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National Energy Transition Roadmap (NETR): Malaysia's roadmap to a carbon-neutral nation



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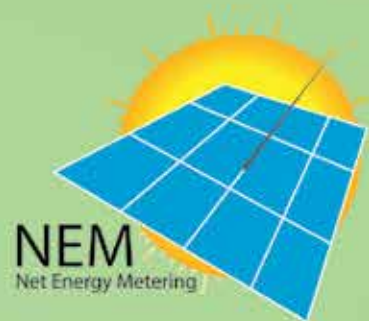
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editor's **note**

MALAYSIA'S ENERGY TRANSITION: WHERE WE STAND TODAY

As we embark on our journey towards sustainable energy, Malaysia is making remarkable strides toward a future that is both eco-conscious and energy-efficient. Since the beginning of 2023, we have witnessed significant developments that continue to shape Malaysia's path towards a sustainable energy transition.

At the forefront of Malaysia's ambitious green initiatives stands the National Energy Transition Roadmap (NETR). Launched in two parts this year (Part 1 on 27 July and Part 2 on 29 August), NETR represents the latest comprehensive strategy that outlines the blueprint for our nation's transition to sustainable energy sources and practices. Collaborations between government agencies and industry leaders are fervently working towards realising the Roadmap's objectives, comprising everything from harnessing renewable energy to promoting energy efficiency across various sectors.

The introduction of the National Energy Transition Roadmap (NETR) aligns perfectly with the much-anticipated arrival of Tesla in Malaysia, a development that has sent ripples of excitement throughout the transportation industry. As the world pivots towards electric mobility, Tesla's presence signifies a monumental step towards making electric vehicles more accessible to Malaysians. This not only reinforces the nation's commitment to reducing carbon emissions but also promises to revolutionise our daily commutes.

While the Government takes significant strides forward, it also acknowledges the outstanding contributions of companies and individuals who have played a significant role in advancing our nation's energy transition agenda. Particularly noteworthy are the 29 winners of the recent National Energy Awards (NEA), with 23 of them proudly representing Malaysia at the ASEAN Energy Awards (AEA), where 12 earned prestigious accolades in their respective categories.

Looking ahead, the International Greentech & Eco Products Exhibition & Conference Malaysia (IGEM) promises to be a pivotal event on our calendar. Celebrating its 14th edition this year, this renowned platform is scheduled to take place from 4 – 6 October at the Kuala Lumpur Convention Centre. IGEM, once again, will bring together innovators, policymakers, and businesses to explore the latest green technologies and solutions. Anticipate cutting-edge insights and exciting developments that will further invigorate Malaysia's transition towards a sustainable, eco-friendly future.

Malaysia's journey towards sustainable energy is characterised by unwavering determination, innovative spirit, and collaborative efforts. As we navigate through this transformative period, we invite you to stay tuned for updates, gain valuable insights, and be inspired by the stories we bring in our magazine. Together, we can drive positive change and help shape a greener, more sustainable Malaysia for generations to come.

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Greenplus, Malaysia's Premier Eco-friendly, Sustainable Lifestyle and Green Business Magazine, is published to meet the specific needs of professionals at the forefront of green sustainability in the country.

Greenplus provides cutting edge information and articles on eco-friendly and sustainable developments targeted at decision makers, managers, and stakeholders in the country and expose them to the latest ideas, tools, techniques, products and outstanding green personalities and bring to their notice current trends in the industry.



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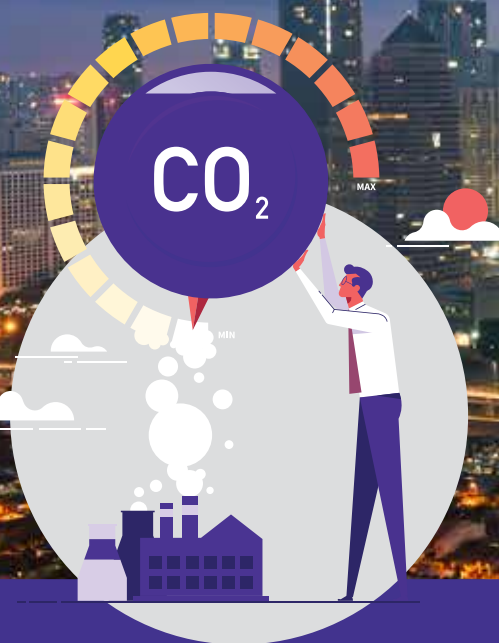
Greenplus Society (GPS) is a youth-led NPO and NGO focused on environmental education.

GPS navigates towards Green Sustainable Living, guided by a vision to uphold the values of the United Nations Sustainable Development Goals which includes sustainable cities and communities, accessibility to quality education, affordable and clean energy, and climate change mitigation action.



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NATIONAL ENERGY TRANSITION ROADMAP (NETR):
*Malaysia's Roadmap to a
Carbon-Neutral Nation*

In alignment with the global drive to combat climate change and transition to a sustainable energy future, Malaysia is embarking on an ambitious journey outlined in the Twelfth Malaysia Plan 2021-2025 (RMK-12). This strategic blueprint sets forth Malaysia's determination to achieve net-zero greenhouse gas (GHG) emissions by 2050.

Simultaneously, the National Energy Policy 2022-2040 (Dasar Tenaga Negara, DTN) lays the groundwork for a transformative shift in the country's energy landscape. DTN underscores the importance of an inclusive and equitable energy transition that encompasses all sectors of society.

The global energy sector is currently undergoing a rapid transformation while addressing the energy trilemma of security, affordability, and sustainability. Both domestically and internationally, there is a growing momentum to further decarbonise energy systems towards net-zero greenhouse gas (GHG) emissions.

To expedite Malaysia's energy transition and adeptly navigate the complex shift from a traditional fossil fuel-based economy to a high-value green economy, the Government is actively formulating the National Energy Transition Roadmap (NETR). This Roadmap sets to chart the course for Malaysia's energy future.

The NETR adopts a comprehensive, nationwide approach that fosters collaboration between the federal government, state governments, industry stakeholders, the general public, and international partners.

Understanding Malaysia's Energy Mix

As Malaysia remains steadfast in its commitment to sustainable development, the nation is diligently reshaping its energy landscape. Recognising the pressing need for a forward-looking strategy, Malaysia is working towards reducing its reliance on fossil fuels while investing in clean, accessible, affordable, sustainable, and dependable alternative energy sources.

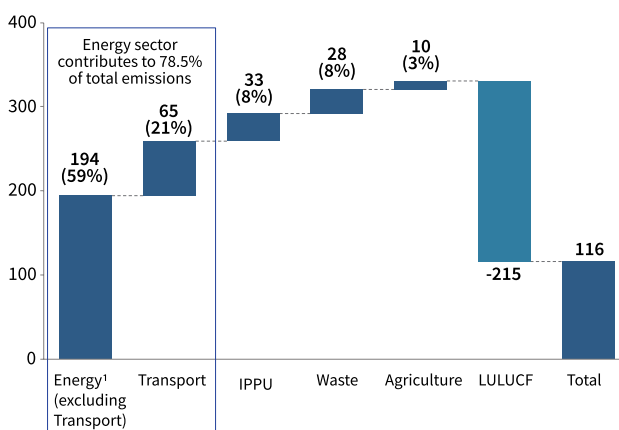
Fossil fuels remain dominant in Malaysia's energy supply, significantly influencing the country's energy landscape. As of 2020, four primary energy sources comprised the majority of the national total primary energy supply (TPES). Natural gas held the largest share at 42.4%, followed by crude oil and petroleum products at 27.3% and coal at 26.4%. Renewables, encompassing hydropower, solar, and bioenergy, accounted for a mere 3.9%.

The growth of the energy sector serves as a catalyst for development across various related industries, generating positive impacts through job creation, capital inflows, investments, and fostering the ecosystem of energy service companies. However, it's important to note that the energy sector also stands as Malaysia's largest contributor to greenhouse gas (GHG) emissions.

In 2019, the energy sector alone emitted 259,326.11 Gigagram CO₂ equivalent (GgCO₂eq), or 78.5% of total emissions. This was followed by industrial processes and product use (IPPU) at 10%, waste at 9%, and agriculture at 3%. The Biennial Update Report (BUR4) also documented climate mitigation measures taken within the energy sector, including the adoption of energy efficiency measures, energy-efficient vehicles, renewable energy (RE), biodiesel utilisation, and transitioning from coal to natural gas for power generation.



Malaysia's GHG inventory, MtCO₂eq (2019) from BUR4



¹ Refers to emissions from energy industries, manufacturing industries and construction, other sectors and non-specified energy emissions, and fugitive emissions from fuels.

Source: Malaysia's Fourth Biennial Update Report submitted to the UNFCCC (2022)

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 International Energy Agency (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, Energy Efficiency (EE) and strengthening the grid and energy storage.

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 gross domestic product (GDP), creates jobs and meets the needs of the people and businesses.

Pathways to Net-Zero Emissions

The National Energy Transition Roadmap (NETR) comprises two parts. Part One of NETR, launched on 27 July 2023, outlines ten flagship catalyst projects and initiatives grounded in six energy transition levers: Energy Efficiency (EE), Renewable Energy (RE), Hydrogen, Bioenergy, Green Mobility, and Carbon Capture, Utilisation, & Storage (CCUS).

NETR aims to power our future by unlocking potential in new growth areas and delivering progress and prosperity to Malaysian households and businesses. The successful implementation of NETR will uplift GDP value from RM25

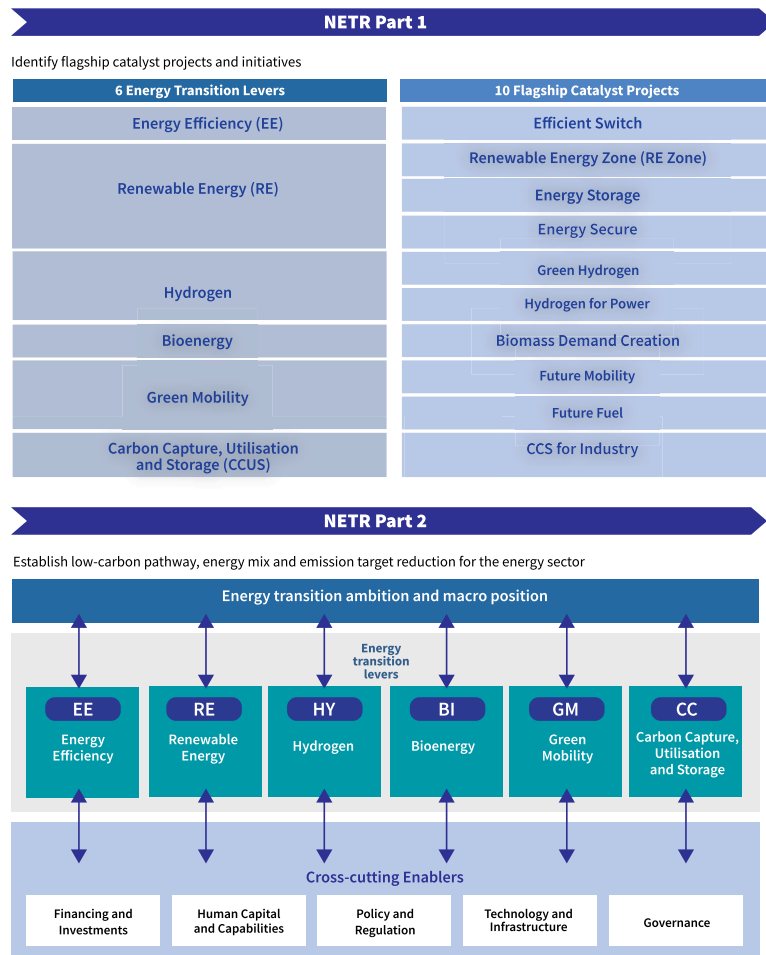
billion in 2023 to RM220 billion, generate 310,000 jobs in 2050, and reduce over 10,000 Gigagram CO₂ equivalent (GgCO₂eq) in GHG emissions annually.

Building on the momentum created by Part 1, the second part of NETR takes a more detailed and accelerated approach towards achieving Malaysia's energy transition goals. NETR Part 2 focuses on biomass, waste-to-energy, Carbon Capture, Utilisation & Storage (CCUS), and hydrogen integration, among others. It also highlights a low-carbon pathway, defining the national energy mix, setting emissions reduction targets, and identifying the enablers necessary for a successful energy transition. These targets reiterate Malaysia's commitment as a responsible global stakeholder, striving to achieve net-zero greenhouse gas (GHG) emissions by 2050, despite contributing only 0.8% to global GHG emissions. By 2050, NETR initiatives are expected to deliver a 32% reduction in GHG emissions for the energy sector compared to the 2019 baseline – reaching 4.3 MtCo₂eq emissions per capita.

Among the key announcements during the launch of NETR Part 2, the Government is earmarking RM2 billion for the National Energy Transition Facility, aimed at supporting energy transition projects that may have lower returns, such as EV charging, hydrogen, and CCUS technologies. To oversee the NETR's implementation, a National Energy Council will be established, chaired by the Prime Minister, with the Ministry of Economy serving as the secretariat. The inaugural council meeting is scheduled for October. Furthermore, plans include the creation of a Renewable Energy (RE) exchange by 2024 to facilitate RE exports and establish pricing standards.

Malaysia is committing up to RM6 billion in investments spanning from now until 2040 to enhance energy efficiency, targeting an average energy savings rate of 21% by 2040. Additionally, RM7 billion will be directed toward retrofitting government buildings for improved energy efficiency. By 2040, the energy savings objectives are set at 15% for the residential sector and 22% for the commercial and industrial sectors.

Parts 1 and 2 of the NETR



(Source: NETR)

Setting the Stage for Change

The National Energy Transition Roadmap (NETR) represents Malaysia's strategic blueprint for harmonising its energy infrastructure with decarbonisation objectives. It deftly strikes a balance between safeguarding the environment and fostering essential economic indicators like GDP growth and employment opportunities.

Within the NETR framework, the Responsible Transition (RT) scenario emerges as a crucial component aimed at propelling Malaysia towards achieving net-zero emissions by the year 2050. This scenario stands as the most fitting ambition for the nation, taking into account the present technological landscape, global trends, and local circumstances.

Flexibility is ingrained in this approach, with the Government poised to adjust its ambition levels to harness the potential of emerging technologies, potentially revising its targets as necessary. This adaptable approach mirrors the spirit of the Paris Accord's Global Stocktake process, which assesses progress towards meeting the goals of the Paris Agreement while identifying gaps and opportunities for heightened action.

The RT pathway outlined in the NETR is designed to expedite Malaysia's energy transition while addressing the complexities of the energy trilemma. By 2050, it envisions achieving the following key milestones:

- A higher utilisation of renewable energy in power generation.
- Nearly eliminating coal from the power generation mix.
- Implementing comprehensive energy efficiency measures, especially through demand-side management, which involves optimising energy usage across key sectors like residential, commercial, industrial, and transport to reduce waste and extend the life of local resources.
- Accelerating the adoption of electrification and biofuels in the transportation sector.

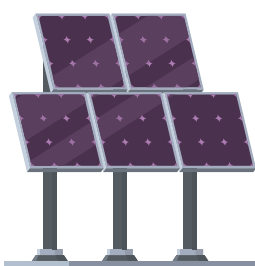
NETR introduces six pivotal energy transition levers, providing strategic guidance to steer Malaysia towards realising a sustainable, low-carbon economy. Furthermore, the Ministry of Economy has identified 10 flagship catalyst projects, each showcasing various modalities and technologies that are indispensable for an effective energy transition.

LEVER: ENERGY EFFICIENCY	
MALAYSIA'S TARGET	KEY INITIATIVES
<ul style="list-style-type: none"> • Energy savings of 21% by 2040. • Energy savings of 22% by 2050. 	<ul style="list-style-type: none"> • Improve energy efficiency (EE) awareness. • Improve Existing Minimum Energy Performance Standards (MEPS) and 5-star rating bands. • Enforce mandatory audits for large commercial and industrial buildings. • Establish green building codes for energy-intensive residential and commercial buildings. • Establish an Energy Service Company (ESCO) platform. • Launch a major EE retrofit initiative among government buildings. <p>Flagship Project: Efficient Switch Modalities:</p> <ul style="list-style-type: none"> • Energy Efficiency and Conservation Act (EECA) • Energy audit for the rail sector

The National Energy Transition Roadmap (NETR) has identified energy efficiency as the cornerstone of the energy transition, underscoring its inherent cost-effectiveness and judicious utilisation of resources. Yet, the NETR highlights a notable impediment to its realisation, stemming from the insufficient awareness among the public regarding this pivotal dimension. The current Minimum Energy Performance Standards are deemed overly restrictive in their scope, constraining the capacity for cost savings across residential, commercial, and industrial domains. Consequently, this scenario has led to diminished enthusiasm for energy-efficient products and decreased profitability for Energy Service Companies (ESCOs).



LEVER: RENEWABLE ENERGY	
MALAYSIA'S TARGET	KEY INITIATIVES
<ul style="list-style-type: none"> ● 70% RE installed capacity by 2040. ● No more new coal plants. 	<ul style="list-style-type: none"> ● Establish solar parks for accelerated deployment of utility-scale solar. ● Promote floating solar and agrivoltaic technology. ● Expand virtual aggregation model for rooftop solar. ● Develop plan for accelerated investments of transmission and distribution. ● Develop Third Party Access (TPA) framework for sourcing of RE. ● Set up RE exchange hub to enable cross-border RE trading. <p>Flagship Project: Renewable Energy Zone (RE Zone) Modalities:</p> <ul style="list-style-type: none"> ● Integrated RE zone ● Solar park ● Hybrid hydro-floating solar PV (HHFS) ● Residential solar <p>Flagship Project: Energy Storage Modalities:</p> <ul style="list-style-type: none"> ● Energy storage system (ESS) <p>Flagship Project: Energy Secure Modalities:</p> <ul style="list-style-type: none"> ● Sabah Energy Security Initiative

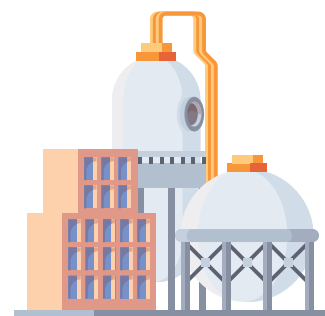


Renewable energy is widely recognised worldwide as a crucial part of shifting to cleaner energy sources, and Malaysia is on the same path. Malaysia is committed to transitioning to renewable energy sources, aiming for 70% of its energy to be from renewables like solar panels by 2040. However, there have been challenges in expanding solar energy, including land acquisition issues and limited profitability for large solar projects. Uncertainty also exists around selling surplus solar power through the Competitive Bidding Process for Large Scale Solar.

The National Energy Transition Roadmap (NETR) highlights the importance of grid investment to handle the unpredictability of renewable energy and balance supply and demand. Tenaga Nasional Berhad plans to invest over RM90 billion in the next six years to improve the power grid and support the transition to cleaner energy sources.

LEVER: HYDROGEN	
MALAYSIA'S TARGET	KEY INITIATIVES
<ul style="list-style-type: none"> ● Eliminate the use of grey hydrogen as a feedstock by 2050. ● Generate a maximum of 2.3Mtpa of green hydrogen by 2050. ● Set up a single low-carbon hydrogen hub by 2030, with plans to establish two more hubs by 2050. 	<ul style="list-style-type: none"> ● Establish low-carbon hydrogen standards and regulations. ● Develop domestic green electrolyser manufacturing capabilities. ● Reduced Levelized Cost of Hydrogen (LCOH) for low-carbon hydrogen. ● Stimulate demand for low-carbon hydrogen. <p>Flagship Project: Green Hydrogen Modalities:</p> <ul style="list-style-type: none"> ● Sarawak hydrogen hub <p>Flagship Project: Hydrogen for Power Modalities:</p> <ul style="list-style-type: none"> ● Co-firing of hydrogen and ammonia

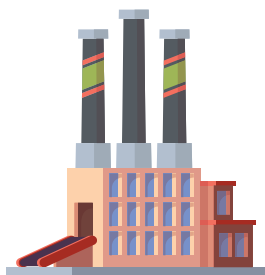
Hydrogen is gaining attention as a future energy source, with countries like Australia and South Korea investing heavily. In Malaysia, Sarawak is leading the way with the introduction of the Sarawak Hydrogen Economy Roadmap and collaborating with multinational companies for large-scale hydrogen production.



However, building a hydrogen-based economy faces challenges. Currently, the technology and infrastructure for hydrogen production, especially electrolysers and storage, are limited. These projects also require significant capital. Additionally, there's a need for clearer regulations, and NETR is considering changes to address this.

LEVER: BIOENERGY	
MALAYSIA'S TARGET	KEY INITIATIVES
<ul style="list-style-type: none"> • Biorefinery capacity of 3.5 billion litres by 2050. • Biomass and biogas power generation capacity of 1.4GW by 2050. 	<ul style="list-style-type: none"> • Explore alternative bioenergy feedstock. • Enhance attractiveness of palm oil biomass. • Address challenge of supply security. • Catalyse local demand for bioenergy. • Improve solid waste management policies. <p>Flagship Project: Biomass Demand Creation Modalities:</p> <ul style="list-style-type: none"> • Biomass clustering • Biomass co-firing

It's worth noting that currently, there are only a limited number of small-scale bioenergy projects in existence. NETR recognises the obstacles associated with the adoption of bioenergy, such as supply reliability, negative views on waste-to-energy, and economic viability.



But it's vital to highlight that bioenergy is essential for the energy shift. It's a carbon-neutral energy source and can be an alternative fuel. Malaysia's substantial municipal waste and palm oil production can be used effectively in bioenergy.

LEVER: GREEN MOBILITY	
MALAYSIA'S TARGET	KEY INITIATIVES
<ul style="list-style-type: none"> • 40% share of public transport in the modal split by 2040, increasing to 60% by 2050. • 80% share of electric vehicles (EVs) in the vehicle fleet by 2050. • 90% local manufacturing capability for EVs by 2050. • 5% of heavy vehicles to transition to hydrogen by 2050. • Achieve net-zero carbon emissions for international aviation by 2050. • Sustainable Aviation Fuel (SAF) blending mandate of 47% by 2050. • Adoption of low-carbon fuels, aiming for a 40% penetration rate in marine transport by 2050. 	<ul style="list-style-type: none"> • Drive public transport modal share shift to 40% by 2040 and 60% by 2050. • Improve light vehicle fuel economy. • Accelerate electrification of light vehicles segment (E4W and E2W). • Enhance demand-side management with fuel economy. • Implement B30 biodiesel blending mandate. • Introduce future powertrains for heavy vehicles. • Establish overarching aviation decarbonisation roadmap. • Implement Sustainable Aviation Fuels (SAF) blending mandate. • Undertake palm oil-feedstock emissions study. • Unlock market opportunities of biofuel and future fuels in marine bunkering. <p>Flagship Project: Future Mobility Modalities:</p> <ul style="list-style-type: none"> • EV charging stations • Mobile hydrogen refuelling station • Public transport electrification • Solar PV installation for rail operations <p>Flagship Project: Future Fuel Modalities:</p> <ul style="list-style-type: none"> • Biofuels hub

Malaysia's transportation sector contributes significantly to greenhouse gas emissions. Transitioning to eco-friendly mobility is crucial for the nation's energy shift and net-zero emissions goal by 2050. Challenges include poor public transportation, lack of charging infrastructure, higher costs for sustainable fuels, and unclear guidance from authorities. Overcoming these challenges will require step-by-step efforts with tailored policies for different transportation sectors.






LEVER: CARBON CAPTURE, UTILISATION & STORAGE (CCUS)	
MALAYSIA'S TARGET	KEY INITIATIVES
<ul style="list-style-type: none"> • 3 CCUS with a combined storage capacity of up to 15 Mtpa by 2030. • 3 carbon capture hubs with a collective storage capacity ranging between 40 to 80 Mtpa by 2050. 	<ul style="list-style-type: none"> • Develop CCUS-specific policies and regulations. • Strengthen CCUS adoption through provisions of incentives across all relevant sectors and facilitate hub development. • CC3 – Facilitate CCUS Hub infrastructure development. • Establish transboundary CO₂ agreement. • Promote local utilisation of CO₂ in industry. <p>Flagship Project: CCS for Industry Modalities:</p> <ul style="list-style-type: none"> • Regulatory framework • Kasawari and Lang Lebah CCS

Carbon Capture, Utilisation & Storage (CCUS) stands as a crucial player in the process of decarbonising the energy sector. However, it is still in its early stages, requiring more development. In Malaysia, there is currently no regulatory framework to encourage CCUS investments and advancements. CCUS is also costly, although NETR expects costs to decrease gradually. These government initiatives demonstrate a commitment to promote CCUS growth and adoption, likely leading to increased investments in this technology.



Benefits of NETR

The effective implementation of NETR drives Malaysia's energy transformation towards attaining the net-zero goal and promises significant socio-economic benefits for the nation. These include bolstered GDP growth, employment opportunities, and income generation within sustainable green industries poised to thrive in the future.

 Rakyat	 Business	 Government
<ul style="list-style-type: none"> • Addition of 310,000 jobs in future-proof sectors across the country • Balanced economic outcomes with 70% of income gains to benefit medium- and low-income households • Better quality of life and health outcomes with lower emissions • Greater empowerment to reduce carbon footprint • Up-skilling support for just transition 	<ul style="list-style-type: none"> • RM120-180 billion investment opportunities in co-funded government facility for energy transition • Investment opportunities for green growth across energy transition value chain, up to RM1.2-1.3 trillion • Lower carbon footprint with cleaner energy mix and energy efficiency to future-proof trade and investment position • Enhanced talents with up-skilling of the workforce 	<ul style="list-style-type: none"> • 10-15% uplift in GDP value with spurring of new growth areas • 32% reduction in energy sector emissions, supporting climate change commitments • Enhanced energy self-sufficiency • Enhanced diversification of fiscal income with new growth • Carbon footprint reduction to future-proof industries and generate Green FDI

(Source: NETR)

NETR's Responsible Transition

NETR is essential for Malaysia's ambitious energy transition, reinforcing its pledge to achieve net-zero emissions by 2050. Over the next three decades, the Responsible Transition pathway will drive energy efficiency, renewables, emissions reduction, green mobility, hydrogen, and CCUS.

Malaysia aims to unlock capital for this transition, focusing on energy security. NETR will guide the Government's energy agenda, fostering innovation while aligning with a just transition that benefits all Malaysians, and encourages business opportunities as well as technological advancements.

(Source: National Energy Transition Roadmap, NETR)



The National Energy Awards, Malaysia's most coveted recognition for the adoption of sustainable concepts and practices by Malaysian organisations across all industries and sectors, returns for its 2023 edition!

Spearheaded by the Ministry of Natural Resources, Environment and Climate Change (NRECC), together with the Malaysian Green Technology and Climate Change Corporation (MGTC), NEA has been organised annually since 2018 to recognise leading Malaysian corporations and institutions for adopting game-changing sustainability initiatives in line with the nation's Just Energy Transition, Net Zero and sustainable development agenda.



RECOGNISING EXCELLENCE:

**NATIONAL ENERGY
AWARDS**



YB Nik Nazmi Nik Ahmad
Minister for Natural Resources, Environment
and Climate Change (NRECC)

Commenting on this year's NEA submissions, Minister for Natural Resources, Environment and Climate Change (NRECC), YB Nik Nazmi Nik Ahmad stated: "Aligning with Malaysia's commitment to sustainable economic growth, NRECC organises NEA annually to raise awareness, acceptance and adoption of sustainable energy practices across all industries. I applaud the strong participation by the entrants this year and believe they are all truly winners for championing sustainable energy practices."

"Malaysia requires everyone to play their part in our race to net zero and the NEA participants have surely led the path with their ideas, innovation and implementation for all of us to emulate. I am certain more businesses will be inspired by their example and look forward to seeing increased participation in future editions of NEA," he added.

This year, there were a total of 114 submissions, collectively achieving an impressive energy reduction of over 1.34GW in terms of electricity savings. This reduction is equivalent to a reduction of over 23,000 metric tonnes of carbon emissions annually. Among the 29 winners of the National Energy Awards, nine excelled in the Best Practices in Energy Management category, 11 in the Energy Efficiency category, and nine in the Best Renewable Energy Projects category.

In the fiercely competitive Energy Management category, four national hospitals received recognition for their proactive adoption of systematic monitoring and control systems. These systems were implemented to optimise

energy consumption, reduce energy costs, and minimise their overall environmental footprint.

Within the Energy Efficiency category, an international school claimed the top award, while another national hospital secured the runner-up position. This category specifically acknowledges initiatives that embrace sustainable energy practices in either new or retrofitted buildings.

In the Renewable Energy category, submissions encompassed a wide range of projects, including solar, solar-to-hydrogen, biogas, and mini-hydro projects from various regions across Malaysia.

In addition to the efforts to recognise the significant role in raising awareness and encouraging the adoption of sustainable practices, this year's NEA announced three categories of Special Award namely, Energy Performance Contractors, Institute of Higher Learning, and Sustainable Energy Financing.

The lead judge for NEA, Ir. Chen Thiam Leong, said, "As Malaysia makes serious strides towards combining robust economic growth with climate action, NEA will continue to play a crucial role to encourage businesses to adopt sustainable practices. This year, the panel of judges were very pleased by the numerous entries that have demonstrated efforts to make Energy Management, Energy Efficiency and RE mainstream."

NEA WINNERS RECOGNISED AT ASEAN ENERGY AWARDS

In accordance with the practice of previous editions, those who emerge as champions in the National Energy Awards (NEA) are granted the opportunity to vie for honours in the ASEAN Energy Awards (AEA). In the context of this year's AEA event, it is noteworthy that 23 out of the 29 NEA winners proudly represented Malaysia during the AEA 2023 award ceremony. This prestigious gathering took place in Bali, Indonesia, concurrent with the conclusion of the 41st ASEAN Ministers on Energy Meeting (AMEM).

The AEA serves as a prestigious accolade with a pivotal mission: to inspire and acknowledge the heightened adoption of sustainable energy practices within the public and private sectors of ASEAN member nations. It does so by categorising its recognition into three distinct segments, namely the Energy Efficiency and Conservation Best Practices Awards, the Renewable Energy Project Awards, and the Clean Coal Awards.

In essence, the AEA stands as a beacon for sustainability, aiming to motivate and honour those leading the charge in adopting sustainable energy practices within the ASEAN community. Through its three award categories, AEA seeks to champion not only the adoption of energy-efficient solutions but also the deployment of renewable energy initiatives and advancements in clean coal technologies. This multifaceted approach underscores the comprehensive nature of the AEA's mission to drive positive change and promote sustainable energy practices across the ASEAN region.

Commenting on the accomplishments of Malaysian energy players, NRECC Minister YB Nik Nazmi stated: "I hope that the success of our Malaysian participants in the AEA will be an inspiration to other industry players to embark in the adoption of sustainable energy practices while contributing towards the country's commitment to decarbonising.

As ASEAN gears up efforts in its race to net zero, we urge more industries, corporations, and individuals to lead the way on climate action to inspire the adoption of sustainable energy practices."

"At the national level, the Ministry of Natural Resources, Environment and Climate Change will continue its efforts to encourage the adoption of sustainable energy best practices, including the organisation of the NEA to recognise and to explore further opportunities to spur the uptake of energy best practices," he added.

FOSTERING SUSTAINABLE ENERGY BEST PRACTICES

In an era of growing environmental concerns and the imperative to reduce carbon emissions, Malaysia is at the forefront of fostering sustainable practices in the corporate world. The National Energy Award (NEA) stands as a testament to the transformative power of recognition and incentive. By honouring businesses committed to energy efficiency and renewable energy adoption, NEA has not only celebrated their achievements but also ignited a nationwide movement toward sustainable energy practices.

As Malaysia continues its journey towards a more sustainable and greener future, the NEA remains an essential tool in motivating, recognising, and fostering a culture of environmental responsibility among corporations. It exemplifies how collaboration between the public and private sectors, piloted by Malaysian Green Technology and Climate Change Corporation (MGTC), can drive significant change, reduce carbon emissions, and create a more sustainable and prosperous Malaysia for generations to come.

MGTC's dedication to advancing Malaysia's energy transition is not only commendable but also essential in meeting the country's regional and international targets and fulfilling its commitments under the Paris Agreement. As a beacon of sustainability and innovation, MGTC lights the path towards a greener and more sustainable future for Malaysia and the world.



RECOGNISING MALAYSIA'S SUSTAINABLE POWERHOUSES

WINNERS OF NATIONAL ENERGY AWARDS (NEA) 2023

CATEGORY 1: ENERGY MANAGEMENT



ENERGY MANAGEMENT IN LARGE BUILDING

WINNER

Hospital Alor Gajah, Melaka

RUNNER UP

Hospital Jasin, Melaka



ENERGY MANAGEMENT IN SMALL & MEDIUM BUILDING

WINNER

Hospital Tangkak, Johor

RUNNER UP

Hospital Pontian, Johor

MERIT

Johor Port Authority



ENERGY MANAGEMENT IN LARGE INDUSTRY

WINNER

*Micron Semiconductor
Malaysia Sdn Bhd*

RUNNER UP

*Ramatex Textiles
Industrial Sdn Bhd*



ENERGY MANAGEMENT IN SMALL & MEDIUM INDUSTRY

WINNER

*Indah Water Konsortium
Sdn Bhd – Klang Selatan*

RUNNER UP

*Indah Water Konsortium Sdn Bhd
– Butterworth Selatan*

CATEGORY 2: ENERGY-EFFICIENT BUILDING

EE DESIGNED BUILDING

RUNNER UP

Tzu Chi International School

RUNNER UP

PJ Midtown (Retail & Office)



TROPICAL BUILDING

WINNER

Johor Port Authority



RETROFITTED BUILDING

WINNER

Kenanga Tower

RUNNER UP

Lotus's Bukit Mertajam

MERIT

Hospital Sultanah Maliha, Kedah



LARGE GREEN BUILDING

WINNER

Tzu Chi International School

RUNNER UP

Menara PJH

MERIT

IOI City Mall Phase 1

ZERO ENERGY BUILDING

MERIT

Spritzer ASRS Warehouse

MERIT

*Projek Lebuhraya Usahasama
(PLUS) Berhad*

CATEGORY 3: RENEWABLE ENERGY



ON GRID
(NATIONAL GRID)

WINNER

Proton Tanjung Malim Sdn Bhd

RUNNER UP

reNIKOLA Holdings Sdn Bhd



ON GRID
(LOCAL GRID)

WINNER

*Sime Darby Plantation
Renewable Energy Sdn Bhd*

RUNNER UP
TONIBUNG



OFF GRID (POWER)

WINNER

Ranhill SAJ Sdn Bhd

RUNNER UP

Sabah Softwoods Berhad

OFF GRID (THERMAL)

MERIT

SIRIM Berhad

MERIT

*Alam Flora Environmental
Solutions Sdn Bhd*

SPECIAL SUBMISSION

MERIT

H2 Energy Sdn Bhd



WINNERS: ASEAN ENERGY AWARDS 2023

SUB-CATEGORY		NAME OF PROJECT	WINNER / RUNNER UP
ASEAN ENERGY EFFICIENCY & CONSERVATION BEST PRACTICES AWARDS			
Green Building Awards Category			
Large Building	Tzu Chi International School		Winner
	Menara PJH		2nd Runner-Up
Energy Management in Buildings & Industries Category			
Small & Medium Building	Johor Port Authority Building		Winner
	Hospital Pontian, Johor		1st Runner-Up
Large Building	Hospital Jasin, Melaka		1st Runner-Up
Small & Medium Industry	IWK Klang-Selatan RSTP: Klang-Selatan Regional Sewage Treatment Plant		1st Runner-Up
	Butterworth-South RSTP: Butterworth-South Regional Sewage Treatment Plan		2nd Runner-Up
Energy-Efficient Building Category			
Special Submission	Spritzer ASRS Warehouse		
	Dengkil RSA Northbound		
ASEAN RENEWABLE ENERGY PROJECT AWARDS			
Off-Grid - Power	Ranhill SAJ Sdn Bhd: Micro Hydro Application at Gunung Ledang Water Treatment Plant, Tangkak, Johor Darul Takzim		1st Runner-Up
On-Grid - Local Grid	Captive Power and Rural Community Electrification via Renewable Energy Sourcing from Palm Oil Mill Effluent at Sandakan Bay Biogas Power Plant Sime Darby Plantation		2nd Runner-Up
ASEAN COAL AWARDS			
CCT Utilisation for Power Generation			
Large Industry	Jimah East Power Sdn Bhd: Roles of Stesen Janakuasa Tuanku Muhriz in Advancing Energy Transition and Bolstering Energy Transition by Enhanced Creativity and Collaboration for a Sustainable Future		Winner

(Source: National Energy Awards, NEA)

The International Greentech & Eco Products Exhibition & Conference Malaysia (IGEM) is gearing up for its 14th edition, scheduled to take place from 4 – 6 October 2023 at the Kuala Lumpur Convention Centre.

Organised by the Ministry of Natural Resources, Environment and Climate Change (NRECC) and co-organised by the Malaysian Green Technology and Climate Change Corporation (MGTC), IGEM has gained recognition as Southeast Asia's leading trade event for green technologies and eco solutions.

For this year's instalment, IGEM has ambitious targets, aiming to generate RM4 billion in business leads, host 400 exhibition booths, and welcome 40,000 visitors from over 40 countries.

Preparations are already underway, with leading corporations like Solarvest Holdings Berhad, Samaiden Group Berhad, Polymateria Far East Private Limited, Cenergi SEA Berhad, and Leader EV Solutions Sdn Bhd confirmed as participants. Notably, international players such as Arctech Solar (China), Phoenix Green Energy (Austria), International Science Council (France), and Saxon Renewable Pte. Ltd (Singapore) will also be part of the event. Additionally, pavilions dedicated to Austria and Canada will be featured.

RACE TOWARDS NET ZERO: LEADERSHIP FOR CLIMATE ACTION



NRECC Minister YB Nik Nazmi Nik Ahmad emphasised the urgency of climate change innovation, mitigation, and adaptation, considering the vulnerability of approximately 3.3 billion people living in highly vulnerable contexts worldwide. He noted that preparations for IGEN 2023 are in full swing, with Malaysia poised to host a significant and enlightening event offering innovative technologies, products, and solutions to support climate action.

“Seamlessly integrating exhibitors showcasing game-changing technology, insightful conferences, business matchmaking, networking sessions, as well as participation from countries, high-profile visitors, and concurrent side-events into a single platform, IGEN 2023 is set to play a pivotal leadership role in accelerating the region’s Net Zero and Just Energy Transition agenda. Events like this are critical contributions to national, regional, and global climate action,” he added.

Nik Nazmi also highlighted that IGEN 2023’s exhibition layout will align with sub-thematic categories, covering Empowering Cities, Electrifying Mobility, Decarbonising Energy, Accelerating Circularity, and Conserving Biodiversity.

Moreover, several Memorandums of Understanding (MoUs) are scheduled for signing between local and international parties, reinforcing their commitment to bolstering the regional green economy.

Sponsors for IGEN 2023 include Solarvest Energy Sdn Bhd, United Overseas Bank (Malaysia) Berhad, and Samaiden Group Berhad as silver sponsors. Cenergi SEA Berhad, Polymateria Far East Private Limited, and Leader EV Solutions Sdn Bhd have been confirmed as bronze sponsors.

Over the years, IGEN has evolved into the trusted convergence point for leading minds in the fields of green technology and climate change. In keeping with this tradition, IGEN 2023 will feature thought leadership conferences covering a wide range of topics, including climate change, low-carbon cities, scientific innovation, hydrogen-based economies, waste management, circular economies, water conservation, energy efficiency, and the United Nations’ Sustainable Development Goals (UNSDGs). These knowledge events will run consistently throughout the three-day trade event.

Furthermore, the Canadian High Commission and Business Finland will concurrently facilitate seminars and networking sessions, providing attendees with inventive concepts and solutions.



Source: IGEN

Additionally, IGEN will offer the highly sought-after business networking sessions for the 14th year in a row. These sessions will be organised by the Malaysian Investment Development Authority (MIDA), the Malaysia External Trade Development Corporation (MATRADE), and the Malaysian Green Technology and Climate Change Corporation (MGTC).

IGEM 2023 will also feature dedicated programmes supporting Malaysia’s agenda to promote local businesses and provide educational opportunities, including government initiatives and youth programmes.

This year’s edition of IGEN is also the exclusive venue for the 2nd International Electric Mobility Showcase (IEMS 2023). Jointly hosted by the Malaysian Green Technology and Climate Change Corporation (MGTC) and Qube Integrated Malaysia Sdn Bhd, IEMS 2023 will be held in conjunction with the trade event.

During the recent soft launch, Minister of Investment, Trade, and Industry, YB Senator Tengku Datuk Seri Utama Zafrul Aziz, highlighted the booming ASEAN electric vehicle (EV) market, projected to reach USD2.7 billion (RM11.77 billion) by 2027. IEMS 2023 is seen as a crucial platform to support this growing industry.

Tengku Zafrul stated, “Malaysia is fully committed to fostering the success of the EV industry through favourable policies and incentives, aiming to lead in the ASEAN EV market.”

MGTC Group CEO Ts Shamsul Bahar Mohd Nor emphasised IEMS 2023’s goal of promoting EV industry growth in Malaysia, mainly through the National EV Taskforce pavilion, which differentiates it from traditional auto shows.

The IEMS 2023 will also introduce the National EV Taskforce booth, supported by key ministries and agencies, serving as a comprehensive resource centre for the Malaysian EV landscape.



Source: IGEN

MALAYSIA'S VISION FOR CLIMATE LEADERSHIP

Malaysia's commitment to achieving the net-zero greenhouse gas (GHG) emissions target, earliest by 2050 pending the completion of Long-Term Low-Emission Development Strategies (LT-LEDS), is at the core of IGEN 2023's chosen theme: 'Race For Net Zero: Leadership For Climate Action'.

This commitment involves a comprehensive, multi-faceted leadership initiative centred on the Sustainable Development Goals (SDGs) and the integration of environmental, social, and governance (ESG) goals into strategic and tactical economic decisions. These decisions lead to a fundamental shift in overall organisational strategy and day-to-day operations. Leadership at all levels is crucial in assisting communities and individuals in achieving the transformative social, economic, and political changes required to combat climate change.

The chosen theme for IGEN 2023, 'Race Towards Net Zero: Leadership for Climate Action,' aligns with Malaysia's dedication to being a frontrunner in addressing the global climate challenge. This theme not only highlights Malaysia's commitment but also emphasises critical aspects of why the country is vigorously pursuing net-zero emissions and climate action.

The theme acknowledges the unprecedented global climate crisis, marked by escalating temperatures, extreme weather events, and environmental degradation. It underscores the urgent and coordinated efforts required to mitigate the severe consequences of climate change.

Malaysia, like many other nations, has made international commitments to combat climate change, including the

Paris Agreement. This agreement obliges Malaysia to reduce carbon emissions, limit global warming to well below 2 degrees Celsius above pre-industrial levels, and pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

Malaysia is particularly vulnerable to climate change impacts, including sea-level rise, intensified storms, and disruptions to agriculture and ecosystems. Recognising these vulnerabilities, Malaysia is motivated to take climate action to safeguard its people and environment.

Additionally, transitioning to a low-carbon economy offers substantial economic opportunities. Green technologies and eco-friendly solutions can drive innovation, create jobs, and stimulate economic growth, positioning Malaysia as a regional hub for green technology and renewable energy.

Furthermore, Malaysia's pursuit of net-zero emissions aligns with broader sustainable development goals. It enhances air and water quality, reduces pollution, and enhances the overall quality of life for its citizens. It also supports efforts to conserve biodiversity and protect natural resources.

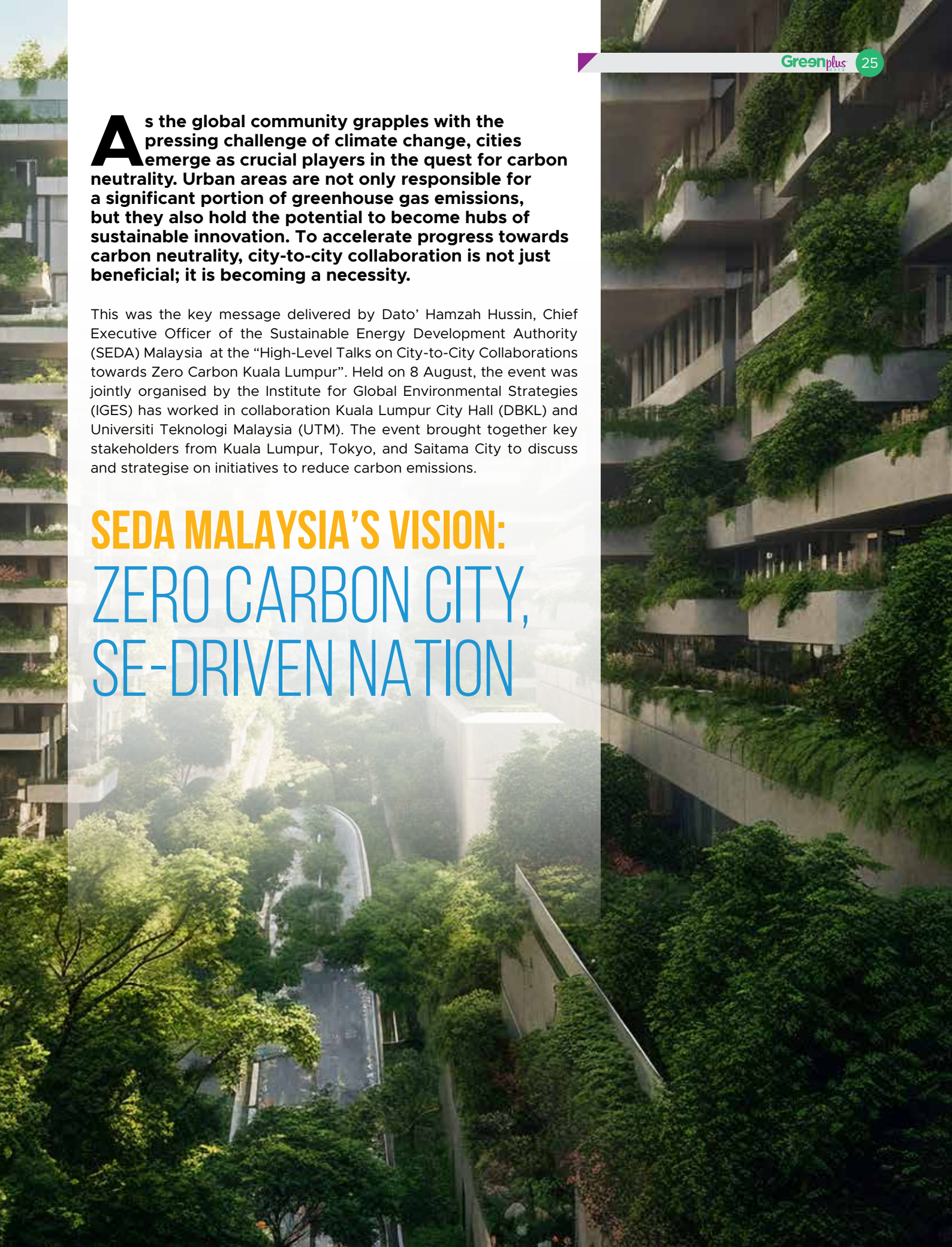
By adopting the theme 'Race For Net Zero: Leadership For Climate Action,' Malaysia signals its intent to set an example for the region. It aims to inspire other nations, demonstrating that meaningful climate action is achievable, even for developing economies.

Recognising that climate change is a global challenge requiring cross-border collaboration, Malaysia leverages IGEN as a platform for international cooperation, knowledge exchange, and the sharing of innovative solutions to expedite climate action.

As the global community grapples with the pressing challenge of climate change, cities emerge as crucial players in the quest for carbon neutrality. Urban areas are not only responsible for a significant portion of greenhouse gas emissions, but they also hold the potential to become hubs of sustainable innovation. To accelerate progress towards carbon neutrality, city-to-city collaboration is not just beneficial; it is becoming a necessity.

This was the key message delivered by Dato' Hamzah Hussin, Chief Executive Officer of the Sustainable Energy Development Authority (SEDA) Malaysia at the "High-Level Talks on City-to-City Collaborations towards Zero Carbon Kuala Lumpur". Held on 8 August, the event was jointly organised by the Institute for Global Environmental Strategies (IGES) has worked in collaboration Kuala Lumpur City Hall (DBKL) and Universiti Teknologi Malaysia (UTM). The event brought together key stakeholders from Kuala Lumpur, Tokyo, and Saitama City to discuss and strategise on initiatives to reduce carbon emissions.

SEDA MALAYSIA'S VISION: ZERO CARBON CITY, SE-DRIVEN NATION



LEADING THE NATION IN SUSTAINABLE ENERGY

In the global quest to combat climate change and transition toward a sustainable future, the role of visionary organisations cannot be overstated. Sustainable Energy Development Authority (SEDA) Malaysia is one such organisation at the forefront of driving Malaysia's initiatives towards achieving a zero-carbon, sustainable future.

SEDA Malaysia was established in 2011 with a clear mandate: to facilitate and promote the development of Sustainable Energy (SE) in Malaysia. The Authority is multifaceted and has become a cornerstone of Malaysia's efforts to reduce carbon emissions, foster clean energy adoption, and transition to a sustainable energy landscape.

SEDA Malaysia's CEO Dato' Hamzah's talk was a pivotal moment during the "High-Level Talks on City-to-City Collaborations towards Zero Carbon Kuala Lumpur" as he provided an insightful update on SEDA Malaysia's initiatives related to sustainable energy. These initiatives are crucial in supporting the Malaysian Government's ambitious target of achieving carbon neutrality, aligning with global efforts to combat climate change.

Dato' Hamzah shared that SEDA Malaysia has been an instrumental organisation in advancing the deployment of renewable energy sources, including solar, biomass, biogas and small hydro.

Over the last decade, the Authority has implemented several transformative initiatives, with the Feed-in Tariff (FiT) scheme emerging as a game-changing strategy for diversifying Malaysia's energy landscape and reducing its reliance on fossil fuels. Dato' Hamzah highlighted the scheme's effectiveness: "FiT has garnered significant interest from both public and private sectors as it offers long-term contracts to renewable energy (RE) producers, guaranteeing a fixed premium tariff for the electricity they generate. This approach ensures a fair and attractive price for RE, thereby encouraging investments in renewable energy projects."

On the broader impact of FiT, Dato' Hamzah elaborated, "Beyond its role in creating a conducive environment for RE development, FiT provides a stable and predictable income stream for RE producers. This, in turn, contributes to an overall increase in the share of RE in Malaysia's electricity generation. It also stimulates job creation and economic growth through the development and operation of RE projects while fostering the growth of local expertise and capacity in the sector."

"The significant progress made by both the FiT and NEM programmes, underlining their instrumental role in advancing Malaysia's sustainable energy goals. As of June 2023, approximately 388.9MW of the allocated 1,080MW quota for NEM 3.0 have been successfully utilised. The data collected clearly demonstrates the remarkable strides these initiatives have made towards a greener and more SE future for Malaysia," highlighted Dato' Hamzah.

Besides renewable energy, SEDA Malaysia promotes energy efficiency (EE) measures across various sectors, such as energy-efficient building standards, industrial processes, and lighting systems. Notable initiatives include:

- Energy Audit Conditional Grant (EACG);
- Voluntary Sustainable Energy Low Carbon Building Assessment (under the Low Carbon Building Facilitation Programme);
- Zero Energy Building (ZEB) Facilitation Programme.

These initiatives aim to reduce energy consumption, increase energy efficiency, and raise awareness about energy conservation.

The Energy Audit Conditional Grant (EACG) was first introduced under the 11th Malaysia plan (RMK-11) for the implementation year of 2016-2020 to promote energy efficiency and sustainability in commercial and industrial sectors by providing financial incentives for energy audits. Due to the positive response by the public, and its impact on the overall sustainable energy agenda, the programme is continued under the 12th Malaysia Plan (2021-2025) with a total allocation of RM86.73 million.

Since its implementation, EACG has made an impact in terms of the number of applications received to the reduction in carbon emissions achieved:

- Total applications – 343
- Grants approved – 277
- Disbursed Amount – RM22,410,000
- Industrial Sector Grants – 55%
- Commercial Sector Grants – 45%
- Total Energy Savings (under RMK-11 EACG) – 78.2GWh
- Carbon Emission Reduction – ~48,122 tCO₂eq

The Voluntary Sustainable Energy Low Carbon Building Assessment, operating under the Low Carbon Building Facilitation Programme, recognises the important role of buildings in carbon reduction efforts, as they are responsible for 80-90% of carbon emissions during

their operational phase. While various initiatives have been launched to promote sustainable, low-carbon buildings, a structured means to assess and access these achievements still needs to be included.

Malaysia has been actively involved in the Zero Energy Building (ZEB) Facilitation Programme (ZEB) development since the introduction of integrated energy-efficient building design programmes and the promotion of MS1525 – Code of Practice for the Use of Energy Efficiency & Renewable Energy in Non-residential Buildings in 2002. The aim is to promote super low-carbon green buildings through advanced energy efficiency measures and on-site renewables, aligning with global climate goals and advancing sustainable building practices.

Malaysia's commitment to sustainable building practices is exemplified through various demonstration projects, which reflect the government's dedication to environmental conservation and energy efficiency:

Demonstration Project	Energy Savings (%)
Low Energy Office (LEO) of the Natural Resources, Environment and Climate Change Ministry (NRECC) building	56%
Green Energy Office (GEO) of the Malaysian Green Technology and Climate Change Corporation (MGTC)	86%
Diamond Building of the Energy Commission	70%
Panasonic Green Warehouse	>75%
Putrajaya's Zero Energy Home P14	>200%

In addition to energy-related organisations and agencies, SEDA Malaysia collaborates closely with cities, including the capital, Kuala Lumpur, to transition to low-carbon urban environments. The Authority's expertise in sustainable urban planning, coupled with its support for green initiatives, is pivotal in realising Malaysia's zero-carbon urban future.

UNWAVERING DEDICATION TO LOWERING CARBON FOOTPRINT

SEDA Malaysia actively participates in international collaborations and knowledge sharing that foster the exchange of best practices and align Malaysia's efforts with global climate goals.

Dato's Hamzah shared that Malaysia has taken robust steps to address greenhouse gas (GHG) emissions, demonstrating its commitment to the international community. In its National Determined Contribution (NDC) pledge under the Paris Agreement, initially put forth during COP26 and reiterated in COP27, the Malaysian Government has made a firm commitment to achieving net-zero emissions by 2050. Additionally, Malaysia aims to reduce the intensity of CO₂ emissions concerning its GDP by 45% by 2030.

"Seminars like the 'High-Level Talks on City-to-City Collaborations towards Zero Carbon Kuala Lumpur' are welcoming platforms where local governments, implementing bodies and other energy-related agencies can gain valuable insights on green technologies and strategic mechanisms to reduce the carbon footprint in their respective countries.

Malaysia is well on its way to achieving its regional and international targets. I believe we can do more to secure a sustainable future for the next generations," said Dato' Hamzah.



Dato' Hamzah shared his insight at the "High-Level Talks on City-to-City Collaborations towards Zero Carbon Kuala Lumpur" event recently.





CITY-TO-CITY PARTNERSHIP

In 2019, the Tokyo Metropolitan Government (TMG) and Kuala Lumpur City Hall (DBKL) initiated a city-to-city partnership with the goal of transferring TMG's expertise to establish and promote a 'zero-carbon buildings' system in Kuala Lumpur city. This collaborative project encompassed a range of activities, including assessing energy consumption in KL's public buildings dating back to 1955. It also involved the identification of buildings requiring energy-saving upgrades and the formulation of comprehensive guidelines.

Among the notable support provided by TMG from 2019 to 2021 were efforts such as establishing an energy database for KL city's facilities. This involved estimating the potential for reducing CO₂ emissions and developing scenarios for emissions reduction within the city. TMG also introduced its "Tokyo Metropolitan Government's standard specifications and designs for energy efficiency and renewable installations." These guidelines are applied during the construction or renovation of facilities and draw from TMG's experience managing the Tokyo Cap-and-Trade Programme.

Additionally, TMG shared valuable information concerning its ambitious 2030 Carbon Half target and outlined strategies to strengthen the programme, focusing on buildings, to realise this initiative.

H.E. Katsuhiko Takahashi, the Ambassador of Japan to Malaysia, emphasised in his opening remarks, "Decarbonisation stands as a crucial realm of collaboration as ASEAN and Japan commemorate the 50th anniversary of ASEAN-Japan Friendship and Cooperation this year." He further underscored that this project serves as a catalyst for advancing

cooperation between Japan and Malaysia in their pursuit of decarbonisation while simultaneously strengthening bilateral relations.

Yuriko Koike, Governor of Tokyo, delivered a video message in her welcome address, expressing her expectations for the three cities to work together as partners towards realising a decarbonised society. A TMG official also participated online and shared the latest initiatives, such as the amendment of the Tokyo Metropolitan Ordinances towards the realisation of the '2030 Carbon Half'.

Saitama City, known for its success in 'smart home community' development, recently joined the collaboration to support KL City's carbon-neutral district vision. During the event, the Mayor of Saitama City, Hayato Shimizu, introduced Saitama City's initiatives for smart home community and mobility. He also expressed his expectation to deepen this city-to-city collaboration and further promote each other's initiatives to realise a decarbonised society.

In this era of climate crisis, cities have risen to the forefront as indispensable champions in the relentless struggle for carbon neutrality. As hubs of innovation and progress, urban areas not only shoulder the burden of substantial greenhouse gas emissions but also lead the way in sustainable transformation. The need for city-to-city collaboration has risen beyond being a mere advantage and has become an undeniable necessity. As these vibrant metropolises join forces to pursue a greener, more sustainable world, they illuminate the way forward, proving that the combined strength of cities is the beacon of hope in the battle against climate change.



MALAYSIA'S ENERGY TRANSITION: POLICIES, PARTNERSHIPS, AND PROGRESS

For decades, Malaysia has been a nation of innovation and progress, dedicated to transforming its energy landscape to meet the evolving needs of its people. Like many nations, Malaysia recognises the environmental and sustainability challenges associated with coal-based energy generation from its initial dependency on coal as a primary energy source to meet the growing electricity demand to power its economy.

Malaysia has consistently demonstrated a commitment to providing its citizens with reliable and sustainable energy (SE) sources in recent years. However, now more than ever, the country has escalated its efforts, standing at the forefront of a global movement towards cleaner and greener energy solutions.

At the heart of this transformation, Tenaga Nasional Berhad (TNB) recently hosted the Energy Transition Conference 2023 – a landmark event designed to propel progress towards net-zero emissions. Held on 28 and 29 August, the conference saw the gathering of local and international thought leaders, experts, industry players, policymakers, and communities from across the value chain. Together, they worked to formulate solutions and strategies, stimulate meaningful changes to accelerate Malaysia's energy transition effectively and form collaborations.



Crucially, the Sustainable Energy Development Authority (SEDA) Malaysia came on board as a Supporting Partner in this landmark event. During the conference, YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia, graced the stage as one of the distinguished panellists in the 'Forward-Thinking Policies & Regulations That Shape The Energy Transition' session.

In his address, Dato' Hamzah highlighted the ever-evolving landscape of global energy transition and the crucial position that Malaysia finds itself in. He underlined, "as the world – Malaysia included – faces the pressing imperative of transitioning towards sustainable and greener energy sources, it is highly necessary to explore and implement critical policies that can accelerate and scale Malaysia's energy transition."

Dato' Hamzah's insights were shared alongside those of other esteemed panellists, including Dato' Ir. Ts. Abdul Razib Dawood, Chief Executive Officer of Energy Commission, Ir. Jisman Parada Hutajulu, Director General of Electricity, Ministry of Energy and Mineral Resources, Republic of Indonesia, and Geoff Childs, General Manager Asia of Gentrack, during the 45 minutes session, moderated by Nurlin Mohd Salleh, Managing Director and Partner of Boston Consulting Group (BCG).

"As the world – Malaysia included – faces the pressing imperative of transitioning towards sustainable and greener energy sources, it is highly necessary to explore and implement critical policies that can accelerate and scale Malaysia's energy transition."



POLICIES AS AN ACCELERATOR OF ENERGY TRANSITION

The discussion at the Energy Transition Conference revolved around next-level policies in accelerating and scaling Malaysia's energy transition. Dato' Hamzah emphasised that policies are the linchpin for mitigating investment risks and ensuring long-term stability for stakeholders.

"Energy transition demands a colossal infusion of capital into diverse sectors, encompassing renewable energy (RE) ventures, grid infrastructure enhancements, the proliferation of e-mobility solutions, and the implementation of energy efficiency measures," stated Dato' Hamzah.

Dato' Hamzah elaborated that these substantial investments come with their fair share of challenges, including policy unpredictability, regulatory bottlenecks, market oscillations, and societal resistance.

"These risk factors, if left unaddressed, can deter potential investors from channelling finances into energy transition projects or elevate their capital-related expenditures. Hence, the imperativeness of crafting policies that offer the twin virtues of steadfastness and credibility, while fostering an environment that is conducive to investment, cannot be overstated," he explained.



Dato' Hamzah highlighted the following key policy recommendations to de-risk investments and promote long-term stability for investors:

Establish clear, long-term policy frameworks:

These frameworks should be meticulously aligned with climate goals and provide a clear direction for the energy transition.

Implement stable policy instruments: Policy instruments such as Feed-in Tariff (FIT), contracts, auctions, or green certificates should be utilised to guarantee minimum revenue or pricing for renewable energy producers.

Simplify permitting processes: Streamline administrative procedures to reduce costs and delays associated with energy transition projects.

Promote public-private partnerships: Encourage partnerships, blended finance, green bonds, and innovative financing mechanisms to mobilise private capital for energy transition projects.

SPEARHEADING MALAYSIA'S SUSTAINABLE AGENDA

SEDA Malaysia has been leading the charge in shaping Malaysia's sustainable energy (SE) vision since its establishment in 2011. The Authority's steadfast dedication to sustainability and its unwavering backing of initiatives promoting SE that enhance both society and the economy have been consistently demonstrated.

However, SEDA Malaysia also faces challenges and uncertainties due to the changing and disruptive energy transition landscape. To remain relevant and effective, the Authority adopts various strategies, including:

Regular policy monitoring and evaluation: SEDA Malaysia keeps its finger on the pulse of energy transition policies, ensuring they remain effective and aligned with evolving needs.

Stakeholder engagement: Engaging with stakeholders is crucial to understanding diverse perspectives and ensuring policies address the needs and concerns of all parties involved.

Adaptive policy-making approaches: Flexibility is key, and SEDA Malaysia adopts adaptive policy-making approaches to adjust to changing circumstances and emerging challenges.

Learning and knowledge exchange: SEDA Malaysia actively engages in knowledge exchange, learning from best practices globally and implementing them to drive sustainable energy (SE) development in Malaysia.

Dato' Hamzah reinforced that SE is not solely a technical or economic issue – it's also a social and environmental one. "Therefore, striking the right balance between the needs and interests of various stakeholders, while ensuring that sustainable energy contributes to the well-being of current and future generations is a core tenet of SEDA Malaysia's mission."



SECURING GREENER FUTURE

The urgency of Malaysia's energy transition cannot be overstated as the country is currently faced with the dual challenge of addressing the global urgency to combat climate change and meeting the domestic requirement for a sustainable energy supply. This transition encompasses various facets, including the crucial aspect of shifting to cleaner and more sustainable energy (SE) sources. This shift is imperative in significantly reducing Malaysia's carbon footprint and combating the harmful consequences of climate change, with SE alternatives playing the primary role in mitigating the environmental impact of energy production.

Further, SE sources provide greater energy security, reducing dependence on fossil fuels and volatile global energy markets and, subsequently,

enhancing Malaysia's ability to meet its energy needs consistently. Moreover, SE projects stimulate economic growth by creating jobs, attracting investments, and fostering innovation.

The country's dedication to achieving net-zero emissions and fostering energy diversity is not merely a domestic initiative but a global pledge to combat climate change. Malaysia will continue charting its pathway towards a sustainable energy future, with policies, partnerships and persistent commitment as its main drivers. The journey may be challenging, but the destination – a greener, cleaner, and more prosperous Malaysia – is well worth the effort.



SAREF 3.0: BRIDGING THE GAP TO SUSTAINABLE ENERGY

The third edition of the Sustainability & Renewable Energy Forum (SAREF 3.0) kicked off in Kuching, Sarawak. Held on 6 and 7 September at the Borneo Convention Centre Kuching (BCKK), SAREF 3.0 is powered by Sarawak Energy, with support from the Ministry of Utility & Telecommunication, and the Ministry of Energy & Environmental Sustainability. The two-day forum brought together industry leaders, policymakers and experts in the global energy and sustainability arenas, all aligned in their commitment to driving the world's transition towards a sustainable energy future.

Also featured in the special panel session entitled: A Shared Energy Future - Partnership and Collaboration is Sarawak Energy Group Chief Executive Officer Datu Haji Sharbini Suhaili, who is also the chairman of SAREF 3.0.

This year's forum theme, "Regional Net Zero and Sustainable Communities, Renewable Energy Development and Interconnections", resonated profoundly in the face of record-breaking global temperatures witnessed in the preceding July. This imperative theme steered discussions towards regional net-zero initiatives and the exploration of green energy solutions.

The event commenced with the esteemed presence of the Premier of Sarawak, The Right Honourable Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari bin Tun Datuk Abang Haji Openg, who inaugurated the proceedings on the first day.

"SAREF is a vital platform for driving regional discourse on renewables and the energy transition. The forum aims to identify opportunities to pave the way for a shared and more sustainable energy future within the region, ultimately contributing to prosperity and sustainable living for all," remarked the Premier of Sarawak in his opening address.

GLOBAL SUSTAINABLE ENERGY COMMITMENT IN MOTION

SAREF 3.0 is built upon the success of its predecessors. Sarawak Energy initiated the first SAREF in 2019 as part of a ten-year thought leadership campaign. This campaign was designed to stimulate conversations on renewable energy and actionable solutions in Southeast Asia, with a strong focus on achieving the United Nations Sustainable Development Goals (UNSDGs). The journey continued with SAREF 2.0 in 2021, in partnership with UN Global Compact Network Malaysia and Brunei (UNGCMYB) as a parallel session within the GO ESG ASEAN 2021 Summit.

SAREF 3.0 delved into the critical issues of regional net zero targets and sustainable communities. It explored how Southeast Asian nations could achieve these ambitious targets through a just and inclusive energy transition. The focus was on people and sustainable communities, driven by renewable energy development and regional interconnections.



Premier of Sarawak, YAB Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari bin Tun Datuk Abang Haji Openg (fifth from left) posing with a SAREF 3.0 promotional banner together with Yusri Safri, Senior Vice President for Contract & Procurement, Sarawak Energy (sixth from left), during Sarawak Energy's courtesy visit to the Premier's Office on 8 August 2023.

The conference's opening day saw discussions centred on the importance of regional collaboration and decisive climate action in shaping a sustainable energy landscape in Southeast Asia. Among the highlights of SAREF 3.0 was the keynote address delivered by Dame Christiana Figueres, an iconic figure in the realms of sustainability and climate action. Being the former Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), Dame Christiana's leadership was instrumental in uniting nearly two hundred countries under the Paris Agreement.



Dame Christiana Figueres, the former Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), was featured in a special panel session entitled: A Shared Energy Future - Partnership and Collaboration.

"In Sarawak, the responsibility is to exercise wisdom and leadership in maximising the use of its abundant natural resources and to serve as a role model for the rest of the world.

"The rest of the world is not using natural resources the way Sarawak is. Nor is it being led with the political leadership demonstrated by Sarawak. The world needs compelling examples they can be inspired by, because, as humans, we are holding the pen of history," said Dame Christiana.

Following her inspiring speech, Figueres joined a Special Panel Session moderated by NBCUniversal Catalyst's Sharanjit Leyl, entitled 'A Shared Energy Future - Partnership and Collaboration'. Dame Christiana Figueres was joined by esteemed panellists, including Dr. Nuki Agya Utama, Executive Director at the ASEAN Centre for Energy, Datu Haji Sharbini Suhaili, Group CEO of Sarawak Energy and Tan Sri Tengku Muhammad Taufik, President and Group CEO of PETRONAS.

The panellists provided valuable perspectives on various critical aspects, including the promotion of renewables in Southeast Asia, the essential policy shifts required to electrify transport systems for urban transformation, strategies to ensure an equitable energy transition, and discussions around ESG and energy financing.

"While dialogue is essential – especially as we continue to forge stronger partnerships going forward – it is not enough to talk. We must do," said Dr. Hazland Abang Hipni, Deputy Minister for Energy and Environmental Sustainability of Sarawak.

"Convening at conferences like SAREF 3.0 is not a privilege enjoyed by everybody. Therefore, we are responsible for translating what we have learned into tangible action for our respective energy transition journeys.

For us in Sarawak, my ministry and I will continue to work towards realising state sustainability goals, identifying new technologies and processes towards this end," he added.

SAREF 3.0 HIGHLIGHTS

Plenary Session 1: ASEAN Renewable Energy Development – Accelerating The Energy Transition: Insights Into The Importance Of Integrated Renewable Energy Frameworks And Policies

Led by Ir. James Ung, Sarawak Energy's Group Chief Operating Officer, the session highlighted ASEAN's climate action approach, emphasising integrated renewables and partnerships for a swift path to net-zero emissions. Despite a projected 2.2°C rise by 2100, optimism prevails for ASEAN's net-zero by 2050 goal via renewable energy adoption. The region targets a 35% renewable energy share by 2025, envisioning a resilient, green future.

Plenary Session 2: Regional Energy Transition & Interconnections In ASEAN: Exploration Of How Interconnections Can Facilitate Equitable Sharing Of Renewable Energy Resources

Dr. Nuki Agya Utama, Executive Director of the ASEAN Centre for Energy, led Plenary Session 2 on regional energy transition and interconnections in ASEAN. The dialogue stressed the significance of actively fostering regional ties among Southeast Asian countries for the ASEAN Power Grid's realisation and a more interconnected ASEAN. The panellists also discussed the equitable sharing of renewable energy resources, drawing insights from successful models like Europe to envision an interconnected ASEAN.

Plenary Session 3: Climate Action, Presented By Alliance Bank: In-Depth Discussions On Countries' Commitments Under The Paris Agreement And The Role Of Corporations In Low-Carbon Ecosystems

Presented by Alliance Bank, the session highlighted the significance of collective action and collaboration in shaping a more sustainable future. It also delved into crucial climate action topics, including countries' commitments under the Paris Agreement, Nationally Determined Contributions (NDCs), corporate roles in building a low-carbon ecosystem, climate action financing, and adopting low-carbon technologies. The insights from this discussion will be developed into a position paper for Asia-Pacific Climate Week (APCW 2023) and COP28.

Plenary Session 4: New Energy Solutions: Strategies For Clean Energy Solutions In Southeast Asia While Balancing Economic Development And Sustainability

During the session, energy thought leaders discussed the role of innovative energy solutions, including Energy Storage Systems (BESS) and Carbon Capture, Utilisation & Storage (CCUS) in contributing to sustainable growth in Southeast Asia and helping nations achieve their net-zero commitments.

Plenary Session 5: Looking Beyond The Hype – Is ESG Financing Really Viable?: Discussions On The Integration Of ESG Into Businesses And Investments

The session discussed the imperative of sustainability in finance and the need for ESG integration in businesses and investments. Ng Wei Wei, Executive Director & Chief Executive Officer of United Overseas Bank (UOB) Malaysia, highlighted that sustainable financing is no longer optional but essential, providing opportunities for competitive advantages until achieving net-zero emissions by 2050. The session also featured leaders from the financial industry discussing the transformation of ESG from a buzzword to a fundamental aspect of global investments and businesses. Following COP26, the commitment to combat climate change has accelerated the adoption of sustainable financing, though businesses face challenges in fully integrating ESG into their core operations.

Plenary Session 6: Talent Development For The Energy Transition: Exploration Of Public Policy And Talent Strategies For Workforce Readiness

The session delved into the significance of public policy, talent strategies, and individual purpose in preparing the workforce for an equitable energy transition. The panellists offered insights into effective policy frameworks and encouraged re-evaluating talent strategies to align with a shared goal.

Plenary Session 7: Diversity, Equity And Inclusion: Enhancing Sustainable Communities: Insights Into The Role Of Organisations In Reducing Inequities And Promoting Inclusion

The session explored the business case for DEI (Diversity, Equity, and Inclusion) in renewable energy, focusing on women, neurodivergent individuals, and young voices in the workforce. The panel, moderated by Anne Abraham, Founder & Chairperson of LeadWomen, emphasised the untapped potential of these groups to benefit both the industry and the environment.

Plenary Session 8: Green Mobility Powered By Renewables, Presented By Gentari: Strategies For Decarbonising The Transportation Sector

The session featured discussions on sustainable strategies for decarbonising transportation. Gentari CEO Sushil Purohit emphasised the central role of renewable energy in driving green mobility. The panellists also explored topics like accelerating the transition to sustainable transportation, government incentives for electric vehicles (EVs), and low-emission transportation modes.



Sarawak Energy organised the first SAREF in 2019 to commence a 10-year thought leadership campaign aimed at igniting a conversation on renewable energy and actionable solutions in Southeast Asia, focusing on meeting the United Nations Sustainable Development Goals (UNSDGs).

BUILDING A SUSTAINABLE ENERGY LEGACY

In the grand finale, the Energy Leaders Forum illuminated a path towards an accelerated and equitable energy transition, leaving no room for complacency. SAREF 3.0 marks a momentous milestone within its decade-long quest for thought leadership, set into motion in 2019. This extraordinary gathering convened luminaries and visionaries from the realms of energy and sustainability – CEOs, policymakers, scholars, champions of civil society, and media stewards alike. Together, they fervently delved into the realm of actionable solutions, crafting a blueprint for a brighter, more sustainable energy future in Southeast Asia.

SAREF 3.0 stands as a resounding testament to Sarawak Energy's unwavering commitment to nurturing dialogues that revolve around renewable energy and sustainable pathways. Aligned closely with the United Nations Sustainable Development Goals (UNSDGs), SAREF 3.0 reinforces the dedication to fostering change on a global scale. It's a transformative endeavour where each successive SAREF conference isn't just a meeting; it's a pledge to review, renew, and reaffirm commitments towards a more sustainable tomorrow.

Beyond closed doors, the SAREF 3.0 Exhibition opened its gates to the public, showcasing the myriad initiatives and groundbreaking products driving the renewable energy revolution. It's an eye-opener to a world of possibilities, inviting everyone to take part in the march towards a greener, brighter future.

(Source: Sarawak Energy)



SUSTAINABLE SEPTEMBER: KLCC GROUP PAVES THE WAY FOR GREEN URBAN TRANSFORMATION

In the heart of Kuala Lumpur, an urban marvel stands as a testament to sustainable development and responsible growth. For over four decades, KLCC Group, under the leadership of KLCC (Holdings) Sdn Bhd, has not only shaped the city's skyline but also pioneered a sustainability agenda that resonates far beyond Malaysia's borders.

KLCC Group's unwavering commitment to eco-conscious practices and long-term responsible growth has seamlessly woven sustainability into its business operations. One of its latest endeavours is 'Sustainable September', a month-long initiative in collaboration with the Kuala Lumpur Convention Centre Business Events Alliance (KLCCBEA).



Sustainable September is designed to promote interconnected sustainability and ESG-related activities across KLCC Group and its BEA Partners. The campaign's mission is ambitious: to establish KLCC Precinct as Malaysia's first Sustainability Development Goal Hub (SDG Hub), aligning with the United Nations' Sustainable Development Goals (SDGs) and the Twelfth Malaysia Plan - Advancing Sustainability. The goal is to position the KLCC Precinct as a sustainable destination that caters to all communities, including business travellers while encouraging responsible practices in all aspects of visitor experiences, encompassing 'meet, eat, sleep, shop, and play'.

A SUSTAINABLE KICK-OFF

The Sustainable September campaign commenced with a 'Run for a Cause', a fundraiser aimed to benefit the National Kidney Foundation (NKF), inaugurated by Datuk Md. Shah Mahmood, Group Chief Executive Officer of KLCC (Holdings) Sdn Bhd. The event brought together 200 enthusiastic participants for a fun run around KLCC Park, complemented by kidney health screenings for all attendees.

Reflecting on the significance of the collaborative effort, John Burke, General Manager of the Kuala Lumpur Convention Centre, representing the KLCCBEA, remarked, "We are thrilled to be involved in the Sustainable September initiative, which would not be possible without in-depth collaboration between the KLCCBEA partners who are all actively contributing to the various activities.

We are committed to our sustainability journey and building a sustainable venue, destination and business events supply chain that inspires others to follow suit. We are also delighted that we can be a part of worthy causes such as the National Kidney Foundation and Stepping Stone Living Centre in the process."

Datuk Md. Shah also commented, "Sustainable September is just one of the many programmes we have created throughout the year which we believe will benefit our Precinct partners. This also demonstrates our collective commitment to transform KLCC Precinct into a sustainable business and leisure destination."

A MONTH OF SUSTAINABILITY

Sustainable September 2023 boasts a diverse calendar packed with activities to benefit both employees and the community. Initiatives like 'Bake for Charity' will direct proceeds to charitable homes – Pertubuhan Dar Asnaf Al-Fateeh Al-Idrisiah and Stepping Stone Living Centre. Additionally, 'Used Cooking Oil Collection' drive will span across the Group, promoting responsible disposal practices, while there will be mental health and well-being education sessions for employees aim to enhance overall wellness, while blood donation drives extend a helping hand to the broader community. The hotels within the KLCC Group will also offer specially curated Restaurant Week promotions featuring delectable, sustainable, and health-conscious food options within the KLCC precinct. The campaign will culminate in a Sustainability Explorers Hunt, an interactive competition designed to solve eco-teasers while amplifying awareness of KLCC Precinct's green initiatives.

Datuk Md. Shah further emphasised that at KLCC Group, sustainability isn't merely a goal; it serves as the dynamic force propelling their decisions into the future. "Our Sustainable September plays a vital role in our commitment to advancing the UN Sustainable Development Goals. By igniting sustainability at its core, KLCC Group along with its partners aim to become the catalyst for change while enriching the lives of our community."

KLCC (Holdings) Sdn Bhd, established in 1989, is a globally recognised real estate company with a visionary mission: to lead the development of the expansive 100-acre Kuala Lumpur City Centre, nestled in the vibrant heart of the Golden Triangle in Kuala Lumpur. This ambitious venture has gained international acclaim, positioning it among the most significant real estate developments worldwide. Within this sprawling urban development lies KLCC Park, a 50-acre green oasis that harmoniously integrates office towers, retail complexes, hotels, residential buildings, and entertainment and recreation facilities into the heart of Kuala Lumpur City Centre.

Complementing this effort is the Kuala Lumpur Convention Centre Business Events Alliance (KLCCBEA), formed in 2017. This powerful collective includes the Kuala Lumpur Convention Centre and prominent partners such as the Mandarin Oriental Hotel Kuala Lumpur, Traders Hotel Kuala Lumpur, Impiana KLCC Hotel, Suria KLCC, the Marini's Group, and Malaysia Airlines Berhad. Together, they provide a seamless one-stop solution for meeting planners and event organisers, located strategically at the foot of the iconic Twin Towers within the scenic KLCC Park.

As KLCC Group continues to shape Kuala Lumpur's urban landscape, it does so with an eye firmly fixed on the horizon, where sustainability isn't just a buzzword but a way of life. Their commitment to eco-conscious practices and responsible growth stands as a shining example, inspiring others to follow suit in the noble journey toward a more sustainable future for all.



Datuk Md. Shah Mahmood (5th from right), John Burke (2nd from right), and KLCCBEA team after the tree planting ceremony to commemorate the launch of Sustainable September 2023.

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RHB EMPOWERS COMMUNITIES AND ENVIRONMENT THROUGH 43 PROJECTS ACROSS SIX COUNTRIES

In a remarkable display of commitment to social and environmental responsibility, the RHB Banking Group (“RHB”) has undertaken 43 impactful humanitarian and environmental conservation and preservation projects across six Southeast Asian countries through its annual RHB Touch Hearts initiative.

“The RHB Touch Hearts 2023 is a group-wide activity that focuses on environmental conservation and preservation, uplifting and empowering communities. It also aims to promote and encourage the spirit of volunteerism among more than 14,000 employees across six countries in the ASEAN region where we operate. The initiative reaffirms our raison d’être of ‘Making Progress Happen for Everyone’ by championing causes that contribute towards the betterment of the communities and contribute towards greener practices,” explained Mohd Rashid Mohamad, Group Managing Director/Group Chief Executive Officer of RHB Banking Group.



Mohd Rashid Mohamad, Group Managing Director/Group Chief Executive Officer of RHB Banking Group (centre right), Tan Sri Ahmad Badri Mohd Zahir, Chairman of RHB Banking Group (centre left) and the RHB team in Denai, Sabak Bernam, Selangor, planted over 530 mangrove trees along the Denai coast.

"Of the 43 projects we ran this year, 22 initiatives were environmental conservation, where our RHB team had planted more than 5,400 trees, of which 4,000 are mangrove trees, across various locations in Malaysia in collaboration with Universiti Pertanian and the Forest Research Institute Malaysia ("FRIM"), to name a few. These activities aim to contribute to the country's effort to reduce carbon emissions and protect the mangrove ecosystem. We will continue to monitor the growth of these trees and work with relevant parties to determine their impact in the long run," added Mohd Rashid.

This year marks the sixth edition of RHB's Touch Hearts initiative, with 37 projects conducted in Malaysia and six more throughout Southeast Asia. The projects in Malaysia were categorised into three pillars: uplifting communities, conserving the environment, and empowering the younger generation through education. RHB employees dedicated six months to raising funds and implementing these initiatives.

RHB Touch Hearts 2023 centred around the theme 'It Starts With Us', emphasising innovative ways to contribute to community well-being and environmental protection. This aligns with RHB's Sustainability aspiration to become a sustainably responsible financial services provider, nurturing employees, customers, and communities.

Mohd Rashid actively participated in the initiative, supporting RHB teams on the ground. One example was in Kampung Rantau Panjang, Klang, Selangor, where

RHB's efforts improved the livelihoods of more than 50 fishermen and the environment by providing financial assistance for infrastructure development, fishing equipment upgrades, and river cleanup.

The Group also intensified its efforts to combat carbon emissions by planting over 4,000 mangrove trees nationwide. Mangrove trees are natural storm barriers that stabilise coastlines and protect water quality. They are also effective at absorbing carbon emissions, contributing to carbon sequestration. Together with YBhg. Tan Sri Ahmad Badri Mohd Zahir, Chairman of RHB Banking Group, Mohd Rashid planted over 530 mangrove trees in Denai, Sabak Bernam, to safeguard a village against coastal flooding due to climate change. This initiative aims to benefit over 18,000 residents of Sungai Air Tawar, Sabak Bernam. Additionally, another group of RHB employees planted over 880 mangrove trees in Sarawak at the Samunsam Wildlife Sanctuary in Sematan to preserve the rainforest and enhance wildlife habitat.

Since its inception in 2016, the RHB Touch Hearts initiative has made a significant impact on communities, completing over 240 community and environmental projects and touching the lives of more than 100,000 people across the ASEAN region. Mohd Rashid emphasised the collective effort's goal to create a positive ripple effect, especially among the underprivileged and vulnerable, while raising awareness about the importance of environmental protection and conservation.



Mohd Rashid Mohamad (front), Tan Sri Ahmad Badri (middle) and Wong Kwang Leh, Group Chief Technology Officer of RHB Banking Group (back), at the mangrove tree planting in Denai, Sabak Bernam.



Tan Sri Ahmad Badri (left) and Tony Yeoh Chiew Mun, Head of Retail Distribution from Group Community Banking, RHB Banking Group, cleaning the river in Kampung Rantau Panjang, Klang, Selangor.

RHB Touch Hearts 2023 centred around the theme 'It Starts With Us', emphasising innovative ways to contribute to community well-being and environmental protection.

The RHB Banking Group, with RHB Bank Berhad as its holding company, is among Malaysia's largest fully integrated financial services groups. It operates across five main business pillars: Group Community Banking, Group Wholesale Banking, Group Shariah Business, Group International Business, and Group Insurance. The Group has a regional presence in eight countries, including Malaysia, Singapore, Indonesia, Thailand, Brunei, Cambodia, Vietnam, and Lao PDR.

In today's world, where social and environmental concerns are of paramount importance, companies like RHB Bank are playing an increasingly active role in promoting projects that contribute positively to society and the environment. Social and environmental projects are crucial as they address pressing issues and have far-reaching impacts. Here are several reasons why such initiatives are of great significance today:

1. **Climate Change Mitigation:** Climate change is a global crisis, and environmental projects play a vital role in reducing carbon emissions, conserving ecosystems, and mitigating the effects of climate change.
2. **Biodiversity Preservation:** Many environmental projects focus on protecting endangered species and preserving biodiversity, which is essential for ecosystem stability and human well-being.



3. **Community Upliftment:** Social projects empower underprivileged communities, providing them with better living conditions, access to education, and opportunities for economic growth.
4. **Sustainable Development:** These projects align with the United Nations' Sustainable Development Goals (SDGs) by addressing issues like poverty, hunger, clean water, and gender equality.
5. **Corporate Social Responsibility:** Companies are increasingly recognising their responsibility to give back to society and minimise their environmental footprint.
6. **Reputation and Brand Image:** Engaging in social and environmental projects enhances a company's reputation, leading to greater customer trust and loyalty.
7. **Legal and Regulatory Compliance:** Many regions have introduced regulations requiring companies to engage in sustainable and socially responsible practices.
8. **Employee Engagement:** Employees are more motivated to work for socially and environmentally responsible companies, leading to increased job satisfaction and retention.
9. **Long-Term Sustainability:** These initiatives contribute to the long-term sustainability of communities, ecosystems, and businesses themselves.
10. **Global Consciousness:** As information spreads globally, there is a growing consciousness about social and environmental issues, prompting companies to take action.

Companies like RHB Bank are setting a positive example by actively engaging in social and environmental projects. These initiatives are not only essential for the well-being of communities and the planet but also align with the evolving expectations of consumers, employees, and regulators in today's world.



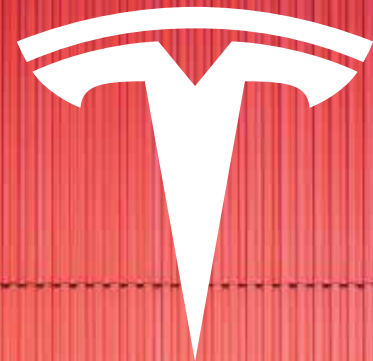
RHB's Group Sustainability and Communications team built a badminton court and installed solar streetlamps at Kampung Lubuk Kelubi, Hulu Langat, Selangor, to encourage and provide the villagers with a conducive and safe environment to promote a healthy and active lifestyle and as a source of additional income through renting of the badminton court to nearby villages.



RHB's Group Sustainability and Communications team ran financial literacy fun activities, including a colouring contest for pre-schoolers, at Kampung Lubuk Kelubi, Hulu Langat, Selangor.

As the world increasingly embraces sustainable transportation, Tesla, the pioneering electric vehicle (EV) manufacturer, epitomises innovation and transformation. With its sleek designs, cutting-edge technology, and commitment to a sustainable future, Tesla has captured the hearts and minds of automotive enthusiasts and environmentally-conscious individuals worldwide.

In recent years, Malaysia has emerged as a key player in the Southeast Asian EV market, and Tesla's entry into the Malaysian automotive scene has sparked excitement and intrigue. Tesla's strategic expansion in Malaysia directly responds to the Battery Electric Vehicle (BEV) Global Leaders initiative introduced by the Ministry of Investment, Trade and Industry (MITI).



TESLA



TESLA IN MALAYSIA: A NEW ERA OF ELECTRIC VEHICLES

Tesla's operations in Malaysia include:

Vehicle Availability: Tesla is introducing the Model 3 and Model Y to Malaysia, with deliveries expected by late 2023 and early 2023, respectively.

Charging Infrastructure: Tesla is investing in a network of fast-charging and regular-charging stations across Malaysia, ensuring convenient and efficient charging for electric vehicle owners.

Central Hub: Tesla plans to establish a cutting-edge head office and service centre in Cyberjaya, Selangor. This facility will handle corporate activities, operations, marketing, training, and customer support, providing reliable after-sales service.

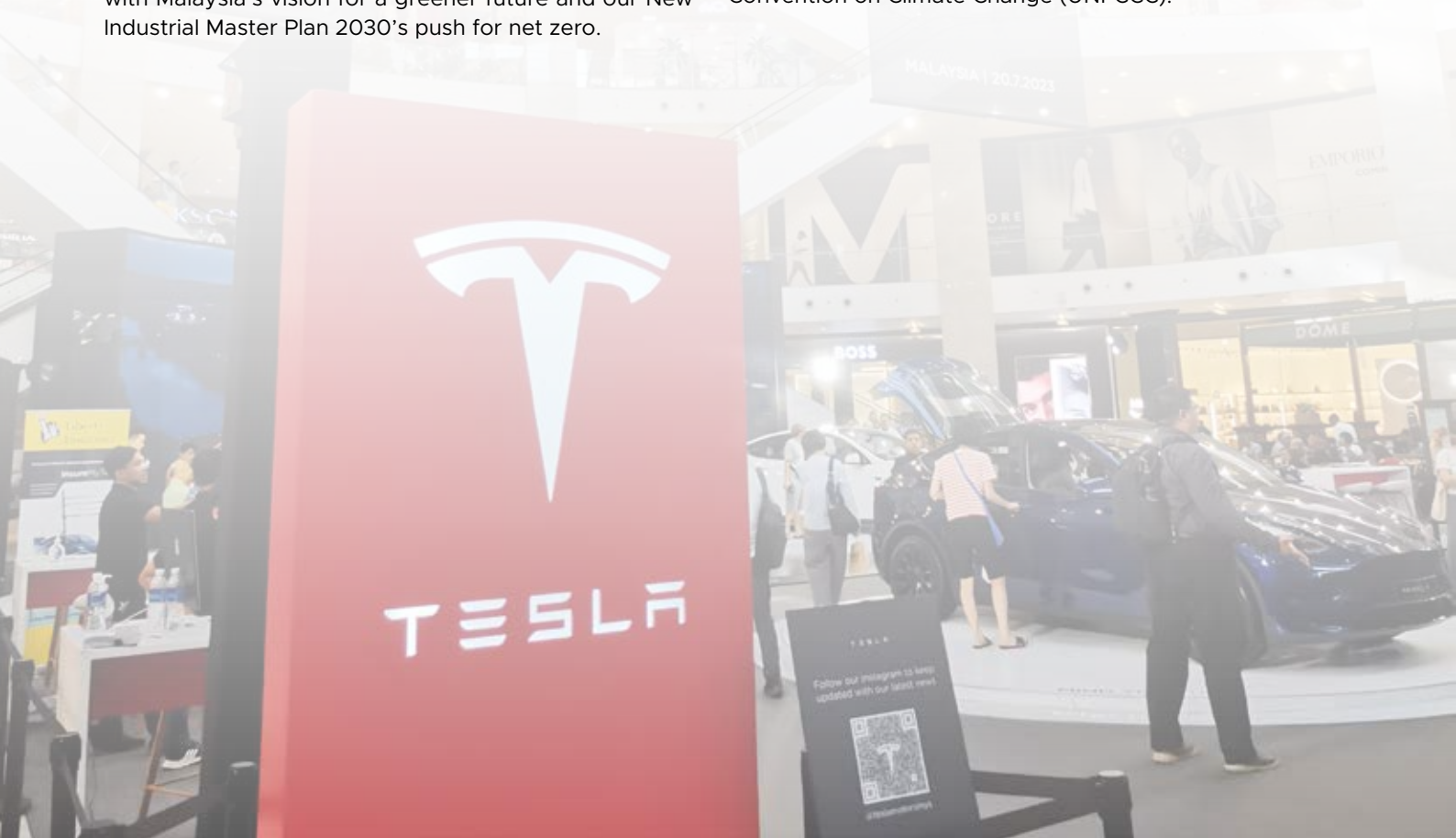
Experience Centres: Tesla will set up experience centres in major cities across Malaysia. These centres will allow customers to explore and test Tesla models first-hand while receiving personalised guidance from knowledgeable sales representatives.

The Minister of Investment, Trade and Industry (MITI), YB Senator Tengku Datuk Seri Utama Zafrul Tengku Abdul Aziz, in a recent media release, shared: "We are pleased that Tesla has chosen Malaysia as one of its destinations for their expansion in Southeast Asia. Their commitment to sustainable mobility closely aligns with Malaysia's vision for a greener future and our New Industrial Master Plan 2030's push for net zero.

MITI is focused on transforming our industrial and investment landscape to not only attract companies like Tesla to help enhance our domestic suppliers' position in global value chains but also open up new 'greener' economic opportunities and create higher-paying jobs for Malaysians. Tesla's presence here will also help raise Malaysia's pro-business and pro-investment credentials on the global stage, and we look forward to welcoming more multinational investors that share our vision of developing a more sustainable, balanced and inclusive economic growth for our nation."

Tesla's Regional Director, Ms. Isabel Fan, expressed excitement and optimism about the expansion into Malaysia. "Tesla's mission is to accelerate the world's transition to sustainable energy. As part of Tesla's commitment to Malaysia, we have unveiled a comprehensive development plan for experience centre, service and support, and charging infrastructure in the country, aimed at delivering a seamless Tesla ownership experience. We're committed and excited to help drive a zero-emission and greener future for Malaysia."

Isabel elaborated that Tesla, with steadfast commitment to innovation, sustainability and customer satisfaction, is primed to revolutionise the Malaysian automotive market and contribute significantly to the nation's environmental goal to become carbon neutral by 2050, in alignment with Malaysia's pledge to reduce carbon emissions under the United Nations Framework Convention on Climate Change (UNFCCC).





DECARBONISING MALAYSIA'S TRANSPORTATION SECTOR

Last year, it was reported that the number of registered vehicles in Malaysia reached 33.3 million units, with an annual increase of a million units annually since 2019. This statistic is a strong indication of one of the reasons for the worsening traffic congestion in recent times, but also a strong factor that emissions from the transportation sector currently rank as the second-largest CO₂ emitter in the nation after the energy sector, contributing 25% to 30% of the nation's greenhouse gases (GHG) emissions. Many experts believe green technology and electric vehicles (EVs) deployment can contribute to pollution reduction, effectively keeping clean air on the road and thus directly increasing air quality.

Efforts to decarbonise Malaysia's transportation sector saw the introduction of the Low Carbon Mobility Blueprint 2021 – 2030 (LCMB) in 2020. The blueprint deploys a policy framework to mainstream the shift towards electrification in the transportation industry as a critical strategy to diminish our emissions and contribute towards achieving our national Paris Agreement GHG target.

Under LCMB 2021-2030, Malaysia is set to achieve at least 15% of xEVs out of the total industry volume (TIV) by 2030, and 38% of xEV by 2040 under the National Energy Policy (NEP) 2022 – 2040, with 10,000 units of Charging Facilities built by 2025 (comprising 9,000 alternating current (AC) units and 1,000 direct currents (DC) units).

From 2018 to March 2023, the Malaysian Investment Development Authority (MIDA) has given the green light to 58 projects in the electric vehicle (EV) and associated sectors, with a total investment of RM26.2 billion. These approved investments cover a wide range of activities, encompassing EV assembly, the production of EV components, and the development of charging infrastructure.

A BRIGHTER, GREENER AUTOMOTIVE FUTURE

Tesla's entry into Malaysia marks a significant milestone in the nation's journey towards embracing sustainable transportation solutions. As the demand for EVs rises and infrastructure expands, Tesla's presence will undoubtedly contribute to a cleaner, greener, and more technologically advanced automotive landscape in Malaysia.

With Tesla leading the way, the road ahead looks electrifying for Malaysia's automotive industry.

ELON MUSK: THE DRIVING FORCE BEHIND TESLA

Elon Musk is a South African visionary entrepreneur, inventor, and engineer who has left an indelible mark on multiple industries. Musk's relentless pursuit of innovation has made him one of the most influential figures of the 21st century.

Musk joined Tesla in 2004, and became its chairman and primary funding source. Tesla has revolutionised the automotive industry by producing electric vehicles (EVs) that combine cutting-edge technology with sustainable energy practices. The company's electric cars, including the Model S, Model 3, Model X, and Model Y, have garnered global acclaim for their performance, range, and eco-friendliness. Under Musk's leadership, Tesla has popularised EVs and advanced autonomous driving technology, with features like Autopilot and Full Self-Driving (FSD). Tesla's commitment to sustainability extends beyond cars, with initiatives like energy storage solutions (Powerwall and Powerpack) and solar products (Solar Roof).

Outside Tesla, Musk co-founded Zip2 (an online business directory), and X.com (later became PayPal). These successes set the stage for his ambitious ventures in the aerospace and automotive industries. Musk's aerospace company, SpaceX (Space Exploration Technologies

Corp.), aims to revolutionise space exploration. SpaceX has achieved numerous milestones, including the first privately funded spacecraft to reach orbit and dock with the International Space Station. Musk's long-term vision for SpaceX includes enabling human colonisation of Mars.

In addition to Tesla and SpaceX, Musk has been involved in various ventures, such as founding The Boring Company to tackle urban transportation challenges, and Neuralink, which focuses on developing brain-computer interface technology. He also has a keen interest in renewable energy through his involvement with SolarCity and OpenAI, an organisation dedicated to artificial intelligence research.

Elon Musk's relentless pursuit of innovation, commitment to sustainability, and audacious goals have reshaped the automotive, aerospace, and technology industries. He is widely recognised as one of the most influential figures in the modern world, with a mission to address some of humanity's most pressing challenges.



(Source: Malaysian Investment Development Authority, MIDA)



LET'S GO GREEN



GREEN CADETS



Power to Grow

As Sarawak's primary power provider and Malaysia's largest renewable energy developer, Sarawak Energy is lighting up and powering our communities.

About Sarawak Energy

- Sarawak Energy is powered by a multi-disciplinary workforce of 5,200, serving a population of about 3 million, covering 700,000 domestic, commercial, industrial and export customers through an extensive transmission and distribution network.
- Our mission is to deliver reliable, renewable and affordable energy for the people of Sarawak and beyond.



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Sarawak Energy's corporate logo symbolises the power of our rivers, our natural resources and the sun harnessed to build a sustainable energy future for Sarawak and beyond.

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