

ASIA CLEAN ENERGY FORUM 2024

Accelerating the Clean Energy Transition and Ensuring Energy Security and Affordability – Time for Urgent Action Now

3-7 June 2024

EVENT HIGHLIGHTS





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Message from the President of the Asian Development Bank

This message was delivered by ADB President Masatsugu Asakawa during the Opening Plenary of the 19th Asia Clean Energy Forum, at the ADB headquarters in Manila on 4 June 2024.

Distinguished guests and colleagues: Good morning and welcome to the 19th Asia Clean Energy Forum.

As we are all too aware, the impacts of climate change are not a distant threat but a present reality. The past year was the hottest on record, and 2024 continues to set new records. The threats to Asia and the Pacific are especially dire, with extreme heat, floods, and droughts growing in number and intensity.

The imperative for our region is clear. We must end our reliance on fossil fuels, particularly coal, and aggressively pursue a transition to clean energy. Our COP28 goals are ambitious yet critical: to triple our renewable energy capacity and double our energy efficiency by 2030, all while ensuring these transformations are just and inclusive for all.

In response to our climate challenges, the Asian Development Bank (ADB) has embraced its role as the Climate Bank for Asia and the Pacific. Our aim is to lead the way in mobilizing the finance and expertise required to accelerate the transformation to clean and efficient energy systems.

The scale of financing required to fund the clean energy transition in the region is unprecedented at least \$1 trillion annually up to 2030. This far exceeds current funding levels. So, we must develop innovative solutions that mobilize unprecedented levels of investment.

To this end, ADB has implemented capital management reforms to unlock \$100 billion in new funding capacity over the next decade, including for climate actions.

Additionally, our launch of the Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP) is set to multiply our lending capacity through leverage, allowing us to crowd in substantially more resources from the private sector and other investors who share our commitment to climate action.

And our Energy Transition Mechanism (ETM), which is leveraging market-based approaches to retire coal-fired power plants and unlock new investments in sustainable renewable energy, has the potential to be one of the largest carbon reduction models in the world.

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While financial resources are crucial, they must be paired with comprehensive knowledge, expertise, and human resources.

Furthermore, the substantial investments needed in energy efficiency and renewable energy have to be combined with robust improvements in our energy infrastructure, particularly in electricity transmission and distribution. This is necessary to ensure resilience, accessibility, and affordability for the millions of people in the region who are at risk of being left behind in the energy transition.

Dear friends, this forum is a testament to our strong commitment to a clean energy transition across Asia and the Pacific. Among us today are government officials, private sector leaders, energy service providers, philanthropies, non-governmental organizations, and others focused on achieving a clean energy future. Together, we form a powerful coalition for change.

While the challenges ahead of us are significant, so too are the opportunities for innovation and creativity in our response to the climate crisis. Today, let us commit to urgent action, ensuring that our collective efforts lead to a prosperous, inclusive, resilient, and sustainable future for all.

Thank you,

Masatsugu Asakawa President, ADB

Asia Clean Energy Forum 2024 Overview

The Asian Development Bank (ADB), in collaboration with the United States Agency for International Development (USAID) and the Korea Energy Agency (KEA), hosted the 19th Asia Clean Energy Forum (ACEF) 2024 from 3 to 7 June 2024 in Manila. Clean energy practitioners from across the region gathered under the theme "Accelerating the Clean Energy Transition and Ensuring Energy Security and Affordability—Time for Urgent Action Now."

Fiscal constraints, high borrowing costs, and market disruptions due to regional imbalances and geopolitical tensions marked the global energy landscape during ACEF 2024's challenging convening. The forum addressed the urgent need for rapid clean energy investments to meet the goals of the Paris Agreement, emphasizing blended finance solutions and concessional financing for developing member countries. ACEF continued to serve as a platform for sharing innovative approaches, including policy frameworks, business models, and financing solutions, to enhance energy security, affordability, and private sector participation in the clean energy transition.



"We must end our reliance on fossil fuels, particularly coal, and aggressively pursue a transition to clean energy. Our COP28 goals are ambitious yet critical: to triple our renewable energy capacity and double our energy efficiency by 2030, all while ensuring these transformations are just and inclusive for all."

Masatsugu Asakawa President, ADB

Key Takeaways

- The Asian Development Bank (ADB), as the Climate Bank for Asia and the Pacific, aims to mobilize unprecedented levels of climate finance starting with at least \$100 billion from its own resources from 2019 to 2030. To combat climate change, the region must end its reliance on fossil fuels and transition to clean energy by aligning with the COP28 goals of tripling renewable energy capacity and doubling energy efficiency by 2030.
- 2. Clean energy has an important role in directing development efforts toward carbon-neutral pathways. ACEF 2024 speakers described current trends and shared their views on the prospects and opportunities for rapidly scaling up clean energy in Asia and the Pacific within an increasingly complex global energy landscape. The discussions covered the key global challenges, such as establishing quick-win policies, accelerating the uptake of renewable energy and energy efficiency, innovative financing models, transforming energy markets through improved governance and reforms, supporting innovative technologies and business models, and leveraging more on private sector investment to move from billions to trillions of dollars.
- 3. Each country has distinct requirements that will necessitate a mix of renewable energy solutions. Ocean-based renewable energy holds significant promise for the Pacific islands. Energy storage will be essential for grid stability with increasing variable renewable energy, with projects in Mongolia and several Pacific islands already showing success. The Lao People's Democratic Republic has updated its regulatory framework to support renewable energy integration. Renewable energy solutions like solar irrigation, agrivoltaics, and renewable energy security and resilience, especially for small island developing states (SIDS).
- 4. Achieving national and international energy efficiency goals requires contributions from all sectors, including industry, buildings, transport, and urban areas through a holistic approach that incorporates regulations, incentives, and information dissemination. Many existing technologies can improve efficient use of energy, so the focus should be on ensuring their widespread adoption. Governments can lead by example through enforcement of energy efficiency standards and procurement of energy-efficient equipment in public procurement. Effective monitoring and verification, data availability, capacity building, and knowledge-sharing are key for successful implementation and tracking of energy efficiency progress.

- 5. It is crucial to accelerate the upgrade and expansion of electricity transmission and distribution grids to keep up with the growing demand for renewable energy and electrification. The electricity grid requires substantial investment to meet the clean energy transition, particularly in Asia and the Pacific, which still lags in regional connectivity. Technological solutions, regulatory frameworks, and cybersecurity measures are important parts of grid modernization, along with smart grid technologies. Proper governance, financial planning, and coordinated efforts are also necessary to support growing electricity demand and enhance grid flexibility and resilience.
- 6. The industrial sector, which accounts for about one-quarter of global carbon dioxide emissions from the energy sector, must invest in advanced digital solutions and innovative clean energy technologies and approaches. Green hydrogen can play an important role in reducing emissions in energy-intensive industries. Innovations in electrolyzers and energy-efficient technologies can enhance operational efficiency and storage of green hydrogen. Digital solutions and data-driven approaches, such as Internet of Things (IoT) and artificial intelligence (AI), can optimize energy use and further reduce greenhouse gas emissions.
- 7. Regional collaboration and partnerships are essential for taking concrete and urgent action to address and finance the clean energy transition through a just and inclusive process. ACEF 2024 speakers highlighted some of the most transformative clean energy financing solutions and emphasized the ACEF's role in uniting all stakeholders and scaling up innovative strategies for the clean energy transition.

Asia Clean Energy Forum 2024 in Numbers



50 Sessions

Plenary Sessions
Thematic Track Sessions
Regional Sessions
Spotlight Sessions
Deep Dive Workshops
Pre-Forum Events
1,300+ Attendees
350+ Speakers
Countries

Top 10 Countries in Terms of Participants

- **483** Philippines
- **87** India
- **66** United States
- 54 Singapore
- **52** Thailand
- 48 Japan
- 47 People's Republic of China
- 43 Indonesia
- 42 Sri Lanka
- 35 Nepal

Number of Attendees by Organization Type

- **429** International Development Agencies
- **318** Private Sector Businesses
- **317** Government Agencies
- 120 Others
- 77 CSOs/NGOs
- 71 Academia/Research
- **33** Banks/Financial Institutions/Investors

* CSO = civil society organization, NGO = nongovernment organization.

Opening Plenary: Time for Action Now

The ACEF Opening Plenary session set the tone for the week by addressing the challenges of meeting the targets set at COP28—to triple renewable energy investments and double energy efficiency progress by 2030. High-level speakers from governments, development organizations, and the private sector discussed the strategies and challenges of scaling up clean energy financing while pursuing inclusive and sustainable development in Asia and the Pacific.

Masatsugu Asakawa, *President, ADB*, emphasized the need for the region to transition from fossil fuels to clean energy. He reiterated ADB's commitment, as the Climate Bank for Asia and the Pacific, to mobilize \$100 billion for climate initiatives over the next decade and leverage its lending capacity to crowd in more resources from other investors. President Asakawa called on governments, the private sector, and stakeholders to collaborate and commit to urgent action to address the climate crisis.

Terje Aasland, *Minister of Energy, Norway*, reinforced Norway's commitment to spurring the clean energy transition. He highlighted Norway's efforts to provide low-emission oil and gas; and to develop offshore wind, carbon dioxide (CO_2) storage, and hydrogen technologies. Minister Aasland stressed the fact that strong enabling policy frameworks and industry expertise are necessary preconditions for meeting our national and global climate objectives.

Keo Rottanak, *Minister of Mines and Energy, Cambodia*, outlined the country's goal to achieve net-zero emissions by 2050 through effective policies, funding, and partnerships, focusing on energy efficiency, renewable energy, and market-based mechanisms.

Fatima Yasmin, *Vice-President, Sectors and Themes, ADB*, echoed the call for urgent climate action. She emphasized the need to boost renewable energy capacity and improve energy efficiency. She highlighted ADB's role in supporting developing member countries through collaboration, and the sharing of expertise through technical assistance.

Boonam Shin, *Executive Director, Korea Energy Agency (KEA)*, underscored the pivotal role of the Asia and Pacific region in the global energy transition. He highlighted the commitment of the Republic of Korea (ROK) to promoting carbon-free energy, including renewable energy and hydrogen. Shin detailed the ROK's initiatives, such as establishing the Green Growth Institute and hosting the Green Climate Fund. He emphasized that the Republic of Korea is scaling its green official development assistance, particularly in Asia, with projects focusing on industrial energy efficiency and solar-powered infrastructure.

Michael Schiffer, Assistant Administrator for the Bureau of Asia, USAID, stressed the need for immediate climate action, advocating for a just and inclusive energy transition. He emphasized USAID's focus on gender equality, involving marginalized communities, and strengthening regional cooperation to combat climate change effectively.

OPENING PLENARY: IME FOR ACTION NO













"If we are to reach our goals, we need good policies and the expertise, experience, and commitment of our industries. As we look to the future, we must build on that platform, continue to identify those common interests in energy—reducing emissions and developing technology, and collaborate for a sustainable energy future."

Terje Aasland Minister of Energy, Norway



"We are at a tipping point. We have seen the growth of renewables and the acceleration of the energy transition. As policymakers, it is our duty to support this transition, to embrace the opportunities for new partnerships, and not to fear the geopolitical shifts it brings. We must seize this moment to turn our commitments into reality, our ambitions into achievements, and our partnerships into powerful drivers of change."

Keo Rottanak Minister of Mines and Energy, Cambodia



"We need clean energy experts, advocates like yourselves to raise our awareness, understanding, and collaboration to levels higher than ever before. In this way, you will help accelerate the region's transition to clean and efficient energy and achieve our shared goal of energy security and affordability for everyone."

Fatima Yasmin

Vice-President for Sectors and Themes, ADB



"This decade will be critical to meet our energy pledge, and the Republic of Korea will continue to support the Asia clean energy transition. Together with our partners and colleagues across the region, we will provide the required resources and support."

Boonam Shin Executive Director, KEA



"If the harsh climate realities of today do not impress upon us the fierce urgency of now, what will it take to convince us?"

Michael Schiffer Assistant Administrator for the Bureau of Asia, USAID

Keynote Addresses



Sione Pulotu 'Akau'ola, *Chief Executive Officer, Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications, Tonga*, emphasized the role of clean energy in addressing energy security, poverty eradication, and sustainable development in the Pacific. The region faces climate challenges like cyclones, sea-level rise, and fuel price volatility. 'Akau'ola highlighted the transition from fossil fuels to renewable sources of energy, including hydropower, solar, wind, and bioenergy, which require significant investment and commitment. The key priorities include better energy planning, innovative finance, community engagement, and the application of decentralized governance and technologies. 'Akau'ola also stressed the strategic importance of national policies and international agreements, urging international support for Pacific countries to achieve their clean energy goals.



Manu Srivastava, *Additional Chief Secretary, Madhya Pradesh Energy Department, India*, highlighted two key projects: the 750 megawatts (MW) Rewa solar park and the solar rooftop project. These initiatives aimed to reduce solar photovoltaic costs using derisking strategies. The Rewa solar park project showed that with competitive bidding it is possible to get highly attractive tariffs, with payment and off-take assurances; this experience has led to the development of guidelines for solar projects in India above 5 MW. The solar rooftop project in Madhya Pradesh used the renewable energy service company model to aggregate small buildings, especially government institutions, and to attract smaller, local investors. Institutions pay for electricity at a cheaper rate than existing tariffs. This approach resulted in more than a hundred installations in Madhya Pradesh, achieving the lowest solar rooftop tariffs to date.



Kavita Sinha, *Director of the Private Sector Facility at the Green Climate Fund (GCF)*, discussed the development, social, and climate challenges in Asia and the Pacific, while highlighting at the same time, the enormous investment opportunities in clean energy infrastructure. In 2023, the region installed 70% of global renewable energy capacity and became the largest green hydrogen market. An additional \$1.5 trillion investment in clean energy will be needed annually by 2030. To meet this target, it will be important to have tailored frameworks for investment in clean energy and a dramatic increase in concessional finance. It will be crucial to unlock private finance, and Sinha noted that while the private sector manages more than \$210 trillion in assets, only a tiny share of this is in climate investments. GCF provides grants to de-risk investments, pre-investment support, and capacity building, and makes equity investments to generate returns and achieve impact.



Satoru Harada, *Chief Operating Officer of Marubeni Corporation's Power Division*, highlighted Marubeni's commitment to green business and decarbonization, focusing on renewable energy, carbon capture, utilization, and storage (CCUS), distributed generation, battery storage, and renewable energy power plants. Marubeni has developed projects like hydropower, a floating solar power plant, and Japan's first commercial offshore wind plant. The company aims to achieve carbon neutrality and supports Viet Nam's net-zero target. Marubeni collaborates with ADB's Energy Transition Mechanism, which aims to catalyze a shift from coal to clean energy.



Ma Jun, Founder and President of the Institute of Finance and Sustainability, emphasized the need for an effective system of categorizing and managing the growth of green finance. He highlighted the role of private capital as a source to finance renewable energy and energy transition technologies that are needed to decarbonize carbon-intensive sectors. The strategies to attract private capital include enhancing project bankability through policy measures, low-cost funding, guarantees, and long-term power purchase agreements that ensure returns were also emphasized. In addition, it is important to enhance technical skills in green finance as well as to build capacity for project structuring. Transition finance supports sectors like steel, cement, and aviation, which are often neglected by traditional green finance. Several local governments in the People's Republic of China (PRC) have adopted transition taxonomy and incentives, signaling a global move toward financing decarbonization in carbon-intensive industries.



Panel Discussion: From Billion to Trillions of Dollars!

The Opening Plenary panel discussion, moderated by **Priyantha Wijayatunga**, *Senior Director of the Energy Sector Office, Sector Groups, ADB*, focused on scaling up investments in the energy transition. The panelists highlighted the importance of robust regulatory frameworks and strong public–private partnerships in dramatically increasing clean energy investments, which can drive energy transition investments from billions to trillions of dollars.

Rowena Cristina L. Guevara, *Undersecretary*, *Department of Energy*, *Philippines*, discussed the Philippines' renewable energy goals and the importance of investing in transmission infrastructure to strengthen the grid and employing efficient permitting processes to attract private sector funding.

Md. Habibur Rahman, Senior Secretary, Power Division, Ministry of Power, Energy and Mineral Resources, Bangladesh, talked about the challenges of acquiring land for renewable projects and called for international support and effective regulatory frameworks to encourage private sector involvement.

Cindy Lim, *Chief Executive Officer, Keppel Infrastructure Holdings*, highlighted her company's transition to clean energy, the complexities of cross-border projects, and the need for innovative financial mechanisms and regional cooperation.

Yongping Zhai, *Senior Advisor, Tencent*, shared Tencent's strategy for achieving carbon neutrality, with a focus on energy efficiency and renewable energy investments.

Ramesh Subramaniam, *Director General and Group Chief of the Sectors Group*, *ADB*, spoke about the role of development finance institutions in creating favorable environments for investments and leveraging private funds.



"For the Philippines, achieving 50% renewable energy in our generation mix by 2040 is not just a target; it's a commitment to a sustainable future. This requires accelerating renewable energy investments and building a smart, green grid."

Rowena Cristina L. Guevara

Undersecretary, Department of Energy, Philippines



"Our vision is to generate 40% of our energy from renewable sources by 2041. This ambitious target reflects our commitment to a sustainable and clean energy future for Bangladesh."

Md. Habibur Rahman

Senior Secretary, Power Division, Ministry of Power, Energy and Mineral Resources, Bangladesh



"Collaborative approaches and focusing on the critical path and bottlenecks, rather than debating technology choices, are key to successfully implementing energy transition and achieving a sustainable future."

Cindy Lim

Chief Executive Officer, Keppel Infrastructure Holdings



"Our objective of reaching carbon neutrality by 2030 is unwavering. We see this challenge as a great opportunity to make significant contributions to society and drive efficiency across all sectors."

Yongping Zhai Senior Advisor, Tencent



"Energy transition is at the forefront of climate transition. Nothing happens without energy. Energy is so intricately linked to various sectors, making it critical in our battle against climate change."

Ramesh Subramaniam Director General and Group Chief of Sectors Group, ADB Thematic Track Session 1.4 Renewable Energy for Transport, Agriculture and her Sectors

<u>2024 | 11:00 a.m. –</u> 12:30 p.m.



Highlights of the Thematic Track Sessions

Thematic Track 1: Tripling Renewable Energy Capacity by 2030

Thematic Track Sessions:

- Session 1.1Renewable Energy for PowerSession 1.2Offshore Wind, Floating
Solar and Other Ocean
Technologies
- Session 1.3 Variable Renewable Energy and Battery Storage
- Session 1.4 Renewable Energy for Transport, Agriculture and Other Sectors

Track Chairs:

Cindy Cisneros-Tiangco Principal Energy Specialist, ADB

Xeniya Rogan Senior Investment Specialist, ADB

Amruth Jayaram

Markets Development Advisory Specialist, ADB

Gurbuz Gonul

Director, Country Engagement and Partnerships, IRENA



In the power sector, the renewable energy race is intensifying due to the rising demand for clean energy. At COP28 in December 2023, countries pledged to triple renewable energy capacity worldwide by 2030. However, many developing countries still struggle with limited capacity to deploy renewable energy for heating and cooling.

The sources of renewable energy being developed across Asia and the Pacific are hydropower, wind, solar, geothermal, ocean, sustainable biomass, and biofuels. Each country has unique needs that may require a combination of solutions, including energy storage and imports from neighboring countries.

Key Takeaways

- To accelerate investments, it is important to implement public-private partnership (PPP) modalities, promulgate supportive laws, and address regulatory bottlenecks. Successful frameworks like Thailand's Utility Green Tariff and Viet Nam's Direct Power Purchase Agreements (DPPAs) enable large corporate buyers to negotiate energy procurements. However, to overcome the utility single-buyer model in Southeast Asia, which limits grid access, it will be necessary to experiment with and scale up regulatory reforms and mechanisms such as DPPAs. Central Asia and the Republic of Korea prioritize strategic planning, government collaboration, and deregulation. International and regional donor funding and collaboration play an important role, and initiatives such as the International Climate Initiative (IKI) and the Just Energy Transition Initiative were presented and discussed in the track sessions.
- Ocean-based renewable energy has significant potential in the Pacific islands and regions with
 favorable conditions. The key challenges to address are the infrastructure and regulatory support
 necessary to attract private investment. This source of "blue energy" provides predictability
 and reliability, while offshore wind projects offer scalability. Utilizing a mix of renewable energy
 sources enhances energy security and resilience, especially for small island developing states
 (SIDS). Speakers noted that the successful deployment of marine renewables requires sustained,
 coordinated effort, risk mitigation, and development of scalable business models.

- Energy storage will be crucial for stabilizing the grid as the adoption of renewable energy increases across the region. Mongolia's utility-scale energy storage project has increased the grid's capacity to utilize renewable electricity, while several Pacific islands have developed and tested battery energy storage projects. The Lao People's Democratic Republic (Lao PDR) has updated its regulatory framework to support the integration of renewable energy. In the textiles sector, on-site energy storage can provide cost savings and grid benefits. The Long-Duration Energy Storage (LDES) Council advocates for supportive policies to establish LDES technologies as a vital resource for improving grid flexibility. The potential for extracting lithium from geothermal brine in Indonesia points to the need for additional research and supportive frameworks to enhance energy transition efforts across all technologies.
- Decarbonizing hard-to-abate sectors with renewable energy requires integrated approaches such as the "Water, Food, and Energy Nexus" to improve resource availability and efficiency. Successful applications include solar irrigation in agriculture, agrivoltaics in the PRC, and renewable energypowered boats in the Philippines. Supportive regulatory frameworks, PPPs, and technical assistance are crucial for scaling solutions. To accelerate adoption and ensure sustainable impact, it will be important to leverage Internet of Things (IoT) technologies and nurture local expertise and businesses. Renewable energy has the potential to revolutionize the use of energy in hard-to-abate sectors by tackling local and sector-specific challenges and promoting innovative, context-specific solutions.



"The key to sustainable development is looking strategically at renewable energy projects and understand their local impacts, regional progress, social mitigation, and economic diversification."

Suchart Charles Klaikaew

Senior Advisor, Innovation Regions for a Just Energy Transition, GIZ



"The battle for climate change will be won or lost in the Asia and Pacific... Since oceans are our biggest source of food, water, energy, and oxygen, they are also our largest carbon and heat sink. We can even say the battle against climate change will be won or lost in our oceans."

Cindy Cisneros-Tiangco Principal Energy Specialist, ADB



"The beauty of the energy storage revolution is that it's not just about utilities figuring it out. We all must be part of the solution. Managing our loads when there are cloudy days, thinking outside the box, and democratizing the way we use energy—everybody has a chance to be a player."

Matthew Mendis

Managing Director, Chemonics International



"Grants are helpful, but technical assistance is crucial. We need to help startups revise their business models to enable sustainable operations and expansions. Additionally, there are many policy and regulatory challenges that prevent businesses from scaling up their operations. A collaborative approach and enabling policy environments are essential to overcome these barriers and boost technology adoption."

Radtasiri Wachirapunyanont

Regional Innovation Hub Manager for South and Southeast Asia, Water and Energy for Food (WE4F) Program



Thematic Track 2: Doubling Progress in Energy Efficiency by 2030

Thematic Track Sessions:

- **Session 2.1** Energy Efficiency Policies
- Session 2.2 Energy Efficiency in Buildings
- Session 2.3 Energy Efficient Heating and Cooling
- Session 2.4 Energy Efficiency in Transport and Cities

Track Chairs:

David Morgado Senior Energy Specialist, ADB

Shuji Hashizume Principal Investment Specialist, ADB

Melanie Slade

Senior Programme Manager, Energy Efficiency in Emerging Economies, IEA



Energy efficiency is an important and cost-effective resource that is not fully utilized in many countries. At COP28, countries committed to doubling the rate of energy efficiency improvements by 2030. However, progress in Asia and the Pacific has been uneven, with notable achievements in India, the PRC, and Singapore. Thematic Track 2 focused on the strategies needed to speed up energy efficiency investments in the region. Discussions highlighted the need to combine regulations, incentives, and information sharing to create markets for energy-efficient solutions and drive industry transformation.

Key Takeaways

- Substantial investments will be needed to double progress on energy efficiency, especially in emerging and developing economies.
- All sectors, including industry, buildings, transport, and urban areas, must contribute to achieving energy efficiency targets. A holistic approach that integrates regulations, incentives, and information dissemination is crucial. Successful energy efficiency initiatives involve comprehensive policy packages that help create markets for energy-efficient solutions and drive industry transformation.
- Many technologies for improving energy efficiency are already available in the market. The focus should be on widespread adoption and implementation rather than waiting for new innovations. Governments can lead by example and provide the necessary push to scale up market transformation. For example, governments can demonstrate compliance with energy efficiency codes in public buildings, and public procurement of energy-efficient equipment and services.
- Both heating and cooling are critical areas for energy efficiency. While cooling has received significant attention, heating remains the largest energy load and should not be overlooked. To achieve significant impact, it will be necessary to scale up innovative solutions—such as evaporative cooling systems and energy-efficient building designs—from pilot projects to broader implementation.
- Effective monitoring and verification mechanisms are necessary to track progress in energy efficiency. Access to accurate data is crucial for making informed policy decisions and ensuring compliance. Capacity building and knowledge-sharing are vital for successful implementation, and important activities can include training for energy auditors, technical assistance in implementation, and sharing of best practices across countries and regions.
- To meet the energy efficiency goals and targets set at COP28, it will be important to collaborate effectively across sectors, such as transport, cities, agriculture, and fisheries. For this level of collaboration to happen, it will be necessary to develop PPPs and institutionalize low-carbon solutions.



"Energy efficiency is seen as an add-on feature, not as an integrated part of a solution. We have to find a way of getting the right technology at the right price to consumers, and particularly to low-income consumers."

Alfredo Baño Leal Senior Energy Specialist, ADB



"There's a level of interest arising in parts of the world for energy efficiency that didn't exist 5 or 10 years ago. We have to go back and try again and be more creative with our approaches."

Melanie Slade

Senior Programme Manager, Energy Efficiency in Emerging Economies, International Energy Agency



"We need actions across all sectors. We need to think about things like the multiple benefits of efficiency, including for example, the number of jobs that can be created. We need to engage all parts of society."

Alvin Mejia Program Manager, Asian Transport Outlook



"Today we're here to talk about people and the planet. We've been talking about energy efficiency up until now, heating and cooling. But I want to add a third dimension to this presentation: air quality. There's a statistic which says that 90% of the world's population lives in parts of the world where the air quality does not meet World Health Organization standards."

Barun Aggarwal

CEO & Founder, BreatheEasy Consultants



"India has set a target to achieve net-zero carbon emitter status by 2070. Buildings consume around 33% of the current energy consumption and this level is going to increase. So, buildings are going to play a crucial role in this transformation. Since India is the third-largest carbon emitter in the world and home to 18% of the world's population, buildings will need to play a crucial role in this transformation."

Shivam Gupta

Senior Project Manager, Environmental Design Solutions Private Limited



Thematic Track 3: Delivering Electricity Transmission and Distribution for the Future

Thematic Track Sessions:

Session 3.1	Governance and
	Optimal Planning of
	Electricity Transmission and
	Distribution Infrastructure
Session 3.2	Regional Power Grids

- Session 3.2Regional Power GridsSession 3.3Upgrade and Expansion
- of Electricity Transmission and Distribution Grids
- Session 3.4 Smart Grids, Digitalization, and Electric Vehicle Charging

Track Chairs:

Jiwan Acharya Principal Energy Specialist, ADB

Matthew Wittenstein

Chief of Section for Energy Connectivity, ESCAP



The energy system in Asia and the Pacific is undergoing a huge transformation toward full electrification. However, the slow upgrade and expansion of the electricity grid are now causing delays or cancellations of renewable energy projects due to the inability to connect them. According to the International Energy Agency (IEA), there are at least 3 terawatts of renewable power projects worldwide waiting for grid connection. This is five times the solar photovoltaic and wind capacity added in 2022.

It is crucial to accelerate the upgrade and construction of electricity transmission and distribution lines to keep up with the demand for renewable energy and electrification. These will require the same level of investment as that needed for renewable energy—to achieve the goals of the Paris Agreement. Experience from other countries with substantial renewable energy capacity shows that upfront planning is critical.

Key Takeaways

- Historically, the role of transmission and distribution has been underemphasized in clean energy discussions. However, transmission and distribution systems are crucial for integrating renewables and realizing the energy transition. Proper governance frameworks and financial planning can support growing electricity demand and ensure integration of renewable energy into the power grid.
- Speakers in the track emphasized the importance of governance and optimal planning. Coordinated efforts in transmission projects are essential for integrating renewable energy, and it is crucial to address challenges related to regulatory frameworks and investment modalities for enhancing and improving flexibility and resiliency of power grid systems.
- Power grid connectivity is crucial for the energy transition, and it provides significant economic, environmental, and energy security advantages. However, Asia and the Pacific lags in terms of regional grid connectivity. Significant investment is required to develop the infrastructure necessary for cross-border power integration. While bilateral power purchase agreements are common, creating multilateral agreements can facilitate broader regional integration.

- Technical, economic, policy, and governance issues hinder the development of regional power grids. Initiatives like the Association of Southeast Asian Nations (ASEAN) Power Grid and Central-South Asia interconnections aim to enhance regional cooperation and grid integration. High-level political commitments, such as that being facilitated by ASEAN, are crucial for fostering the collective ambition for the regional power grid, while coordination and alignment among stakeholders are essential for realizing synergies in achieving a successful multilateral power grid integration.
- Even though upgrades of electricity transmission and distribution grids are a precondition to scaling up and integrating larger amounts of renewable energy, investments in this aspect are often overlooked. Utilities need to adopt new smart grid technologies and manage grid upgrades effectively, and the role of international partnerships and funding is crucial.
- Speakers in the track discussed technological solutions and regulatory frameworks for grid modernization. They emphasized the importance of integrating solar energy systems with electric vehicle charging and addressing peak demand challenges. Additionally, they highlighted the importance of implementing electric vehicle charging standards, cybersecurity measures, and enhancing energy efficiency through demand response strategies and municipal service digitalization.
- As the energy system becomes more digitalized and interconnected, robust cybersecurity measures are needed to protect the operational integrity and reliability of the grid systems. Proper training is needed, as new technologies are integrated in the system.



"In today's challenging environment and the changing world where governments are committing to net-zero commitments, environmental, social, and governance considerations are increasingly taking center stage, and consumers are becoming more ethically aware."

Sajid Raza Senior Financial Management Specialist, ADB



"Aside from infrastructure we need institutional frameworks. We need regulators to create the rules of the game and guide these initiatives. We need financing mechanisms for these initiatives, along with social acceptance, and political agreement."

Anna Lobanova Energy Connectivity Expert, ESCAP



"Power system connectivity is a very important part of energy transition. There is no transition without transmission. Power grid connectivity will provide great opportunities for regional cooperation, and it can also accelerate the energy transition. In particular, it will help us to achieve Sustainable Development Goal 7 on affordable, sustainable, and reliable energy."

Hongpeng Liu Director, ESCAP



"Energy is a very precious resource, and digitalization of energy management systems can significantly enhance the efficiency and reliability of municipal services."

Naveed Ahmad Director, Buildings Energy Research Center



Thematic Track 4: Financing New and Innovative Clean Energy Solutions in Hard-to-Abate Sectors

Thematic Track Sessions:

- Session 4.1 Green Hydrogen for Industrial Decarbonization
- Session 4.2 Energy Efficiency and Renewable Energy in the Industrial Sector
- Session 4.3 Carbon Removal Financing and Technologies for the Industrial Sector
- Session 4.4 Advanced Digital Solutions for Industrial Decarbonization

Track Chairs:

Annika Seiler Principal Energy Specialist Asian Development Bank

Atsumasa Sakai

Senior Energy Specialist Asian Development Bank

Sheharyar Chughtai

Markets Development Advisory Specialist Asian Development Bank

Peter Warren

Facility Manager United Nations Industrial Development Organization (UNIDO)



The industrial sector uses about 37% of the world's energy and is responsible for one-quarter of carbon dioxide emissions related to energy. In Asia and the Pacific, industrial energy demand is rapidly increasing and is supplied mainly by fossil fuels. The IEA states that to achieve net-zero emissions, the industrial sector must invest in hydrogen, CCUS, direct electrification, advanced digital solutions, material efficiency, and other innovative technologies and approaches. The industrial sector will need to make significant investments in clean energy systems within a short period to reach net-zero emissions by midcentury.

Key Takeaways

- Green hydrogen was highlighted as critical for reducing emissions in heavy industries, such as steel production. Speakers emphasized the importance of optimizing renewable energy sources to power electrolyzers and reducing reliance on critical minerals for hydrogen production.
- Speakers discussed innovations in electrolyzers for production of green hydrogen, as well as energy-efficient technologies, like variable frequency drives with industrial motors. These technologies can significantly reduce reliance on fossil fuels through storage and increases in operational efficiency.
- Discussions across the sessions in the track highlighted the need for policy frameworks to support the adoption of decarbonization technologies, along with strong financial mechanisms. Examples include concessional loans, grants, and subsidies to bridge economic viability gaps. Low-cost financing and de-risking instruments were also described as vital for scaling up green hydrogen projects.
- Numerous speakers described digital solutions and data-driven approaches as crucial for enhancing energy efficiency and achieving decarbonization goals. Real-time monitoring and predictive maintenance enabled by IoT and artificial intelligence (AI) technologies can optimize energy use and reduce emissions.
- Speakers also emphasized the importance of knowledge-sharing and capacity building, especially through platforms that provide a one-stop solution for industries seeking decarbonization technologies. These platforms offer tools for energy calculation, carbon emission tracking, and access to a wide range of technologies tailored to specific industrial needs.

- Across the track, speakers identified several challenges, including a high incumbent dependency
 on fossil fuels, limited access to green finance, and the need for localized solutions. They proposed
 solutions to these challenges, including tailoring technologies to different sector end uses and
 demand, as well as collaborative efforts at industrial decarbonization among stakeholders,
 including governments, industries, and international organizations.
- Public acceptance and regulatory support were recognized as critical for the initiation and successful implementation of decarbonization projects. Case studies from various countries illustrated the need for clear regulatory frameworks and public engagement to address concerns and facilitate smooth project execution.



"Hydrogen is one of a suite of solutions we have, and we need to apply very critical thinking to it. Getting it down to \$2 a kilo means a lot of investment. That's trillions of dollars of investment before we get it to \$2 a kilo."

Stephen Peters

Senior Energy Specialist (Waste-to-Energy), ADB



"Energy efficiency really offers the greatest opportunities for near-term decarbonization solutions. We've been hearing it across this session so far. In many cases it does not actually require major changes to industrial processes, and it can bring immediate reductions in emissions."

Carishma Gokhale-Welch

Partnership Development Manager, National Renewable Energy Laboratory (NREL)



"Energy efficiency is a key pillar for achieving a low-carbon society. Electric motors and drives hold the key for sustainable industries, and the journey toward energy efficiency should be data-driven."

Apryl Herrera Country Business Head, ABB Motion



"It's a huge complex systems problem. Therefore, our monitoring cannot be linear. We cannot simply monitor power plants and say how many tons of carbon dioxide you emitted last year and expect to actually have an impact on climate change. Yes, it is an intervention, and yes, it's a good intervention, but it's just not good enough."

Luis F. Gonzalez

Chief Operating Officer for Power and Head of Applied Research, Aboitiz







Regional Sessions

Regional Sessions at ACEF 2024 showcased ADB's clean energy initiatives in South, Central, and West Asia; East and Southeast Asia; and the Pacific. ADB's regional operations departments convened sessions to present, discuss, and share knowledge with countries and the clean energy community, fostering collaboration and learning from shared experiences in clean energy development.



1. Reliability and Flexibility for a Carbon-Neutral Central, West, and East Asia

Central, West, and East Asian countries aim to accelerate renewable energy transitions by enhancing energy system flexibility and increasing renewable energy use. Cross-border electricity trade can decarbonize power sectors, balance the grids, and ensure energy security. Achieving this requires supportive policies, enabling environments, and mobilizing capital for increased regional power trade and a carbonneutral future.

Key Takeaways

- Central Asia needs to improve flexible capacity, address power grid bottlenecks, and encourage international collaboration to achieve renewable energy targets and ensure grid stability.
- Kazakhstan and Mongolia are working toward carbon neutrality through renewable energy, with a focus on regulatory and commercial arrangements, digitalization, and capacity building.
- Advanced technologies like long-duration energy storage, smart inverters, and Al-driven asset management are essential for enhancing energy transition, grid stability, and power distribution efficiency.
- The potential for developing 5 gigawatts of solar and wind in Mongolia with cross-border transmission systems could revolutionize energy integration in Northeast Asia.
- Optimizing renewable resources across borders requires cross-border power trade and robust regulatory frameworks. The Northeast Asia Power System Integration project is an example of energy security and cooperation among neighboring countries.
- The region can learn from Denmark's experience showing that stable energy prices could be maintained while increasing renewable energy use through strategic subsidies and market-driven behaviors. Transparent price signals and connections between regional energy markets are crucial.



"The future of renewable energy lies in the adoption of long-duration energy storage technologies, which are not just critical for grid stability but also pivotal in making renewable energy a reliable and efficient power source for our communities."

Hans Mikael Svanbom

Independent Consultant









2. Policy, Technology, and Finance in South Asia's Energy Security and Transition

South Asian countries have ambitious clean energy targets. To achieve these targets, it will be necessary to enhance energy system flexibility, increase renewable energy use, and expand cross-border electricity trade to address demand-supply gaps. Currently, only a fraction of the renewable potential is utilized. Trading excess solar and hydropower is key for the energy transition, grid-balancing, and energy security. Supportive policies and mobilizing capital are essential for promoting regional power trade and achieving a carbon-neutral future.

Key Takeaways

- South Asian countries have ambitious climate targets. For example, Bangladesh aims to generate 40% of its power from clean energy by 2041, while India plans to reduce carbon intensity by 45% from 2005 levels by 2030.
- Nepal sees great potential in hydropower but faces challenges in financing projects and transmission infrastructure, as it aims to export excess power to neighboring countries.
- South Asia is also embracing new technologies like electric vehicles, battery storage, smart grids, and green hydrogen.

- Financing is a critical challenge. There are innovative financial tools and PPPs, such as efforts to attracting private investment in renewable energy to Bangladesh and mobilization of private capital for solarization of agriculture in India. Sri Lanka also plans to generate 70% of its energy from renewables by 2030, with a focus on competitive procurement and private sector involvement.
- Regional cooperation is vital for optimizing cross-border energy trade and leveraging synergies. For example, Nepal's hydropower potential and India's solar energy can complement each other. Legislative reforms, like Sri Lanka's new electricity act, aim to create a favorable environment for renewable energy investment and regional integration by unbundling the power sector.



"Regional cooperation is key to optimizing energy resources and achieving energy security. By working together, South Asian countries can harness their complementary strengths, such as Nepal's hydropower and India's solar potential, to create a more interconnected and resilient energy grid."

Cindy Malvicini Deputy Director General South Asia Department, ADB





3.1 ASEAN Power Grid: Powering ASEAN's Green Future (Part 1)

The ASEAN Power Grid (APG) is crucial for ASEAN's energy transition, as it improves the ability of the region to integrate renewables into the power system while enhancing energy security and reducing emissions of greenhouse gases. ASEAN needs a total of \$300 billion for investment into grid development, including \$16 billion for interconnection projects by 2040. However, it faces numerous regulatory, political, and investment challenges. It is therefore imperative to have coordinated efforts on APG from governments, multilateral institutions, the private sector, and civil society. Policymakers need to create supportive regulations, development banks need to offer financial support, and the private sector needs to drive innovation and investment. The session was designed to exchange knowledge about APG and to foster collaboration for a low-carbon ASEAN future.

Key Takeaways

 The APG was initiated in 1997 and is gaining momentum as a transformative solution for integrating renewable energy, enhancing energy security, and reducing carbon emissions.

- ASEAN Deputy Secretary-General Satvinder Singh highlighted the need for approximately \$764 billion investment into power generation and transmission by 2040, including \$17 billion for interconnections and \$90 million for feasibility studies.
- ADB and the USAID reaffirmed their support for the APG, emphasizing the critical role of energy connectivity alongside clean energy in achieving decarbonization.
- Key factors for unlocking the potential of the APG include robust governance, development of regulatory frameworks, investment in infrastructure, and the creation of a regional power pool to promote renewable energy investments and efficient power distribution.
- It is essential to ensure secure and well-maintained transmission networks, and for development partners to take a coordinated approach to provide for stable revenue streams for private investors and to support the success of the APG.



"Energy connectivity, or investing in the grid, is as important as clean energy for our decarbonization strategy."

James P. Villafuerte

Regional Lead Economist, Economic Research and Development Impact Department, ADB

I Session: Energy Transition onization in South







3.2 Driving the Energy Transition and Decarbonization in Southeast Asia (Part 2)

Energy demand in Southeast Asia has increased due to the increasing urbanization, population growth, and economic development, further increasing the heavy reliance on fossil fuels. Coal consumption has doubled since 2010, which conflicts with the targets set by the Paris Agreement. However, the region is now shifting toward clean energy—for example, since 2019, more renewable energy projects have been developed compared to coal power plants. Viet Nam's solar capacity has increased significantly from 260 MW in April 2019 to 5,053 MW in July 2020. Cambodia held two solar auctions, in 2019 and 2022, and the price of solar electricity in Cambodia has decreased dramatically—by nearly 75%. Achieving net-zero emissions requires transforming energy production and taking advantage of lower renewable energy costs. Speakers in the session emphasized the importance of aligning policies, establishing PPPs, and promoting collaboration to advance clean energy projects in ASEAN.

Key Takeaways

• The Philippine Energy Plan 2020-2040 aims to achieve a 35% share of renewable energy by 2030 and 50% by 2040. In line with this, Meralco, the country's largest distribution utility is pursuing a sustainability strategy that focuses on three key areas: transitioning to low-carbon energy sources to meet growing demand, advancing clean technology for greener energy, and leading in decarbonization efforts for long-term sustainability. As of 2023, Meralco and its subsidiaries has secured 1,880 MW of renewable energy supply and developed a pipeline of 1,442 MW of renewable energy capacity.

- Viet Nam is transitioning from coal and aims to achieve a 32% share of renewable energy in its power mix by 2030. In 2017, the country introduced a support mechanism for solar projects, offering a feed-in tariff of \$0.093 per kilowatt-hour, which attracted significant interest. By the end of 2022, Viet Nam achieved 20 gigawatts of clean power capacity, surpassing its target 5 years ahead of schedule and becoming a leading solar power market. ADB has contributed \$1.4 billion to finance eight projects, including the Monsoon Wind Power Project, which will export solar power from Lao PDR into Viet Nam. However, regulatory uncertainties continue to impede progress, highlighting the need for stable policies.
- Thailand has implemented successful initiatives such as the Demand Response Control Center, which manages grid consumption, handles emergencies, and reduces the immediate need for new power plants. The Renewable Energy Forecast Center forecasts wind and solar energy generation to manage power system fluctuations. Despite challenges posed by an outdated grid code, Thailand is modernizing its grid and aims to complete an update of the grid code by the end of 2024.
- ADB supports countries in their energy transition by addressing issues of policy, project scoping, finance structuring, and promoting electrification. Viet Nam has increased grid capacity through strategic policy revisions, while the Philippines is exploring modular nuclear reactors as a regional initiative. Speakers from ASEAN countries emphasized the importance of a co-creation approach, as well as collaboration on research and development to tailor technological solutions to the needs of the region. Examples from Europe and the United States (US) are recognized as useful, but Asia also requires tailored solutions.
- Japan, likewise, is supporting the energy transition in the Southeast Asian region. The region could learn from Japan's energy conservation and "Basic Policy" for Green Transformation, targeting ¥150 trillion (\$1 trillion) in investments over the next decade. Innovations include offshore wind power for Asian markets and flexible solar cells. These efforts set Japan on track in achieving carbon neutrality by 2050. In 2022, Japan launched the Asia Zero Emission Community to promote decarbonization, and foster PPP, among others. Currently, more than 350 projects are underway. Kawasaki Heavy Industries is also undertaking an ASEAN-Japan cooperation with an effort to "co-create" a project with the Philippines and the US to develop decarbonization equipment. Such co-creation efforts are crucial to adapt technologies to global needs.



"We have seen important progress in Southeast Asia, but there is much more that can be done, and needs to be done, to accelerate energy transition."

Keiju Mitsuhashi

Energy Director, Southeast Asia and the Pacific Team, ADB





4. Pacific Energy Transition Challenges, Opportunities, and the Way Forward

Small island developing states (SIDS) in the Pacific were early adopters of 100% renewable energy goals. In 2012, SIDS ministers adopted the Barbados Declaration, with Niue and Tuvalu targeting 100% renewable power by 2020, and Fiji, Solomon Islands, and Vanuatu by 2030. The 2020 targets were missed, and the 2030 goal remains challenging. Actions such as improving grid absorption, strengthening grid operation regulations, building capacity for regulators and operators, and using demand-side management, including electric vehicles, are necessary to overcome grid constraints and achieve the goal.

Key Takeaways

- The Pacific faces increasingly frequent and severe disasters triggered by natural hazards. Adaptation and resilience are crucial, with a focus on renewable energy and stronger infrastructure to withstand climate impacts like cyclones and rising sea levels.
- Progress has been made in shifting from fossil fuel power to renewable energy. But there are challenges in integrating variable renewable energy into the grid. This requires grid upgrades, energy storage solutions, and increased capacity to manage these resources effectively.

- It is important to establish and update legal and policy frameworks to drive the energy transition forward. Examples shared by the speakers in this session included amending outdated electricity acts for renewables, setting ambitious renewable energy targets, and creating supportive policies for private sector involvement and PPPs.
- Building the technical, legal, and financial capacities of utilities and local communities is vital for the success of renewable energy projects. Models for local engagement and for sharing benefits of clean energy projects with communities are important, as they can help address land acquisition challenges and ensure local support for energy projects.
- The transition to renewable energy requires substantial financing. Development partners like ADB and the World Bank play a critical role in providing concessional funding, technical assistance, and facilitating PPPs to attract investment and support the development and scaling of renewable energy projects in the Pacific.



"Addressing these challenges across the region will require strengthening regional cooperation not only in mobilizing finance but in mutually enhancing institutional and organizational capacity."

Scott Morris

Vice-President, East and Southeast Asia, and the Pacific, ADB

Deep Dive Workshops

ACEF 2024 had 11 Deep Dive Workshops (DDWs) that covered a broad range of concepts, ideas, technologies, and business models. DDWs at ACEF promote interactive problem-solving and are organized by ADB members and partner organizations. The workshops included a number that focused on cross-sectoral approaches. An "Energy Finance Day" was held for the first time at ACEF, and it comprised a special series of four DDWs led by ADB's Private Sector Operations Department. Energy Finance Day focused on the critical role of private sector finance in transitioning to a sustainable and low-carbon economy. It brought together experts and stakeholders to explore strategies for scaling up clean energy investments from "billions" to "trillions."



1. Gender Inclusive Clean Energy Solutions to Tackle Energy Poverty 2. Catalyzing Clean Energy Transition through Carbon Markets 3. Identifying the Enabling Frameworks for Renewable Energy Multilateral Power Trade

4. Decarbonizing the Energy Sector: The Role of ADB's Energy Transition Mechanism

Organized by ADB Institute

Organized by ADB

Organized by USAID and ASEAN Center for Energy









5. Low-Carbon Odyssey -People's Republic of China's Story 6. Electrifying Cooking - Innovative Approaches and Business Models for Asia and the Pacific 7. Mobilizing Financing and Technology to Promote Solar in Asia and the Pacific 8. Collaborative Dynamics in Clean Energy: Roles of Governments, International Organizations, and the Private Sector

Organized by ADB and Energy Foundation China Organized by ADB and Sustainable Energy for All

Organized by International Solar Alliance Organized by KEA









9. Critical Minerals and Clean Energy <u>Technology</u> Manufacturing Supply <u>Chains</u> 10.1 Energy Transition in Asia through Asia Zero Emission Community (Part 1) 10.2 Challenges toward Net-Zero in Asia and the Role of Transition Finance (Part 2)

Industrial Decarbonization and Net-Zero Transition Acceleration

Organized by ADB

Organized by Ministry of Economy, Trade and Industry, Japan, and AZEC





11. Energy Finance Day

Financing Renewables Growth in Asia and Beyond Mobilizing Capital for Clean Energy Transition Structuring and Financing Pathfinder Climate Projects in New Sectors

Spotlight Sessions

ACEF 2024 featured eight Spotlight Sessions on emerging topics in Asia's clean energy transition. ADB and several ACEF partner organizations organized these sessions.



Spotlight Session: Clean Energy Integration: Advancing Regional Rower Trade In Asia-Pacific Mathematical Sector (Construction) Mathematical Sector (Construc

Comprehensive Energy Planning for Sustainable Development and Net-Zero Targets Clean Energy Integration: Advancing Regional Power Trade in Asia-Pacific

Organized by ADB and International Atomic Energy Agency Organized by ADB



Sustainable Geothermal Development



CEO Talks on Emerging Areas

Organized by ADB



Energy Systems for Climate Resilience: Strategic and Technical Solutions

Organized by ADB



Harnessing Pumped Storage Hydro for Sustainable Energy Solutions

Organized by ADB



Policy-Based Loans - Creating Ripples for the Energy Transition

Women Bridging the Clean Energy Financing Gap

Organized by USAID's South Asia Regional Energy Partnership







Closing Plenary: Providing a Just and Inclusive Clean Energy Transition for All

ACEF 2024 concluded with a closing session emphasizing the importance of partnerships for a cleaner energy future. Representatives from governments, the private sector, and international organizations shared insights on overcoming challenges and implementing strategies toward a just and inclusive clean energy transition for all.



Woochong Um, *Managing Director General*, *ADB* reflected on ADB's transformation from when it started its clean energy revolution in 2005 almost exactly at the same time when ACEF first convened. He highlighted how ADB's financing grew from \$650 million in 2005, to its first climate finance target of \$6 billion in 2015, and up to the current \$100 billion commitment—with ADB transforming itself into the Climate Bank for Asia and the Pacific as part of its New Operating Model. The shift in ADB's updated 2021 Energy Policy called for the phaseout of coal in ADB's portfolio and the pursuit of innovative financing, such as the Energy Transition Mechanism and Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP). Um urged participants to work at clean energy transition that is in line with the broader efforts to reduce poverty and promote greater equality—power services that are affordable and accessible to low-income communities, particularly households that still do not have access to electricity. He called on everyone to make a positive contribution—as we need all hands on deck—to build a community of climate action advocates in every sector, who will seriously pursue clean energy transition that is effective and sustainable, inclusive, affordable, and secure.

Keynote Addresses

Muaviyath Mohamed, State Minister, Ministry of Climate Change, Environment and Energy, Maldives, shared Maldives' plan to achieve 33% renewable energy share by 2028 to move away from heavy dependence on imported fossil fuels. Mohamed called for investments in renewable energy infrastructure and collaboration among government, communities, and international partners to address climate vulnerabilities.

Satvinder Singh, *Deputy Secretary-General, ASEAN Economic Community*, emphasized ASEAN's commitment to economic growth and decarbonization. Singh highlighted the ASEAN Power Grid as a key decarbonization strategy and mentioned initiatives in biofuels and grid efficiency. He called for partnerships with institutions like ADB to help ensure success in decarbonization efforts.

Abha Shukla, *Additional Chief Secretary (Energy), Government of Maharashtra, India*, outlined Maharashtra's target to source 50% of its energy from non-fossil fuels by 2030. Shukla emphasized the socioeconomic benefits of the energy transition and showcased Maharashtra's alignment with the *Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan* scheme, which was launched in 2019 to increase energy security for farmers and the share of renewable energy in India's power capacity. She stressed the importance of a just and inclusive energy transition for sustainable development and climate resilience.

Adnan Amin, *Chief Executive Officer, COP 28*, echoed the urgency for a just and inclusive clean energy transition in Asia and the Pacific. He highlighted the outcomes of COP28 and the United Arab Emirates consensus, which provides a road map for meeting the Paris Agreement targets. Amin stressed the need to peak emissions by 2025 and achieve deep reductions by 2030. He also mentioned the role of the oil and gas industry in decarbonization, and the mobilization of \$1.2 billion for methane reduction projects.

Annetje Ottow, *President of the Executive Board at Leiden University*, discussed the importance of interdisciplinary education and research in the energy transition. She praised the collaboration between Leiden University, the Leiden-Delf-Erasmus Strategic Alliance (LDE), and ADB in addressing climate change through a multidisciplinary approach. Ottow emphasized the need to blend thinking across disciplines to tackle complex challenges, citing examples of several successful interdisciplinary projects. She also highlighted the importance of developing new labor force capacity to ensure that clean energy initiatives are fair and inclusive.

Leena Srivastava, Former Deputy Director General of the International Institute for Applied Systems Analysis, concluded the keynote addresses by stressing the importance of a just and inclusive energy transition. She focused on broader energy justice issues and outlined five dimensions of energy justice. Srivastava called for a broader perspective on energy affordability, emphasizing that the cost of inaction on climate change far outweighs the cost of taking action. Drawing on global experiences, she illustrated the challenges and advocated for a holistic approach to the energy transition, to avoid worsening environmental and social vulnerabilities.





Panel Discussion: Leaving No One Behind

The panel discussion, moderated by **Susann Roth**, focused on ensuring inclusivity in the energy transition. **Suzanne Gaboury** from ADB highlighted the private sector's interest in renewable energy investments, citing projects like the Monsoon Wind Project in Lao PDR, and clean cooking initiatives across the region. She emphasized the need for a supportive regulatory environment to attract private investment. **Hongpeng Liu** from ESCAP acknowledged achievements in electrification but highlighted challenges in providing clean cooking solutions. He called for increased investment and policy support to address these challenges.

Gurbuz Gonul from the International Renewable Energy Agency and **Kitty Bu** from the Global Energy Alliance for People and Planet discussed the need for innovative financial mechanisms and strategic partnerships. Gonul emphasized the importance of infrastructure and supportive regulatory frameworks, while Bu emphasized blended finance and philanthropic support to bridge the funding gap. The panelists collectively stressed the importance of collaboration among governments, the private sector, and international partners to ensure an inclusive and equitable energy transition.

Panel Discussion: Reflections on ACEF Week with Thematic Track Chairs

The final panel discussion of ACEF Week, moderated by Pradeep Tharakan from ADB, brought together thematic track chairs Cindy Tiangco, Jiwan Acharya, and Annika Seiler of ADB, and Melanie Slade of the IEA, for a reflection on the week's insights and takeaways.

Cindy Tiangco, *ADB*, *Cochair* of **Thematic Track 1: Tripling Renewable Energy Capacity by 2030**, expressed excitement about achieving this goal. She emphasized the need for innovative technologies and integrated planning, underscoring the critical role of robust grid infrastructure. Tiangco highlighted the importance of resilience and sustainability, stressing that ambitious renewable energy targets require advances in offshore and floating renewable technologies. Comprehensive planning and investments are essential to support the seamless integration of renewable energy into the grid.

Melanie Slade, *IEA*, *Cochair* of Thematic Track 2: Doubling Progress in Energy Efficiency by 2030, brought attention to the recent surge in clean energy investments driven by households, particularly through the electric vehicle market. She highlighted Thailand's progress, where one in five cars sold is now electric. Slade emphasized the need to enhance energy efficiency in light industry sectors, which are often overlooked but crucial for overall energy savings. She pointed out that replacing electric motors with efficient ones and electrifying low-temperature processes can significantly contribute to energy efficiency goals.

Jiwan Acharya, *ADB*, *Cochair* of Thematic Track 3: Delivering Electricity Transmission and Distribution for the Future, noted the importance of modernizing electricity transmission and distribution networks to handle more renewable energy. This requires robust infrastructure, smart grid technologies, and energy storage systems. Acharya stressed the need for significant investments and policy support to upgrade and expand the grid, especially to underserved areas. He highlighted the importance of comprehensive stakeholder consultations and aggressive outreach to ensure equitable access to reliable, clean energy.

Annika Seiler, *ADB*, *Cochair* of Thematic Track 4: Financing New and Innovative Clean Energy Solutions in Hard-to-Abate Sectors, discussed the need to address supply chain risks for minerals, which are vital components to renewable energy technologies. She highlighted the potential of advanced and digital solutions for energy efficiency in manufacturing. Seiler emphasized a data-driven, system-based approach to energy transition, and the value of leveraging AI and digital tools. She also stressed the importance of substantial investments and PPPs for the energy transition.

The track chairs emphasized the importance of innovative approaches, stakeholder engagement, and new technologies to propel the clean energy transition. Their insights throughout ACEF Week set a foundation for progress in achieving energy and climate goals.





Closing Remarks

Bhargav Dasgupta, *Vice-President for Market Solutions at ADB*, echoed this optimism in his closing remarks, highlighting the role of ACEF in driving important discussions and actions toward creating a carbon-neutral Asia and the Pacific. He emphasized the urgency for collective action to address the climate crisis and reaffirmed ADB's commitment of \$100 billion in investments over the next decade for clean energy solutions, supported by innovative financing and partnerships. Dasgupta called for united efforts from governments and the private sector, emphasizing the importance of effective coordination and collaboration. At the end of the 19th edition of ACEF, he ended his remarks by expressing his desire for the clean energy community to carry forward this determination and work together for a greener, more resilient Asia and the Pacific.

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