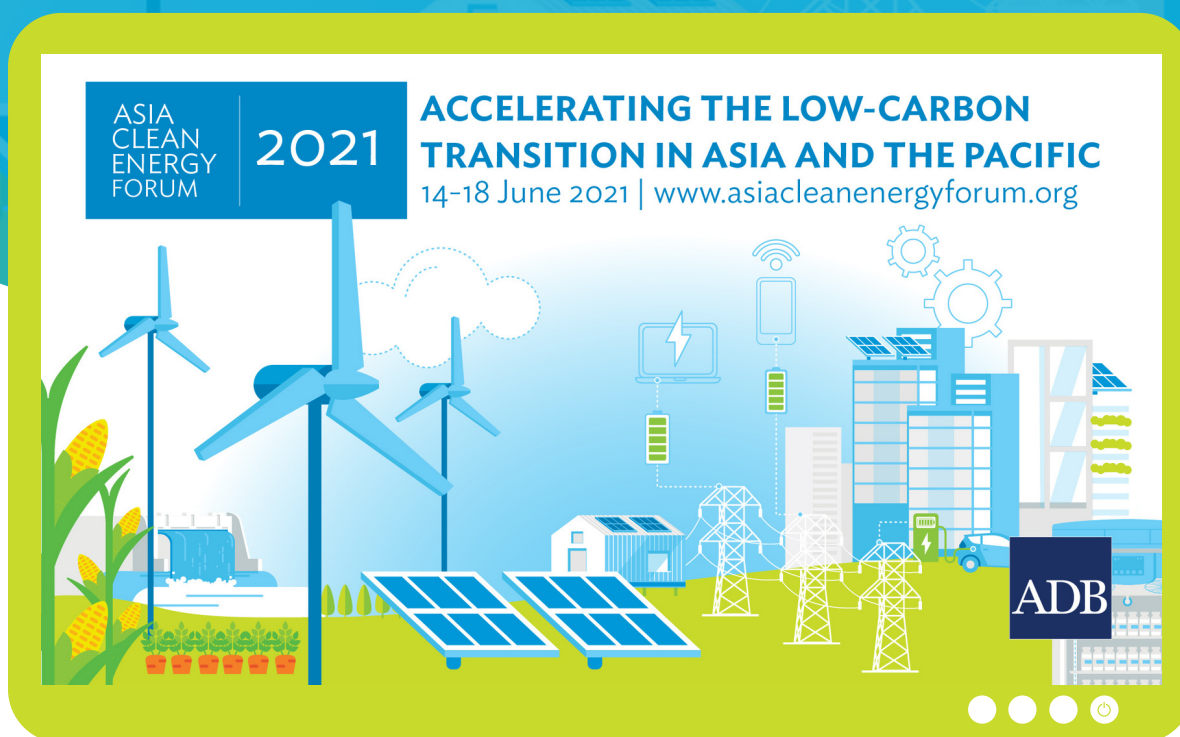


ASIA CLEAN ENERGY FORUM 2021

SUMMARY REPORT



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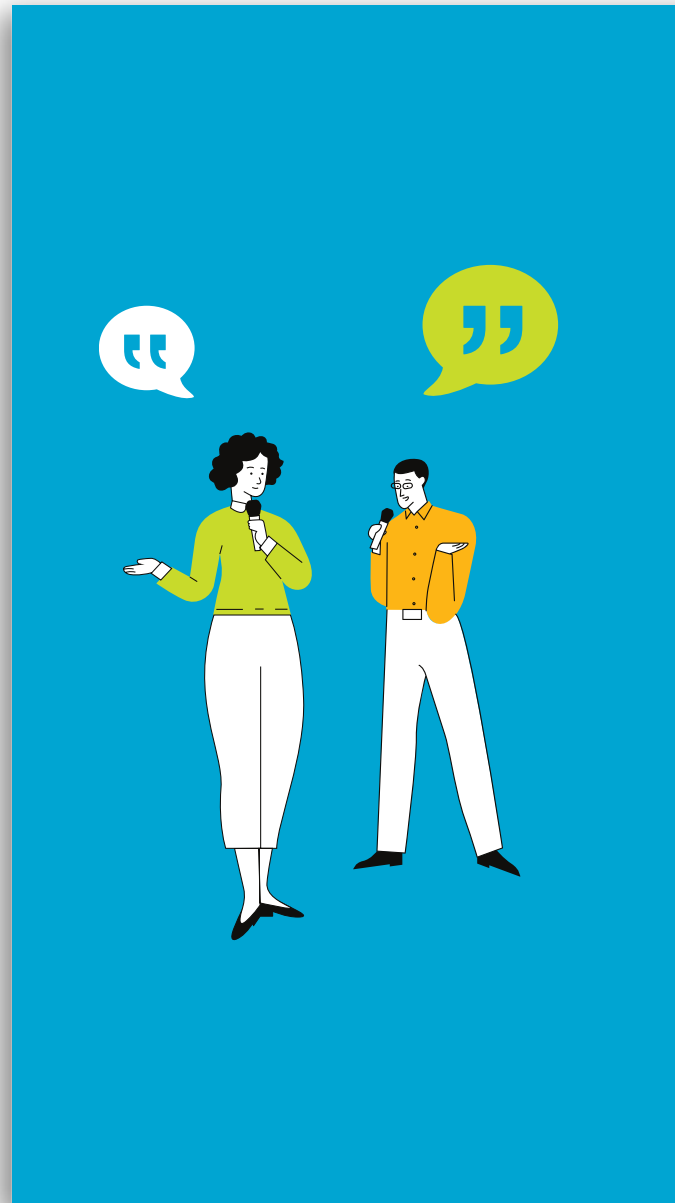
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ACEF 2021 Key Message and Participants' Engagement



MESSAGE FROM ADB

Dear Participants,

Once again, we held a virtual forum as the world continues to grapple with the coronavirus disease 2019 (COVID-19) pandemic. The Asian Development Bank (ADB) is committed to finding ways for people to connect and engage with our work, especially now that the global fight against climate change is at a critical juncture.

This November, the United Nations Framework Convention on Climate Change will hold its 26th Conference of Parties, or COP26, in Glasgow. COP26 will firm up more ambitious targets for reducing carbon emissions by 2030, with the goal of reaching carbon neutrality by 2050. The energy sector will play a decisive role in this effort.

This year's Asia Clean Energy Forum (ACEF) theme, Accelerating the Low-Carbon Transition in Asia and the Pacific fully aligns with the COP26 agenda—and with the Paris Agreement and the Sustainable Development Goals. It also reflects ADB's own Strategy 2030 which prioritizes climate as a focus area and where, the energy sector has a vital role.

In the past year, clean energy investments made up almost half of ADB energy sector lending—clean energy investments doubled from \$1.0 billion in 2019 to \$1.9 billion in 2020, of which, 57% were invested in energy efficiency and 43% in renewable energy. Clean energy investments in 2020 are expected to boost electricity generation capacity by 3.4 gigawatts and reduce greenhouse gas emissions by nearly 7 million tons of carbon dioxide equivalent. ADB's efforts in the energy sector have provided energy access to an additional 10.3 million households in 2020.

Moving forward, I hope that our discussions at ACEF will further ADB's clean energy advocacy and add momentum to the global effort to mitigate and adapt to climate change while promoting sustainable development.

I would like to express my gratitude to everyone who joined ACEF 2021. Your participation made this event a great success.

Sincerely,



Bambang Susantono

Vice-President for Knowledge Management and Sustainable Development
Asian Development Bank

ACEF 2021 IN NUMBERS



180+
Speakers

18 Side Events

2 Plenaries

4 Spotlight Sessions

6 Regional Sessions

1 Book Launch

6 Thematic Track Sessions

2 Energy Policy Consultation Sessions

7 Deep Dive Workshops

Top 10 Countries in Terms of Participants

Philippines – 526
India – 189
Indonesia – 130
Singapore – 117
Thailand – 112
Japan – 99
United States – 75
People's Republic of China – 61
Nepal – 58
Australia – 47

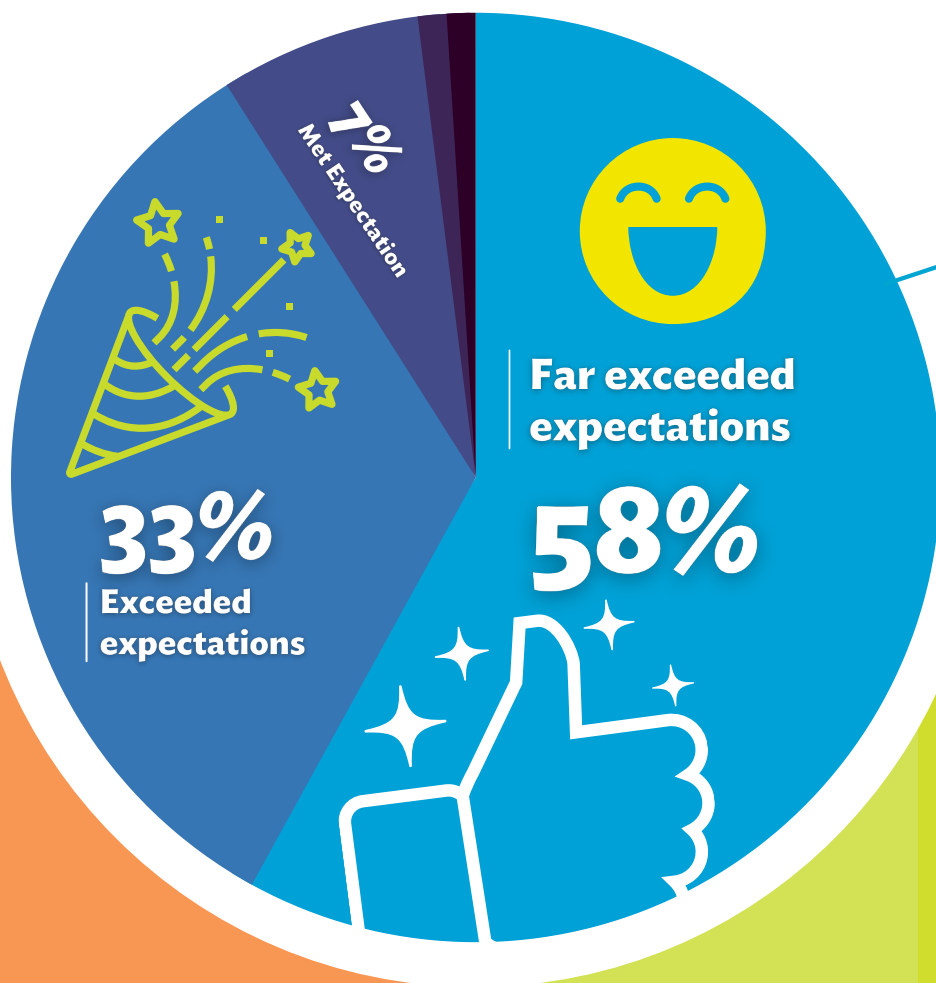
Number of Attendees by Organization Type

Other Guests – 42%
No Answer – 22%
ADB Personnel – 9%
Multilateral Development Banks/International Organizations – 8%
Civil Society Organizations – 8%
Government Officials from ADB Members – 6%
Speakers – 2%
Financial Institutions – 2%
Media – 1%

2800+
attendees



PARTICIPANT FEEDBACK



**Did ACEF 2021
meet your
expectations?**

- 1% Fall short of expectations
- 1% Fall significantly short of expectations

**Will you
join ACEF
2022?**

99%

yes

16th Asia Clean Energy Forum and the Second Virtual Format

The Asia Clean Energy Forum (ACEF) 2021 was the 16th ACEF forum of the Asian Development Bank. For more than a decade, ADB has been convening this forum, which brings together thousands of clean energy professionals across Asia and the Pacific and around the globe to discuss, share knowledge and experiences, and collaborate on sustainable energy development.

ACEF 2021, held from 14–18 June 2021, was the second to be conducted virtually. Over 3,900 registrants were given complimentary access to discussions, insights, and opportunities for networking and collaboration with a community of leaders and practitioners working to transition Asia and the Pacific to a low-carbon energy future.

The theme for this year, “Accelerating the Low-Carbon Transition in Asia and the Pacific”, is consistent with global climate and development efforts in mitigating climate change, and ADB’s Strategy 2030, which establishes a framework for concerted efforts and coordinated actions across sectors to accelerate and sustain the transition to a low-carbon future. The forum’s objective was to promote dialogue, knowledge sharing, and collaborations to drive the transition to clean energy for green recovery, carbon neutrality, and NetZero emissions by mid-21st century.

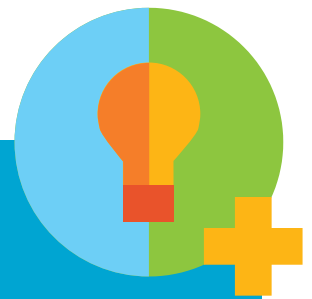
ACEF 2021 was organized around three pillars:

1. Technology road maps to achieve nationally determined contributions (NDCs),
2. Rebounding from the coronavirus disease (COVID-19) and prospects for a green recovery, and
3. Consultations to make the ADB Energy Policy more relevant.

What was New at ACEF 2021?

The sessions during the week-long virtual event were limited to 90 minutes to avoid overwhelming desk-bound virtual participants. Each day, there were three 90-minute time slots: one in the morning and one in the afternoon for the main ACEF 2021 sessions, and one in the evening for side events.

ACEF 2021 featured regional sessions to highlight the work of ADB’s five regional departments and its Private Sector Operations Department. These regional sessions showcased ADB’s regional and country-level projects and initiatives that promote the development and deployment of low-carbon policies and technologies and enabled the sharing of experiences and lessons learned with ADB’s developing member countries (DMCs) and the broader Asia clean energy community.



OPENING PLENARY



Masatsugu Asakawa
ADB President



Chang-Seob Kim
KEA President and
CEO



Bambang Susantono
ADB Vice-President



Nigel Adams, UK FCDO
Minister of State for Asia
on behalf of Alok Sharma
President Designate, COP26



Karen Freeman
USAID Acting Assistant
Administrator for Asia

The Asia Clean Energy Forum (ACEF) 2021 commenced with an Opening Plenary on Clean Energy for Green Recovery and Carbon Neutrality.

INTRODUCTORY REMARKS

ADB Vice-President (VP) for Knowledge Management and Sustainable Development, Bambang Susantono welcomed the participants to ACEF 2021 and formally opened the week-long forum. In his introductory remarks, VP Susantono highlighted the necessity for the energy community to meet even as the world grapples with the coronavirus disease 2019 (COVID-19) pandemic at this critical time in the global fight against climate change. He said ACEF 2021 presents an opportunity to make a difference and help speed-up the low-carbon transition in the region. VP Susantono then provided an overview of the ACEF 2021 sessions and presented the Thematic Tracks to provide a sharper focus on ACEF 2021 discussions. He urged everyone to participate in the discussions and generously share their knowledge, experience, and insights.

Chang-Seob Kim, Korea Energy Agency president and chief executive officer also extended a warm welcome to the participants. He stressed in his introductory remarks that responding to climate change during the COVID-19 pandemic has become “the way we have to go” as both are pressing issues that require action

WELCOMING REMARKS AND KEYNOTE MESSAGES

ADB President Masatsugu Asakawa officially welcomed the over 3,000 participants to ACEF 2021. He delivered his welcoming remarks saying, “now is the time for bold action.” Underscoring ADB’s commitment to improve and align its operations with global climate and development goals, President Asakawa highlighted the importance of urgent action to combat climate change while ensuring economic growth, green recovery, and carbon neutrality. He emphasized the need to balance climate mitigation and adaptation efforts and ensure universal energy access, including the need to address the special challenges of disadvantaged communities and the need of women for modern, clean, and affordable energy and for sustainable livelihood. ADB President Asakawa outlined the initiatives and commitments of ADB in support of the global commitments to bold climate actions, innovative technologies for clean energy development and ADB’s effort to come up with a new ADB Energy Policy that is aligned with ADB’s 2030 Strategy and responsive to the needs of ADB’s developing member countries (DMCs) as they build sustainable and resilient energy systems.

OPENING PLENARY

Karen Freeman, USAID acting assistant administrator for Asia, and Nigel Adams, UK Foreign Commonwealth and Development Office (FCDO) minister of state for Asia (speaking on behalf of COP26 President Designate Alok Sharma), both emphasized the need to scale up the global climate change response. With the power sector accounting for a quarter of global carbon emissions, the United Kingdom (UK) believes that the choices that governments make today will shape our climate for generations to come. Failing to act therefore is not an option. In her keynote messages, Karen Freeman pointed out that climate change presents immense challenges, but also opportunities for a cleaner, brighter future—new investment opportunities, job creation, and the potential for better public health are just a few. Partnerships can advance technological innovations and policy commitments and build back greener economies. Collective action can drive toward the decarbonization of Asia. Additionally, they discussed their initiatives and commitments to clean energy development and global net zero emissions.

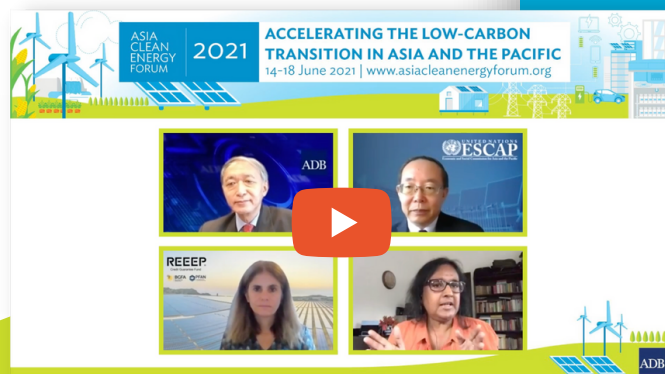
PANEL DISCUSSION: NET ZERO EMISSIONS BY MID-21ST CENTURY—IS IT POSSIBLE FOR ASIA AND THE PACIFIC?

The second half of the opening plenary featured a panel discussion on pathways to carbon neutrality in the Asia and the Pacific. The panelists agreed that the following are “key ingredients” for achieving a carbon-neutral future: regional cooperation to share scarce resources, a “just transition” that includes vulnerable populations, proactive efforts to phase out coal, innovative methods for lowering financing costs and managing risks, and a more systematic integration of gender equality and social inclusion.



KEY MESSAGES

- Asia and the Pacific has been successful in reducing poverty and providing access to electricity to more than 95% of its population, but a large portion is powered by coal.
- COVID-19’s impact has been very uneven across different economic and social sectors. We must make a conscious effort to assist the poor and disadvantaged groups, including providing them access to reliable and affordable clean energy.
- The Asia and Pacific region accounts for 36% of global GDP and is responsible for about 80% of global coal consumption, and 60% of global CO₂ emissions.
- ADB’s clean energy investments increased from \$1.0 billion in 2019 to \$1.9 billion in 2020. These investments will add 3.4 GW electricity generation capacity and reduce nearly 7 million tons of carbon dioxide equivalent GHG emissions. ADB’s efforts in the energy sector helped 10.3 million households gain energy access in 2020.





Masatsugu Asakawa, President, ADB

“Now is the time for bold action. We must commit wholeheartedly to fighting climate change, including meeting the emission-reduction goals under the Paris Agreement—all while promoting economic growth and putting the region’s development on a green path.”



Chang-Seob Kim, President and Chief Executive Officer, Korea Energy Agency

“We need a change in our daily lives for carbon neutrality as we had a change in all parts of our society going through COVID-19. All of us here must join this change for our future, and for the future of new generations.”



Karen Freeman, Acting Assistant Administrator for Asia, United States Agency for International Development

“United States assistance to clean energy development in the Asia-Pacific region has significantly increased over the past decade. As part of this funding increase, the United States is launching several new, high-profile energy programs totaling \$375 million to aggressively scale Asia’s energy paradigm shift.”



Nigel Adams, UK FCDO Minister of State for Asia, on behalf of Alok Sharma, President Designate, COP26

“To avoid the worst effects of climate change, the world must decarbonize up to five times faster over the next ten years than we have over the last 20 years.”



Hongpeng Liu, Director, Energy Division, United Nations Economic and Social Commission for Asia and the Pacific

“The drive to net zero should be inclusive and account for vulnerable groups in developing Asian countries. Approximately 200 million people in Asia and the Pacific are without access to electricity and about 1.8 billion, or 40% of the population, have no access to clean cooking.”



Magdalena Kouneva, Director General, Renewable Energy and Energy Efficiency Partnership

“What is really important at this time is to move beyond policies to actual implementation by developing deal flows, creating pipelines of bankable projects that are required to mobilize the significant investments in clean energy transition.”



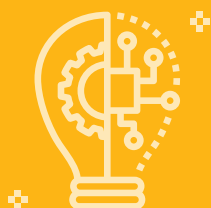
Reihana Mohideen, Principal Advisor at Nossal Institute for Global Health, University of Melbourne

“If we don’t raise questions of vulnerability and equity (questions of poverty and equity, gender equality, and social inclusion), then these risks will be slowing down the transition. These are the most vulnerable groups; these are the groups who will benefit the most.”

HIGHLIGHTS OF THE THEMATIC TRACKS

THEMATIC TRACK I

Tracing Future Paths with Technology Road Maps for Nationally Determined Contributions



This thematic track highlighted long-term issues confronting ADB's DMCs as they transition to low-carbon economy and explored strategies for meeting national climate targets or nationally determined contributions (NDCs). The session covered future pathways and technology road maps (emergent technologies; transition fuels; energy access, sufficiency, flexibility, and reliability to meet development goals), balancing economic goals with the low-carbon transition (cross-sectoral issues), new methods of financing such as transition finance and green bonds, private sector intervention strategies, and innovative business models for the clean energy transition.

TAKEAWAYS

1.1: Implementing NDCs through Action Planning

- Governments' current climate pledges and commitments are insufficient to meet the Paris Agreement commitments. The emphasis must now be on looking beyond NDCs and in developing clear road maps that establish targets for carbon neutrality, and even a step further toward carbon negative status.
- The global trend manifests positive impact of renewable energy in the energy transition. Investments in renewable energy generate three times more jobs than investments in fossil fuels. Additionally, solar and wind energy have become more affordable than coal in all member states of the Association of Southeast Asian Nations (ASEAN), and prices are expected to continue to fall.
- NDCs serve as a vehicle for countries to develop and communicate future climate action plans and policies. They must be integrated into national economic planning, including the coronavirus disease 2019 (COVID-19)-specific economic recovery plans.

1.2: Showcasing Low-Carbon Transition Technologies

- ADB is currently implementing a technical assistance project for the development of floating solar photovoltaic (PV) in Azerbaijan, and the Kyrgyz Republic. The technical assistance aims to (i) enhance knowledge and technical skills related to designing, constructing, and operating floating solar PV systems; (ii) enhance knowledge and technical skills in the development of policies and tariff structures; and (iii) provide hands-on institutional capacity building, including in-depth study tours in leading floating PV countries.
- The Republic of Korea has developed procedures for evaluating potential applications for reusing Li-Ion batteries. Li-Ion batteries can be reused in a variety of ways, including energy storage, solar PV, electric vehicle chargers, uninterruptible power supplies (UPS), and emergency power. Recycling and reusing Li-ion batteries is more cost effective and environmentally friendly. Batteries can be recycled to recover valuable metals such as lithium, nickel, and cobalt.
- An integrated intelligent energy system that incorporates concentrated cooling system, ice storage, PV, combined cooling, heat, and power (CCHP), and battery storage will have a low carbon and economic impact over the power system's operational life.

1.3: Deep Dives at the City, National, and Regional Levels

- The lack of up-front capital required to connect communities to the national grid and decentralized renewable energy systems such as mini-grids is being addressed by the introduction of the Energy Impact Fund—an innovative, direct-delivery revolving credit facility.
- As the world is implementing the NDC targets and given the current situation, it is crucial that the world moves beyond the NDC targets. In this context, everyone needs to work together to contribute—not only the national governments, but also the city level, specifically in Asia where urbanization is rapid.



“ADB energy sector investments are opening the door to more creative projects with hybrid systems, and ADB will continue its support to help countries help themselves to implement ambitious energy sector interventions that look beyond NDCs.”

Priyantha Wijayatunga, Chief of Energy Sector Group, ADB

“All the technologies needed to achieve the necessary deep cuts in global emissions by 2030 already exist, and the policies that can drive their deployment are already proven.”

Colin Steely, Senior Investment Specialist (ADB consultant)



HIGHLIGHTS OF THE THEMATIC TRACKS

THEMATIC TRACK II

Rebounding from COVID-19 with Integrated Solutions



Apart from examining the current and future impacts of COVID-19 on energy and the environment, participants in this track discussed the possibility of combining economic recovery and a green energy transition to maximize the benefits of stimulus packages and provide multiple solutions, not only for economic recovery but also for carbon neutrality, post-COVID-19. Presenters and panelists agreed that the pandemic has opened opportunities to reset energy sector priorities and to rethink technology, finance, and policy considering cross-sectoral issues and needs. This track emphasized the importance of holistic solutions for a more successful recovery from COVID-19.

TAKEAWAYS

2.1: Impacts of COVID-19 on Energy and the Environment

- The pandemic significantly altered electricity consumption patterns, shifting demand away from commercial and industrial sectors toward the residential sector. With these changes, COVID-19 has acted as a catalyst for decision makers to review and revise their current energy mix, based on new energy consumption patterns brought about by the “new normal,” thus prompting a shift toward a greater emphasis on energy efficiency and renewable energy.
- Increased emphasis on energy efficiency is aligned with a post-COVID-19 green recovery as it creates business opportunities for small and medium-sized enterprises (SMEs) and energy service companies (ESCOs) while moving toward sustainable growth.
- Stimulus packages must also address issues outside of electricity. Apart from the reduced demand for electricity, the demand for other renewable energy has also contracted. For example, the demand for biofuels reduced as the energy consumption of the transport sector declined.

2.2: Combining Stimulus Recovery with the Green Energy Transition

- Blended financing can leverage limited public and philanthropic funds by unlocking private capital to bridge the financing gap for a green recovery.
- Accelerating the clean energy transition will only happen with enabling policy frameworks and imposing accountability among those that set obligations. It is increasingly critical to establish benchmarking and accountability mechanisms and to impose mandatory disclosures with consistent metrics to measure actual results and gauge the progress of commitments.
- The benefits of inclusive and green recovery far outweigh the costs. Green recovery can lead to a global gross domestic product (GDP) growth of 3.5% higher in 2023 than it would otherwise. Therefore, green recovery is the pathway for faster economy. Renewable energy demonstrates financial reliability and resilience, with robust returns on investments. Green recovery can lead to a global GDP growth of 3.5% higher in 2023 than it would otherwise. Therefore, green recovery is the pathway for faster economic recovery.

2.3: Boosting Clean Energy Innovation with COVID-19

- NDCs and COVID-19 recovery plans should be retooled and implemented around sustainable food production, safe drinking water provision, and ocean acidification mitigation.
- Initiatives that integrate innovative renewable energy technologies such as off-grid solar energy have a positive impact not only on energy quality and the climate, but also on the development of health infrastructure that bridges geographic, income, and gender divides in terms of access to high-quality, affordable, and resilient health care services.
- Centralized Air-Conditioning (CAC) systems that are efficient, clean, and intelligent have become critical. The importance of integrating key strategies to minimize the risk of airborne transmission and to ensure safe working conditions in DMCs has increased in response to COVID-19.



“Energy efficient investments are well aligned with post-COVID green recovery and climate target as they create jobs, open business opportunities for ESCOs, and expand markets for energy efficiency equipment.”

Hyunjung J. Lee, Senior Energy Economist, Southeast Energy Division, ADB

“To measure impact meaningfully, develop metrics and reporting practices alongside structuring activities. Because many finance vehicles do not report on their impacts, we don’t know what’s worked and how to move forward so reporting is important to understand what works and improve design of funding vehicles.”

Robert van Zwieten, Managing Director, Asia-Pacific Convergence Blended Finance



“Good building designs minimize the cooling and heating requirements of a building. Selecting the right kind of cooling and heating based on your local climate will make your building energy efficient”

**Yash Shukla, Executive Director
Center for Advanced Research in Building Science and Energy, CEPT University**

REGIONAL SESSIONS

ACEF 2021 introduced a new focused discussion. For the first time, ACEF organized regional sessions that highlighted the work of ADB's five regional departments and the Private Sector Operations Department. These sessions showcased regional and country-level projects and initiatives that support the development and deployment of low-carbon policies and technologies. These region-specific discussions enabled the sharing of experiences and lessons learned with ADB's DMCs and the broader Asia clean energy community.

Central and West Asia 📍

**Decarbonization in Central Asia:
Managing Reserve Capacities to Support
the Development of Large-Scale
Renewable Energy Generation**

East Asia 📍

**Carbon Emissions Peaking in Asia
and the Pacific**

The Pacific 📍

**Navigating the
New Normal in a
Fragile Pacific**

South Asia 📍

**Digitalization of the
Electricity Utilities
in the South**

Southeast Asia 📍

**Getting Southeast Asia on the
Clean Energy Fast Track**

Private Sector Operations 📍

**SGD-linked Debt Instruments for the Clean Energy Sector:
Moving Beyond the Climate Thematic Label**



DECARBONIZATION IN CENTRAL ASIA: MANAGING RESERVE CAPACITIES TO SUPPORT THE DEVELOPMENT OF LARGE-SCALE RENEWABLE ENERGY GENERATION

Organized by ADB's Central and West Asia Department (CWRD)

This session presented the issues surrounding intermittency of renewable energy generation (e.g., variability, uncertainty, and additional cost of reserve capacity requirement) and the ongoing efforts and solutions to improve balancing capacity while integrating large scale renewable energy generation in Central Asia. Likewise, the session discussed lessons and challenges in addressing intermittency of large-scale renewable energy generation, and how maximizing the use of renewable energy resources can support worldwide decarbonization. Case studies on efficient system planning in Kazakhstan, trading of reserve capacities in Central Asia, and benefits of the expansion of the regional power trade through Central Asian Power System, were presented.

TAKEAWAYS

- In Kazakhstan and Central Asia, geographic dispersion of renewable generation sources can help mitigate the impact of variability (regulating reserves) and the use of state-of-the-art forecasting tools can help mitigate uncertainty (balancing reserves) to address the scarce flexibility of the country's intermittent sources.
- While there are existing complementary power systems for trading in the region, lack of technical experience to address the intermittency of renewable energy generation remains as one of major technical challenges for large-scale renewable energy integration.
- For successful intermittent source integration, countries need to (i) hold Frequency Restoration Reserve (FRR) and develop regionally harmonized rules for FRR dimensioning and cross-border exchanges; (ii) have accurate intermittent generation forecast, and load/generation balance monitoring; (iii) introduce cross-border capacity trade; (iii) develop regional power markets; and (iv) introduce energy storage systems (e.g., batteries).



“There is a need to look at regional balancing of reserves: the more integrated the regional balancing market, the better is the management of balancing reserves.”

Flavio Fernandez, Managing Director, DlgSILENT GmbH (Germany)

NAVIGATING THE NEW NORMAL IN A FRAGILE PACIFIC

Organized by ADB's Pacific Department (PARC)

The session highlighted the extreme vulnerability of small Pacific Island countries to climate change impacts like sea level rise and extreme weather events. Amid this climate crisis, and now with the COVID-19 pandemic, overcoming economic, energy, water and food insecurity in these fragile economies has become an increasingly complex challenge.

TAKEAWAYS

- The session highlighted the extreme vulnerability of small Pacific Island countries to climate change impacts like sea-level rise and extreme weather events.
- Development partners are collaborating and working to increase institutional capacity in the region, supporting reforms, and using grant financing to leverage private sector investments in clean energy.
- The session increased the understanding of the challenges and opportunities in the Pacific and made clear that the low-carbon transition and the transformation from fragility to resilience require fundamental changes in the form and substance of all development efforts of all partners.

“Transition is not only about technology, but it also includes human resources, financial resources, ensuring a just transition and access for everyone.”

Arieta Gonelevu Rakai, Programme Officer (Lead)
SIDS Lighthouses, International Renewable Energy Agency



DIGITALIZATION OF ELECTRIC UTILITIES IN SOUTH ASIA

Organized by the South Asia Department (SARD)

The discussion in this session focused on the potential and challenges on digitalization of electricity utilities and presented approaches and solutions to adopting digital technology into power systems planning, assets management, operation, maintenance, customer service and regulations for a smooth low carbon transition.

TAKEAWAYS

- The presentations by the speakers from Bangladesh, India, Nepal, and Sri Lanka put forward the details of digital practices and experiences including smart meter solutions, renewable desks (energy control platforms), digital customer services, supervisory control and data acquisition (SCADA) system, Enterprise Resource Planning (ERP), and others.
- Digitalization has brought substantial value to power utilities such as more efficient operations, continued reduction in losses, more transparent information, and higher customer satisfaction.
- Digitalization of utilities facilitates integration of distributed energy resources (DER) and electric vehicles to achieve emission reductions and NDC targets.



“Before, we thought 50% generation from renewable energy may not be possible, but now digital technology can enable a transition towards 100% renewable energy by 2050.”

Reji Kumar Pillai, President, India Smart Grid Forum
Chairman, Global Smart Energy Federation

CARBON EMISSIONS PEAKING IN ASIA AND THE PACIFIC

Organized by the East Asia Department (EARD)

The discussion in this session focused on the potential and challenges on digitalization of electricity utilities and presented approaches and solutions to adopting digital technology into power systems planning, assets management, operation, maintenance, customer service and regulations for a smooth low carbon transition.

TAKEAWAYS

- The People’s Republic of China (PRC) announced that it would aim to achieve carbon dioxide (CO₂) emissions peak before 2030 and carbon neutrality before 2060. Japan and the Republic of Korea have also announced that they will achieve carbon neutrality by 2050.
- There is a pressing need to slash emissions in half by 2030 for an emissions trajectory that is aligned with 1.5 degree Centigrade, and then get to net zero by 2050.
- The longer the delay of achieving peak emissions, the more rapid the required transition needs to achieve neutrality.
- If COVID-19 recovery is used as an opening to pursue decarbonization, global greenhouse gas emissions are projected to reduce by over 25% in 2030 compared with the pre-COVID 19 current policies scenario.

“We have a history of broken promises in 1992 when we concluded UNFCCC, when we adopted Kyoto Protocol, in Copenhagen—no one thought about our commitments and why we failed. I hope the same mistake, same broken promises will not be repeated in 2030”

Rae Kwon Chung, Board Member,
Ban Ki-moon Foundation for a Better Future



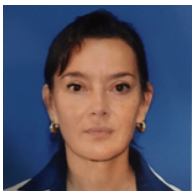
GETTING SOUTHEAST ASIA ON THE CLEAN ENERGY FAST TRACK

Organized by ADB's Southeast Asia Department (SERD)

The session discussed challenges and opportunities for the clean energy transition in Southeast Asia. The speakers discussed the following points regarding the clean energy transition in Southeast Asia: (i) the need for multiple stakeholder engagement; (ii) the importance of devising country-specific solutions; (iii) the importance of knowledge sharing and capacity building; (iv) the inclusion of gender-specific considerations in the context of the green economy (e.g., in the form of job creation); and (v) the need for a “just transition” of communities impacted from a shift to a greener economy.

TAKEAWAYS

- The clean energy transition is being supported by development partners that cover evidence-based research Clean, Affordable and Secure Energy for Southeast Asia (CASE) Program (GIZ), greening of the financial system (UK Low Carbon Energy Program), promoting multi-stakeholder collaboration (Energy Transition Partnership [ETP]), development of a learning acceleration platform (Clean Power Hub), and early retirement of coal assets (ADB).
- While the energy transition in Southeast Asia is gaining momentum, more needs to be done. For instance, while some companies based in Southeast Asia have set carbon neutrality targets, no country of the region has made net zero emissions pledge yet.
- There is strong potential for synergies between the donor knowledge-sharing activities—namely the CASE Energy Transition Knowledge Hub, ETP's planned Roundtables, and the Clean Power Hub. These discussions are already underway.



“Pledges of carbon neutrality made in other Asian countries could have a strong demonstration effect in Southeast Asia.”

Sirpa Jarvenpaa, Director, Southeast Asian Energy Transition Partnership

SUSTAINABLE DEVELOPMENT GOALS-LINKED DEBT INSTRUMENTS FOR THE CLEAN ENERGY SECTOR: MOVING BEYOND THE CLIMATE THEMATIC LABEL

Organized by ADB's Private Sector Operations Department (PSOD)

This session focused on “sustainability-linked financing,” which sets certain key performance indicators (KPIs) at the corporate level and linking the KPIs to Sustainable Development Goals (SDGs). This aims to provide the issuers more flexibility in pursuing corporate sustainability goals. Unlike conventional financing, the sustainability-linked approach measures the long-term impact of the company's achievements in relation to its sustainable goals. This shows that sustainability-linked debt can be issued by a broader pool of issuers.

TAKEAWAYS

- The sustainable financing market has not only grown in terms of size, but also in terms of product types. The conventional approach was to restrict the use of proceeds of the “green” projects, while the latest approach is to take a behavior-based approach, which involves not restricting the use of proceeds but instead establishing certain KPIs at the corporate level and linking them to the SDGs.
- The amount of sustainability-related debt has boomed since the early days when green bonds were introduced. The mix of sustainable debt has also evolved and now includes not only green and social debt, but also sustainability-linked products. There is still huge potential since sustainable finance only accounts for about 1%–2% of total bonds and loans.
- Nowadays, being “SDG compliant” is becoming increasingly important for companies. SDG compliance is now included as a risk factor when evaluating an entity's long-term financial risk.

“The mix of sustainable financing has changed in the recent years and the amount of issuances has boomed as well.”

David Jenkins, Global Head of Sustainable Finance Corporate & Institutional Banking, National Australia Bank,



ENERGY POLICY CONSULTATIONS

ACEF 2021 hosted two of a series of energy policy consultations to solicit input on how to update ADB's Energy Policy to ensure that it remains relevant and effective in assisting DMCs.



CONSULTATIONS WITH CIVIL SOCIETY ORGANIZATIONS

Yongping Zhai, Chief of ADB's Energy Sector Group, presented an update on ADB's Energy Sector Operations and Energy Policy, which included a run-through of the seven operational areas of ADB's Strategy 2030, a briefing on ADB's clean energy investments in Asia, and a history of ADB's Energy Policies dating back to 1981.

Joining Yongping was Chris Morris who leads ADB's NGO and Civil Society Center and oversees the planning, implementation, and monitoring of ADB's overall engagement with civil society organizations. During the consultation, he was responsible for presenting nongovernment organizations' concerns about ADB's new energy policy and requests that ADB address those concerns.

Session Summary

- Asia is making a lot of progress in economic growth, poverty reduction, and energy access. Much of this progress is achieved through the reliance on fossil fuels. About 60% of power generation comes from coal, which is close to 80% of the worldwide coal consumption. Reducing dependence on fossil fuels can be achieved through (i) energy efficiency, (ii) replacement of fossil fuels with low carbon technologies (renewable energy), and (iii) carbon offsets to reach carbon neutrality for those sectors that are difficult to decarbonize.
- While many DMCs are moving ahead toward decarbonization, others find it difficult to follow suit. One example is Mongolia, where coal resource is redundant and the country's energy system is heavily dependent on coal. Coal exports also provide substantial contribution to the nation's economy. ADB is using a multifaceted approach to respond to these challenges.
- A just transition is essential for affected workers and communities. The communities that will be impacted, whether directly or indirectly, must be considered. A macro perspective should consider the implications for education, gender equality, and vulnerable groups, among others.

“Storage is critical because a lot of grids are fragmented. Without grid integration and additional storage capacities, there will be problems in scaling up variable renewable energy.”



**Toru Kubo, Director,
Southeast Asia Energy
Department, ADB**

- ADB is giving high priority to the Paris alignment and has joined the other multilateral development banks (MDBs) in developing a framework for aligning operations within the Paris Agreement. ADB will assist countries in developing climate plans and long-term strategies to meet their NDC targets, and align these development pathways to ADB climate finance targets. ADB is making progress in meeting its climate finance objective of \$80 billion from 2019 to 2030.
- ADB is helping DMCs to take advantage of new technologies, such as renewable energy, to meet their Paris Agreement commitments. Storage is critical because a lot of grids are fragmented. Additional storage capacities will facilitate scaling up of variable renewable energy and encourage private sector participation in this space.

ENERGY POLICY CONSULTATION: VIRTUAL CONSULTATION ROUNDTABLE

Building on previous consultations with its member and civil society organizations (CSOs), ADB conducted a virtual consultation roundtable to provide global experts an opportunity to contribute to the development of ADB's new energy policy.

Feedback included the following:

- Energy demand growth is the fundamental issue and not much analysis has been done in the draft Energy Policy. The Energy Policy should emphasize the current energy situation of the DMCs and provide differentiated strategies in accordance with their priorities. It must give more attention to, and prioritize island countries. The draft Energy Policy is evolving into a climate policy review with an emphasis on energy.
- Access to energy for clean cooking should be prioritized. At the current scenario, the target of universal access is difficult to achieve. Approximately 40% of the population currently lacks access to clean cooking fuels.
- The conditions for developing gas projects are too rigid. Gas is not only a transition fuel but also the main fuel for cooking. Natural gas is just starting in Asia and ADB should not follow the European Investment Bank (EIB) policy. Europe has been involved in natural gas development for more than a hundred years.
- Not all ASEAN member states will reach carbon neutrality by mid-century. Only Singapore and Malaysia would achieve carbon neutrality by 2060 while the rest of ASEAN would do so by 2070. Given this reality, flexibilities on financing of fossil fuels should be considered.
- Just transition should not be limited to retooling or reskilling but should also include a link to new income generation, which should be given priority attention. Policies should be centered on people and on socioeconomic development of countries.
- The current draft focuses only on high voltage transmission lines. In the future, an increasing amount of renewable energy will be connected at the distribution level. Strengthening of the distribution sector through innovation, capacity building, and sector reform is essential.
- Expand discussion on emerging technologies. Discussion on the emerging technologies focuses a lot on hydrogen but in reality, hydrogen—particularly green hydrogen—is not yet ready technically and commercially for market development. This discussion should be expanded to include a wider range of emerging technologies.

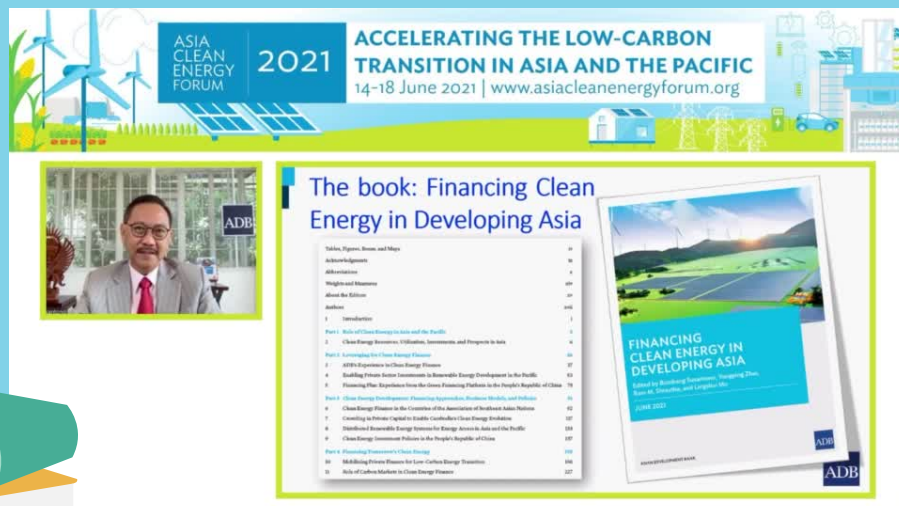
“In the short- and medium-term, ADB will fund gas but this will be limited in scope. It will not support DMCs that already have a number of gas projects. It will not be open to building greenfield projects that are adding more emissions but will consider combined cycle gas power plant that will replace coal-fired power plant.”



**Yongping Zhai, Chief of
Energy Sector Group,
ADB**

BOOK LAUNCH

Following the Opening Plenary on 15 June, ADB launched a new publication, *Financing Clean Energy in Developing Asia*, which examines financial gaps and provides guidance on how to effectively mobilize finance for clean energy. The book was introduced by Dr. Yongping Zhai, chief of ADB's Energy Sector Group.



“This book comes out at an opportune time, as the world, during this pandemic era, accelerates the transition to a safe and sustainable energy future.”

Bambang Susantono, Vice-President for Knowledge Management, ADB

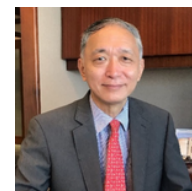


“The book is a timely publication, as many countries need this kind of knowledge-sharing in order to enhance the energy transition.”

Hongpeng Liu, Director of the Energy Division, UNESCAP

“It’s a valuable resource for developing countries as they face the daunting challenge of rapidly scaling up the identification and financing of clean energy projects to meet their climate targets.”

Yongping Zhai, Chief Energy Sector Group, ADB



DEEP DIVE WORKSHOPS

DEEP DIVE WORKSHOP

Innovative and Sustainable Cooling Solutions for Asia and the Pacific



DEEP DIVE WORKSHOP

Finance to Accelerate Energy Transition in Asia and Pacific: Public Sector Initiatives and Good Practices of Private Sector



DEEP DIVE WORKSHOP

Industrial Decarbonization: Innovation in Financing and Market-Building



DEEP DIVE WORKSHOP

Potential and Challenges of Hydrogen Energy in Asia and Pacific Developing Countries



DEEP DIVE WORKSHOP

CCUS – Essential Tool for the Low-Carbon Transition in Asia



DEEP DIVE WORKSHOP

The Relevance of Energy Efficiency for Asia and the Pacific



DEEP DIVE WORKSHOP

From Dreams to Reality: Achieving NDCs through Power Sector Planning and Implementation



SPOTLIGHT SESSIONS

WASTE, ENERGY, AND THE OCEANS

Organized by the Asian Development Bank (ADB)



This session probed into the negative impacts of modernization and the progress of our civilization on the oceans, and emphasized the urgency of commitment to restore ocean health and harness offshore renewable energy. The concept of rigs-to-reef is deemed suitable for the region to enhance fish habitat. A great amount of savings will be realized as it is more expensive to decommission the whole oil and gas structure completely than to reuse the platforms. One idea that surfaced is to utilize the top portion of the oil and gas structure for offshore renewable energy generation as the related infrastructure like cablings, etc. are already in place.

TAKEAWAYS

- There are existing marine renewable energy technologies that can be harnessed, but this needs support and commitment from the government to make them commercially viable.
- The restoration of coral reefs, regenerative farming, and rigs-to-reefs are some of the ways cited to protect the ocean and the environment. It is important to get governments' commitments to restore ocean health and harness offshore renewable energy to reach the scale.
- Waste-to-energy may not be an ideal solution in all cases. The preference should be recycling. However, a huge amount of waste cannot be recycled, and waste-to-energy recovery is seen as a solution to get rid of materials that cannot be recycled and processing them to produce energy is a productive way, while getting rid of the waste.
- The concept of rigs-to-reef has potential in the region. Through this approach, the offshore oil and gas structure at the end of its useful life is reused to enhance fish habitat.



“If we want to make marine renewable energy technologies like ocean thermal energy conversion, tidal conversion, and wave energy commercially viable, we should have the commitment to scale, and the government has to make that commitment.”



Dan Millison,
Consultant, ADB



“Once you start to put a value on the services of nature, we can create new markets and new products which include the natural world in our blue economy and create regenerative and sustainable value.”



Belinda Bramley,
NLA International



This spotlight session showcased how development organizations can build on partnerships to create synergies that would increase investments in clean energy in the Asia and Pacific region. Given the significant investment gaps to develop necessary energy infrastructure, address energy access issues, and meet NDCs, organizations, countries, and stakeholders must work together to attain shared goals and aspirations. Countries and the private sector can tap into the tools, technical assistance, and financial resources that development organizations provide to support the clean energy transition.

TAKEAWAYS

- Governments play a critical and visible role in addressing both the COVID-19 and the climate crisis. Governments must develop plans for an orderly transition instead of piecemeal approaches.
- Governments can use limited public funds to unlock private capital. This can be achieved by making business models more attractive or enabling.
- The diverse energy needs of each country may be satisfied by small and big projects. There is no one solution. There needs to be customized solution and a mix of options to address specific needs.
- Support from bilateral development organizations are available and these organizations are ready and willing to work in partnership with governments to meet climate and sustainable development objectives:
 - The United States Agency for International Development (USAID) has developed a new 5-year regional cooperation strategy that reaffirms its commitment to regional cooperation. The work focuses on strengthening regional energy systems to ensure an inclusive, resilient, and secure region.
 - The United States International Development Finance Corporation (DFC) provides technical development assistance, such as feasibility studies for projects in energy access, distributed energy, advanced energy technologies, gender mainstreaming and climate finance. DFC prioritizes partnerships and works together with implementing partners on the ground to interface in the life cycle of project development, bring in complementary financing to de-risk the project, and crowd-in financing tools to address gaps and help governments meet international standards in order to attract private sector financing.
 - The Government of Australia through Export Finance Australia catalyzes private sector clean energy transition projects through the Australian Climate Finance Partnership that is administered by ADB.
 - Bilateral assistance of the Japan International Cooperation Agency (JICA) focuses on policy making, planning, capacity development, infrastructure, helping in the development of transition road maps where it highlights the implementation of the 3 + S (environment, energy security, energy efficiency, and safety), and facilitate science and research.
 - The Rockefeller Foundation can also provide credit guarantees, grant, and debt in partnership with other lenders particularly in support of distributed renewable energy solutions and minigrids.



“We must end energy poverty with urgency, and the fastest way to reach this goal is through partnerships.”
Pariphan Uawithya, Director, Power & Climate initiative, The Rockefeller Foundation

“In Viet Nam, where the demand for energy is expected to more than double by 2030, USAID is working with the Ministry of Industry and Trade to implement a renewable energy direct power purchase agreement mechanism. This allows power consumers to contract directly with renewable energy developers. Dozens of companies operating in Viet Nam, including business leaders like Apple, Nike, and GE, have partnered with USAID to support this initiative.”



Stephen G. Olive, Mission Director, United States Agency for International Development Regional Development Mission for Asia



The session focused on opportunities and challenges women and women entrepreneurs face during this energy transition. Session speakers discussed policies and strategies that address SDGs related to women and energy access while promoting women entrepreneurship in renewable energy. The experiences, practices, and lessons learned by UN Environment and UN Women in implementing its EmPower project which supports women entrepreneurs in the renewable energy sector were also discussed. The importance of access to finance, networks, training, and leadership was emphasized.

TAKEAWAYS

- Findings from a study by the International Renewable Energy Agency (IRENA) indicate that in the energy sector, only 32% of the workforce in the renewable energy sector are women. In terms of type of occupation in the sector, 28% are related to science, technology, engineering, and mathematics (STEM) while 45% are administrative functions.
- Women face entry barriers due to lack of STEM background, limited mobility, lack of awareness and opportunities, and lack of gender targets by energy companies. Likewise, there is the problem of retention and advancement (discouraging workplace policies, lack of childcare facilities, lack of training opportunities, lack of required skills and qualifications); and barriers in the access context (cultural and social norms, lack of skills and gender-specific training opportunities, lack of gender-sensitive programs and policies).



“We need to improve the skill sets of women entrepreneurs and bring in digital technologies to improve their access to markets. We can help them with a digital transformation and providing them with the skillsets that they need to sustain and expand their business.”



**Parimita Mohanty, Programme Manager,
Renewable Energy, Asia Pacific Office, United
Nations Environment Programme**



“Advancing equality and diversity in the energy sector is a compelling proposition. Establishing gender as a pillar of energy strategies will produce a swifter and more inclusive transition while accelerating the attainment of multiple SDGs.”



**Celia Garcia-Baños, Associate Programme
Officer, International Renewable Energy
Agency**



ADB's Technology Innovation Challenge (TIC) and ADB Ventures support high-impact technology providers with early-stage financing and technical assistance to facilitate their entry in developing economies that can benefit from them the most. The session also featured companies and technologies that have participated in ADB's TIC and those that have been supported by ADB Ventures through technical assistance and/or financing. ADB Ventures aim to expand nonsovereign operations by filling a market gap for early-stage funding of high impact technology solutions. The session showcased three companies and their innovative technologies and another three companies that presented their startup pitches.

TAKEAWAYS

- ADB's TIC was launched to identify and support new solutions that can address development challenges across ADB's developing member countries. To encourage innovation, TIC invited technology providers to propose a pilot or proof-of-concept of high-level technologies for identified development issues.
- Through the TIC, ADB provides grant co-financing to allow selected companies to pilot test their technologies and promote them for dissemination. The selected technologies include (i) Helios PowerWheel, a micro-hydro system that can generate power even in low levels of hydro resources such as streams and canals that are otherwise too small for conventional hydro, (ii) Clean Cooling and Heating System by Utilization of Unused Wastewater in Viet Nam, and (iii) energy-efficient solar cooling system that uses the thermal heat from solar water heaters to run a solar air-conditioning unit.
- The Spotlight Session also featured companies and technologies that have been supported by ADB Ventures through technical assistance and/or financing. The three companies that presented include (i) Euler Motors, which manufactures small cargo electric vehicles that are ideal for intra-city logistics; (ii) Nuventura, which developed an ambient air-insulated switchgear that displaces the traditional use of SF6 gas for insulation; and (iii) Gram Power, company that provides an integrated platform service for power distribution management that will lead to radical efficiency for electricity distribution companies in India.
- Through ADB Ventures, ADB can support private sector startup companies and encourage investments in new and innovative technologies and business models.



“ADB's programs, ADB Ventures and the Technology Innovation Challenge, identify high impacts startups and support them with early-stage financing and technical assistance.”



Priyantha Wijayatunga, Chief of Energy Sector Group, ADB



“The public sector has a critical role in providing infrastructure and creating an enabling policy environment for clean energy. However, the private sector must be ready to grab the baton and run with it.”



Suzanne Gaboury, Director General, Private Sector Operations Department, ADB

CLOSING PLENARY

ACEF 2021's closing plenary aptly focused on Collective Action for Low-Carbon and Sustainable Development. It was opened with the ACEF 2021 summary video presenting the highlights of the various sessions across the world.

Steven G. Olive, mission director of USAID's Regional Development Mission for Asia, showed a video that highlighted USAID's efforts and collaboration with governments in Southeast Asia and other partners in securing the region's energy future and promoting a healthier climate for the world. In introducing the video, he emphasized the value of collaboration and the critical need to forge new alliances to advance the low-carbon agenda.



"We need to study and understand the impact that an accelerated energy transition will have on economic growth."

Sujata Gupta, Director, Sustainable Infrastructure Division, ADB East Asia Department



"The bigger the challenge, the closer the collaboration required. We need to work hard to build communities of collaboration."

Ashok Lavasa, Vice-President for Private Sector Operations and Public-Private Partnerships, ADB

KEYNOTE MESSAGES

Damilola Ogunbiyi, chief executive officer, special representative of the UN Secretary-General for SEforALL, and co-chair of UN-Energy talked about the critical role of energy access in the clean energy transition, emphasizing that many development goals, including poverty, energy security, and equality and climate change, are dependent on it. John Murton, the UK envoy to the 26th Conference of the Parties (COP 26), focused on the importance and benefits of transitioning to a zero-carbon economy in his keynote address. He called for a collaborative action now by turning net zero targets into 2030 commitments.



PANEL DISCUSSION: COLLABORATIVE ACTIONS FOR A SUSTAINABLE AND RESILIENT ASIA AND THE PACIFIC


The closing session involved a panel discussion titled, "Collaborative Actions for a Sustainable and Resilient Asia and the Pacific," with representatives from ADB, the United Nations Environment Program (UNEP), and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) as panelists.

Panelists exchanged ideas and views on the importance of existing collaborative efforts and discussed how these initiatives can be translated into collective action toward transforming and achieving a progressive, inclusive, resilient, and secure energy future for the Asia and Pacific region. They identified clean energy development areas that the region should prioritize and the ways in which stakeholders can collaborate more effectively in these areas.

CLOSING REMARKS

In his closing remarks, Ashok Lavasa, ADB's vice-president for Private Sector Operations and Public-Private Partnerships expressed gratitude to participants for their contributions to a busy week of discussions at ACEF and further emphasized the importance of building communities of collaboration and enlisting the participation of the private sector to contribute its resources. He reaffirmed ADB's commitment of help guide the region out of the pandemic and to build back smarter and more sustainably. He ended his closing message with a quote from Ernest Hemmingway: "The earth is a fine place and worth fighting for", and finally, he said, the future is here and the time for action is now.

SIDE EVENTS

 ACEF 2021 featured 18 side events, which added to the forum's great diversity of topics and depth of discussion. These evening side events were organized and hosted by partner organizations.

[Blockchain Innovation and Adoption in Electric Utilities \(India Smart Grid Forum, Global Smart Energy Federation\)](#)

[I-Pitch@ACEF: Tech-Enabled Solutions with Data and Digitalization
\(The Private Financing Advisory Network, Sustainable Energy Association of Singapore\)](#)

[It's Not Just Gas or Storage: Meeting Growing Electricity Demand with Power System Flexibility
\(The Clean Power Hub\)](#)

[Leading the Energy Sector into the Future by Harnessing the Power of Gender Equality
\(USAID Southeast Asia EDGE Hub, USAID Engendering Utilities, Enhancing Equality in Energy for Southeast Asia\)](#)

[Scoping Dialogue to Raise Climate Awareness Among Emerging Energy Youth Leaders
\(New Energy Nexus and OurEnergy2030\)](#)

[Just Transition to Low Carbon Futures: Phasing Out Coal \(Energy Transition Partnership\)](#)

[Artificial Intelligence and Robotics for Electric Utilities \(India Smart Grid Forum, Global Smart Energy Federation\)](#)

[Developing Urban Energy for a Carbon Neutral Future \(Asia Pacific Urban Energy Association
, Alliance for an Energy Efficient Economy\)](#)

[The Future of E-Mobility in Asia: Goals, Challenges, and Holistic Solutions
\(USAID, National Renewable Energy Laboratory, SLOCAT Partnership\)](#)

[Sustainable Air Conditioning with District Cooling System
\(India Smart Grid Forum, Global Smart Energy Federation, Asia Pacific Urban Energy Association\)](#)

[From Rhetoric to Reality: Tracking the Global Progress of Renewables \(REN21\)](#)

[Applying New Integrated Resources Planning and Data Visualization into Sustainable Power Planning in the Mekong Subregion \(USAID, The Asia Foundation, Asian Disaster Preparedness Center, Stockholm Environment Institute\)](#)

[The Prospect of Pumped Storage Hydropower in Asia \(International Hydropower Association\)](#)

[Asia Livecast of New Report from WRI and Ørsted – “Unlocking a Renewable Energy Future: How Government Action Can Drive Private Investment” \(World Resources Institute and Ørsted\)](#)

[Evidence-based Communications to Propel the Energy Transition \(GIZ Clean, Affordable and Secure Energy for Southeast Asia\)](#)

[Electric Cooking – The Way Forward \(India Smart Grid Forum, Global Smart Energy Federation\)](#)

[Decarbonization Pathways in South Asia \(USAID India\)](#)

[Financing CCUS – A Key Clean Technology for Industry \(The Clean Energy Ministerial Carbon Capture, Utilization, and Storage \(CCUS\) Initiative\)](#)

ACEF 2021 KEY MESSAGES AND PARTICIPANTS' ENGAGEMENT



ACEF 2021 IN 4 MINUTES



ORGANIZER



CO-ORGANIZERS:



USAID
FROM THE AMERICAN PEOPLE



**KOREA ENERGY
AGENCY**

DONORS:



Government of Canada
Gouvernement du Canada



**Department for
Business, Energy
& Industrial Strategy**



From
the People of Japan



ADB recognizes "Korea" as the Republic of Korea and "Vietnam" as Viet Nam.



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