# Table of Contents

01 Overview ........................................................................................................... 01  
  Asia Clean Energy Forum 2019

02 Plenaries ........................................................................................................... 03

03 Thematic Tracks ................................................................................................. 09  
  Energy and Livable Cities  
  Energy and Water Sustainability  
  Energy and Rural Poverty Alleviation  
  Energy and Innovative Finance  
  Clean Energy Trends and Directions

04 Deep Dive Workshops ...................................................................................... 20

05 Special Events ................................................................................................... 22  
  ADB on the Ground  
  Dim Sum with Entrepreneurs

06 Other Events ..................................................................................................... 23  
  ADB Clean Energy Day  
  Women in Energy Lunch  
  Energy Leadership Roundtable

07 ACEF Lunch Talks ............................................................................................. 24

08 Key Announcements ........................................................................................ 25

09 Week at a Glance .............................................................................................. 26
Overview
Asia Clean Energy Forum 2019

Each year, the Asia Clean Energy Forum (ACEF) brings together a diverse community of practitioners and implementers at the headquarters of the Asian Development Bank (ADB) in Manila. The participants are energy and climate professionals who are eager to drive change towards a more sustainable energy future. They convene to identify, discuss and find solutions to the key clean energy challenges we face in the region.

The 14th edition of ACEF was held during 17–21 June 2019. The theme was “Partnering for Impact”. For the first time, ACEF had five cross-sectoral thematic tracks—Energy and Livable Cities, Energy and Water Sustainability, Energy and Rural Poverty Alleviation, Energy and Innovative Finance, and Clean Energy Trends and Directions—based on the cross-cutting approach outlined in ADB’s new Strategy 2030. Each track included four sessions. The cross-sectorial approach sparked a wider and more inclusive discussion on how Asia’s clean energy community can partner and address key issues in parallel to meet our sustainable development goals.

ACEF 2019 also included 22 Deep Dive Workshops (DDWs), co-organized by a total of 29 partners including ADB, covering diverse topics ranging from electric vehicles to carbon capture to hydro mini-grids. There were also several special events on the ACEF 2019 menu: ADB on the Ground and Dim Sum with Entrepreneurs, and ACEF Lunch Talks.
Carbon-neutral and Paper-light

ACEF 2019 was designed to “walk the talk” about being sustainable. All efforts were taken to make the Forum as green as possible. There was no printed agenda; instead people were encouraged to use the Mobile App to access all Forum-related information. The traditional ACEF conference giveaway canvas bags were also missing this year. Instead, ADB purchased offsets for the travel-related carbon emissions of all ACEF participants, to ensure a smaller carbon footprint of the Forum.

No all-male panels (“Manels”) at ACEF 2019

ACEF 2019 had more than 1,600 participants from 78 countries. More than 40% were female.

Youth Engagement

The ADB Youth for Asia team played a key role in the Forum this year. Nearly 30 youth participants, representing 11 ADB member countries such as Vietnam, Thailand, Cambodia, Afghanistan and India, participated in ACEF 2019 in different roles. This included: a “Crash Course” on sustainable energy and entrepreneurship, and the “Voltage Tank” where the youth pitched their clean energy ideas and solutions to experts. Some members of the ADB Youth for Asia team also served as rapporteurs for the Thematic Tracks.
Plenaries

Opening Plenary: Envisioning the Low Carbon Energy Future

The opening plenary addressed the uncertainties of how energy systems will develop in the future, in the context of mitigating and adapting to climate change, rapid technology developments and global pressures to meet sustainability. Bambang Susantono, ADB’s Vice-President of Knowledge Management, provided the welcome remarks which was followed by powerful keynote addresses by Amory Lovins, Co-founder and Chief Scientist, Rocky Mountain Institute and Fiza Farhan, Advisor and Member, UN High Level Panel on Women Economic Empowerment. The plenary also included a thought-provoking panel discussion featuring Amory Lovins, Fiza Farhan and ADB President Takehiko Nakao on pathways for energy sector development and the steps needed to deliver sustainable energy for Asia and the Pacific. Following this, representatives from ACEF’s partner organizations—Gloria D. Steele, Acting Assistant Administrator, US Agency for International Development (USAID); Chang Seob Kim, President, Korea Energy Agency (KEA); and Keisuke Sadamori, Director, Energy Markets and Security, International Energy Agency (IEA)—provided their thoughts on how partnerships are critical to delivering the clean energy future.

In addition, Yongping Zhai, Chief of ADB’s Energy Sector Group, shared a Story of Impact about a solar-based microgrid project in microgrid project in the Philippines, which is helping the local community to thrive, rather than just exist.

Yongping Zhai, ADB’s Chief of Energy Sector, talking to the beneficiaries of the microgrid project supported by ADB.
“A sustainable and secure energy supply is essential for Asia and the Pacific, and is a key part of the fight against climate change.”

Takehiko Nakao
President, ADB

“Youth engagement is a key component of ACEF this year. Innovative solutions for development challenges will be catalyzed by empowering the next generation of energy leaders.”

Bambang Susantono
Vice President, Knowledge Management, ADB

“The amount of energy saved every year globally is avoiding about twice as much carbon as is the growth in renewable energy.”

Amory Lovins
Co-founder and Chief Scientist, Rocky Mountain Institute

“When you are giving access to light, you are giving access to life.”

Fiza Farhan
Advisor and Member, UN High Level Panel on Women Economic Empowerment
Finance Plenary: Financing Paris-aligned Pathways to the Energy Future

This plenary, moderated by Lotte Schou-Zibell, Chief of ADB’s Finance Sector Group, explored strategies for financing the transition from the current centralized, fossil-based energy system to a much more decentralized, low-carbon energy system. ACEF participants heard the visions and perspectives of an impact investor (Vineet Rai, CEO, Aavishkaar); a social and microfinance entrepreneur (Jim Ayala, CEO and Founder, Hybrid Social Solutions); a commercial bank involved in sustainable energy finance (Eunjoo Park-Minc, Chief Advisor and Head of Sustainable Energy Finance, Banco de Oro (BDO), Philippines); and a development financing institution (Michael Barrow, Director-General, Private Sector Operations Department, ADB).

Finally, Woochong Um, Director General, Sustainable Development and Climate Change Department, ADB, shared a Story of Impact about the conference giveaway this year—travel-related carbon emissions offsets for ACEF 2019 participants through the purchase of certified emission reductions from an ADB-supported 126 MW hydro project in Bhutan.
“In a lot of places in the world, renewables are the least expensive source of energy and out produce traditional fossil-based energy sources.”

**Lotte Schou-Zibell**  
Chief, Finance Sector Group, ADB

“We need to reimagine, because we cannot do the same thing and expect to change the world. It is time to look for ideas of change through the prism of new actions.”

**Vineet Rai**  
CEO, Aavishkaar

“There are 40,000 communities in the Philippines still without electricity, but we keep pushing the grid. It’s time to push a grid-less solar network to transform rural villages.”

**Jim Ayala**  
CEO and Founder, Hybrid Social Solutions

“We need three A’s to make financing happen: Action, Action, and Action.”

**Eunjoo Park-Minc**  
Chief Advisor and Head of Sustainable Energy Finance, BDO, Philippines

“Over the last three to four years, we’ve seen a massive expansion of private sector funding for renewables project in Asia.”

**Michael Barrow**  
Director-General, Private Sector Operations Department, ADB
Closing Plenary: Leveraging Disruption for Sustainable Impact

ADB Senior Energy Specialist and ACEF 2019 Co-chair David Elzinga welcomed participants to the final ACEF 2019 plenary which was moderated by Ashok Bhargava, Director, Central and West Asia Energy Division, ADB. This plenary focused on how disruptions in the energy sector can be leveraged to deliver new solutions, with greater impacts. Plenary speakers — Jennifer Holmgren, CEO, LanzaTech; Ruth Yu-Owen, Co-founder, Connected Women and President and CEO, PhilCarbon; Amanullah Ghalib, CEO, Da Afghanistan Breshna Sherkat; and Atsushi Najima, President and Managing Director, Nissan Philippines — discussed how impactful partnerships can help accelerate shifts in how we plan, produce and use energy.
“We are not yet breaking the backbone of the carbon trajectory.”

**Ashok Bhargava**
Director, Central and West Asia Energy Division, ADB

“Winning slowly is the same as losing. We must disrupt the energy system.”

**Jennifer Holmgren**
CEO, LanzaTech

“The fourth industrial revolution is happening now.”

**Ruth Yu-Owen**
Co-founder, Connected Women and President and CEO, PhilCarbon

“Electricity can disrupt the challenges of pollution and urbanization.”

**Atsushi Najima**
President and Managing Director, Nissan Philippines

“We see Afghanistan as a transit hub for energy between Central Asia and South Asia.”

**Amanullah Ghalib**
CEO, Da Afghanistan Breshna Sherkat
Thematic Tracks

This year we changed our approach to innovative discussions, building on ADB’s Strategy 2030, which is focused on integrating operations across different sectors. So, unlike previous years where ACEF thematic tracks were based on streams such as energy efficiency, renewable energy, and energy access, this year ACEF had five cross-sectoral thematic tracks—an integrated approach that can help to more effectively address the energy needs of Asia.

**TRACK 1**
Energy and Livable Cities

- Session 1.1: Urban Energy Planning for Smarter Utilities
- Session 1.2: Scaling Up E-Mobility as a Platform for Sustainable Urban Transportation
- Session 1.3: Heating and Cooling for Buildings in Cities
- Session 1.4: New Energy Solutions: Multi-Benefit Opportunities for Cities

**TRACK 2**
Energy and Water Sustainability

- Session 2.1: Sustainable Energy for Water Supply and Sanitation
- Session 2.2: Sustainable Energy Use for Water: Focus on Irrigation
- Session 2.3: Sustainable Water Use for Energy: Floating Solar Photovoltaics
- Session 2.4: Sustainability Lessons in Hydropower, Offshore Wind, and Pacific Utilities

**TRACK 3**
Energy and Rural Poverty Alleviation

- Session 3.1: Planning and Building for Climate Resilience and Low-Carbon Growth
- Session 3.2: Going Beyond Solar Home Systems: Scaling Up Micro-grids and Mini-grids
- Session 3.3: Innovative and Inclusive Microfinance for Renewable Energy
- Session 3.4: Innovations in End-use Applications

**TRACK 4**
Energy and Innovative Finance

- Session 4.1: Global and Regional Trends in the Financing of Clean Energy
- Session 4.2: The Role of Governments in Enabling Clean Energy Financing
- Session 4.3: Financing of Large-Scale Renewable Energy Projects
- Session 4.4: Crossing the “Valley of Death”: Impact and Venture Capital Investments in Early-stage Clean Energy Firms

**TRACK 5**
Clean Energy Trends and Directions

- Session 5.1: Novel PV Applications and Reaching Grid Parity
- Session 5.2: Ocean Energy in the 21st Century
- Session 5.3: Bioenergy and Waste-to-Energy
- Session 5.4: Renewable Heating, Cooling, and Storage
Track 1: Energy and Livable Cities

Our future is defined by cities.

With continued rapid urbanization, our future is defined by livable and resilient cities that benefit all citizens, especially the poor and vulnerable.

Track 1 sought cross-sectoral collaboration between the energy, transport, urban and water sectors of ADB through cross-disciplinary topics and rich interactions. Although many of the elements of dense urban settings such as buildings, mobility, citizen services, and energy resources are physically close, the interconnections need to be driven institutionally with the aid of data-driven planning tools and methods.

Speakers stressed the need for strong partnerships and information-sharing between stakeholders in order to facilitate delivery of the greatest impacts for sustainable energy and thus enable livable cities. The overarching message was that three I’s (Indicators, Incentives and Institutions) can drive this change.
The global demand for fresh water will exceed the supply by 40% by 2030. There is a critical need to address the challenges posed by existing institutional structures, policies, and procedures across all levels—subnational, national, regional, and global.

A key message from this Track was that we need to look beyond the cost of doing things and also look at the cost of not doing things.

Discussions in Track 2 focused on how optimizing the water-energy nexus is key to achieving Sustainable Development Goals 6 (Clean Water and Sanitation) and 7 (Affordable and Clean Energy). One way to achieve this is by developing effective institutional and financing solutions. Speakers also suggested the need to tailor technologies to market, technical and socio-economic situations as there is no one-size-fits-all solution to address the challenge.

A key message from this Track was that we need to look beyond the cost of doing things and also look at the cost of not doing things.
Track 3: Energy and Rural Poverty Alleviation

The poor bear the major brunt of climate change.

The focus of Track 3 was on how decentralized energy access is necessary for the “last mile” of energy consumers. Now more than ever before, there is a critical need for tools, technologies and approaches to address climate change, to both enhance resilience in poorer communities and achieve sustainability goals.

Higher access to electricity can lead to diversification of employment as well as economic and social improvement. Speakers suggested that it is also important to enhance the technical capacity of youth by training them in clean energy technologies and end-use applications.

Practitioners agreed that it is time to go beyond solar home systems and leverage micro- and mini-grids that can reach the most vulnerable and remote areas. Any transformational change will require a transparent stakeholder process.
The clean energy transition will require financing from across the risk spectrum.

Discussions in Track 4 made it clear that the transition to a low-carbon economy will require the involvement of everyone—from small retail investors investing through crowd-funding platforms to the largest pension funds in the world.

Speakers acknowledged the innovative approaches deployed by governments across the world to scale up clean energy. Some examples include: the role of the government in enabling large solar parks in India, which has led to record low prices for procurement of solar energy; the Green Bank in the UK, which enabled the first set of off-shore wind projects in the UK; and Malaysia’s efforts to promote on-bill financing through the utility for commercial and institutional solar rooftop projects.

It was also noted that while incentives are extremely important for changing behavior and scaling up the right kind of investments, they can also cause a lot of harm if they are not well-designed or are abruptly changed. Thus, it is critical to design incentives with the market clearly in mind.

Speakers suggested that innovative contractual agreements called hybrid power purchase agreements are a new promising development, as they can integrate thermal energy or storage with renewables to ensure “firm power” generation.
Clean energy is a strategic tool for fighting poverty.

Clean energy is much more than electricity. Typically, however, 99% of clean energy discussions are about electricity generation and not end-uses.

Discussions in Track 5 focused on the need to expand and reinvent our strategy so that we can deliver diversified, multi-dimensional benefits of clean energy including solar, bioenergy, and ocean energy.

Speakers expressed concerns over accessibility, affordability and equity due to the speed and disparity of clean energy development, particularly in Asian countries. They expressed the need to develop innovative financing mechanisms and government support in order to scale emerging technologies such as ocean energy which has a huge potential in Asia and the Pacific.
Deep Dive Workshops

The Deep Dive Workshops (DDWs) were a core part of the Forum this year. ACEF attendees had the choice of participating in 22 DDWs, which are focused sessions designed to give participants in-depth knowledge on specific topics of interest. Each DDW focused on defining, discussing, and brainstorming on a significant problem or opportunity in the clean energy sector.
List of DDWs at ACEF 2019

- Clean Energy Policy, Financing and Innovation (7th ADB-MOTIE Joint Energy Forum)
- Accelerating Clean Energy Technology Transformation with the Private Sector
- Renewable Energy Transition: Is Asia Leading?
- The Twelfth Meeting of Asia Solar Energy Forum (ASEF)
- Hydro Mini-Grids in the Asia-Pacific: Scaling Inclusive Enterprise-Based Approaches
- Scaling up Energy Efficiency with Simplified M&V Meters and ESCO Business Models
- Youth for Asia Voltage Tank
- The Subsidy Swap in Asia: Reforming Fossil Fuel and Electricity Subsidies to Drive a Renewable Revolution
- Integrated Solutions for Livable Cities in Asia Pacific: Multi-Energy Systems and Sustainable Buildings
- Community Energy Systems: Realizing the Potential of People’s Partnership in Achieving Energy Access
- Women Power—Smarter, Inclusive Energy Solutions
- Integrated Design for Radical Energy Efficiency
- Urban Microgrids
- The Food-Water-Energy Nexus: Transforming Science for Sustainable Societies
- Grid Integration and System Flexibility: Status and Emerging Trends in Asia
- Asia Wakes Up to CCUS
- Regional Cooperation and Integration (RCI) for Cross-Border Energy Markets
- The Future of Cooling –Promoting Sustainable Cooling through Technology and Policy Innovation
- Utility-Scale Renewables: Challenges in Developing Solar and Wind Energy Projects
- Electric Vehicles
- Next-gen Utilities for a Smart Energy Future
- Achieving Universal Energy Access in the Asia-Pacific Region
Special Events

ADB on the Ground

In its second edition this year, the ADB on the Ground event was held in a “World Café” format: participants rotated to 26 tables, each showcasing an innovative ADB project across Asia. More than 200 ACEF participants learned about ADB projects and interacted with ADB staff and country counterparts in this fast-track networking special event!

Dim Sum with Entrepreneurs

A rapid-pitch event—Dim Sum with Entrepreneurs—was co-organized by ADB Ventures and the Private Financing Advisory Network (PFAN) as a special event at ACEF 2019. The objective was to showcase innovative emerging clean energy solutions, and to catalyse commercial connections. During the 90-minute, dynamic networking and match-making event, 26 clean energy entrepreneurs from 14 different countries pitched and presented their solutions to an audience of more than 300 people.
Other Events

ADB Clean Energy Day

This was a dedicated half-day event for ADB staff to hear from ACEF 2019 plenary speaker Amory Lovins and to share knowledge across departments and sectors. Yongping Zhai, Chief of ADB’s Energy Sector Group, led an engaging discussion with the ADB Energy Directors on how to support Strategy 2030 and integrate its principles into sector projects.

Women in Energy Lunch

A special “Women in Energy” luncheon meeting was organized to engage men to engage men and women professionals in discussions on the sustainable energy and gender nexus. Led by Deborah Stokes, Vice President of Administration and Corporate Management at ADB, the deliberations at the luncheon meeting will be used to support ADB’s gender mainstreaming approach in its energy sector development and investment planning with its DMCs.

Energy Leaders Round Table

ADB’s Energy Sector group organized a round table event to engage high level ACEF 2019 attendees and ADB senior energy experts in moderated discussions on the latest technology and policy trends and challenges in the energy sector. Led by ADB’s Yongping Zhai and Rocky Mountain Insitute’s Amory Lovins, the round table focused on emerging trends, implementation of ADB’s Strategy 2030 and the development of ADB’s Energy Sector’s Work Plan.
ACEF Lunch Talks

The Ocean Economy
This Lunch Talk provided an overview of ADB’s ocean economy initiative which was announced in May 2019. Presentations covered scalable solutions for marine aquaculture, coral propagation, and coastal zone waste-to-energy.

ADB Innovation Challenge
ADB announced its first technology innovation challenge and highlighted three energy-related development challenges: better clean heating and cooling; sustainable renewable energy-based microgrids; and application of artificial intelligence for energy demand management.

Scaling up Clean Energy in Southeast Asia: From Concept to Reality
This Lunch Talk provided a comparative assessment of ongoing regional and national initiatives in green finance to meet sustainable development aspirations in Southeast Asia.

How Are Clean Energy Programs Doing in Asia?
A range of speakers highlighted the importance of assessing clean energy interventions in Asia and the Pacific, in order to optimize the impact of clean energy programs.
Key Announcements: Partnering for Impact

Partnership between USAID and ADB

USAID/Asia announced a new clean energy partnership with ADB, as part of its new USAID EDGE program. USAID’s contribution of up to $100 million is expected to leverage up to $7 billion of investment in clean energy in Asia.

MOU between ADB and the Korea Energy Agency

ADB and the Korea Energy Agency (KEA) signed their 3rd MOU at ACEF 2019. Through this MOU, ADB and KEA will further strengthen their joint efforts including information exchange, knowledge-sharing, and capacity building of DMCs in the areas of energy efficiency, renewable energy, energy access and climate change issues.

UK Funding Extension to ADB’s Clean Energy Fund

The UK Government, through its Department for Business, Energy and Industrial Strategy, (BEIS) announced a £9 million extension of funding to ADB’s Clean Energy Financing Partnership Facility. The funding will support technical assistance activities for clean energy in the Asia-Pacific region.
# ASIA CLEAN ENERGY FORUM 2019

**17-21 June 2019**

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday, June 17, 2019</strong></td>
<td>11.00 a.m. - 12:30 p.m.</td>
<td>Open Networking</td>
</tr>
<tr>
<td></td>
<td>12:30 p.m. - 2:00 p.m.</td>
<td>Session 1.1: Urban Energy Planning for Smarter Utilities</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 3:30 p.m.</td>
<td>Session 2.1: Sustainable Energy for Water Supply and Sanitation</td>
</tr>
<tr>
<td></td>
<td>4:00 p.m. - 5:30 p.m.</td>
<td>Session 3.1: Planning and Building for Climate Resilience and Low-Carbon Growth</td>
</tr>
<tr>
<td></td>
<td><strong>Lunch</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td></td>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>ACEF Welcome Reception</td>
</tr>
<tr>
<td><strong>Tuesday, June 18, 2019</strong></td>
<td></td>
<td>Open Networking</td>
</tr>
<tr>
<td></td>
<td>11.00 a.m. - 12:30 p.m.</td>
<td>Session 1.2: Scaling Up E-Mobility as a Platform for Sustainable Urban Transportation</td>
</tr>
<tr>
<td></td>
<td>12:30 p.m. - 2:00 p.m.</td>
<td>Session 2.2: Sustainable Energy Use for Water: Focus on Irrigation</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 3:30 p.m.</td>
<td>Session 3.2: Going Beyond Solar Home Systems: Scaling Up Micro-girds and Mini-girds</td>
</tr>
<tr>
<td></td>
<td>4:00 p.m. - 5:30 p.m.</td>
<td>Session 4.1: Global and Regional Trends in the Financing of Clean Energy</td>
</tr>
<tr>
<td></td>
<td><strong>Lunch</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td></td>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>ACEF Reception (Women’s Reception: 5:30 p.m. - 6:30 p.m.)</td>
</tr>
<tr>
<td><strong>Wednesday, June 19, 2019</strong></td>
<td>11.00 a.m. - 12:30 p.m.</td>
<td>Open Networking</td>
</tr>
<tr>
<td></td>
<td>12:30 p.m. - 2:00 p.m.</td>
<td>Session 1.3: Heating and Cooling for Buildings in Cities</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 3:30 p.m.</td>
<td>Session 2.3: Sustainable Water Use for Energy: Floating Solar Photovoltaics</td>
</tr>
<tr>
<td></td>
<td>4:00 p.m. - 5:30 p.m.</td>
<td>Session 3.3: Innovative and Inclusive Microfinance for Renewable Energy</td>
</tr>
<tr>
<td></td>
<td><strong>Lunch</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td></td>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>ACEF Reception (Women’s Reception: 5:30 p.m. - 6:30 p.m.)</td>
</tr>
<tr>
<td><strong>Thursday, June 20, 2019</strong></td>
<td>11.00 a.m. - 12:30 p.m.</td>
<td>Open Networking</td>
</tr>
<tr>
<td></td>
<td>12:30 p.m. - 2:00 p.m.</td>
<td>Session 1.4: New Energy Solutions: Multi-Benefit Opportunities for Cities</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 3:30 p.m.</td>
<td>Session 3.4: Innovations in End-use Applications</td>
</tr>
<tr>
<td></td>
<td>4:00 p.m. - 5:30 p.m.</td>
<td>Session 4.3: Financing of Large-scale Renewable Energy Projects</td>
</tr>
<tr>
<td></td>
<td><strong>Lunch</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td></td>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>ACEF Reception (Women’s Reception: 5:30 p.m. - 6:30 p.m.)</td>
</tr>
<tr>
<td><strong>Friday, June 21, 2019</strong></td>
<td>11.00 a.m. - 12:30 p.m.</td>
<td>Open Networking</td>
</tr>
<tr>
<td></td>
<td>12:30 p.m. - 2:00 p.m.</td>
<td>Session 1.5: Bioenergy and Waste-to-Energy</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 3:30 p.m.</td>
<td>Session 3.5: Renewable Heating, Cooling, and Storage</td>
</tr>
<tr>
<td></td>
<td>4:00 p.m. - 5:30 p.m.</td>
<td>Session 4.4: Crossing the “Valley of Death” Impact and Venture Capital Investments in Early-stage Clean Energy Funds</td>
</tr>
<tr>
<td></td>
<td><strong>Lunch</strong></td>
<td><strong>Break</strong></td>
</tr>
<tr>
<td></td>
<td>6:00 p.m. - 8:00 p.m.</td>
<td>ACEF Lunch Talk: ADB on the Ground</td>
</tr>
</tbody>
</table>

### LEGEND

- **PLENARY SESSIONS**
- **DEEP DIVE WORKSHOPS**
- **NETWORKING OPPORTUNITIES**
- **SPECIAL EVENTS**
- **THEMETIC TRACKS**
  - Energy & Livable Cities
  - Energy & Water Sustainability
  - Energy & Rural Poverty Alleviation
  - Energy and Innovative Finance
  - Clean Energy Trends & Directions
  - Energy and Innovative Finance
  - Clean Energy Trends & Directions

### THEMATIC TRACKS

- Energy and Innovative Finance
- Clean Energy Trends & Directions
Mark your calendar for ACEF 2020
June 15-19, 2020 | Manila

Connect with us on:
- www.asiacleanenergyforum.org/
- www.facebook.com/asiacleanenergyforum/
- www.twitter.com/ACEF2019
- www.linkedin.com/groups/5069172/

Please contact us at:
acef@adb.org for further inquiries