

**SMART GRID TECHNOLOGIES AND IMPLICATIONS FOR INCLUSIVE DEVELOPMENT  
APRIL 3 - 4, 2018  
GALLE, SRI LANKA**

**Day 1** **APRIL 3, 2018**

<b>08:30-09:00</b>	Forum Registration
<b>09:00-09:15</b>	Opening Ceremony Welcome Remarks <b>Sri Widowati</b> , Country Director, Sri Lanka Resident Mission (SLRM), Asian Development Bank (ADB)
<b>09:15-09:25</b>	Opening Remarks <b>Dr. B. M. S. Batagoda</b> , Secretary, Ministry of Power and Renewable Energy, Sri Lanka
<b>09:25-09:35</b>	Additional Remarks <b>Priyantha Wijayatunga</b> , Director, South Asia Energy Division, South Asia Department (SAEN,SARD), ADB
<b>09:35-09:45</b>	Forum Objectives <b>Francesco Tornieri</b> , Principal Social Development Specialist, SARD, ADB

<b>09:45-10:15</b>	Keynote Address <b>What is 'smart grid'? What are the social risks, benefits, opportunities?</b> <b>Pierluigi Mancarella</b> – Chair of Electrical Power Systems, Melbourne School of Engineering, The University of Melbourne (MSE, UoM), Melbourne Energy Institute (Introduced by Reihana Mohideen, Senior Research Fellow, MSE, UoM)
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**10:15-10:45 GROUP PHOTOGRAPH, TEA & COFFEE BREAK**

1. Smart Grid applications in developing countries
2. Gender & Social Inclusion (GESI) energy linkages: policies, strategies and practices
3. Energy technology innovation in South Asia: implications for gender equality and social inclusion
4. R&D for smart grid innovation
5. Sri Lanka Case Studies - GESI integrated energy projects and impacts
6. Smart grid methodologies and models to address affordability, sustainability and system reliability and resilience
7. India Case Studies – Transition to smart grid
8. Smart grid, smart workforce and capacity development
9. Asia Pacific Case Studies – GESI integrated energy initiatives and impacts
10. Demand Side Management & the <i>prosumer</i> – what, who and the GESI implications
11. IEEE – Perspectives on technology, society and ethics

Workshop Co-Chairs: Reihana Mohideen, Francesco Tornieri



10:45-11:45

### Session 1: Smart grid applications in developing countries

#### MODERATED DIALOGUE

*How smart grid is evolving is also context specific, varying between geographic regions and even countries. This session will outline some of the common and emerging features of smart grid in developing countries, with a focus on the experiences in Sri Lanka. The speakers will discuss the implications of smart grid in addressing the socio-economic challenges in developing countries.*

Session Moderator: *Ranishka Wimalasena*

#### Speakers:

- **Narendra De Silva**, Head of Engineering, Lanka Electricity Company Limited (LECO)
- **Ronald Comester**, Deputy General Manager (R&D), Ceylon Electricity Board (CEB)
- **Harsha Wickramasinghe**, Deputy Director General, Sri Lanka Sustainable Energy Authority (SLSEA)
- **Susumu Yoneoka**, Energy Specialist (Smart Grids) ADB

11:45-12:15

### Session 2: Gender & social inclusion (GESI) energy linkages: policies, strategies and practices

#### PANEL

*This session will present institutional policies, strategies and practices that aim to contribute to inclusive development and the GESI linkages with the energy and power sector. Speakers will present an overview of GESI in the ADB energy sector portfolio and the policies and strategies in Sri Lanka relevant to inclusive development, through achieving 100% levels of household electrification.*

Session Moderator: *Sudarshana Anojan, Social Development Specialist, Sri Lanka Resident Mission, ADB*

#### Speakers:

- **Francesco Tornieri**, Principal Social Development Specialist, SARD, ADB

12:15-13:15 LUNCH



**13:15 -14:15**

**Session 3: Energy technology innovation in South Asia: implications for gender equality and social inclusion**

**INTERACTIVE LECTURE**

*This session will present the methodology, findings and outcomes of the research on ‘Energy technology innovation in South Asia: implications for gender and social inclusion’ conducted by the UoM for the ADB. It will discuss how GESI can be integrated into electricity systems modeling with a focus on rural electrification. It will identify potential entry points for GESI in the renewable energy programs of the Government of Sri Lanka. The speaker will outline the next steps for the continuation of the research.*

*Session moderator: Greg Adamson, Chair, IEEE Design for Ethics Ad Hoc & Associate Professor, MSE*

**Speaker: Reihana Mohideen**, Senior Research Fellow, Melbourne Energy Institute, MSE, UoM

**14:15-15:15**

**Session 4: R&D for smart grid innovation**

**PANEL**

*Research and development is an important aspect of smart grid innovation and development. Researchers from leading universities will introduce and outline their research programs in smart grid and power systems design and control and will specifically assess how socio-economic considerations such as affordability and access are relevant to this work.*

*Session Moderator: Pierluigi Mancarella*

**Speakers:**

- **Iven Mareels**, Lab Director, IBM Research Australia, honorary Professor, UoM
- **Udayanga Hemapala**, Senior Lecturer, Department of Electrical Engineering, University of Moratuwa
- **Janaka Ekanayake**, Department of Electrical and Electronic Engineering, University of Peradeniya

**15:15-15:45 TEA & COFFEE BREAK**



15:45-16:30

**Session 5: Sri Lanka Case Studies - GESI integrated energy projects and impacts**

**PANEL**

*This session presents an overview of the ADB Sri Lanka energy sector portfolio. It will present good practice examples addressing poverty and GESI considerations in the Sri Lanka energy sector. Case studies will range from innovative Government programs to achieve 100% household electrification, the provision of credit for households to connect to the grid, that is the last mile and beyond, and catalyzing local economic growth through energy access and training targeting women end-users. The impact of these programs on women and their communities and any emerging impacts on gender relations will be examined.*

*Session moderator: Sudarshana Anojan*

**Speakers:**

- **Ranishka Wimalasena**, Senior Project Officer (Energy), SLRM, ADB
- **Sulakshana Jayawardena**, Director, Ministry of Power and Energy
- **Anoja Wickramasinghe**, Professor, Department of Geography, University of Peradeniya

**16:30-17:00 Summary of Day 1**

**18:00-21:00**

**COCKTAILS & PROGRAM DINNER**

Greetings from **Priyantha Wijayatunga** Director, South Asia Energy Division (SEAN), ADB  
& Solidarity Messages



08:30-09:00	Keynote Address <b>The energy transition in Asia – ‘leap frogging’ development?</b> <b>Priyantha Wijayatunga</b> (Introduced by Ranishka Wimalasena)
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**09:00-9:45**
**Session 6: Smart grid methodologies and models to address affordability, sustainability and system reliability and resilience**
**INTERACTIVE LECTURE**

*What are the tools necessary to develop ‘pathways’ to facilitate an orderly transition from the old grid to smarter grids and low-carbon systems? How can models be designed to address affordability, sustainability and system reliability? System resilience to extreme weather conditions is also an emerging and important consideration in addressing reliability. This presentation will look at various modeling methodologies that address these considerations.*

*Session Moderator: Greg Adamson*

**Speaker: Pierluigi Mancarella**

**9:45-10:15 TEA & COFFEE BREAK**
**10:15-11:15**
**Session 7: India Case Studies - Transition to smart grid**
**PANEL SESSION**

*This session will present an overview of India’s energy sector, how the ADB portfolio supports sector development, ongoing and upcoming projects and examples of GESI mainstreamed interventions. It will present and discuss the Government of India’s program piloting 14 smart grid projects in State utilities highlighting useful examples which include consumer awareness initiatives and PPP models with implications for social development. It will describe the ongoing challenge of bridging rural electrification gaps and potential smart grid solutions in the State of Meghalaya.*

*Session Moderator: Jaimes Kolantharaj, Energy Specialist, SAEN, SARD, ADB*

**Speakers:**

- **Pradeep Perera**, Principal Energy Specialist, SAEN, ADB
- **Prabhjot Khan**, Social Development Specialist, INRM, ADB
- **Atul Kumar Bali**, Deputy General Manager - NPMU, National Smart Grid Mission, Ministry of Power
- **Tippor R Pdah**, Additional Chief Engineer Eastern Zone, Meghalaya Power Distribution Corporation Ltd, Shillong, India



11:15-12:15

### Session 8: Smart grid, smart workforce and capacity development

#### PANEL SESSION

*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.*

*Session Moderators: Wendy Walker, Chief of Social Development Thematic Group, Sustainable Development and Climate Change Department, ADB*

#### Speakers:

- **Gi Soon Song**, Principal Social Sector Specialist, Human and Social Development Division, SARD, ADB
- **Iven Mareels**
- **Thusitha Sugathapala**, Senior Lecturer, Mechanical Engineering Department, University of Moratuwa

12:15-13:30 LUNCH

13:30-14:30

### Session 9: Asia Pacific Case Studies – GESI integrated energy initiatives and impacts

#### MODERATED DIALOGUE

*This session will discuss a range of examples from the energy and power industry in Asia; projects and programs where social inclusion considerations were assessed and addressed. The panelists will identify the social inclusion issues, key project design features addressing these issues, implementation and processes involved and results if any.*

*Session Moderator: Nasheeba Selim, Social Development Specialist, Bangladesh Resident Mission, ADB*

#### Speakers:

- **Helal Uddin**, Deputy Chief, Power Division, Ministry of Power, Energy and Mineral Resources, Government of Bangladesh
- **Rudra Khanal**, Director, Alternative Energy Promotion Centre, Ministry of Energy, Government of Nepal
- **Rajan Kadel**, Director, Nepal Electricity Authority, Ministry of Energy, Government of Nepal
- **Cindy Tiangco**, Senior Energy Specialist, Central and West Asia Department, ADB
- **Aruna Wanniachchi**, Senior Energy Specialist, South East Asia Department, ADB



**14:30-15:15**

**Session 10: Demand Side Management (DSM) & the prosumer – what, who and the GESI implications**

**PANEL SESSION**

*This session will explain DSM in relation to the power system and the electricity network, from generation to end-users. It will discuss the enhanced role of demand management for smart grid systems. It will include the case of the Sri Lanka experience. Enter the 'prosumer', as the smart grid will bring in a new paradigm of 'active' distribution that can dramatically change the role of the consumer and communities, transforming 'passive' users into 'active' players – both as producers and consumers or 'prosumers' with potentially important implications for GESI.*

*Session Moderator: Francesco Tornieri*

**Speakers:**

- **Thusitha Sugathapala**
- **Pierluigi Mancarella**
- **Reihana Mohideen**

**15:15-15:45**

**Session 11: IEEE – Perspectives on technology, society and ethics**

*Institute of Electrical and Electronics Engineers (IEEE) objectives include "Ensuring technology is harmoniously and sustainably harnessed for humanity". The IEEE has also recently adopted a 'code of ethics'. In this session a leading member of IEEE will outline the organizations perspective on social considerations and ethics, and the implications for social inclusion and gender equality in engineering practice. It will also present some practical examples of its work in community energy.*

*Institute of Electrical and Electronics Engineers (IEEE) has been a key partner of SARD in its inclusive energy solutions initiatives.*

*Session Moderator: Iven Mareels*

**Speaker: Greg Adamson**

**15:45-16:00**

**CLOSING SESSION: Ways Forward**

**Refreshments**

*Media: Meetings and interviews with the media will be organised during the workshop. Roshani Yogarajah, Senior External Relations Officer and Mohemad Asmi, Project Analysis, SLRM, ADB, will facilitate the program with the media.*

