

9 - 11 OCTOBER 2024 KUALA LUMPUR CONVENTION CENTRE

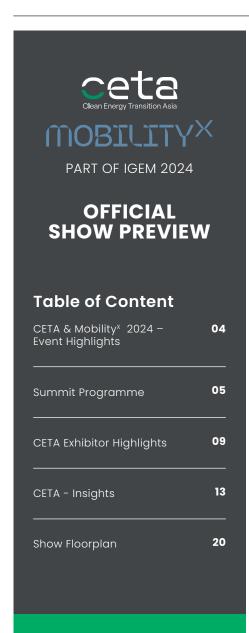
SHOWPREVIEW



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Driving ASEAN's Energy and Mobility Future: A Preview of CETA and Mobility^x 2024

elcome to this special edition of the CETA and Mobility^x Show Preview, where we explore transformative innovations in clean energy and mobility across ASEAN.

As global efforts to combat climate change intensify, Malaysia is stepping up as a regional leader with ambitious goals through its National Energy Transition Roadmap (NETR). The country targets 70% renewable energy capacity by 2050, a 15% electric vehicle (EV) sales share by 2030, and the establishment of 10,000 EV charging stations by 2025. Supporting frameworks like the Hydrogen Economy and Technology Roadmap (HETR) and the Energy Efficiency and Conservation Act (EECA) will be pivotal to ensuring sustainable and affordable progress in these sectors.

CETA and Mobility^x, held in conjunction with the International Greentech & Eco Products Exhibition and Conference Malaysia (IGEM) 2024, serve as platforms for industry leaders, policymakers, and innovators to collaborate on actionable strategies. This Show Preview extends those dialogues, providing industry updates, insights from partners and exhibitors, and articles that highlight the critical role of public-private partnerships in advancing net-zero solutions.

We would also like to extend our sincere gratitude to all our key partners for their invaluable support and collaboration,



which has made this platform possible. Your commitment helps drive the conversations and innovations that will shape the future of clean energy and mobility in ASEAN.

We hope this Preview informs and inspires, encouraging you to join us at Kuala Lumpur Convention Centre from the 9th to 11th October 2024. By coming together, we can unlock ASEAN's US\$4 trillion clean energy opportunity.

I look forward to meeting you at CETA and Mobility^x 2024.

Warm regards,

Mel Lanvers-Shah

Chief Executive Officer, The C0_Lab





CETA & Mobility^x 2024: Event Highlights

lean Energy Transition Asia (CETA) and Mobility^x, co-located with IGEM, will bring together the entire energy transition and decarbonisation value chain in a highly anticipated event this year. Over three dynamic days, these events will provide actionable insights, foster collaborations, and showcase innovations designed to accelerate clean energy and mobility transitions.

The event is aligned with the National Energy Transition Roadmap (NETR) and under the patronage of the Ministry of Natural Resources and Environmental Sustainability (NRES), placing a strong emphasis on Malaysia's ambitious netzero goals. With a focus on advancing sustainable solutions, CETA and Mobility aim to unlock the estimated \$3 to \$5 trillion in green business opportunities over the next decade, empowering businesses to capitalise on the region's growth potential.

Event Highlights

This year's CETA and Mobility^x will feature:

- 450+ Exhibiting Brands showcasing the latest innovations in energy and mobility technologies from global players.
- 150+ Global and Regional Thought Leaders sharing insights on the future of energy transition, carbon reduction, and sustainable mobility. Industry experts from both public and private sectors will provide a comprehensive view of the challenges and opportunities ahead.

- Keynote Sessions by Top Policymakers including Malaysia's Prime Minister, Deputy Prime Minister, Ministers and other senior government figures. These addresses will offer critical insights into the country's energy policies, renewable energy goals, and ASEAN's future as Malaysia assumes its Chairmanship role in ASEAN next year.
- 3 Days of Content-Driven Sessions including panel discussions, presentations, and interactive engagement, all designed to deliver value for decision-makers and stakeholders.

ASEAN's Trillion-Dollar Opportunity

One of the central themes of the event is the region's trillion-dollar opportunity in clean energy and mobility. As ASEAN transitions to a netzero economy, the potential for growth and innovation is enormous. CETA and Mobility^x provide a platform to explore how public and private sectors can collaborate to tap into this massive opportunity.

Investments in renewable energy ramp up, carbon, hydrogen, and transition fuels will be key drivers in unlocking these opportunities. Attendees will gain valuable knowledge on how to navigate these emerging markets and capitalise on new revenue streams in green businesses.

Networking and Long-Term Collaborations

Beyond the sessions and exhibitions, CETA and Mobility^x emphasise the importance of networking and building lasting partnerships. With a mobile app designed to facilitate ongoing interactions, participants can continue to connect with peers, build strategic relationships, and leverage the insights gained during the event.

Networking at CETA and Mobility^X goes beyond the typical event setting. Attendees are encouraged to forge relationships that will extend beyond the three-day event, fostering collaborations that drive innovation and measurable outcomes in the clean energy and mobility sectors.

Driving Measurable Outcomes

Beyond the exhibition and summit, CETA and Mobility^{x'}s core goal is to continue being the "transition bridge" in providing actionable takeaways and facilitate long-term partnerships that lead to tangible results. From policy recommendations to business opportunities, CETA and Mobility^x will equip the community with the knowledge, tools, and network needed to thrive in the clean energy and mobility landscape.

By attending CETA and Mobility^x, participants will be positioned at the forefront of the energy transition and mobility transformation in ASEAN, shaping a sustainable future for the region.

DAY 1 9 OCT 2024

9:00am - 9:15am

Organizer's Welcome Address:

Race Towards Net Zero: Regional Leadership for Climate Urgency

Elina Jani

Chief Executive Officer GreenTech Ideaslab Sdn Bhd **Mel Shah**

Chief Executive Officer The CO_Lab Pte Ltd

9:15am - 9:30am

Special Address from our Industry Patron



Petronas

9:30am - 9:45am

Special Address from our Industry Patron



Ir. Dr. Mohd Fadzil Mohd Siam

Acting Chief Strategy Ventures Officer Tenaga Nasional Berhad

9:45am - 10:00am

Special Address from our Global Partner Energy Transition, The Swedish Energy Agency and Business Sweden

Helena Bernland

Senior Business Developer, International Markets Swedish Energy Agency

10:00am - 10:15am

Keynote: APAC's Roadmap to Net Zero and 2030 Outlook

McKinsey & Company Kaushik Das

Senior Partner, Southeast Asia McKinsey and Company

10:15am - 10:30am

Keynote: ASEAN and The World – Pathway to Zero



__ Jarand Rystad

Chief Executive Officer Rystad Energy

10:30am - 11:00am

Morning Tea Break

11:00am - 11:45am

Partnerships – Public, Private, Regional:

The Role of Policy, New Energies, Technology Innovations and Regional Collaboration

<u>SPEAKERS</u> Shiv Sivarajah

Head of Project Finance Asia MUFG Bank Davis Chong

Executive Director & Group CEO Solarvest Holdings Berhad



Petronas

TENAGA NASIONAL

Tenaga Nasional Berhad (TNB)

MODERATOR Vijay Krishnan

Managing Director & Head of APAC Rystad Energy

DAY 1 9 OCT 2024

11:45am - 12:30pm

Financing Zero:

Unlocking Critical Climate Finance to Keep Transition Goals on Track

SPEAKERS

Roy Heong

Head of Strategic Partnerships and Innovation

Alliance Bank Malaysia Berhad

Tham Chee Aun

Group Chief Executive Officer

Ditrolic Energy

MODERATOR Andy Yap

Finance Sector Lead, S&EA (Singapore)

FRM

Elina Jani

Chief Executive Officer
GreenTech Ideaslab Sdn Bhd

Scott Clements

Partner

Tribeca Capital, Singapore

12:00pm - 1:30pm

Networking Lunch

2:00pm - 2:15pm

Special Address:

Contributing to NETR and The Roadmap Ahead

TS Shamsul Bahar Mohd Nor

Group Chief Executive Officer

Malaysian Green Technology And Climate Change Corporation (MGTC)

2:15pm - 2:30pm

Special Address:

NanoMalaysia Berhad and UZMA

Nano Malaysia Berhad

NANOMALAYSIA.

UZMA Environergy Sdn Bhd

UZMX

2:30pm - 3:00pm

GOH Special Address

YAB Dato Sri Haji Fadillah Haji Yusof

Deputy Prime Minter of Malaysia and

Minister of Energy Transition and Water Transformation (PETRA)

3:00pm - 3:30pm

Afternoon Tea Break

3:30pm - 4:30pm

Global Leadership Panel:

CSOs and Clean Energy Parnerships - Strengthening Collaboration for Net-Zero Transition

SPEAKER

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Petronas

OCBC

***bcsd** Malaysia

MODERATOR
Celine Ng Boon Yuan

Business Council for Sustainable Development

BCSD Malaysia

4:30pm - 5:30pm

Global Leadership Panel:

From Challenges to Opportunities – Green Building Opportunities for Malaysia and ASEAN

SPEAKERS

Saiful Adib Abdul Munaff

Chief Operating Officer Malaysian Green Technology & Climate Change Corporation (MGTC)

MODERATOR Vaibhav Dua

Partner

McKinsey and Company

Grégory Thomassin

Head of Business Development TotalEnergies, Renewables Asia Pacific

DAY 2 10 OCT 2024

9:00am - 10:00am

Joint Opening Ceremony & Head of State Keynote

YAB Dato' Seri Anwar Ibrahim

Prime Minister of Malaysia

10:00am - 10:15am

Morning Tea Break

10:15am - 10:55am

The New Energy Company: Future Visions for Global Energy Companies

Karen Andries

Vice President, Asia-Pacific Exploration & Production TotalEnergies



Patricia Seevam

Prof. Ir. Dr. Mohd Shahir Liew

Energy Institute Malaysia

Director, Shell New Ventures / GM Transformation & Energy Transition Shell Malaysia



Petronas

TENAGA NASIONAL

Chairman

Tenaga Nasional Berhad (TNB)

MODERATOR Rajat Agarwal

Partner

McKinsey and Company

10:55am - 11:45am

ASEAN's 2030 Energy Mix

SPEAKERS

Vicky Janita

Senior Analyst, Energy System Research

Rystad Energy

Dato' Leong Kin Mun

President

Malaysia Biomass Industries Confederation

MODERATOR Mel Shah

Chief Executive Officer
The C0_Lab Pte Ltd

12:00pm - 1:30pm

Networking Lunch

1:30pm - 1:45pm

Mobility^x Leadership Keynote

YB Tuan Anthony Loke Siew Fook

Minister of Transport

2:00pm - 2:20pm

Mobility^x Leadership Keynote

Pras Ganesh

Executive Vice President, CISO

Toyota Motor Asia

2:20pm - 3:10pm

Global Leadership Panel: Race to CASE

SPEAKER

YINSON Market Streen Tech

YINSON GreenTech

MODERATOR
Chris Bradley

Director and Senior Partner

McKinsey Global Institute and McKinsey & Company

DAY 2 10 OCT 2024

3:10pm - 3:40pm

Afternoon Tea Break

3:40pm - 4:20pm

Sustainability Leaders and Energy Transition:

Commercial & Industrial Champions Sustainability CXOs and Their 2030 Vision

SPEAKERS

Ken Haig, Ph.D.

Head, Energy and Environmental Policy,

Asia-Pacific & Japan Amazon Web Services

Leo Pui Yong

Chief Sustainability Officer Tenaga Nasional Berhad

3Degrees Group Inc **MODERATOR**

Izzat Hamzah

Seng Kee (SK) Wong

Country Managing Partner, Malaysia & Brunei

APAC Lead - Originations, Environmental Commodities

4:20pm - 5:30pm

Panel: Mega Projects for Energy Transformation

Mel Shah

Chief Executive Officer The C0_Lab Pte Ltd

DAY 3 11 OCT 2024

9:00am - 9:15am

Keynote: Hydrogen - Will It Be ASEAN's Swiss Army Knife for Energy Transition?

Nigel Rambhujun

Analyst, Hydrogen Research

Rystad Energy

9:15am - 10:05am

Energy Storage, Batteries and Hydrogen:

The Convergence Required to Transition to Carbon Neutrality

Christian Pataky, MSc

Director, Industrial Projects & Engineering ILF Consulting Engineers Austria

RystadEnergy

Rystad Energy

MODERATOR Jye Yng Voon

Senior Partner, Malaysia

Milan Padhi

Market Development – Energy Transition (Hydrogen and Decarbonisation Solutions)

Siemens Energy

aentari

Gentari

10:05am - 10:35am

Morning Tea Break

10:35am - 11:25am

Panel: Transition Innovations for Hard to Abate Sectors

SPEAKERS

Dora C Branyan

Director of Sustainability & External Relations Marquis Energy Global Pte Ltd

Su Yin Anand

Co-Founder The Captain's Table **MODERATOR Shawn Woo**

Senior Commercial Lead - APAC 3Degrees Group, Inc.

11:25am - 12:25pm

Summit Closing Fireside Discussion: Clean Energy Transition Commandments

for ASEAN

Fling Jani

Chief Executive Officer GreenTech Ideaslab Sdn Bhd Mel Shah

Chief Executive Officer The CO_Lab Pte Ltd

12:25pm - 1:55pm

End of Summit and Networking Lunch

2:00pm -5:00pm

Exhibitor Hi-Tea Appreciation and End of Summit

Ramping Up Renewable Energy

Bridging the Gap: STX and Malaysia's REC Industry

The Malaysia Renewable Energy Certificates (REC) industry is a mature yet growing market. Both RE asset owners, and companies of all sizes increasingly see the value of RECs in the country's efforts towards decarbonization.

STX places itself in the middle as a consultant and a service provider to either side of the coin. RE developers benefit from knowing good estimates on the returns of their REC generation, albeit the revenue from that being relatively small to that of the actual power generation. And since REC demand is voluntary, end-user corporations want to ensure the most efficient and smooth way

to reach their sustainability goals. STX's main aim is to bring solutions to these to the market and bridge gaps of information where needed.

Often discussed topics in a day at the office include report standards, cross border power trading, reporting periods, registries, bundled vs unbundled RECs, RECs generated from different islands in the same country, RE asset technologies, and many other questions surrounding best practices.

stxgroup.com Booth No.: 4111, Hall 4



Navigating Southeast Asia's Evolving REC Market: Opportunities and Challenges

"The Renewable Energy Certificates (REC) market in Southeast Asia is expanding rapidly, fuelled by corporate sustainability goals and government policies aimed at promoting clean energy. In Malaysia, International Renewable Energy Certificates (I-RECs) have become a crucial tool for companies, especially those without the capacity to install their own renewable systems, allowing them to support renewable energy generation while meeting carbon reduction targets.

However, challenges remain, such as inconsistent regulatory frameworks, limited infrastructure, and a lack of awareness among businesses. I-RECs provide a valuable solution for multinational corporations seeking to comply with global sustainability standards and contribute to the renewable

energy transition. These certificates complement initiatives like Malaysia's Corporate Green Power Programme (CGPP) and the newly announced Corporate Renewable Energy Supply Scheme (CRESS) by offering a flexible approach to renewable energy procurement.

As the market evolves, partnering with experts like 3Degrees, who procure high-quality I-RECs and provide strategic market insights, analysis, and regulatory support, will be essential for companies navigating country-specific regulations and understanding supply-demand dynamics. This expertise empowers businesses to make informed decisions and effectively meet their sustainability objectives."

3degreesinc.com





Powering the Future: Game-Changing Innovations in Solar Energy

Leading the Solar Revolution: Suzhou Talesun

Visitors to the Suzhou Talesun Solar stand at Clean Energy Transition Asia will witness the future of solar energy deployment in action. Talesun, a global leader in solar module manufacturing, is transforming the clean energy landscape—not just as a conceptual goal, but as a tangible, hereand—now solution.

At the heart of their showcase will be cutting-edge technologies that have already powered some of the world's most ambitious solar projects, from 407 MW in Texas, USA, to 55 MW in North Macedonia, and 15 MW in Thailand. Talesun's innovative approach is reshaping the solar industry, ensuring energy efficiency and sustainability across diverse geographies. What sets Talesun apart is their relentless pursuit of quality and innovation. Their

solar modules undergo over 35 rigorous tests, ensuring unrivaled reliability and performance. With warranties of up to 25 years, Talesun's solutions are built to last, offering peace of mind to businesses and governments alike.

But it's not just about technology—Talesun is driving a global movement. Their collaboration with top research institutes and ongoing investment in R&D is enabling a cleaner, greener future for all. Visitors to their stand will discover how Talesun's solar technology is already delivering realworld results and how it can transform their energy strategies.

www.talesun.com Booth No.: 5108, Hall 5



JM SOLAR

品 兆 能 源 科 技

Building the Future of Solar Infrastructure: Xlamen Jinmega Solar Technology

At Clean Energy Transition Asia, Xiamen Jinmega Solar Technology Co., Ltd. will showcase the next evolution in solar mounting systems. As a world-leading provider of solar infrastructure, Jinmega Solar specializes in cutting-edge solutions for rooftops, solar farms, BIPV, floating systems, and carports. Their expertise extends across the globe, with installations in over 100 countries and annual production capacity exceeding 5 GW.

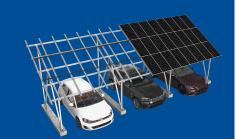
Jinmega's innovations are already transforming solar projects around the world. Their systems power significant installations, such as the 27 MW BIPV project in Fujian and the 65 MW fixed structure project in Ningxia, China. At Clean Energy Transition Asia, visitors will discover how Jinmega's solutions are

engineered to perform even in the harshest environments—such as during Typhoon Dujouray, where Jinmega's photovoltaic support structures withstood winds of up to level 16, proving their resilience.

With production bases in Fujian and Tianjin, Jinmega integrates advanced R&D, precision manufacturing, and stringent quality control to deliver state-of-the-art mounting systems. Their commitment to quality is backed by ISO9001:2015 and ISO14001 environmental certifications, and their products have received international certifications including TUV, CE, and UL. As one of the largest exporters of solar mounting products from China, Jinmega's systems ensure both reliability and costeffectiveness for solar projects of all sizes.

For those looking to enhance their solar infrastructure, Jinmega Solar offers a glimpse into the future of intelligent and durable solar energy solutions.

www.jinmega.com Booth No.: 5305, Hall 5









Powering a Low-Carbon Future: Bonada

As the world increasingly turns to renewable energy solutions, Bonada (Fujian) New Energy Technology Co., Ltd. is at the forefront of delivering energy storage systems that are not only efficient but also environmentally friendly. At Clean Energy Transition Asia, visitors will discover Bonada's advanced lithium iron phosphate (LiFePO4) energy storage batteries, designed specifically for small- to medium-sized homes and commercial businesses. These systems are perfect for regions facing unstable power grids, high electricity costs, or limited access to reliable energy sources.

Bonada's commitment to low-carbon and energy-saving technologies is evident in their broad product range, which includes residential and commercial energy storage systems, golf cart battery packs, RV battery packs, and portable power stations. With over a decade of experience in the energy storage industry, Bonada has built long-term partnerships in Southeast Asia, Europe, South Africa, and South America. Their products are internationally certified with UL, CE, and RoHS, ensuring they meet the highest standards of safety and efficiency.

Visitors to the Bonada stand will see how their "turnkey" energy storage solutions provide reliable and cost-effective power to homes, businesses, and industries. By focusing on innovation and sustainability, Bonada is driving the shift towards cleaner energy, empowering communities to achieve energy independence. Their vision is to provide clean power for all, while responding to market demand with continued research and development.

www.fjbnd.com Booth No.: 5212, Hall 5

Energy Storage and Power Management: Pioneers of Energy Independence

Powering the Future: Far East Battery's Breakthrough Energy Solutions

Far East Battery (FEB) is set to showcase the next generation of lithium-ion battery technology, offering groundbreaking solutions that promise to transform the global energy landscape. Founded in 2009 as a subsidiary of Far East Smarter Energy Co., Ltd., FEB has grown to become one of the leading suppliers of battery energy storage systems (BESS), empowering electric vehicles, e-bikes, power tools, and digital appliances worldwide.

What sets FEB apart is their unwavering focus on safety, reliability, and energy density. Their advanced battery technology, featuring high-energy density cells and ultra-fast charging (80% charged in just 12 minutes), is designed to support clean energy storage in all scenarios. FEB's batteries currently power over 100,000 electric vehicles and have accumulated

more than 3 million e-bike installations globally. With facilities in Jiangxi and Tianjin, FEB combines state-of-the-art production with a smart manufacturing system, integrating real-time management for greater efficiency, quality, and sustainability.

As a testament to their leadership, FEB recently won the Best C&I ESS Solution of 2024 at the EESA Starlight Awards Gala. Visitors to their stand will also witness how their intelligent manufacturing systemsfrom SRM to WMS—enhance production, reduce costs, and improve customer satisfaction, making FEB a trusted partner for green energy solutions.

en.febbattery.com Booth No.: 5215, Hall 5





Techfine





For over two decades, Guangdong Techfine Electronics Co., Ltd. has been leading the way in electrical energy safety and solar systems. As a high-tech enterprise with over 20 years of experience, Techfine brings precision and innovation to the clean energy sector, delivering high-quality solar power inverters, energy storage systems, and UPS solutions

Empowering Energy Solutions: Guangdong Techfine Electronics Co., Ltd.

to more than 30,000 customers across 60+ countries. At Clean Energy Transition Asia, visitors will experience firsthand why Techfine is trusted by over 4,200 long-term partners globally.

With three state-of-the-art production bases in China and Malaysia, spanning 270,000 square meters, Techfine's manufacturing prowess is unmatched. Their cutting-edge facilities, combined with an experienced R&D team of 40+ engineers, enable them to produce top-tier products, including environmentally friendly lead-acid and lithium-ion batteries. Every product, from solar energy systems to UPS solutions, is designed and manufactured in-house, ensuring complete control over quality and cost.

Techfine's commitment to customer service is unparalleled. They provide 1-on-1 VIP pre-sales and after-sales support, with a 90% repeat order rate—a testament to the reliability of their products. Certified by CE, UL, ROHS, and more, Techfine's solutions meet the highest global standards for performance and safety.

At their booth, visitors will explore how Techfine's integrated energy solutions are transforming energy access and storage across industries, offering reliable power even in the most challenging environments.

www.techfinesolar.com

Booth No.: 5102, Hall 5

HEXONESS: Zero-Carbon Drive

Hexoness Energy: Powering a Zero-Carbon Future

At the forefront of the global energy transition, Guangzhou Hexoness Energy Co., Ltd. is driving innovation in energy storage with cutting-edge solutions designed for a sustainable future. Specializing in safe, efficient, and scalable energy storage products, Hexoness provides the tools to transform energy systems across residential, commercial, and industrial sectors.

With 3+ GWh of energy delivered and over 60 successful projects, Hexoness Energy has established itself as a leader in the energy storage space. Their proprietary LiFePO4 battery technology offers unmatched safety and stability, ensuring efficient energy management in both grid-connected and off-grid applications.

Hexoness' solutions come equipped with BMS (Battery Management Systems) for advanced online thermal management, offering protection against overcurrent, overvoltage, and other potential hazards.

Hexoness is not just about technology but also about ensuring customer satisfaction through comprehensive support. Their integrated system design, from battery cells to fire protection, ensures seamless operations. Customers benefit from remote diagnostics, on-site services, and lifetime maintenance that keep systems running at peak performance.

Looking to the future, Hexoness is dedicated to building the core capabilities necessary for a zero-carbon era, leveraging world-class innovation and a robust global supply chain. By focusing on multi-scenario energy storage solutions, Hexoness is



helping to accelerate the global transition towards sustainable energy infrastructure.

flbook.com.cn/c/wZM64R0G4w#page/35 Booth No.: 5111, Hall 5

Building Clean Energy Foundations: The Power Behind the Transition

Clenergy's Solar Mounting Solutions: Driving Clean Energy Worldwide

At Clean Energy Transition Asia, Clenergy will showcase its SolarTerrace, SolarRoof, and ezTracker series, which offer durable and efficient mounting systems for pitched roofs, flat roofs and fixed tilts. These solutions are designed to provide long-lasting, secure installations, supported by industrystandard services.

Founded in 2007 in Melbourne, Australia with a manufacturing HQ in Xiamen China, Clenergy is the Top 1 manufacturer in the Australian rooftop solar PV market for 14 consecutive years. Clenergy is recognised for its solar mounting solutions across residential applications, specialising in the development, manufacturing, and engineering of reliable systems.

For commercial and utility-scale projects, Clenergy provides innovative solar mounting equipment, with installations spanning various regions from APAC to Europe. The company's ground mount systems have been used in significant projects, including the 100MW SolarRoof project in Quanzhou, Fujian, China, and the 69MW SolarTerrace I Solar Plant in Vietnam and more across the globe.

With over 16 years of experience and more than 20 GW of systems installed across 50+countries, Clenergy has established itself as a world-class pioneering technology enterprise, leading the way towards a globally sustainable future.

www.clenergy.com Booth No.: 5105, Hall 5





FOEN 奋安



With a legacy of over 30 years in aluminum production, Fenan Aluminum Co., Ltd. has grown into one of China's Top 5 aluminum extrusion companies, consistently delivering high-quality solutions for both the solar

Innovating with Aluminum: Fenan Aluminum's Solutions for Solar and Automotive Industries

energy and automotive sectors. At Clean Energy Transition Asia, Fenan will showcase its advanced aluminum extrusions, including solar frames, mounting systems, and automotive components like battery trays and vehicle frames.

Founded in 1988, Fenan covers 1.33 million square meters of production space and has an annual output of over 400,000 tons. The company specializes in aluminum profiles for windows, doors, and solar systems, along with automotive parts such as anti-collision beams and baggage racks. Their expertise spans the globe, supported by a growing technical and sales team ready to meet international market demands.

What sets Fenan apart is its use of cutting-edge manufacturing technologies, including Asia's largest vertical electrophoresis production line. The company also offers a 3D/4D simulated wood color finish, combining sustainability with aesthetic appeal. Fenan's products are designed for lightweight durability, corrosion resistance, and long life spans, making them a reliable choice for both the renewable energy and automotive industries.

Certified by ISO and SGS, Fenan continues to lead the way in aluminum innovation and sustainability.

www.foenalu.com Booth No.: 5308, Hall 5

Kinee Electrical Powers the Future of Energy and Smart Systems

Wenzhou Kinee Electrical Co., Ltd. will be presenting its innovative electrical solutions at Clean Energy Transition Asia, showcasing products designed to meet the evolving needs of the energy sector. Specialising in circuit breakers, contactors, PV combiner boxes, surge protective devices, and fuses, Kinee has quickly become a trusted name in new energy and smart electrical systems.

Founded in 2014, Kinee focuses on the development and manufacture of high-quality switchgear accessories. The company's products are used across a range of industries, from power plants to industrial engineering projects and machine manufacturing. With a focus on customer satisfaction and strict quality

control, Kinee has built a strong reputation, serving more than 150 clients worldwide.

Kinee's products are certified by international standards, including the China Quality Certification Centre's CCC, US UL, German TUV, and EU CE and RoHS certifications. These endorsements demonstrate Kinee's commitment to delivering reliable and compliant electrical components to the global market.

www.kinee.net Booth No.: 5101, Hall 5



Jiangyin Xiangyue Aluminum: Innovating Solar Bracket Solutions

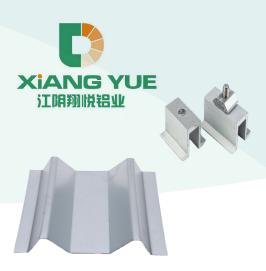
Jiangyin Xiangyue Aluminum Co., Ltd., based in Jiangyin, China, specialises in the design, development, and manufacture of solar photovoltaic bracket products. With over a decade of experience in the industry, Xiangyue has earned a reputation for delivering high-quality, customisable solutions for the global market, serving regions such as China, Europe, Africa, and Southeast Asia.

At Clean Energy Transition Asia, Xiangyue will showcase its innovative range of aluminium extrusion products and BIPV solutions. These products are designed for distributed photovoltaic systems, with applications on industrial, commercial, and residential rooftops, including steel, cement, and glazed tile roofs. Xiangyue's manufacturing capabilities include two aluminium

extrusion lines, two steel production lines, and four BIPV production lines, allowing for fast and flexible production to meet diverse customer requirements.

Xiangyue stands out for its commitment to quality and customisation. The company sources raw materials from renowned suppliers like Shougang and Jiusteel, ensuring that all products are backed by material certifications. With experience in OEM production for leading enterprises, Xiangyue offers tailor-made solutions that meet the needs of clients worldwide.

Certified by industry-leading standards, Xiangyue Aluminium continues to expand its offerings and grow its presence in the global photovoltaic market.



xypv.en.alibaba.com Booth No.: 5307, Hall 5



Unlocking the Trillion-Dollar Opportunity in Sustainable Innovation: McKinsey's **Insights for a Net Zero Future**

McKinsey & Company

n an era defined by climate change and economic uncertainty, sustainability has emerged as a beacon of hope, promising a path toward a thriving future for both businesses and society at large. This article delves into insights and initiatives by McKinsey & Company, the exclusive knowledge partner for Clean Energy Transition Asia (CETA) 2024.



Vishal Agarwal Senior Partner at McKinsey and Co

In the lead up to the summit, we had the privilege of speaking with Vishal Agarwal, Senior Partner at McKinsey & Company, about how technology can accelerate the transition, the critical success factors for decarbonization, and how innovators of all sizes can establish businesses that address the climate crisis.

An edited version of the interview follows.

CETA: First, could you share more details on McKinsey's role in environmental sustainability and how the firm has helped catalyse net zero goals?

Vishal Agarwal: I'll describe our contribution to help accelerate sustainable inclusive growth in 4 areas.

First, it's important to establish that sustainability and energy transitions are complex challenges that require collaborative efforts across various stakeholders. The creation of broad ecosystems is required to facilitate significant change. Some examples of how we do this:

We provided knowledge support to the establishment of the Taskforce on Scaling Voluntary Carbon Markets, also known as TSVCM, which has now evolved into the Integrity Council for the Voluntary Carbon Market or ICVCM.

- As an impact partner for COP28, we provided insights and analysis to drive ambitious action across 12 of COP28's Presidential Action Agenda areas, including oil and gas decarbonization, health, water, climate finance, technology, and youth engagement. Notably, the Oil and Gas Decarbonization Charter (OGDC) was launched, marking a commitment to net zero emissions and near-zero upstream methane by about 50 oil and gas companies and aiming for near-zero upstream methane emissions by 2030.
- Nearer to home, we collaborated with the Monetary Authority of Singapore (MAS) to help create a new asset class known as highintegrity transition credits to mobilize financing in hard-to-abate sectors.

Historically, companies have largely focused on top- and bottomline impact. At McKinsey, however, emphasize the importance of measuring carbon intensity of operations as a third element of impact. We have been trying to do this at scale and have created different assets and solutions in the process. For example, we have developed a tool called SpendScape that provides a comprehensive understanding of procurement data to help greenify entire supply chains and Scope 3 emissions. In the case of Lufthansa, we are using SpendScape for exactly this purpose, ultimately helping them make progress towards their net zero goals.

Thirdly, we focus significantly on what we call "green business building" to ensure that decarbonization and sustainability efforts are seen not just as challenges, but also as opportunities for growth. And these efforts need to go hand-in-hand with energy security and growth and development.

advanced analytics, machine learning, and Al.

An important example of this is the significant role that advanced analytics can play in enhancing the efficiency of power plants. While we await the expansion of renewable energy and the decommissioning of coal plants, current technologies can significantly reduce emissions by 2 5 percent. This represents a substantial saving. Another critical area is Scope 3 emissions. With increasing bottlenecks in supply chains, achieving transparency is virtually impossible without leveraging technology and digitalization.

In partnership with A*STAR—Singapore's leading public sector agency for scientific and technological advancement—we recently reenvisioned the Innovation & Learning

For most commercial and industrial (C&I) customers, gaining this clarity is crucial as it is also necessary to determine who will bear the costs of decarbonization. In some instances, this may be covered by subsidies, green premiums from customers, or internal carbon pricing. Alternatively, it may be concluded that the costs are too prohibitive without appropriate carbon pricing, which may or may not be available in a specific country. Without a clear understanding of the issues to address, the sources of emissions, or the costs associated with decarbonization, it will be challenging to develop effective

strategies and measures.

Vishal Agarwal: First, companies need to understand where the business lies on

the emissions curve. They can develop

of their carbon footprint and their

company's position on the abatement

cost curve. In fact, for this very purpose,

we have made a significant investment

in our automated tool for abatement

understanding

comprehensive

The next step is to manage the supply chain. While most companies focus on Scope 1 emissions, which they directly control, Scope 2 emissions, related to power and electricity, are often overlooked. Many companies have yet to map their Scope 3 emissions, so it's vital they start determining the carbon footprint of the supply chain. This will aid in incentivizing suppliers and other ecosystem players, ultimately leading to the development of optimally green supply chain practices.

Then, they should assess the possibilities regarding the power grid. Often, companies must rely on central grid power, which poses challenges if the grid is not transitioning towards green energy. Various methods, such as microgrids or some forms of captive energy supply, can be explored to attempt abatement.

Finally, companies need to focus on long-term capability building. For many, capability building is seen as a cost due to the absence of carbon pricing that would make these investments financially viable. It could be detrimental if few customers are willing to pay a green premium. The long-term goal should be to focus on developing the right capabilities to understand and accurately measure decarbonisation processes.

CETA: To wrap up, what advice would you give corporate leaders and entrepreneurs who are seeking to create and scale new businesses that address the climate crisis?

Vishal Agarwal: I'm a big believer that sustainability should drive growth. McKinsey has made extensive efforts to

"Our assessment shows that in Asia alone, there is a potential for new value pools in green businesses worth \$3 to \$5 trillion in the next decade. This includes areas such as renewables, green data centres, electrification and transportation, and green materials."

We helped scale one of the first and largest green steel companies in Europe. Another example of the work we are doing is in Indonesia to help create electric two-wheelers from design to launch.

Last but not least, we help financial institutions, from banks to institutional and private investors, figure out how they can unlock capital to fund sustainability and transition-driven growth. We believe it's important to build pipelines for capital to flow, as there is a high demand for this capital, but it is not yet flowing at the required speed and volume.

CETA: In concrete terms, how exactly can technology help accelerate the transition?

Vishal Agarwal: Without technological innovation, achieving global sustainability goals would likely be unattainable. Our analysis suggests that broadly categorized technology could facilitate the abatement, removal, and reduction of approximately 30 to 32 gigatons of CO2 equivalent by 2050. This represents about 47 percent of the total reductions needed. Essentially, nearly half of the necessary changes will stem from new or evolving technologies, including Industry 4.0, IoT,

Center (ILC), a capability-building facility designed to demonstrate Industry 4.0 applications to focus on sustainability. The facility now showcases numerous sustainability-driven use cases, from gear manufacturing to the disassembly and recycling of electric vehicle batteries. We have also developed a lifetime cost analysis database and are exploring applications of AI in energy efficiency.

Technological advancements can, of course, yield benefits while having impacts. For emerging technologies like generative Al are expected to significantly increase power demands in the coming years due to their intensive processing requirements. In response, many major companies have already tripled their initial power demand estimates, and some have announced that they are unable to meet their 2030 sustainability targets, a shift from just a year or two ago before the rise of generative Al. Despite these challenges, it's difficult to deny the critical role technology plays in facilitating decarbonization efforts.

CETA: What are some success factors for businesses to consider as they embark on their energy transition and decarbonization journey?

determine what is required for growth, which sectors will expand, which will not, and ultimately, where the growth will originate. Through our analysis, we have identified over 60 growth driver sectors worldwide. As I mentioned earlier, an estimated \$3-5 trillion of new opportunities will be in Asia alone. Globally, it's an estimated \$10 trillion over the next decade. So, there's massive untapped potential, but also many challenges and obstacles of all sizes, which will require a strong entrepreneurial spirit to address and overcome.

My advice is three-fold. First, focus on addressing the major problems, such as reducing significant sources of emissions and scaling up renewable energy sources. This includes enhancing solar efficiency, reducing capital expenditures, and improving battery chemistry for storage. Adopting a portfolio approach that balances a focus on proven technologies and the

scaling of emerging technologies is crucial. It is also necessary to develop cost advantages at scale, as many of these technologies may not be cost-competitive today but can become highly competitive at the right scale. Consider the cost reductions seen in solar and battery technologies over the past decades, which have decreased not by 10, 20, or 30 percent, but by 80 to 90 percent. Integrating this with building at scale can structurally reduce costs by 60 to 80 percent.

Second, adopt a "plant as a product" approach. Some of these projects will require huge investments to enable building massive plants at scale. In other words, think about how one can build the first plant at scale at cost X, the next plant at .7 X, and then the next at point .3X. Think of it as if you're developing a modular product and really scaling. This is what we're doing with leading climate startups.

Finally, don't go at it alone. Take an ecosystem approach.

"It is impossible for one company or stakeholder to make a significant change alone. An ecosystem approach can involve exploring how to optimally green new supply chains, how these should created, considering the financing ecosystem, and the right public-private partnerships."

Equally important is the need for the right capability building, which includes both the hard skills needed to reduce costs and the right technologies, as well as heart skills that integrate businesses with sustainability from the ground up.

Vishal Agarwal is a Senior Partner at McKinsey & Company. He leads McKinsey's sustainability practice in Asia and advises clients on energy transition, green business development, and sustainable finance. His expertise lies in guiding both public and private sectors towards achieving net zero goals, as well as developing sound strategies on decarbonization, enhancing operations, and leveraging digital solutions.



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The hard stuff

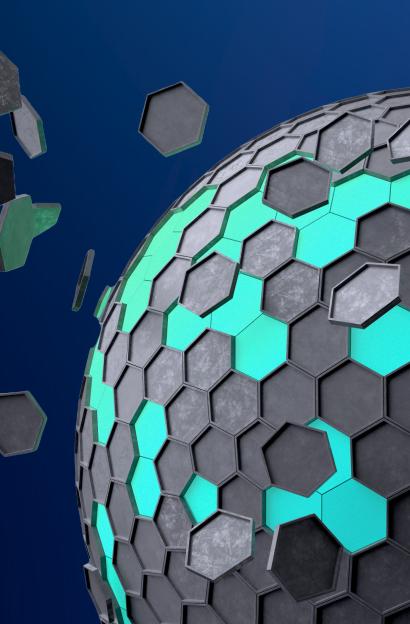
Navigating the physical realities of the energy transition



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SEAN and Southeast Asia are at a tipping point. Beyond this juncture lies a renaissance opportunity for the region, driven by sustainabilityfocused growth. As we approach critical moments such as COP 29 and Malaysia's chairmanship of ASEAN in 2025, it is crucial to pause, reflect and recommit to a clear plan of action to fully realize the opportunities ahead.



Vijay Krishnan Partner and Head of APAC Rystad Energy

In the lead-up to Clean Energy Transition Asia (CETA), we had the privilege of speaking with Vijay Krishnan, Partner and Head of APAC at Rystad Energy, about the key factors for achieving a genuine sustainabilitydriven renaissance in the region.

CETA: Thank you, Vijay and Rystad Energy, for being active, committed Strategic Partners to CETA. We would like to start by giving our industry network a deeper insight into Rystad Energy and your growth journey in Asia.

Vijay Krishnan: Thank you for having us here. We are really looking forward to CETA's great success. Rystad Energy is committed to partnering with platforms such as CETA to advance the region's clean energy transition.

Let me start by giving you a deeper view of Rystad Energy. We are a global Research, Advisory and Analytics company headquartered in Norway. This year, we are 20 years old, and we have four main arms: Data, Analytics, Advisory and Education.

We have 35 offices worldwide and 800 full-time employees, including 260 in Asia. Our singular focus is helping clients navigate the energy transition through robust research, advisory services and analytics. Our journey in Asia Pacific started 7 years ago, and since then, we have added 11 other offices across the region. Our company is 100% employee owned. This has truly enabled us to attract amazing talent and build a high-performance culture, which in turn has propelled us on this amazing global growth journey.

Our business is centered around tackling the energy transition through a science-based approach. Every company, government, investor and operator need ready access to robust research. This is where we step in to provide forward-looking, commercially sustainable strategies customized to our client's needs and keeping in mind the wider environment they operate in.

CETA: Could you walk us through the net zero transition outlook for ASEAN running into 2030? What are the critical success factors and accelerators for this journey.

Vijay Krishnan: First and foremost, let's recognise and acknowledge that this transition is a multi-decade journey that we need to take. We must start moving now to actualize stated policy goals by 2050 and 2060.

Coming to the present day, it is important to highlight that emissions globally have gone in the wrong direction. Several factors contribute to this situation, including conflicts in energy-sensitive regions. ASEAN must navigate the energy "Quadrilemma," which encompasses energy security, sustainability balanced with growth ambitions, access, and emissions. Achieving policy consistency, ensuring effective capital flow, and maintaining strong implementation governance will be crucial for ASEAN's success in addressing these challenges.

In the short term, we anticipate a continued rise in emissions, but expect them to decline afterward. Unfortunately, some key developed nations have shifted focus away from decarbonization, emissions

"The world of energy transition is highly nuanced and constantly presents new challenges, which we embrace and enjoy. It's in our DNA as a research house to tackle some of the world's toughest problems and to do so with excitement. Our team consists of selfstarting, entrepreneurial, high-performing talent from around the world, creating a dynamic culture that is a key driver of our growth."

management and ESG principles. This shift in rhetoric is beginning to impact ASEAN, which is a significant concern we are committed to addressing at CETA. It is crucial to prioritize and accelerate decarbonization efforts now.

Malaysia is a shining example of this commitment to acceleration. Neighbouring ASEAN member states need to collaborate closely with Malaysia, especially into 2025, as the country takes over the Chairmanship of ASEAN.

Going back to your question on critical success factors, I would sum these up as below:

- ASEAN member states need to overcome the movement away from ESG principles and remind people of the importance of decarbonization.
- ASEAN member states should address gaps in the adoption and implementation of policies to achieve their NDC goals and net zero targets by 2050-2060.
- ASEAN member states should foster the right ecosystem, including effective policies, capital, and collaboration, to drive meaningful change in the energy transition.

CETA: You have talked about the sustainability-powered renaissance for the region in some of your speaking engagements this year. Could you expand on this?

Vijay Krishnan: ASEAN has a great opportunity to meet its fast-expanding consumer demand and economic growth by investing in sustainable industrial and energy systems. Let's take a look at some of the enablers for this sustainability-powered renaissance:

- We are a region with a combined population of 670 million, 50% of whom are below the age of 30.
- As we look to 2050, we are looking at additional contributions of US\$5 trillion from Gross Domestic Product (GDP).
- Based on an investment strategy centred around sustainability, our region can create 50 to 70 million new jobs, primarily within industrial and energy ecosystems. These jobs will be future-proof, as they are built on sustainable principles.

Our vision of the renaissance is driven by three key factors: a large, young, and dynamic population; substantial opportunities for GDP growth and the creation of impactful jobs and careers.

To catalyze this renaissance, favorable policies that offer risk mitigation and blended finance mechanisms will be essential. ASEAN currently benefits from a conducive environment for accelerated cross-border collaboration and an abundance of low-cost clean energy.

When these elements are combined, the stage is set for this renaissance, which hinges on easy access to affordable, low-cost clean energy.

CETA: Building on the renaissance red thread, what are your thoughts on the role Hydrogen has to play in ASEAN's energy mix long and short term. What are some of the accelerators that you have identified for the future growth of hydrogen?

Vijay Krishnan: At Rystad Energy, we track about 25 different technologies that we think are crucial for the transition.

Hydrogen is one of them, in addition to solar, wind and carbon capture of course. Hydrogen technology has been worked on for many years now and we have some great examples of pilot success stories in East Asia and China. The key to wider adoption is increased affordability. Increased affordability will be driven by the confluence of three major developments:

- Policy Support
- Investment in hydrogen technology development
- Reimagined business models that integrate hydrogen partly or fully as part of a cleaner industrial and energy ecosystem. This will help unlock capital.

ASEAN is well-positioned to benefit from the innovations emerging in the EU, East Asia, and China. For instance, the EU Hydrogen Bank demonstrates how policies can effectively finance the development of a hydrogen economy. We should explore how similar financing innovations could be applied in our region, particularly to stimulate cross-border development. Additionally, we need to consider hydrogen from a downstream perspective: its byproducts are valuable for hard-to-abate sectors, while hydrogen fuel cells present a promising opportunity for decarbonizing commercial transportation.

To sum up, our view is that Hydrogen is a vital component of the clean energy transition and the key fundamentals that need addressing in the near term are:

- ASEAN member states should explore the potential of hydrogen as a key enabler for the energy transition, addressing technology advancements, cost reductions, safety concerns and downstream applications.
- ASEAN member states should revisit business models and reimagine how to deploy hydrogen effectively in various sectors, such as power generation, transportation, and maritime.

CETA: With two significant events approaching—the end-of-year COP 29 and Malaysia's Chairmanship of ASEAN in 2025—what can we anticipate? How can Malaysia leverage its role as ASEAN Chairman in 2025 to foster deeper regional collaboration for energy transition?

Vijay Krishnan: Malaysia's chairmanship of ASEAN in 2025 presents a significant opportunity. Positioned at the core of the transition, Malaysia has the potential to advance regional plans, foster collaboration, and drive impactful change.

Malaysia is endowed with numerous energy resources that could support the ambitious goals we've discussed, such as adding US\$5 trillion to ASEAN's GDP and creating 50 to 70 million new jobs. We anticipate that Malaysia will play a key role in advancing cross-border collaboration initiatives, particularly in carbon offsets and the regional grid.

Energy Exchange Malaysia (ENEGEM) is a fantastic step forward to enhance cross border renewable energy exports and access. Add to this the fact that the latest large solar auction in Malaysia achieved some of the lowest solar bid prices in Southeast Asia. This will provide a surplus which places the country in a great position to spearhead regional efforts for greater solar adoption.

Malaysia's ASEAN Chairmanship will also positively influence COP 29. We anticipate Malaysia will lead ASEAN initiatives at COP 29, which could attract and unlock essential climate finance for driving technological innovation and long-term sustainable investment. This year's COP 29 is critical for recommitting to our Nationally Determined Contributions (NDCs) for 2030. ASEAN member states must ensure they can meet these commitments and significant work will be required to achieve this.

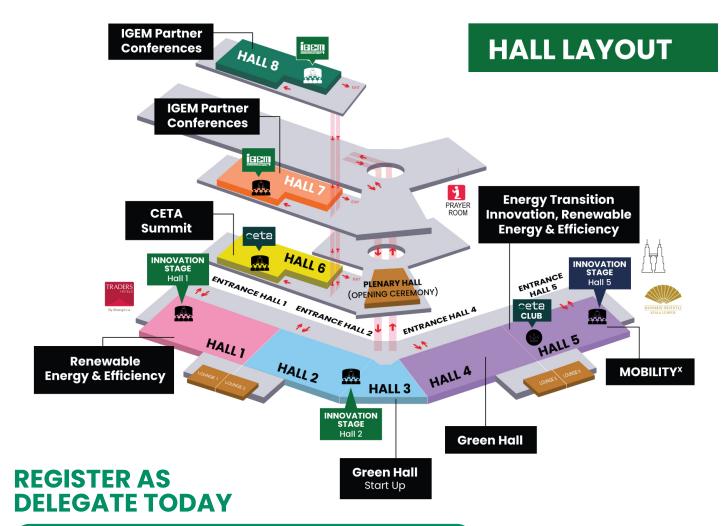
In summary, our view is:

- Malaysia, as the chair of ASEAN in 2025, should leverage its position to spearhead regional efforts, develop harmonized policies, and implement regional grid initiatives, leveraging its geographical location and energy resources.
- ASEAN member states should recommit to their NDCs and drive collaboration, integration, and harmonization during COP29, setting the stage for accelerated progress in the energy transition.

Vijay Krishnan is a Partner and Head of Asia Pacific at Rystad Energy. Vijay joined Rystad Energy in January 2017 and is responsible for the overall business across Asia Pacific. He has over 25 years of experience in the Energy & Petrochemical sector across Asia Pacific & the Middle East. Having started his career as an Analyst covering the Commodities and Energy Markets. He moved into Product & Business development in the Middle East and India for ICIS-LOR before joining Wood Mackenzie to start up their South East Asia business in 2005 where he went on to Head the Singapore office and was the Global Head of their NOC business. He specializes in strategic & commercial advice to clients in Asia Pacific and the Middle East and is extremely passionate about the Energy Transition.

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