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*Second Meeting of SAFIR Working Group on
'Regulatory Cooperation to Facilitate Knowledge sharing, addressing
Crosscutting Energy/ Electricity Regulatory Issues and
Capacity Building in South Asia'*

Minutes of the Meeting



Left to Right: Mr. Md. Firoz Zaman, Deputy Director, BERC, Bangladesh ; Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI IRADE ; Honourable Mr. Monowar Islam, Chairman, BERC, Bangladesh ; Mr. Pankaj Batra, Project Director, SARI/EI/ IRADE ; Ms. Rashmi Somasekharan Nair, Deputy Chief (RA), CERC India; Mr. Gaseb Dorji, Chief, Economic Research , BEA, Bhutan

**4th December 2019,
Radisson Blu Dhaka Water Garden
Dhaka, Bangladesh**



The Second Meeting of the SAFIR Working Group was held on 4th December 2019 at Radisson Blu, Dhaka, Bangladesh. SAFIR Working Group members from South Asian countries, along with representatives of SARI/EI secretariat at IRADe (Technical and Knowledge support provider to the Working Group), attended the meeting. The list of Participants is attached at Annexure-I.

Inaugural Session - 1

Introduction by the Participants: All SAFIR Working Group members and participants gave a brief introduction about themselves and their organisation.

Mr. Pankaj Batra, Project Director, SARI/EI, welcomed the Chief Guest, Honourable Mr. Monowar Islam, Chairman, Bangladesh Energy Regulatory Commission and current Chairperson, SAFIR, and the distinguished members to the second meeting of the SAFIR Working Group on Regulatory Cooperation (RC) to facilitate knowledge sharing, addressing cross-cutting energy/ electricity regulatory issues and capacity building in South Asia. He highlighted the need for deeper energy cooperation to advance cross-border energy trade in the region which would benefit all the countries. For this to happen, there was a need for harmonization of regulations and policies among the South Asian countries. He spoke of the extension of USAID's SARI/EI program by four years, with focus on implementation of tri and multilateral cross border electricity trade. Mr. Batra noted that due to the differential in peak demand between the countries of South Asia over a day, as well as on a seasonal basis, there are opportunities of export/ import of power between the countries. Also, the differential in the seasonal variation in hydro power availability in hydro power rich countries would be ideal complement the predominantly base load thermal power of a neighbouring country. He highlighted about the recent positive developments in India, such as, allowing cross-border power to be traded through the Indian transmission system, and neighbouring countries to participate in Indian power exchange and banking of power between India and Nepal. He further added that India has stranded power plant capacity, which can be tied up for meeting the power demand of Bangladesh. Mr. Batra highlighted that the SARI/EI team would present on the Common Minimum Grid Code for South Asia, developed at the behest of CERC, as well as the status of work done by SARI/EI secretariat for supporting the SAFIR Working Group.

Honorable Mr. Monowar Islam, Chairman, Bangladesh Energy Regulatory Commission, Bangladesh and Chairperson of South Asia Forum for Infrastructure Regulation (SAFIR), delivered the keynote address in the meeting. During his keynote address, he highlighted the importance of energy and regulatory cooperation among South Asian countries. He stressed that the SAFIR Working Group on "Regulatory Cooperation to Facilitate Knowledge sharing, addressing Cross-cutting Energy/ Electricity Regulatory Issues and Capacity Building" is a step in the right direction under SAFIR, and hoped that the Working Group will provide the needed technical inputs and contribute to the advancement of energy and regulatory cooperation among South Asian Countries (SACs). He said that India and Bangladesh are performing very well on energy cooperation, and now it is time to move towards a harmonized policy and regulatory framework, trilateral and multilateral power trade and development of a regional power market in the South Asia Region.

Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI, delivered the vote of thanks and recapitulated on the conception of the Working Group almost five years back. He expressed pleasure on the successful constitution of the Working Group and its work on various key activities. Citing an example, Mr. Panda said that the European integration initiatives also started with small working level initiatives, which ultimately flourished to its current heights, and hoped that this Working Group, in its own unique way, will positively contribute in deepening/ advancing the energy and regulatory cooperation among SACs. He thanked



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Honorable Mr. Monowar Islam, Chairman, Bangladesh Energy Regulatory Commission, Bangladesh and Chairperson of South Asia Forum for Infrastructure Regulation (SAFIR) for delivering the keynote address and Mr. Pankaj Batra, Project Director, SARI/EI, for delivering the welcome remarks. He thanked each of the members from Bangladesh, Bhutan and India for accepting to participate in the meeting. He informed that members from Pakistan and Sri Lanka though confirmed but could not participate in the meeting due to some unavoidable circumstances.

Session- 2: Presentation on Common Minimum Grid Codes for Facilitating Cross Border Electricity Trade

As per the agenda¹, Mr. Pankaj Batra, Project Director, SARI/EI, and Rajiv Ratna Panda Technical-Head, SARI/EI, presented on the Common Minimum Grid code for facilitating cross-border electricity trade in the South Asia region. Mr. Batra stated that the Code gave the minimum requirements to be fulfilled by all the countries in order to promptly initiate cross-border trading of power, without affecting grid stability. The objectives of the Common Minimum Grid Code are: a) Facilitating cross-border trading of power, while ensuring secure, reliable, economic, and efficient operation of the grid; b) Facilitating coordinated optimal operation of the South Asian grid; and c) Facilitating coordinated and optimal maintenance planning of generation and transmission facilities in the South Asian grid. The Common Minimum Grid Code is structured in four parts: i) Connection Code, ii) Operating Code, iii) Scheduling and Despatch Code, and iv) administration of the Grid Code. The Common Minimum Grid Code is applicable to all countries of South Asia, who will get connected to the South Asia grid through a synchronous or asynchronous (i.e. HVDC) connection. Each country will initially be represented by a single point of contact for the initiation of implementation of the Common Minimum Grid Code. The single point of contact would be supported by the relevant Ministry dealing with power, the regulator, the transmission agency, the system operator and the accounts settlement/ market operator of the respective country. Later, to formalize the process of implementation, regional coordination bodies need to be formed for South Asia region at various levels, such as at the regulator level, planning body level, transmission utility level, system operator level and at the accounts settlement/ market operator level. A South Asia Power Portal would be formed for information of all South Asian countries. Once the Common Minimum Grid Code is finalised and adopted by SACs, it will enable seamless flow of electricity and integration of power system in a safe, secure and reliable manner. The copy of the presentation is attached in the link below.

<https://sari-energy.org/wp-content/uploads/2019/12/Common-Minimum-Grid-Code-for-South-Asia-SAFIR-WG-4th-Dec-2019-1.pdf>

Session - 3: Evolution of Cross-border Electricity Trade in South Asia and the Future Outlook

Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI, made an interactive presentation on the evolution of Cross-border Electricity Trade in South Asia and its future outlook. The presentation highlighted and dwelled upon four key future trends – (i) moving from bilateral to tri/multilateral and market integration; (ii) role of regional hydro power in renewable integration and grid balancing; (iii) Moving towards market form of cross-border power trade; and (iv) trans-regional energy integration – South Asia and South-East Asia. The presentation stressed on the ‘Role of Cross-border Hydro in Renewable Integration and Grid Balancing’, in the context of India’s high RE target of 175 GW by 2022, which was recently enhanced to 440 GW by 2030. [As per the CEA-Draft report on optimal generation capacity mix -2029-30 published in FEB 2019](#), the renewable energy sources (solar + wind) installed capacity will become 440 GW by the end of year 2029-30, which is more than 50% of the total installed capacity of 831 GW. This will give rise to the opportunity

¹ <https://sari-energy.org/wp-content/uploads/2019/12/Final-Agenda-Second-Meeting-of-SAFIR-Working-Group.pdf>



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of developing regional balancing and ancillary service market in the region. The copy of the presentation is attached in the link below.

<https://sari-energy.org/wp-content/uploads/2019/12/Evolution-of-Cross-Border-Electricity-Trade-in-South-Asia-and-Future-Outlook-SAFIR-WG-4-Dec-2019-1.pdf>

Session - 4: Country Presentation by Members on the Existing Energy/ Electricity Regulatory Framework and Perspective on Regulatory Cooperation to facilitate Knowledge-sharing, and addressing Cross Cutting Energy/Electricity Regulatory Issues

SAFIR Working Group Members from Bangladesh, Bhutan and India made country presentations on their respective country's existing energy /electricity regulatory framework and presented their perspective on regulatory issues, followed with discussions.

Md. Firoz Zaman, Deputy Director of Bangladesh Energy Regulatory Commission (BERC), made the country presentation of Bangladesh on 'Existing Energy/ Electricity Regulatory framework and Perspective on Regulatory Cooperation to Facilitate Knowledge sharing and addressing Cross Cutting Energy/Electricity Regulatory Issues'. The presentation highlighted the salient provisions of Bangladesh Energy Regulatory Commission Act, 2003, and the major functions of Bangladesh Energy Regulatory Commission (BERC). Currently, Bangladesh imports 1160 MW from India (1000 MW (+/-400 KV HVDC) through Bheramara (Bangladesh) – Baharampur (India) interconnection, and 160 MW (132 KV Aerial mode) through Tripura (India) - Comilla (Bangladesh). Bangladesh aims to increase the imports to 9000 MW by 2041. The presentation highlighted the various challenges for power trade such as purchase of power through development of hydro power projects in Nepal, Bhutan and North-eastern India at competitive prices, development of regional transmission inter-connections with adequate capacity, non-discriminatory 'Open Access' power flow regulations to allow power transmission through a third country and removal of technical and commercial barriers for power trade, such as harmonization of grid codes, standards, norms, dispute resolution etc. The presentation focused on the need to: a) harmonize codes and standards; b) strengthen regulatory bodies through capacity building; and c) collect, review, maintain and publish statistics and data. A copy of the Mr. Zaman's presentations is attached in the link below.

<https://sari-energy.org/wp-content/uploads/2019/12/Mr.-Firoz-BERC-SAFIR-WG-4-Dec-2019-1.pdf>

Mr. Gaseb Dorji, Chief Economic Research Division, Bhutan Electricity Authority, made the country presentation of Bhutan on the existing 'Energy/ Electricity Regulatory framework and Perspective on Regulatory Cooperation to Facilitate Knowledge-sharing, addressing Cross Cutting Energy /Electricity Regulatory Issues'. The presentation highlighted the current generation capacity in the country, future plans for export of electricity, key features of the Electricity Act - 2001, focusing on the role and mandate of Bhutan Electricity Authority. The presentation also informed about various BEA regulations such as Tariff Determination 2016; Accounting & Reporting 2006; Regulatory Fees Regulation 2006; Grid Code 2008; Distribution Code 2008; Safety regulation; Internal House Wiring Regulation 2016. Mr. Dorji's presentations is attached in the link below.

<https://sari-energy.org/wp-content/uploads/2019/12/Bhutan-BEA-SAFIR-WG-4-Dec-2019-1.pdf>

Ms. Rashmi Somasekharan Nair, Deputy Chief (Regulatory Affairs), Central Electricity Regulatory Commission, the Central Regulator of India, made the country presentation of India on the role and initiatives of Central Electricity Regulatory Commission. The presentation was on: a) India's power sector overview; b) transmission flow-gates in India; c) generation, transmission & distribution ownership; d) regulatory framework; and e) CERC role & initiatives. The presentation dwelled upon how regulation has



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helped in creating a vibrant power market in India. Currently there are 600+ generators, 30+ transmission licensees, 70+ distribution utilities, two power exchanges and about 40 trading licensees. The presentation also touched upon the cross-border trade of electricity, real-time energy market design, day-ahead market re-design: market-based economic dispatch and re-design of ancillary services framework. Ms. Rashmi's presentations is attached in the link below.

<https://sari-energy.org/wp-content/uploads/2019/12/Role-and-Initiatives-of-CERC-Ms.-Nair-SAFIR-WG-4-Dec-2019-2.pdf>

Session 4 and 5: Presentation on Updates on the TOR of the Working Group, discussion of work plan/ plan of action for the next year (2019-2020), and discussion & strategy to implement the various activities planned

Mr. Pankaj Batra, Project Director, SARI/EI, and Mr. Rajiv Ratna Panda Technical-Head, SARI/EI, presented on the updates on the TOR of the Working Group and discussed the work plan/ plan of action for the next year (2019-2020). The key activities that were presented and discussed in detail along with the revised timelines were:

- *Study on South Asia electricity regulations to develop regulatory pathway for electricity/ energy exchange and energy cooperation in South Asia:* The Study on South Asia electricity regulations to develop regulatory pathway or a roadmap for electricity/ energy exchange and Energy Cooperation in SA will review, study and analyse the existing energy/ electricity regulations of each South Asian country and will suggest a regulatory pathway/ roadmap for electricity/ energy exchange, cross border electricity/energy trade and Energy Cooperation (EC) in South Asia.
- *Study on regulatory interventions for Grid discipline and Grid reliability in the region:* The Study on regulatory interventions for Grid discipline and Grid reliability in the South Asian region will review and analyse all the existing relevant electricity regulations, mechanisms and technical frameworks related to Grid discipline and Grid reliability of each South Asian country, both from the perspective of integration/ unification of grid within each country, as well as cross-border power grid integration. The study will come out with: a) detailed set of regulatory measures/ intervention and mechanism needed for enhancing Grid discipline & Grid reliability in SA region, along with detailed explanatory memorandum; and b) roadmap (regional and country-wise) and action plan for implementation of above suggested regulatory measures/ interventions.
- *Study on 'Benefits of Cross Border Electricity Trade - Potential Optimum Utilisation and Reduction in Cost of Supply':* The Study will review and analyse the load and generation patterns in all neighbouring countries and study the season-wise trade/ barter of power between the countries to ensure 24x7 supply to all countries and optimum utilization of generation assets, including quantification of benefits for all countries. The Study will work out the savings in generation reserves for all countries and will calculate the reduction in cost of supply for each country.
- *Organizing a 'South Asia Energy Sector Training and Capacity Building program on Energy Regulation for Energy Cooperation and Exchange of Electricity in South Asia':* The South Asia Energy Sector Training and Capacity Building program on energy regulation for energy cooperation and exchange of electricity in South Asia (three modules of 4-5 days each) will cover various subjects such as Transmission Planning, Coordinated System Operation, Licensing Regimes, Tariff Frameworks, Grid Codes, Open access, Transmission Pricing, Imbalance Settlements, Power Trading and Power Exchange Mechanism, Power Market Regulations and International Experiences.
- Developing South Asia Energy/Electricity Regulatory Compendium
- *SAFIR Regulatory Newsletter (quarterly):* The quarterly SAFIR regulatory newsletter aims to increase regulators' knowledge in the SA region. It will track and compile various energy regulatory



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and policy developments in the region, as well as analysis on these. It will cover power, oil and gas sectors, and will be circulated among the regulatory commission/policy makers of SA countries in an electronic format.

- *Creating a web portal on 'South Asia Energy/ Electricity Knowledge Resource Database':* The web portal on 'South Asia Energy/ Electricity Knowledge Resource Database' aims to create an energy/ electricity sector data base/ dashboard. The web portal will have data analytics, indicative graphs, pie charts and figures, infographics, etc. The South Asian members can also get custom made graphs as per the parameters decided by them using the portal. Energy data is a critical enabler for regulators and the research community in formulating and analysing energy policies. Effective policy formulation in the energy sector relies on rigorous analysis of readily available, accurate, reliable and comprehensive data. Availability of such data requires institutional mechanisms and processes to collect, process and disseminate data in a timely manner. Thus, the web portal on 'South Asia Energy/ Electricity Knowledge Resource Database' will be immensely useful in this regard.

The members were in agreement with the revised timelines of the various activities of SAFIR Working Group and urged SARI/EI secretariat at IRADe to implement the activities as quickly as possible, as it would be immensely useful to all South Asian nations and will complement the various efforts being undertaken for enhancing cross border energy trade in the region.

The presentation also touched upon 'Expected Development Outcomes of the Phase IV (Extended Phase 2018-2022)' of SARI/EI program. A copy of the detailed presentation is attached in the link below.

<https://sari-energy.org/wp-content/uploads/2019/12/Updates-on-the-TOR-of-the-SAFIR-Working-group-Plan-for-Implementation-of-Key-Activities.pdf>

Way Forward and Action Plan:

1. 3rd Meeting of SAFIR Working Group scheduled in March 2020 preferably in Sri Lanka or Nepal.
2. SARI/EI to share the terms of reference of "South Asia Energy/Electricity Knowledge Resource Database" for members' comments and suggestions. After incorporating the comments and suggestions, SARI/EI will initiate the process for Request for Proposal.
3. SARI/EI to share the terms of reference "Study on South Asia Electricity Regulations to develop Regulatory Pathway for Electricity/ Energy exchange and Energy Cooperation in South Asia" for members' comments and suggestions. After incorporating the comments and suggestions, SARI/EI will initiate the process for Request for Proposal.
4. SARI/EI to draft the design of the SAFIR Regulatory Newsletter and terms of reference for the same. The same will be shared with members for comments and suggestions. After incorporating the comments and suggestions, SARI/EI will initiate the process for Request for Proposal.
5. It was also proposed to take up another study on balancing generation, on a regional basis, and provide a Report for the same.
6. It was agreed to have more frequent meeting (at least twice in a year) to take a stock of the activities of the SAFIR working Group.



Annexure-I

List of Participants at the Second Meeting of SAFIR Working Group on 'Regulatory Cooperation to Facilitate Knowledge sharing, addressing Cross-cutting Energy/ Electricity Regulatory Issues and Capacity Building in South Asia', on 4th December 2019, at Radisson Blu Dhaka Water Garden, Dhaka, Bangladesh

S. No	Name	Designation & name of Organization	Country	Email address	Phone/Mobile Signatures
CHIEF GUEST					
1	Honorable Mr. Monowar Islam	Chairman, Bangladesh Energy Regulatory Commission,	Bangladesh	chair.berc@gmail.com	+88-02-55013517
SAFIR WORKING GROUP MEMBERS					
2	Md. Firoz Zaman	Deputy Director, BERC,	Bangladesh	firozberc@gmail.com	+88 01779174719
3	Mr. Gaseb Dorji	Chief Economic Research Division,	Bhutan	ggdorji@gmail.com	+975 2329953
4	Ms. Rashmi Somasekharan Nair	Deputy Chief (RA), CERC	India	rashmisnair102@gmail.com	+91 9560022909
SARI/EI/IRADe Key Personnel					
7	Mr. Pankaj Batra	Project Director, SARI/EI, IRADe	India	pbatra@irade.org	+91-9650981062
8	Mr. Rajiv Ratna Panda	Technical-Head, SARI/EI, IRADe	India	rajivratnapanada@irade.org	+91 9650598697