

2019

SARI/EI Inception Meeting in Bhutan, Bangladesh, Nepal, Sri Lanka: Key Action Points



RAJIV RATNA PANDA



SARI/EI/IRADe participation in the South Asia Forum for Infrastructure Regulation Regulators (SAFIR) Executive Committee Meeting (ECM) held on 22nd November 2018 at Taj Tashi, Thimphu, Bhutan and SARI/EI/IRADe meeting with Bhutan Stakeholders for gathering support and cooperation for extended Phase of SARI/EI Program on 23rd November 2018.

SARI/EI/IRADe delegation comprising Mr. Pankaj Batra, Senior Advisor, IRADe and Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe visited Bhutan on 22nd and 23rd November, 2018 to participate and make a presentation on “SAFIR Working Group activities and implementation of the Annual Work plan/Action Plan of SAFIR Working Group” in the South Asia Forum for Infrastructure Regulation Regulators (SAFIR) Executive Committee Meeting (ECM) held on 22nd November 2018 and also to meet various Bhutan power sector Stakeholders on 23.11.2018, to intimate them of the extension of the SARI/EI program to 2022 and to brief them about the various activities of SARI/EI under the extended phase (2018-2022).

On the 22nd November, Mr. Pankaj Batra and Mr. Rajiv Ratna Panda participated in the ECM and made a detailed presentation on the Plan for Implementation of Key Activities of SAFIR-Working Group. Mr. Batra



Left to Right - Mr.Md. Firoz Zaman, Deputy Director, Bangladesh Energy Regulatory Commission (BERC), Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe, Mr. Monowar Islam ndc, Chairman, BERC, Mr. Saliya Mathew, Chairman, Public Utilities Commission of Sri Lanka, Mr. Pankaj Batra, Senior Advisor, IRADe, Mr. Arun Kumar, Assistant Secretary, Central Electricity Regulatory Commission, India

highlighted the potential benefits of cross border energy/electricity trade (CBET) and win-win situation that exists for all the South Asian countries because of different load curves, Peak time differences, seasonal differences, difference in holidays & work hours etc. in South Asia (SA). He said that region as a whole would benefit significantly because of cross border energy/electricity trade. He said that multilateral/trilateral power trade in the power exchange could be taken up later and must address the concern of India w.r.t. transmission congestion, higher uniform clearing price in the power exchange, and consequently the probability of domestic consumers getting deprived of electricity because of cross border energy/electricity trade. This can be done by making the rules accordingly. He also stated that it would be a good Idea to create a Forum of Transmission Utilities and System Operators in the SA Region for better coordination between the countries for CBET.

Mr. Panda introduced the extended Phase IV (2018-2022) of SARI/EI program and highlighted the Key Activities and expected Development Outcomes from the extended phase. He briefed the members about the objective and key activities of SAFIR group in detail, brief Terms of reference of the studies and presented the plan for implementation. The various activities that have been proposed are:

- ✓ Study/Research on Regulatory interventions for Grid discipline and Grid reliability in the SA region
- ✓ Study on Cross Border Trade of Electricity
- ✓ SA Energy Sector Training and Capacity Building program on energy regulation for Energy Cooperation in South Asia.
- ✓ SAFIR-Regulatory newsletter
- ✓ Web portal “SA Energy/Electricity Knowledge Resource Database/ Dashboards
- ✓ Annual South Asia Energy Data Book
- ✓ South Asia Energy/Electricity Regulatory Compendium and
- ✓ SAFIR Working Group Meetings planned for the year.

In response to the discussion on multilateral/trilateral power trade, he said a detailed study could be conducted for successful multilateral/trilateral power trade to enhance knowledge and awareness about the issues and possible solutions for a multilateral/trilateral power trade in SA.

The presentation was well received by all the Members. SAFIR ECM Members appreciated the various activities we had proposed and Members were eager that activities get implemented on priority, in particular the South Asia Energy/Electricity Knowledge Resource Database/Dashboards, Annual Energy Data Book and SAFIR-Regulatory newsletter, as well as the studies and training program proposed.

The delegation also had meetings with Dasho Yeshe Wangdi, Secretary, MOEA, Dasho Bhart Tamang, Member, the King’s privy council, CEO, Bhutan Power System Operation. During the meetings, the honorable officers of Bhutan agreed continued support for the SARI/EI program and the idea of South Asia Forum of Transmission Utilities and System Operators. The delegation also visited the Load Dispatch Centre of Bhutan that made a short presentation about system Operation of Bhutan, followed by discussions. The Delegation also visited the Punatsangtchu I and II hydro power project site to get a firsthand understanding about the progress of the above hydro power projects and issues/challenges being faced by these two large hydro projects. The delegation had a brief meeting with Joint Managing Director of PHPA-II, Shri Dorji P. Phuntshok and others.

Action Points:

- Securing Bhutan’s Nomination to TASK forces and PSC.
- Initiating the work toward implementation and institutionalization i.e. South Asia Forum of Transmission Utilities, South Asia Forum of System Operators
- Implementing the activities under SAFIR Working group i.e. 1) Study/Research on Regulatory interventions for Grid discipline and Grid reliability in the SA region 2) Study on Cross Border



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Trade of Electricity 3) SA Energy Sector Training and Capacity Building program on energy regulation for Energy

- Cooperation in South Asia 4) SAFIR-Regulatory newsletter 5) Web portal "SA Energy/Electricity Knowledge Resource Database/ Dashboards 6) Annual South Asia Energy Data Book 7) South Asia Energy/Electricity Regulatory Compendium.

The Trip of Bhutan Photos are attached as **Annexure-1**.



SARI/EI inception meeting with Bangladesh Stakeholders about the activities of the extended phase of SARI/EI (2018-2022) on 11th and 12th December, 2018 at Dhaka, Bangladesh.

SARI/EI/Integrated Research and Action for Development (IRADe) along with USAID and United State of Energy Association (USEA) visited Bangladesh key stakeholders in its inception meeting for developing the new scope for SARI/EI extended phase under the new umbrella program of USAID- Asia EDGE (Enhancing Development and Growth through Energy) on 11th -12th December 2018. They met Mr. M. Shahidul Islam, Secretary General, BIMSTEC, Dr. Ahmad Kaikus, Power Secretary, MPEMR (Ministry of Power, Energy and Mineral Resources), Bangladesh, Mr. Monowar Islam, Chairperson and Mr. Mizanur Rahman, Member, BERC (Bangladesh Electricity Regulatory Commission), Mr. Arun Kumar Saha, Chief Engineer, PGCB (Power Grid Corporation of Bangladesh) and Ms. Shahin Ahmed Chowdhury, Chairperson, Energy and Power Research Council (EPRC). The IRADe team briefed them on the continuation of the SARI/EI program for another four years.

The team informed them that it is working towards development of South Asian Forum of Transmission Utilities (SAFTU) and South Asian Forum for System Operators and also working towards creating a free and competitive market through developing institutions such as South Asian Regional Electricity Market (SAREM) and operationalization of South Asian Regional Power Exchange (SARPEX) etc. The esteemed officers of the Bangladesh Government assured them of their continued support for the program.

Action Points:

- **Meeting with BIMSTEC:** Both sides agreed that mutual cooperation will help both the entities to achieve their objectives. SARI/EI and BIMSTEC will mutually decide their future work-plan/action points for enhancing the regional energy cooperation in South Asia and South East Asian region.
- **Meeting with Energy and Power Research Council (EPRC):** It was mentioned by Mr. batra that it would be worthwhile for EPRC to visit their counterpart in India, i.e. Central Power Research Institute (CPRI) and collaborate with them



Left to Right : Mr. Han Thein Kyaw, Director, BIMSTEC, Mr. Michael Satin, Director of Clean Energy and Environment, USAID/India, H.E. Mr. M Shahidul Islam, Secretary General of BIMSTEC, Mr. Pankaj Batra, Senior Advisor, SARI/EI/IRADe, Mr. Gaurav Jain, Senior Research Analyst, SARI/EI/IRADe and Mr. S M Nazmul Hasan, Director, BIMSTEC.

and similar institutions in South Asia and globally, as this would help them to draw the best experiences of institutional development.

- **Meeting with Dr. Ahmad Kaikus, Power Secretary, MPEMR** (Ministry of Power, Energy and Mineral Resources), Bangladesh : He was informed that SARI/EI is proposing regional association of Transmission Utilities and of System Operators of the South Asia nations, for helping in cooperation and coordination at the operational level, to ensure implementation in accordance with inter-Government Agreements, for a win-win situation for all the participating countries and for Forum of Regional Electricity Market players, and Regional Power Exchange. Secretary power commended the work SARI/EI is doing and mentioned that Bangladesh will provide the needful support in SARI/EI activity.
- **Meeting with Bangladesh Electricity Regulatory Commission (BERC)**- Mr. Mizanur Rahman, Member, BERC: Mr. Rahman mentioned that SARI/EI may review from the perspective that Bangladesh-India power trade can take place through synchronous interconnection in future. Bangladesh was also willing to develop a decision tool that may showcase different options and choices for meeting the Bangladesh power demand in a sustainable manner.
- **Meeting with PGCB (Power Grid Corporation of Bangladesh)**: Mr. Arun Kumar Saha, Chief Engineer, PGCB: It was mentioned by the SARI/EI team that interconnection should be planned in a planned in a phased manner. Certain internal grid strengthening may be required to be taken by Bangladesh before synchronous interconnection, from the grid reliability and security perspective. The grid code and Grid Connectivity Standards of Bangladesh-India need to be harmonized for synchronous interconnection.

The Trip of Bangladesh Photos are attached as Annexure-2



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SARI/EI inception meeting with Nepal Stakeholders about the activities of the extended phase of SARI/EI (2018-2022) on 27th, 28th February, 2019 and 1st March, 2019 at Kathmandu, Nepal.

USAID, India and SARI/EI/IRADe delegation comprising Ms. Julia Kennedy, Deputy Director, Energy and Environment Office, USAID India, Ms. Monali Zeya Hazra, Regional Energy Manager & Clean Energy Specialist, CLEEO Office, USAID/India, Mr. Pankaj Batra, Senior Advisor, SARI/EI/ IRADe and Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe visited Kathmandu, Nepal for inception meeting with various key stakeholders on 27th, 28th February 2019 and 1st March, 2019 to brief them about the scope of work for the SARI/EI extended phase under the new umbrella program of USAID- the Asia EDGE (Enhancing Development and Growth through Energy). USAID, Nepal represented by Mr. Shanker Khagi, Environment and Energy Specialist, USAID, Nepal also joined the delegation. The USAID, India, SARI/EI/IRADe and USAID, Nepal delegation had detailed discussions with various stakeholders, such as Hydroelectricity Investment and Development Company Limited (HIDCL), Director, Power Trading Department, Nepal Electricity Authority (NEA), Independent Power Producers' Association, Nepal (IPPAN), Nepal Hydropower Development Project (NHDP), Secretary, Ministry of Energy, Water Resources and Irrigation, CEO, Investment Board Nepal, Director, Energy, Transport, Science and Technology (ETS), SAARC Secretariat, Kathmandu, Nepal, Managing Director, NEA, Load Dispatch Center, NEA, ED, Institute for Integrated Development Studies (IIDS) and ED, Alternative Energy Promotion Centre, Nepal. SARI/EI/IRADe team gave a brief about the extension of the SARI/EI program of USAID, extended by four years, which would focus on implementation of cross border electricity trade for mutual benefits. The focus will be on implementation through institutionalizing the processes of Cross Border Electricity Trade (CBET) through already existing institutions such as South Asia Forum for Infrastructure Regulation (SAFIR) Working Group, SAARC Council of Energy Regulators, and proposed creation of new institutions such as South Asian Forum of Transmission Utility (SAFTU), South Asian Forum for System Operators (SAFSO), South Asia Forum of Electricity Markets and South Asia Working Group for investment facilitation, as well as operationalization of South Asian Regional Power Exchange (SARPEX). The esteemed officers of the Nepal Government and private sector assured the delegation of their continued support for the program. Based on the interaction, SARI/EI/IRADe will provide various technical and knowledge support to Nepal power/energy Institutions.

Action points:

- SARI/EI to provide technical support to **HIDCL** in the area of a) Financing business models and modalities b) investment frameworks c) innovative instruments and mechanism for mobilizing finance d) capacity



building and training in the area of project financing, project appraisals etc. e) involving HIDCL in the South Asia Working Group for investment facilitation.

- **NEA** and SARI/EI agreed to work on a) developing appropriate regulatory frame work for power trade in Nepal including cross border power trade b) Paper on suggesting alternative financing modalities/options for New-Butwal-Gorakhpur (New) 400kV D/C (Quad Moose) Cross-Border transmission line c) involving both senior officials as well as mid-level officials in the SARI/EI capacity and training programs.
- **IPPAN** and SARI/EI agreed to work on a) developing a comprehensive Energy Connectivity Plan/Road Map for BBIN/BIMSTEC region b) addressing issues related to implementation of Nepal-India Power trade agreement c) jointly organize the session on cross border electricity trade in the next IPPAN Annual Energy Summit d) participation of IPPAN in the South Asia Working Group for investment facilitation.
- **NHDP** and SARI/EI agreed to work on mutual areas of interest. SARI/EI and NHDP will be in touch with each other for finalizing the detailed modalities of activities to take this forward. SARI/EI will be communicating with NHDP for implementation.
- During the meeting with **Secretary, Ministry of Energy, Nepal**, SARI/EI agreed to work on a) securing nomination of Government of Nepal for the PSC and Task Force b) suggesting alternative financing modalities as well as sharing of charges for New-Butwal-Gorakhpur (New) 400kV D/C (Quad Moose) Cross-Border transmission line.
- **IBN** and SARI/EI agreed to work on a) developing regional frameworks and guidelines for regional power projects and for trilateral-multi-lateral power trade b) facilitating addressal of issues related to implementation of Nepal-India Power trade agreement c) participation of IBN in the South Asia Working Group for investment facilitation.
- During the meeting with **Director (ETS), SAARC** and USAID & SAR/EI delegation, it was agreed a) SAR/EI will continue to provide technical support/assistance to SAARC council of experts of energy regulators b) support the work in other areas of energy cooperation. SARI/EI and SAARC will be in touch with each other for finalizing the detail of activities



Left to Right : Mr. Shanker Khagi, Environment and Energy Specialist, USAID, Nepal, Mr. Pankaj Batra, Senior Advisor, SARI/EI/ IRADe, Ms. Julia Kennedy, Deputy Director, Energy and Environment Office, USAID India, Mr. Ali Hader Altaf, Director of SAARC, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe, Ms. Monali Zoya Hazra, Regional Energy Manager & Clean Energy Specialist, CLEEO Office, USAID/India



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- During the meeting between **MD, NEA** and USAID & SAR/EI delegation, it was agreed a) to prepare a paper on suggesting alternative financing modalities/options for New-Butwal-Gorakhpur (New) 400kV D/C (Quad Moose) Cross-Border transmission line b) involvement of NEA in the Task forces c) Training program in Nepal for NEA officials on regulatory framework for power trade, power exchange operation and learnings from the development of Indian power sector (policy, regulatory, technical and market aspects).
- During the meeting between **ED, IIDS** and USAID & SAR/EI delegation, it was agreed a) IIDS will be engaged under the SARI/EI program for highlighting the benefits of cross border power trade in Nepal and creating a positive narrative in Nepal's civil society about the various cross border transmission lines that are in operation /being planned/under implementation b) human stories and articles highlighting the beneficial aspects cross border transmission lines. SARI/EI will be communicating with Dr. Bishnu Dev Pant, ED, Institute for Integrated Development Studies (IIDS) in this regard.
- During the meeting with Mr. Madhusudan Adhikari, it was agreed that a) SAR/EI will involve APEC in the various program activities including training and capacity buildings events b) provide technical support to AEPC on mutually agreed topics such as renewable energy, energy efficiency, electric vehicles. SARI/EI and AEPC will be in touch with each other for finalizing the detail modalities of activities.

The Trip of Nepal Photos are attached as Annexure-3



SARI/EI inception meeting with Sri Lankan Stakeholders about the activities of the extended phase of SARI/EI (2018-2022) on 17th and 18th April 2019 at Colombo, Sri Lanka.

USAID India Delegation, comprising Ms. Monali Zeya Hazra, Regional Energy Manager and Clean Energy Specialist, along with SARI/EI/IRADe Delegation comprising Mr. Pankaj Batra, Senior Advisor, SARI/EI/ IRADe, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe visited Colombo, Sri Lanka for the inception meeting with various key stakeholders in Sri Lanka, after extension of phase IV of the SARI/EI Program with effect from October 2018 for four years. The meetings were held on 17th and 18th April 2019. SARI/EI team briefed them about the scope of work for the SARI/EI extended phase under the new umbrella program of USAID- the Asia EDGE (Enhancing Development and Growth through Energy). The USAID, Sri Lanka team also joined the USAID, India and SARI/EI/IRADe team in the meetings.

- Meeting with **Ceylon Electricity Board (CEB)**. The following was discussed :
 - Securing Nomination of CEB in the Task Force-2.
 - A One day Workshop would be conducted under the SAR/EI Program for CEB officials and Engineers on CBET and Regional Energy Cooperation (REC)
 - CEB involvement would be required in development of South Asia Generation and Transmission Master Plan.
- Meeting with **Public Utilities Commission of Sri Lanka (PUCSL)**:
 - SARI/EI to partner with PUCSL for developing processes on Regulatory and Policy frameworks for Renewable Energy and for Grid Integration of renewables, based on international experiences including India, and lessons learnt from success stories such as India.
 - SARI/EI to support PUCSL for developing hearing process in PUCSL by facilitating PUCSL to participate in the Hearing process of CERC. SARI/EI to facilitate Regulatory knowledge Exchange among SA Regulators.
- Meeting with **Ministry of Power, Energy and Business Development (MoPEB)**:
 - It was requested that MoPEB may expedite the Nomination to the PSC and Task Forces.
 - One day Workshop for Ministry, CEB, SLEA on CBET and Regional Energy Cooperation (REC) would be held by SARI/EI/IRADe for the benefit of officers and engineers in Sri Lanka.
- Meeting with **Sri Lanka Sustainable Energy Authority**:
 - SARI/EI to prepare the detailed Knowledge Report on International Experiences on Renewable energy Grid integration: Key take away and Lessons learned.



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- One day Workshop for Ministry, CEB, SLEA on CBET and Regional Energy Cooperation (REC) by SARI/EI/IRADe.
- SARI/EI to prepare the detailed Knowledge Report on “Models for Development Transmission system for Renewable Energy and Cross Border Transmission Links”
- Assess the Policy and Regulatory framework associated with Ceylon Electricity Board in the context of development of transmission system for beneficiaries.
- Meeting with Secretary and Other Officials of Ministry of Highways & Road Development and Petroleum Resources (MHRP):
 - One day Workshop for Ministry, CEB, SLEA, MHRP on Cross border energy trade and Regional Energy Cooperation (REC), creating regional gas hub. Knowledge Exchange among South Asian Countries.
 - MHRP and SAR/EI will be communicating with each other for freezing activities for partnership

The Trip of Sri Lanka Photos are attached as Annexure-4

Annexure-1:- Bhutan Trip Photos





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Annexure-2: The Trip of Bangladesh Photos





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Annexure-3: The Trip of Nepal Photos

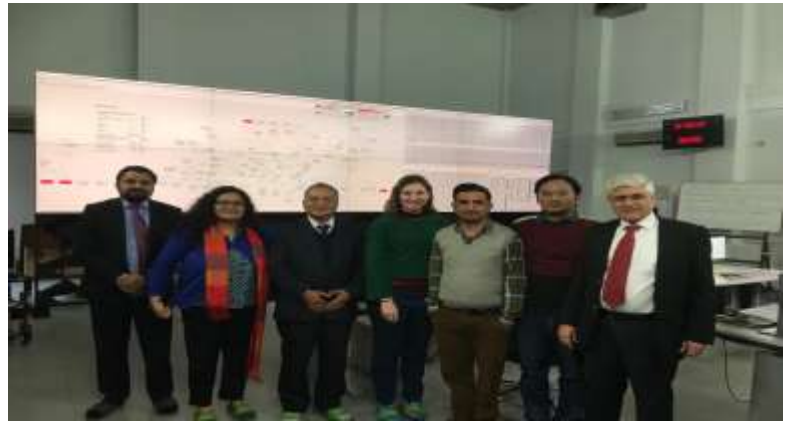




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Annexure-4: The Trip of Sri Lanka Photos



Left to Right : Ms. Monali Zeya Hazra, Regional Energy Manager and Clean Energy Specialist , USAID, India, Mr. Rajiv Kandanarachchi, Project Management Specialist , USAID, Sri Lanka, Mr. Merrille Goonetilleke, Add. Secretary, Ministry of Power & Energy, Sri Lanka , Mr. Pankaj Batra, Senior Advisor, SARI/EI/IRADe, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe



Left to Right : Mr. Rajiv Kandanarachchi, Project Management Specialist , USAID, Sri Lanka, Ms. Janaki Vithanagama, Secretary, PUCSL, Mr. Damitha Kumarasinghe, Director General, PUCSL Mr. Saliya Mathew, Chairman, PUCSL, Mr. Pankaj Batra, Senior Advisor, SARI/EI/IRADe, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe



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Left to Right : Mr. Rajiv Kandanarachchi, Project Management Specialist , USAID, Sri Lanka, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe, Ms. Monali Zoya Hazra, Regional Energy Manager and Clean Energy Specialist , USAID, India, Mr. T. M. R. Bangsa Jayah, Chairman, Sri Lanka Sustainable Energy Authority (SLEA), Dr. Asanka S. Rodrigo, Director General, SLEA, Mr. Chamika Jayasekera, Director (Strategy), SLEA and Mr.H.A Vimal Nadeera, Deputy Director General(Supply Side Management), SLEA.



Left to Right : Mr. Pankaj Batra, Senior Advisor, SARI/EI/ IRADe, Mr. Rajiv Selvaraj, Vice Chairman, Ceylon Electricity Board (CEB), , Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe



Meeting with Mr. Sunil Hettiarachchi, Secretary, Ministry of Highways & Road Development and Petroleum Resources (MHRP), MD, Ceylon Petroleum Corporation, Director General , Petroleum secretariat and their senior officials and Mr. Pankaj Batra, Senior Advisor, SARI/EI/IRADe, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe