



**SAARC ENERGY CENTRE
ISLAMABAD**

THE REPORT

Program Activity: PRG-114/2017/PENT



"System Operation and Settlement Mechanism, Cross-Border Trade/Regional Power Market in South Asia"

**10 -11th December, 2017
Dhaka, Bangladesh**

In Collaboration with
Power Cell, Power Division, Ministry of Power, Energy and
Mineral Resources, Govt. of Bangladesh



December 2017

SAARC Energy Centre
697, Street 43, Sector E-11/4, NPF,
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www.saarcenergy.org



Training Workshop
**System Operation and Settlement Mechanism, Cross
Border Trade/Regional Power Market in South Asia**
Dhaka, Bangladesh | 10 – 11 December 2017



Group Photograph:

The Report

Introduction

SAARC Energy Centre, Islamabad organized a two days training workshop on **System Operation and Settlement Mechanism, Cross Border Trade/Regional Power Market in South Asia** in Dhaka, Bangladesh on 10 – 11 December 2017. The event was arranged at Hotel Bengal BlueBerry in collaboration with the Department of Power Cell, Power Division Ministry of Power, Energy and Mineral Resources, Bangladesh as the Knowledge Partner (copy of the Workshop Program is available at Annexure I).

2. SEC especially envisaged this training workshop “System Operation and Settlement Mechanism, Cross Border Trade/Regional Power Market in South Asia” under its thematic programme area of “Power and Energy Trade (PENT), aiming to enhance capabilities of the power planners/stockholders in carrying out to prepare the professionals of SAARC Member States for undertaking cross border trade through its modalities including system operation and settlement mechanism.

Objective

3. The objective of organizing this workshop is to prepare the professionals of SAARC Member States for undertaking cross border trade through its modalities including system operation and settlement mechanism.

Participation

4. A total of 30 delegates from i) Member States Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka; ii) Resource Persons from Bangladesh, India & Pakistan attended this training workshop (participant list is available at Annexure II). The workshop attracted an overwhelming participation from the host Member State Bangladesh; Bangladeshi delegates, dominated by SEC’s Knowledge Partner for this Workshop i.e. Power Division, Ministry of Power, Energy and Mineral Resources, Bangladesh followed by delegates from Power Cell.

Major Aspects Covered

5. The Workshop focused on following major activities

- Sharing the best regional practices pertaining to System Operation including Scheduling and Dispatch) and Settlement Mechanism (energy accounting and settlement procedures for cross border trade
- Lectures on Energy Exchange, Interconnection, Harmonized Regulatory Regimes, Commercial Agreements, Best Practices Pertaining to Negotiation of Terms and Conditions, Payment Security Mechanism, Tenure of Electricity Trade, etc.
- Knowledge sharing on different types of power trading models prevailing in the world
- Knowledge sharing on pre-requisites for setting up, features and functioning of competitive power market

6. The workshop started with the Inaugural session chaired by Mr. Mohammad Hossain, Director General, Power Cell, Power Division, Ministry of Power, Energy and Mineral Resources, Government of Bangladesh, followed by five technical sessions. The event was closed with the Valedictory Session on second day of the event i.e. 11th December 2017,

chaired by Dr. Ahmad Kaikaus, Secretary, Power Division, Ministry of Power, Energy and Mineral Resources, Government of Bangladesh.

Inaugural Session

7. Mr. S.M.Mohibur Rahman, Program Coordinator, SAARC Energy Centre welcomed the resource persons and all the delegates from SAARC Member States for attending the workshop and extending keen interest. He especially thanked Chief Guest, Mr. Mohammad Hossain, DG, Power Cell, Power Division for his gracious presence at this workshop and for encouraging the SAARC endeavor for enhancing capacity of the regional power planners/analysts.

8. On behalf of Director SEC, Mr. Mohibur Rahman, RF(TT) in his welcome address briefly introduced SEC and its program activities as the SAARC Centre of Excellence on energy. He highlighted that in view of the huge financial investments, required for addition of new power projects, power planners as well as decision makers, throughout the world, have been forced to prioritize smart solutions, modern technology and optimal utilization of available resources.

9. He added that there are various load forecasting tools available, but almost all these tools have their pros and cons. Consequently, most of the countries use multiple tools to generate different scenarios; the sole purpose remains to facilitate the decision makers with maximum number of potential options. Considering this criticality, SEC has organized this workshop in Bhutan on their exclusive demand, to apprise the SAARC professionals with the options available, their strengths, weaknesses and potential impact of selection with strong emphasis on comparison between them.

10. Sk. Munir Ahmed, Focal Point and Director, Power Cell from Bangladesh shared his strong belief that that this Training Workshop will help Member States in moving ahead on the road to modern technology and energy security through complementing efforts of professionals (present in the workshop) and many others.

11. Mr. Mohammad Hossain, DG, Power Cell, Power Division, Ministry of Power, Energy and Mineral Resources, Bangladesh; in his key note address gave an in depth overview of Bangladesh's power sector scenario and shared the experiences of challenges and opportunities on cross border electricity trade and power market of Bangladesh chapter with SAARC Member States.

12. Hon'ble State Minister, Mr. Nasrul Hamid, Government of the Peoples Republic of Bangladesh has given his kind consent to chair the Inaugural Session, but all of a sudden he was called by the PM's house for emergency meeting. Mr. Mohammad Hossain chaired the Inaugural Session. In his address, the Chief Guest welcomed all delegated from SAARC Member States, Resource Persons and SEC officials at Dhaka, Bangladesh. He thanked SEC for organizing this workshop in Bangladesh, by providing this opportunity to the Bangladeshi's power sector professionals in their homeland.

13. The Chief guest informed audience that cross border trade in electricity has already been started between Bangladesh and India since many years and some others regional electricity trade is under consideration.

14. He confidently told that this training workshop will enhance the knowledge base of power planners of SAARC Member States on various aspect of regional electricity trade, settlement mechanism, payment system and related issues and the participants would fruitfully utilize this knowledge to ensure energy security of their respective countries.

15. He also showed strong belief that SEC under the leadership of Director SEC will provide more advance trainings to enhance the capacities of our Member States, which will go a long way in integrating the network for successful and vibrant Asia. In the end Mr. Hossain thanked professionals from SAARC Energy Centre and all the delegates and resource persons for their participation.

Technical Proceedings

16. Brief information on the technical proceedings, designed in multiple sessions, is as follows (All the presentations delivered during the workshop are available at SEC's website www.saarcenergy.org):

A. Technical Session 1

- **Introduction to SAARC Energy Centre, Islamabad**

Mr. Ram Gopal Lageju, Research Fellow (Energy Trade), SAARC Energy Centre

- **Country Scenario: Presentations by the participating Member States**

- a. Bangladesh
- b. Bhutan
- c. India
- d. Nepal
- e. Pakistan
- f. Sri Lanka

- **Experiences and Learnings from Competitive Power Market (power trading and exchange) Development in South Asian:-Approach for developing Competitive Regional Power Market in South Asia**

Mr. Rajiv Ratna Panda, Program Coordinator, IRADe/USAID SARI/EI, India.

B. Technical Session 2

- **Pakistan System Network and its Operation**

Engr. Ilyas Ahmed, General Manager, System Operation, National Transmission and Distribution Ltd, Lahore, Pakistan.

C. Technical Session 3

- **Technical Challenges of System Plannin & Operatio of Integrated Grid of SAARC Region**

Engr. Hassan Jafar Zaidi, Power Planners International, Pakistan

- **Cross Border Trade through Energy Exchange**

Mr. Nitin Sabikhi, Indian Energy Exchange Limited, India

D. Technical Session 4

- **Envisaged South Asian Regional Power Market Development & Learning from International Power Exchanges/Pools**

Mr. Gaurav Jain, Sr. Research Analyst, IRADe/USAID SARI/EI, India

E. Technical Session 5

- **Prospects and Challenges of Cross Border Electricity Trade in SAARC Countries**

Engr. Mohammad Hossain, DG, Power Cell, Power division, Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh

F. Dinner Reception

17. SAARC Energy Centre hosted welcome dinner on Sunday, 10th December 2017 for the workshop delegates providing an informal opportunity for close interaction and networking. A number of dignitaries from Power Cell, Power Division, Ministry of Power, Energy and Mineral Resources, Government of Bangladesh, along with technocrats joined on this occasion.

Valedictory Session

18. Mr. S.M. Mohibur Rahman, Program Coordinator thanked the Chief Guest, Dr. Ahmad Kaikaus, Power Division, Ministry of Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh & Mr. Mohammad Hossain, Governing Board Member, SAARC Energy Centre for joining this invaluable event. He briefly informed that SEC's program activities are focused on different thematic areas including technology transfer and knowledge sharing. He commented that SEC is mandated to launch demand based program activity calendar designed and developed through participatory approach. He requested the Chief Guest, Resource Persons and all the SAARC delegates to contribute their ideas for future planning of program activities of SEC.

19. Engr. Mohibur reiterated SEC's commitment to continue working through such knowledge sharing activities and proposed closed liaison among the resource persons and delegates for sustained growth and development. Mr. Mohibur opined that SAARC Energy Centre is confident that this Workshop will facilitate the SAARC policy makers/analyst in moving ahead on the road to improve its cross border/regional trade/interconnections in power sector and through synergetic efforts of professionals like you.

20. The Chief Guest, Dr. Ahmad Kaikaus chaired the valedictory session. Through his address to the workshop delegates, he congratulated SAARC Energy Centre for organizing this invaluable opportunity for achieving and maximizing the knowledge sharing opportunities. He commented that SAARC Energy Centre is playing a vital role to enhance cooperation to address regional energy issues and to enhance SAARC knowledge base in energy development and management.

21. He addressed the SAARC Energy Centre acts as a think tank in Energy initiatives for SAARC region. He expected that useful proposals and initiatives should be considered by the appropriate SAARC body for immediate effect. He also focused on SAARC Framework Agreement and SAARC Market for Electricity (SAME).

22. Dr. Ahmad Kaikaus showed greater satisfaction over the feedback from the participants of this training workshop to have good understanding cross border electricity trade in SAARC region.

23. In the end the chief guest thanked the resource persons for coming to Bangladesh and sharing their profound knowledge to the participants and providing them with hands-on training. He also thanked program coordinator and SEC's management and hope for its support with such workshops in future to build the capacity of Member States especially Bangladeshi's young power sector agencies.

24. Ms. Rishika Sharan, Director, Central Electricity Authority, Government of India offered vote of thanks on behalf of all the delegates to the Chief Guest, Resource Persons, Power Cell and Power Division, Ministry of Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh, SAARC Energy Centre and hotel staff for successful organizing of the workshop and managing high enthusiasm and involvement on the part of delegates throughout the process at the end. Mr. Mohibur Rahman, Program Coordinator, SEC concluded the Workshop Program with wishing of safe return to home for everyone.



Agenda

SAARC Training Workshop Program “System Operation and Settlement Mechanism, Cross Border Trade/Regional Power Market in South Asia” Dhaka, Bangladesh | 10 – 11 December, 2017

Saturday, 09 December, 2017	
Arrival of Delegates: Dhaka, Bangladesh	
Sunday, 10 December, 2017	
Inaugural Session at The Hotel Blue Berry, Gulshan, Dhaka, Bangladesh. Chair: Mr. Mohammad Hossain, DG, Power Cell, Power division, Ministry for the ministry of Power, Energy and Mineral Resources, Govt. of The People's Republic of Bangladesh	
Time	Description
0900 – 0930	Registration
0930 – 0935	Recitation from Holy Qur'an
0935 – 1000	Welcome address on behalf of Director, SAARC Energy Centre (SEC) Engr. S.M.Mohibur Rahman, Program Coordinator, SEC
1000 – 1030	Keynote Address Mr. Mohammad Hossain, Director General, Power Cell, Power Division, Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh
1030 – 1045	Address by the Chief Guest Hon'ble Nasrul Hamid Bipu, State Minister, Ministry of Power, Energy and Mineral Resources. Govt. of Bangladesh.
1045 – 1115	Group Photo and Refreshments
Technical Session 1	
1115 – 1135	Introduction to SAARC Energy Centre and Cross Border Electricity in South Asia. Engr. Mr. Ram Gopal Lageju, Research Fellow (Energy Trade), SEC
1135– 1230	Country Scenario Presentations by the delegates of SAARC Member States
1230 – 1300	Experiences and Learnings from Competitive Power Market (power trading and exchange) Development in South Asian:-Approach for developing Competitive Regional Power Market in South Asia Mr. Rajiv Ratna Panda, Program Coordinator, IRADe/USAID SARI/EI, India.
1300 – 1400	Break (Prayer/Lunch)

Technical Session 2	
1400 – 1430	Pakistan System Network and its Operation Engr. Ilyas Ahmed, General Manager, System Operation, National Transmission and Distribution Ltd, Lahore, Pakistan.
1500 – 1530	Coffee/Tea Break
Technical Session 3	
1530 – 1600	Technical Challenges of System Planning & Operation of Integrated Grid of SAARC Region. Engr. Hassan Jafar Zaidi, Power Planners International, Pakistan
1600 – 1630	Title: Cross Border Trade through Energy Exchange Mr. Nitin Sabikhi, Indian Energy Exchange Limited, India
1630 - 1635	Invitation of Welcome Dinner S.M.Mohibur Rahman, Program Coordinator, SEC
Welcome Dinner	
1900 - 2100	Welcome Dinner hosted by SAARC Energy Centre at Bengal Blueberry, Dhaka.
Monday, 11 December, 2017	
Technical Session 4	
Chair: <i>Dr Ahmad Kaikaus, Secretary, Power Division, Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh.</i>	
0930 – 1030	Envisaged South Asian Regional Power Market Development & Learning from International Power Exchanges/Pools Mr. Gaurav Jain, Sr. Research Analyst, IRADe/USAID SARI/EI, India
1030 – 1100	Working Coffe/Tea Break
Technical Session 5	
1100 – 1200	Prospects and Challenges of Cross Border Electricity Trade in SAARC Countries Engr. Mohammad Hossain, DG, Power Cell, Power division, Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh.
	Valedictory Session Chair: <i>Dr Ahmad Kaikaus, Secretary, Power Division, Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh.</i>
1200 - 1215	Summing-up and The Way Forward Engr. S.M.Mohibur Rahman, Research Fellow (Technology Transfer), SEC, Islamabad
1215 – 1230	Address by the Chief Guest Dr. Ahmad Kaikaus, Secretary, Power Division, Ministry of Power, Energy and Mineral Resources, Govt. of Bangladesh)
1230 – 1300	Award of Shields
1300 – 1330	Distribution of Certificates

1330 - 1445	Vote of Thanks by delegates from Member States
1445 – 1500	Group Photo & Refreshments
1500 -	Delegates Choice to roam around Dhaka City.
Tuesday, 12 December, 2017	
Delegates Depart from Dhaka, Bangladesh	



Annexure II

List of Resource Persons, Delegates & SEC Team Members
“Training Workshop on System Operation and Settlement Mechanism, Cross
Border Trade/Regional Power Market in South Asia”
 Dhaka, Bangladesh | 10 – 11 December 2017

#	Name	Member State	Contact Details
Resource Persons			
1.	Mr. Engr. Mohammad Hossain Director General, Power Cell Ministry of Power ,Energy and Mineral Resources, Bangladesh	Bangladesh	mhossain@powercell.gov.bd Cell: +88-01711868319
2.	Engr. Ilyas Ahmed, General Manager System Operation NTDC Lahore, Pakistan	Pakistan	ilyasahmed67@ntdc.com.pk 042-99203145
3.	Engr. Hassan Jafar Zaidi, Chief Executive Officer Power Planners International (Private) Limited, Pakistan	Pakistan	hassan@powerplannersint.com +92 301-4145264
4	Mr. Rajiv Ratna Panda, Project Coordinator, IRADe / USAID SARI/EI, New Delhi, India.	India	rajivpanda@irade.org Telephone: +91 9958126333
5	Mr. Gaurav Jain, Sr. Research Analyst. Energy & Power System USAID SARI/EI, New Delhi-110017, India	India	gjain@irade.org Cell : +91 9643380643 Phone: 001-26692714, Extn-102
6	Mr. Nitin Sabikhi, Indian Energy Exchange, New Delhi, India	India	Nitin.Sabikhi@iexindia.com Cell # +91 96541 25157

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Delegates			
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9	Engr. Md. Mahbubur Rahaman Director Bangladesh Power Development Board (BPDB) Ministry of Power, Energy and Mineral Resources, Bangladesh.	Bangladesh	mrahman_egcb@yahoo.com Cell # +880 17130 11749
10	Mr. Denkar Deputy Executive Engineer, Department of Hydropower & Power Systems Ministry of economic Affairs, Bhutan	Bhutan	tashipem@moea.gov.bt +975 1742 13 57
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12	Mr. Mohamed Thoriq Ahmed Executive Manager, Fenaka Corporation Limited	Maldives	009607791099 Email: info@fenaka.com.mv Tel : (960) 3007555 Fax: (960) 3327555
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16	Ms. Rishika Sharan Director, Central Electricity Authority Government of India	India	rishika_sh@yahoo.com 00919868021299
17	Ms. Nuwani Wathsala Kodithuwakku Electrical Engineer- Energy Marketing Transmission Division Ceylon Electricity Board Colombo, Sri Lanka	Sri Lanka	nuwani.eng.pera@gmail.com ee3ema.tr@ceb.lk 0094711235613
18	Mrs. Geethani Babarande Guruge Chief Engineer System Control Branch Ceylon Electricity Board, Colombo, Sri Lanka.	Sri Lanka	cesosc.tr@ceb.lk geethani.01@yahoo.com 0094718731103
19	Mr. Maqsood Ahmed Qureshi General Manger Power System Planning Power National Transmission and dispatch Company Ltd, Lahore, Pakistan.	Pakistan	
20	Ms Afreen Abdullah Assistant Director, Power Cell Power Division, MoPEMR, Bangladesh.	Bangladesh	
SAARC Energy Centre			
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Focal Person – Knowledge Partner			
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Brief Pictorial View of the Workshop





















