

Transitioning The Nation Towards

Sustainable Energy

MALAYSIA

LEADING THE CHARGE

Sustainable Energy Development Authority (SEDA) Malaysia Chief Executive Officer (CEO), Dato' Hamzah Hussin, says the rise in sustainable energy awareness globally is indeed a good thing, whereby more people have taken notice and have started to join in the conversation locally. **P08-14**



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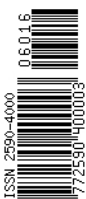


A CATALYST FOR ENERGY SAVINGS MEASURES

SEDA Malaysia's Energy Audit Conditional Grant (EACG) has helped save 344.78 GWh of electricity in 2021, involving 217 industrial and commercial buildings. **P35-37**

BOOSTING SOLAR ENERGY USAGE

SEDA Malaysia's Net Energy Metering programme to contribute 1,287 MW to renewable energy generation by 2025. **P32-34**



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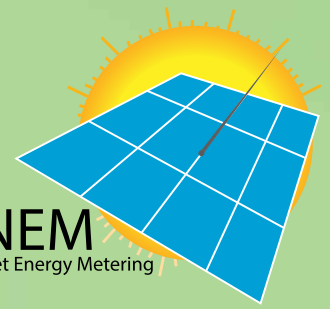


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Dato' Hamzah says the Authority promises to deliver and continue improving the country's renewable energy industry

potential and the positive changes it will bring along.

Being a statutory body, SEDA Malaysia's key role is to administer and manage the implementation of the Feed-in Tariff (FiT) mechanism, which is mandated under the Renewable Energy Act 2011 [Act 725].

As a body in charge of promoting, stimulating, facilitating and developing sustainable energy and implementing the national policy objectives for renewable energy, SEDA Malaysia has enormous tasks ahead. But no mountain is too high for this agency as it promises to deliver and continue improving the country's renewable energy industry.

According to SEDA Malaysia Chief Executive Officer (CEO), Dato' Hamzah Hussin, the rise in sustainable energy awareness globally is indeed a good thing, whereby more people have taken notice and



for Malaysia's energy space next year, Dato' Hamzah said the launch of several policy framework and guidelines such as the Malaysia Renewable Energy Roadmap (MyRER) and National Energy Policy (DTN), which outline the strategy and future for the energy industry in Malaysia, will be something to look forward to in 2023.

He wished to see more new technologies introduced and employed to ensure Malaysia is on the right track towards the set target of 31 per cent renewable energy installed mix capacity by 2025 and 40 per cent by 2035, which aligns with the net zero targets by 2050 announced by then Prime Minister Datuk Seri Ismail Sabri.

Dato' Hamzah quoted the Director-General of the International Renewable Energy Agency (IEA), HE Francesco La Camera at the International Sustainable Energy Summit (ISES) 2022 where in his keynote address on Malaysia Energy Transition Outlook (METO), he highlighted the positive outlook for share of renewable energy (RE) which will grow up to 16 per cent of the total final energy consumption in 1.5°C from less than one per cent in 2018.

He also pointed out that METO foresees solar photovoltaic (PV) and hydropower would be the key technology for renewable energy power acceleration in Malaysia.

"This is great news for SEDA as the implementing agency of the FiT mechanism

have started to join in the conversation locally.

"I believe this is a good time to ride on the interest and step up on our programmes' promotions and awareness to the public," said Dato' Hamzah.

When asked about SEDA Malaysia's aspirations for next year and its plans to strengthen its position as the leading agency in sustainable energy development, Dato' Hamzah explained this would be achieved through close collaborations with the Ministry and the various agencies under it.

"I believe SEDA will work harder to lead and grow the sustainable energy industry," he added.

ENSURING MALAYSIA IS ON THE RIGHT TRACK

Elaborating on his expectations and hopes

for hydropower resources and Net Energy Metering (NEM) for Solar PV," said Dato' Hamzah.

As the agency that advises the minister and relevant government entities on all matters relating to sustainable energy, including recommendations on policies, laws, and actions to be applied to promote sustainable energy and promoting and implementing national policy objectives for renewable energy, SEDA Malaysia will naturally continue to advocate energy-efficient practices in Malaysia.

SEDA LEADING BY EXAMPLE

On how SEDA Malaysia plans to promote renewable energy in the coming years, Dato' Hamzah highlighted several ongoing projects that were part of this continuous effort.

"The Authority is running a few programmes such as Energy Audit Conditional Grant (EACG) 2.0, Sustainable Low Carbon Building Facilitation and Assessment (LCB GreenPASS), and Zero Energy Building (ZEB) Facilitation programme, among others.

"During its first run, the EACG programme has reached the cumulative energy saving achieved of 53.4GWh based on electricity bill for 109 buildings, which is equivalent to 33,433 (tCO₂eq) as of 2020," said Dato' Hamzah.

He said through the Low Carbon Building Performance Assessment-GreenPASS and Certification Programme, 158 buildings in Malaysia were registered, and 113 buildings have been rated under the programme. The total energy savings amounted to 89,763,232.30kWh, equivalent to 61,882.33 tonnes of carbon emission reduction.

"The initiatives were aligned with the committed Nationally Determined Contributions (NDC) target to reduce Greenhouse Gas (GHG) emissions intensity of GDP by 45 per cent by 2030 relative to the emissions intensity of GDP in 2005," Dato' Hamzah explained.

Dato' Hamzah highlighted that SEDA Malaysia also led by example. "The initiative was started in 2015 by SEDA's in-house expertise. Various Energy Management initiatives had helped the Authority to achieve the Building Energy Index (BEI) of 53.9 kWh/m²/year (Zero Energy Building ZEB Ready), compared to 220 to 300 kWh/m²/year for a typical office building in Malaysia and electricity bill ≈ RM2,000/mth," he said, adding that this translated to savings of almost 74,143.45 kWh per year (at least RM38,000 per annum) and avoided 50 tonnes per year of carbon emissions.

He also touched on the significance of energy efficiency in the coming years, stating it had always been part of a holistic, sustainable energy approach.

"SEDA Malaysia was tasked to oversee both renewable energy and energy efficiency aspects to address the energy trilemma and to promote improved economic, environmental and social outcomes for the country.

"With the increase in coal prices, the cost of generating also increased by 45 per cent, according



As the statutory body tasked with leading the development of sustainable energy in Malaysia, the success of the 5th ISES 2022 established the Authority's role in promoting and increasing the awareness of sustainable energy. The event saw close collaborations between SEDA Malaysia and the then KeTSA, along with its various agencies such as Energy Commission and Tenaga Nasional Berhad (TNB) and prominent industry players in ensuring the two-day summit achieved its objectives," — Dato' Hamzah

to then Minister of Energy and Natural Resources Datuk Seri Takiyuddin Hassan.

"Hence, managing your energy through energy-efficient appliances and changed behaviour will make a difference in the electricity bill. I believe energy efficiency will be one of the highlights as we race towards our net zero goal," he explained.

ISES 2022 INCREASED SUSTAINABLE ENERGY AWARENESS

As the new year fast approached, Dato' Hamzah recalled the agency's achievements in 2022, stating that it was a significant year for SEDA Malaysia with several ongoing programmes such as SAVE3.0, NEM3.0, and MyRER.

The CEO also discussed the International Sustainable Energy Summit (ISES), which was rescheduled due to the pandemic.

"ISES was initially planned in 2020 but rescheduled due to the pandemic outbreak. The 5th ISES was eventually held on Aug 29-30, 2022 and was officiated by the then Prime Minister Datuk Seri Ismail Sabri Yaakob.

"It held an extensive exhibition featuring the industry's cream of the crop during the two-day event," said Dato' Hamzah.

ISES 2022 has become a flagship event organised in collaboration with the then Ministry of Energy and Natural Resources (KeTSA).

"As the statutory body tasked with leading the development of sustainable energy in Malaysia, the success of the 5th ISES 2022 established the Authority's role in promoting and increasing the awareness of sustainable energy.

"The event saw close collaborations between SEDA Malaysia and the then KeTSA, along with its various agencies such as Energy Commission and Tenaga Nasional Berhad (TNB) and prominent industry players in ensuring the two-day summit achieved its objectives," Dato' Hamzah elaborated.

He also explained that in addition to ISES 2022, the SAVE3.0 programme, a continuation of the successful SAVE2.0 programme, saw an overwhelming response whereby the rebates were fully taken-up ahead of its closing deadline in November 2022.

Dato' Hamzah pointed out the ongoing NEM3.0 programme was also seeing a reasonable take-up rate across all three categories. He was optimistic that NEM3.0, ending in December 2023, would show a favourable result. **SED**

YOUTH – THE VOICE OF TODAY AND THE FUTURE

SUSTAINABLE Energy Development Authority (SEDA) Malaysia Chief Executive Officer (CEO), Dato' Hamzah Hussin, plans to involve more youth in the sustainable energy sector and its long-term benefits on the industry.

"We believe that young people are the voice of today and the future. Their involvement will ensure a sustainable future for the future generation," he said.

"Realising the impact of youth in advocating for sustainable energy and climate action, SEDA Malaysia has initiated several programmes to educate today's youth on the importance of sustainable energy for Malaysia's next generation."

Dato' Hamzah said the programmes were aligned with one of the tasks mandated to SEDA Malaysia under the five strategic thrusts of the National Renewable Energy Policy and Action Plan (NREPAP) which was to develop an action plan to create greater acceptance and participation by the general public and private sector towards the sustainable energy programmes administered by the Authority.

"The Sustainable Energy E-Learning Development (SEDA SEED) was introduced in 2020 as a dedicated online Sustainable Energy (SE) educational digital programme with a combination of educational video series, quizzes, mini RE seminars with students as Speakers and tutorial sessions on RE projects.

"SEDA Malaysia organised the SEDA SEED programme in association with the Malaysian Association of Creativity & Innovation (MACRI) and STEM 4 All Makerspace Malaysia," said Dato' Hamzah.

He underlined that, for the year 2020, SEDA had combined both SEDA SEED 2020 activities and the National Science Week (NSW).

"The SEDA SEED programme was continued in 2021 to reach out to more students on the importance of SE, grooming and empowering them to advocate SE within their schools, communities and public.

"SEDA appointed 24 students from 12 secondary schools from Central Region Kuala Lumpur, Putrajaya, Cyberjaya and Selangor as SEDA SEED Student Ambassadors," Dato' Hamzah pointed out, adding the Student Ambassadors will represent SEDA and create greater awareness on SE in their schools and among the peers.

He was confident the new year would bring many new changes and challenges.

"But SEDA Malaysia will continue to play its role in growing the sustainable energy industry in Malaysia and work closely with stakeholders just like we have been doing so far," he concluded.

FINDING EFFECTIVE AND CREATIVE SOLUTIONS

SEDA Malaysia to boost RE
generation through new
programmes and collaborations



THE COVID-19 pandemic no doubt impacted the world in more ways than one.

Industries were affected, and some were even crippled due to the global lockdowns. However, it has also taught us resilience and the motivation to fight back and seek a semblance of normalcy.

According to Sustainable Energy Development Authority (SEDA) Malaysia Chief Executive Officer (CEO), Dato' Hamzah Hussin, there have been various

key learnings and challenges this past year, especially after the pandemic.

"We have seen enormous crises happening globally, which resulted in many policies being formed, with some undeniably impacting the region's economy," he said.

"Global export bans to and from some countries have caused renewable energy (RE) technology costs spikes and experts harder to obtain. As the pandemic was a worldwide crisis, Malaysia was not exempt from being plagued with several

significant issues.

"Since 2020, we are no longer one of the world's major exporters of solar panel parts. Worse, the global effect of the pandemic has slumped down the regional economy with the slump of RE constructions, further impacting the RE growth in Malaysia," said Dato' Hamzah.

Moving forward, SEDA Malaysia is ready to capture the various opportunities currently available in the sustainable energy in line with the agency's aim for growth.



TANGIBLE ACTIONS FOR RE TARGET

SEDA Malaysia aspires to achieve a 31 per cent RE in the grid by 2025, and for that, there are two tangible actions that the agency plans to focus on:

Internal processes - the Authority aims to accelerate the current processes that involve the approval of applications, and monitor for best generation outcomes. Communication is the key, and SEDA Malaysia intends to create more awareness among ministries and the community – sparking the ideas to the public can generate interest in the industry and make Malaysians more aware of the green initiatives in Malaysia.

External foresight - To engage with relevant agencies, local and globally, to look for solutions that may fit Malaysia's case. To be more creative in providing solutions regarding RE in Malaysia while balancing the energy trilemma not just for current scenarios but also to predict what will happen in the future and prepare an efficient solution plan.

“Sustainable energy and its technology are growing exponentially. Injecting the latest technologies with higher energy yield could boost RE generation in Malaysia, pushing for more economic growth in the sector as more mechanisms and programmes are introduced locally.

“This is in line with the National Energy Policy launched by the government for more green productions in the grid. As the sector grows, SEDA Malaysia has the capacity to make full use of the potential through new programmes or collaborating

with other agencies/institutions for new research and find effective and creative solutions for Malaysia,” said Dato’ Hamzah.

A TIME TO RESET

Due to the pandemic, timelines were shifted, investments were reallocated, and targets were relooked.

“This is a huge lesson to us Malaysians, something we have learnt from our neighbouring countries. It is time to reset - from starting to diversify our economy

to include the entire supply chain of the economy in the planning process. Malaysians are moving further ahead with more roadmaps and policies being formed as we speak, with concrete action plans formulated to prepare ourselves for a tough year ahead,” he added.

The pandemic and associated social distancing guidelines had reduced overall energy consumption, resulting in a decline in demand for energy, including biomass-powered electricity.

Based on region, Asia-Pacific held the largest share in 2021, contributing to more than two-fifths of the global renewable fuel market share.

However, according to the International Energy Agency (IEA), there was a sharp increase registered in energy demand globally.

After a 0.3 per cent decline due to the Covid-19 pandemic in 2020, global power generation rebounded by 5.5 per cent in 2021, above its 2010-2019 average growth (2.5 per cent/year) and exceeding its 2019 level by 5.2 per cent. **SEM**

GOVERNMENT SUPPORT A BOON FOR RE

SINCE 2012, RE development in Malaysia has been supported through four main programmes - Feed-in Tariff scheme (FiT), Large Scale Solar auction (LSS), Net Energy Metering (NEM) and Self-consumption (SELCO).

Sustainable Energy Development Authority (SEDA) Malaysia Chief Executive Officer (CEO), Dato' Hamzah Hussin said: "The support given by the government assisted tremendously for SEDA to have strategic priorities and growth targets for the next two years."

With the government meting out the target of 31 per cent RE share in the national installed capacity mix, a total of 12,916 MW of RE capacity is required by 2025.

It corresponds to 4,466 MW of renewable capacity additions from 2021 to 2025. Along with the target for the next 12-24 months, the continuation of existing RE programmes and initiatives would further its development in Malaysia.

Dato' Hamzah said the Authority was looking forward to increasing its training programmes to support human capital development in the SE sector.

"Training courses cover topics ranging from grid-connected PV system design to PV installation and maintenance, from biogas operation and maintenance training to energy efficiency and management training programmes."

CROSS-TECHNOLOGY ENABLING INITIATIVES

SEDA Malaysia collaborated with a few local training institutions and universities as its training partners. Some of the SE trainings are recognised by the National Occupational Skills Standard by the Department of Skills Development.

In line with these developments, the Malaysia Renewable Energy Roadmap (MyRER) published by SEDA Malaysia was formulated to support Malaysia's vision to achieve 31 per cent RE share in the national installed capacity mix by 2025.

Furthermore, MyRER designs a pathway to enhance the decarbonisation of the electricity sector through 2035.



Training courses cover topics ranging from grid-connected PV system design to PV installation and maintenance, from biogas operation and maintenance training to energy efficiency and management training programmes."

The MyRER strategic framework builds upon four technology-specific pillars:

- Solar pillar;
- Bioenergy pillar;
- Hydro pillar; and
- New solutions and resources pillar, including geothermal, wind and energy storage technologies

These four pillars are supported by cross-technology enabling initiatives in four areas:

- future-proofing existing electricity regulatory and market practices;
- access to financing;
- future readiness; and
- increased system flexibility.

The framework considers the outcome of MyRER's assessment of available RE resources, existing institutional and regulatory framework, industry practices and technology adoption, and projected future social and economic development.

Key actions are planned to realise respective milestone targets up to 2025 and post 2025 to 2035 horizon. MyRER's strategic pillars with milestone development target for 2025 will be achieved through the enhancement of existing programmes.

Meanwhile, the 2035 development milestones will be achieved with the implementation of new business models in line with the government's strategy for future-proofing its existing electricity market regulatory and power sector industry practices. **SEM**



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SEDA PARTICIPATES IN SIEW 2022

Delegates also had the opportunity to meet up with representatives from Carbon Trust Singapore



SUSTAINABLE Energy Development Authority (SEDA) Malaysia participated in the Singapore International Energy Week (SIEW) 2022, organised by Energy Market Authority (EMA) at Marina Bay Sands (Sands Expo and Convention Centre) on

Oct 25-28, 2022.

The four-day conference was a platform for energy professionals, policymakers and commentators to share best practices and solutions within the global energy space.

Dr Wirdati Mohd Radzi, Authority Member of SEDA Malaysia and Saiful Hakim Abdul Rahman, Director of Strategic

Planning SEDA Malaysia, had an engaging session with Carbon Trust Singapore, Xinying Tok, Head of South East Asia and Mauricio Riveros, Associate Director, Programmes & Innovation discussing potential areas of collaboration on technology accelerators.

In line with its theme this year, A Resilient

ENHANCING SINGAPORE'S SOLAR ADOPTION AND GRID RELIABILITY WITH SOLAR FORECASTING TOOLS

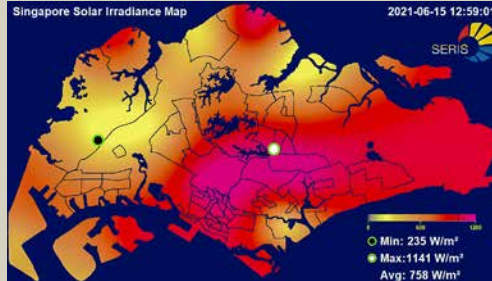
THE trial for a Solar Forecasting Model to anticipate solar intermittency and enhance Singapore's power grid resilience has been completed.

Supported by the Energy Market Authority (EMA) and the Meteorological Service Singapore (MSS) of the National Environment Agency (NEA), and developed by the Solar Energy Research Institute of Singapore (SERIS) at the National University of Singapore (NUS), the model completed its one-year trial at EMA's Power System Control Centre in September this year.

First of its kind, the model can forecast Singapore's island-wide solar irradiance up to one hour ahead, with an average error rate lower than 10 per cent, one of the lowest for solar forecasting in the tropics.

The Model would allow EMA, as Singapore's power system operator, to anticipate the solar power output ahead of time and take pre-emptive actions to manage solar intermittency and balance the power grid.

This is another step towards maintaining



grid reliability as we scale up solar deployment in Singapore. It also allows the electricity market to procure additional reserves or adjust the output of power generation plants and energy storage systems to increase electricity supply ahead of time to meet demand.

The Solar Forecasting Model utilises data from real-time irradiance sensors installed on rooftops of buildings and electrical substations across Singapore. It also incorporates numerous dynamic solar forecasting techniques, such as satellite imagery and machine learning algorithms.

Combining outputs from MSS' numerical weather prediction system,

known as SINGV, the Solar Forecasting Model can aggregate the various types of data to generate round-the-clock solar irradiance forecasts at regular intervals from five minutes to 24 hours ahead of schedules.

The Solar Forecasting Model has an average nRMSE (normalised root mean square error) of less than 10 per cent up to one hour ahead.

"In tandem with the Singapore Green Plan 2030 and to advance Singapore's energy transition, Singapore aims to deploy at least two gigawatt-peak (GWp) of solar capacity by 2030," said Ngiam Shih Chun, Chief Executive, EMA.

Dr Thomas Reindl, Deputy Chief Executive Officer at SERIS, who led the project team, said: "Asian power grid operators increasingly require forecasting of solar irradiance from owners of large-scale solar power systems.

"Therefore, the developed model has strong potential to be scaled up and commercialised to support the operations of solar farms across the region."

And Sustainable Energy Future, SIEW 2022 discussed policies, frameworks, and best practices to accelerate the transition to a more resilient, greener and more inclusive energy future.

It also examined the opportunities and challenges as the region scales up investments and regional connectivity for a green economy.

There were different forums under SIEW 2022, and all forums were energy-related industries, from sustainable energy to conventional forms of energy.

The forums SEDA Malaysia delegates attended were:

- SIEW Summit,
- SIEW Energy Insights,
- SIEW TechTables,
- SIEW Thinktank Roundtable A - ASEAN Centre for Energy (ACE) & United States of America Department of Commerce,
- SIEW Thinktank Roundtable B - Energy Studies Institute (ESI) & Energy Research Institute @ NTU (ERI@N), and The Future of The Grid.

SIEW 2022 highlighted several critical



issues in the energy industry, such as the current global energy crisis caused by the Russian-Ukraine War and the pledged climate commitment while driving industrial ambition.

A new energy system will be the future, taking into account renewables, hydrogen, and nuclear.

Currently, the energy transition agenda globally is dominated by renewables and complemented by hydrogen. **SEM**

REIMAGINING RE AND ENABLING THE ENVIRONMENT

SEDA Malaysia continues to examine the RE business globally and strategises further to be a steward of our environment

MALAYSIA is keen to move its energy sector forward continuously. With this aspiration in mind, the development of sustainable energy in the country is further enhanced by learning from other energy players' experiences and success stories worldwide.

In this regard, the Malaysian delegates, led by the Secretary-General continues, strategise, the then Ministry of Energy and Natural Resources (KeTSA), YBhg. Dato' Hj Rosli Isa attended meetings and had benchmarking and technical visits in the Netherlands, Austria and the United Kingdom from October 22 to 30, 2022, accompanied by SEDA Malaysia Chief Strategy Officer, En Mohamad Nazri Mizayauddin. All these countries are the foremost leaders who lead the latest technology in the electricity supply sector.

The programme serves as a platform for officials from KeTSA and related agencies to exchange views and knowledge on the development of the global energy transition and the geopolitics of energy transition. It also explored the development of new technologies, resources and strategies to increase financing access and the energy transition risks. **SEM**



Meeting with Andritz Hydro in Vienna, Austria.



A meeting with R.E Vantage Ltd in London, United Kingdom.



Visiting Thomassen Energy in the Netherlands.



YBhg. Dato' Hj Rosli Isa, KeTSA Secretary-General with HE Ikram Mohammad Ibrahim, Malaysian Ambassador to Austria.



SEDA Malaysia Chief Strategy Officer En Mohamad Mizayauddin handed over a plaque of appreciation during the visit.



YBhg Dato' Hj Rosli Isa at the Danube power plant of Freudenuau, Austria.



NEW 'LOSS AND DAMAGE' FUND FOR VULNERABLE COUNTRIES

Package strengthens action by countries to cut greenhouse gas emissions and adapt to the inevitable impacts of climate change

THE United Nations Climate Change Conference COP27 closed with a breakthrough agreement to provide “loss and damage” funding for vulnerable countries hit hard by climate disasters.

“This outcome moves us forward,” said Simon Stiell, UN Climate Change Executive Secretary. “We have determined a way forward on a decades-long conversation on funding for loss and damage – deliberating over how we address the impacts on communities whose lives and livelihoods have been ruined by the very worst impacts of climate change.”

Set against a difficult geopolitical backdrop, COP27 resulted in countries delivering a package of decisions that reaffirmed their commitment to limit global temperature rise to 1.5 degrees Celsius above pre-industrial levels.

The package also strengthened action by countries to cut greenhouse gas emissions and adapt to the inevitable impacts of climate change, as well as boosting the support of finance, technology and capacity building needed by developing countries.

Creating a specific fund for loss and damage marked an important point of progress, with the issue added to the official agenda and adopted for the first time at COP27.

Governments took the ground-breaking decision to establish new funding arrangements and a dedicated fund to assist developing countries in responding to loss and damage. Governments also agreed to establish a ‘transitional committee to make recommendations on how to operationalise both the new funding arrangements and the fund at COP28 next year. The transitional committee’s first meeting is expected to occur before the end of March 2023

Parties also agreed on the institutional arrangements to operationalise the Santiago Network for Loss and Damage, to catalyse technical assistance to developing countries that are particularly vulnerable to the adverse effects of climate change.

COP27 saw significant progress on adaptation, with governments agreeing on the way to move forward on the Global Goal on Adaptation, which will conclude at COP28 and inform the first Global Stocktake, improving resilience amongst the most vulnerable.



Simon Stiell

New pledges,

totaling more than US\$230 million, were made to the Adaptation Fund at COP27. These pledges will help many more vulnerable communities adapt to climate change through concrete adaptation solutions. COP27 President Sameh Shoukry announced the Sharm el-Sheikh Adaptation Agenda, enhancing resilience for people living in the most climate-vulnerable communities by 2030.

UN Climate Change’s Standing Committee on Finance was requested to prepare a report on doubling adaptation finance for consideration at COP28 next year.

The cover decision, known as the Sharm el-Sheikh Implementation Plan, highlights that a global transformation to a low-carbon economy is expected to require investments of at least US\$4-6 trillion a year. Delivering such funding will require a swift and comprehensive transformation of



the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors.

Serious concern was expressed that the goal of developed country Parties to mobilise jointly US\$100 billion per year by 2020 has not yet been met, with developed countries urged to meet the goal, and multilateral development banks and international financial institutions called on to mobilise climate finance.

At COP27, deliberations continued setting a ‘new collective quantified goal on climate finance’ in 2024, considering developing countries’ needs and priorities.

“In this text, we have been given reassurances that there is no room for backsliding,” said Stiell. “It gives the key political signals that indicate the phasedown of all fossil fuels is happening.”

The World Leaders Summit, held



A SUMMARY OF SOME OF THE OTHER KEY OUTCOMES OF COP27

Technology

COP27 saw the launch of a new five-year work program at COP27 to promote climate technology solutions in developing countries.

Mitigation

COP27 significantly advanced the work on mitigation. A mitigation work programme was launched in Sharm el-Sheikh, aimed at urgently scaling up mitigation ambition and implementation. The work programme will start immediately following COP27 and continue until 2026, when there will be a review to consider its extension. Governments were also requested to revisit and strengthen the 2030 targets in their national climate plans by the end of 2023 and accelerate efforts to phasedown unabated coal power and

phase out inefficient fossil fuel subsidies.

The decision text recognises that the unprecedented global energy crisis underlines the urgency to rapidly transform energy systems to be more secure, reliable, and resilient by accelerating clean and just transitions to renewable energy during this critical decade of action.

Global Stocktake

Delegates at the UN Climate Change Conference COP27 wrapped up the second technical dialogue of the first global stocktake, a mechanism to raise ambition under the Paris Agreement. The UN Secretary-General will convene a 'climate ambition summit' in 2023, ahead of the conclusion of the stocktake at COP28 next year.

over two days during the first week of the conference, convened six high-level roundtable discussions. The discussions highlighted solutions – on themes including food security, vulnerable communities and just transition – to chart a path to overcome climate challenges and how to provide the finance, resources and tools to effectively deliver climate action at scale.

COP27 brought together more than 45,000 participants to share ideas, solutions, and build partnerships and coalitions. Indigenous peoples, local communities, cities and civil society, including youth and children, showcased how they are addressing climate change and shared how it impacts their lives.

The decisions taken here today also reemphasise the critical importance of empowering all stakeholders to engage in climate action; in particular through the five-year action plan on Action for Climate Empowerment and the intermediate review of the Gender Action Plan.

These outcomes will allow all Parties to work together to address imbalances in participation and provide stakeholders with the tools required to drive greater and more inclusive climate action at all levels.

Young people in particular were given greater prominence at COP27, with UN Climate Change's Executive Secretary promising to urge governments to not just listen to the solutions put forward by young people, but to incorporate those solutions in decision and policy making.

Young people made their voices heard through the first-of-its-kind pavilion for children and youth, as well as the first-ever youth-led Climate Forum.

In parallel with the formal negotiations, the Global Climate Action space at COP27 provided a platform for governments, businesses and civil society to collaborate and showcase their real-world climate solutions.

The UN Climate Change High-Level Champions held a two-week programme of more than 50 events. This included several major African-led initiatives to cut emissions and build climate resilience and significant work on mobilising finance.

"We have a series of milestones ahead. We must pull together, with resolve, through all processes, may they be national, regional, or others such as the G20. Every single milestone matters and builds momentum," said Stiell.

"The next step for change is just around the corner, with the United Arab Emirates'



Sameh Shoukry

stewardship of the First Global Stocktake. For the very first time we will take stock of the implementation of the Paris Agreement. It will independently evaluate the progress we have made and if our goals are adequate. It will inform what everybody, every single day, everywhere in the world, needs to do, to avert the climate crisis."

Stiell reminded delegates in the closing plenary that the world is in a critical decade for climate action. A stark report from UN Climate Change underpinned his remarks, as well as discussions throughout the two-week conference.

According to the report, implementation of current pledges by national governments put the world on track for a 2.5°C warmer world by the end of the century. The UN's Intergovernmental Panel on Climate Change indicates that greenhouse gas emissions must decline 45 per cent by 2030 to limit global warming to 1.5°C.

COP27 President Sameh Shoukry said: "The work that we've managed to do here in the past two weeks, and the results we have together achieved, are a testament to our collective will, as a community of nations, to voice a clear message that rings loudly today, here in this room and around the world: that multilateral diplomacy still works.... despite the difficulties and challenges of our times, the divergence of views, level of ambition or apprehension, we remain committed to the fight against climate change.... we rose to the occasion, upheld our responsibilities and undertook the important decisive political decisions that millions around the world expect from us."

Speaking about the year ahead, Stiell said UN Climate Change would help Parties, and future COP Presidencies navigate this path to the new implementation phase. **SEM**

SNAPSHOT OF OTHER ANNOUNCEMENTS

The conference heard many announcements:

- Countries launched a package of 25 new collaborative actions in five key areas: power, road transport, steel, hydrogen and agriculture.
- UN Secretary-General António Guterres announced a US\$3.1 billion plan to ensure everyone on the planet is protected by early warning systems within the next five years.
- The UN Secretary-General's High-Level Expert Group on Net-Zero Commitments published a report at COP27, serving as a how-to guide to ensure credible, accountable net-zero pledges by industry, financial institutions, cities and regions.
- The G7 and the V20 ('the Vulnerable Twenty') launched the Global Shield against Climate Risks, with new commitments of over US\$200 million as initial funding. Implementation is to start immediately.
- Announcing a total of US\$105.6 million in new funding, Denmark, Finland, Germany, Ireland, Slovenia, Sweden, Switzerland, and the Walloon Region of Belgium, stressed the need for even more support for the Global Environment Facility funds targeting the immediate climate adaptation needs of low-lying and low-income states.
- The new Indonesia Just Energy Transition Partnership, announced at the G20 Summit held in parallel with COP27, will mobilise US\$20 billion over the next three to five years to accelerate a just energy transition.
- Significant progress was made on forest protection with the launch of the Forest and Climate Leaders' Partnership, which aims to unite action by governments, businesses and community leaders to halt forest loss and land degradation by 2030.

UN CLIMATE CHANGE HIGH-LEVEL CHAMPIONS

Contribution of the 'All of Society' Global Climate Action Agenda

COP27'S final event, COP27 Action Agenda: Progress & Priorities, reviewed non-State actors' contributions after two weeks of over 50 activities. The Sharm-El-Sheikh Adaptation Agenda, African-led measures to cut emissions and enhance climate resilience, and funding mobilisation were among these.

The High-Level Climate Champions, Nigel Topping and Dr Mahmoud Mohieldein, Helena Gualinga, Omnia El Omrani, COP27 Youth Envoy, and Mary Robinson, Chair of The Elders, gave keynote presentations on accountability, fairness, and non-State progress at COP 7.

COP27 Champions presented the Summary of Global Climate Action to national government officials. The Summary and Yearbook of Global Climate Action 2022 show how the Champions and Marrakech Partnership delivered the first year of their five-year plan for the Improved Marrakech Partnership for Enhancing Ambition and COP27 action.

It recognises that mobilising "all of society" action with State climate plans can unlock an upward implementation cycle and cites the Marrakech Partnership's headline outcomes from COP27.

Each outcome supports one of the four key areas in the 2022 Marrakech Partnership Workplan—strengthening and mainstreaming resilience, raising finance for climate action, accelerating action, and building credibility and trust—to achieve the 1.5°C, resilient world target.

Commenting on the Summary, Dr Mahmoud Mohieldein, High-Level Champion for COP27, said: "The non-State actor community showcased at COP27 the progress they have been making on the hard work of implementation. The membership of the Race to Zero and the Race to Resilience has grown significantly, with more than half of the finance actors in Race to Zero now releasing interim targets.

"By the close of the Global Stocktake next year, we need these real economy and finance actors to demonstrate impact in the real world, through projects and



From left to right:
Racquel Moses, CEO,
Caribbean Climate-
Smart Accelerator;
Chilando
Chitangala,
Mayor of Lusaka;
Helena Gualinga,
Environmental
and Human Rights
Activist; Mary
Robinson, Chair,
The Elders.

investments on the ground, especially in developing and emerging economies. Importantly, the Sharm el-Sheikh Adaptation Agenda clarifies the work on adaptation and resilience, helping us adopt a holistic approach to climate action that touches on all the Sustainable Development Goals."

The Summary of Global Climate Action at COP27 and Yearbook of Global Climate Action shows the ongoing commitments and implementation steps.

The Champions launched data explorers for its two major programmes, Race to Resilience and Race to Zero, to track progress on these promises. Both explorers will arrive before the year ends.

Thirty-four Race to Resilience partners from 139 countries are helping 2.9 billion people build resilience. 26 Race to Zero partners have mobilised over 11,000 non-State actors.

The UN Climate Change High-Level Champions supported and delivered a wide range of initiatives, announcements, and events across mitigation, adaptation financing, and equality over two weeks, focusing on implementation.

The African Cities Water Adaptation Fund, an African-led insurance pledge to cover up to US\$14bn in climate losses and the Sharm-El-Sheikh Adaptation Agenda with the COP27 Presidency were launched.

Since January 2020, Nigel Topping has been COP26's High-Level Climate Champion.

He worked with Mohieldein and Gonzalo

Muñoz, the High-Level Champion for COP25, to launch the Race to Zero and Race to Resilience flagship campaigns, as well as the 2030 Breakthroughs, a framework that sets near-term targets across each sector of the economy that must be met to reach a net-zero economy by 2050.

The Champions and COP27 Presidency's Breakthrough Agenda and Sharm El Sheikh Adaptation Agenda have advanced the framework's concept.

Mohieldein chairs the Glasgow Financial Alliance for Net Zero's Africa Network, which Topping co-founded with Mark Carney.

Topping, High-Level Champion for COP 26, said: "We can hit our climate goals faster than we ever thought possible. We see evidence of this growing momentum in now 'possible to abate' sectors, including aviation, shipping, steel, cement and hydrogen. Countries, regions and individual organisations are consigning fossil fuels to history and ushering in a new era of cheap, reliable, renewable electricity.

"This is the power of radical collaboration; when we unite around shared goals and shared values. And this reality of exponential growth beating linear change needs to be firmly embedded as part of the Global Stocktake.

"I urge Parties to take courage and embed this momentum in their national plans. Tackling climate change is our generation's moonshot, not to demonstrate one country's industrial prowess, but to save everyone and everything we hold dear." **SEM**

SUMMARY OF GLOBAL CLIMATE CHANGE ACTION OUTCOMES

1. ADDRESSING THE ADAPTATION GAP AND STRENGTHENING RESILIENCE:

Elevating adaptation and resilience to the cornerstone of sustainable development pathway implementation to strengthen non-Party stakeholders' contributions to address loss and damage through equitable, holistic, and collaborative efforts.

● Sharm-el-Sheikh Adaptation Agenda

The Adaptation Agenda, a flagship collaboration between the COP27 Presidency, the High-Level Champions, and the Marrakech Partnership, is the first comprehensive global plan to rally States and non-State actors behind a shared set of 30 Adaptation Outcomes that are required by 2030 across food and agriculture, water and nature, oceans and coastal, human settlements and infrastructure systems and delivery across key enablers of planning and finance to enhance resiliency.

● Sharm el-Sheikh Adaptation Agenda Outcome on Oceans and Coastal Zones related to Mangroves and the launching of the Mangrove Breakthroughs

The Global Mangrove Alliance and High-Level Champions have emphasised the need for a global mangrove protection strategy. They called on signatories to join the Mangrove Adaptation Outcome (Mangrove Breakthroughs) of the Sharm el-Sheikh Adaptation Agenda to secure the future of 15 million hectares of mangroves globally by 2030 by halting mangrove loss, restoring half of recent losses, doubling global mangrove protection, and ensuring sustainable long-term finance for all existing mangroves.

● Sharm el-Sheikh Adaptation Agenda – Technical Report: 2030 Outcomes for Adaptation & Resilience Finance Outcomes

The High-Level Champions cited three Sharm el-Sheikh Adaptation Outcomes for Finance: public finance actors should increase the volume and share of adaptation and resilience finance, private finance actors should help mobilise the USD\$140 billion to US\$300 billion needed annually by 2030, and insurers should institutionalise a longer-term industry approach to adaptation and resilience. The financial deep-dive report details the Sharm el-Sheikh Adaptation Outcomes for Finance and presents delivery solutions.

● Sharm el-Sheikh Adaptation Agenda – Technical Report: 2030 Outcomes for Human Settlements

In support of the Sharm el-Sheikh Adaptation Agenda, the High-Level Champions and partners produced a human settlements technical study on adaptation outcomes such urban infrastructure, urban nature, and secure housing, as well as action to accomplish them.

● Action on Water Adaptation and Resilience Initiative (AWARE)

COP27 Presidency established Action on Water Adaptation and Resilience Initiative (AWARE). Transitional adaptation solutions for the planet and people, starting with Africa's most vulnerable communities and ecosystems, are the initiative's goal. The initiative has three main goals: decrease water loss and improve water supply worldwide; propose and support implementing mutually agreed policy and methods for cooperative water-related adaptation action and its co-benefits; and promote cooperation and interlinkages between water and climate action to achieve Agenda 2030,

particularly SDG6.

● Glasgow Declaration for Fair Water Footprint

The Glasgow Declaration for Fair Water Footprint called on governments in wealthy and developing nations, progressive corporations, bankers, and NGOs to embrace this leadership movement that puts climate resilient and equitable water management at the centre of the global economy by 2030.

● Enhancing Nature-based Solutions for Climate Transformation (ENACT)

The COP27 Presidency and IUCN created Enhancing Nature-based Solutions (NbS) for Climate Transformation (ENACT). To help finance nature-based solutions, climate, biodiversity, and desertification, collaborative action is needed. ENACT will help government and non-State players collaborate, speed action, facilitate policy discourse, and globalise NbS. The cooperation will generate annual reports and promote the NbS Global Standard. ENACT targets the land use 2030 Breakthrough, Sharm el-Sheikh Adaptation Agenda, and Mangrove Breakthroughs.

● Sustainable Urban Resilience for the Next Generation (SURGE)

The COP27 Presidency announced the Sustainable Urban Resilience for the Next Generation (SURGE) programme at the first Urbanisation and Climate Ministerial, which brought together ministers and mayors to discuss cities' biggest issues. It also seeks to unlock urban climate finance and build a pipeline of bankable projects with national governments, international development banks, and the private sector. UN Habitat and ICLEI helped.

● Beat the Heat: Nature for Cool Cities Challenge

Beat the Heat: Nature for Cool Cities Challenge by Cool Coalition. The challenge invites developing countries to pledge to boost nature-based solutions in their cities by 2030 and show success by 2025. Participants will get financing, technical assistance, partnerships, and PR support.

● Champions Group for Deltas and Coastal Zones

Netherlands created Champions Group for Deltas and Coastal Zones. The group coordinates short- and medium-term delta and coastal zone management between governments and Small Island States. Countries will receive region-specific help on implementing their National Adaptation Plans (NAPs). These efforts aim to create a financial institution project pipeline.

● Addressing Loss and Damage conference – practical action

The Scottish government, High-Level Champions, and Global Resilience Partnership produced a report on practical action to address climate losses and damages for the most vulnerable people and nations. The research stressed the need to raise public and private funds through debt relief, charity, and investment.

● Roof Over Our Heads

Roof Over Our Heads was launched under the Race to Resilience after global and regional roundtables. Community project labs in India will give two billion people durable, low-carbon, and cheap homes by 2050.

● Actions After Impacts discussion paper

The High-Level Champions produced a co-created discussion paper with practical steps for non-

State actors to accelerate losses and damages and mobilise financing. The High-Level Champions ask everyone to contribute by implementing solutions and expediting money flows to where they are required.

2. INCREASING FINANCE FOR CLIMATE ACTION

Driving the scaling of financial mobilisation and the reform of financial systems to support climate-aligned transitions, including innovative efforts implemented with integrity that seize opportunities such as debt management and carbon markets.

● Outcomes of the Regional Finance Forums and issuance of the Assets to Flows report

The COP27 Presidency, UNFCCC, and High-Level Champions held five Regional Finance Forums in 2022 with over 1,500 participants to create regional project pipelines. This report summarises project statistics from those forums. Project proponents and financiers offer practical advice on creating project pipelines and obtaining private investment.

● Climate project pipeline development – extended compendium

The COP27 Presidency, High-Level Champions, and UN Regional Commissions released 50 projects in 2022. The High-Level Champions released 128 initiatives requiring USD128 billion at COP27. This forms a mitigation and adaptation project pipeline based on NDC and regional objectives.

● Finance for Action High-Level Expert Group report

The Independent High-Level Expert Group on Climate Finance, co-chaired by Vera Songwe and Lord Nicholas Stern, released a report earlier this year with recommendations for scaling up long-term finance for developing countries beyond USD\$100 billion, integrating climate and development. Mitigation, adaptation, and nature are recommended, with underdeveloped nations needing US\$2 trillion annually until 2030.

● Action Plan for Climate and SDG Investment Mobilisation

Finance actors released a Climate and SDG Investment Mobilisation Action Plan at Convergence. Public and charitable financial resources, MDBs, and DFIs can scale blended financing. Increase catalytic funding, make MDBs and DFIs mobilisation catalysts, integrate development and climate finance, improve data, and empower local capital markets and financial intermediaries.

● Private finance Race to Zero Partner growth

By COP27, the Race to Zero had 550 financial institutions with US\$150 trillion in assets, up from 450 in COP26 (US\$130 trillion). At COP27, finance sector Race to Zero Partners published over 300 interim net zero targets. Partners are more regionalised. The Net-Zero Banking Alliance covers 40 per cent of global banking assets from 41 developing nations in Africa, Asia-Pacific, Latin America, and the Caribbean.

● The Global Investor Statement

Six hundred two investors representing over US\$42 trillion in assets under management, coordinated by The Investor Agenda, urged policymakers to establish enabling conditions and mobilise finance at the scale needed to meet Paris Agreement commitments.

● Glasgow Financial Alliance for Net Zero (GFANZ) Call to Action One Year On report

In its Call to Action One Year One report, GFANZ identified policy levers to encourage private finance. This includes net zero targets, transition plans and sector paths, aligning the global and financial architecture, pricing carbon emissions externalities, generating incentives, and mobilising capital flows to emerging markets and underdeveloped countries.

● African Carbon Market Initiative (ACMI)

ACMI, a collaboration between the Global Energy Alliance for People and Planet (GEAPP), Sustainable Energy for ALL (SEforALL), and UNECA, intends to increase Africa's involvement in voluntary carbon markets by setting a goal and developing a roadmap of action programmes over the next few years. ACMI produced a roadmap study and sought advice to realise carbon market potential.

● Financing Factsheet

The High-Level Champions created a Financing Factsheet to help project proponents give financiers with project details. This standard tool covers financial data, project structure, timing, and climate impact. Fifteen underdeveloped countries are piloting it.

● Glasgow Financial Alliance for Net Zero (GFANZ) Africa Network

At COP27, the GFANZ Africa Network and Advisory Board, founded in September 2022, prioritised unlocking investment and supporting and engaging African Financial Institutions. At COP27, the GFANZ Africa Advisory Board stated its 2023 priorities: project pipelines into investable prospects, climate finance cost reduction, carbon markets, and African perspectives in GFANZ outputs. COP27's High-Level Champion will lead the network's Advisory Board.

● Africa Climate Risk Facility

The Nairobi Declaration on Sustainable Insurance, hosted by FSD Africa and supported by the High-Level Champions, commits African insurers to cover climate risks for the first time. Eighty-five insurers pledged USD\$14 billion in climate risk coverage by 2030 under the African Climate Risk Facility. The Africa Climate Risk Facility will grow private sector underwriting for floods, droughts, and tropical cyclones in Africa for 1.4 billion people.

● High-Quality Blue Carbon Principles and Guidance

Meridian Institute and collaborators created the High Quality Blue Carbon Principles and Guidance. These guidelines and guidance attempt to standardise and optimise blue carbon projects and credits for people, biodiversity, and the climate.

● African Food Systems Transformation Initiative (AFSTI)

AFSTI and 70 African-owned agri-businesses unveiled a proposal to divert finance flows to African food supply chains. It will target ignored agri-businesses and food processors to change Africa's food outlook.

● African Cities Water Adaptation Fund (ACWA Fund)

The African Cities Water Adaptation Fund (ACWA Fund) is a new hybrid finance instrument that seeks to create and deliver over 200 projects in 100 African cities by 2032. The World Resource Institute (WRI) and its partners, development banks, impact investors, State and non-State actors, and experts help city leaders fund and scale high-impact water resilience solutions across Africa by leveraging private financing and better coordinating public sector funds with climate and development aid.

● Insurance Adaptation Acceleration Campaign

The Race to Resilience launched the Insurance Adaptation Acceleration Campaign to mobilise

3,000 insurance companies (half the market) before COP 28. The goal is to grow the industry's ability to reduce meaningful climate risk and seek creative public-private partnerships that safeguard vulnerable populations from climate change's physical impacts.

● Cool Capital Stack

The Adrienne Arsht-Rockefeller Foundation Resilience Center (Arsht-Rock) and Clean Cooling Collaborative launched the USD\$750 million Cool Capital Stack to protect the planet from excessive heat. It is the first pipeline to mobilise investment in projects and technologies to protect people, communities, and local economies from climate-driven excessive heat, especially women and girls.

● Caribbean Climate Smart Fund

RMI and Lion's Head Global Partners launched a USD\$75 million Caribbean Climate Smart Fund and USD\$15 million Project Preparation Facility to invest in Caribbean energy projects. These initiatives will stabilise electricity costs, boost energy security, and support climate resilience against severe storms while saving tens of millions of dollars in fossil fuel imports.

● Collective for Clean Transport Finance

The Collective for Clean Transport Finance was founded to develop methods to lower zero-emission transport investment risk. The Collective is a strategic partnership between the High-Level Champions, Smart Freight Center, World Bank, WBCSD, and Nand & Jeet Khemka Foundation.

● AFR100

AFR100, a 32-country programme to restore 128 million ha by 2030, has received new blended finance investments and increased financial flows since COP26.

● Industry Transition Programme

Climate Investment Fund (CIF) launched the first large-scale industrial transition finance initiative for developing countries. EBRD and World Bank plans include a US\$410m green hydrogen investment in Egypt and a US\$1.6bn global green hydrogen programme.

3. ACCELERATING ACTION

Driving action that addresses zero-carbon development needs holistically leverages nexus areas, is appropriate to local and regional conditions, and delivers a just, managed, and financed transition.

● Africa Just and Affordable Energy Transition Initiative (AJAETI)

The COP27 Egyptian Presidency announced the Africa Just and Affordable Energy Transition Initiative (AJAETI). By 2027, its three main goals are to provide technical and policy assistance for affordable energy for at least 300 million Africans, provide clean cooking fuels and technology, and expand renewable electricity output by 25 per cent.

● Planning for Climate Commission

The global Planning for Climate Commission was established to accelerate planning and approvals for the large deployment of renewables and green hydrogen needed to address climate change and energy security. The Commission was created by Green Hydrogen Organisation, International Hydropower Association, Global Wind Energy Council, and Global Solar Council.

● Global Renewables Alliance

The Global Renewables Alliance was formed by wind, solar, hydropower, green hydrogen, long-duration energy storage, and geothermal energy organisations. For the first time, it pulls together all energy transition technologies to expedite it. The Alliance promotes renewable energy as a driver of sustainable development and economic progress while meeting targets.

● Global Offshore Wind Alliance (GOWA) expansion

Belgium, Colombia, Germany, Ireland, Japan, the Netherlands, Norway, the UK, and the US join the Global Offshore Wind Alliance (GOWA). To bridge the carbon gap and improve energy security, the Alliance brings together governments, international organisations, and the private sector to promote offshore wind worldwide. Denmark, IRENA, and GWEC created the Alliance at COP26. (GWEC).

● Energise

Fifteen corporations and 364 supplier companies have joined Energise. Energise accelerates renewable energy procurement for the pharmaceutical industry's value chain. Electricity usage increased by 22.1 TWh.

● Food and Agriculture for Sustainable Transformation (FAST)

The COP27 Presidency launched the FAST initiative with support from the High-Level Champions to increase the quantity and quality of climate finance contributions to transform agriculture and food systems by 2030, supporting adaptation and a 1.5-degree pathway while ensuring food and economic security. This multi-stakeholder cooperation programme will improve the country's climate finance, investment, knowledge, policy support, and conversation capabilities.

● Agriculture Innovation Mission for Climate

AIM for Climate has announced an expanded investment of more than USD\$8 billion from 23 government partners, up from USD\$4 billion at COP 26 with the assistance of over 275 government and non-government partners. UAE-US AIM for Climate is global.

● Net Zero Playbook

The Consumer Goods Forum (CGF) and Accenture launched the Net Zero Playbook to help firms solve their toughest environmental issues. It describes what is achievable and how to start, and contains case studies of industry leaders acting on important decarbonisation levers.

● Breakthrough Agenda

Under the Breakthrough Agenda first launched at COP26, countries representing more than 70 per cent of global GDP, with support from multi-stakeholder partners, produced a package of 25 new collaborative actions to be delivered by COP28 to speed up decarbonisation under five key breakthroughs: power, road transport, steel, hydrogen, and agriculture, with buildings and cement to be added next year.

Thirteen countries joined the Agriculture Breakthrough to make climate-resilient, sustainable agriculture the most appealing and commonly chosen alternative for farmers by 2030.

● Carbon Dioxide Removal 2030 Breakthrough

The Carbon Dioxide Removal 2030 Breakthrough proposes that by 2030, carbon dioxide removals are sustainably and equitably scaled to remove three billion tonnes per year and store 500 million tonnes for at least 100 years. The Carbon Removals at COP virtual online pavilion captured removals-related events, daily comments, news, and thoughts during and after COP27.

● ICT & Mobile 2030 Breakthrough

Mobile network providers requested 64 terawatt hours (TWh) of new renewable energy by 2030, prompting the Asia Clean Energy Coalition to speed renewable electricity procurement in Asia. These clear demand side signs indicate progress toward the 2030 ICT & Mobile Breakthrough of 80 per cent decarbonised electricity.

● First Movers Coalition (FMC) Cement & Concrete Commitment

The FMC launched its Cement & Concrete

Commitment with the World Economic Forum (WEF) and Mission Possible Partnership to demonstrate the growing worldwide demand for green cement (MPP). Five signatories started the commitment.

● **African Green Hydrogen Alliance**

At COP26, the Africa Green Hydrogen Alliance (AGHA) asked for government-private sector cooperation in six African countries. Reporting on accomplishments since COP 26, the group published a detailed analysis indicating green hydrogen could sustainably industrialise Africa and improve GDP by six to 12 per cent of six important member countries by 2050. (Egypt, Kenya, Mauritania, Morocco, Namibia, and South Africa).

● **Africa Net Zero Concrete Group**

The Africa Net Zero Concrete Group exchanges experiences gained, supports enterprises in their net zero trajectories via the Race to Zero, and accelerates the creation of net zero country sector roadmaps in African countries to decarbonise the cement sector. Next year, these will be set up in ten African nations.

● **Green Cement Technology Tracker**

The LeadIt-GGCA Green Cement Technology Tracker promotes transparency and accountability. To track cement sector low-carbon investment announcements publicly.

● **Joint Statement on Green Hydrogen and Green Shipping**

Ten prominent shipping companies and green hydrogen producers pledged to generate and deploy at least five million tonnes of green hydrogen by 2030 to supply the five per cent zero emissions shipping fuels needed to decarbonise the global marine industry and limit global warming to 1.5°C.

● **Green Shipping Corridor Hub**

Zero-Emission Shipping Mission from Mission Innovation created an online Green Shipping Corridor Hub. The first online one-stop shop for green shipping corridor development. The Hub comprises a route tracker showing green shipping corridors, an interactive map connecting interested partners to co-create new corridors, and a curated library of industry thought leaders' work.

● **Maritime Just Transition Task Force**

The Maritime Just Transition Task Force released an action plan to upskill seafarers to achieve shipping's decarbonisation goals. New research suggests 800,000 seafarers will need more training by the mid-2030s, prompting the idea.

● **Sustainable Aviation Fuels (SAFs) Offtake Pocket Guide**

Aviation Fuels (SAFs) Offtake Pocket Guide Clean Skies for Tomorrow and the Sustainable Markets Initiatives collaborated to create a guidebook illustrating the SAF carbon accounting principles, providing credibility to airlines' USD\$17 billion SAF agreements. This advances the 2030 objective of 10-15 per cent sustainable aviation fuels (SAF).

● **Low Carbon Transport for Urban Sustainability (LOTUS)**

After a multi-stakeholder engagement process, the Egyptian COP27 Presidency and SLOCAT established the Low Carbon Transport for Urban Sustainability (LOTUS) initiative to decarbonise the global urban mobility landscape and implement urban transport solutions for developing nations. LOTUS launched 2023 Transport Breakthroughs.

● **Accelerate to Zero (A2Z) coalition**

The UK, High-Level Champions, International Council on Clean Transportation, The Climate Group, and the Drive Electric Campaign formed the Accelerate to Zero (A2Z) alliance to implement the "Zero Emission Vehicles Declaration" from COP26. The world's largest transportation coalition,

involving over 200 governments, business, and civil society organisations, aspires to make all new vehicle and van sales zero-emission by 2035 in leading markets and 2040 globally.

● **Zero Emission Vehicles Emerging Market Campaign (ZEV-EM-C)**

US-UK-WBCSD Zero Emission Vehicles Emerging Market Campaign (ZEV-EM-C). This one-year effort accelerates zero-emission passenger vehicle implementation in emerging markets. The campaign will promote private sector contributions and interaction between emerging markets and major firms to accelerate private investment to meet ambitious ZEV deployment goals.

● **African Alliance for Sustainable Cities and Built Environment**

The African Alliance for Sustainable Cities and Built Environment was created to implement the Africa Manifesto for Sustainable Cities & the Built Environment, which requires African business leaders, city and government officials to support energy, water, materials, finance, and infrastructure policies to create a socially and economically inclusive built environment for all.

● **Ambition Loop for the Ocean Economy Report**

The High-Level Champions produced the Ambition Loop for the Ocean Economy Report with WRI, Ocean & Climate Platform, Orsted, and UN Global Compact. The "Blue Breakthroughs" in activating the blue ambition loop present a system approach to ocean-climate action in the report.

4. BUILDING CREDIBILITY AND TRUST

Working to close the credibility gap and strengthen accountability through tracking and reporting on progress, establishing best practices, and progressively connecting voluntary action with the ground rules of the economy.

● **UN High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities (HLEG) report**

The UN Secretary-General published the High-Level Expert Group's study Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions as a guide to credible, accountable net-zero pledges. The UN SG called UN Climate Change to hold non-State actors accountable and proposed a Net Zero Regulation Taskforce in response to the report.

● **Climate Data Steering Committee – Public Data Utility**

The Climate Data Steering Committee, created by French President Emmanuel Macron and UN Special Envoy for Climate Ambition and Solutions Michael R. Bloomberg, recommended creating an open climate data utility to centralise key climate transition data for stakeholders to easily access and interpret climate commitments and actions. The Committee proposes designing and building the Utility to be part of the UNFCCC Global Climate Action Portal, recognising its key importance (GCAP).

● **Global Climate Action Portal (GCAP) COP27 event page**

The Global Climate Action Portal (GCAP) COP27 event page archives climate action efforts and conference announcements. Until COP28, initiatives will be encouraged to report progress. COPs will repeat this endeavour.

● **SCL Data Platform launch**

The Systems Change Lab created an open-source data platform to track worldwide improvements in power, industry, transit, food, and finance. The interactive platform shows which transformational movements are accelerating or decelerating and the

main causes behind them.

● **Glasgow Financial Alliance for Net Zero (GFANZ) Transition Plans**

GFANZ and the High-Level Champions advance finance industry net zero transition plans through cross-sectoral best practices and technical collaboration. Financial Institution Net Zero Transition Plan Framework and Guidance from GFANZ. This includes financing/enabling entities with climate solutions, aligned or aligning with 1.5°C, and managed phase-out.

● **Net Zero Asset Owners Alliance (NZAOA)**

In their Second Progress Report, NZAOA noted 44 members had established 2025 and 2030 decarbonisation targets. Two-thirds of the initiative's 80 members' US\$10.9 trillion Assets Under Management come from these members.

● **Net Zero Banking Alliance (NZBA)**

NZBA's inaugural Progress Report includes over 60 members' intermediate decarbonisation targets. From 43 founding members in April 2021 to 122 members in 41 countries representing over 40 global banking assets in 18 months, the NZBA has nearly tripled.

● **Paris Aligned Asset Owners (PAAO)**

PAAO's first Progress Report and initial target disclosures for 13 additional signatories showcased asset owners' ingenuity and best practices for implementing net zero commitments. 40 asset owners now have starting aims since March 2021.

● **Net Zero Asset Managers initiative (NZAM)**

NZAM set early targets for 86 investors as 291 asset managers committed to net zero. The latest disclosures bring the total number of asset managers with early targets to 169, representing US\$21.8 trillion committed to net zero by 2050 or sooner.

● **Net Zero Insurance Alliance (NZIA)**

NZIA initiated a consultation on its first target-setting methodology in January 2023. NZIA and PCAF reported on the first global standard to measure and publish emissions from insurance underwriting portfolios.

● **Finance Sector Deforestation Action (FDSA)**

The FDSA, a results-driven collaborative of 35 financial institutions with USD\$8.9 trillion in assets under management, made progress. These institutions are speeding up their commitment to eliminate commodity-driven deforestation, invest in nature-based solutions, and move toward a net zero, nature-positive economy. FDSA members have published investor expectations for companies, increased involvement, and worked with governments and data suppliers to harmonise climate and nature-related efforts.

● **Race to Resilience Data Explorer**

The Race to Resilience dashboard tracks adaptation implementation. Alongside a 2021 metrics framework upgrade. The Race to Resilience programme tracks progress across project categories and finds adaption solutions using the framework.

● **Regions Adapt Report**

Regions Adapt, a Race to Resilience partner, released its inaugural report. Regions Adapt promotes climate change adaptation collaboration, learning, and capacity building across leading states and regions. 70 signatories affect 300 million people.

● **Green Shipping Corridors**

Getting to Zero Coalition and Global Maritime Forum released the 2022 Annual Progress Report on Green Shipping Corridors. At COP26, signatories pledged to create at least six green maritime lanes by the middle of the decade in the Clydebank Declaration. The progress report lists over 20 green corridor efforts in Transpacific, Asia Pacific, Transatlantic, Europe, North, and South America. **SEM**

PEATLANDS CAN HELP ADDRESS CLIMATE CHANGE

Developing multi-stakeholder partnerships for sustainable peatland management will help reduce carbon emissions

PPEATLANDS, have played a significant role in Malaysia's climate change journey for many years as they are one of the critical agents in reducing carbon emissions.

As such, there is a need for Malaysia to conserve and manage its remaining peatlands sustainably. To support sustainable peatland management, multi-stakeholder partnerships must be developed.

A side event titled 'Multi-stakeholder partnerships in sustainable peatland management for climate change in Malaysia' was held on Nov 10, 2022, at Malaysia Pavillion at COP27, Egypt. It was organised by the Global Environment Centre (GEC) and the then Ministry of Environment and Water (KASA).

The Regent of Pahang Tengku Hassanal Shah in his opening address said the peatland ecosystem was the most important terrestrial ecosystem globally for carbon storage.

"Although peatlands only cover three per cent of the land surface, they store about 30 per cent of soil carbon, which is more than the biomass of all the world's forests combined," said Tengku Hassanal.

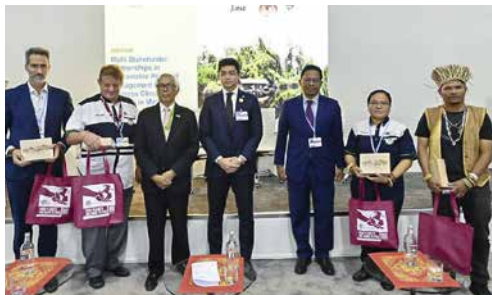
"Southeast Asia has about 23 million hectares of peatlands or about 40 per cent of tropical peatlands globally. Of which, an estimated 2.6 million hectares of peatlands are in Malaysia. One hectare of peat swamp forest may store up to 5,000 tonnes of carbon or more than 10 times the carbon stored of tropical forests on mineral soil."

Because peatlands are critical in global carbon storage, Tengku Hassanal noted that the degradation of peatlands could lead to large-scale carbon dioxide emissions and other greenhouse gasses (GHG).

It is estimated that global emissions from peatland degradation are more than two billion tonnes of carbon dioxide a year or about 30 per cent of global GHG emissions from the forestry and land use sector.

SCALING UP EFFORTS TO RESTORE FORESTS AND PEATLANDS

"In Malaysia, more than 50 per cent of our peatlands have been cleared and drained



(From left) Mr David Ramos, Senior Manager in Corporate Sustainability of HSBC Bank, Mr Faizal Parish, Director of Global Environment Centre (GEC), Tan Sri Dr Zakri Abdul Hamid, Prime Minister's Special Representative for Climate Change at COP 27, Tengku Hassanal Ibrahim, Regent of Pahang, Dato' Seri Dr Zaini Ujang, Head of Malaysian Delegation at COP 27, Ms Lew Siew Yan, Manager, Peatland Programme of GEC and Mr Shaq Koyok, Indigenous People (Artist).

for agriculture and plantations over the past 50 years. A large portion of our remaining peat swamp forests has been logged. More than 200,000 hectares of our peatlands have been identified as fire-prone," added Tengku Hassanal.

Malaysia has recognised the importance of stopping the further degradation of peatlands and managing them sustainably. The efforts to rewet and restore degraded peat swamp forests in Malaysia started in 2008 and are now being conducted in more than 10 sites covering nearly 6,000 hectares.

In 2021, Malaysia set a national target of net zero greenhouse gas emissions by 2050. The country's Nationally Determined Contribution under the Paris Agreement was enhanced to a 45 per cent reduction of GHG intensity by 2030.

"At COP26 in Glasgow, 141 nations committed to halt and reverse forest loss and land degradation by 2030. We must scale up our actions in every country to meet our targets.

"We also need to take a whole-of-society approach. We need to engage stakeholders from all levels - from the private sector, state and national government, consumers, indigenous people, and local communities.

All must work together to achieve the common goals of restoring our forests and peatlands and reducing GHG emissions," Tengku Hassanal emphasised.

He highlighted that indigenous people and local communities (IPLCs) had been the stewards of the land for thousands of years, and their active engagement in preventing and reversing forest and peatland degradation was essential. The recent Report on the State of Indigenous People's and Local Communities' Lands and Territories confirmed that IPLCs are vital custodians of the world's remaining natural landscapes.

"In total, 42 per cent of all global lands in good ecological condition are within IPLCs' lands, and 91 per cent of IPLCs' lands are in good or moderate ecological condition."

PAHANG PROTECTS ITS BIODIVERSITY

"In my state of Pahang, we are blessed with the largest forest cover and the largest area of peatland in Peninsular Malaysia," he added.

According to Tengku Hassanal, several actions have been undertaken to better protect peatlands and forests in Pahang in recent years, including:

Establishment of the Pahang State Parks Corporation and the Pahang Biodiversity Council to better conserve natural ecosystems and biodiversity;

Undertaking a pilot project for rewetting and fire prevention for 1,700 hectares of peatlands in Pekan in partnership with the state government agencies, local indigenous communities, oil palm plantations and NGOs;

Initiating a project to support the development of a State Action Plan on Peatlands and prepare an integrated management plan for the Southeast Pahang Peatland Landscape;

Initiating a carbon study of peat swamp forests in Southeast Pahang and lowland forests in the Tekai region to explore options for better protection and rehabilitation of forests and peatlands.

"And currently, as we speak, the state of Pahang is setting up a Royal Tiger Park next to Taman Negara - our national park, where we have nearly 40 tigers.

"Moving forward, we are encouraging the state government, private sector, local communities, and NGOs to enhance and scale up collaborative work to protect better and restore peatlands and forests in the State."

He ended his address by highlighting the importance of action to urgently protect and restore Malaysia's remaining peatlands for their essential roles in carbon storage, water management and biodiversity conservation and sustaining the lives of local communities.

SEM



SEDA MALAYSIA TRAINING PROGRAMMES



Energy Management & Energy Efficiency

Awareness & Technical Trainings:



- **Energy Management in Building;**
Eligible for 12 Hours CDP for Registered Electrical Energy Manager (REEM) by Suruhanjaya Tenaga (ST)
- **Principles and Applications of Malaysia Standard MS1525: Code of Practice on Energy Efficiency and Use of Renewable Energy for Non-Residential Buildings;**
Eligible for 8 Hours CDP for Registered Electrical Energy Manager (REEM) by Suruhanjaya Tenaga (ST)
- **Energy Efficiency Management for Air-Conditioning and Mechanical Ventilation (ACMV) System;**
Eligible for 8 Hours CDP for Registered Electrical Energy Manager (REEM) by Suruhanjaya Tenaga (ST)
- **Energy Audit in Building;**
Eligible for 12 Hours CDP for Registered Electrical Energy Manager (REEM) by Suruhanjaya Tenaga (ST)
- **Customise training in any combination of the above**



For more information, please visit our website

www.seda.gov.my

EMPHASISING QUALITY AND TRANSPARENCY

Thirty-two companies awarded Feed-in Tariff quotas via e-bidding exercise for energy generation through renewable sources



YB Tuan Lukanisman Awang Sauni.



Dato' Haji Rosli Isa, YB Tuan Lukanisman Awang Sauni and Dato' Hamzah Hussin with the winners of 2022 FiT quota e-bidding exercise.



Some of the winners of 2022 FiT quota e-bidding exercise.



(Second from left) Dato' Hamzah Hussin, CEO of SEDA Malaysia, Dato' Haji Rosli Isa, the then Ministry of Energy and Natural Resources (KeTSA) Secretary-General, YB Tuan Lukanisman Awang Sauni, Former Chairman of SEDA Malaysia and Dato' Mohamad Razif, the then KeTSA Deputy Secretary General (Energy).

THE Sustainable Energy Development Authority (SEDA) Malaysia awarded 32 companies the Feed-in Tariff (FiT) quotas for the year 2022 with a total capacity of 111.407MW at Majlis Penyerahan Sijil Perakuan Kelulusan Galakan event on Dec 7, 2022 at the Intercontinental Hotel, Kuala Lumpur.

The FiT quota application for 2022 was fully available via e-bidding exercise for biogas, biomass, and small hydropower sources in August 2022, with a total quota of 187MW. Following the new quota allocation announcement, SEDA Malaysia received encouraging participation from 68 companies with a total capacity of 312.007MW.

"The offer for the quota application was opened last August, and SEDA Malaysia received participation from 68 companies

with a total capacity of 312.007MW. A total of 32 companies were selected based on the eligibility criteria," said then Chairman of SEDA Malaysia, YB Tuan Lukanisman Awang Sauni in his speech at the ceremony.

He highlighted that these selected companies met the e-bidding assessment requirements, which were set to ensure that the whole process was done transparently and competitively.

BOOSTING MALAYSIA'S ECONOMIC GROWTH

Tuan Lukanisman said: "This FiT quota offering is expected to generate investment of RM1.14 billion and create as many as 540 job opportunities in the renewable energy (RE) industry. These projects are expected to generate and supply electricity from 2025 to 2027."

He noted that the initiative was also part of the government's efforts to boost the

country's economic growth, particularly in the development of the RE sector, while supporting the target of 31 per cent installed capacity of RE by 2025 and 40 per cent by the year 2035.

"Since the FiT mechanism was introduced in 2011, a total of 1,423.96MW in quotas have been approved for all renewable sources involving 10,480 projects nationwide.

"This is in line with the vision to make the energy sector an important sector in Malaysia's economy, where it is seen as a sector that is competitive, resistant to future challenges and has great spillover benefits to the entire economy."

As a statutory body tasked with developing sustainable energy industry in Malaysia, he emphasised that SEDA Malaysia would continue to support the government's aspirations in achieving the status of a carbon-neutral country by 2050. **SEM**

FiT THE MAIN DRIVER OF RE POLICY

A total of 10,353 renewable energy projects are operating under the Feed-in Tariff mechanism



THE Feed-in Tariff (FiT) mechanism in Malaysia has the potential to attract more applications from industries and commercial sectors. The mechanism provides opportunities for the participation of individuals and corporations in producing renewable energy (RE).

Under this scheme, the Distribution Licensees (DLs) are obliged to buy RE from the Feed-in Approval Holders (FIAHs) at a mandated FiT price. This ensures RE is an excellent long-term investment for stakeholders as it guarantees access to the grid and sets a competitive price per unit of power.

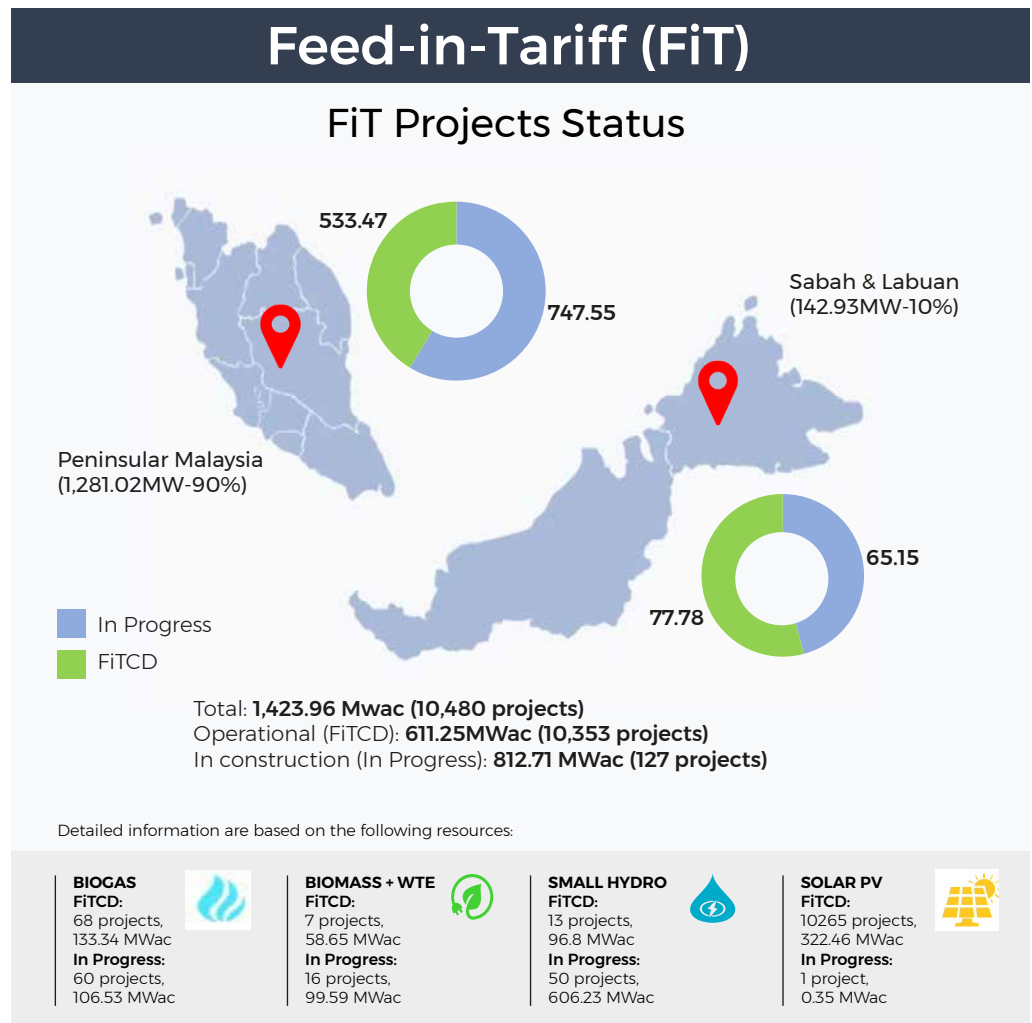
In Malaysia, FiT was introduced in 2011 under the Renewable Energy Act 2011 [Act 725] and administered by the Sustainable Energy Development Authority (SEDA) Malaysia to establish and implement a unique tariff system that promotes RE generation and related matters. FiT rates are routinely reviewed to enhance the cost-competitiveness of RE generation compared to non-RE electricity generation, aligned with the gradually optimised overall development costs due to improvement in engineering designs, financing opportunities, regulatory framework and industry awareness in Malaysia.

BENEFITS OF THE FIT MECHANISM

With Malaysia's targeting 31 per cent of RE share in the national installed capacity mix by 2025, the FiT programme will be amongst the main drivers in realising this aspiration. The deployment of FiT in the country has led to a breakthrough in Malaysia's energy landscape.

The scheme enables the emergence of new businesses, the creation of employment and the development of new growth sectors, paving the path for the country to become the leading entity in the region for green technologies and low-carbon economic growth.

Among the benefits of the FiT mechanism



With Malaysia's targeting 31 per cent of RE share in the national installed capacity mix by 2025, the FiT programme will be amongst the main drivers in realising this aspiration.

are as follows:

- Reducing CO2 emissions by replacing fossil fuel-based power production with clean, renewable energy sources.
- Helping secure domestic energy supply, enabling countries to reduce their reliance on imported fossil fuels.
- Guaranteeing investment security for renewable energy investors.
- Driving technological innovation.
- Providing fair market conditions for renewables, without which renewables would be unable to compete fairly with heavily subsidised conventional energy.

FiT is also dubbed the most widely adopted RE policy globally due to its efficiency and effectiveness.



Still in progress are 127 projects slated to produce another 812.71MW. These approved RE projects are expected to generate and supply electricity starting from the year 2025 and 2027.”

STATUS OF THE FEED-IN TARIFF PROJECTS IN MALAYSIA

To date, a total of 10,353 FiTCD projects are already operating and producing 611.25MW. Ninety per cent of these projects are based in Peninsular Malaysia, with a capacity of 1,281.02MW electricity being generated. Meanwhile, another 10 per cent of these projects are based in Sabah and Labuan.

Still in progress are 127 projects slated to produce another 812.71MW. These approved RE projects are expected to generate and supply electricity starting from the year 2025 and 2027.

RE sources involved in these FiT projects are biogas, biomass, waste-to-energy (WTE), small hydroelectric and solar PV.

The lion's share of FiT projects comes from small hydro. After completing another 50 projects, it is expected to produce another 606.23MW, bringing it to 703.03MW.

Solar PV also saw a marked increase to 10,265 projects generating 322.46MW. This is followed by the biogas sector, with a total of 128 projects, half of which are already operational and producing 133.34MW.

Another 60 FiT projects involving biogas are still under construction and will produce 106.53MW, giving a total of 239.86MW.

In total, the FiT scheme will have 10,480 projects, contributing to the electricity generation of 1423.96MW. With this scenario, Malaysia is on track to achieve a target of 31 per cent of RE share in the national installed capacity mix by 2025.

As of October 31, 2022, FiT currently contributes 611.25MW to RE power generation. The figure represents 45 per cent of its total target of 1,369MW by 2025.

SEM

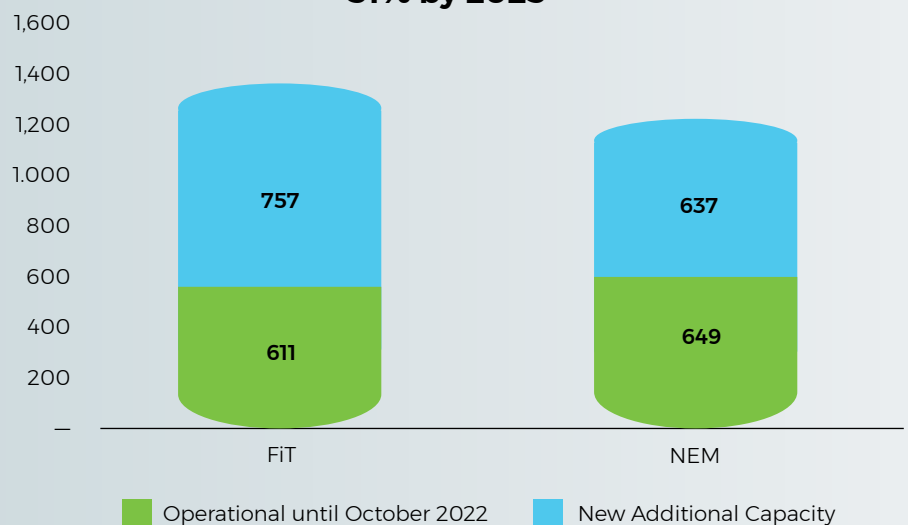


Achievement target of 31% in 2025

45%
FROM
1,369 MW

50%
FROM
1,287 MW

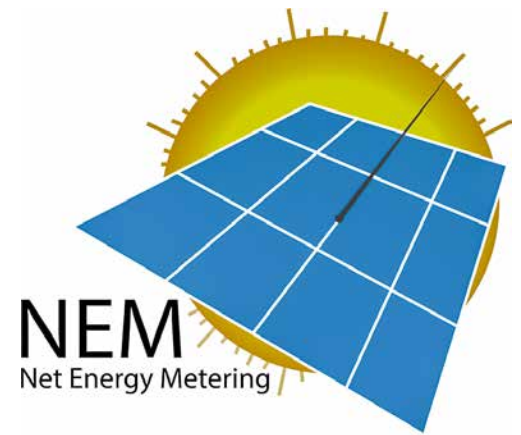
**Aspiration towards
31% by 2025**



*Data until 31 October 2022

*Capacity installation in MWac

*New Additional Capacity includes New Quota Capacity (1,394 MWac)



BOOSTING SOLAR ENERGY USAGE

SEDA Malaysia's Net Energy Metering programme to contribute 1,287 MW to renewable energy generation by 2025

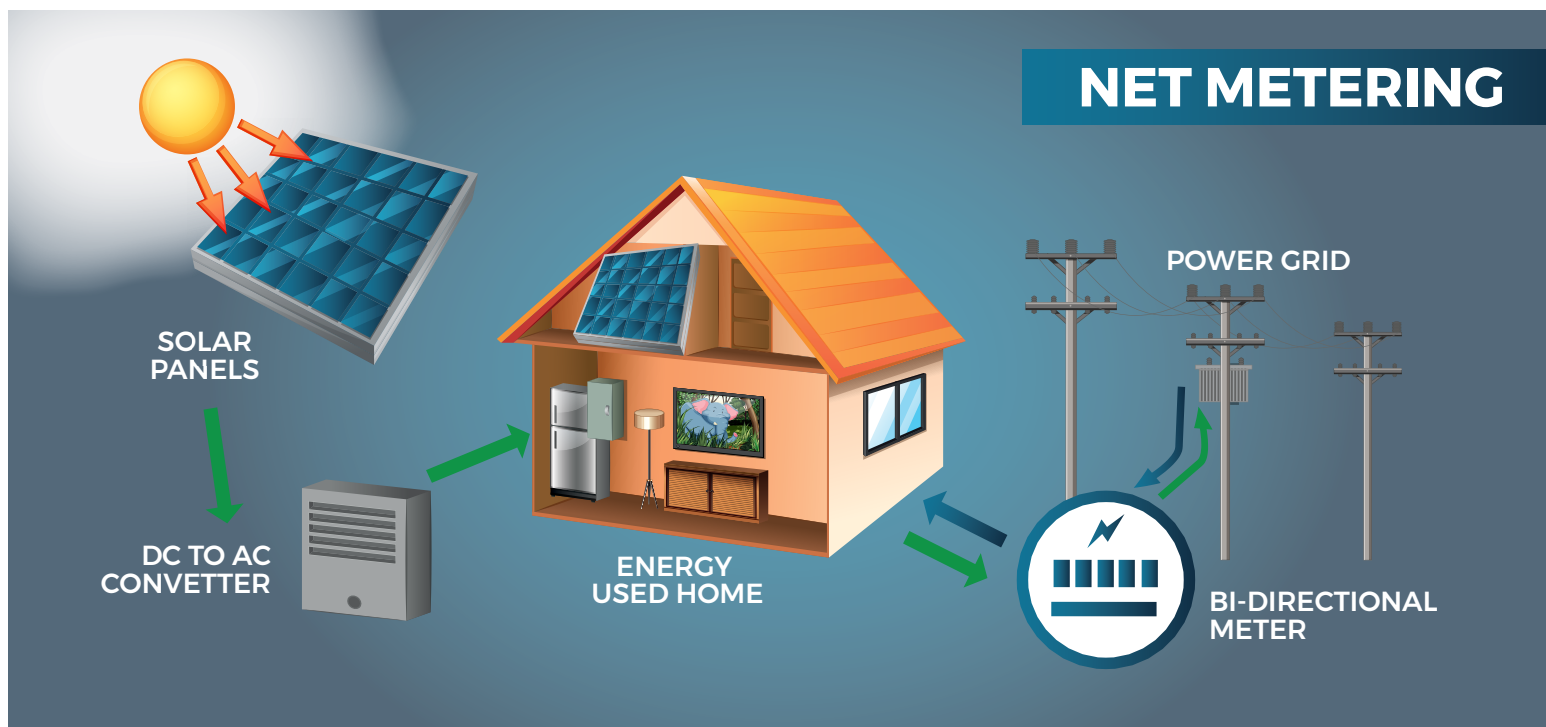
THE Net Energy Metering (NEM) mechanism allows electricity consumers to generate and consume their own electricity by installing solar PV panels on rooftops. It will enable any excess electricity generated from the solar PV

system to be exported to Tenaga Nasional Berhad's (TNB) grid to offset electricity on a one-on-one basis. This means that for every one kWh exported to the grid, it will be offset against one kWh consumed from the grid at gazetted tariff.

Introduced in November 2016, the NEM scheme has contributed significantly

to Malaysia's renewable energy (RE) development. The scheme was executed by the then Ministry of Energy and Natural Resources (KeTSA), regulated by the Energy Commission (EC), with the Sustainable Energy Development Authority (SEDA) Malaysia as the implementing agency.

Following an overwhelming response



Categories	Quota Allocation (MW)	Quota Opening Date
NEM Rakyat	100MW	1st February 2021 – 31st December 2023
NEM GoMEn	100MW	1st February 2021 – 31st December 2023
NEM NOVA	600MW	1st April 2021 – 31st December 2023

from the PV industry for the second edition of the programme, NEM 2.0, the government introduced the new NEM 3.0 programme on December 29, 2020, to boost solar energy usage.

THE ONGOING NEM 3.0 PROGRAMME

NEM 3.0, which went into effect on Feb 1, 2021, will have another full calendar year till the end of December 2023 to achieve its total quota allocation of 800MW in RE.

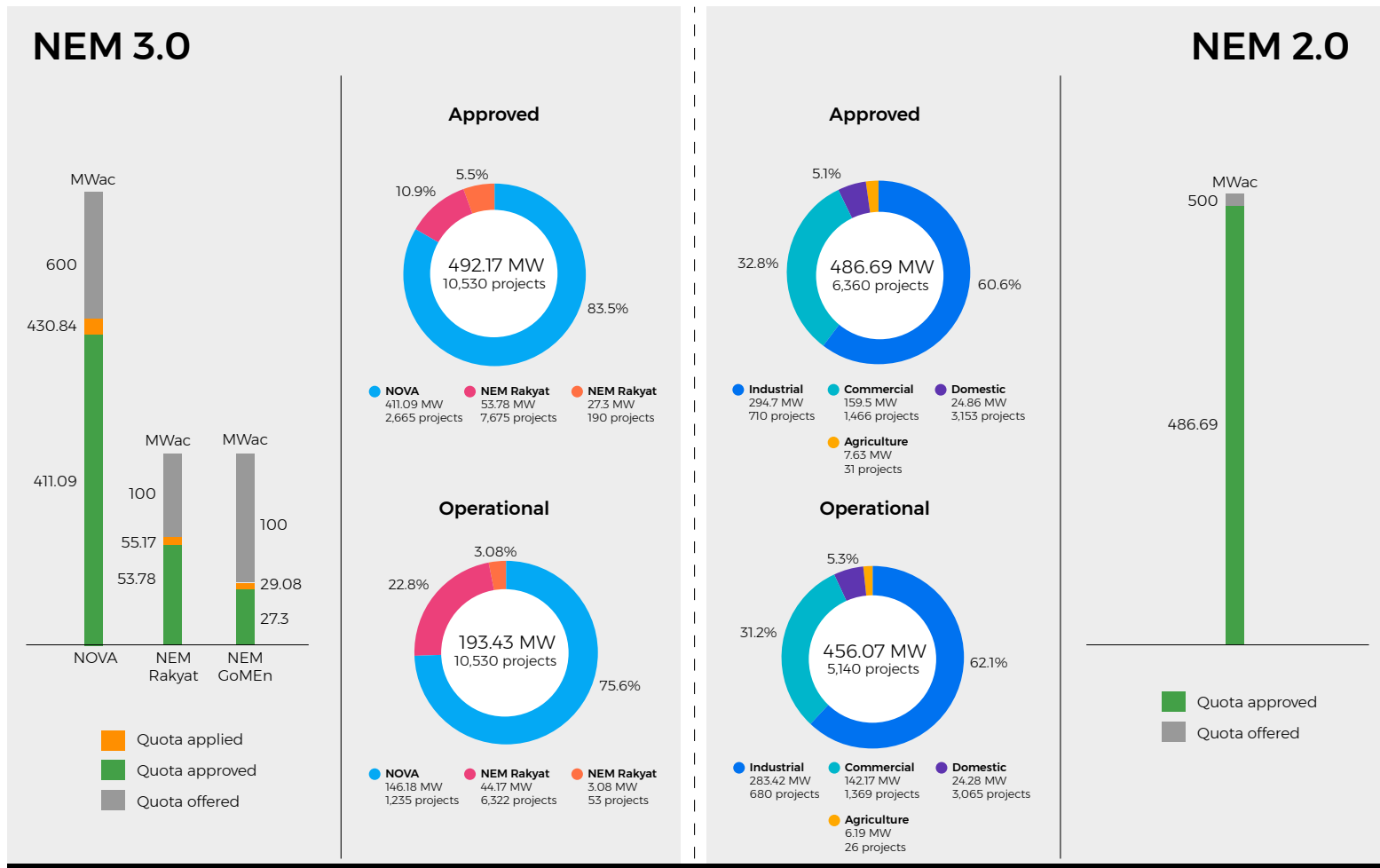
The three categories currently under NEM 3.0 are: -

- NEM Rakyat Programme (100MW)
- NEM GoMEn Programme (Government Ministries and Entities) (100MW)
- NOVA Programme (Net Offset Virtual Aggregation) (600MW)

To date, a total of 10,530 projects for all three categories, expected to generate 492.17MW of RE, have been approved. Of this, 7,610 projects are already operational and generating 193.43MW of green energy. The lion's share of 51 per cent



Net Energy Metering (NEM)



goes to the industrial sector, followed by the commercial sector, domestic and agriculture.

With the COVID-19 pandemic now under control, SEDA Malaysia expects things to pick up, with more projects to be approved for implementation under its NEM 3.0.

NEM 3.0 is designed to provide more opportunities to generate renewable energy by installing solar PV systems on the roofs of residential homes and condominiums to save on electricity bills.

RESPONSE UP FROM NEM2.0

According to SEDA Malaysia, NEM2.0 (Jan 1, 2019 - Dec 31, 2020) with its 500MW quota had been fully subscribed by Dec 31, 2020, with 97 per cent of the quota taken up.

This second edition of the NEM programme was launched after the government decided to reimburse excess solar electricity on a one-to-one offset instead of displaced cost. NEM2.0 saw a significant increase in the total RE capacity



NEM 3.0 is designed to provide more opportunities to generate renewable energy by installing solar PV systems on the roofs of residential homes and condominiums to save on electricity bills.

approved in 2019, almost four times higher than the ones approved from 2016 to 2018.

Sixty-two per cent of this quota went to the industrial sector, representing 680 projects producing 283.42 MW of renewable energy. This doubles the total renewable energy produced by the commercial sector, with 1,369 projects generating 142.17 MW or 31 per cent of the total renewable energy.

The domestic demand during NEM2.0 was still low at five per cent or 3,065 projects, generating 24.28MW.

However, a two-fold increase in green energy generated was seen from the domestic applicators, and it has hit 44.17MW under NEM3.0.

SEDA Malaysia hopes that more domestic solar PV applications will be implemented in the next 12 months before NEM3.0 concludes.

As of Oct 31, 2022, NEM programme has generated around 649MW of electricity, 50 per cent away from its 2025's target of 1,287 MW. **SEM**



ENERGY AUDIT CONDITIONAL GRANT RMK-12

A CATALYST FOR ENERGY SAVINGS MEASURES

SEDA Malaysia's Energy Audit Conditional Grant (EACG) under 11th Malaysian Plan has helped save 347.07 GWh of electricity in 2021, involving 217 industrial and commercial buildings. Based on this success, the government announced the continuation of the programme under the RMK12.

To qualify for the EACG, building owners must show that their monthly electricity consumption exceeds 100,000 kWh.

The encouraging results last year saw some 80 per cent of the energy saved involving the industrial sector, while the

other 20 per cent of energy savings came from the commercial buildings (see Table 1).

Energy audit is a systematic process to evaluate the consumption of energy in industrial and commercial installations, and identify opportunities to reduce consumption. As such, the EACG programme aims to fulfil the following objectives:

- To provide financial facility assistance with the conditional grant through the five years (2021-2025) of programme implementation.
- A catalyst for energy audits exercise to set up the baselines for industrial and commercial premises.
- To provide a platform and facilitation for the implementation of the ESM according to the outcome of energy audit report.
- Capacity development for industry and commercial, in order to fulfil the current and future demand of

energy management in industrial and commercial sector.

- To foster awareness the importance of energy management among the industrial and commercial premises owners in Malaysia in order to reduce the electricity consumption.

Under the programme which runs for five years until the end of 2025, a maximum grant of RM100,000 is available for Industrial building owners, while for Commercial buildings, the amount is capped at a maximum of RM60,000.

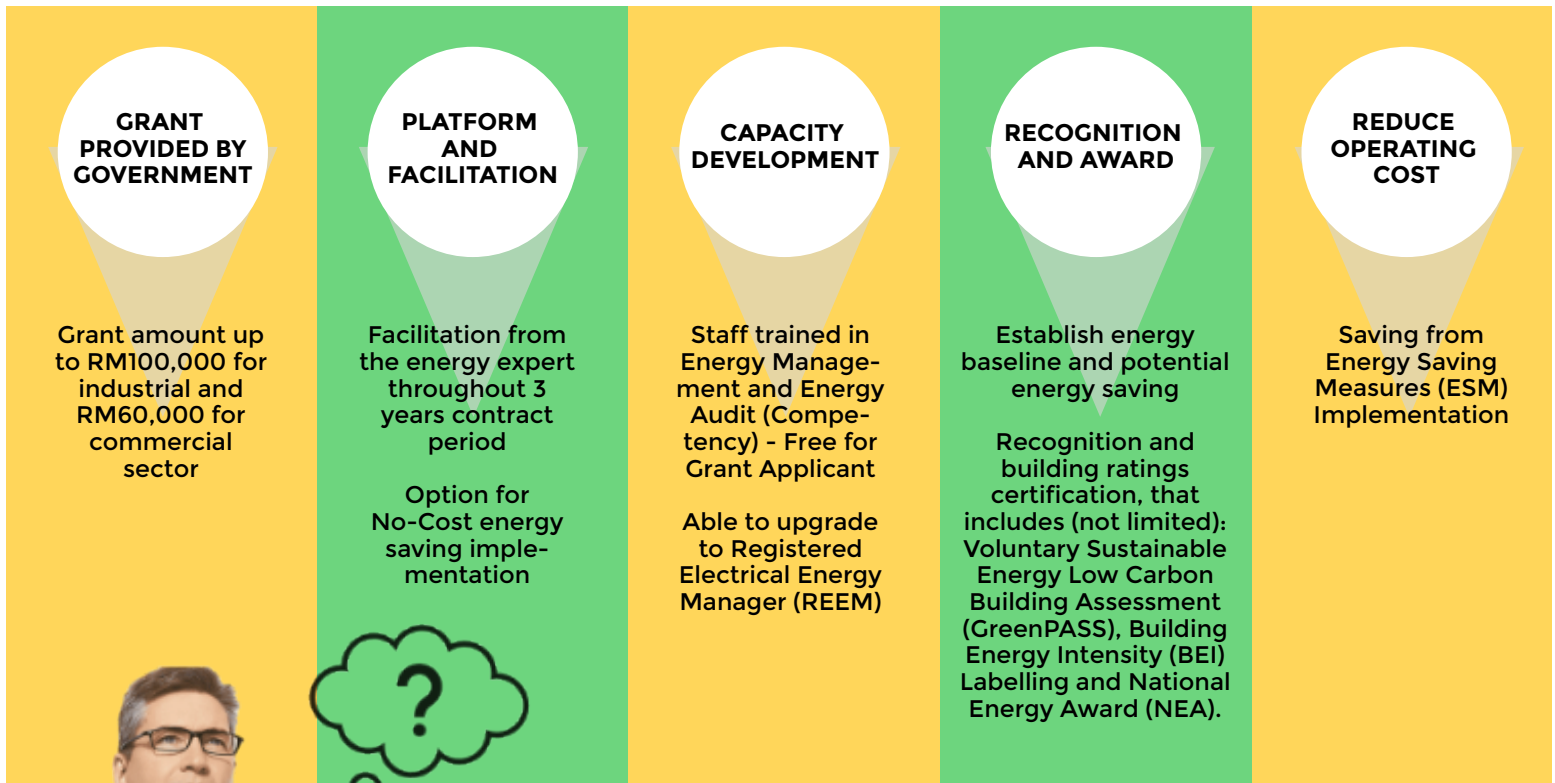
Since its inception in 2021, the programme has become a catalyst for building or installation owners to participate in energy audits, which is carried out in collaboration with local energy service companies (ESCOs).

Based on the outcome of the energy audits, baselines for industrial and commercial premises are set up. SEDA Malaysia hopes to see more energy-saving

Table 1

Sector	Applications	Savings
Industrial	109	273.04 GWh
Commercial	108	74.03 GWh

BENEFITS



TERMS AND CONDITIONS



Energy Audit

2 month of allocation for Energy Audit exercise



Implementation Cost

Minimum investment must be equal or greater than total grant applied within 3 years



Target Saving

Percentage savings are based on Energy Audit Report



Reporting

Every 3 months to SEDA

Every 6 months to EMIS System

measures (ESM) being implemented and CO2 emissions further reduced.

It is hoped that more building owners will participate in the programme in the next three years.

Its benefits include:

Platform and facilitation

- Facilitation from energy expert throughout three years contract period
- Establish energy baseline and identify potential energy saving
- Options for No-Cost, Medium-Cost, and High-Cost energy-saving implementation

Capacity Development

- Staff trained in Energy Management and Energy Audit (Competency) -Free for Grant Applicant
- Able to upgrade to Registered Electrical Energy Manager (REEM)

Recognition and award

- Voluntary sustainable energy low carbon building assessments such as GreenPASS, BEI Labelling and National Energy Award

Reduce operating cost

- Saving from Energy Saving Measures (ESM) Implementation

Conditions for application

To qualify for the EACG, installation and building owners must first appoint a Registered Electrical Energy Manager

(REEM) or a person in charge for their premises

EACG RMk-12 is open for application by any commercial and industrial installation with minimum monthly consumption 100,000 kWh/month, with the exception of installations that has previously received a grant from the EACG RMk-11.

The application process goes through four stages.

1. Applicants must first understand the terms and condition of EACG before submitting the application form to SEDA Malaysia. Applicants must ensure to appoint an ESCO.
2. At the evaluation stage, the application will be processed, validated and approved by the Evaluation Committee, which will take at least a month.
3. Successful applicants will then receive the Letter of Approval from SEDA Malaysia and 20 per cent of the grant will be disbursed after signing the agreement between SEDA Malaysia and the applicant.
4. Next is the Energy Audit Phase, whereby applicants shall instruct the appointed ESCO to conduct the energy audit exercise. 80per cent of the grant will be disbursed after the Final Audit Report is submitted to SEDA Malaysia.

The terms & conditions EACG as follows:

Energy audit

Two months of allocation period for the Energy Audit exercise

Implementation cost

The minimum investment must be equal to or greater than the total grant applied within three years

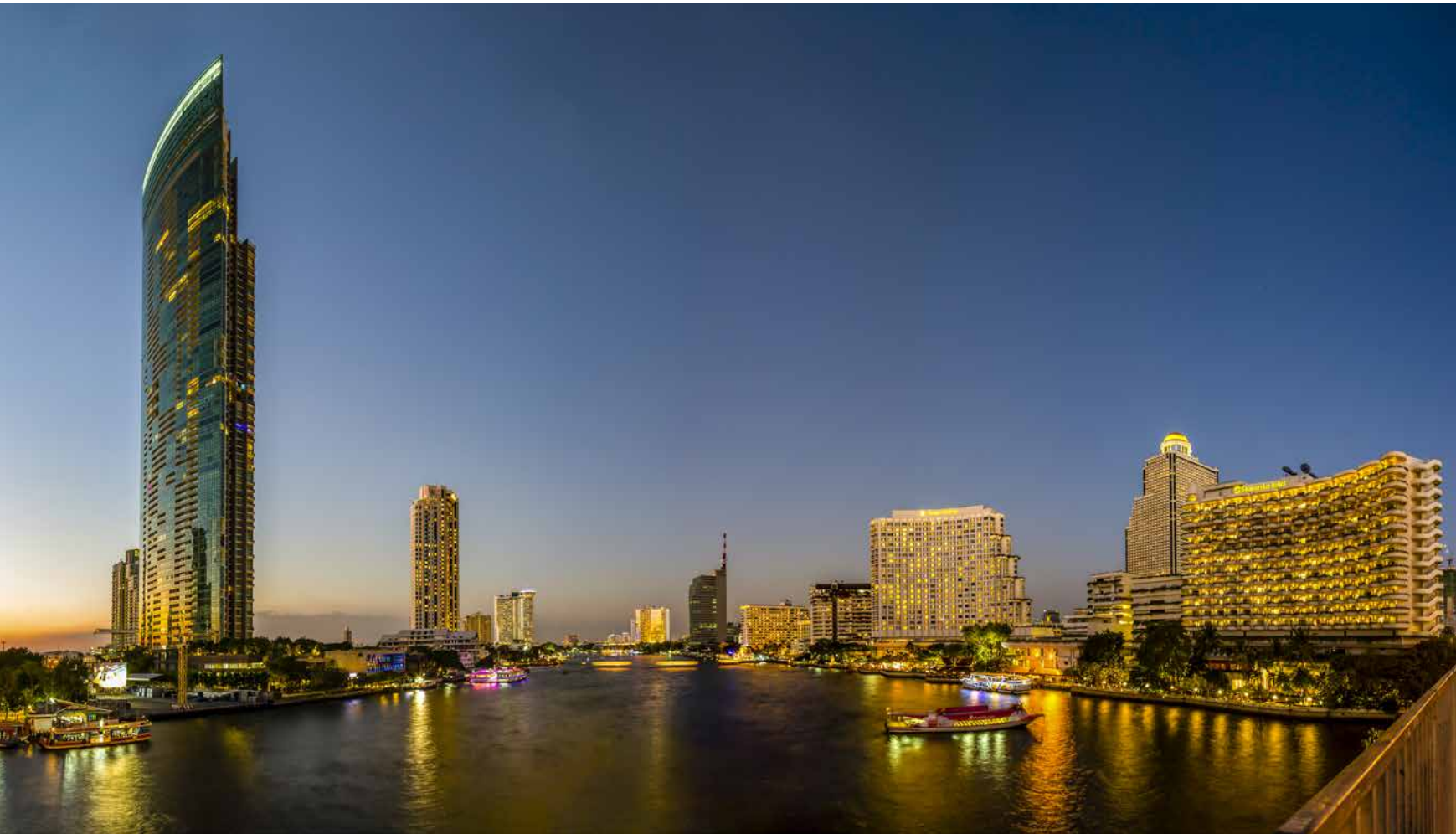
Target saving

Percentage savings are based on Energy Audit Report

Reporting

- Every three months to SEDA Malaysia
 - Every six months to EMIS System
- Within three years after the energy audit exercise is completed, applicants are responsible to;
- Implement the energy-saving measures recommended in this project's energy audit report submitted by the ESCO.
 - Submit implementation progress report to SEDA Malaysia and EMIS system provided by ST.
 - Attend the energy audit & energy management training organised by SEDA Malaysia under the project to ensure continuous development of capacity building within the organisation.
 - Communicate/liase with SEDA Malaysia to ensure proper implementation of energy-saving measures.

More information can be obtained from <https://www.seda.gov.my/eagrant> SEM



MOBILISING A CREDIBLE REC MARKET

The REC market is expected to be in high demand and create a new trading model

FORMER Prime Minister YAB Dato' Sri Ismail Sabri, during International Sustainable Energy Summit (ISES) 2022, announced new programmes and initiatives by the government to reform the country's electricity supply and support the energy transition.

One of the initiatives is to develop a framework - Renewable Energy Certificate (REC) with clear and orderly governance and regulation to ensure that RECs produced in the country are credible, transparent and high in value.

REC is a type of Energy Attribute Certificate (EAC) that represents the environmental attributes of generating a one-megawatt hour (MWh) of energy



THE INTERNATIONAL
REC STANDARD

produced by renewable sources. Since electricity is a tangible product, end-users worldwide can rely on EACs to provide accurate statements about their energy usage.

RECs can facilitate the take-up of corporate power purchase agreements (PPAs) and green tariff programmes while giving renewable energy (RE) asset developers a new revenue stream. Corporations can utilise RECs to purchase green attributes from RE developers and meet their RE procurement goals.

Meanwhile, utilities can use RECs to purchase green attributes from RE

developers and package green tariffs. In Malaysia, RECs are based voluntarily and subjected to the attributes of respective RE programmes.

Welcoming the excellent initiative from the government to strengthen REC's regulation, SEDA Malaysia took the opportunity to participate in I-REC Standard Conference (ISC) 2022 from Nov 1-2, 2022, in Bangkok, Thailand. With its participation in the event, the agency aimed to get more input and updates regarding the REC market.

THE I-REC STANDARD CONFERENCE 2022

ISC 2022 was a unique opportunity for global I-REC market actors, facilitators, stakeholders, and governmental agencies

like SEDA Malaysia, to meet each other and get up to date on the existing governance structure, upcoming Product Codes, and market developments. Organised by I-REC Standard Foundation, it served as a platform for these participants to share their thoughts, visions, and experiences with their peers from around the world.

The conference highlighted various REC-related topics centred around its theme of Standardising Global Attribute Markets. The opening session on Day 1 of ISC 2022 helped set the tone for the conference. Having the same title as the theme, the first session emphasised the rising importance of REC standards.

With attribute tracking becoming a crucial component in electricity market development, REC standardisation is essential in ensuring both power generators and end-users have access to credible, transparent, and globally standardised information about the source of their electricity. The discussion discussed how RECs became the standard denominating instrument for new energy markets beyond electricity, such as clean hydrogen. It further described how RECs fit into new markets, how additional tracking layers are being implemented in different countries and the role of various stakeholders in these new attribute markets.

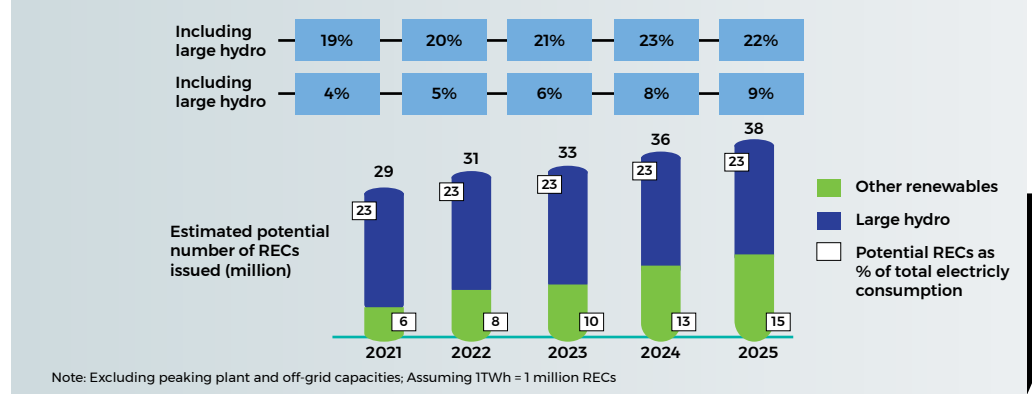
DEVELOPING HARMONISED REC STANDARDS IN SOUTHEAST ASIA

Other sessions during ISC 2022 include the Development of Hydrogen Tracking Systems, Global EAC Standardisation and the Impacts of Carbon Border Taxes, the Use of Renewables Across the Supply Chain and I-REC Growth in Emerging Markets. It also featured discussions on Granularity and the Role of Platforms, End-User Round Table, Volume and Prices, Value of Renewables Around the World and many more.

Prominent experts and speakers joined these sessions, and the topics highlighted were relevant to Malaysia's aspiration to create more credibility and transparency in the REC market.

One of the sessions during ISC 2022 - the ASEAN EAC Market Integration explored how Europe has successfully integrated its REC markets to support cross-border clean power transactions. This scenario has supported the growth of clean energy generation alongside more robust corporate procurement options and cross-country REC transactions.

Figure 6-19: Potential volume of REC generation in Malaysia, 2020-2025 for the New Capacity Target scenario



Source: Malaysia Renewable Energy Roadmap (MyRER)

“SEDA Malaysia believes that enabling a more vibrant and liquid RECs market in the national context can accelerate the transition towards a low-carbon nation.”

It is noted that Asian governments and utilities are working toward similar agreements that align with corporate clean power ambitions. This session then discussed progress toward market integration, implications for buyers and sellers, next steps, and how to engage in broader ASEAN market transformation.

Relevant to this discussion, SEDA Malaysia, through Malaysia Renewable Energy Roadmap (MyRER), has already touched on the prospect of creating demand for RECs outside of Malaysia. In the Roadmap, the agency suggested that such a demand can be explored at the ASEAN level by developing harmonised REC standards among countries to encourage more significant RECs trading within the region.

The standards should also be expanded to adopt the requirements of RECs by other APAC countries, such as Japan, South Korea, and Taiwan, so the regional market for RECs can increase.

THE POTENTIAL OF THE REC MARKET IN MALAYSIA

SEDA Malaysia believes that enabling a more vibrant and liquid RECs market in

the national context can accelerate the transition towards a low-carbon nation.

Currently, Malaysia is adopting several RECs trading platforms, such as Malaysia Green Attribute Tracking System (mGATS), I-REC and TiGRs. mGATS is a national marketplace for RECs operated by TNBX Sdn. Bhd, a wholly subsidiary of Tenaga Nasional Berhad (TNB). RECs transactions through this platform ensure full compliance with international standards and campaigns, such as CDP, GHG Protocol and RE100.

Malaysia potentially has vast supplies of RECs for the market. Sources of RECs include:

- Hydro assets – owned mainly by Sarawak Energy Berhad and TNB.
- Large-scale solar plants, whose RECs are assigned to TNB.
- Assets under Feed-in Tariff.
- Net Energy Metering (NEM)/Self-consumption (SELCO).

According to MyRER, if all renewable assets are leveraged to generate RECs, the estimated number of certificates issued in one year would be approximately 29 million in 2021, corresponding to 19 per cent of total power consumption in Malaysia, growing to 38 million by 2025 or 14 per cent of power consumption. If large hydro assets are excluded, RECs issuance could still cover four per cent of electricity consumption in 2021, growing to nine per cent by 2025.

The Roadmap noted that the REC market should incorporate flexible procurement from utilities or mandated parties in meeting the demand from both public and private sectors. In line with the current transition towards sustainability from the private sector, the REC market is expected to be in high demand and will be able to create new trading models. **SEM**

GOOD RESPONSE TO SAVE 3.0 PROGRAMME

SEDA Malaysia's SAVE 3.0 programme benefited over 180,000 domestic households in 2022, up from 130,000 households that received their rebate vouchers under SAVE 2.0 in the previous year.

The total dispensed was also up by 38 per cent to RM36 million, compared to RM26 million in 2021 (see Table 1).

Sustainability Achieved via Energy Efficiency 3.0 (SAVE 3.0) involved 1,474 registered shopowners selling electrical appliances. This is an innovative programme under the National Energy Efficiency Action Plan (NEEAP) to promote energy-efficient electrical appliances, which help save energy and money and ultimately protect the environment.

On its impact on the environment, SEDA Malaysia said that the rebate has managed to reduce CO2 emissions by 117.4 MT.

SAVE 3.0 PROGRAMME

The main objectives of the SAVE 3.0 Programme are as follows:

- Increase the total number of five- and four-star energy efficient electrical

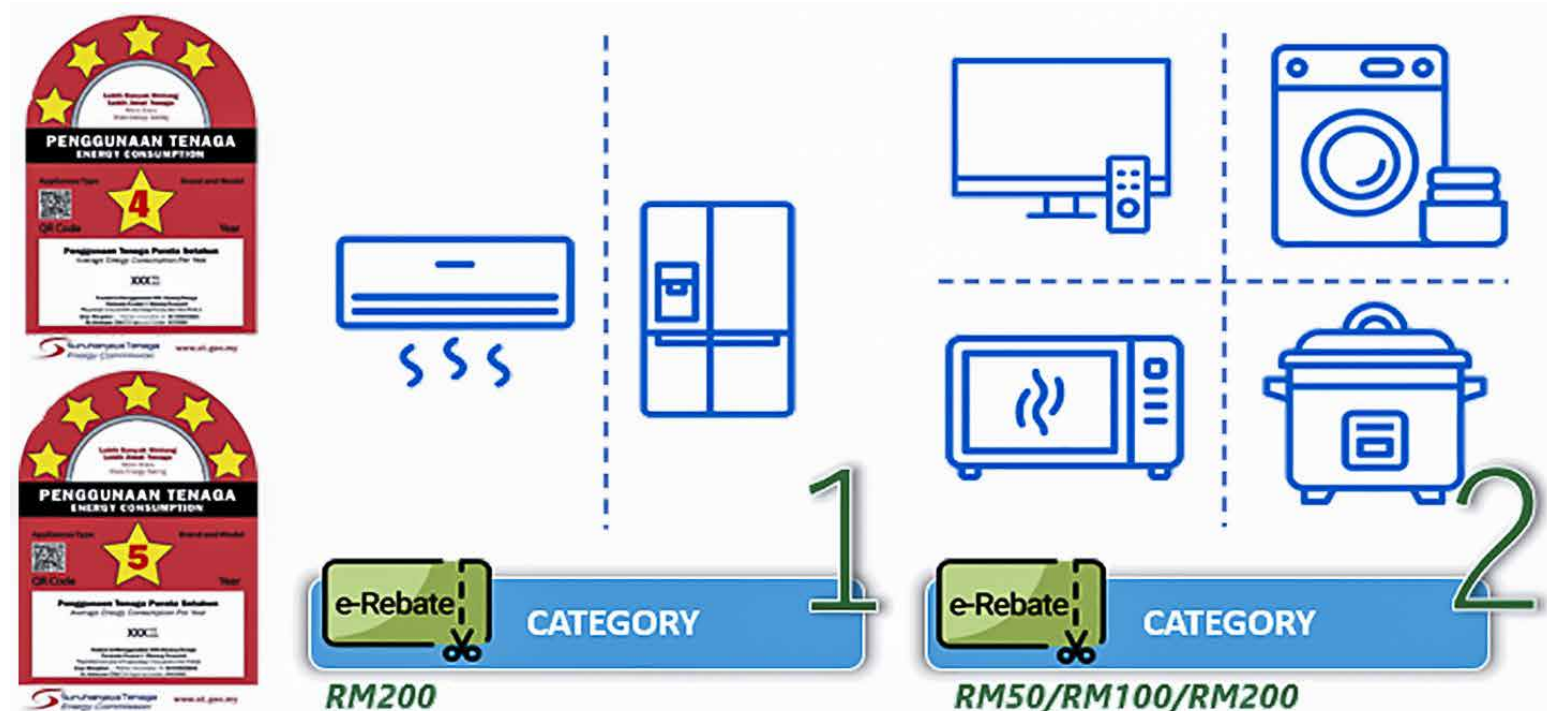
TABLE 1

Programme	SAVE 2.0	SAVE 3.0
Appliances	1. Air conditioners 2. Refrigerators	Category 1 1. Air conditioners 2. Refrigerators Category 2 1. Televisions 2. Washing machines 3. Microwave ovens 4. Rice cookers.
Total Rebates (vouchers)	Over 130,000	Over 180,000
Total of Rebates (RM)	Over RM26 mil	Over RM36 mil



appliances and energy efficient appliances in the market; and

- Raise public awareness to encourage them to buy energy efficient appliances that will save consumer's electricity consumption, especially for domestic consumers.
- Save the environment by reducing greenhouse gas emissions as a result of reduced energy generation
- The project's implementation period was set for one year from January 2022 to December 2022.





The SAVE 3.0 vouchers can be redeemed at registered physical stores and e-commerce platforms.

Eligibility requirements to participate in the programme are as follows:

- Malaysian citizen
- Users / owners of registered electrical account (domestic) in electrical utility companies such as TNB, Sabah Electricity Sdn. Bhd. (SESB), Sarawak Energy Berhad (SEB) and Nur Power Sdn. Bhd.
- Redemption for two (2) categories:
 1. Category 1 – refrigerator or air conditioner; and
 2. Category 2 – television or washing machine or microwave oven or rice cooker.
- 1 electricity bill account only eligible to apply 1 e-rebate for each category & first come, first served basis; and
- Recipients of e-rebate for the SAVE 2.0 programme are not eligible to apply for category 1 of the SAVE 3.0 programme, and can only apply for category 2.

DOMESTIC HOUSEHOLDS

Under SAVE 3.0, Malaysian households purchased electrical appliances which are energy efficient with 4-star or 5-star energy efficiency labels issued by the Energy Commission (ST).

The e-Rebate given was worth up to RM400 for items purchased, such as



The e-Rebate given was worth up to RM400 for items purchased, such as televisions, washing machines, microwave ovens and rice cookers, which SEDA Malaysia has added on top of the air conditioners and refrigerators listed under SAVE 2.0.”

televisions, washing machines, microwave ovens and rice cookers, which SEDA Malaysia has added on top of the air conditioners and refrigerators listed under SAVE 2.0.

Consumers welcome the extended list in tandem with modern lifestyles, where most households now have a rice cooker and a television at least.

Given the enthusiasm shown by consumers, SEDA Malaysia hopes to launch SAVE 4.0 next year. The programme

has also created a demand for electrical appliances.

DOMESTIC ELECTRICAL APPLIANCE PURCHASE REBATE FOR FLOOD VICTIMS

As part of the Malaysian Family Flood Aid initiative, households hit by floods were each given a RM500 rebate to buy electrical goods in addition to the SAVE 3.0 programme.

The initiative was aimed to reduce the burden of flood victims to buy some electrical equipment for daily use, to replace electrical equipment that has been damaged due to flooding.

To get the Domestic Electrical Appliance Purchase rebate, recipient must be:

- Malaysian;
- Users/owners of electricity accounts (domestic) with electricity utility companies; and
- Residences entered or flooded during floods and listed (officially confirmed) as Disaster Victims by the National Disaster Management Agency (NADMA) or Disaster Operations Control Centre (PKOB).

Eligible household or owner can apply and obtain the e-rebate when making purchases either physically at registered shops and supermarkets, or on e-commerce sites recognised under the SAVE programme. **SEM**



SEDA MALAYSIA

TRAINING PROGRAMMES

Renewable Energy



Trainings for Qualified Person/Technical

- Grid-Connected Photovoltaic (GCPV) System Design
- Off-Grid Photovoltaic (OGPV) System Design
- Grid-Connected Photovoltaic (GCPV) for Wireman & Chargeman
- Grid-Connected Photovoltaic (GCPV) Installation and Maintenance
- Operation and Maintenance of Biogas Power Plant
- Continuous Development Programme for Continuous Development Programme (CDP) for SEDA Malaysia Grid-Connected Solar PV Systems Design Qualified Persons (QPs)

Awareness Trainings:

- Introductory Training on Grid-Connected Photovoltaic (GCPV) System for Non-Technical Persons

For more information, please visit our website

www.seda.gov.my



JANUARY
5

SEDA Malaysia Authority Member, YBrs. Puan SJ Usha Nandhini, continued the 'Tautan Kasih' CSR activity in the new year with the single mothers of the B40 community in Kota Damansara. Donations in the form of rice and dry food were donated to help ease the burden of the group.



JANUARY
7

SEDA Malaysia channelled aid to the flood victims around Putrajaya by donating school bags and stationery to the children of Taman Lestari Mewah, Dengkil, affected by the floods during the day. YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia, handed over the donation to En Azlan Zamanhuri, Deputy Chairman of the Residents Association of Taman Lestari Mewah.



JANUARY
31

SEDA Malaysia Chief Strategy Officer, En Mohamad Nazri Mizayauddin (center right) during the Opening Ceremony of Dubai Expo 2020 Week 18: Sustainable Energy and Natural Resources.



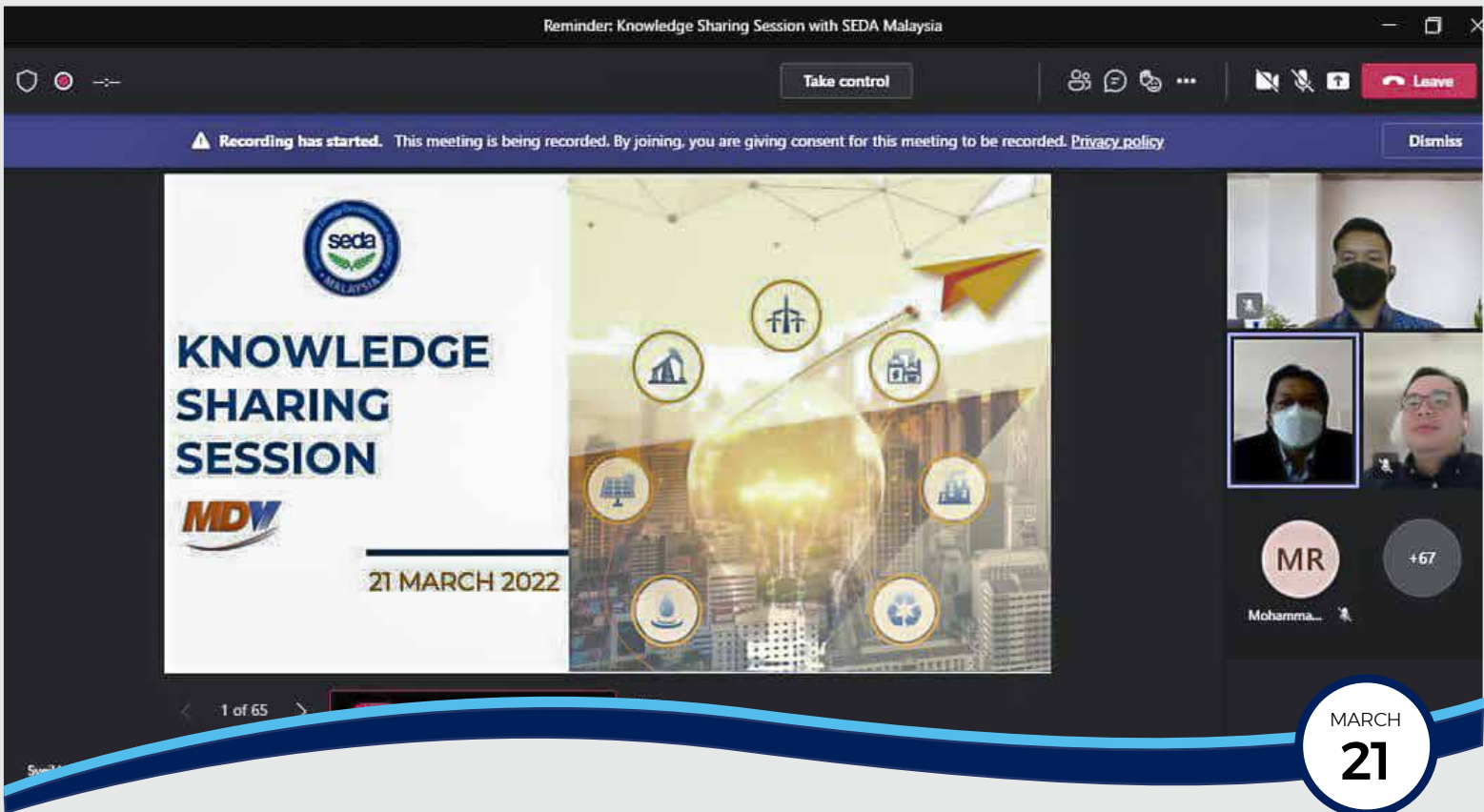
FEBRUARY
11

YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia, launched the "Let's Get Fit" program by SEDA Malaysia's Sports Club during the meeting of SEDA Citizens. He also continued the knowledge-sharing series 'CEO Power Hour 4.0' held for the first time in 2022.



MARCH
3

The 'Jelajah Aspirasi Keluarga Malaysia' programme which took place at Dataran Angsana, Johor Bahru.



MARCH
21

SEDA Malaysia gave a talk during a virtual knowledge-sharing session with MDV Berhad on renewable energy (RE) updates, MyRER briefs, and ISES 2022. En Nazri Mizayauddin, Chief Strategy Officer of SEDA Malaysia, delivered the opening remarks after the welcoming speech by MDV Berhad VP of Business & Technology Advisory, En Zuhry Rashid. SEDA Malaysia will continue working closely with organisations such as MDV Berhad to raise sustainable energy awareness and assist Malaysia in reaching its climate aspiration.



SEDA Malaysia promoted the SAVE 3.0 programme with the then Ministry of Energy and Natural Resources (KeTSA) at the 'Jelajah Aspirasi Keluarga Malaysia' exhibition booth at the Tuanku Syed Putra Sports Complex, Kangar, Perlis, from Mar 25-27, 2022.



Ts. Hazril Izan, SEDA Malaysia's Acting Director of Strategic Planning, participated in the 'Journey to Net Zero Carbon Emission' workshop promoting MyRER, NEM and renewable energy for Penang's commercial and industrial application in Ascott Gurney, Penang. The session organised by Penang Development Corporation and Tadau Energy Ventures saw Chief Minister of Penang, YAB Chow Kon Yeow, deliver his keynote address on Penang's green economy agenda.



SEDA Malaysia members get ready to welcome the month of Ramadan through a tazkirah session by Ustaz Jafri Bin Abu Bakar titled 'Refresh Ramadan'. Dates were also distributed to every SEDA Malaysia personnel.



SEDA Malaysia members recited and signed a corruption-free pledge led by the Chief Executive Officer YBhg. Dato' Hamzah Hussin in collaboration with the Malaysian Anti-Corruption Commission (MACC). Also present was Datuk Razim Mohd Noor, Director of Community Education Division, MACC.



APRIL
23

SEDA Malaysia broke fast while distributing donations with Maahad Tahfiz Az-Zahrah, Hulu Langat. This programme was part of SEDA Malaysia's CSR activities and was organised in collaboration with SEDA's Sports Club. The contribution was presented by the Chief Executive Officer of SEDA Malaysia, YBhg. Dato' Hamzah Hussin to Maahad Director Tahfiz Az-Zahrah Ustaz Ashri Lateh and the students. He also distributed bubur lambuk prepared by SEDA Malaysia to residents around Kampung Hulu Langat.



MAY
20

YBhg. Dato' Hj Rosli Isa, Secretary General of the then Ministry of Energy and Natural Resources (KeTSA) visited the then KeTSA exhibition site at the Jelajah Aspirasi Keluarga Malaysia (JAKM) programme, at the Sabah International Convention Centre. Also present was the Chief Executive Officer of SEDA Malaysia Dato' Hamzah Hussin, Director General of JUPEM YBrs. Sr. Mohammad Zaki Mohd Ghazali, and ST South West Coast Area Director Mr Jeffrey Nuri.



MAY
24

SEDA Malaysia celebrated 25 orphans during Majlis Hari Raya that was attended by the then Minister of KeTSA.



MAY
31

YB Datuk Seri Takiyuddin Hassan, the then Minister of Energy and Natural Resources and YBhg. Dato' Hj Rosli Isa, Secretary General of the then Ministry of Energy and Natural Resources (KeTSA), welcomed YAB Dato' Seri Haji Muhammad Sanusi Md Nor, Menteri Besar of Kedah to the then KeTSA 'Mesra Aidilfitri' Council in Sik, Kedah. YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia, and Heads of the then KeTSA Departments/Agencies attended the ceremony. SEDA Malaysia also opened an exhibition site with other agencies under the then KeTSA, promoting programmes such as SAVE 3.0 and NEM 3.0 to the public who attended the event.



JUNE
1

During the Malaysia Renewable Energy Roadmap (MyRER) Briefing Session at Pahang State level in collaboration with the Pahang State Economic Planning Division (BPEN), SEDA Malaysia briefed representatives from state government agencies about MyRER. YBrs. En Nazri bin Mizayauddin, Chief Strategy Officer of SEDA Malaysia and YH. Dato' Razihan bin Adzharuddin, Deputy Government Secretary (Development) of the Pahang State Government, also welcomed the audience. This plan aims to set targets for TBB's installed capacity to reach a target of 31 per cent by 2025 and 40 per cent by 2035. In addition, this plan is also expected to benefit the national economy and have a positive impact on the environment. SEDA Malaysia also promotes its programmes that are currently and will be carried out, especially those related to renewable energy and energy efficiency.



JUNE
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JUNE
3-6

YBhg. Dato' Hamzah Hussin, CEO of SEDA Malaysia, did a walkabout at SEDA Open Day 2022 in MyTOWN Shopping Centre.



JUNE
8

SEDA Malaysia conducted a Knowledge Sharing Session on Renewable Energy (RE) updates with MBSB Bank. Chaired by YBrs. En. Mohammad Nazri Mizayauddin, the session focused on current renewable energy programs in Malaysia, Malaysia Renewable Energy Roadmap (MyRER) and ISES 2022. The session ended with a Q&A session.



YB Datuk Seri Takiyuddin Hassan, then Minister of Energy and Natural Resources, announced a new 187MW quota for the Incentive Tariff (FIT) mechanism for non-solar sources. This new quota will contribute to the target of 31 per cent renewable energy installed capacity by 2025 and 40 per cent by 2035. The government expects this quota offer to generate investment of RM1.8 billion and create as many as 550 job opportunities in the renewable energy industry. YB Datuk Ali Biju, then Deputy Minister of KeTSA, YBrs. Tuan Mohammad Razif Hj Abdul Mubin, Deputy Secretary General (Energy) of the then KeTSA, and YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia was also present during the Press conference.



SEDA Malaysia opened a booth promoting Renewable Energy (RE) and Energy Efficiency (EE) Programmes at the Majlis Bandar Raya Petaling Jaya (MBPJ) 's 16th Anniversary celebration from Jun 24-26, 2022, at Laman MBPJ, Petaling Jaya. Selangor Menteri Besar YAB Dato' Seri Amirudin Bin Shari, Petaling Jaya Mayor Mohamad Azhan Md Amir, and the members of MBPJ paid a visit to the Authority's booth during their walkabout. Currently, SEDA Malaysia is collaborating with MBPJ for the Three (3) Years Programme of Energy Management, Implementation of Malaysian Standard (MS 1525), and Low Carbon Building.



SEDA Malaysia at the Jelajah Aspirasi Keluarga Malaysia (JAKM) programme exhibition site at Litar Dato' Sagor, Pasir Salak, Perak, from July 1-3.



SEDA Malaysia held the RMK-12 Energy Audit Conditional Grant (EACG) Programme Tour for Sabah on Jul 4, 2022. The RMK 12-EACG Programme is a program that offers conditional grants for the implementation of energy audits in the Industrial and Commercial sectors.



JULY
12

YB Datuk Seri Takiyuddin Hassan, former Minister of Energy and Natural Resources and YBhg. Dato' Hj Rosli Isa, the then KeTSA Secretary General, slaughtered three cows in conjunction with the Mesra Rakyat Keluarga Malaysia Programme by the then Ministry of Energy and Natural Resources (KeTSA) in Trong, Perak. This ceremony also witnessed YB Datuk Seri Takiyuddin planting a Beruas tree as a symbol of Malaysia's Greening Program. He also visited the SEDA exhibition site and other agencies under the then KeTSA that promote programs introduced by the government.



JULY
22-24

SEDA opened an exhibition site at the Jelajah Aspirasi Keluarga Malaysia (JAKM) program from July 22-24, 2022 at Sultan Muhammad IV Stadium, Kota Bharu, Kelantan Darul Naim.



JULY
27

SEDA Malaysia and UniKL British Malaysian Institute (UniKL BMI) have collaborated for the implementation of the Sustainable Energy Forum and the Launching Ceremony of the UniKL Sustainable Energy Living Lab Building Construction Project at UniKL BMI on Jul 27, 2022 which was officiated by Dato Seri Mahdzir Bin Khalid, former Minister of External Development City. This project will make history for UniKL BMI by becoming the first Zero Energy Building in Malaysia. UniKL BMI is also a training partner of SEDA Malaysia for several energy-related courses, such as solar PV.



JULY
26-27

The Energy Management and Energy Audit Training Session in Buildings (Commercial Sector) was held from Jul 26-27, 2022, at SEDA Malaysia in a hybrid manner attended by building owners and Energy Service Companies (ESCO) who have applied for grants under the Conditional Energy Audit Grant program (EACG) RMK-12. This training is one of the packages offered in the EACG program in addition to the technical facilitation assistance package.



AUGUST
1-4

The Energy Management and Energy Audit Training Session in Buildings (Industrial Sector) was held from Aug 1-4, 2022 at SEDA Malaysia in a hybrid manner with a focus on building owners and Energy Service Companies (ESCOs) that have applied for grants under the Energy Audit Conditional Grant programme (EACG) RMK-12.



AUGUST
22

SEDA Malaysia signed a Memorandum of Understanding (MoU) with Pahang Skills Development Center to provide training related to sustainable energy from August 2022 until August 2024. Chief Executive Officer of SEDA Malaysia YBhg. Dato' Hamzah Hussin signed the MoU with Pahang Skills Executive Director Tuan Mohd Yusri Mohd Nor at the SEDA Malaysia office on Aug 22, 2022.



AUGUST
26

Memorandum of Understanding (MoU) Signing Ceremony between NUR Power and TNB was signed by TNB's Chief Retail Officer, YBhg. Datuk Ir. Megat Jalaluddin Megat Hassan and the Managing Director of NUR Power, En Ikhwan Hafiz Jamaluddin took place on Aug 26, 2022, at the Double Tree Hotel by Hilton Putrajaya. Senior Division Secretary (Electricity Supply), the then Ministry of Energy and Natural Resources (KeTSA) YBrs. Puan Mareena Mahpud, Chief Executive Officer of SEDA Malaysia, YBhg. Dato' Hamzah Hussin, Head of Retail Division Solutions, Mr Mohamed Azrin Mohamed Ali and Chairman of NUR Power, Datuk Wira Ir. Md Sidek Ahmad was also present at the event. The MoU is for large-scale solar projects, rooftop solar and electric vehicle (EV) charging facilities at Kulim High Tech Park (KHTP)



AUGUST
29-30

Then Prime Minister YAB Dato' Sri Ismail Sabri Yaakob officiated the International Sustainable Energy Conference (ISES) 2022 at the Kuala Lumpur Convention Center. The conference themed 'Empowering Energy Transition' is hosted by the then Ministry of Energy and Natural Resources (KeTSA) and organised by SEDA Malaysia. YB Datuk Seri Takiyuddin Hassan, then Minister of Energy and Natural Resources, gave a welcome speech to the 2,300 participants who attended the conference. ISES 2022, which took place on Aug 29-30, 2022, featured four plenary sessions and 10 in-depth discussion workshops by leading speakers from various fields related to sustainable energy.



SEPTEMBER
19

YAB Dato' Sri Ismail Sabri Bin Yaakob, then Prime Minister, launched the National Energy Policy (NTP) 2022 - 2040 at the Marriott Hotel Putrajaya. DTN outlines the strategic direction and the main importance of the energy sector in Malaysia in the coming period. YB Dato' Sri Mustapa Bin Mohamed, then Minister in the Prime Minister's Department (Economy), YBhg. Datuk Seri Mohd Zuki Bin Ali, Chief Secretary, and YBhg. Datuk Seri Saiful Anuar Bin Lebai Hussien, Director General of the Economic Planning Unit, also participated with YAB PM during the completion of the launch. YAB PM then visited the exhibition site accompanied by YB Datuk Seri Takiyuddin Bin Hassan, then Minister of Energy and Natural Resources and YB Dato' Sri Dr Adham Bin Baba, the then Minister of Science, Technology and Innovation. This exhibition showcased the work of the then Ministry of Energy and Natural Resources (KeTSA), SEDA Malaysia, as well as other agencies related to the energy sector.



OCTOBER
3

During the presentation of the Renewable Energy Bill (Amendment) 2022 and the Sustainable Energy Development Authority Bill (Amendment) 2022 by YB Datuk Seri Takiyuddin Hassan, then Minister of Energy and Natural Resources in the Dewan Rakyat on Oct 3, 2022. YB Datuk Ali Biju, then Deputy Minister of Energy and Natural Resources, YBhg. Dato' Mohamad Razif Haji Abd Mubin, Deputy Secretary General (Energy) of the then Ministry of Energy and Natural Resources (KeTSA) and officials from the then KeTSA and SEDA were also present during the session. This Bill aims to ensure that the process of handing power for the supply of electricity to the Sabah government is carried out orderly without causing any legal implications in the future.



OCTOBER
7-9

SEDA Malaysia at the exhibition site of the Jelajah Aspirasi Keluarga Malaysia program at Dataran Seri Jempol, Negeri Sembilan from Oct 7-9.



OCTOBER
8-9

YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia, led the SEDA Malaysia contingent in the Sports Day Carnival of the then Ministry of Energy and Natural Resources (KeTSA) which took place on Oct 8-9, 2022. Seven sports events were contested by representatives from agencies under the then KeTSA in conjunction with the National Sports Day celebration week.



OCTOBER
12-14

The Chief Executive Officer of SEDA Malaysia, Dato' Hamzah Hussin, spent time visiting the International Greentech & Eco Products Exhibition & Conference Malaysia (IGEM) 2022, Kuala Lumpur Convention Centre.

EVENT GALLERY FOR 2022



OCTOBER
13-15

The KeTSA @ KB Prihatin Carnival took place at Dataran Platinum Mall, Lembah Sireh, Kota Bharu, Kelantan. SEDA Malaysia an agency under the then Ministry of Energy and Natural Resources (KeTSA), participated in the opening of the exhibition site and gave talks related to the SAVE 3.0 programme.



OCTOBER
14-16

SEDA Malaysia promoted the SAVE 3.0 programme with the then Ministry of Energy and Natural Resources (KeTSA) at the Jelajah Aspirasi Keluarga Malaysia exhibition booth at the Melaka International Trade Center from Oct 14-16, 2022.



OCTOBER
25-28

YBrs. Dr Wirdati Mohd Radzi, Authority Member of SEDA Malaysia and En Saiful Hakim Abdul Rahman, Director of Strategic Planning SEDA Malaysia, had an engaging session with Carbon Trust Singapore, Ms. Xinying Tok, Head of South East Asia and Mr Mauricio Riveros, Associate Director, Programmes & Innovation discussing potential areas of collaboration on technology accelerators. The meeting was held during the Singapore International Energy Week (SIEW) 2022. The four-day conference is a platform for energy professionals, policymakers and commentators to share best practices and solutions within the global energy space.



OCTOBER
29

Petaling Jaya City Council, in collaboration with SEDA Malaysia has organised an Energy Management and Efficiency Awareness Programme and Renewable Energy for residents around Petaling Jaya Zone 17 on Oct 29, 2022, at PJS1 Dataran Anak Muda, Petaling Jaya. This programme was attended by guests of honour YB Maria Chin Abdullah and Zone 17 Area Council Member Puan Norah Mansor. As a speaker for this program, SEDA Malaysia presented interesting information related to Energy Management and Efficiency, as well as programs related to Renewable Energy available in Malaysia that can be participated by the local community.



NOVEMBER
10

Then Minister of Energy and Natural Resources, YBhg Datuk Seri Takiyuddin Hassan and his delegation visited the floating solar system installation site in Lake Tok Uban, Pasir Mas, Kelantan, by Cypark Renewable Energy Sdn Bhd. This project will be the World's Largest Aquaculture Integrated Floating Solar System. YB Ustaz Tuan Haji Mohd Saripudin Tuan Ismail, EXCO Agriculture, Green Energy, and Environment, YBhg. Dato' Hamzah Hussin, Chief Executive Officer of SEDA Malaysia, YBhg. Dato' Daud Ahmad, Chief Executive Officer of Cypark Resources Berhad, Tuan Haji Wan Mohd Shuhaimi Wan Mustapha, Director of UPEN Kelantan, and senior officials from the Energy Commission were also present to accompany YB Minister during this visit.



NOVEMBER
14

Digitalisation is transforming the energy industry by improving efficiency and safety and facilitating renewable energy use. This morning, SEDA Malaysia made a courtesy visit to HUAWEI Malaysia led by YBrs. En. Nazri Mizayauddin, Chief Strategy Officer of SEDA Malaysia, and welcomed by Mr James Lee, Director of Huawei Technologies (M) Smart PV Business Solution with his team. The visit looks at Huawei's latest ICT Technology and uses cases involving Huawei - 5G Technology, Digital Power (Green Technologies), and Cloud Technology which aligns with Malaysia's aspiration to become a carbon-neutral nation by 2050.



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AS WE ACHIEVE OUR SUSTAINABLE ENERGY
GOALS



WISH YOU A HAPPY
New Year
2023