecting on the journey so far, Renuka Indrarajah, Corporate Affairs & Legal Director of HEINEKEN Malaysia, shared “At HEINEKEN Malaysia, sustainability is embedded in our culture. We have established a sustainability governance committee that ensures cross-functional collaboration, driving our sustainability ambitions across the entire organisation. It’s clear that our zero-waste-to-landfill journey was a team effort, involving every level of our employees as well as our stakeholders. Hence, to truly succeed, sustainability must be integrated and aligned through effective communication, leadership commitment, implementation, and monitoring.” As we look to the future, our commitment remains the same – to continually refine our sustainability approach.

We believe a systemic approach and a cross-functional team are key to maximising circularity, and we want to inspire other businesses to join us on this journey,” she added.

For more information on HEINEKEN Malaysia’s sustainability journey, you may download the brewer’s Annual Report here:

<https://www.heinekenmalaysia.com/annual-report-2022/>



# FROM BINS TO RENEWABLES: KDEB

**Ahadi Bin Haji Mohd Nasir**

**General Manager, Subsidiary Management and Project Delivery KDEB Waste Management.**



Malaysia faces a significant waste management challenge as a result of rapid urbanization and population increase. Each day, the nation generates an astonishing 38,427 metric tonnes of solid waste, a number projected to swell to 49,670 tonnes daily by 2030. Amid this escalating waste crisis, KDEB Waste Management (KDEBWM), wholly owned by the State Government of Selangor emerged as an innovative leader. KDEBWM manages an astounding 7,000 tonnes of waste daily throughout Selangor, placing it at the forefront of Malaysia's waste management sector. Yet, what truly distinguishes KDEBWM is not just the scale of its operations, but its unwavering commitment to sustainability and carbon reduction. This commitment is epitomized by its support for the National Energy Transition Roadmap (NETR), a visionary initiative aimed at propelling Malaysia toward a sustainable, low-carbon future. This article delves into KDEBWM's transformative journey - from waste bins to renewable resources - exploring how its approaches align with NETR's objectives and contribute to reducing Malaysia's carbon footprint.

## Understanding NETR

In the pursuit of a sustainable and low-carbon future, Malaysia embarks on a transformative journey guided by NETR. Officially unveiled on July 27, 2023, this visionary roadmap marks a pivotal moment in our nation's quest to attain a net-zero greenhouse gas emissions target by 2050. NETR aligns seamlessly with our nation's aspirations for sustainable development, social equity, and balanced progress. Among NETR's key focal points lies the strategic management of Municipal Solid Waste (MSW).

Annually, Malaysia generates a substantial 13.9 million tonnes of MSW, a figure on an upward trajectory. MSW represents a burgeoning source of bioenergy, with potential as a feedstock for power generation through Waste-to-energy (WtE) technologies. WtE processes involve the conversion of waste materials into energy, such as electricity, heat, or biofuel. By harnessing waste as a feedstock for energy production, feedstock for energy production, WtE technologies simultaneously providing a mitigate the volume of waste sent to landfills, while simultaneously providing a sustainable source of renewable energy. In this journey towards a greener, more

success. It aids in reducing our carbon footprint and expedites our transition to a low-carbon economy. The synergy between NETR and MSW, with the integration of WtE technologies, promises to steer in a cleaner and more energy-efficient Malaysia.

## Leading the Charge in Selangor's Waste Management Landscape

KDEBWM plays a pivotal role in Malaysia's waste management sector, servicing 6.5 million residents and 2 million taxpayers, primarily in Selangor, a densely populated state. Our mission is to maintain cleanliness and public health while embracing sustainability. KDEBWM offers a range of services, including efficient residential waste collection and proper disposal, street cleaning, public space maintenance, and responsible waste management for industrial, commercial, and institutional (ICI) sectors. We also champion recycling initiatives to contribute to sustainable resource management.

## From Bins to Renewables

To support the NETR, KDEBWM has ventured into waste-to-energy (WtE) solutions, recognizing that it is the most effective solution to address the challenges posed by increasing waste quantities and the scarcity of landfill space. This evolution aligns seamlessly with our commitment to supporting NETR's objectives and reducing our carbon footprint.

A significant development underscores our commitment to environmental sustainability—KDEBWM, in collaboration with YTL Power International Bhd., is embarking on the establishment of a 2,400-tonne-per-day waste-to-energy (WTE) plant in Rawang, Selangor. This plant, named the Sultan Idris Shah Green Energy Plant, serves as a vital component of the larger Selangor Green Energy Eco Park (SGEEP) project, with a total estimated cost of RM4.5 billion. The development is planned to span over 10 years and will be executed in four distinct phases.

The primary objective of this ambitious initiative is to harness municipal solid waste (MSW) from various areas and convert it into an impressive 58 megawatts of electricity for the first phase. For all four phases combined,





the total power generated will be 130.5 megawatts, inclusive of 45 megawatts from solar sources. The Sultan Idris Shah Green Energy Plant represents the inaugural phase of the SGEEP development, requiring an estimated investment of RM1.5 billion. This state-of-the-art facility not only advances sustainable waste management practices but also creates substantial employment opportunities, thereby

fostering economic growth and progress in the region. As waste quantities continue to rise, finding sustainable disposal solutions becomes imperative. Traditional landfilling not only consumes precious land resources but also contributes to greenhouse gas emissions, mainly in the form of methane. WtE, on the other hand, offers a comprehensive and environmentally friendly approach.

WtE plants utilize advanced technologies to efficiently convert municipal solid waste (MSW) into renewable energy. By burning MSW at high temperatures in a controlled environment, we maximize the energy recovery while minimizing environmental impact. This method not only reduces the volume of waste destined for landfills but also helps mitigate the release of methane, a potent greenhouse gas.

Furthermore, the adoption of WtE aligns with global trends in waste management. Our closest neighbouring countries, including Singapore, Thailand, and Indonesia, have already embraced WtE technology to address their waste challenges effectively. These countries recognize that WtE is a sustainable solution that not only reduces waste disposal pressures but also generates clean energy in the process.

KDEBWM's commitment to implementing WtE solutions not only supports the NETR's objectives but also places us on par with our regional counterparts in adopting environmentally responsible waste management practices. Through WtE, we are actively contributing to the reduction of carbon emissions and the creation of a cleaner, more sustainable future for Selangor and Malaysia as a whole.

**“KDEBWM manages an astounding 7,000 tonnes of waste daily throughout Selangor, placing it at the forefront of Malaysia’s waste management sector.”**

**-Ahadi Bin Haji Mohd Nasir**  
*Chief Executive Officer, SEDA General Manager, Subsidiary Management and Project Delivery KDEB Waste Management*

# ESG, NET-ZERO TOP PRIORITIES FOR BERJAYA SOMPO



Along with many other countries throughout the world, Malaysia signed the Paris Agreement at the UN Climate Change Conference (COP21) in 2015 and ratified it on 16 November 2016, committing to reduce its greenhouse gas emissions. Insurance is thought to play a key role in transitioning the country's economy towards a less carbon-intensive business model, as the industry assesses and covers environmental risks and invests in new technologies.

Berjaya Sampo Insurance Berhad (Berjaya Sampo), one of the top general insurers in Malaysia, is committed to ensuring that its business is socially responsible and has embraced the drive and implementation of a more sustainable economy in support of global governments' environmental, social, and governance (ESG) requirements, as a measure of mitigating risk and generating sustainable long-term outcomes.

A focus on sustainability is essential to Berjaya Sampo's ability to deliver on its purposes and positively contribute to the economies and communities in which it operates. Its tagline of "Journey to a Sustainable Future" reflects its aspiration to support its clients and society as a whole on their sustainable journeys.

In pursuit of sustainability integration towards achieving the company's ESG aspirations, a mid-term strategy called the '3-year Sustainability Implementation Plan' was established to align with its Sustainability Framework.

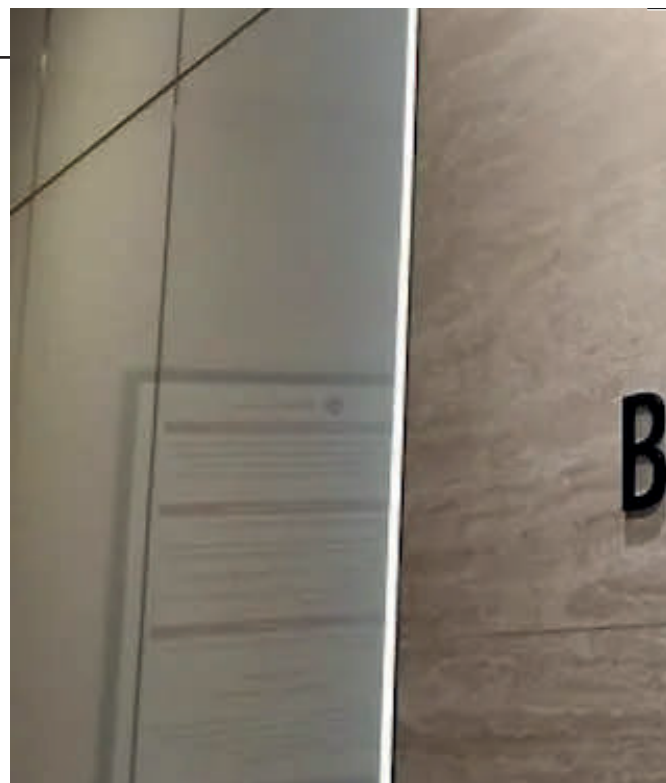
The framework and implementation plan established is in line with global sustainability standards and supports

Sampo Holdings' Group sustainability efforts. In the Malaysian context, Berjaya Sampo also supports the direction and initiatives developed by Bank Negara Malaysia (BNM).

As part of the Malaysian Government's overall plan to achieve carbon neutrality (or net-zero carbon emissions) by 2050, Berjaya Sampo believes that there are many areas where insurance companies can play a significant role. To that end, Berjaya Sampo has adopted a policy of supporting environmentally friendly business practices. These initiatives include activities such as organising a windscreen repair roadshow for its customers and the public in 2022. The roadshow aimed to raise awareness about environmental issues related to windscreen replacement waste, and to instead promote windscreen repair as a preferable option where possible.

In addition, the company has embarked on a slope mitigation initiative together with Global Environment Centre, and in partnership with the Department of Irrigation and Drainage Gombak, Department of Orang Asli Development Gombak and Petaling District, Jungle School Gombak Malaysia, and Friends of Sungai Gombak Batu 12 at Kampung Batu 12, Gombak.

The initiative, called the "River Slope Mitigation through Tree Planting to Protect Water Resources at the Klang River Basin" initiative, kicked off with over 40 volunteers from both Berjaya Sampo and local indigenous community members coming together to plant over 730 trees, including species such as *Melastoma malabathricum* (pokok senduduk), *Dillenia suffruticosa* (pokok simpoh air) and *Saraca thaipingensis* (pokok gapis) as well as erosion







control plants like *Chrysopogon zizanioides* (vetiver) and *Schizostachyum jaculan* (buluh termiang) at the Gombak River slope at Kampung Batu 12. Additionally, the Orang Asli communities will be involved through the Friends of Sungai Gombak Batu 12 platform to monitor the river and the trees planted.

Berjaya Sompo has also partnered with its bancassurance (insurance sales through the banking channel) partner CIMB Bank to offer complimentary EV (electric vehicle) coverage through Secure Motor. Both new and existing EV cars (of up to 8 years of age) can be covered under Secure Motor. This complimentary EV coverage includes legal liability of passengers, legal liability to passengers, unlimited towing costs, personal accident coverage up to RM100,000, EV home wall charger coverage up to RM15,000, personal liability up to RM50,000, and loss of use up to RM1,000. Berjaya Sompo has also partnered with Mazda for similar coverage.

The company believes these efforts are important for the Malaysian economy as they enhance resilience, support the economy's transition to clean and renewable energy, and contribute to long-term economic stability. For consumers, insurance companies can further provide financial protection, instil sustainable behaviour, and raise awareness about climate change and its associated risks, empowering individuals to take proactive steps towards a more sustainable future.

For its part, Berjaya Sompo has had (and continues to have) a collaboration with an automotive treatment facility company (ATF) to scrap written-off vehicles since August 2020. The process involves reusing and recycling vehicle

parts and components, while also regulating the use of hazardous or toxic materials to prevent adverse impacts on the environment. At present, Berjaya Sompo disposes of actual total-loss vehicles to the ATF.

Furthermore, Berjaya Sompo's underwriting guidelines have been updated to integrate the climate change principle-based taxonomy classification and natural disaster protection. In this manner, Berjaya Sompo is able to incorporate and consider climate-related risks and opportunities in its business.

Additionally, Berjaya Sompo also continues to restrict its activities in terms of investing in and the insuring of new construction of coal-fired power plants, in order to curb the production of greenhouse gas emissions while shifting towards energy business projects that result in a lower environmental impact.

Berjaya Sompo's sustainability initiatives encompass its own activities and impact, as well as those of its value chain partners and customers. For instance, the company's headquarters have completed its transition from traditional and fluorescent lighting to LED lights, which is expected to reduce the company's energy costs by at least 60% annually. Furthermore, the longer lifespan of LEDs leads to fewer light bulb replacements over time, which in turn reduces waste.

Additionally, Berjaya Sompo is cognisant of the impact that its operations – specifically, the energy consumed to run its operations – has on carbon emissions and has undertaken several initiatives to improve its operations. From a process optimisation and digitisation/digitalisation.

perspective, Berjaya Sompo credits a range of strategic initiatives driven by innovation, customer-centricity, and continual improvement with having propelled its growth and strengthened its position in the insurance market.

Two key drivers of this success are the introduction of market-relevant products and adoption of digital processes for its customers' convenience. This includes the launch of innovative products such as SOMPO MotorSafe, a usage-based telematics motor insurance coverage providing low-mileage drivers the flexibility of paying according to the distance driven. Aside from easing the financial burdens of the community, driving less also promotes the reduction of carbon emissions.

Berjaya Sompo's dedication to embracing digitalisation as a part of its growth strategy is further demonstrated in the recent launch of the MySOMPO mobile application, demonstrating the Company's commitment to enhancing customer experience and convenience. MySOMPO provides a user-friendly platform for policyholders to request assistance in case of a vehicle breakdown or accident, and to submit claims electronically. Since its launch on 20 March 2023, MySOMPO has seen more than 4,000 downloads.

Berjaya Sompo realises that speed is essential in most aspects of the insurance business. Hence, the company continually improves its processes to optimise internal processes, eliminate redundancies, and enhance operational effectiveness. As a result, Berjaya Sompo has achieved greater agility, responsiveness, and cost-efficiency, benefitting both the organisation and its customers. When it comes to exchanging data to inform risk insights and improve understanding across the sector, the company closely adheres to the guidelines provided by BNM when it comes to data management, in addition to strictly complying with the Personal Data Protection Act (PDPA).

Berjaya Sompo's achievement of RM1 billion in gross written premiums (GWP) for financial year 2022 illustrates its market leadership and customers' trust in the company. As Berjaya Sompo moves forward, it remains focused on driving innovation, leveraging digital technologies, and adopting sustainable business practices to ensure a positive impact on its customers, employees, and the communities it serves.

Moving forwards, Berjaya Sompo will focus on initiatives and programmes that address environmental concerns,



promote social well-being, and uphold strong governance practices, guided by its Board-approved Sustainable Framework. Berjaya Sompo is dedicated to spearheading initiatives and programmes that align with the United Nations Sustainable Development Goals (SDGs). Specifically, the company has chosen to champion SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 13 (Climate Action), SDG 16 (Peace, Justice and Strong Institutions), and SDG 17 (Partnerships for the Goals).

Berjaya Sompo is also a firm believer that the company itself – and its employees should take the first step when it comes to climate change. Berjaya Sompo actively advocates sustainable living amongst its staff by organising internal campaigns and competitions themed around ESG. Some of the initiatives include the Plant Babies Contest, which encourages its staff to start planting potted plants and share how plants contribute to the 'Innovation of Wellbeing'. Berjaya Sompo also collaborated with AIESEC at the University of Malaya to conduct a virtual workshop on how to make compost. The workshop was part of AIESEC's





'Clean Our Plate' Campaign aiming to increase awareness, change attitudes, and initiate easy and obvious actions toward reducing food waste, in line with United Nation's Sustainable Development Goal ("SDG") pillars 4 – Quality Education, 12 – Responsible Consumption & Production and 3 – Good Health and Well-being.

Communications, campaigns, and awareness activities are also shared through internal newsletters, through which the company hopes to influence its employees' behaviour and mindset. This includes encouragement to use their shopping bags and energy-efficient appliances at home, and cultivating a recycling or repurposing habit, amongst other ESG-related news.

To further elevate Berjaya Sompo's "Journey to a Sustainable Future", the company is taking a step forward with its 'The Good Policy' campaign, which seeks to improve the lives of those in need, in line with the group's vision and mission. The campaign underlines the company's commitment to safeguarding its customers and the future of Malaysia by addressing ESG challenges through various initiatives, including 'The Good Bengkel', which is aimed at helping the B40 community facing financial challenges related to vehicle maintenance.

## “Journey to a Sustainable Future”



Sanjay Rohatgi, Senior Vice President and General Manager (Asia-Pacific) NetApp shares with business today his views on how Malaysia can optimise data's carbon footprint for a sustainable future.

## HOW TO OPTIMISE DATA'S CARBON FOOTPRINT FOR A SUSTAINABLE FUTURE



he creation, processing, and management of data have forever changed the world. Consider the fact that the amount of data generated each year worldwide is expected to grow to 175 zettabytes (ZB) by 2025, according to a report prepared by market research firm International Data Corporation (IDC).

Data's flow to the cloud is fueling unparalleled innovation and business growth. That's why many observers call data "the new oil." And, like oil, data is the core of an industry that is under increased scrutiny as a major source of global carbon emissions in a world that's adapting to the realities of climate change.

As data – and the industry that supports it – increase our collective contributions to global carbon emissions, organisations need to understand their impact and take steps to mitigate it. These include investments in technologies that generate and store renewable energy and carbon capture. Companies should also learn how to manage their data and work towards a sustainable future.

### Malaysia fast becoming a hotspot for data centres

Malaysia is fast becoming a hotspot for data centres. According to the Malaysia Digital Economy Corporation (MDEC), Malaysia has some 24 data centres across prime locations throughout the country. **MDEC attributes the growth in data centres** to "a politically stable environment,



a location that is free from natural disasters, as well as a competitive real estate market”.

“Malaysia has steadily become an increasingly popular location for the proliferation of data centre and cloud services. By leveraging on various factors such as cost efficiency, availability of skilled workers and a strong foundation in data governance laws, we have positioned Malaysia as a regional hub for data centre and cloud services.”

Data centres, however, consume a lot of electricity with studies suggesting that, worldwide, 1% – 2% of data centres of all global electricity is used by data centres. Looking further ahead, if no action is taken, data’s voracious appetite for energy will continue to grow unabated as digitalisation accelerates.

However, it’s unrealistic for organisations to stop producing or storing data in today’s world. Rather, they need to get better use out of their data. The first step is to understand the data they have, where it’s stored and how it’s used.

Only 32% of data available to enterprises is put to work; the remaining 68% is not even used, according to research by IDC. Organisations can reduce their carbon footprint by learning how much of their data they use and need and getting rid of the rest.

#### **Moving to the cloud, invest in tech**

Organisations can further lower their carbon emissions by moving their data to the cloud. A forecast from IDC shows the continued adoption of cloud computing could prevent the emission of more than 1 billion metric tons of carbon dioxide from 2021 through 2024. A key benefit of the cloud is the greater efficiency of aggregated compute resources.

As cloud and technology adoption proliferate, cloud and data software companies have an important role in reducing the data industry’s environmental impact. They are making bold commitments to a more sustainable future by reducing their environmental footprints and helping customers build sustainable solutions.

#### **Creating a greener data ecosystem**

To further mitigate the environmental impact of data, companies can source for cloud and data centre service providers that invest in technologies that increase resource utilisation and leverage their scale to influence the energy generation mix. For example, cloud providers can contract energy companies to build solar or wind farms and

commit to purchasing energy from them. These types of agreements justify the investment in renewable energy and help service providers reach sustainability targets.

Furthermore, organisations should look for service providers that design and outfit their data centres for energy efficiency. The energy optimisation measures they can implement include leveraging ambient cooling and cold-aisle containment features to optimise the energy used to cool the equipment. Efficient lighting and smart controls can also play a crucial role in lowering data centres’ carbon emissions in the long run.

Companies can also expect governments to implement environmental taxes to drive down carbon emissions within their organisation and technology supply chain. These carbon taxes will be an added cost with complex and quickly evolving compliance that may require operational changes. For example, organisations will need to consider new carbon consumption models that technology vendors are offering and review them every couple of years.

#### **Paving the way for a more sustainable future**

We believe that managing our environmental resources responsibly and creating a more sustainable future is our duty to the future generation. However, the window of opportunity for us to act is fast closing.

The question is, what do we do next? As organisations continue to generate, process and store copious volumes of data, they should leverage a ‘cloud-first’ strategy to create a highly sustainable approach for data storage. This can significantly lower their carbon footprint and make a more meaningful impact on our environment.

***This commentary was contributed by Sanjay Rohatgi, Senior Vice President and General Manager AsiaPacific NetApp.***

## **“Malaysia Fast Becoming A Hotspot For Data Centres”**

# BURSA MALAYSIA COMMENCES CENTRALISED SUSTAINABILITY PROGRAMME

By:Chong SM



**F**ollowing the announcement by YAB Prime Minister at Invest Malaysia Kuala Lumpur 2023, Bursa Malaysia today signed a Memorandum of Collaboration (MOC) with UMW Corporation Sdn Bhd (UMW) and Maybank to deploy a Centralised Sustainability Platform.

Working in collaboration with the London Stock Exchange Group (LSEG), Bursa Malaysia has developed and tested the Platform that will serve as a repository for listed companies' ESG disclosures.

The Platform will enable listed companies' to reinforce their sustainability disclosures and accelerate swift adoption of their supply chain's carbon emissions, which also includes non-listed entities. The Platform will also help banks develop green financing products and services, that will incentivise

and encourage decarbonisation of the corporate sector and their supply chain.

"We are pleased to be working with the LSEG to develop this Platform which will enable Malaysian corporates to meet regulatory requirements, facilitate greater transparency and consistency in sustainability disclosures, while providing wider access to green financing products," said Datuk Muhamad Umar Swift, CEO of Bursa Malaysia.

"The Platform will also offer additional capabilities such as TCFD modules, as well as a carbon emission calculator for corporates and their supply chain."

Last year, Bursa Malaysia and the LSEG signed a Memorandum of Understanding (MoU) to expand the ESG collaboration between the two exchanges. The MoU covers ESG educational initiatives, implementation of sustainable



supply chain finance, corporate ESG reporting solutions, among other areas.

Commenting on the MoU, Cornelia Andersson, Group Leader, Sustainable Finance and Investment at LSEG pointed out that this step will yield a significant increase in the environmental, social and governance (ESG) data and analytics available on listed companies in Malaysia.

"We are also exploring the development of an ESG corporate reporting solution to increase disclosure of climate related risks and opportunities for investors. It follows the launch of a new ESG and low carbon benchmark covering the largest listed issuers on Bursa Malaysia," Cornelia Andersson added.

UMW and Maybank are pioneers of the Early Adopter Programme (EAP), an initiative to accelerate Corporate Malaysia's transition towards a Green Economy. Running from April to October 2023, participants of the EAP will validate the value extraction of this Platform.

"Following YAB Prime Minister's call-to-action at the recent Invest Malaysia event, we commend the leadership stance taken by UMW and Maybank to take on the first movers' advantage and pilot this innovative sustainability initiative," said Umar.

"We envisage building a sustainable ecosystem that will be able to address the needs of a multitude of stakeholders, and one that is inter-operable, hence easing the path for acceptance and raising competitiveness of Malaysian companies in the global supply chain."

The MOC was signed by Datuk Muhamad Umar Swift, representing UMW was Dato' Ahmad Fuaad Kenali, President & Group Chief Executive Officer, while Maybank was represented by its Group President & CEO, Dato' Khairussaleh Ramli.

Dato' Khairussaleh Ramli said that as corporates are duly expediting adoption of sustainability as a core component of their business strategy, Maybank believes that this Centralised Sustainability Platform would facilitate them to disclose standardised common ESG data in ways that conform to established global standards.

"In line with our mission to Humanise Financial Services and driven by our M25+ strategy, we will continue to support our stakeholders on their decarbonisation journey - providing advisory and engaging them on their plans on sustainable and transition financing solutions," added Dato' Khairussaleh Ramli.

"Sustainability has always been core to UMW's purpose and values, and it continues to stand as one of the main pillars of our CREST@UMW strategic framework. Our sustainability roadmap is anchored on four key thrusts, including to achieve carbon neutrality by 2050 and the Group has been disclosing its Scope 1 and Scope 2 carbon emissions in its annual Sustainability Report," said Dato' Ahmad Fuaad Kenali.

"Furthermore, the UMW Group is continuing with environmental conservation efforts through UMW Green Shoots Initiatives to plant mangrove trees throughout Malaysia and participation in the River of Life programme via the planting of bamboo shoots. With the introduction of this new platform initiated by Bursa Malaysia, we will be able to work towards ascertaining the Group's Scope 3 carbon emissions to enable us to be more objective and effective management of the Group's carbon emissions as we embark on the phased implementation of TCFD from FYE 2024."

Concluded Datuk Muhamad Umar Swift, "Bursa Malaysia and our partners share the common goal of creating a sustainable marketplace, where listed companies can grow sustainably and make profits. With this Platform, we hope to accelerate the pace of achieving this objective and see improved ESG performances by our listed companies recognised by global investors, while enabling the opportunity for them to access capital freely and improving liquidity of our markets."

To familiarise themselves with the features and functions of the Platform, general awareness and education sessions for the broader listed companies will commence from July onwards. This will assist companies with financial year ending December 2023, in time to meet mandatory disclosure requirements which starts March 2024.



# CLEAR DISCONNECT EXISTS BETWEEN SUSTAINABILITY PRACTICES AND DIGITAL TRANSFORMATION IN BUSINESSES: PAESSLER REPORT

**A clear disconnect exists between sustainability practices and Digital Transformation initiatives across organisations in Malaysia.**

**I**n a report by IT infrastructures and networks monitoring experts Paessler, titled 'Keeping Watch: Monitoring Your Path to a Sustainable IT', which aims to shed light on the current state of sustainability practices among businesses, and deep dives into drivers and barriers in deploying sustainable IT practices, revealed that balancing the ESG metrics with growth targets (73%), cost of deployment to business (53%), lack of clarity from government bodies (43%) and lack of technical know-how on planning implementation (35%) as the top barriers to adopting sustainability practices in Malaysia. About half of the organisations in Malaysia are optimistic on the business outlook for the next three years. The report revealed businesses in Malaysia view sustainability and digital transformation in silos and not as intertwined. Organisations are working on developing sustainability frameworks and digital transformation strategies in a piecemeal manner. As a result, their resources, whether budgets, time or skills involved, are less effective.

They also lack the capabilities and the expertise to develop a sustainability framework and work on it, clearly highlighting a disconnect between the engaged sustainability practices and their digital transformation journeys.

At the same time, organisations in Malaysia are realising the benefits of IT infrastructure monitoring, a key cog in an organization's IT strategy to help optimise energy consumption (95%), analyse the need for IT equipment (95%), monitor environmental factors like temperature, humidity, CO2 etc. (89%), and reduce emissions (84%). Therefore, a sustainable IT strategy backed by a comprehensive monitoring framework must be a vital part of the business operations. This will ensure sourcing material; production processes and all other components of a sustainable business can be integrated by the overarching digital transformation strategy.

Paessler Asia Pacific Regional Sales Manager Felix Berndt (pic) said: "Many businesses see sustainability and profitability as a contradiction, but when the right values are measured, it results in cost efficiency and a competitive lead. It is imperative to build a robust IT strategy, a digital transformation strategy and develop a sustainability framework which are all integrated by a comprehensive IT monitoring framework. Bridging the gap between digital transformation and sustainability to make data-based decisions can result in resource optimization and bring economic benefits for businesses."

## Not on the same page

While sustainability is one of the top 3 business priorities for the next three years, it does not even feature as one of the top 5 challenges for businesses across markets and sectors.

Instead, challenges such as increasing competition, digital transformation, driving growth (top line), improving profitability (bottom line), and talent management are seen as top five challenges by businesses.

The top three drivers for adopting sustainable frameworks are reputation (45%), following industry operations standards (36%) and adhering to Regulatory framework and compliance (24%).

The technology, telecom, and data center vertical (82%) were seen as the top vertical which already has a sustainable IT strategy in place followed by manufacturing (79%) and essential services/ public sector (66%).

While the public sector lags in this regard, 31% said that they will embark on their sustainable IT strategy journey in the next year.

Digital transformation can enable sustainability by making businesses more efficient, reducing their environmental impact, and helping them meet sustainability goals.



Engaging the right digital technologies can help monitor and optimise energy usage, reduce waste, and streamline supply chains.

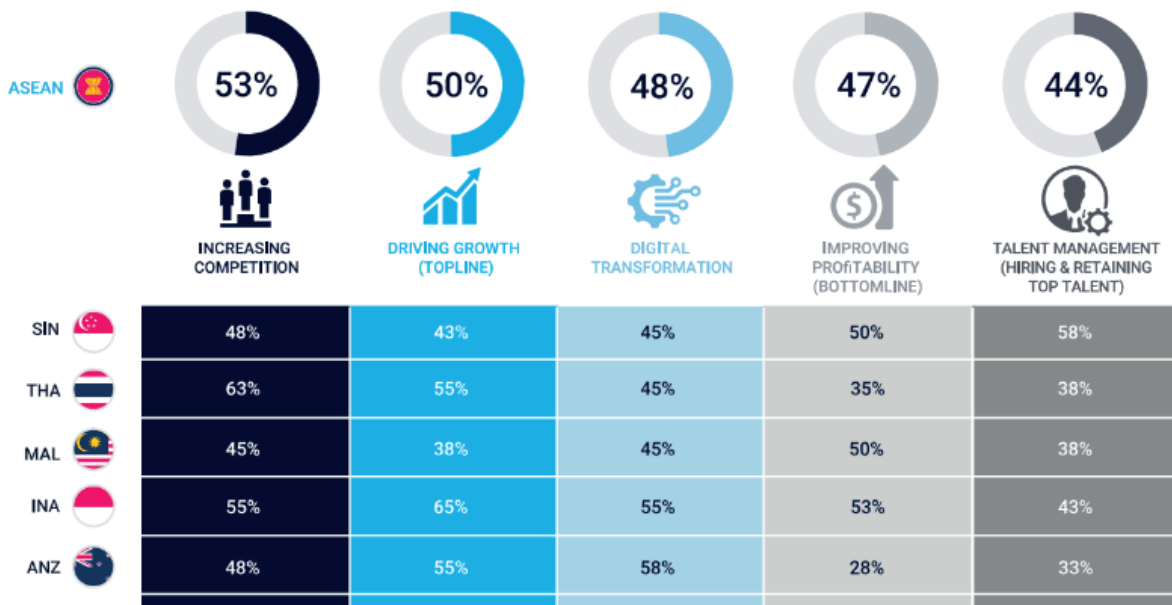
The knowledge and importance of a sustainable IT strategy can be improved if backed by an effective IT monitoring backbone.

Paessler believes monitoring plays a vital part in reducing humankind's consumption of resources. Monitoring data helps its customers save resources, from optimising their IT, OT and IoT infrastructures to reducing energy consumption or emissions – for our future and our environment.

That is why Paessler offers monitoring solutions for businesses across all industries and all sizes, from SMB to large enterprises. Paessler works with renowned partners, and together they tackle the monitoring challenges of an ever-changing world.

Paessler's Keeping Watch: Monitoring Your Path to a Sustainable IT report was conducted by Intuit Research from Dec 2022 to March 2023, to understand the current state of sustainability practices among businesses, and deep dive into drivers and barriers in deploying sustainability IT practices.

Key business decision makers of large businesses (with revenue of USD 50 million to over USD 1 billion) were interviewed in six countries, namely, Singapore, Thailand, Malaysia, Indonesia, Australia and New Zealand. Opinion was gathered from senior business decision makers across three key sectors – Manufacturing, Essential Services, and Tech / Telecom / Data centers.





# NETR: NAVIGATING THE TRANSIENT STAGE TOWARDS IMPROVING CLIMATE RESILIENCE

By K. Harinderan

11

Malaysia is committed to low-carbon development aimed at restructuring the economic landscape to a more sustainable one. In this context, the National Energy Transition Roadmap (NETR) sets the goal to accelerate energy transition and change the way energy is generated to improve climate resilience.

NETR has developed the Responsible Transition (RT) Pathway 2050 to shift Malaysia's energy systems from fossil fuel-based to greener and low-carbon systems. The Total Primary Energy Source (TPES) modelling indicated that the nation's energy demand will increase marginally at 0.2% annually from 95 Mtoe in 2023 to 102 Mtoe in 2050. The RT Pathway 2050 has also shown promising decarbonisation results as evidenced by the phasing out of coal and the reduction of fossil-fuel reliance from 96% in 2023 to 77% in 2050.

Natural gas is set to be not only a transitional fuel, but also the primary contributor of TPES at 57 Mtoe (56%) followed by renewables that include solar, hydro and bioenergy, which collectively contribute 23% of TPES in 2050 from a mere 4% in 2023. NETR outlines 50 initiatives under the six energy transition levers and five enablers, in addition to the 10 flagship projects and initiatives announced in July 2023.

The energy transition financing will be undertaken through a combination of grants, loans, rebates, incentives, and other investments to support the whole-of-nation approach. NETR aims to power Malaysia's future by unlocking potentials in new growth areas and delivering progress and prosperity to households and businesses.

The successful implementation of NETR will uplift GDP value from RM25 billion in 2023 to RM220 billion and generate 310,000 jobs in 2050. NETR is not just a document about measures to meet Net-Zero GHG emissions target. NETR represents a new way of thinking to fundamentally transform Malaysia's economy and livelihoods for a stronger and more resilient future.

Energy Transition represents a structural shift in energy systems, characterised by a transition towards cleaner sources of energy, increased use of RE, and a significant reduction in carbon emissions. The energy transition is expected to occur at an accelerated pace, driven by rapid technological advances and robust climate change policies.

The urgency for Malaysia's shift to sustainable energy is fuelled by global commitments, particularly the Paris Agreement and the need to fortify economic diversification and energy security. In addition, industry related to the energy transition has the potential to be a new source of growth that can benefit from the global market. The IEA reports that investment in the development of the clean energy industry is expected to reach USD1.7 trillion in 2023.

The focus of global investment is on the development of the RE, EE and strengthening the grid and energy storage. Moreover, corporations and enterprises confront a rapidly changing market landscape where carbon costs will reshape business dynamics and potentially strain competitiveness. Meanwhile, the imminent realities of climate change, exemplified by rising sea levels, extreme weather events, and escalating heatwaves highlight the direct and tangible impacts on rakyat's daily lives.

Beyond mitigating risks, the energy transition presents Malaysia with the opportunity to restructure its economy and maximise the potential for green growth that balances sustainability, enhances GDP, creates jobs and meet the needs of the rakyat and businesses.

## Malaysia's Policy Responses

The five-year development plan covers socioeconomic policy planning that sets out the country's direction and growth targets as well as the allocation of the development expenditure. The Twelfth Plan, outlines the aspiration for the nation to achieve net-zero GHG emissions as early as 2050. The plan emphasises Malaysia's approach to effectively manage its energy transition. It recognises the complex and interconnected nature of energy systems and acknowledges the need to balance the energy trilemma.



The approach not only ensures that energy policies and programmes are environmentally responsible but also takes into consideration the socioeconomic implications. The DTN lays the groundwork for a transformation in the energy landscape. The energy transition is expected to occur at an accelerated pace, driven by rapid technological advancement and robust climate change policies.

The energy trilemma refers to the interconnectedness of energy security, affordability and environmental sustainability. These three objectives are often in conflict with each other. Addressing the energy trilemma requires a delicate balancing act and often involves making trade-offs. Solutions to the energy trilemma also commonly include a mix of policies, innovations, and investments that aim to harmonise these three objectives to the greatest extent possible while acknowledging their inherent trade-offs.

### Guiding Principles

NETR has four guiding principles. The first principle highlights the importance of aligning the energy sector based on national aspirations and commitments to sustainable development. The second principle emphasises that the energy transition must be just, inclusive and cost-effective. It acknowledges the challenges that exist for low-income and vulnerable populations.

The NETR aims to ensure that the benefits and opportunities from the energy transition trickle down to every segment of society, leaving no one behind. The third principle stresses the need for effective governance and a whole-of-nation approach. Collaboration among all stakeholders is crucial to create a vibrant energy industry ecosystem that supports sustainability and facilitates the transition to a low-carbon economy. The fourth principle highlights the significance of creating high-impact job opportunities and enhancing small and medium enterprises (SMEs) involvement in the ecosystem.

The NETR is rooted in Malaysia's overarching aspirations, charting a course for the energy system that is aligned with decarbonisation targets. It strikes the right balance between environmental mitigation and the need to bolster net socioeconomic values such as GDP and job creation.

NETR's Responsible Transition (RT) scenario will support Malaysia's pursuit of achieving net-zero as early as 2050. RT scenario represents the best-fit ambition for the nation, considering current technology developments, global trends and local context. The NETR's RT aims to accelerate the pace of energy transition, with improved ambition across all six levers.

Moving forward, the government will re-calibrate ambition levels to capitalise on new and emerging technologies, potentially reviewing targets where possible. The stated ambition will also generate significant investment opportunities across all six levers.

The RT aims to achieve a notable 70% RE installed capacity mix for power sector. Despite this, Malaysia will continue to maintain diversification of its power generation mix remaining stable throughout projected period to 2050. However, there are concerns about Malaysia's growing dependence on fuel import particularly natural gas imports. Given the anticipated rise in reliance on natural gas and crude oil by 2050, there is a heightened need to focus on ensuring energy security.

Malaysia will look to reduce this dependence on natural gas by scaling up of RE capacity and exploring potential non-carbon energy sources. In the meantime, proactive initiatives are being undertaken to secure natural gas, such as necessary infrastructure and commercial arrangements for importation, including long-term agreements to stabilise fuel imports. At the same time, it is crucial to ensure that natural gas prices for domestic consumers reflects market parity. This will enhance the attractiveness of Malaysia as an investment destination for upstream sector as well as incentivise third party suppliers to enter the domestic gas supply market, spurring the operationalisation of TPA for gas market.

By 2050, Malaysia is expected to face higher system costs due to the investments required to rapidly increase RE's installed capacity within the country's power generation mix. Though this trajectory might see an uptick in system costs, such an increase is inevitable given the potential scenarios of higher reliance on natural gas import in the power generation mix following the projected diminishing of Malaysia's gas reserves by 2050.

Although there will be higher system costs, the RT is poised to significantly bolster Malaysia's economic development. The energy transition will catalyse growth in nascent areas such as green mobility ecosystems, RE, energy storage, and alternative new energy ecosystems. Taking a pioneering role in these emerging areas will enhance Malaysia's competitive edge, which will yield positive outcomes for both GDP and job creation. The RT is estimated to generate investment opportunities totalling between RM1.2 trillion and RM1.3 trillion by 2050. These investments will contribute additional GDP of RM220 billion and create approximately 310,000 green growth job opportunities in 2050. Economic benefits will be felt across the social spectrum, with medium- and low-income households expected to be the biggest beneficiaries of income gains.





# MITIGATING CLIMATE CHANGE? LET'S BUILD SMART CITIES

By Ts. Dr. Saraswathy Shamini

The author is a Senior Lecturer and Head of Innovation at the Institute of Informatics and Computing in Energy *≈*IICE<sup>≈</sup>, Universiti Tenaga Nasional *≈*UNITEN<sup>≈</sup>.

**T**hese days, experiencing scorching heat by the day and a heavy downpour during the nights on some days and otherwise on every other day seems to be the norm. Thanks to smart devices, we are lucky to be updated on the unpredictable weather sequence, but I must say that we may not be as lucky if this weather condition persists and aggravates the worst. It's rather alarming to experience these extreme weather events not only in Malaysia but in every part of the world.

My inquisitive self did some digging (being the researcher that I am), and I was alarmed by the facts I came across. If you take a peek at their recently published article on the National Oceanic and Atmospheric Administration (NOAA) website, the Earth's temperature increased by 0.14°F (0.08°C) on average per decade. However, since 1981, the rate of warming has accelerated, increasing by 0.32°F (0.18°C) on average per decade. According to NOAA data, 2022 was the sixth warmest year on record!

Interestingly, the main source of 80% of global CO<sub>2</sub> is cities, according to UN-habitat. Rapid urbanization has caused an increase in carbon emissions and will continue to do so if early intervention is not considered. The question which then arises is, how should we tackle this to better manage and improve climate change?

Perhaps the idea of a Smart City may be the solution. Smart cities are infused with varied technologies to improve the livelihood of their citizens. In a perfect scenario, these Artificial Intelligence (AI) -infused cities are to be intelligent, digital, resilient, sensible and most of all sustainable to be lived in. Sustainability is an important factor to

Consider when designing Smart Infrastructure, Smart Transportation, Smart Buildings, Smart Public Safety, and Smart Healthcare to name a few attributes of these cities. The incorporation of green technology such as renewable energy to generate green electricity, and smart grid systems to reduce carbon emissions may have the highest impact on city-level climate action which encourages green development and innovation. To understand this better, let's take a look at some of the earliest examples of smart cities in the world.

Smart cities such as Songdo in South Korea, Copenhagen in Denmark, and Helsinki in Finland use a variety of technologies to achieve their sustainable goals. They implemented Smart Grids, Smart Transportation Systems, Smart Water Systems, and Smart Waste Management Systems. These solutions have lowered energy consumption, promoted resource efficiency, and created a green infrastructure, all of which have resulted in lower greenhouse gas emissions.

A study by the Korean Ministry of Environment found that South Korea's greenhouse gas emissions in 2020 were 40% lower than in 2010. The Danish Energy Agency's website states that Denmark's increased usage of renewable energy has lowered the country's emissions by 38% since 1990. The Finnish Environment Institute's website states that Finland's greenhouse gas emissions were 29% lower in 2020 than they were in 1990. Along with these success stories, additional countries are investing in sustainable smart cities, including the United States, Canada, the United Kingdom, France, and Germany. worth USD 1.3 trillion.



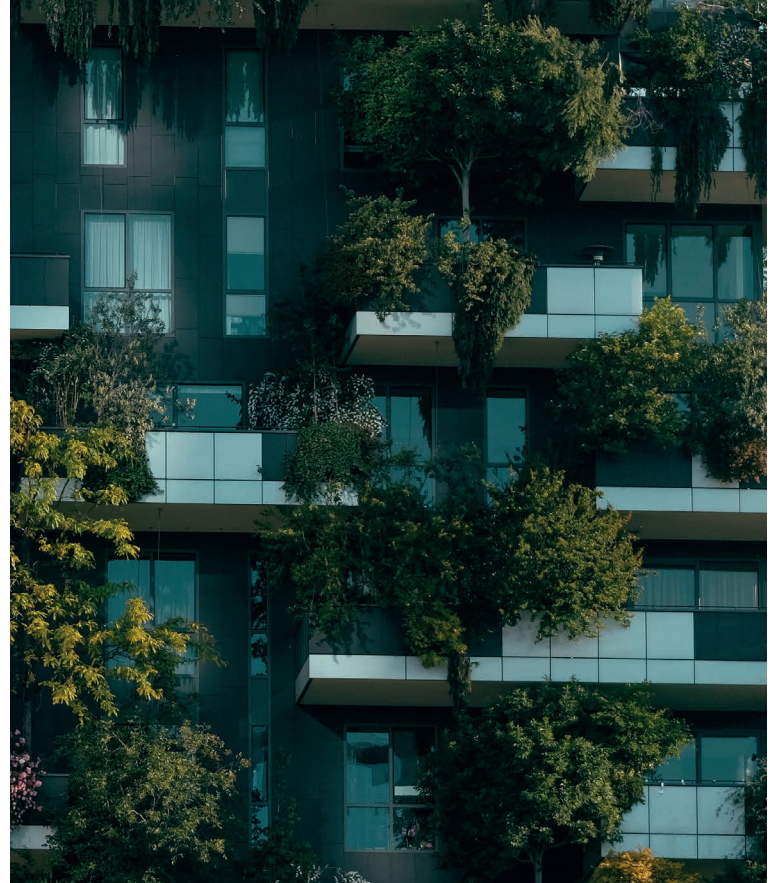


The relationship between smart cities and climate change is critical. More sustainable cities, in particular, can reduce energy consumption and create more efficient and environmentally friendly urban environments, hence increasing the use of renewable energy sources.

Malaysia, like many other countries, is enthusiastic about smart city initiatives too. Malaysia has declared a goal of being a smart city nation by 2025. The Malaysian government's ambition for smart cities is described in the National Smart City Framework (MSCF). Sustainability is a key consideration for smart cities, and it demands careful planning and foresight. At the Institute of Informatics and Computing in Energy (IICE), UNITEN, our research focuses on technology and sustainability in smart city projects. We are excited to collaborate with others to guarantee that cities are livable for future generations.

As a result, we invite all stakeholders, including government agencies, business leaders, communities, and individuals, to join us on this revolutionary journey. Let us leverage the potential of innovation, technology, and sustainability to create smart cities that improve urban infrastructure and services while also promoting energy efficiency, water conservation, and waste management. We can design a future where our cities become examples of sustainability, increasing the quality of life for all Malaysians by embracing this vision and working together.

Join us today and be a part of this smart city revolution. Together, we can build a smarter, greener, and more prosperous Malaysia for generations to come.





# TECHNOLOGY DRIVEN INITIATIVES TO DRIVE ENERGY EFFICIENCIES, TOWARDS LOW CARBON GROWTH



elekom Malaysia Berhad is dedicated to advancing its sustainability initiatives by leveraging technology across the economic, environmental, social and governance (EESG) spheres.

In its transformation toward becoming a human-centered TechCo, TM has seamlessly integrated sustainability as a core component of their operations, primarily supporting the United Nations' Sustainable Development Goal #9, to enable industry development, innovation and digital infrastructure; and Goal #17, fostering partnerships towards the achievement of the SDG goals.

The Group places significant emphasis on four key pillars: (1) building a Digital Malaysia, (2) protecting the planet, (3) putting people first and (4) strengthening integrity within the organisation. These pillars underpin a diverse array of endeavours, encompassing energy efficiency initiatives, capacity development for suppliers, continuous re-skilling and up-skilling of its employees and communities, while upholding high governance standards.

In an exclusive conversation with BusinessToday, TM's Senior Director and Group Head of Sustainability Dr. Sumitra Nair shared the group's aspirations towards low carbon growth, in alignment with its sustainability obligations. TM as a digital tech provider and enabler, plays a pivotal role in facilitating Malaysia's transition towards a low-carbon future and is poised to champion future-focused initiatives rooted in sustainability principles, with profound implications for businesses.

TM's journey towards low carbon growth encompasses a multifaceted approach, commencing with the enhancement of its internal energy efficiency, while seeking to increase the percentage of renewable energy sources into the Group's energy mix. Over and above this, TM One, its subsidiary, collaborates closely with businesses and government sector clients to provide digital solutions promote the development of smarter and more sustainable cities.

## Reducing Carbon Footprint

Environmental well-being is an essential component of achieving sustainable societies and economies. One of TM's main environmental priorities is addressing climate change, which poses significant risks to its stakeholders and society at large. This includes extreme social challenges such as physical health effects, food, water and livelihood security, forced displacement and other risks.

From a business perspective, climate change also poses substantial socio-economic risks to the communications sector. These include physical risks such as damages to network infrastructure, disruptions to operations and supply chains and employee health and safety.

There are also other emerging risks related to the global transition towards a low-carbon economy, such as carbon cap and pricing, along with growing investor expectations. As a company that is committed to sustainable and inclusive growth, TM is taking progressive actions, aligning with the global climate agenda while addressing the digitalisation needs of our Malaysia.

Commenting on this, Dr. Sumitra Nair, TM's Senior Director and Group Head of Sustainability said "TM addresses climate change by addressing our own carbon emissions via energy efficiency, transition to renewable energy (RE), as well as working with our ecosystem to offer carbon-efficient digital solutions. Our carbon emissions based on TM's existing boundaries of GHG calculations, reduced by 12.45% compared to our 2019 baseline. In addition, to help our data centre customers to address their own carbon reduction targets, we have focused on enhancing the energy efficiency and RE mix in our data centres.



"All levels within TM play an active role in reducing carbon emissions, from the Board which provides strategic direction on sustainability matters, to the leadership team which drives energy efficiencies across the group, to the continuous support of all employees in ideating and implementing programmes to achieve our goals."

TM published its Task Force on Climate-related Financial Disclosures (TCFD) report 2 years ahead of Bursa Malaysia's December 2025 target requirement for public listed companies. Through this 2022 report, TM is taking a proactive approach in understanding, assessing, and managing climate-related risks and opportunities, which will enable TM to strengthen its risk management practices, drive innovation, and ensure the long-term sustainability of its business operations.

TM has put in place initiatives to reduce its carbon footprint, which include:

1) Network Element Optimisation: Network modernisation, focused on optimising the efficiency of TM's existing network systems. These includes shutting down underutilised network elements and migrating them to more utilised networks. The impact of the move has resulted in a reduction of over 9.5 million kwh of electricity.

2) Energy efficiency initiatives: Includes environmental optimisation, lighting optimisation and power factor correction. This has resulted in multiple energy savings in the



company. For example, by replacing over 500 conventional air conditioning units to energy saving inverter units, TM has reduced its energy consumption by 1.3 million kwh.

3) Subscription to renewable energy (RE): In 2022, TM began subscription of 27 million kwh of RE, which were used to largely power 3 of its core data centres. In 2023, they have been able to add 25 million kwh of RE to the group's energy mix, bringing the total RE subscription to 52 million kwh. With this additional capacity, TM is powering 3 data centres and 4 nodes with the RE mix. In addition, we are also focusing on improving our Power Usage Effectiveness (PUE) ratio in our data centres to improve energy efficiency.

Asked on Malaysia's National Energy Transition Roadmap (NETR) 2023, TM said it welcomes the NETR and is fully onboard with the direction and objectives set in the roadmap. TM is currently conducting a pilot programme for the use of electric vehicles in line with the government's direction towards sustainable solutions.

They also believe that collaboration is key and that everyone has a role to play in achieving the objectives set forth. Creating a sustainable ecosystem will drive accelerate the transformation and to this end, TM has begun engagements within its value chain and is keen on working closely with these sections to mutually benefit from its energy transition journey.

On aspects that lay in the path of Energy Transition and reducing carbon footprint, TM cited that one of the main challenges is the fact that Malaysia is still in a development phase of growth. As such, there is a growing demand for connectivity especially as the country moves towards digitalising its industries and society, in order to improve the productivity of critical sectors such as agriculture, as well as improving access to essential services such as education and healthcare. This growth is necessary for Malaysia's socio-economic well-being.

Therefore, achieving the nation's low carbon ambition in line with our developmental needs will require concerted efforts from public, private sectors to ensure that the right policies, incentives, and technologies are in place to ensure a just transition which balances Malaysia's climate ambitions with the socio-economic needs of her people.



# ONE SMALL STEP FOR ACER, ONE GIANT LEAP FOR ENVIRONMENTAL SUSTAINABILITY



Taiwanese IT giant Acer Group (Acer)'s ambitious RE100 goal to ensure its operations are 100% powered using renewable energy by 2035 – and its even more ambitious goal of having net zero carbon emissions by 2050 – had led the company to set up several initiatives and intermediate milestones towards the achievement of its ultimate objectives. Examples of such intermediate milestones include the 2023 targets to achieve a 42% and 38% decrease in energy consumption of their laptops and desktops respectively as compared with 2016, as well as ensuring Acer's computers and displays are made of at least 18.5% post-consumer recycled (PCR) plastic, rising to 20-30% PCR plastic usage in 2025. Meanwhile, it has the short-term target of 60% renewable electricity usage by 2025.

In 2022, Acer managed to bring its share of renewable electricity usage to 44% of its energy consumption. When it comes to the use of PCR plastic, in 2022 Acer managed to incorporate 30% of PCR plastic into the Aspire Vero laptop chassis. For 2023, this will be increased to 40% – while still meeting Acer's quality standards. Aside from the Vero chassis specifically, Acer has been using 50% PCR plastic in the manufacturing of laptop keyboard caps and 100% ocean-bound plastic for laptop touchpads.

The Aspire Vero series is part of the Earthion (a portmanteau of 'Earth' and 'mission') initiative. Earthion's mission is to help address environmental challenges through innovative and integrated solutions involving Acer's employees and its entire value chain. For instance, to combat the environmental impact of manufacturing activities, Acer stepped up with its partners to upgrade their overall waste management system, with a particular emphasis on plastic reduction and chemical surveillance. Acer is also actively working with its designers and partners to find innovative ways to use environmentally-friendly materials without sacrificing the durability and robustness

of the tech giant's products. Acer requires critical suppliers to commit to RE100 or to set aggressive carbon reduction targets based on the science-based targets methodology; to date, 60% of the company's critical suppliers have committed to do so.

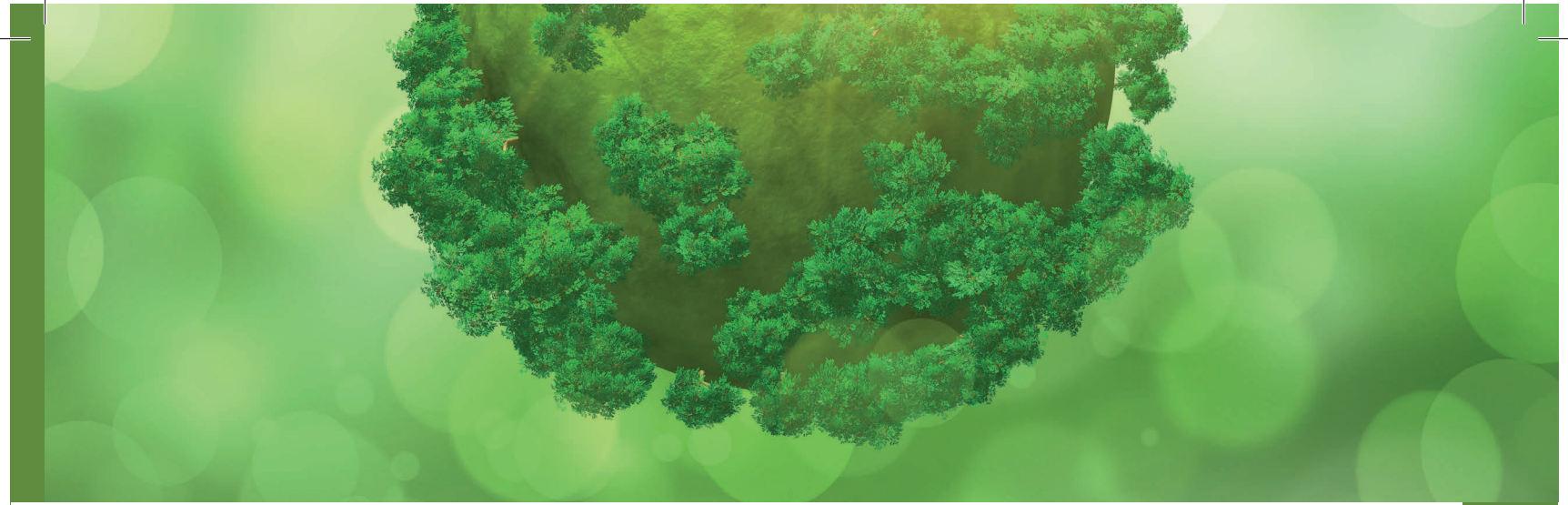
As part of the Acer Earthion initiative, a 21-Day Green Challenge was held through the Acer Earth Mission app. Over 7,000 Acer employees, partners, and suppliers were motivated to reduce their carbon footprint, resulting in 152 tonnes of carbon dioxide (CO<sub>2</sub>) emissions being cut.

In Malaysia, Acer adopted a total of 33 trees in Taman Tugu last year, and is collaborating with another organisation to plant 200 saplings in Lower Kinabatangan, Sabah. When fully grown, the trees will absorb more than 4,000kg of CO<sub>2</sub> per year.

Another one of Acer's global initiatives was Project Humanity. Launched in 2017, it provides all Acer employees a chance to share their voices and contribute to the company's decisions. Through Project Humanity, which involved Acer's employees over 40 countries, 60 tonnes of CO<sub>2</sub> emissions have been eliminated, 20 metric tonnes of batteries were recycled and remanufactured into new batteries, 8.8 million products using PCR plastic have been shipped, and all of Acer laptops have adopted recycled paper for packaging.

These environmental efforts are part of the company's commitment to good environmental, social, and governance (ESG) principles. Its subsidiaries are further engaged in various fields of sustainable solutions for everyday living, working on more eco-friendly innovations and application solutions for smarter cities. Acer's efforts have paid off in the form of various recognitions for its ESG initiatives. The company was named in the Top 5% category of the S&P Global Sustainability Yearbook for sustainable business





practices for the third straight year in 2022, and has been a constituent of the MSCI ESG Leaders Indexes – garnering the best rating of “AAA” in its category – and listed on the Dow Jones Sustainability Indices Emerging Markets for the ninth consecutive year.

The company’s products have been recognised as well. The Acer Aspire Vero was selected as Sustainability Product of the year by Business Intelligence Group. Acer’s eco-friendly packaging, film, animation, and Project Humanity campaign designs have earned the company several accolades at the 2022 Red Dot Brands & Communication Design awards.

Also in 2022, Acer was awarded the Platinum medal, which is EcoVadis Sustainability Rating’s highest recognition representing the top 1% of rated companies. It was also listed on the FTSE4Good Emerging Index for the seventh year. In addition, Acer was included in Forbes’s list of the World’s Best Employers and the World’s Top Women-Friendly Companies. The company’s Project Humanity campaign won a Shorty Impact Award in the “Best in Employee Engagement” category

Find out more about Acer’s sustainability initiatives and how Acer’s products can fit with your company’s ESG requirements at <https://www.acer.com/my-en/business/sustainability>.

According to Acer’s Chairman and CEO, Jason Chen, “Through our green innovations and initiatives, we continue to move forward with humanity in mind, step by step, project by project, and mission by mission.”

Guided by its long-term mission of breaking barriers between people and technology, Acer’s brand values of being “human,” “progressive”, and “curious” have been translated into a determination to change the world for the better, aligning with the company’s ESG commitments. For the long-term sustainability of both Acer’s operations and the environment, Acer continues to evolve with the industry and its customers’ lifestyles by pushing for innovation in existing businesses with eco-conscious solutions, while expanding multiple business engines.



# MALAYSIA'S OIL PALM INDUSTRY URGED TO UPHOLD SUSTAINABILITY PRINCIPLES FOR ECONOMIC, ENVIRONMENTAL HARMONY



The government is committed to driving the oil palm industry's sustainability and capping the size of oil palm cultivation areas in the country, said Deputy Prime Minister Datuk Seri Fadillah Yusof.

Fadillah, who is also the Minister of Plantation and Commodities, said that the oil palm sector's sustainability is a global issue that must be collectively addressed to ensure that there is a balance between economic prosperity and environmental conservation.

"In line with the Malaysia Madani concept that emphasizes sustainability as a core value, I urge all stakeholders in the oil palm industry to strongly hold on to the principle of sustainability in their efforts to strengthen the economy without compromising the environment or the people's welfare," he said.

Fadillah said this in a speech text read by the Malaysian Palm Oil Board (MPOB) chairman Mohamad Helmy Othman Basha during the launch of the Oil Palm Technology Transfer program at the MPOB headquarters here today.

He added that in order to increase palm oil production, efforts should be focused on the existing plantation areas through replanting activities using high-yield oil palm variants and good cultivation practices.

Fadillah also said that the mandatory implementation of the Malaysian Sustainable Palm Oil (MSPO) Certification was to ensure the industry's sustainability and to produce high-quality palm oil products.

"As of May 31, 2023, 95.81 per cent of oil palm plantation areas are MSPO-certified."

"I am confident that with the effective use of technology and adherence to sustainable agricultural practices, Malaysia's oil palm industry will be able to compete at the global level and meet the growing demand for oil and fats," he added.



# STRONG POLICY FRAMEWORK NEEDED TO REALISE NETR ENERGY TRANSITION ROADMAP: KPMG



PMG Malaysia said the newly released National Energy Transition Roadmap (NETR) by the Ministry of Economy is the strongest signal yet of the Malaysian government's commitment to achieving the country's

aspirations for net-zero emissions by 2050.

Abhishek Kumar, KPMG's Head of Infrastructure, Strategy & Operations in Malaysia, noted a wider number of government agencies and regulatory bodies engaged in the preparation of this roadmap as a stride forward in progressive collaboration.

He added, "Real progress to deliver according to the NETR roadmap will require infrastructural and legislative reforms on a national scale. The government has a heavy responsibility to introduce robust policy and regulatory frameworks to establish a level playing field that fosters a favorable investment climate for financing and implementing its initiatives."

Phase 1 of NETR builds upon the National Energy Policy (DTN) 2022 – 2040 document and comprises 10 flagship catalyst projects selected based on ongoing initiatives across various stakeholders in Malaysia, including government agencies and private organizations. In the pursuit to achieve the targeted 70% renewable energy (RE) capacity by 2050, the NETR is expected to open up investment opportunities between RM435 billion to RM1.85 trillion by 2050.

"This provides a clear view for investors and stakeholders on the efforts needed to achieve green power generation and grid integration of renewable energy sources. For starters, the 10 flagship catalyst projects outlined in Phase 1 of NETR are expected to bring significant investment to accelerate Malaysia's energy transition. For example, the RE Zone project championed by Khazanah Nasional

Berhad has the potential to attract billions in public-private investment and underscores Malaysia's commitment in accelerating the energy transition. However, to fully realize the ambitions envisaged in the NETR will require a concerted approach from the local and international community to undertake further innovation and initiatives," observed Abhishek.

For this reason, Abhishek emphasized the need to advance new policies, projects, and infrastructure which will be important enablers for corporates to embark on decarbonization.

The NETR's comprehensive approach extends to the substantial reduction of greenhouse gas emissions, primarily from the energy and transport sectors – the two largest contributors to greenhouse gases (GHG) emissions in the country. The framework effectively segments its catalysts into three pivotal categories, namely: (1) energy usage reduction, (2) green energy supply, and (3) carbon capture. He commends the government's aspirations to enhance energy efficiency on a national scale under the first energy transition lever identified by NETR. This is one of the most cost-effective steps in curbing global warming through leveraging the reduction in energy consumption in existing infrastructures and supporting stakeholders in achieving proactive energy demand reduction.

"Among the various implementation modalities, the long-overdue Energy Efficiency and Conservation Act (EECA) is expected to be tabled in Dewan Rakyat by the end of 2023. This welcomed development will particularly benefit energy-intensive equipment suppliers, who will be further incentivized to invest in energy efficiency improvements. The EECA will undoubtedly elevate efficiency ratings, catalyze green building initiatives, bolster efficient cooling solutions, and drive building equipment automation in Malaysia," he added.

The KPMG head believes that the NETR can be considered as the first crucial step and that more updates will invariably be announced with further evolutions of technology. However, he cautioned against taking too long to introduce the necessary reforms because new risks will be emerging even as Malaysia embarks on this important energy transition journey. For example, as countries explore the adoption of alternative energy sources and electric vehicles (EVs), there is also a need to concurrently consider the health and safety risks that may potentially emerge. The government will therefore need to continue the holistic approach it has undertaken during the NETR to fully realize the aspirations it has set out for the country. emerge. The government will therefore need to continue the holistic approach it has undertaken during the NETR to fully realize the aspirations it has set out for the country.

# HYATT CENTRIC KOTA KINABALU: A PARADIGM SHIFT IN MICE EXPERIENCES, LOCAL ENGAGEMENT, SUSTAINABILITY

By: Cynthia Ignatius



In an interview with Lillian Tan, Director of Sales & Marketing at Hyatt Centric Kota Kinabalu, **BusinessToday** delves into the distinctive positioning of the hotel in the Meetings, Incentives, Conferences, and Exhibitions (MICE) landscape in

Kota Kinabalu. Discover how this dynamic hotel is redefining the art of business events, amplifying local experiences, and championing sustainability, all while engaging with the vibrant Sabahan community.

## Positioning MICE in a New Light

Hyatt Centric Kota Kinabalu has set a new benchmark for MICE events in Kota Kinabalu, positioning itself as a haven for creative thinkers and innovative minds. Lillian Tan describes their target audience as the “savvy explorer,” a blend of business and leisure travelers seeking novel experiences. The hotel caters to this segment by seamlessly integrating nature and culture within its design, creating a refreshing environment for meetings and events

Lillian Tan emphasises, “Our hotel is designed with the integration of nature and culture in mind, right in the middle of the city.” With over 3,000 square feet of versatile function space across seven meeting rooms, the hotel offers an inspiring environment for brainstorming and collaboration. The unique offerings extend beyond conventional meeting spaces, with customisable areas like the lobby lounge, ON22 restaurant, and ON23 Sky Bar.

## Savoring Sabah: Showcasing Natural Beauty and Experiences

Hyatt Centric Kota Kinabalu is an integral part of Sabah’s tourism landscape, aligning with the “Feel Sabah, North Borneo” campaign to showcase the region’s natural beauty. The hotel’s design, inspired by Sabah’s topography, integrates lush greenery and rocky mountains, mirroring the iconic Mount Kinabalu. Tan notes, “Every detail counts, we strive to make every event unique.”

The hotel’s commitment to local experiences extends to its partnerships with artists and designers. Local designer Melinda Looi created staff uniforms that are both stylish and comfortable, sparking conversations with guests. Street artist Jared Abdul Rahman’s guided street art walking tours offer guests the chance to explore Sabah’s hidden gems and listen to stories behind the art.

## A Sustainable Oasis in the Heart of Kota Kinabalu

Hyatt Centric Kota Kinabalu’s dedication to sustainability sets an inspiring example for the industry. The hotel’s achievements include receiving the Silver Certification by GreenRE, which recognises its commitment to green building excellence. Tan explains, “We are dedicated to consistently enhancing our environmental performance to promote responsible tourism.” air-cooled chillers to utilising recycled The hotel’s sustainable practices range from energy-efficient







air-cooled chillers to utilising recycled condensate water for their bamboo gardens. LED lighting, smart energy systems, and eco-friendly amenities further reinforce their commitment to reducing environmental impact. Tan believes these efforts will build a culture of eco-consciousness that benefits both the community and the environment.

### **Strategies for Savvy Travellers: Curating Unique Experiences**

As the Director of Sales & Marketing, Lillian Tan orchestrates strategies that entice savvy travelers to the Hyatt Centric Kota Kinabalu. These strategies include digital marketing, influencer collaborations, and industry participation.

Collaborations with local artists and designers, such as street artist Jared Abdul Rahman and fashion and crafts promoter Dia Guild, further contribute to the hotel's unique appeal. The hotel's commitment to tech-savvy business travelers is evident in personalised solutions, including keyless check-in, casting solutions for presentations, and even room access via Apple Watch.

Additionally, the hotel's curated food and beverage menu, featuring locally-inspired dishes and cocktails, elevates the dining and cocktail culture at ON22 restaurant and ON23 sky bar.

### **A Thriving Community Connection**

Since its debut in Southeast Asia, Hyatt Centric Kota Kinabalu has garnered tremendous support from the local community.

Hosting events like the Ewan Lane Festival, which celebrates street art, extreme sports, and music, the hotel has become a hub of creativity and engagement.

The festival features both established and emerging Sabahan artists, providing a platform for cultural expression and talent.

Tan enthuses, "We put in a lot of work to ensure that security, technology, support, and general well-being are at the core of all our services."

The hotel's dedication to community engagement, sustainability, and creative experiences ensures that every guest, whether business or leisure, leaves with a deeper connection to Sabah's unique spirit.

In the heart of Kota Kinabalu, Hyatt Centric Kota Kinabalu is more than a hotel—it's an experience that seamlessly blends business, culture, and nature, elevating the concept of MICE events and championing responsible tourism in Southeast Asia.



# SUSTAINABILITY DEVELOPMENT AND ITS IMPACT ON MODERN BUSINESS



ustainable development is a holistic approach that seeks to meet the needs of the present without compromising the ability of future generations to meet their own needs. It encompasses economic, social, and environmental dimensions, aiming to

balance progress with responsible resource use and environmental protection. In the context of modern businesses, sustainable development has gained significant importance due to its potential to create long-term value, enhance corporate reputation, and address pressing global challenges.

## Impact on Modern Businesses:

Sustainable development has a significant impact on modern businesses, influencing various aspects of their operations, strategies, and relationships. Let's explore this impact with a specific example from Malaysia:

### Example: The Sustainability Initiatives of Tenaga Nasional Berhad (TNB)

Tenaga Nasional Berhad (TNB) is the largest electricity utility company in Malaysia, providing power generation, transmission, and distribution services to the nation. In recent years, TNB has demonstrated a commitment to sustainable development through various initiatives.

## Sustainable Practices and Impact:

TNB's sustainable development initiatives showcase its dedication to creating a positive impact. **Renewable Energy Investment:** TNB has made substantial investments in renewable energy sources, such as solar, hydroelectric, and wind power. This commitment reduces Malaysia's dependence on fossil fuels and contributes to the country's renewable energy targets.

**Energy Efficiency Programs:** TNB has launched energy efficiency programs aimed at reducing energy and carbon emissions. These programs encourage customers to adopt energy-efficient technologies and practices.

**Community Engagement:** The company engages with Environment





Conservation: TNB has implemented environmental management systems to monitor and mitigate the environmental impact of its operations. It focuses on reducing emissions, conserving water, and managing waste. local communities by supporting education, healthcare, and infrastructure projects. TNB's contributions enhance social equity and well-being in the areas it serves.

Green Innovation: TNB is involved in research and innovation to develop cleaner and more efficient energy solutions. These efforts contribute to technological advancement and economic growth.

#### **Impact on Business:**

TNB's commitment to sustainable development has yielded several positive outcomes: Enhanced Reputation: TNB's sustainability initiatives have improved its reputation and positioned it as a responsible and forward-thinking company in Malaysia's energy sector.

Operational Efficiency: The company's focus on energy efficiency has reduced operational costs and improved resource utilization, leading to better financial performance. Regulatory Compliance: TNB's sustainable practices align with Malaysia's environmental regulations, reducing the risk of penalties and legal issues.

Attracting Investment: Investors and stakeholders are increasingly interested in companies that prioritize sustainability. TNB's initiatives make it an attractive choice for socially responsible investors. Customer Loyalty: Consumers are more likely to support companies that contribute positively to society and the environment. TNB's sustainability efforts can enhance customer loyalty and engagement.

Talent Attraction: TNB's commitment to sustainability can attract top talent, as employees are often drawn to companies that align with their values. Sustainable development has a profound impact on modern businesses in Malaysia, as exemplified by Tenaga Nasional Berhad. By integrating sustainable practices into their operations and strategies, companies can contribute to environmental protection, social equity, and economic growth.

The example of TNB highlights how a commitment to sustainability can lead to enhanced reputation, financial performance, and stakeholder engagement, positioning the company for long-term success in a rapidly changing business landscape.





# HUGE OPPORTUNITIES IN RENEWABLE ENERGY, EE TECHNOLOGIES

By: Cynthia Ignatius



outheast Asia's demand for electricity has surpassed those of other regions globally, rising by an average of more than 6.0 per cent annually over the past two decades.

According to the International Energy Agency, electricity consumption in Malaysia, Indonesia, Vietnam and Thailand cumulatively account for more than 80 per cent of total electricity demand in the region, amid growing ownership of household appliances and increasing consumption of goods and services.

Although the region is one of a select few where coal-fired power generation has been expanding, the dynamics are expected to change in a few decades as governments in the region look towards increasing Renewable Energy (RE) share in the power mix.

At the same time, the increased utilisation of energy-efficient technologies for coal-fired power plants will significantly contribute to a reduction in power consumption.

## ICPT in Malaysia

The Imbalance Cost Pass-Through (ICPT) is a mechanism under the Incentive Based Regulation framework that allows for an adjustment in the electricity tariff to reflect the changes in fuel and other generation-related costs as these costs are set based on benchmarked prices in the base tariff.

The ICPT, which is reviewed every six months, would reflect the actual costs in tariff in the form of either rebates or surcharges.

Since 2015, the government has successfully implemented 18 cycles under the ICPT mechanism to help cushion the impact of high global fuel prices, including the most recent RM5.2 billion electricity subsidy for the July 1-Dec 31, 2023 regulatory period.

UiTM Solar Research Institute director, associate professor

Dr Nofri Yenita Dahlan, said that dramatic changes in the energy scenario due to rising energy prices, increasing demand for coal and rapid global economic recovery post-pandemic are inevitable.

"The pressures on the fiscal system due to Covid-19 and rising energy prices necessitated the passing of the cost of energy to the consumers, be they households or companies," she said to Bernama.

As such, some pass-through mechanisms or surcharges that reflect international energy prices are inevitable now and in the future, she said.

## Energy-efficient Technologies in Malaysia

To reduce spending on electricity bills, global industries are also accelerating their investments towards energy efficiency as the crucial race toward net-zero emission intensifies.

This entails reducing the amount of energy required to power manufacturing plants, homes, commercial buildings and vehicles through the use of energy-efficient equipment.

In Malaysia, the Energy Commission (EC) introduced energy efficiency rating labels for equipment such as refrigerators, air-conditioners, domestic fans, washing machines, televisions, microwave ovens, electric ovens, rice cookers and lights.





These products would bear the energy efficiency labels which are issued to manufacturers of electrical equipment which comply with the requirements of energy performance standards.

The energy efficiency label indicates the estimated energy consumption by electrical equipment using a star rating system, with five stars being the most efficient and one star the least efficient.

For the record, only those with a minimum of two stars are allowed to enter the Malaysian market.

Although five-star equipment may be slightly pricier, consumers will be able to enjoy savings on their electricity bills in the long run.

### Government's Commitment to Transition Towards RE

Government incentives also play a role to encourage RE uptake; for example, the Net Energy Metering (NEM) scheme for the people, the NEM Rakyat, has seen positive uptake with only 45 per cent of the quota left until Dec 31 this year. Under the scheme, those who use their own Solar Photovoltaic (PV) panels to generate electricity can export the excess energy to the national utility company Tenaga Nasional Bhd's (TNB) electricity grid in exchange for credits which can be used to offset their electric bill.

To further encourage the installation of solar PV systems, the government has also eased the requirements under the NEM programme and Self-Consumption for Solar PV Installation (SelCo) programme through measures such as:

- the relaxation of the capacity limit for each household applying for the NEM Rakyat programme;
- the increase in the allowable capacity for solar PV systems under the NEM NOVA programme and SelCo programme from 75 per cent to 85 per cent; and
- the opening up of applications and participation by high-voltage consumers under the SelCo programme.

TNB will also announce several enhancements to encourage the installation of solar PV systems.

"We do feel additional government support and incentives can help spur home solar adoption, for example, personal tax relief, similar to one claimable for purchases of computers," said Plus Xnergy group chief executive officer/ executive director, Ko Chuan Zhen to Bernama.

Plus Xnergy is a clean energy solution provider that has outfitted more than 700 homes, 130 commercial and industrial buildings (between 2012 and 2019) and 126 buildings (2020-2021) with solar PV panels.

Ko lauded the government's move to prioritise environmental sustainability in Budget 2023.

"By being committed to improving the balance of economic growth and environmental sustainability, the government would not only unlock more job and reskilling opportunities but also create opportunities for mitigation of energy shortages in rural regions by providing clean and affordable energy," he said.

Ko also highlighted positive actions taken by the government to support the green agenda, including the National Energy Policy 2022-2040.

"Initiatives include unlocking potential solar resources, extension of the NEM scheme, and allowing businesses to access RE to power system advancements, including investments in the grid and energy storage among others," he added.

### Energy Efficiency and RE: the Way Forward

In Malaysia, there are many ways for consumers to reduce their electricity bills. One can save a lot of money on utility bills with just a few upgrades, including using energy-efficient equipment and installing solar PV panels.

Ko is optimistic about the future of RE, saying that affordable consumer solar solutions help to encourage commercial users and households to adopt more environmentally-friendly energy solutions.

"Our nation is headed in the right direction, and we see good progress, especially with the announcement by our government on the allocation and redistribution of a new quota for RE," he added.





# MALAYSIAN INITIATIVES TOWARDS SUSTAINABLE CITIES AND COMMUNITIES

By :Prof Dr Suhaiza Hanim Mohamad Zailani



In Malaysia, more than 74 per cent of the population lives in metropolitan regions, which also host more than 90 per cent of the nation's economic activity.

As indicated by the Urban Sustainability Index produced by MURNInets in 2021, out of the 127 Malaysian cities analysed, around two-thirds (68 per cent) are sustainable, with the remaining cities (33 per cent) being moderately sustainable.

However, numerous issues related to climate change are threatening Malaysia's cities' capacity to serve as viable pillars of sustainable development.

A weak public transit infrastructure, dependency on fossil fuels and coal, a strong desire for mobility, and fast urbanisation and industrialization (7 per cent yearly) have all contributed to the rapid rise in automobile ownership in cities, which has exceeded population growth. All these elements have influenced the city's rapidly rising greenhouse gas emissions.

## Resilient cities

According to Kieran Li Nair, a researcher at Research for Social Advancement (REFSA), a climate-resilient Malaysia can only be attained by creating resilient cities, or towns and cities that can absorb, recover from, and prepare





**“What is the use of a house if you don’t have a decent planet to put it on?”**

—Henry David Thoreau

for shocks connected to the climate while simultaneously fostering sustainable development.

The Local Government Development Minister, Nga Kor Ming, said a sustainable city is one that can evolve with the times and eventually overcome negative social, environmental, and financial effects.

Improvements must be made to public transit, air quality, and the percentage of publicly accessible open space in metropolitan areas in order for Malaysia to meet the necessary SDG objectives.

For instance, the task force ought to be created by the federal and state governments to look into the adoption of

“green” travel choices, the upgrading of public transportation, and improving the accessibility of public transit for urban poor people.

By 2030, Prime Minister Datuk Seri Anwar Ibrahim wants to turn the federal territories into smart cities. This is consistent with the Madani Malaysia notion, which also stressed the importance of sustainability through the concepts of green cities and smart cities.

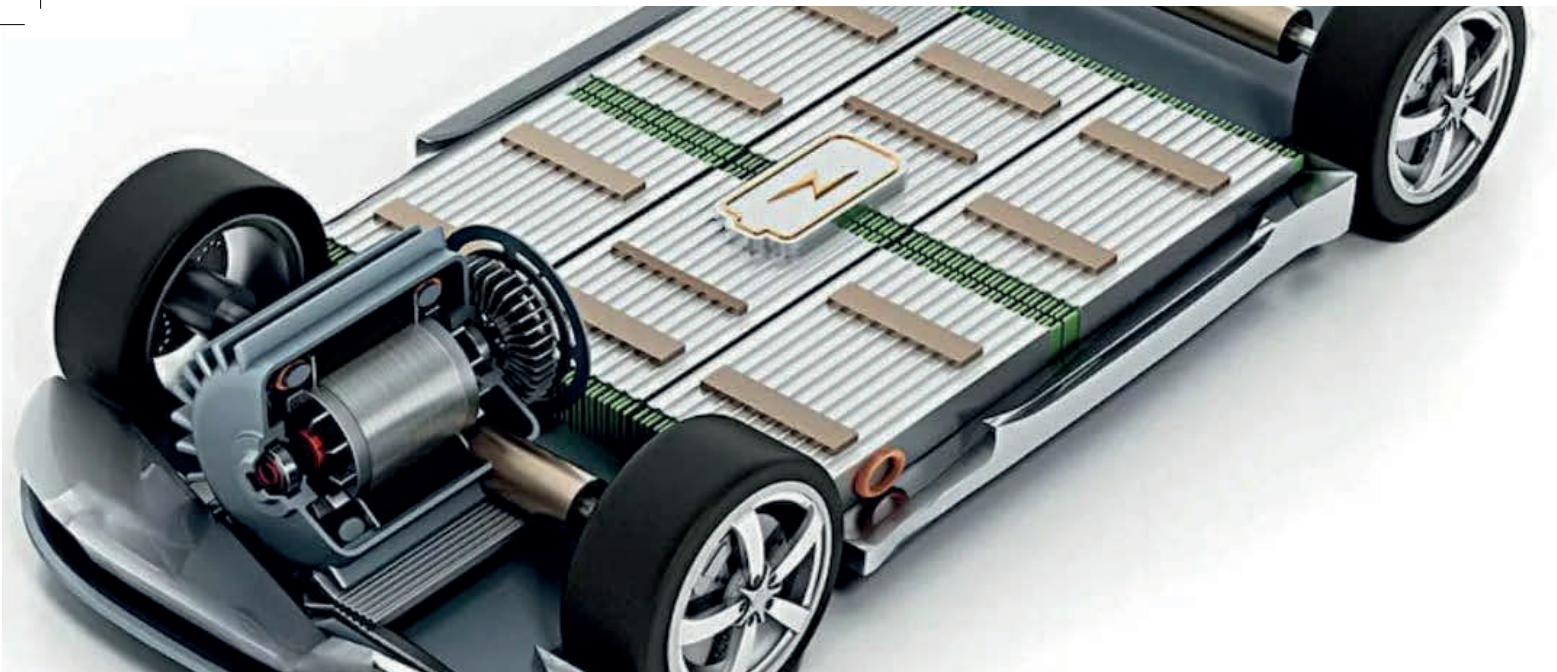
The growing usage of mobile devices and high-speed internet, as well as the incorporation of cutting-edge technology into several industries, are projected to be major drivers of the development of smart cities, said Cyberview’s acting managing director, Dr Mohd Hafiz Ibrahim.

### **Renewable energy**

It is important to promote and broaden access to renewable energy sources like solar for households and city planners. Besides, updating current infrastructure in a practical manner is a part of a climate adaptation strategy to make sure it can withstand climate change. In this case, the Malaysia International Centre for Sustainable Cities (MyICSC) programme encourages smart city players to create sustainable cities and communities in accordance with SDG 11 by acting as a platform for bringing together, disseminating, exchanging, aligning, and syncing numerous stakeholders in the field of sustainable cities. In addition, Urbanice Malaysia promotes the localisation of SDGs in the creation of liveable cities and climate-responsive urban development with the goal of creating a sustainable urban country. In carrying out this objective, Urbanice Malaysia concentrates on localising and mainstreaming the sustainable urban agenda, igniting urban solutions, fostering community resilience, and promoting climate actions for the sustainability of communities and cities.

Working collaboratively to create sustainable cities for future generations is crucial for all parties involved, whether they are in government or on the street. Community participation and education must be ongoing to preserve a sustainable culture and guarantee sustained development towards a sustainable and liveable city. Further work must be put forth, especially in the areas of protecting the environment, getting rid of poverty, increasing creativity and technology, and encouraging good health and happiness, to enable all cities in Malaysia to be sustainable.

Sustainable cities work towards achieving fair economic expansion, societal progress, and ecological accountability in order to safeguard the city’s long-term survival and enhance both urban and rural community wellbeing. This is also in line with the achievement of SDG 11 – Sustainable Cities and Communities..



# ARE ELECTRIC VEHICLES TRULY SUSTAINABLE?

By : ChongSM

Electric vehicles (EV) are such a thing to behold. Just the fact that they lack an exhaust and run about without petrol is a nod towards the future of transport.

And we have the BYD electric cars recently launched in Malaysia, their formidable presence on the roadside making people eager to hop on the EV bandwagon.

When EVs are brought into the discussion, we will undoubtedly touch on the aspect of sustainability, because is it not the primary purpose of an EV's existence? The answer of course lies within the batteries that run these vehicles.

For starters, EV batteries are composed of many rare earth elements such as lithium, manganese and cobalt. According to a report by Nature, an average EV battery has 8 kg of lithium, 14 kg of cobalt, and 20 kg of manganese.

And when the word "rare" is being mentioned, we can already tell that mining or procuring these materials are not easy. Lithium, for example, poses quite a challenge since it is mainly found in South America and China, being produced from salt flats or underground brine reservoirs.

That said, a good deal of fuel needs to be expended to bring the material to the factory in the first place, assuming you are a manufacturer and is not located within said countries.

Second, lithium is extracted from brine by evaporating the water to leave behind the lithium-rich solution. Lots of water is used in the process. To make matters worse, lithium is usually found in arid places where the water supply is scarce. As though that is not bad enough, the residue can be radioactive, requiring time and resources to purify.

If the mining of lithium gives you a headache, then try cobalt. Toxic liquid often seeps out from the cobalt mines, polluting underground water that connects to farmlands and rivers. Highly toxic fumes containing sulphur oxide are also produced when cobalt ore is smelted.

Cobalt is not the only material that pollutes the air. Manganese, another vital component for making EV batteries, is mined in dry places which allows the dust to easily go airborne.

Now that we think about it, that is one truckload of pollution to get our wonderful EVs up and running. Departing from the manufacturing process, we must also examine the process to generate the electricity that charges the EV batteries.

Sadly, most charging stations rely on power plants that run on fossil fuel. So it seems that our EVs run on fossil fuel too. And here you have it, the bleak reality behind the idyllic image of EVs being the saviour of this planet.



**“If we save wild places, we will  
ultimately save ourselves”**

—STEVE IRWIN

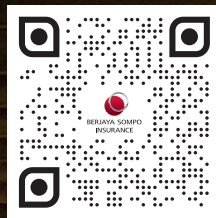


# Malaysia is covered by **THE GOOD POLICY**

**And so are you, absolutely free.**

With our ongoing ESG efforts, we strive to ensure that future generations of Malaysians stay good for years. From initiatives to reduce erosion and slope mitigation to keeping vehicles safe for drivers and pedestrians, it's not just any policy; it's The Good Policy.

Find out more



**BERJAYA SOMPO INSURANCE**