



**CONFERENCE ON:
INCLUSIVE COMMUNITY ENERGY RESILIENCE IN BANGLADESH
GAZIPUR, DHAKA, 23-24 APRIL 2019¹**

The ‘smartening’ of grids is already on the horizon, and smart grids and its component technologies are increasingly becoming an important focus of the ADB energy portfolio in Bangladesh. The program will focus on community-based clean energy solutions, including smart grid technologies and systems, such as distributed generation, mini-grids, battery storage, smart meters, electric vehicles and integrated solutions combining the energy, water, agricultural production and environmental sustainability nexus that strengthens community resilience², within an inclusive development framework, with a focus on gender equality and social inclusion³ (GESI). Information on international experience -relevant to Bangladesh- will be shared, through examples and case studies, along with implementation roadmaps, frameworks and strategies. The policy and regulatory environment required to foster the low-carbon energy transition⁴, leapfrog with smarter and inclusive technology solutions will be discussed. Capacity development and business models for community uptake of new technologies will be addressed. The program is also aligned with the ADB initiative to integrate high level technology in projects. It aims to introduce innovation, improve service delivery, efficiency and productivity, address climate mitigation, enhance system resilience and create market opportunities, towards inclusive development. The Conference will be organized in eight sessions:

1. Smart grid innovation in the sub-region and learnings for Bangladesh
2. Power sector policy and planning - implications for poverty reduction and social inclusion
3. GESI integrated energy programs and impacts
4. Community energy resilience - framing the issues and identifying social metrics
5. Blockchain driven community energy
6. Project beneficiaries - the lady Directors of the Rural Electric Cooperatives (<i>Palli Bidyut Samitis</i>)
7. Smart grid, smart workforce – women in STEM⁵ and the power sector
8. Business models to promote community technology uptake

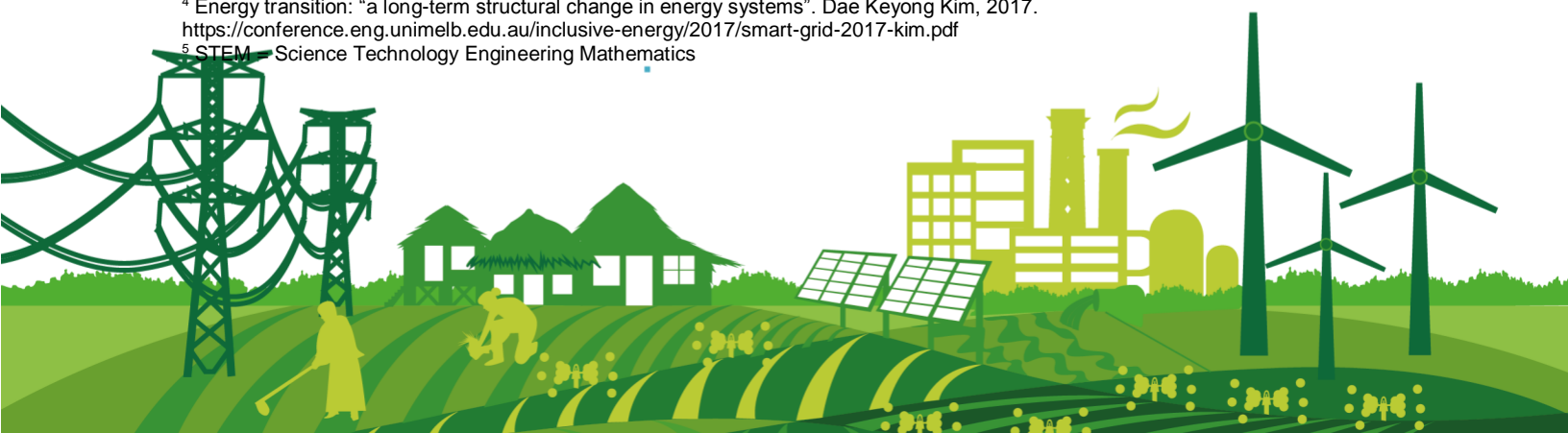
¹ All the sessions of the conference will be video-taped and uploaded in the Conference website available at www.adb.org.

² Community resilience: “The capacity of communities to cope with and recover positively from disasters, learning from such stress, activating their inner resources and performing better in future in the face of adversity”. Pierluigi Mancarella, 2018. <https://k-learn.adb.org/materials/20180404/smart-grid-methodologies-and-models-address-affordability-sustainability-and>

³ Social inclusion: “The process of improving the terms of participation in society, particularly for people who are disadvantaged, through enhancing opportunities, access to resources, voice, and respect for rights”. Reihana Mohideen, 2018. *Energy technology innovation in South Asia Implications for gender equality and social inclusion*. https://energy.unimelb.edu.au/_data/assets/pdf_file/0010/2928574/R-Mohideen_energy-technology-innovation-south-asia.pdf

⁴ Energy transition: “a long-term structural change in energy systems”. Dae Keyong Kim, 2017. <https://conference.eng.unimelb.edu.au/inclusive-energy/2017/smart-grid-2017-kim.pdf>

⁵ STEM – Science Technology Engineering Mathematics



DAY 1

9:00-9:30	Registration
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9:30 -10:30

OPENING SESSION

9:30-9:40	Welcome Remarks By Manmohan Parkash , Country Director, Bangladesh Resident Mission (BRM), Asian Development Bank (ADB)
9:40-9:50	Remarks by Special Guest By A.K.M Humayun Kabir , Additional Secretary, Power Division
9:50-10:00	Remarks by Special Guest By Mahmood Malik , Executive Director & CEO Infrastructure Development Company Limited (IDCOL)
10:00-10:25	Remarks by Chief Guest Tawfiq-e-Elahi Chowdhury , Power, Energy and Mineral Resources (MPEMR) Affairs Adviser to the Prime Minister's Office, Government of Bangladesh
10:25-10:35	Vote of Thanks By Priyantha Wijayatunga , Director, South Asia Energy Division, SARD, (SAEN, SARD), ADB

10:35-10:45 GROUP PHOTOGRAPH

10:45-11:00 TEA & COFFEE BREAK

11:00-12:00

Session 1: Smart grid innovation in the sub-region and learnings for Bangladesh

MODERATED DIALOGUE

Smart grid experts from the sub-region will present innovative smart grid case studies from the Asia Pacific region. They will discuss system design and control, automated metering infrastructure, distributed generation, microgrids, demand management and the challenges of storage, including battery storage solutions. The speakers will outline the social risks, benefits and opportunities of smart grid transformation. Speakers from the government of Bangladesh, will discuss the learnings and applicability of these cases to the Bangladesh context

Session Moderator: *Aiming Zhou, Principal Energy Specialist, SAEN, SARD*

Speakers:

- **Vineet Taneja**, Deputy General Manager, Energy Efficiency Service Limited, Ministry of Power, Government of India
- **Mewang Gyeltshen**, Director, Department of Renewable Energy, Government of Bhutan
- **Ranishka Wimalasena**, Sustainable Development and Climate Change Department (Energy), ADB
- **Noor Mohammad**, Executive Director (Operation), Dhaka Electric Supply Company Limited

12:00-13:00

Session 2: Power sector policy and planning - implications for poverty reduction and social inclusion

PANEL SESSION

This session will provide an overview of the policy environment and planning frameworks for the power and energy industry in Bangladesh. The speakers will discuss the linkages and implications of these policies and plans for poverty reduction and social inclusion, focusing on solutions for affordable access and rural electrification, introduction of low-carbon technologies and local economic development.

Session Moderator: Reihana Mohideen, Senior Research Fellow, Department of Electrical and Electronic Engineering (EEE) and Program Lead, Melbourne Energy Institute, The University of Melbourne (UoM)

Speakers:

- **Siddique Zobair** Additional Secretary and Member, Sustainable and Renewable Energy Department Authority (SREDA)
- **Mohammad Alauddin**, Joint Secretary, (Renewable Energy) Power Division
- **S.M. Zafar Sadeque**, Member (Distribution & Operation), Bangladesh Rural Electrification Board
- **Nasheeba Selim**, Senior Social Development Specialist (Gender), BRM, ADB

13:00-14:00 LUNCH

14:00-15:00

Session 3: GESI integrated energy programs and impacts

This session will present an overview of how GESI considerations have been addressed in energy sector programs in the region. It will present good practice case studies addressing GESI considerations. Case studies will range from innovative programs to achieve 100% household electrification, the provision of cheap credit for households to connect to the last mile and beyond, catalyzing local economic growth through integrated solutions linking agriculture, water and energy access and storage, livelihoods, such as solar water pumping programs, solar-powered refrigeration for both storage and livelihood solutions, as well as training programs targeting women end-users. Any emerging impact of these programs on women and gender relations will also be examined

Session 3(a) Setting the Context

Speaker: Francesco Tornieri, Principal Social Development Specialist, Office of the Director General, SARD, ADB

Session 3(b) Case Studies

PANEL SESSION

Session moderator: Nasheeba Selim

Bangladesh, Case Studies

Speakers:

- **Sohel Ahmed**, Managing Director, Grameen Shakti
- **Nazmun Nahar**, Senior Project Officer (Energy), BRM, ADB
- **Yoojung Jang**, Social Development Specialist, SARD

Subregion, Case Studies

Speakers:

- **Ahmed Ali**, Director General Energy, Ministry of Environment, Government of Maldives
- **Pushkar Manandhar**, Project Officer (Energy), NRM, ADB

15:00-15:30 TEA & COFFEE BREAK

15:30-16:30

Session 4: Community energy resilience - framing the issues and identifying social metrics

PANEL SESSION

System resilience to extreme weather conditions is an emerging and important consideration in addressing power system reliability. What are the linkages between energy and power system resilience to community resilience and how can a better understanding of the issues and challenges to enhance community resilience capacities? This session will include a brief presentation from the University of Melbourne of the key questions and the preliminary outline of the research to be undertaken on community energy resilience in Bangladesh. International examples of how community energy resilience was considered will also be presented. The presentation will be followed by a panel of experts to discuss the specific considerations and their applicability to the context of Bangladesh.

Session Moderator: Nasheeba Selim

Speakers:

- **Reihana Mohideen**
- **Ashok Kumar Ghosh**, Deputy Director, Program and Planning, BREB
- **Md. Taibur Rahman**, Project Manager, UNDP Bangladesh
- **Sharmind Neelormi**, Associate Professor, Jahangir Nagar University
- **Erik Kjaergaard**, Disaster Risk Management Specialist, SARD, ADB

16:30-17:00

Session 5: Blockchain driven community energy

Blockchain technology can help developing countries in the Asia-Pacific to leapfrog in the development of their energy sectors. Blockchain empowers individual consumers and producers. When each household that can generate electricity can enter into automated, peer-to-peer transactions with other households or sell power into the grid at the market price, the households (consumers) become “prosumers”. Blockchain can also serve as a distributed memory during network emergencies and problems. If a natural disaster destroys transmission towers or transformer substations for instance, the grid can quickly draw on that reliable, distributed information to automatically reroute power to prevent a massive blackout. This session will introduce blockchain technology and its application in community energy systems.

Session Moderator: Antonin Demazy, Research Assistant - PhD Candidate, EEE, UoM

Speaker: Greg Adamson, Chair, IEEE Ad Hoc on TechEthics and Past President IEEE Society on Social Implications of Technology (IEEE-SSIT)

17:00-17:15: Summary of Day 1

18:00-21:00

PROGRAM DINNER

Hosted by Priyantha Wijayatunga, Director, SAEN, SARD

DAY 2

8:30-09:00am	Keynote Address The energy transition in Asia – advanced technology solutions for ‘leap frogging’ inclusive development Priyantha Wijayatunga (Introduced by Francesco Tornieri, SARD)
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09:00-10:00

Session 6: Project beneficiaries – the lady Directors of the Rural Electric Cooperatives (Palli Bidyut Samitis)

MODERATED DIALOGUE

Lady Directors from the Rural Electric Cooperatives or ‘Palli Bidyut Samitis’ (PBS), customer-owned electricity cooperatives, will discuss the structure and work of the PBS and their roles within it, with a focus on capacity development programs, customer service and the impact on women’s participation in the management and delivery of services, as well as gender roles in the community.

Session Moderator: Nasheeba Selim

Session 6: Project Beneficiaries

Speakers:

- **Rehana Ferdous**, Lady Director, Bhola Palli Bidyut Samiti (PBS)
- **Shakera Begum**, Lady Director, Shunamganj Palli Bidyut Samiti (PBS)
- **Afroza Akhtar**, Lady Director, Gazipur Palli Bidyut Samiti (PBS)

10:00-10:30 TEA & COFFEE BREAK

10:30-11:45

Session 7: Smart grid, smart workforce - women in STEM and the power sector

MODERATED DIALOGUE

The number of jobs in the renewable energy industry worldwide is growing and studies indicate that much of this employment is shifting to Asia. Smarter grid will require a highly skilled workforce, with implications for retraining, training and education. Some studies also find that the renewable energy industry indicates more gender parity than the broader energy sector. This session will discuss the implications of this emerging new industry for the education system, the power sector and the labor force in Bangladesh.

Session Moderators: Yoojung Jang, Reihana Mohideen

Session 7(a): Women in STEM

Speakers:

- **Celia Shahnaz**, Professor, Dpt. EEE, Bangladesh University of Engineering and Technology (BUET)
- **Md. Shahriar Ahmed Chowdhury**, Director, Centre for Energy Research, United International University (CER, UIU)
- **Prathaj Haputhanthri**, Associate Project Officer (Energy), Sri Lanka Resident Mission, ADB

Session 7(b): Women in Power Sector (WePower)

Speakers:

- **Francesco Tornieri**
- **Tanuja Bhattacharjee**, Energy Specialist, World Bank, Bangladesh

11:45-12:45

Session 8: Business models to promote community technology uptake

PANEL SESSION

Clean energy access has also been driven by access to new technologies, such as the programs for solar home systems that have spurred rural electrification in Bangladesh. Emerging programs include solar minigrids and water pumping for irrigation. This poses the challenges of both energy technology access and uptake in low-income communities, and especially amongst women. They are contingent on a range of complex factors, including gender roles in the division of labor and personal preferences. This session provides examples of business modalities and discusses these challenges.

Session Moderator: Nazmun Nahar

Speakers:

- **Farzana Rahman**, Senior Vice President, Renewable Energy Infrastructure Development Company Limited
- **Selima Ahmed**, President, Bangladesh Women Chamber of Commerce and Industry (BWCCI)
- **Nuher Khan**, Managing Director, Joules Power Limited, Dhaka Chamber of Commerce and Industry
- **Mst. Aziza Sultana (Mukti)**, Director Operations, SOLshare
- **Munawar Misbah Moin**, Managing Director, Rahimafroz Renewable Bangladesh Limited

12:45-13:00 CLOSING SESSION – KEY TAKE-AWAYS AND WAYS FORWARD

13:00-14:00 LUNCH

This conference is organized in collaboration with University of Melbourne.