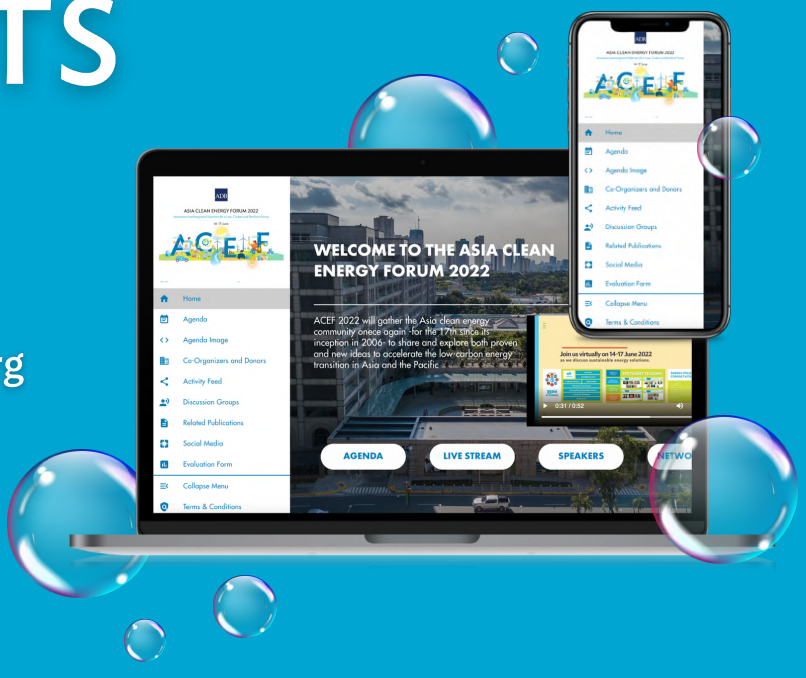
Asia Clean Energy Forum 2022

Innovative and Integrated Solutions for a Low-Carbon and Resilient Future

HIGHLIGHTS



14–17 June 2022

www.asiacleanenergyforum.adb.org

Contents

MESSAGE FROM THE ASIAN DEVELOPMENT BANK

Dear Participants,

Thank you for joining us at the 17th Asia Clean Energy Forum (ACEF). As I mentioned during my remarks in the Opening Plenary, ACEF is incredibly close to my heart because I was part of the team that launched this knowledge forum in 2006. At that first ACEF, we had a modest number of participants—around a hundred people. Over the years, this event has grown and evolved to become the Asian Development Bank's flagship clean energy knowledge event and one of the premier events in the region and indeed globally. I know that ACEF is an event that practitioners and experts in the clean energy sector eagerly look forward to and mark on their calendars. ACEF grew to host around 1,600 participants before the pandemic back in 2019 and attendance more than doubled to approximately 3,400 people during the pandemic via a virtual format. I'm hoping we can revert to the face-to-face format for ACEF in the subsequent editions so we can make the most of this incredible event.

The urgency of bold action on climate change sets ACEF 2022 apart from previous ACEF forums. As clearly pointed out during the opening plenary, we are now on the verge of irreversibly damaging our climate. We face the significant challenge of finding scalable, practical, and innovative solutions to address climate change and build a resilient and sustainable future. Central to these efforts is clean energy transition—the critical response to meeting nationally determined contributions (NDCs) and achieving net-zero emissions by mid-century—which we must undertake within each country's economic development goals.

Transitioning to clean energy is not just about lowering greenhouse gas emissions. It is also about promoting inclusive growth. It provides sufficient and reliable energy access for development and energy resiliency to more communities, even in remote areas. It ensures food supply sufficiency through increased agricultural productivity and food preservation. It is about providing clean heating, cooling, and cooking for the better health of the population. The rising oil prices and the uncertainty of petroleum supplies in recent months further underscore the importance of attaining energy security through clean energy development.

With these considerations in mind, ADB chose the theme of "Innovative and Integrated Solutions for a Low-Carbon and Resilient Future" for ACEF 2022. I hope that you enjoyed participating in the week-long discussions and conversations. I hope you gained further inspiration to be actively involved in local and international initiatives, whether on your own or as part of collaborative efforts to accelerate the transition to clean energy as quickly as possible.

Sincerely,

Woochong Um
Managing Director General and Officer-in-Charge
Vice-President for Knowledge Management and
Sustainable Development, Asian Development Bank

ACEF 2022 OVERVIEW

"ACEF has evolved into ADB's flagship clean energy event. But what really sets ACEF 2022 apart from the 16 ACEFs preceding it is the urgency of bold action on climate change."

Woochong Um,
Managing Director General and Officer-in-Charge
Vice-President for Knowledge Management and Sustainable Development,
Asian Development Bank

The Asia Clean Energy Forum 2022 (ACEF 2022), held on 14–17 June 2022, was the 17th ACEF and the third entirely virtual event. The theme of this year's ACEF was "Innovative and Integrated Solutions for a Low-Carbon and Resilient Future." Spread across the week, the 32 main sessions and 15 side events highlighted the urgent need for concrete action; the need for partnerships, technological innovation, and enabling policies; the importance of community buy-in and participation, and the need to acknowledge and address underrepresentation and gender-related impacts of climate change. ACEF centered around the achievement of climate goals, including nationally determined contributions (NDCs), and the importance of accelerating action toward a just energy transition in Asia and the Pacific.

ACEF 2022 was co-sponsored by ADB partners: the United States Agency for International Development (USAID) and the Korea Energy Agency (KEA).

ACEF 2022 OVERVIEW

Key takeaways from ACEF 2022 include:

- The climate crisis is no longer a distant challenge for future generations, and we can see this in the historic droughts, fires, storms, and flooding affecting every part of the world. We are close to the point of irreversibly damaging our climate.
- To limit global warming to 1.5 degrees Celsius, we need to increase financial flows by 3-to 6-fold. While there is sufficient global capital to close these investment gaps, the gaps are most comprehensive in developing countries.
- Existing policies and regulatory frameworks need to adapt to the dynamic development of clean technologies and new business models. There is a dire need for a multidimensional approach and strategies from governments, investors and financiers, academia, and other stakeholders to support the energy transition.
- To respond to the urgency demanded by climate change, we must do as much in the next 10 years as we have during the past 40 years—in research, innovation, and strategic partnerships—to deliver solutions for a clean energy economy.
- The clean energy transition is fundamental—delivering on countries' nationally determined contributions (NDCs), reaching the net-zero targets by mid-century, and attaining the United Nations' Sustainable Development Goals (SDGs).
- An inclusive transition can unlock the multi-sectoral benefits of clean energy—supporting growing economies and creating high-value jobs, reinforcing climate mitigation and adaptation efforts, and extending access to people without electricity and clean cooking, among others. A clean energy transition empowers people and communities, making a low-carbon and resilient future a reality.
- Community buy-in and participation in energy transition projects are essential to project success and sustainability. This requires early communications, collaboration with local government, and community involvement in decision-making and project development processes.
- Several innovative technologies and best practices successfully contribute to clean energy transition and build a low-carbon and resilient future. These can be replicated and adapted to the relevant country or community context.
- The energy transition is not a linear phenomenon. Instead, it involves multiple, simultaneous changes that are testing not only the energy system but also the economic system, social cohesion, and political resilience.
- The energy sector remains the least gender-diverse sector globally. Seizing the opportunities for energy transformation and creating a gender-responsive clean energy ecosystem with growing opportunities for women to participate at all levels in the energy sector will be pivotal to overcoming the barriers. There is a dire need to create awareness among public and private authorities on the added value of women's leadership and participation in the development of the clean energy sector.
- The Asia and the Pacific region has made excellent strides in electrification and is spearheading the clean energy story for developing countries and economies. Numerous inspiring examples of innovative financing and deployment for clean energy projects exist. However, the region still has a long way to go to realize a just and sustainable energy transition.

ACEF 2022 IN NUMBERS

3,000+ Attendees

200+ Speakers

106 Countries

47 Sessions

- **2** Plenaries
- **12** Thematic Track Sessions
- **5** Regional Sessions
- **4** Spotlight Sessions
- **9** Deep Dive Workshops
- **15** Side Events

Top 10 Countries in Terms of Participants

Philippines	911
India	271
Indonesia	256
Thailand	149
Singapore	123
United States	118
Viet Nam	111
Japan	94
Bangladesh	78
People's Republic of China	73

Number of Attendees by Organization Type

Other Guests	815
Academics	484
Private Sector Developers	463
Multilateral Development Banks and International Organizations	428
Civil Society Organizations	306
Government Officials from ADB DMCs	230
ADB DMCs	141
Financial Institutions	119
Private Sector Investors	112
Media	87

OPENING PLENARY
Catalyzing Energy Transition

The ACEF 2022 opening plenary discussed the current status of the energy sector in terms of nationally determined contributions (NDCs) and net-zero commitments. It called attention to the seriousness of climate change and the importance of clean energy transition in meeting this global crisis. It also explored the challenges and barriers that hamper clean energy transition, and the potential issues that could emerge. The opening plenary kicked off the discussions on the importance of integrated solutions to address these concerns.

Masatsugu Asakawa, ADB President, stressed the need to work together to "transition to clean, secure, and resilient energy that can also support just and inclusive growth for the region." He noted that, "The uncomfortable truth is that energy is essential for the economic growth that has lifted millions out of poverty in Asia and the Pacific; but the hard reality is that the region now accounts for over 50% of global greenhouse gas emissions." His call for tangible results is underscored in this year's ACEF theme, "Innovative and Integrated Solutions for a Low-Carbon and Resilient Future."

Woochong Um, ADB Managing Director General and Officer-in-Charge, Vice-President for Knowledge Management and Sustainable Development, noted that ACEF has evolved into ADB's flagship clean energy event, with more than 3,000 participants during the pandemic in the virtual format. He explained that what sets ACEF 2022 apart from the 16 ACEFs preceding it is urgency—the mounting exigency of laying pathways for a resilient and sustainable energy future. Woochong noted that there are three underlying imperatives for shifting to clean energy: (i) we must make a decisive switch now from fossil fuels to renewable energy and energy-efficient technologies, (ii) we must create the policy and market environment needed to execute this transition at a reasonable cost, and (iii) we must mobilize finance and develop effective investment channels.

Gillian Caldwell, United States Agency for International Development (USAID) chief climate officer and deputy assistant administrator, reminded ACEF participants that the climate crisis is no longer a distant challenge for future generations. It has already begun, as seen in the historic droughts, fires, storms, and flooding affecting every part of Asia and worldwide. She stressed the urgency to push for the systems interventions needed to create an enabling environment for the renewable energy revolution. In response to this urgency, USAID aims to mobilize $150 billion in new public and private finance and partner with indigenous and local communities, women, and youth in locally-led efforts.

Sang-Hoon Lee, Korea Energy Agency (KEA) president, urged all ACEF attendees to participate in the movement to change toward carbon neutrality for the present and future generations. He stressed that the transition to carbon-neutral civilization, even during the coronavirus disease (COVID-19) pandemic, is not a choice. It is the road we must travel to have a planet worth living on. He committed that KEA will respond to climate change not only in the Republic of Korea, but also around the world through cooperation between institutions, countries, and international organizations.

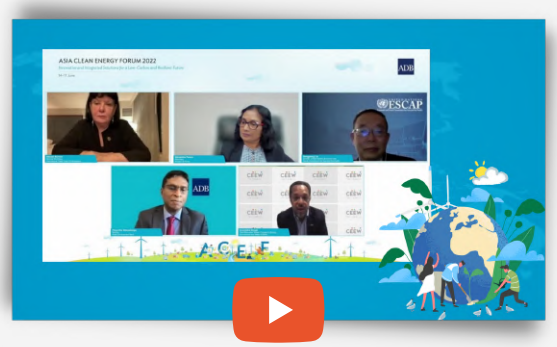
Hoesung Lee, Intergovernmental Panel on Climate Change (IPCC) chair, highlighted the critical message in a trilogy of recently released IPCC reports—we are close to the point of irreversibly damaging our climate. He explained that unless there are immediate and deep emissions reductions across all sectors, the ability to limit global warming to 1.5 degrees Celsius will be beyond our reach.

Martin Keller, National Renewable Energy Laboratory (NREL) director and Alliance for Sustainable Energy president, pointed out that to respond to the urgency demanded by climate change, we must do as much in the next 10 years as we did during the past 40. The needed actions include research, innovation, and strategic partnerships to deliver solutions for a clean energy economy. Relative to this response, NREL executes its mission through a portfolio of research in renewable power technologies, energy efficiency, sustainable transportation, and integrating and optimizing energy systems.

Andrea Watson, laboratory program manager for strategy, NREL, said that the laboratory is expanding its research and capabilities to address three megatrends: (i) modernization of the grid to support a high level of renewable energy integration; (ii) deep decarbonization across multiple sectors; and (iii) circularity—namely, ensuring the sustainability of energy materials from source to end of life.

Panel Discussion: Accelerating Action Towards Energy Transition

A panel discussion during the opening plenary focused on the key challenges that countries in Asia and the Pacific need to overcome to accelerate their energy transition. Panelists said that the energy transition is not a linear phenomenon but rather involves multiple, simultaneous changes. These include the shift from traditional fuels to increasing levels of access to modern energy; the shift in demand for urban centers; and the integration into global energy markets, with the need to increase energy supply while at the same time reducing the carbon intensity of the energy sources.



Panelists also discussed energy as the lifeblood of civilization. They noted that the energy transition is not just a matter of adapting or evolving from one resource to another—it is a complete transformation of society and civilization, requiring the construction of a new social order, new politics, a new jurisprudence, and a new reality. They called on the Asian Development Bank and other multilateral development banks to provide their members with an improved understanding and support for the different types of financial de-risking that each country needs.

"The transition to a net-zero future will not be stress-free: it calls for an overhaul of the energy sector—its policies, structure, governance, financing, and technologies."

Masatsugu Asakawa
President, Asian Development Bank

"Today, we are faced with the growing urgency of laying the pathways for a sustainable and resilient future. In this task, clean energy is at center stage." – Woochong Um, Managing Director General and Officer-in-Charge, Vice-President for Knowledge Management and Sustainable Development, ADB

"Prosperity means a more secure society for all — which requires investments to encourage innovation, strengthen economic competitiveness, produce good-paying jobs, rebuild supply chains, and expand economic opportunities." – Gillian Caldwell, Chief Climate Officer and Deputy Assistant Administrator, USAID

"Transitioning to an industrial society based on fossil fuels has led to economic growth and climate crisis. Humanity is now preparing for another shift to a carbon-neutral civilization." – Sang-Hoon Lee, President, KEA

"What is lacking now is the link connecting the global net benefit of action to the individual net benefits of activity at the local level. This link does not yet exist. A task for all of us is to find and activate this link." – Hoesung Lee, Chair, IPCC

"A fundamental shift away from fossil fuels to power our homes, move about in our cities, and generate prosperity is possible with an open imagination, boldness in action, and a commitment to ambition." Martin Keller, Director, National Renewable Energy Laboratory (NREL), and President, Alliance for Sustainable Energy

"Science, engineering, and technology are fundamental to transforming the energy sector, but these tools cannot be deployed without accounting for society. As clean energy jobs come online, there is an opportunity to address social inequities as part of the transformation. Increasing women's participation in these well-paying industries can buoy multiple sustainable development goals."

Andrea Watson
Laboratory Program Manager for Strategy, NREL

"We now have excessive heat stress in many parts of the world. We are not geared up for that in our working lives. We also have the displacement of people. And we all know the risks of being unable to manage displaced people. When we can't manage 25 million refugees globally, the thought of managing tens of millions of climate refugees is daunting."

Sharan Burrow
General Secretary, International Trade Union Confederation

"Energy is the lifeblood of civilization. The energy transition is a complete transformation of society and civilization, and it will require a new social order, new politics, a new jurisprudence, and a new reality."

Wasantha Perera
Secretary, Ministry of Justice and Constitutional Reforms, and former Secretary, Ministry of Power, Sri Lanka

"The task ahead is massive. A country like India has to install 10.5 MW of renewable power every hour for the next 9 years to meet its national climate goals."

Arunabha Ghosh
Chief Executive Officer, Council on Energy, Environment, and Water

"One of the key challenges is that if we look at the current energy system, it has been expanding in the second half of the 20th century, using fuels such as coal, oil, and gas to meet rising demand. And the recently released IPCC reports make it clear that we are close to the point of irreversibly damaging our climate."

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

HIGHLIGHTS OF THE THEMATIC TRACK SESSIONS

Thematic Track 1: Policy Reforms for the Energy Transition

The sessions in this thematic track highlighted the region's heavy reliance on fossil fuels, how government policies have a pivotal role in supporting the energy transition, and the need to change the current energy systems and regulatory frameworks to move forward. Managing the energy transition in small island developing states (SIDS) and fragile and conflict-affected states (FCAS) will require different approaches and multidimensional support.

Speakers described how investments in the energy transition could more than recoup the high capital costs associated with it and how the energy transition is primarily about trying out new things and changing the systems, which can involve administrative, regulatory, and technical aspects; and what are the specific energy transition needs for SIDS and FCAS.

Takeaways

1. **The region still relies heavily on fossil fuels, and government policies have a pivotal role in supporting the energy transition.**

   - The world is moving forward to act on climate change and energy transition. However, energy security and affordability remain a significant challenge in the region. Despite the commitments made at the 2021 United Nations Climate Change Conference (COP26) and in the Paris Agreement, many countries are still heavily reliant on fossil-based fuels for power generation and consider fossil fuels as reliable and affordable sources in the short to medium term.
   - Experience from the People's Republic of China and India demonstrates that while countries may have different priorities and be at various stages of development, government policies and regulations have a pivotal role in shifting public and private investments into clean energy. However, the call for a rapid transition is causing concern about equity and the need to ensure a just transition that manages the social and economic dislocations.
   - Each country will have its challenges in its efforts to reach net-zero emissions. On the other hand, the rapid development of renewable energy in some countries is giving rise to new issues, such as in relation to grid reliability, financing, supply chains, and skills shortages. Governments must develop strategies to address the multidimensional challenges within their country's economic development context.

Takeaways

2. As we move forward, we need to recalibrate the current energy systems, policy, and regulatory frameworks.

- New technologies and business models are needed to accelerate the achievement of NDCs. There are many ways to achieve NDCs and SDGs. For example, developing offshore renewable energy resources (e.g., wind and wave energy) can pay for themselves, and scaling up existing "bridge" technologies can help achieve significant GHG reductions more effectively. It can be beneficial and cost-effective to proactively explore and adopt these new technologies and business models locally.
- Existing energy systems and regulatory frameworks can be barriers to adopting new technologies and business models. Policy, regulation, and market structures need to be recalibrated and adjusted to allow for the entry of new technologies and for these to thrive. Governments must be more flexible, and getting early commitments from all sectors will be critical to support these changes.

3. It will require a different approach and multi-dimensional support to address the energy transition in small island developing states and fragile and conflict-affected situations.

- Clean energy technologies are available, but it is often challenging to implement the energy transition to achieve SDGs in SIDS due to the complexity of conditions in these countries. The practical issues faced include the challenges of remote locations, dispersed populations, low demand and low income, lack of financing, maximizing investors' profitability, institutional capacity, and local skills. The situation is worse in remote outer islands with lower economic activity levels.
- The future of SIDS relies on the world's most advanced societies implementing their COP26 commitments thoroughly with increased urgency. It is challenging for communities in SIDS to afford infrastructure costs. Projects need to be tailored to local needs and conditions. Hybrid systems, off-grid micro-grids, and solar home systems are among the options. After service, ongoing operations, and maintenance, carefully consider skill requirements. It is also essential to include succession planning and training to ensure that systems will work properly over their lifetime. Moreover, policies and regulations are needed to attract private sector funding and international contractors.
- SIDS needs multidimensional support to address energy projects' affordability, reliability, and sustainability. Technical assistance is required to support regulatory reforms, technology transfer, and capacity building. In addition to energy, it is also necessary to consider the productive use of energy to help local communities develop their livelihoods, improve energy affordability, and achieve their SDGs.

"Viet Nam does not have a policy for the retirement of coal-fired power plants, but it needs such a policy. The government has been working hard to identify possible solutions, and ADB is actively supporting the government to develop this kind of mechanism."

Nhien Ngo, Executive Director, Viet Nam Initiative for Energy Transition

"If we're going to save the planet, there has to be a war on climate change. And that war on climate change is going to be won and lost on the oceans. It's only going to be won if we monetize offshore renewable energy and regenerate ecosystems."

Dan Millison, Manager, Transcendergy LLC

"The future of small island developing states depends on the world's most advanced societies implementing their COP26 commitments fully with increased urgency."

Bruce Robins, Energy Sector Advisor, Department of Resources and Development, Federated States of Micronesia

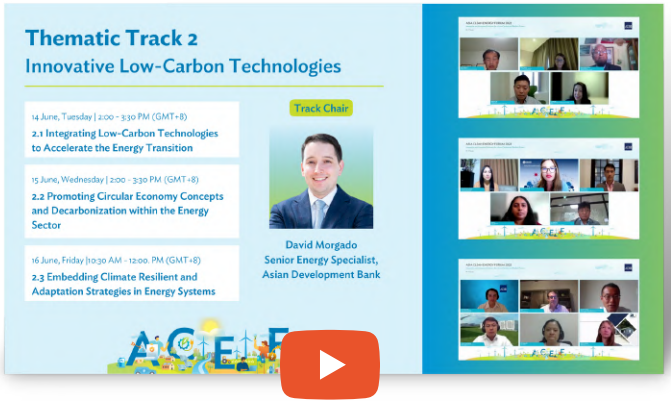
"In our experience in the Cook Islands making the transition from conventional to hybrid systems, we learned to provide information to decision-makers in a clear and simple format. Ultimately, decisions are driven by the increased resilience, affordability, and sustainability of the hybrid systems."

Chris Blanksby, Specialist Renewable Energy Engineer, Entura

HIGHLIGHTS OF THE THEMATIC TRACK SESSIONS

Thematic Track 2: Innovative Low-Carbon Technologies

The sessions in this thematic track focused on low-carbon technologies that are shaping the energy transition, including new, emerging technologies, how these technologies are forcing energy systems to evolve, and how they can work efficiently and optimally within existing structures.



Takeaways

1. **Scaling up energy efficiency projects and the widespread use of carbon capture and storage technologies will be essential in decarbonizing the region and permanently storing carbon dioxide by 2030.**

- Energy efficiency initiatives can bring many benefits, as demonstrated by the example of Bangladesh's national energy efficiency and conservation targets and initiatives, which include an energy management program, an energy efficiency building program, an energy efficiency labeling program, and an energy finance program. Some of the benefits include the decreased cost of production for industries, more competitive industries, the overall reduction in electricity demand, competitive export prices, emission reductions, and new green jobs.
- Energy efficiency initiatives could also benefit the Association of Southeast Asian Nations (ASEAN) region; however, there are several challenges, including the lack of experience and capacity among local banks in assessing and financing energy efficiency projects.
- Carbon capture and storage (CCS) technologies play a critical role in the acceleration of clean energy solutions because they help with the complex dual challenge the world faces today: combining economic progress and access to energy while at the same time achieving net-zero emissions.
- Some of the barriers identified in implementing CCS are the absence of long-term policy frameworks and favorable regulations, financial incentives, and carbon tax, along with high installation and operation costs and reduced profits. With growing interest in CCS in Asia, there is a need for a more aggressive policy framework beyond mere demonstrations. Governments can support pricing mechanisms, grants, direct procurement schemes, and financing that can provide choices to energy consumers and drive the development of new clean technologies.

Takeaways

2. A circular economy approach can fast-track decarbonization. It should be incorporated as part of a clean energy transition strategy, with deployment across sectors, such as in manufacturing renewable energy equipment, energy storage, electric vehicle, and textiles.

- The term "circular economy" refers to efforts to maintain the value of products, materials, and resources in an economy for as long as possible and to minimize waste. The circular economy has been a well-known concept for many years. Still, its large-scale deployment across sectors has not taken off, especially in support of the energy transition.
- Through its $29.7 million, 5-year program, Scaling Up Renewable Energy (SURE), USAID aims to help countries meet their climate goals by spurring the adoption of renewable energy. In its work on the circular economy, SURE helps partner countries to develop innovations, sustainable energy practices, and business models. SURE is also engaged in secondary markets for parts and materials for renewable energy equipment, meets climate commitments, empowers private sector action, activates local partners, ensures equality and inclusion, and promotes innovation.
- Industries account for about 40% of the total final global energy consumption. The industrial sector, especially in the Asia and Pacific region, also has a high demand for materials and goods. As a result, there is a critical need for actions to carry out deep decarbonization and employ circular economy approaches, particularly in the heavy or hard-to-abate industries. To help decarbonize industries, supporting technologies not quite at the market-readiness stage is essential. The Government of the United Kingdom is looking into innovative technologies, sector approaches, deep energy efficiency solutions, fuel switching, and new ways of providing energy.
- There are several decarbonization efforts in the textile and electric vehicle industries, including the circular economy approach. However, they face many challenges. These challenges include the lack of fees or the meager fees for landfill disposal; the result is that circular economy activities such as sorting, recovery, and recycling are uncompetitive. Another barrier is the lack of transparency in using funds collected from extended producer responsibility fees that large multinational companies are willing to pay. This scheme has not become attractive in developing Asia.

3. Energy systems require climate-resilient and adaptation strategies that include policies and innovative technologies.

- Some new energy technologies have demonstrated their adaptability and resilience in challenging scenarios. Examples include the Helios PowerWheel, Fluence's battery-based energy storage system (BESS), and the specialized heat exchangers for industrial wastewater of the Asano Taiseikiso Engineering Co. Technologies such as these can be adapted and scaled up into clean energy systems and platforms.
- Adaptation measures in energy systems should not be limited to physical, tangible aspects like technology and infrastructure but should also include institutional and policy frameworks. Paramount considerations for adaption approaches should consist of social elements such as the community, gender, and inclusion. This is the crucial learning from initiatives like GIZ's Climate Resilient Economic Development (CRED) initiative in Viet Nam and Reiner Lemoine Institute's study on energy access for islands in Southeast Asia.

"Rich countries need to take action to transition to low-carbon energy sources. At the same time, millions of people are gaining access to electricity, and those countries need support to transition to clean energy as well."

Garrick Lee, USAID Papua New Guinea

"Including adaptation measures in infrastructure projects can increase capital costs, but over the long run, resilient energy planning and energy systems are more cost-effective than those that have not incorporated climate-resilience measures."

Katrin Lammers, Reiner Lemoine Institute

"Right now, terawatts of power are flowing down rivers and streams and are not being utilized. And more importantly, there are hundreds of gigawatts of power flowing through manufactured structures that are not being utilized. We can take advantage of available technologies to capture these energy sources."

Michael Carroll, HeliosAltas Corp

"When it comes to carbon capture and storage (CCS), I believe we have all the elements to make it a success, and I see them all represented today, here in Asia. I therefore ask that we move together to seize the technological and commercial opportunities that CCS offers in helping to make the energy transition a reality."

Li Ping Yu, Shell PLC - Asia

HIGHLIGHTS OF THE THEMATIC TRACK SESSIONS

Thematic Track 3: Cross-sectoral Applications for an Inclusive Energy Transition

The sessions in this thematic track covered various business models and innovative technologies implemented to advance the adoption of renewable energy technologies for energy access. Speakers in this track provided concrete examples of how clean energy can create green jobs and enhance the role of women in the energy sector toward a just, inclusive energy transition. The track also discussed renewable energy applications in different end-use industries, citing examples from other countries and the benefits they generate.

Takeaways

1. **Innovative technologies and business models for electricity access are critical in mitigating the impacts of climate change and the energy transition and uplifting people's livelihoods and quality of life.**
   - A solar-diesel hybrid system in an off-grid island in the Philippines has proven to be the catalyst for improved livelihoods, with better storage for fish catch and enhanced potential for growth in local tourism. Electricity from the hybrid system also improved educational facilities and created local employment for installers and operators. It enabled experience-based teaching on renewable energy and climate change in the community.
   - Deploying solar home systems for isolated and marginal communities involves community engagement, mapping capacity building, and training. The introduction of solar-power lighting in homes has helped families cope with the pandemic, enabled distance learning, and allowed households to enjoy the benefits of having access to energy.
   - For off-grid solutions to work, there is a need to establish a new, integrated regulatory and legal framework for off-grid power. A novel off-grid business model in Indonesia, called the MENTARI Programme of the Indonesian Government, focuses on supporting the uptake of low-carbon energy for disadvantaged communities. Panelists called for a collaborative effort by central governments, relevant ministries, local financiers, local beneficiaries, and financial services authorities to develop strategies for enabling these new off-grid business models.

Takeaways

2. Gender and sustainable and inclusive development should be key considerations in designing innovative technologies, energy transition programs, and green jobs strategies.

- The development of fully sustainable cities is possible, as presented in the example of the Orchid City framework for sustainable city development. Depending on the location, existing communities can use a transition model and an adaptive regeneration method. For example, in Viet Nam, strategies that build on the people's cultural heritage—e.g., making bags out of indigenous materials—can be very effective. One approach can be a hybrid one that combines reconstruction and reorientation—for example, 70% of a system can be old or traditional, and 30% can be newer high-tech technologies.
- Gender disparity is a persistent issue in the clean energy sector. In many countries, women are less educated than men, and women's unemployment is high. There is a dire need to create awareness among public and private authorities on the added value of women's leadership and participation in the development of the clean energy sector. Companies should be encouraged to implement policies that support women and gender-sensitive approaches. Companies should also address gender stereotyping by undertaking skilling and upskilling training and setting a target for a balanced employment ratio of 50:50 for men to women.
- When developing projects in rural communities, it is crucial to engage the community and ask them what they need and how they can get involved. It is essential to establish a form of collective leadership from the start. There should be some easily replicable policy solutions. Communities must know how to deal with financing issues, such as the risk involved in getting funding from informal lenders to ensure they do not get into unsustainable debt.

3. Mini-grids need to consider reliable sources of energy to support productive use applications, attract people to be part of the mini-grid system, and support the mini-grid's sustainability.

- Variable renewable energy sources (VRE), even with BESS, will not be enough to power cold storage devices for food applications. However, diesel generators can also be carbon-neutral if crop wastes and lignocellulosic biomass are converted into diesel and can deliver a fast start and a balanced supply that provides reliable and continuous electricity, even in off-grid settings. Rural applications of mini-grids should consider baseload availability, which diesel generators are known to deliver.
- Mini-grids require leaders with strong stakeholder engagement and grassroots development organizations. Mini-grids need productive use applications integrated with food and water services to show how renewable energy can contribute directly to the livelihoods of communities and support the local economy. This will bring inclusivity and also improve the sustainability of micro-grid systems.
- In Nepal, the Multi-Actor Partnership (MAP) conducts cutting-edge policy research on full decarbonization in target countries through inclusive policy dialogues. MAP comprises 46 organizations and individual experts that aim to develop country pathways for a just transition to 100% renewable energy. It is funded by the Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by the World Wildlife Fund Nepal and the Prakriti Resource Center. The partnership will support developing policy road maps that enable policy makers to improve and prepare robust renewable energy policies backed by science and to revise existing renewable energy strategies to be more ambitious, with longer-term commitments.

"In developing off-grid power systems, collaboration between the local government and the village level authority is very beneficial. It can establish incentives for private cooperation in development and operation of the systems and provides clear and specific motivation for the local government."

Bagus Mudiantoro, Policy Co-Director, Castlerock Consulting

"I've been working in the energy sector for over 20 years and have seen the sector tranition, from the traditional grids to gradually embrace smart grids, but frankly, the energy sector still remains the least gender-diverse sector worldwide."

Reena Suri, Executive Director, India Smart Grid Forum

"Potential solutions that involve changes in market structures will need to consider alteration of political power and empowerment."

Angela Minas, Research Associate, Tyndall Centre for Climate Change Research, The University of Manchester

"We used to think that renewable energy was only important because we care for the environment. This is no longer the case, and we think differently. We want to distribute renewable energy, especially solar and wind because they provide energy security."

Charlie Ayco, President, WeGen Laudato Si', Inc.

HIGHLIGHTS OF THE THEMATIC TRACK SESSIONS

Thematic Track 4: Financing NDC Actions

The sessions on financing NDC action showed that with proper dialogue and expectation-setting between government and the private sector, it is possible to mobilize significant amounts of private sector financing for renewable energy infrastructure to achieve NDCs. Nevertheless, the challenges show there is still a lot of work to be done to bridge the financing gap through Paris-aligned, climate-resilient financing solutions.

It may take time to see an acceleration in uptake by private sector investors, in climate finance generally, and more specifically in renewable energy investments. However, experiences and successful pilot programs shared during the sessions showed significant promise.

Takeaways

1. **Environmental, social, and governance metrics in private investments have the potential to catalyze public–private partnerships and will eventually overcome the current low levels of financing for cross-border innovations in low-carbon technologies and businesses.**

   - Speakers presented Paris-aligned public finance schemes, providing a range of perspectives on reducing and eventually eliminating the financing gap. If national climate finance funds utilize environmental, social, and governance (ESG) metrics in delivering projects for private investments, the potential to accelerate the development of public–private partnerships (PPP) may be enhanced if national climate finance funds utilize ESG metrics in delivering projects for private investments.
   - A blended finance system is also a viable solution, especially for small-scale renewable energy, which can target population segments without access to the grid and implement solutions for cleaner cooking, heating, and cooling.
   - One speaker presented how PPP financing can leverage investment into the cross-border application of intellectual property. This approach can increase portability across Asia and the Pacific borders and overcome the obstacles posed by low levels of cross-border investment in low-carbon innovation.

Takeaways

2. Private sector investments will bridge the gap in financing for clean energy.

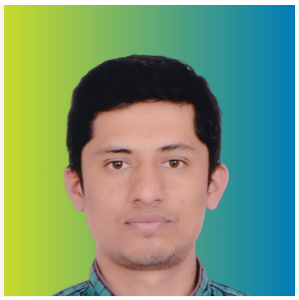
- Given the time frame to achieve net-zero targets by mid-century, there must be a significant increase in project development and related investments into renewable energy generation and supporting electricity networks. Investments from the public sector in Asia and the Pacific are not enough to cover the financing needed to fund projects that will enable countries to fulfill their NDCs. This is a gap that private sector investments can fill, thus the urgent need to accelerate the uptake of clean energy financing from the private sector.
- Asset financing, corporate research and development, public markets, venture capital, and private equity are various financing modalities that can be accessible. However, the success of this endeavor depends on addressing various barriers through (i) ensuring government transparency and precise and reliable power sector legislation; (ii) providing government finance that can act as a bridge between the construction and the operational phases of renewable energy infrastructure, and government securities that will minimize the risks perceived by the private sector; (iii) increasing capacity-building from the government side; (iv) establishment of organizations or platforms that can bridge the gap between projects and investors; and (v) coordinating with the private sector to explore financial structures that have been pilot-tested and are viable and replicable in the Asia and the Pacific region.

3. Three elements needed to green the corporate supply chain include responsive government policies and regulations, utility capacity-building, and deployment of finance structures that integrate public and private climate funds.

- With the growing need for and the increasing uptake of financing of renewable energy infrastructure, there is also an underlying but equally vital need to harmonize these development initiatives with green considerations: that is, to ensure that the supply chain is resilient and can support, rather than disrupt, sustainability goals.
- Drivers for success include responsive government policies and regulations, utility capacity-building, and employment of finance structures that integrate public and private climate funds and that have been proven effective in Asia and the Pacific settings. A financial design that includes corporate power purchase agreements, blended finance structures, or innovative financing structures such as digital lending will provide investors with better information on risk factors.

"The Nepal government has started allocating budget to achieve its Paris-aligned targets, and it has also secured international funds from sources such as the Green Climate Fund. It is estimated that to achieve its NDC targets, Nepal will need to spend an amount that is around 90% of its GDP."

Pradeep Bhattarai, Program Officer, Prakriti Resource Centre



"Traditional asset owners of fossil-fuel energy are still important, and we need to have a very long-term plan until everything can be operated in a renewable fashion. There is a bridge, and we can find a way to make the owners of traditional sources of energy understand they are important to energy security."

Randi Kristiansen, Economic Affairs Officer, UNESCAP

"Annual clean energy investment in emerging and developing economies needs to increase by more than seven times—from less than $150 billion last year to over $1 trillion by 2030—to put the world on track to reach net-zero emissions by 2050."

Marga Manzo, Investment Director, SunFunder

"Increasing resiliency often means adding costs for design as well as equipment. This leads to higher costs and a longer payback period. It is tough to monetize resiliency as a direct benefit, which often makes it hard for public financing of more resilient energy infrastructure projects."

My Ton, Technical Advisor, P&R Energy

REGIONAL SESSIONS

ADB is committed to helping its developing member countries achieve their NDCs, climate, and development targets. The bank is involved in regional and country-level projects, programs, initiatives, and facilities for clean development and sustainable economic growth. During the regional sessions, ADB's regional operations departments showcased these efforts through discussions and the sharing of experiences and lessons learned with developing member countries and the broader Asian clean energy community.

1. South Asia Department: Renewable Energy Integration in South Asia

Organized by ADB's South Asia Regional Department (SARD), speakers and panelists in this session shared their experience and knowledge gained in developing more flexible and resilient energy systems in South Asian countries. These solutions can accelerate the uptake of the best combinations of technologies and concessional financing to help manage the grids, balance different infrastructure requirements, and improve overall energy system operation.

Takeaways

- Blended finance solutions for renewable energy projects and risk mitigation mechanisms are generally country-specific. The menu for these options should be developed and shared so that countries can choose the most suitable options for their energy needs.
- Capacity building is essential for policy makers, bankers who evaluate renewable energy proposals, and people who design renewable energy systems.
- Integration of variable renewable energy (VRE) into the grid is an important issue, and battery storage is emerging as a near-term solution in countries across the region.

"The greatest challenge we have with variable renewable energy is prioritizing the merit order for dispatch of these systems. And given the way that contracts are written, the effective prices we pay are often different from the real prices reflected in the system."

Ajay Mathur
Director General, International Solar Alliance

2. Pacific Department: Can the Pacific Save the World?

Discussions in this session covered opportunities, resources, and technologies that the Pacific countries can tap to become a platform for change in the world. Speakers in the session highlighted that the Pacific has a wealth of marine resources waiting to be tapped. Discussions centered around ways to monetize offshore regenerative systems, and one speaker provided an example of carbon sequestration through sea plant farming. A panel discussion covered the need for new ideas to deliver innovation and the requisite enabling environment and frameworks for ease of doing business to overcome persistent barriers faced by small island developing states.

Takeaways

- The Pacific should no longer be viewed as a vulnerable victim but as a source of transformational and existential solutions. With the support of like-minded partners and financiers, Pacific island nations could adopt innovative technologies and solutions and turn this potential into reality.
- The Pacific has a wealth of marine resources ready to be tapped. One country can access numerous global examples of innovative technologies and financing through partnerships.

"Our friends in the Pacific islands have the largest exclusive economic zone in the world. Collectively, the SIDS, or small island developing states, are stewards of 28% of the ocean, and they have an abundance of clean marine energy resources."

Ronald Jumeau
Roving Ambassador for the Ocean and
Former Chair, SIDS DOCK

3. Central and West Asia Department: Decarbonizing Central Asia: Pioneering Innovative Green Technologies and Financing to Enable a Clean Energy Future

Speakers from the Energy Division of ADB's Central and West Asia Department presented three unique pioneering solutions to decarbonize Central Asia. ADB has recently implemented these solutions in cooperation with its DMCs. The projects involved (i) a utility-scale solar photovoltaic project in Uzbekistan, showcasing ADB's "One ADB" approach, which provides a one-stop-shop solution for the government to enable private-funded projects; (ii) a first-of-its-kind urban transport electrification project in the Kyrgyz Republic; and (iii) a floating solar project in Azerbaijan. All three projects align with ADB's Strategy 2030 and Energy Policy 2021 and will help meet SDGs 7 and 13. ADB's Central and West Asia Department hopes to replicate these projects in other parts of the region.

Takeaways

- Well-structured tenders with bankable Power Purchase Agreements (PPAs) can deliver real price discovery and better terms for the off-takers. However, this also depends on the PPA's bankability, resource abundance, land availability, regulatory certainty, and off-taker credit rating.
- Additional optimizations such as the inclusion of a credit enhancement mechanism and public support for public infrastructure can significantly improve the attractiveness of projects for the private sector and, hence, deliver better results for the buyer of power.
- Many solar farm developers face the issue of displacing alternative land uses when installing floating solar PVs. However, the benefits of floating solar PVs include (i) avoided cost of not having to buy land, (ii) reduced evaporation rates and water maintenance, (iii) lower visual impact but higher energy yield (site specific), and (iv) suitable in continental waters with less wave and less water level. Ultimately, floating solar PV technology has the advantage of an inexhaustible supply of solar energy and is already a mature technology.

"In our Solar Public–Private Partnership Investment Program in Uzbekistan, we found that well-structured tenders with bankable power purchase agreements generally resulted in true price discovery and better terms for the off-taker."

Seung Duck Kim
Senior Energy Specialist,
ADB Central and West Asia Department,
Energy Division

4. East Asia Department: Promoting Decarbonization Through Efficient District Heating and Cooling Solutions in East Asia Region

This regional session showcased many innovative and transformative examples from the People's Republic of China (PRC) and other developing countries in Asia. Adaptation of district heating and cooling achieves various benefits, including reduced greenhouse gas emissions, grid benefits, reduced noise and air pollution, and improved cost and quality.

Takeaways

- Global uptake of district energy is only around 7% due to long-standing barriers, including lack of awareness, lack of capacity among stakeholders in new business models, lack of data and integrated planning, and absence of incentives and accounting methods. The commercial viability of district energy still needs to be proven in additional markets.
- Green buildings can bring significant economic benefits through improved energy efficiency. Private investors in Singapore adapted more sustainable building materials to demonstrate sustainability to their customers. Green building credits do not always include district heating and cooling. Respective policymakers should create more substantial incentives to address commercial viability issues for energy efficiency projects.
- There are various opportunities and flexible models to channel finance to district heating, such as PPPs. This requires creating a stable investment environment through improved policy and coordination efforts. The return on investment from district heating projects is very high, from 12% to 20%.

"The PRC's Low-Carbon District Heating project in Hohhot is an extremely impressive project. While another project in the PRC is removing carbon emissions to the same extent as the entire emissions of a capital city in Europe. It is quite remarkable."

Mikael Jakobsson
Asia Pacific Urban Energy Association/ NXITY

5. Southeast Asia Department: Innovative Solutions for Southeast Asia Low-Carbon and Sustainable Energy Future

The session showcased ADB's cross-sectoral collaboration and close cooperation with clients in supporting the Climate Change Program in the Philippines, the Energy Transition Sector Development Program in Cambodia and Viet Nam, and the push for energy efficiency in the Mekong subregion.

Takeaways

- The goal of multi-sectoral climate change action programs is to transform critical sectors by implementing the firm commitments already made by governments. Laying the necessary foundations in clean energy, resilient cities, agriculture, natural resources, low-carbon transport, sustainable finance, and climate policy is the ultimate goal of these programs. These programs are made possible due to the robust set of NDC sectors on which ADB and its government partners work.
- Large-scale solutions are needed to rapidly decarbonize and build up clean energy in Asian developing countries. The energy transition mechanism (ETM) initiative aims to speed up the retirement of coal-fired power plants, leading to increased demand for clean energy investment, reduced emissions, and lower generation costs.
- Modalities such as sovereign lending from international financial institutions, energy efficiency revolving funds with concessional loans, financial intermediary loan programs, and private sector participation in the transport sector (electric vehicle chargers and fleet) have been identified. There will be a need to coordinate work on policy, personal participation, and public procurement to accelerate investments into energy efficiency.

"The safeguards and just transition are two very critical parts of the energy transition mechanism work. Strategic environmental and social impact assessments have been started in the region to better analyze the retirement of coal-fired power plants."

Architrandi Priambodo
Senior Energy Specialist,
ADB Southeast Asia Department,
Energy Division

SPOTLIGHT SESSIONS

1. Integrated Energy System Planning (ADB, IAEA)

This session discussed the role of integrated energy system planning in making decisions and guiding policies and strategies of the DMCs toward realizing their SDGs, NDCs, and net-zero targets. ADB and the International Atomic Energy Agency (IAEA) expounded on the capability of integrated energy system planning to analyze the role of different technologies in meeting future energy needs and introduced various analytical tools to participants.

Takeaways

- As countries strive to realize their SDGs, NDCs, and net-zero targets, energy plays a critical role. Energy system analysis and planning must evolve to consider multidimensional factors. IAEA promotes the use of several technology-neutral, integrated modeling tools. These tools help define optimal energy generation profiles, account for environmental and external costs, and calculate the financial viability of energy projects, among others.
- Energy planning is not just about investing in new technologies but also about optimizing the existing access to deploy new technologies, identifying regulatory and financial investment, and minimizing the environmental impacts. Integrated energy planning is necessary for decarbonizing various sectors such as industry, and transport, among others, that are dependent on fossil fuels today.
- Integrated energy system planning is not a one-time exercise. It is a dynamic activity that must be updated as factors affecting the system change. Understanding the problem is a critical first step. The involvement of several actors and partners from policy makers, utilities, the academe, and others is essential. Hence, there is a need for a strong network and pool of external experts. Developing local expertise will help institutionalize the process.

**"Plans are nothing; planning is everything.
Energy planning is not a one-time exercise,
and capacity building is a long-term process."**

Andrii Gritsevskyi
Unit Head, Planning and Capacity Building,
International Atomic Energy Agency

SPOTLIGHT SESSIONS

2. Lessons from the Trenches: How Can We Scale Up Investment into SME Clean Energy Projects? (PFAN)

The Private Financing Advisory Network (PFAN), an international network of climate, energy, and financing experts operated by the United Nations Industrial Development Organization (UNIDO), with support from the Renewable Energy and Energy Efficiency Partnership, organized this spotlight session. This session drew on and highlighted several lessons PFAN and its partners learned based on its 15 years of experience working with developers of small and medium clean energy and climate projects around the world and helping them raise financing.

Takeaways

- PFAN faced many challenges, particularly on how to scale up in terms of the number of projects to support and eventually get into final closure while increasing the impacts of these projects. Investors must have access to information to make sound investment decisions, especially for projects deploying technologies that are not yet commercially proven.
- There are a lot of risks involved: risk of the country, risk of currency, and risk inherent to the project. Corporate guarantees from more prominent institutions can help to enable project investments by securing them and making them more bankable. However, most of these projects are relatively small, and the ticket size many investors are looking for is about $100 million.
- Regulators in several countries have made good progress by enacting regulations so that capital markets are equipped with rules to support issuances of green bonds and ensure that projects are funded with a green label.

"Companies need more than just capital, they need access to networks, technical know-how to expand their market, policy-making bodies, and access to the right talent pool."

Jagnu Pati
Investment Specialist,
ADB Ventures

SPOTLIGHT SESSIONS

3. Sensitivity Mapping – An Essential Tool to Speed Up the Renewable Energy Transition (ADB)

ADB partnered with BirdLife International to organize this spotlight session. Speakers in the session stressed the need to minimize the negative impacts of building renewable energy sources, especially in key biodiversity areas. In response to this need, the Avian Sensitivity Tool for Energy Planning (AviStep) was developed—with support from the e-Asia Knowledge Partnership Fund—considering the impacts on biodiversity in the development of renewable energy projects.

Takeaways

- If renewable energy developments are sited purely to maximize wind and solar resources, this could jeopardize over 11 million hectares of key biodiversity areas and threatened species. This habitat loss could release around 400 million tons of stored carbon, undermining climate change targets.
- One of the advantages of e-sensitivity mapping is it provides biodiversity insight early in the planning cycle and can steer development toward low-risk sites. It also speeds up renewable energy expansion by ensuring that fewer developments become embroiled in controversy or need elaborate mitigation measures to make them viable. Sensitivity mapping also enables action to be planned strategically and efficiently, maximizing available space to achieve rapid scaling up of renewables in a genuinely nature-safe way.

"There are impacts that are not necessary and there is ample scope to avoid sensitive locations. Wind farms and solar facilities are widespread resources that can be readily integrated into landscapes of low ecological value."

Tris Allinson
Senior Conservation Scientist,
BirdLife International

SPOTLIGHT SESSIONS

4. Floatovoltaics: Scaling Up Deployment of Floating Photovoltaics in Southeast Asia (USAID, NREL)

The session explored the drivers and barriers of floating solar PV projects ("floatovoltaics" or FPV) and showcased examples from different countries in Asia. The technology is increasingly competitive but is still nascent. Many potential adopters have questions about the underlying technology, its benefits, potential impacts, and how to analyze it appropriately.

Takeaways

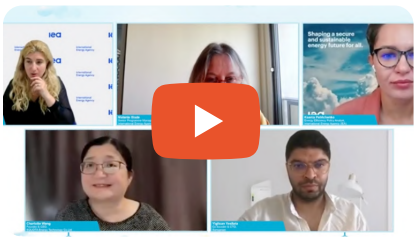
- Countries are considering FPV projects because of their ambitious renewable energy targets, abundant solar and hydropower resources, land-use benefits, option to hybridize with hydropower generation, the ability to diversify the power generation mix, and decrease reliance on imported fossil fuels.
- Developers of FPVs are expected to develop systems in new types of environments. The combination of floating solar and hydro dams is expected to grow, which is a good application of floating solar PVs. FPVs will have additional benefits in the Middle East and drier regions, as this technology reduces water evaporation.
- A challenge for FPVs includes not having a set of universally accepted standards. Although the standards accreditation organizations Det Norske Veritas (DNV) and Technischer Überwachungsverein (TUV) have developed the proprietary standards that the industry follows, there is still a need for international standards i.e., International Electrotechnical Commission (IEC) standards for FPVs. Singapore had already organized a structure of what types of studies to do and steps to follow before developing FPV projects to avoid impacts on drinking water resources.

"Regional collaboration on knowledge-sharing is very important, especially with regards to guidance and standards, because they are evolving. Much wider sharing of information on best practices will help."

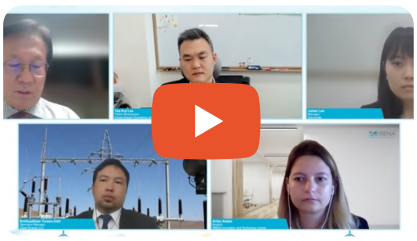
Uma Rajarathnam
Vice President & Global Head of Applied Research and Collaboration at Enzen Global Solutions Pvt Ltd.

DEEP DIVE WORKSHOPS

Future Hydrogen Society in Asia and the Pacific
(ADB, ADB Institute)

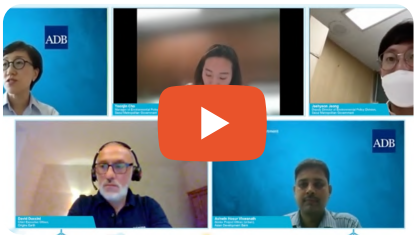


Energy Efficiency for a Secure and Net Zero Emissions Energy System
(International Energy Agency, ADB)

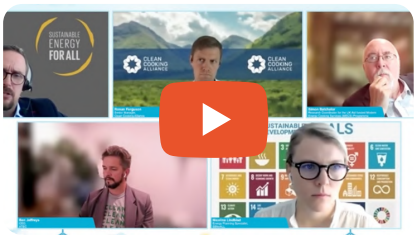


Renewable Energy Based Sector Coupling
(Korea Energy Agency)

The United States and Australian Climate Action and Sustainable Infrastructure in Southeast Asia
(USAID)



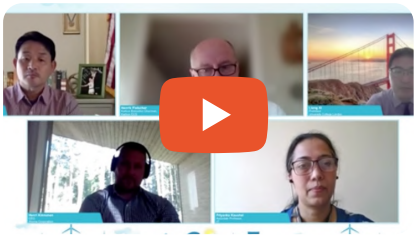
How to Maximize Energy-Urban Nexus for Making Cities More Livable
(ADB)



Opportunity for Action: Clean Solutions for Cooking
(ADB, Sustainable Energy for All)

Cooling Solutions for a More Equitable Future
(ADB)

The Future of Ocean Energy and Hydrogen – Just Transition to a Safer World
(ADB Marine Aquaculture, Renewable Energy, Reefs, and Ecotourism for Ecosystem Services)



CCUS: Meeting the Challenge of Scaling Up in Asia
(ADB, Department for Business, Energy and Industrial Strategy, United Kingdom)

CLOSING PLENARY
Integrated Energy Action Agenda to a Low-Carbon Future

The closing plenary was a call to action, and speakers highlighted the urgency of collaborative and aggressive efforts to accelerate and scale up the energy transition. The plenary began with a five-minute video summary of the previous day's discussions at ACEF.

Keynote messages were delivered by Damilola Ogunbiyi, CEO and special representative of the UN Secretary-General, Sustainable Energy for All and Co-Chair of UN-Energy; and Craig Hart, acting senior deputy assistant administrator, United States Agency for International Development (USAID).

Damilola Ogunbiyi noted that the Asia and Pacific region had made excellent strides in electrification. However, she said that while the region's journey has been impressive, there is still a long way to go. The solutions will vary significantly by country, subregion, technology, and sector. She stressed that last-mile connectivity and reliability of the grid continue to be an issue and that the widespread lack of access to clean cooking is even more worrying. She acknowledged the Asia and Pacific region for spearheading the clean energy story for developing countries and economies with concrete examples of financing for clean energy projects. Indeed, evidence from the field demonstrates how clean energy development led by private investment can drive job creation and growth—addressing energy access challenges while supporting development, addressing the climate emergency, and ensuring a just and equitable clean energy transition.

Craig Hart noted that the vibrant discussions at ACEF stressed the urgent need to adopt low-carbon strategies and scale up the necessary financing to implement these strategies across the region. He said that USAID is committed to working on locally-led efforts to attract private investment and deploy cutting-edge technologies to tackle the climate crisis head-on. He further remarked that USAID is a climate agency because climate change impacts everything in development.

Panel Discussion:
Seizing the Momentum for Action

The conversation during the panel discussion focused on three key questions: How can countries sustain collective action from the public and private sectors on the energy transition and other climate initiatives? What cases can best serve as models? And what steps should nations prioritize in their transition toward achieving climate and development goals?

CLOSING PLENARY
Integrated Energy Action Agenda to a Low-Carbon Future

Rachel Kyte, dean of the Fletcher School at Tufts University, began by observing that the momentum toward the energy transition has been slowing down due to COVID-19, noting that before the Russian invasion of Ukraine, there were already disruptions in the supply chain and dislocations, and fossil fuel prices were increasing. Then the invasion exacerbated everything. She said that, given the significant investment needed, we must draw in private sector funding and pool investments for the energy transition. She issued a call to action, stressing that serious action on aggressive clean energy transition is urgently needed and that we have to speed things up and go further and faster.

Jan Corfee-Morlot, senior advisor, World Resources Institute and New Climate Economy, and editor, Climate Policy Journal, summarized the challenge and opportunity for Asia and the Pacific to transition to clean energy: "It's all about scale and speed, and speed is perhaps a bigger challenge in today's world than scale because renewables have come along in today's world in such a big way. We are seeing huge price declines in this region and worldwide. Asia and the Pacific has the opportunity to lead the energy transition and indeed, some countries, such as India and Viet Nam, have been leading." She noted that Viet Nam is an exciting example of how a country can turn around and stimulate its renewable energy markets. It is an excellent example of the impact of political leadership and stable policy frameworks.

Tim Gould, chief energy economist at the International Energy Agency, warned that meeting the 1.5C ceiling target for global temperature increase is off track, noting a minimal carbon budget. He pointed out that fossil fuel prices are causing all sorts of economic problems but also stressed that we should not address the current crisis, which is marked by high fuel prices, inflation, and food shortages, in ways that make it harder to address climate change.

CLOSING PLENARY
Integrated Energy Action Agenda to a Low-Carbon Future

Yongping Zhai, senior advisor, Tencent, drew on his decades of experience with international development banks to observe that multilateral development banks have three main priorities: economic growth, poverty reduction, and climate action. He said that although multilateral development banks (MDBs) have a small number of resources in the context of the global economy, they play a much more significant role beyond the money they provide. He said that MDBs have "policy power," and big tech companies, such as Google, Facebook, and Tencent, where he now works, and others have "platform power". Using these "powers" will accelerate the clean energy transition.

Bruno Carrasco, director general of ADB's Sustainable Development and Climate Change Department, concluded the 17th ACEF with remarks highlighting the importance of collaboration, innovation, and tangible results. He said ADB had raised its cumulative climate finance ambition from $80 billion to $100 billion for 2019 to 2030. He described the urgency in ADB's efforts to improve information and knowledge sharing. He noted that ADB has been mainstreaming a "One ADB Approach," which brings together knowledge and expertise across the organization to address pressing problems in developing countries. He ended with a call for increased collaboration among clean energy stakeholders and partners in designing, implementing, and monitoring projects emphasizing a just energy transition. He said that ADB is committed to building collaboration communities within and beyond the region.

"We must remember that while energy security is a real and pressing issue, the energy transition is an opportunity to address it."

Damilola Ogunbiyi
CEO and Special Representative of the UN Secretary-General, Sustainable Energy for All, and Co-Chair of UN-Energy

"USAID will help to mobilize $150 billion in public and private financing by 2030 to help mitigate climate change. But we cannot do this alone. We will build on existing local partnerships and develop new ones to drive innovative solutions to realize a low-carbon and resilient clean energy future."

Craig Hart
Acting Senior Deputy Assistant Administrator, USAID

CLOSING PLENARY

Integrated Energy Action Agenda to a Low-Carbon Future

"MDBs have policy power, which they can use to influence people and interact with stakeholders. They should maximize their policy actions and improve the ability of the private sector to come into areas where it can finance clean energy, mitigate greenhouse gas emissions, and stimulate climate adaptation."

Yongping Zhai
Senior Advisor, Tencent

"At the moment, the momentum toward clean energy is hollowing out. We have a quite extreme triple whammy of food price, energy price, and inflation effects around the world, which has had a significant impact on the ability to ramp up quickly on the energy transition."

Rachel Kyte
Dean of the Fletcher School
at Tufts University

"Unless we address the needs of displaced workers of closing coal mines and provide a means towards just transition, it would be hard to push the climate change envelope. Programs need to be designed to ensure that no one is left behind. That energy transition is pursued in a just manner."

Bruno Carrasco
Director General, Sustainable Development
and Climate Change Department, ADB

SIDE EVENTS

ACEF 2022 featured 15 side events, which added to the forum's incredible diversity of topics and depth of discussion. These evening side events were organized and hosted by ADB's partner organizations.

- Southeast Asia's Power Grid: A Conduit for Low Carbon Southeast Asia
  (UNOPS Energy Transition Program)
- Financing Carbon Capture, Utilization, and Storage
  (Clean Energy Ministerial CCUS Initiative)
- US Government Support for Private Sector Clean Energy Champions
  (USAID SE Asia EDGE Hub)
- Diesel Generator Replacement with Lithium-ion Batteries
  (India Smart Grid Forum)
- New Business Models for Rooftop Solar Penetration in SMEs and Residential Sectors
  (The World Bank)
- Regional Energy Integration in Asia: Lessons from the Nordic
  (Innovation Norway)
- Enhancing Women's Participation in Southeast Asia Energy Transition
  (USAID SE Asia EDGE Hub)
- Grid Integrated Vehicles (GIVs)
  (Global Smart Energy Federation)
- Scaling-up Renewables Use in Agriculture in Asia; Towards the 2030 Agenda and Climate Goals
  (International Renewable Energy Agency (IRENA) and the UN Food and Agricultural Organization (FAO)
- Introduction of the Southeast Asia Platform for the Energy Transition (SIPET)
  (GIZ Clean Affordable and Secure Energy programme (CASE))
- Innovative Financing Instruments for Enabling Asia's Clean Energy Transition
  (USAID South Asia Regional Energy Hub)
- Peeling the Onion: Monitoring, Evaluation, and other Acronyms for Assessment and Learning in Clean Energy/Energy Access
  (World Resources Institute - India)
- Green Hydrogen for Net Zero
  (International Solar Alliance/ ADB South Asia Energy Division)
- Tracking the Global Status of Renewables: Understanding the New Drivers and Levers
  (REN21)
- eSensitivity Mapping Tool (AVISTEP) Demonstration Session
  (ADB)

ORGANIZER

ADB

CO-ORGANIZERS

USAID FROM THE AMERICAN PEOPLE

KOREA ENERGY AGENCY

DONORS

Government of Canada / Gouvernement du Canada

Department for Business, Energy & Industrial Strategy

Gobierno de España — Ministerio de Industria, Energía y Turismo

From the People of Japan

EAKPF Republic of Korea

Australian Aid

Sweden Sverige

Norwegian Ministry of Foreign Affairs

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

Publication Stock No. ARM210350-2 pubsmarketing@adb.org