

**MINUTES OF THE 27TH EXECUTIVE COMMITTEE MEETING OF SOUTH
ASIA FORUM FOR INFRASTRUCTURE REGULATION (SAFIR)**

Venue : New Delhi, India; Hybrid
Date/Day : 12th December 2024, (Thursday)
Time : 15:30 PM IST

LIST OF PARTICIPANTS: Appendix-I.

Chairperson, SAFIR/CERC welcomed all ECM members, Mr. Jalal Ahmed, Chairperson, Bangladesh Energy Regulatory Commission (BERC), Ms. Deki Choden, Chief Executive Officer of Electricity Regulatory Authority of Bhutan (ERA), Prof. K. P. Lalith Chandralal, Chairperson, Public Utilities Commission of Sri Lanka (PUCSL). He also welcomed the Chairperson of the Electricity Regulator Commission of Nepal (ERCN), Mr. Ram Prasad Dhital, who joined as a special invitee.

2. Chairperson, SAFIR/CERC, referred to the ongoing Silver Jubilee of SAFIR, celebrating 25 years of partnership, growth, and progress while acknowledging the members' dedication to the activities of the Forum. He highlighted the key agenda items for the meeting, which included the approval of Audited Accounts, discussions on SAFIR Working Group deliverables, SAFIR Core Course, etc, and wished for active participation and collaboration to ensure SAFIR's impactful future.

3. Mr Jalal Ahmed, Chairperson of Bangladesh Electricity Regulatory Commission, in his opening remarks, expressed happiness that SAFIR has come a long way in 25 years. With time, the cooperation between and, among other countries in the South Asian region, has reached new milestones. He informed of the recent development of an agreement that Bangladesh has signed with Nepal to import electricity using the Indian transmission system and appreciated the support given by India in this regard. Thus, grid connectivity among the countries or the Region has been a much-discussed agenda, and now the same has become a reality.

4. Prof. K.P. Lalith Chandralal, the newly appointed Chairperson of PUCSL, Sri Lanka, joining virtually, expressed gratitude for the opportunity to engage with the South Asian regulators in the infrastructure sector. He emphasized the importance of Forums like SAFIR in fostering collaboration among regulators and highlighted the evolving energy landscape shaped by decarbonization, technological advancements, and marketization, underscoring the crucial role of infrastructure regulation in driving investments, economic growth, and improved quality of life. He stressed that

collaboration and knowledge sharing among regulators are essential for addressing challenges like the Common Minimum Grid Code and achieving reliable, affordable, and sustainable infrastructure. He viewed SAFIR as a platform for exchanging insights, adopting best practices, and advancing shared goals for resilient and inclusive infrastructure systems.

5. Ms. Deki Choden, Chief Executive Officer of the Electricity Regulatory Authority of Bhutan (ERA), who joined virtually, thanked all the SAFIR members for their participation and looked forward to a fruitful meeting.

6. Mr. Ram Prasad Dhital, Chairperson of the Electricity Regulatory Commission Nepal, remarked that this was his first meeting as a special invitee at the SAFIR Executive Committee Meeting. He thereafter shared Nepal's achievements in the electricity sector, such as being the first South Asian country to participate in the day electricity market since 2001, and underlined recent efforts to export power to India and Bangladesh to support decarbonization goals. He emphasized Nepal's commitment to adopting the Common Minimum Grid Code and harmonizing technical standards with neighbouring countries. Acknowledging Nepal's relatively new regulatory body, he expressed the desire for full-time SAFIR membership. He also urged collaboration among regulators to share knowledge, best practices, and lessons learned. Additionally, he proposed hosting a retreat in Nepal for the SAFIR members and assured full support and commitment to SAFIR's initiatives.

7. With the permission of the Chair, the agenda items were taken up for discussion.

AGENDA ITEM 1: CONFIRMATION OF MINUTES OF THE 26TH EXECUTIVE COMMITTEE MEETING

8. Joint Chief (Regulatory Affairs), CERC, apprised the Forum about the actions taken for the decisions in the 26th ECM. The EC recommended that SAFIR could conduct a study on cross-border transmission, the terms of reference of which will be worked out by SAFIR Sectt. After detailed deliberations, the EC confirmed the minutes.

AGENDA ITEM 2: ACCOUNTS RELATED:

a) AMENDMENTS TO THE MEMORANDUM OF ASSOCIATION (MoA) AND RULES & REGULATIONS (R & R) OF SAFIR.

9. The Members were apprised of the decisions in previous ECMs (& SCMs) with respect to various changes in the MoA and R&R of SAFIR. In line with the decision taken in the 29th SCM held on 18th September 2023, at New Delhi to present a consolidated amendment to the MoA and R&R of SAFIR, the changes to MoA and R&R of SAFIR were discussed and approved by the EC Members. Accordingly, the revised MoA and R&R are placed in **Annexure-I**

b) AUDITED ACCOUNTS OF SAFIR FOR THE FY 2023-24.

10. Joint Chief (RA), CERC apprised the salient features of the Annual Accounts of SAFIR for the FY 2023-24, after which the EC approved the Annual Accounts of SAFIR for the FY 2023-24.

c) MEMBERSHIP SAFIR- UPDATE

11. The EC members were apprised that currently, SAFIR has 37 Members from India & 3 Members from outside India and that the SAFIR Secretariat had made efforts to write to various corporations in India to be part of SAFIR. It also apprised the EC that ERA Bhutan had referred to Druk Green Power, though there was no response.

12. In response, the Chairperson, CERC/SAFIR, advised the SAFIR Secretariat to continue writing to Corporate Utilities in India to join SAFIR. In addition, the Chairperson of ERC of Nepal and the Chairperson of Bangladesh ERC also informed the SAFIR Secretariat to write to their offices so that they can share suggestions of Corporates from the respective countries who can join SAFIR.

d) ACTIVITIES OF IICA FOR FY 2024-25

13. Joint Chief (RA), CERC, apprised the Members that IICA, being one of the Members of SAFIR, has been offering its services to publish e-newsletters and conduct online webinars during the FY 2023-24. In continuation, IICA has expressed their interest to continue with their services/activities during the FY 2024-25 as well. In this matter, the Members were apprised that during the previous year, IICA had conducted 2 online webinars and published 3 quarterly e-newsletters, which were well received.

14. After discussion, the Members approved the proposal of IICA to continue with their activities for the FY 2024-25 as well, at the same cost as has been charged during the FY 2023-24.

AGENDA ITEM 3: SAFIR CORE COURSE FOR FY 2024-25

15. The EC members were apprised of the proposals received from IICA, CIRC, and IIM-Ahmedabad for conducting the SAFIR Core course for FY 2024-25.

16. The Members were apprised that while CUTS offered to do the program in Hybrid mode, both IICA and IIMA offered to do the program in physical mode. After discussion on the subjects to be covered in the Course, costs, etc, the EC decided that IIM-A, being a premier institute in India with excellent feedback from previously conducted Core Courses, was selected for conducting the SAFIR Core course for FY 2024-25 with the following updated conditions:

- a) The batch size will be increased from 20 to 40 participants to accommodate 1 participant from each Member of SAFIR. In this matter, the EC notes that the cost of the program as currently proposed will change for enhanced participants, which is acceptable
- b) The course span will be for 4 days which includes 3 classroom days and 1 day for a site visit.

17. The SAFIR Secretariat was directed to inform IIM-A of the decision of SAFIR and to seek their concurrence on the above changes so as to conduct the Core Course in this FY.

AGENDA 4: SAFIR ANNUAL REPORT

18. JC(RA), CERC presented the SAFIR annual report and informed that the report preparation faced challenges due to limited input from members and time constraints. A desktop survey was conducted to compile the report, but more comprehensive input was sought for future editions.

19. Specific issues included the inability to extract necessary details from the Bangladesh Energy Regulatory Commission's website, as it was in Bengali, delaying translation efforts.

20. After detailed deliberations, the EC decided that those members who have not shared inputs/updates for the FY2023–24 may do so within 1 month, after which the report will be finalized and circulated. SAFIR Secretariat was also directed to seek inputs for the Annual report for FY 24-25 much earlier to ensure early preparation of the Annual report

AGENDA ITEM 5:

A) UPDATES AND PRESENTATION BY CONSULTANTS / AGENCIES ASSISTING SAFIR JOINT WORKING GROUP (JWG)

B) UPDATE AND PRESENTATION BY CONSULTANTS ASSISTING THE SAFIR WG ON REPORTS ON:

- i. DEVELOPING A REGULATORY ROADMAP FOR ELECTRICITY/ENERGY EXCHANGE AND ENERGY COOPERATION AMONG SOUTH ASIAN COUNTRIES**
- ii. ASSESSING THE POTENTIAL BENEFITS OF CROSS BORDER ELECTRICITY TRADE FOR AFFORDABLE SUPPLY OF ELECTRICITY**
- iii. MODEL REGULATIONS RELATED TO CBET (IN COUNTRIES THAT CURRENTLY DOES NOT HAVE CBET REGULATIONS)**
- iv. TECHNICAL ASSISTANCE AND SUPPORT TO REGULATORS ON ENHANCING INSTITUTIONAL REGULATORY CAPACITY**

21. JC(RA), CERC apprised the EC members of two working groups in SAFIR, i.e., a Joint Working Group that operates at the level of Chairpersons and Members of the SAFIR EC countries and another Working Group that comprises senior officers from EC member countries. USAID and SAREP are providing technical support to these Working groups. While the JWG was working on the Common Minimum Grid Code (CMGC) and Power market design, the officer working group was focused on various studies and capacity-building programs for SAFIR.

22. In order to concentrate on studies needing guidance at a senior level, the EC recommended merging the activities and deliverables of the Officer Working Group with the Joint Working Group and the capacity building programs, preparation of compendiums, etc., to be managed by the SAFIR Secretariat. To this effect, the SAFIR secretariat may update the TOR of the JWG.

I. COMMON MINIMUM GRID CODE

23. The representatives of SAREP, assisting the JWG, made a detailed presentation on the Common Minimum Grid Code (**Annexure II**). The main objective is to facilitate cross-border electricity trading among South Asian countries by setting common minimum rules, guidelines, and standards and ensuring secure, reliable, economical, and efficient operation and planning of the interconnected South Asian grid.

24. Some of the key components of CMGC are as follows:

- i) **Planning Code:** Focuses on planning cross-border transmission systems. Promotes coordination among national transmission utilities. Ensures reliability and stability of cross-border grids.
- ii) **Connection Code:** Governs safe and reliable connection of national grids to the South Asian grid. Ensures new connections meet standardized technical requirements.
- iii) **Operation Code:** Defines operational parameters like frequency, voltage, and fault reporting. Includes protocols for coordinated outage planning and protection systems.
- iv) **Scheduling and Dispatch Code:** Establishes uniform procedures for scheduling and dispatching electricity across countries. Aligns timelines and processes for intercountry power flows.
- v) **Administration of CMGC:** Initially to be overseen by the JWG and Joint Steering Committee, future management could transit to the Forum of Electricity Regulators. Including provisions for code modifications and updates as needed, this Code aims to create a standardized framework for effective cross-border electricity trading, benefiting all participating countries.

25. The consultants assisting the SAFIR WG made presentations (**Annexures III**) on two key studies on energy cooperation and cross-border trade. The salient features include:

A. Regulatory Roadmap for Energy Cooperation:

- i. Development of a common, minimum harmonized regulatory framework and templates.
- ii. The framework includes country-specific adaptations, a roadmap, and associated regulatory changes.
- iii. Focus areas: harmonization of grid codes, institutional frameworks, planning, open access, and scheduling.

B. Potential Benefits of Cross-Border Trade:

- i. Identification of prerequisites for countries to engage in cross-border trade beyond government-to-government agreements.
- ii. Introduction of a master regulation to guide countries in developing their frameworks.
- iii. Recommendations on harmonizing terminologies and institutional roles and enabling seamless coordination.

26. Thereafter, a presentation (**Annexure IV**) was made highlighting a detailed quantitative study assessing the benefits of enhanced regional energy cooperation in South Asia, focusing on cross-border electricity trade and ancillary services. Key points include:

a) Scope and Methodology:

- i. Detailed modelling power systems operations of Bangladesh, Bhutan, India, Nepal, and Sri Lanka (BBINS) are around 8,760 hours in a year.
- ii. Examined scenarios including unrestricted transmission and cross-border reserve sharing.

b) Findings:

- iii. Cost Savings: Enhanced cooperation could save up to \$11 million by 2035 (present value).
- iv. Efficiency Gains: Reduced start-up /shutdown costs and lower average power costs (up to 5%).
- v. Grid Resilience: Sharing reserves reduces the need for separate investments in balancing capacities.
- vi. Capacity Credits: Enhanced cooperation boosts renewable energy reliability, increasing capacity credits by 35%.

C. Transmission and Trade:

- i. Significant transmission augmentation is necessary for deeper integration.
- ii. Shadow pricing analysis shows that 50% of transmission costs can be recovered during peak demand hours.

27. After detailed deliberations, the EC decided that the said reports be presented before the Steering Committee and thereafter circulated to all SAFIR members for further vetting and comments before discussions in the next JWG of SAFIR.

28. Appreciating the presentation on “Assessing potential benefits of Cross Border Electricity Trade for an affordable supply of electricity” the chairperson of CERC invited the consultants working on the said report to make a presentation in CERC and also invited EC Member countries of Bhutan, Bangladesh, Sri Lanka, and Nepal to join online. SAFIR Secretariat was advised to invite SAFIR members, Grid India and PGCIL also for the presentation for their inputs.

29. As time was short, the EC requested the consultant assisting the JWG on Power market design to present the same directly in the Steering Committee meeting

At the close of the meeting, Secretary, SAFIR/CERC thanked the EC members for their guidance in the agenda items discussed. The meeting ended with a vote of thanks to the Chair.

APPENDIX-I**LIST OF PARTICIPANTS OF 27TH EXECUTIVE COMMITTEE MEETING OF SAFIR”
DATE :12TH DECEMBER, 2024**

S. NO.	NAME	ORGANIZATION
01.	Mr. Jishnu Barua Chairperson, CERC & SAFIR	Central Electricity Regulatory Commission (India)
02.	Mr. Jalal Ahmed Chairman, BERC	Bangladesh Energy Regulatory Commission (Bangladesh)
03.	Prof. K.P. Lalith Chandralal Chairperson, PUCSL	Public Utilities Commission of Sri Lanka (Sri Lanka) [Online]
04.	Ms. Deki Choden CEO, ERA	Electricity Regulatory Authority, Bhutan [Online]
05.	Mr. Harpreet Singh Pruthi Secretary, CERC	Central Electricity Regulatory Commission (India)
06.	Dr. Sushanta K. Chatterjee Chief (Regulatory Affairs), CERC	Central Electricity Regulatory Commission (India)
SPECIAL INVITEES		
07.	Mr. Ram Prasad Dhital Chairman, ERC	Electricity Regulatory Commission, Nepal
08.	Mr Damitha Kumarasinghe, Director General	Public Utilities Commission of Sri Lanka (Sri Lanka) [Online]
09	Ms. Monali Zeya Hazra Regional Specialist	USAID
10	Mr. Pankaj Batra Consultant	SAREP
11	Mr. Rajiv Ratna Panda Regional Power Lead	SAREP
12	Mr. Maitreyi Karthik Regional Energy Analyst	SAREP
13	Mr. Rohit Pathania	SAREP
14	Mr. Arun K.A. Director	Deloitte
15	Ms. Suruchi Uppal	KPMG
16	Ms. Srishty Jain	KPMG
SAFIR SECRETARIAT		
17.	Ms. Rashmi Somasekharan Nair Jt. Chief (Regulatory Affairs)	CERC, New Delhi (India)
18.	Ms. Sukanya Mandal Asst. Chief (RA)	CERC, New Delhi (India)
19.	Mr. Debasish Roy	CERC, New Delhi (India)

	Asst. Chief (RA)	
20.	Mr. Pankaj Rana Asst. Secretary	SAFIR / CERC, New Delhi (India)
21.	Mr. Sushil Kumar Arora Administrative Officer	SAFIR, New Delhi (India)
22.	Mr. Nilesh Diwan Accounts Officer	SAFIR, New Delhi (India)
23.	Mr. M.M. Prasad Sr. Accounts Officer	FOR
24.	Ms. Jijnasa Behera R.O.	FOR
25.	Mr. Davinder Kumar T.O. (IT)	FOR



ANNEXURE-I

MEMORANDUM OF ASSOCIATION
SOUTH ASIA FORUM FOR INFRASTRUCTURE REGULATION
(SAFIR)

1. NAME OF THE ASSOCIATION:

The name of the Association shall be “South Asia Forum for Infrastructure Regulation” (hereinafter referred to as “SAFIR”).

2. OFFICE:

- (i) The Secretariat of SAFIR shall be located at such place as may be decided by the Steering Committee from time to time.
- (ii) Presently, the Secretariat of SAFIR is with the regulatory body from India, namely, the Central Electricity Regulatory Commission, having its office at 8th Floor, Tower-B, World Trade Centre, Nauroji Nagar, New Delhi-110029.

3. AIMS AND OBJECTIVES:

SAFIR aims at providing high quality capacity building and training on infrastructure regulation and related topics, in South Asia. The specific objectives of SAFIR are to:

- (i) Provide a platform for experience sharing amongst the regulators of the region;
- (ii) Facilitating effective and efficient regulation of utility and infrastructure industries;
- (iii) Initiate beneficial exchange of knowledge and expertise;
- (iv) Evolve best practices;
- (v) Build regulatory decision-making and response capacity in South Asia;
- (vi) Conduct training programs to serve regulatory agencies and other stakeholders;
- (vii) Spur research on regulatory issues;
- (viii) Interact, coordinate, facilitate and engage with various International developments, regulation, financial bodies and government or private entities of various countries.



Further, it may include any objectives subsidiary and ancillary to the main aim set out above and are to be used only for the attainment of that aim and any income generated there from is to be applied for the aim only.

4. SUBSCRIPTION:

4.1. The membership subscription of the association shall be payable only by the Institutional Members as under:

Institutional membership	Fee (in USD)	
Consumer Bodies/Non-Governmental Organisation (NGOs)	500	Annual
Academic/Research Institutions	2000	Annual
Regulatory Commission/Bodies of various countries in South Asia	4000	Annual
Corporate/Utilities	5000	Annual

4.2. Payment of Annual Subscriptions:

4.2.1. The annual subscription shall be payable in advance at the commencement of the financial year.

4.2.2. Subscription for membership of the Association shall be decided by the Executive Committee and in case of revision of fee, the same shall be effective after it is approved in Steering Committee, from time to time.

4.2.3. The Steering Committee may in its discretion relax the condition of mode and the time of payment in any particular case.

5. INCOME AND ASSETS:

- (i) The properties and funds of SAFIR shall be held subject to the directions of the Executive Committee given from time to time, and their application and disposal shall be under the general supervision of the Steering Committee.
- (ii) All the income and assets, both movable and immovable, of SAFIR shall be utilized by SAFIR only for the promotion and achievement of its aim and objects as set out in this Memorandum of Association and no portion thereof shall be paid directly or indirectly by way of dividend, bonus, profit or in any



other manner to any present or past or future member of SAFIR or to any person claiming through any one or more of them.

- (iii) All immovable and moveable properties of SAFIR and all funds created by the Executive Committee for any purpose shall be held by and in the name of SAFIR and shall be deemed to be vested in SAFIR.
- (iv) An office-bearer or member of SAFIR may be allowed remuneration for services rendered by him/her to SAFIR as may be considered reasonable.

6. ACCOUNTS & AUDIT AND OTHER APPOINTMENTS;

- (i) The accounts of SAFIR shall be audited every year by an Auditor appointed by the Chairperson of CERC (Member of SAFIR). The auditors' report shall be placed before the Members during the Annual General Meeting/ Steering Committee.
- (ii) Any vacancy in the office of Auditor occurring during the year will be filled in by the Chairperson of CERC (Member of SAFIR).
- (iii) The appointment of Tax Consultant in SAFIR for filing its Income Tax Return, Goods & Service Tax Returns (GST), FCRA Returns, conducting Tax Audit (if applicable) and for appearing before the Income Tax and GST Authorities (if required), shall be appointed by the Chairperson of CERC (Member of SAFIR).
- (iv) The aforesaid appointments will be for a maximum period of 3 (three) years.

7. INDEMNITY:

Every office bearer for the time being of SAFIR shall be indemnified out of the funds of SAFIR against all losses and expenses incurred in the discharge of his / her duties.

8. MANAGEMENT AND ADMINISTRATION

(i) Steering Committee

The SAFIR initiative shall be guided by a Steering Committee. The "Steering Committee" shall comprise of representatives from regulatory bodies, corporate/utilities, consumer bodies/Non-Governmental Organizations and Academic/Research institution from the South Asian region provided that such representative shall be not below the level of a member or equivalent of the respective



regulatory body or Board level member of the respective corporate/utility or Governing Body member of the respective consumer body/ Non-Governmental Organization/Academic/Research institution, as the case may be.

(ii) Executive Committee.

The Executive Committee of SAFIR shall have the responsibility for operationalising the strategic direction(s) provided by the SAFIR Steering Committee. The members of the Executive Committee will be from the South Asian region not below the level of Chairperson or Chief Executive Officer or Director or Head of the Body/Organization. The members of Executive Committee of SAFIR shall be entitled to be invited to and to vote at any meeting of the Steering Committee on any question touching the properties and funds of SAFIR.

The names, addresses, and designations of the members of SAFIR, who shall undertake the formation of SAFIR based on the mandate of the Steering Committee, are as under:

COUNTRY	NAME OF THE ORGANISATION	ADDRESS	NAME OF AUTHORISED PERSON & DESIGNATION
Nepal	Water Supply Tariff Fixation Commission of Nepal	41-Aaloknagar Marg, Minbhawan Kathmandu-10,Nepal	Mr. B.K. Mansingh, Chairperson
India	Central Electricity Regulatory Commission	3 rd and 4 th Floor, Chanderlok Building,36,Janpath, New Delhi - 110001	Dr. Pramod Deo, Chairperson

9. BOOKS OF SAFIR TO BE THE SAFIR'S PROPERTY:

All books, files, etc. maintained by the SAFIR Secretariat shall be the property of SAFIR and will be kept as a record (in physical form for a maximum period of 6 (six) years, previous years).



10. RULES AND REGULATIONS

- (i) Primacy shall always be accorded to mechanism within SAARC over those created under SAFIR if any clash occurs.
- (ii) The affairs of SAFIR shall be governed by the Rules and Regulations **annexed** herewith.
- (iii) Notwithstanding anything contained in the Rules and Regulations, if there is any conflict between any provision of the Memorandum of Association and that of the Rules and Regulations, the Memorandum of Association and the Rules and Regulations shall be read harmoniously to remove such a conflict, and if still there is any conflict the provisions of the Memorandum of Association shall prevail.

11. NOTICES:

- (i) Each member of SAFIR shall communicate from time to time to the Secretariat the address to which notices addressed to it may be sent, and all notices sent to such address shall be considered delivered.
- (ii) The Secretariat of SAFIR shall send notice of the Annual General Meeting or Extraordinary Meeting in accordance with the rules laid down hereunder.

12. BANK ACCOUNT:

- (i) The bank account or accounts of SAFIR will stand in the name of “South Asia Forum for Infrastructure Regulation” or in such name as SAFIR may hereafter bear.
- (ii) All cheques drawn on behalf of SAFIR shall be signed by any two office-bearers duly authorized by the Chairperson of CERC (Member of SAFIR).
- (iii) However, if two office-bearers are not available to sign the cheques, then by two such other office bearers of the Secretariat who are so authorized by the Chairperson of CERC (Member of SAFIR).

13. USE OF CORPUS IN CASE OF DISSOLUTION

At any time, if it is found that the affairs of SAFIR cannot be carried on, either because it has survived its usefulness, or because sufficient support is not forthcoming or for



any other reason, the Steering Committee may wind up SAFIR. Provided that SAFIR shall not be wound up save by a clear majority of two-thirds of the members of its Steering Committee present and voting at an Extraordinary General Meeting. Should it be decided to wind up as aforesaid, its property shall not be paid to or distributed among its members, but shall be given to some other body having objects similar to SAFIR or to any charitable society to be determined by the votes of not less than three-fifths of the members of the Steering Committee present at a meeting called for that purpose.

THEREFORE, WE, the undersigned, having the mandate of the Steering Committee are desirous of forming an Association in pursuance of this Memorandum of Association-

Serial No.	Name of the Organisation	Signatures in full	Name of Authorised Person & Designation	Address, designation	Full seal with signatures of witness.
1.	Water Supply Tariff Fixation Commission of Nepal		Mr. B.K. Mansingh, Chairperson	41-Aaloknagar Marg, Minbhawan Kathmandu-10,Nepal	
2.	Central Electricity Regulatory Commission		Dr. Pramod Deo, Chairperson	3 rd and 4 th Floor, Chanderlok Building, 36,Janpath, New Delhi - 110001	



ANNEXURE 1: RULES AND REGULATIONS

1. GENERAL

1.1. Name:

The name of the Association shall be “South Asia Forum for Infrastructure Regulation” (hereinafter referred to as “SAFIR” or the “Association”). SAFIR is an “Association of Persons” committed to a common aim and Objective(s) of directing all energies and efforts towards building a strong expertise in infrastructure regulation. The Association is not intended to form any partnership or trust for any purpose whatsoever.

1.2. Background:

The South Asia Forum for Infrastructure Regulation (SAFIR) was formed in May 1999. SAFIR aims to provide high quality capacity building and training on infrastructure regulation, and related topics, in South Asia and to stimulate research on the subject by building a network of regional and international institutions and individuals that are active in the field. It also aims at facilitating effective and efficient regulation of utility and infrastructure industries, initiate beneficial exchange of knowledge and expertise, and set the trend of rapid implementation of global best practices.

1.3. Office:

The Secretariat of SAFIR shall be located at such place as may be decided by the Steering Committee from time to time.

1.4. Aims and objectives:

SAFIR aims to provide high quality capacity building and training on infrastructure regulation and related topics in South Asia. Specific objectives of SAFIR are to:

- 1.4.1. Provide a platform for experience sharing amongst the regulators of the region;
- 1.4.2. Facilitating effective and efficient regulation of utility and infrastructure industries;
- 1.4.3. Initiate beneficial exchange of knowledge and expertise;



- 1.4.4. Evolve best practices;
- 1.4.5. Build regulatory decision-making and response capacity in South Asia;
- 1.4.6. Conduct training programs to serve regulatory agencies and other stakeholders;
- 1.4.7. Spur research on regulatory issues;
- 1.4.8. Interact, coordinate, facilitate, and engage with individuals, various International development, and regulatory, financial bodies like World Bank, government or private entities of various countries.

1.5. Ancillary or incidental objectives:

- 1.5.1. Provide a databank of information relating to regulatory reform processes and experiences;
- 1.5.2. To make, amend, rescind or add the rules and regulations for the conduct of affairs of the Association.
- 1.5.3. To promote, support, affiliate, amalgamate or merge with any other body or institution having partially or wholly similar aim or objective.
- 1.5.4. To prepare and print public papers, periodicals, monographs and books, in furtherance of the objectives of the Association.

2. STRUCTURE

2.1. The structure of SAFIR shall comprise of:

- a. Chairperson**
- b. Steering Committee**
- c. Executive Committee**
- d. Secretariat**
- e. Treasurer**



2.2 Chairperson

The Chairperson of SAFIR shall hold the office in ex-officio capacity. SAFIR shall elect on rotation basis (among the Countries represented in SAFIR) a Chairperson from its present members representing regulatory bodies and shall hold the office for a term of 2 (two) years in continuation.

3. Steering Committee

3.1. Members: The Steering Committee of SAFIR shall comprise of all the members inducted from time to time into the Association. The following shall be eligible to be the members of SAFIR.

(a) Regulatory Bodies

The Infrastructure Regulatory Commissions/ Bodies of various countries in South Asia shall be eligible to join as the members of SAFIR. Each such Regulatory Commission/body may nominate one person to the Steering Committee provided that such person shall be not below the level of member or equivalent of the respective Regulatory Commission/body.

(b) Corporates/Utilities

Co-operative Societies, Corporate Bodies, Infrastructure Service Providers and/or organizations in South Asia , involved in or incidental to the functioning of the Association may be admitted as members of SAFIR. Each such Corporate/Utility may nominate one person to the Steering Committee provided that such person shall be not below the level of Board member or equivalent of the respective Corporate/Utility.

(c) Consumer Bodies/Non-Governmental Organizations (NGOs)

Consumer advocacy groups, consumer organizations, and/or Non-Governmental Organizations (NGOs) in South Asia, involved in or incidental to the functioning of the Association may be admitted as members of SAFIR. Each such Consumer Body/ Non-Governmental Organization may nominate one person to the Steering Committee provided that such person shall be not below the level of Governing Body member or equivalent of the respective Consumer Body/ Non-Governmental Organization.



(d) **Academic Institutions**

Technical, professional, research or academic institute, survey conducting or statistics collecting bodies or other educational or training bodies in South Asia, may be admitted as members of SAFIR. Each such institution may nominate one person to the Steering Committee provided that such person shall be not below the level of Governing Body member or equivalent of the respective academic or research institution.

3.2. Duties, Powers and Functions of the Steering Committee

3.2.1. The duties of the Members shall be as follows:

3.2.1.1. Members are expected to actively involve themselves in achieving the aim and objectives of the Association.

3.2.1.2. Members shall bring matters of importance to the notice of the Chairperson, Steering Committee and other members for consideration from time to time.

3.2.1.3. Members shall suggest ways, methods and practices and benchmarks which may be followed to accelerate the achievement of the aim and objectives of the Association.

3.3. The Liability of the Members of the association shall be as follows:

3.3.1. The liability of the members of the Association shall be limited.

3.3.2. Member shall not be liable personally for any expenditure or liability of the Association or any loss of the Association's income or assets, unless he/she is guilty of fraud or gross negligence;

3.3.3. No member shall be liable for the personal acts of another member.

3.4. **Functions:** The Steering Committee shall be guided by the SAFIR objectives. The Steering Committee shall be the body responsible for taking all strategic decisions pertaining to functions of SAFIR.

3.5. **Term of the Steering Committee:**

3.5.1. Members of the Steering Committee shall hold office so long as they pay the subscription regularly.

3.6. **Meeting of the Steering Committee**



- 3.6.1. The Steering Committee of (SAFIR) shall ordinarily meet at least once in year as part of the AGM and/or as may be expedient for achieving the objectives of SAFIR.
- 3.6.2. The Rules and Regulations in regard with notice, place and procedure for the Meeting of the Extraordinary General Meeting (EGM) shall apply mutatis mutandis to a meeting of the Steering Committee.
- 3.6.3. 1/3 (one third) of the members will form the quorum of the Steering Committee. If within 30 minutes from time appointed for the meeting, no quorum is present at any meeting of the Committee, the meeting shall be adjourned. The adjourned meeting may be reconvened at the discretion of the Chairperson and no quorum shall be necessary in that meeting and the members present may transact the business for which the meeting was called.

4. Executive Committee

- 4.1. **Members:** The Executive Committee shall comprise of members of the Steering Committee representing regulatory bodies from South Asia. Each member Country of SAFIR will be represented in the Executive Committee by one member from a regulatory body. If a member Country has more than one regulatory body as member of SAFIR, such members will decide amongst themselves a representative who would be the representative in the Executive Committee. Chairperson of SAFIR shall be the ex-officio Chairperson of the Executive Committee.
- 4.2. **Function:** The Executive Committee of SAFIR shall have the responsibility for operationalizing the strategic direction provided by the SAFIR Steering Committee.
- 4.3. **Term of the Executive Committee:**
 - 4.3.1. The members of the Steering Committee shall nominate the members of the Executive Committee. The said members may hold the membership of the Executive Committee in their ex-officio capacity.
 - 4.3.2. Members of the Executive Committee shall hold office so long as they remain as a member of the Steering Committee and pay the subscription regularly.



4.4. Meeting of the Executive Committee

- 4.4.1. The Executive Committee shall ordinarily meet back to back with the meeting of the Steering Committee and/or as may be expedient for achieving the objectives of SAFIR.
- 4.4.2. The notice for a meeting of the Steering Committee of SAFIR shall be deemed to be the notice for the meeting of the Executive Committee. Additionally, the Rules and Regulations in regard with notice, place and procedure for the Meeting of the EGM shall apply mutatis mutandis to a meeting of the Executive Committee being held independently of a Steering Committee meeting.
- 4.4.3. 1/3 (one third) of the members will form the quorum of the Executive Committee. If within 30 minutes from the time appointed for the meeting, no quorum is present at any meeting of the Committee, the meeting shall be adjourned. The adjourned meeting may be reconvened at the discretion of the Chairperson and no quorum shall be necessary in that meeting and the members present may transact the business for which the meeting was called.

5. SECRETARIAT

- 5.1. One of the members of the Steering Committee shall be entrusted with the responsibility of operating the Secretariat of SAFIR for such period as may be decided by the Steering Committee. The executive head of such member (regulatory commission/body) shall be the ex-officio Chairperson of the Secretariat and shall be entitled to commission the staff of the Secretariat.

5.2. Powers and Functions

- 5.2.1. The Secretariat shall be responsible for inducting new members in SAFIR, subject to placing any such new membership before the Steering Committee subsequent to such induction.
- 5.2.2. The Secretariat shall be responsible for examining new applications for membership to SAFIR and for taking decision thereon subject to ex-post facto approval of the Steering Committee.



- 5.2.3. The Secretariat shall be responsible for soliciting new applications for membership to SAFIR and for taking decision thereon subject to ex-post facto approval of the Steering Committee.
- 5.2.4. Secretariat shall be responsible to accept from all the members of SAFIR, such amounts as Subscription Fee for such term, as may be prescribed from time to time by the Executive Committee under authorization of the Steering Committee.
- 5.2.5. The Chairperson of the Secretariat shall approve rejoining of any such member who has either voluntarily left SAFIR or has been removed from SAFIR by reason of defaulting in payment of the Subscription subject to payment of the Renewal Subscription Fee as may be prescribed from time to time.
- 5.2.6. The Secretariat shall keep a roll of members with address. If a member of the Association changes its address, it shall notify such change to the Secretariat and the entry in the roll shall be changed accordingly. If such member fails to notify such change, the address in the rolls of the Association shall be deemed to be the correct address.
- 5.2.7. The Secretariat shall keep separate books of accounts in accordance with the applicable statutory provisions and accounting principles at its office reflecting all sums of money received and expended by the Association and the matters in respect of which the receipt and expenditure takes place including paying of wages and salaries of employees
- 5.2.8. The accounts of SAFIR shall be audited every year by an Auditor appointed by the Chairperson CERC (Member of SAFIR). The Auditors' Report, together with the remarks, if any, of the Secretariat thereon shall be placed before the next Annual General Meeting before all the members of SAFIR.
- 5.2.9. The Secretariat shall issue any Notice/ Notice of AGM/EGM/meeting of the Association to all members of SAFIR Steering Committee or Executive Committee, as the case may be.
- 5.2.10. The Secretariat shall determine the time and place of AGM/EGM after consultation with the Chairperson of SAFIR.



5.2.11. Every notice of AGM / EGM of the Association shall specify the time and place of the meeting and contain a statement of the business to be transacted thereat.

5.2.12. Any inadvertent omission to give notice or non-receipt of notice by any member shall not invalidate the proceedings of the meeting.

6. ANNUAL GENERAL MEETING

6.1. SAFIR shall hold an annual general meeting (hereinafter referred to “AGM”) in the form of an annual “**SAFIR Conference**”.

6.2. A notice of at least 21 (Twenty-One) days in advance shall be given to the members of SAFIR. The notice shall contain the agenda for discussion and action at the AGM.

6.3. The venue of the meeting shall be subject to rotation each year unless it is decided to hold it at any other place with the express approval of Steering Committee or the approval of a simple majority of the members present and voting at the preceding AGM.

6.4. The Chairperson of the Association shall preside over the AGM. If, the Chairperson is not present, members present shall elect one person from amongst themselves to chair the meeting.

6.5. The presence of 1/3 (one third) of the Members shall form the quorum. If within 30 minutes from time appointed for the meeting, no quorum is present at any meeting the same shall be adjourned. The adjourned meeting may be reconvened at the discretion of the Chairperson and no quorum shall be necessary in that meeting and the members present may transact the agenda or issue for which the meeting was called.

6.6. The AGM shall transact the following business, namely: -

6.6.1. to report to the Chairperson and members of the affairs of the Association;

6.6.2. to adopt the audited income and expenditure account of the association;

6.6.3. to determine the time and place of the next AGM; and

6.6.4. to consider any other matter that may be given notice of by any member or brought forward at the meeting with the permission of the Chair.

7. EXTRAORDINARY GENERAL MEETING (EGM)

7.1. All meetings of the Association other than AGM shall be called Extraordinary General Meetings.



- 7.2. An Extraordinary General Meeting may be convened by the Chairperson of SAFIR through the Secretariat to consider specific matters of urgency and importance.
- 7.3. EGM may be called only after giving not less than 10 (ten) days' notice in writing to all members.
- 7.4. An Extraordinary General Meeting may also be convened on submission of a written requisition in this behalf to the Executive Committee by not less than 5 (five) members to consider specific issues.
- 7.5. The Chairperson of SAFIR shall preside over the EGM. If, the Chairperson is not present, members present shall elect one person from amongst themselves to chair the meeting.
- 7.6. The presence of 1/3 (one third) of the Members shall form the quorum. If within 30 minutes from the time appointed for the meeting, no quorum is present at any meeting the same shall be adjourned. The adjourned meeting may be reconvened at the discretion of the Chairperson and no quorum shall be necessary in that meeting and the members present may transact the agenda or issue for which the meeting was called.
- 7.7. The EGM shall transact the limited business on its agenda as specifically mentioned in the notice to the EGM.

8. VOTING AT AGM/EGM

- 8.1. Each member represented in the Steering Committee shall be entitled to one vote at any meeting of the AGM/EGM.
- 8.2. Each eligible member shall be entitled to appoint a proxy to attend a meeting of the SAFIR and vote on its behalf.
- 8.3. All matters in the meeting shall be decided by a simple majority of the members present and voting. In case voting is required each member of the Steering Committee has one vote and in the event of a tie, the Chairperson shall have a second or casting vote.
- 8.4. The member appointed by Secretariat shall record the minutes of the meetings of the Association in a Minutes Book to be maintained for the purpose and obtain the signature of the Chairperson in token of its correctness as early as



possible after the meeting, and in any case, within a month of the date of the meeting or otherwise the minutes of the meeting shall be considered void.

8.5.

9. RESIGNATION, WITHDRAWAL OR EXPULSION/CESSATION OF MEMBER

9.1. A member of SAFIR shall cease to be a member:

9.1.1. upon being so removed by the Steering Committee acting on the recommendation of the Chairperson of the Secretariat for non-observance of the rules and regulations laid herein, after having given an opportunity to show cause to the member. The decision of the Steering Committee shall be final and binding in this regard.

9.1.2. upon voluntarily withdrawal from membership of SAFIR by making an application in the regard to the Chairperson of the Secretariat.

9.1.3. upon non-renewal of subscription for a consecutive 2 (two) terms.

10. APPEALS AND RE-ADMISSATION OF MEMBERS:

10.1. A Commission/Body who has ceased to be a member of the Association by virtue of provision of Rule 9 herein before, may appeal within 30 days of such cessation to the Steering Committee who may re-admit the said Commission/Body as a Member subject to such conditions as may be specified.

10.2. A defaulter member who has not paid the membership subscription by virtue of provision of Rules 9.1.3. can re-join the Association by paying the membership fees for the last 2 (two) years.

11. FUNDS AND DONATION ETC.

11.1. SAFIR may receive gift, grants, donations and benefactions from any individual, corporate body, association, trust, Bank, or any other statutory or regulatory or financial body, Government or any other source in or outside India and the same shall be used by the association for exercising its objects and discharging its aim subject to the condition that any acceptance from foreign agencies, institutions and Government will be on such terms as may be prescribed by statues or law for the time being in force. This includes:



11.1.1. A Corpus fund of (amount) may be created with contribution from various members, individual, corporate body, Association, trust, Bank, or any other statutory or regulatory or financial body, Government or any other source in or outside India.

11.1.2. All other sums of money that may be provided by the Governments.

11.1.3. All subscription & charges received from the members.

11.1.4. All sums of money generated by way of grants and donations or any other manner or from any other sources.

11.1.5. All other sums of money credited to the said fund subject to the tax and foreign currency transactions related statutes and regulations, for the time being in force

12. UTILIZATION OF THE FUNDS

12.1. All the funds of the SAFIR shall be deposited, utilized or invested by the Secretariat under the general supervision of the Executive Committee as allowed under various applicable tax statutes and rules in force for the time being.

12.2. All the income and movable and immovable assets of the Association shall be utilized and applied solely for the promotion and achievement of its aim and objectives as set forth in the Memorandum of Association.

12.3. No portion of the income or assets of the Association shall be paid or transferred directly or indirectly by way of dividend, bonus and profit or in any other manner to the present or past members of the Association or to any person claiming through any one or more of them.

12.4. No member of the Association may make any profit or derive any pecuniary benefit by virtue of his membership of SAFIR. However, a member may be reimbursed any out-of-pocket expenses incurred by him in connection with the work of the Association.

12.5. Notwithstanding anything contained hereinabove, any member of SAFIR may be allowed by the Steering Committee, on a recommendation made by the Secretariat, a remuneration for services rendered by him to the Association as may be considered reasonable in the circumstances of the case.



13. CONTRACT AND AGREEMENTS

- 13.1. The Steering Committee may enter into any arrangements with any government or authority, supreme, municipal, local or otherwise, or company that may seem conducive to the Association's main object(s), and to obtain from any such government authority or company, any charters, contracts, decrees, rights, privileges and concessions and to carry out, exercise and comply with any such arrangements, charters, contracts, decrees, rights, privileges and concessions.
- 13.2. The Executive Committee or anybody of persons or person designated by the Executive Committee may enter into any lease, license, hire purchase agreement with respect to any immovable or immovable property or service
- 13.3. The Secretariat may enter into contract, agreements of employment with any individuals or contractor or recruitment agency, head hunting agency, employment exchange or any other body for employment of any person for any designation or post in SAFIR.

14. LEGAL PERSONALITY

The Association may sue or be sued in the name of the Chairperson as per provision laid down under statutes or rules applicable and for the time being in force in the respective country in which cause of action has arisen to the Association.

15. INDEMNITY

Every office bearer (including the Chairperson) for the time being of SAFIR shall be indemnified out of the funds of SAFIR against all losses and expenses incurred in the discharge of his / her duties.

16. BOOKS OF SAFIR TO BE THE SAFIR'S PROPERTY

All books, files, etc. maintained by the Secretariat shall be the property of the Association and shall be kept as a record at the Secretariat.

17. BANK ACCOUNT:

- 17.1. The bank account or accounts of SAFIR shall stand in the name of "South Asia Forum for Infrastructure Regulation" or in such name as SAFIR may hereafter bear.



- 17.2 All cheques drawn on behalf of SAFIR shall be signed by any two office-bearers duly authorized by the Chairperson of CERC (Member of SAFIR).
- 17.1. However, if two duly authorized office-bearers are not available to sign on the cheques, then a cheque may be signed by two such other office bearers of the Secretariat who may be authorized from time-to-time by the Chairperson of CERC (**Member of SAFIR**).

18. DISSOLUTION

- 18.1. The Association may be dissolved upon unanimous decision of the Steering Committee in the EGM or upon a decision of 2/3rd majority of the Steering Committee and in compliance with the law and procedure for the time being in force.
- 18.2. If on holding up or dissolution of the Association there shall remain, after satisfaction of all debts and liabilities, any assets or property, they shall be dealt with in such manner as the law of the respective country may determine.
- 18.3. At the end of the “term” of office, the Association shall report to the concerned statutory authority in this regard and shall comply with all legal formalities and reporting requirements including but not limited to the following, and obtain the following:
- i. Tax clearance certificate from the Statutory/Regulatory authority/body in this regard whether at state or central level;
 - ii. Auditor’s Certificate confirming that all liabilities accruing to the Association by event of its operation have been either fully paid or adequately provided for;
 - iii. Certificate to the effect that no legal proceedings pending in any court /judicial/ statutory authority against the Association.
- 18.4. At the end of the “term” of office in the member Country, the Assets, deposits/ bank balances etc, shall be remitted to a new office of the association member country in compliance with central or state or international law in force for the time being.



19. USE OF CORPUS IN CASE OF DISSOLUTION

At any time, if it is found that the affairs of SAFIR cannot be carried on, either because it has survived its usefulness, or because sufficient support is not forthcoming or for any other reason, the Steering Committee may wind up SAFIR. Provided that SAFIR shall not be wound up save by a clear majority of two-thirds of the members of its Steering Committee present and voting at a Extraordinary General Meeting. Should it be decided to wind up as aforesaid, its property shall not be paid to or distributed among its members, but shall be given to some other body having objects similar to SAFIR or to any charitable society to be determined by the votes of not less than three-fifths of the members of the Steering Committee present at a meeting called for that purpose.

South Asia Regional Energy Partnership (SAREP) Presentation

on

Common Minimum Grid Code (CMGC) for South Asia

Presented by

Shri Pankaj Batra, Senior Adviser, SAREP & Shri Rajiv Ratna Panda, Regional Energy Trade Lead, SAREP

Content

01

Progress on Common Minimum Grid Code (CMGC) for South Asia

02

Key Highlights Common Minimum Grid Code (CMGC) for South Asia

1. Objective

2. Structure

3. Planning Code

4. Connection Code

5. Operation Code

6. Scheduling and Dispatch Code

7. Administration of the Code

Progress on Common Minimum Grid Code (CMGC) for South Asia

Consultative and Participative Processes



Through Extensive Deliberation and Consultation (*Over a period of four years and 7 JWG Meetings*) CMGC has been *Finalized and adopted* with the changes during the 10th meeting JWG held on 8th January 2024.



In addition, several One-to-one Meeting were undertaken with SAFIR Member Countries



Builds upon the earlier study work done on Harmonisation of Grid codes, Operating Procedures and Standards to facilitate/promote Cross-Border Electricity Trade in the South Asia Region.



The CMGC is now placed before this August Body - SAFIR ECM and SCM for its consideration.

PREAMBLE

The Common Minimum Grid Code for South Asia lays down the common minimum rules, guidelines and standards to be followed by various South Asia country participants in the system *for cross border trading in electricity, while operating the power system, in the most secure, reliable, economic and efficient manner.*



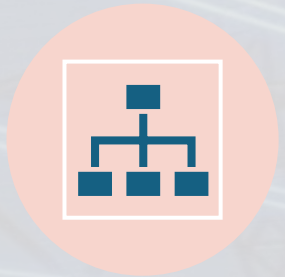
Objective

- a) **Facilitation of Cross Border Trading Of Power**, in a **Fair and Non-discriminatory Manner** for all South Asian nations, while ensuring **Secure, Reliable, Economic and Efficient** planning and operation of the grid.
- b) Facilitation of the **Coordinated Optimal Operation of the South Asian Grid.**
- c) Facilitation of **Coordinated and Optimal** maintenance **planning of generation and transmission facilities** in the South Asian grid.

Common Minimum Grid Code (CMGC) for South Asia

Structure of CMGC

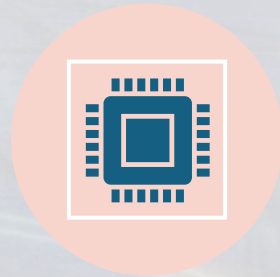
The structure of the Common Minimum Grid Code for South Asia consists of the following



PLANNING CODE



CONNECTION
CODE



OPERATING CODE



SCHEDULING AND
DESPATCH CODE
AND



ADMINISTRATION
OF THE GRID
CODE

Common Minimum Grid Code (CMGC) for South Asia Planning Code



The cross-border transmission system shall be capable of withstanding the loss of most severe single system infeed without loss of stability.

Common Minimum Grid Code (CMGC) for South Asia

Connection Code



Objective:

- a) To ensure the safe operation, integrity and reliability of the connected South Asia grid.
- b) Any country in South Asia intending to new country getting connected to the South Asia grid shall neither suffer unacceptable effects due to its connectivity nor impose unacceptable effects on the South Asian grid.
- c) Any country in South Asia new country seeking connection to the South Asia grid is required to be aware, in advance, of the requirements for connectivity to the South Asian grid and also the standards and conditions its system has to meet for being integrated into the grid.
- d) It lists out the important Technical Requirements for Connectivity to the Grid.
- e) A Connection Agreement is envisaged between the SAFTU and the national transmission utility of the country seeking connection.

Common Minimum Grid Code (CMGC) for South Asia

Operation Code

- a) The objective of this Code is to maintain operation security.**
- b) This Code lists out the important operational parameters, and processes and procedures, required to be maintained/followed, for safe and secure operation of the interconnected grid, like frequency, voltage, protection coordination, operation liaison, system restoration procedure, etc.**
- c) This also consists of outage coordination, and reporting system.**
- d) All country system operators are to abide by these.**

Common Minimum Grid Code (CMGC) for South Asia

Scheduling and Dispatch Code

This code deals with the procedures to be adopted for scheduling of the net injection/drawals of concerned country entities on a day ahead basis with the modality of the flow of information between the South Asia Forum of System Operators (SAFSO) / country system operators / Power Exchange.

Common Minimum Grid Code (CMGC) for South Asia

Administration of the grid code

- a) **Initially, the Committee of the single points of contact for each country would shall be responsible for administration and modification of the Common Minimum Grid Code for South Asia.**
- b) **Later this would shall be replaced by the South Asia Forum of Electricity Regulators.**
- c) **The Committee may meet at regular intervals or as needed for the purpose of administration and modification of the Common Minimum Grid Code for South Asia.**

Thank You



“

Change is inevitable, but
transformation is a choice.

HEATHER ASH AMARA

This Photo by Unknown Author is licensed under [CC BY-ND](#)

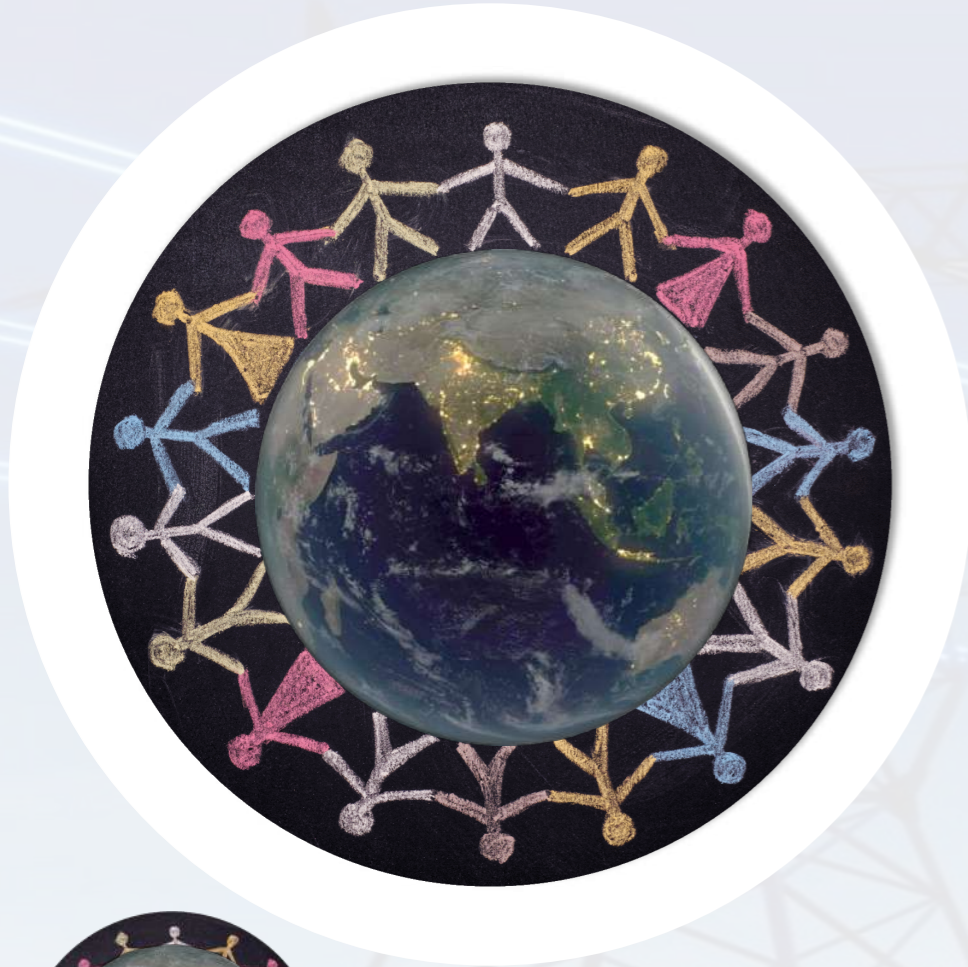
“It always seems
impossible until
it's done.”

- Nelson Mandela

Contact: rpanda@sarep-southasia.org
rajivratnapanda@gmail.com
+91-9650598697



South Asia Regional Energy Partnership (SAREP)



**Presentation
on
Key Findings of SWG Study on ‘South Asia
Energy/Electricity Regulations to develop
Regulatory Road Map for Electricity/Energy
Exchange and Energy Cooperation among South
Asian Countries’**

26th SAFIR Executive Committee Meeting & 30th SAFIR Steering Committee Meeting
12th December, 2024 , New Delhi, India

Presented by
Mr. Arun K A, Director, Deloitte-India and Mr. Rajiv Ratna Panda, Regional Energy Trade Lead, SAREP

Content

1. Introduction
2. Recommendations for regulatory changes in South Asia
3. Common Minimum Harmonized and Standardized Template of energy/electricity regulations for Energy Cooperation
4. Roadmap and action plan



Key components of the report

Common Minimum Harmonized and Standardized Template of energy/electricity regulations for Energy Cooperation

A master regulation /
regulatory template that can
be adopted by the South
Asian countries after
undertaking country specific
customizations



Country wise regulatory roadmap

The broader process of
adoption of the “common
minimum template” and
associated regulatory changes
considering intermediate and
long term scenarios

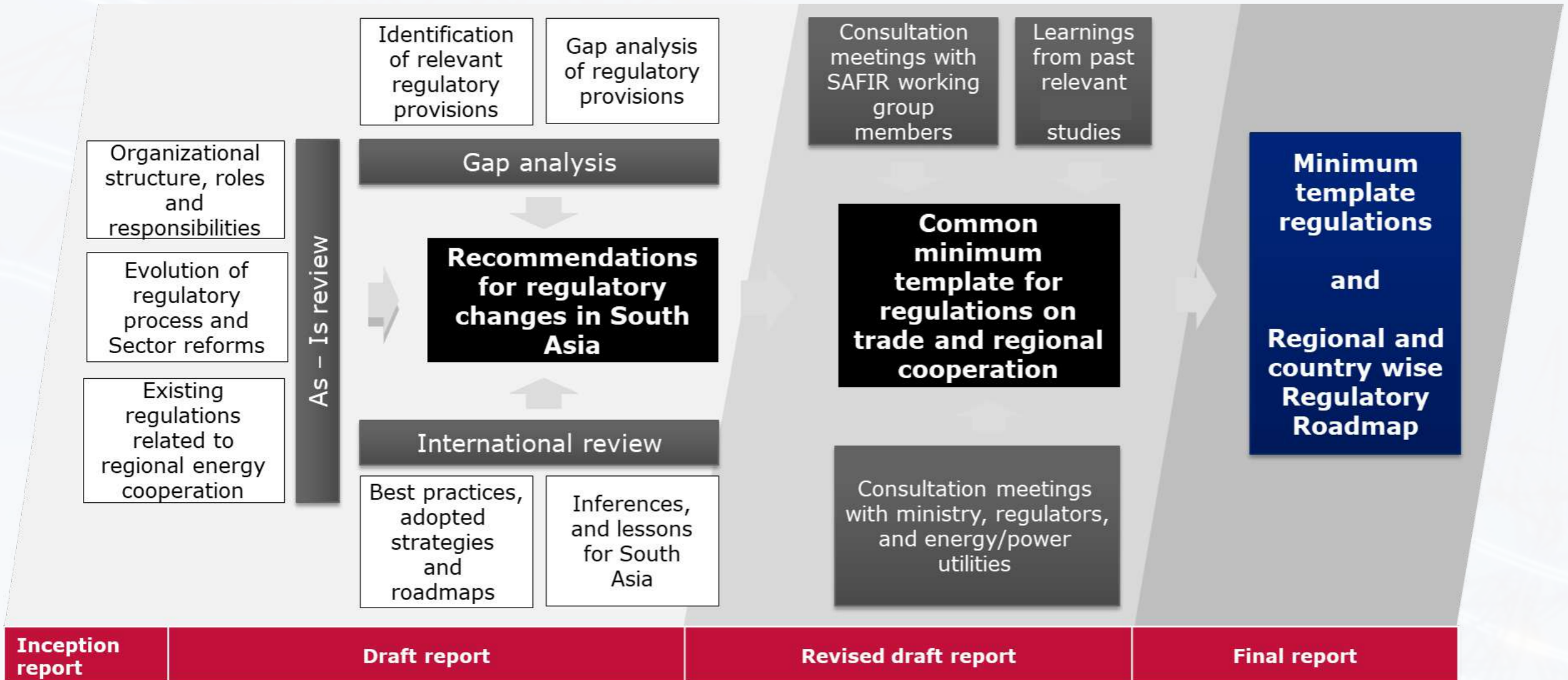


Country wise action plan

Action plan for regulatory
amendments or introduction
of new regulations, beyond
what is specified in the
“common minimum
template”



Methodology



Suggestions and comments obtained during stakeholder consultations: July 2022



Bangladesh

- Govt. of Bangladesh is also considering a CBET policy document to be issued
- Policy clarity required on BERC's role on CBET
- A few more definitions to be added in the common minimum template

Bhutan

- Role of Govt. is crucial
- Possibility of common vs country specific deviation settlement mechanisms may be explored

Sri Lanka

- The recent crisis has prompted rethink on strategies.
- Law does not have any provision for CBET.
- CEB has to identify areas of regional coordination such as purchase of energy, ancillary services etc.

Nepal

- Multiple suggestions on common template – frequency of information system, clarity on curtailments, meter reading, dedicated lines etc.

India

- Need for MBMS model, deviation settlement etc.



The study report has been further modified based on the feedback received during 04th SAFIR Working Group meeting held on 14 Feb 2023, in Kathmandu, Nepal.

Recommendations for regulatory changes in South Asia

Regulatory & Institutional changes required to
support Energy Cooperation and Trade



Key Recommendations for Regulatory changes in South Asia

1. Policy/rule of the Government, relating to regional energy cooperation

- Reduce the ambiguities on regional energy cooperation framework and help in reducing the perceived investment risk in regional energy projects.

5. Going beyond electricity – Natural Gas trade

- Governments may preferably come up with a policy/guideline/rule on Cross Border trade of Natural Gas also in the future.

2. Master regulation on regional Energy Cooperation

- Covered further in detail as “Model/Template Regulations”

4. Grid code harmonization

- May continue as per SAFIR’s “Common Minimum Grid Code”

3. Wholesale Market

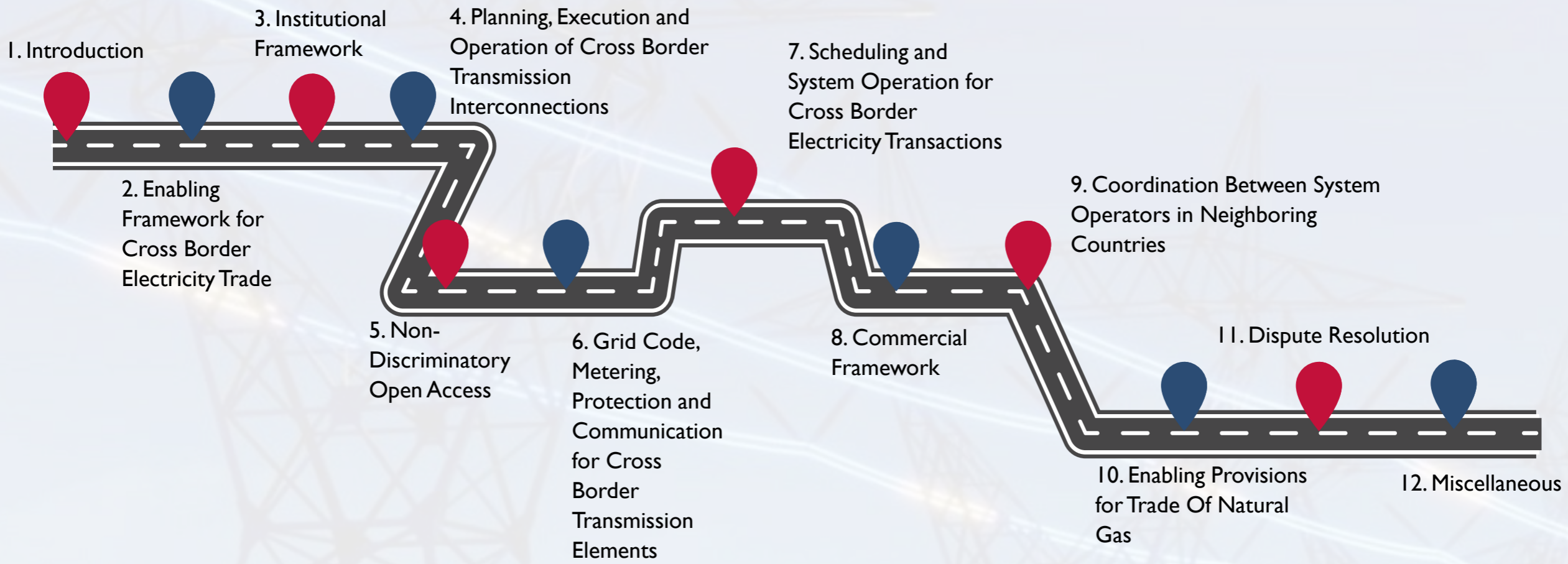
- The member countries (other than India, Maldives & Pakistan) shall clarify type of competition envisaged regd. CBET – Role of private sector, traders, exchanges etc.



Common Minimum Harmonized and Standardized Template of energy/electricity regulations for Energy Cooperation



Contents of Common Minimum Harmonized and Standardized Template





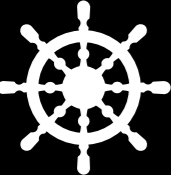
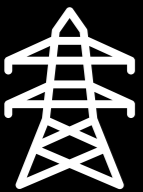
Key features of Common Minimum Harmonized and Standardized Template (1/6)

Key terms defined:

CBET Authorization	Authorization granted by the Government to a Participating Entity for participating in CBET
Authorized Participating Entities	Participating Entities which have obtained Authorization for CBET
Dedicated Interconnection	Cross Border Transmission Interconnections constructed for the use of single or multiple Participating Entities, for the entire lifetime of such interconnections
National Transmission Utility	Entity which has overall responsibility for operating and maintaining the national transmission network
National System Operator	Agency entrusted with the scheduling and operational of national level transmission grid of each Country
Open Access (OA)	Non-discriminatory provision for the use of transmission network by any Participating Entities
Open Access Nodal Agency	STOA Nodal Agency, MTOA Nodal Agency or LTOA Nodal Agency for processing OA applications
Regulatory Authority	Regulatory body, which is entrusted with the regulation of electricity sector at the national level, in each Country
Settlement Nodal Agency	Nodal agency as notified Government of each country for settlement of grid operation related charges with the entities in neighboring countries
Shared Interconnection -	Cross Border Transmission Interconnections which are constructed without any permanently identified users
Short Term, Medium Term and Long Term OA	OA for up to one month; three month to five years; and not less than fifteen years respectively
Transmission Planning Agency	Agency designated so by the Government of each Country for undertaking transmission planning at national level
Transmission Service Provider	Entity which owns and operates a transmission line

Key features of Common Minimum Harmonized and Standardized Template (2/6)

Role of key entities

	<p>Regulatory Authority</p>	<ul style="list-style-type: none"> • Approve guidelines for OA • Notify OA nodal agencies • Develop transmission pricing framework, and determine transmission tariffs • Develop transmission loss determination mechanism • Define terms and conditions for power traders, and power market platforms
	<p>Transmission Planning Agency</p>	<ul style="list-style-type: none"> • Plan new CBET interconnections • Finalize specifications for metering, network protection and communication facilities for Cross Border Transmission Interconnections
	<p>National System Operator</p>	<ul style="list-style-type: none"> • Operate the national system including cross border transactions • Conduct system studies and publish corridor wise total transmission capacity, available transmission capacity, and available transmission margins, for the current period and forecast for the future period
	<p>CBET Transmission Service Provider</p>	<ul style="list-style-type: none"> • Own, operate and maintain Cross Border Transmission Interconnections, including the associated metering systems, network protection systems, voice and data communication systems • Provide adequate information and data to National System Operator and Open Access Nodal Agencies, for matters relating to energy accounting, settlement and Open Access.

Key features of Common Minimum Harmonized and Standardized Template (3/6) Transmission Planning

Shared Interconnections

- TPA to assess the need for new interconnections, at least once in a year
- Participating Entities can also request TPA to consider new lines
- Tariff to be determined / adopted by Regulatory Authority

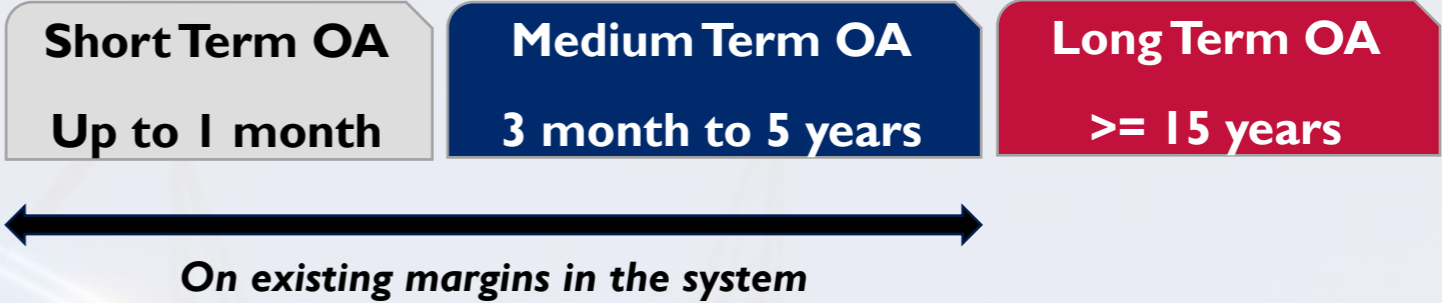
Dedicated Interconnections

- To be built by the relevant Participating Entities, after obtaining approval of TPA
- Not bound to ensure Open Access

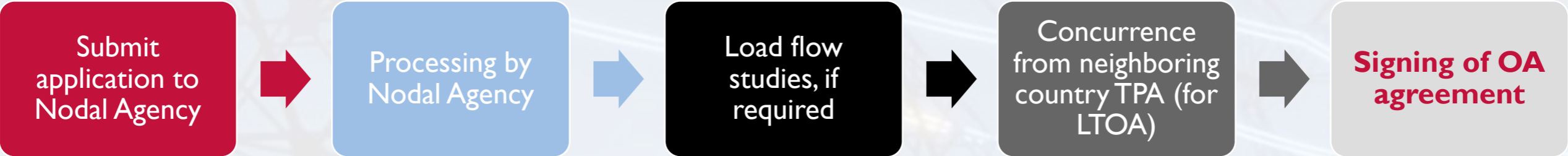
Key features of Common Minimum Harmonized and Standardized Template (4/6)

Open Access

- Authorized Participating Entities shall have the right to obtain **Open Access** to transmission network, covering the **national transmission grid and Shared Interconnections**, for undertaking Cross Border Trade.



- Procedure for approval**



Key features of Common Minimum Harmonized and Standardized Template (5/6)

Key technical aspects

GRID CODE	Strive to ensure harmony – Common Minimum Grid Code
METERING, PROTECTION AND COMMUNICATION	<p>TPA to finalize metering, and protection system specification, after consulting with System Operator</p> <p>System Operator to finalize communication system specification, after consulting with TPA</p>
SCHEDULING	Done for each Cross Border Transmission Interconnection point, for each 15 minute time interval. Schedule to be submitted before 5 PM IST of prev. day
SYSTEM OPERATION	<p>System Operation as per respective grid codes</p> <p>Deviation Settlement mechanism as per applicable country regulations</p> <p>National System Operator of Remote Country to be informed about major outages</p>

Key features of Common Minimum Harmonized and Standardized Template (6/6)

Other aspects

Energy accounting

A committee constituted by the National System Operator, with representatives from National Transmission Utility and CBET Transmission Service Providers shall be constituted to prepare monthly energy accounts at the national level for CBET

Dispute Settlement

In case of disputes relating to Cross Border Electricity Trade between entities registered under different Countries, if the dispute cannot be resolved in an amiable manner, the parties may approach an international arbitration forum at a neutral country for dispute resolution

Emergency Procedures

Black start support to neighboring country's system operator (on commercial basis)

Information Sharing

System operators to ensure seamless information sharing with system operator of neighboring country

Roadmap and action plan

The broader process of adoption of the “common minimum template”



Country wise roadmap (1/2)

Components	Current scenario	Intermediate scenario	Ideal target scenario
Common components for Afghanistan, Bangladesh, Bhutan, Nepal, Sri Lanka			
Adoption of harmonized template regulations for regional energy cooperation	Specific regulations for regional energy cooperation do not exist	Harmonized template regulations customized to the needs of the country prepared	Harmonized template regulations customized for the country adopted and implemented
Afghanistan			
Regulatory interventions other than adoption of harmonized template regulations	Grid code does not exist	Formation of a team for development of grid code	Grid code developed and adopted
Bangladesh and Bhutan			
Regulatory interventions other than adoption of harmonized template regulations	Detailed regulations for scheduling, system balancing, and deviation settlement does not exist	Formation of a team for development of regulations for scheduling, system balancing, and deviation settlement	Regulations for scheduling, system balancing, and deviation settlement developed and adopted

Country wise roadmap (2/2)

Components	Current scenario	Intermediate scenario	Ideal target scenario
Nepal			
Regulatory interventions other than adoption of harmonized template regulations	Regulations for scheduling, system balancing, deviation settlement, power trading, open access and transmission pricing does not exist	Formation of a taskforce/ working group/technical assistance team for development of regulatory framework	Regulations for scheduling, system balancing, deviation settlement, power trading, open access and transmission pricing developed and adopted
Pakistan			
Regulatory interventions other than adoption of harmonized template regulations	Competitive market trial operations are undergoing	Regulatory interventions identified based on results of CTBCM trial operations	Regulatory interventions implemented based on results of CTBCM trial operations
Sri Lanka			
Regulatory interventions other than adoption of harmonized template regulations	Regulatory framework for transmission pricing exists as part of overall bulk supply tariff determination	Formation of a taskforce/ working group/technical assistance team for amendment of Tariff Methodology, to cover transmission pricing as a standalone element	Tariff Methodology amended to cover transmission pricing as a standalone element

Thank You



“

Change is inevitable, but
transformation is a choice.

HEATHER ASH AMARA

This Photo by Unknown Author is licensed under CC BY-ND

“It always seems
impossible until
it's done.”

- Nelson Mandela



Contact: rpanda@sarep-southasia.org
rajivratnapanda@gmail.com
+91-9650598697



Annexure-IV





USAID
FROM THE AMERICAN PEOPLE

01

Objective

02

Key findings

03

Ancillary Services Framework

04

Annexure



Uniqueness

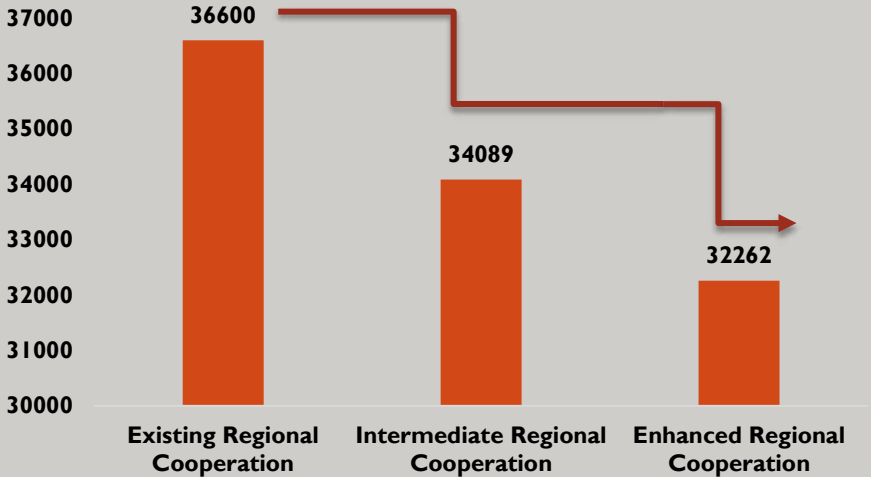
- 1 Detailed Modelling of power system operations of BBINS over **8760 hours**
- 2 Detailed capacity expansion modelling of power systems of BBINS for **15** years over the period **2021 – 2035**
- 3 Nuanced Cost **Sensitivity Analysis** for transmission enhancement, regional supply balance, and cross border sharing of reserves
- 4 **Detailed Modelling** for identification of optimal timeline, location, and technology for capacity additions to minimize power system costs..
- 5 Computation of **capacity credits** of RE generation under regional cooperation
- 6 Framework for common **ancillary service market** for South Asian nations



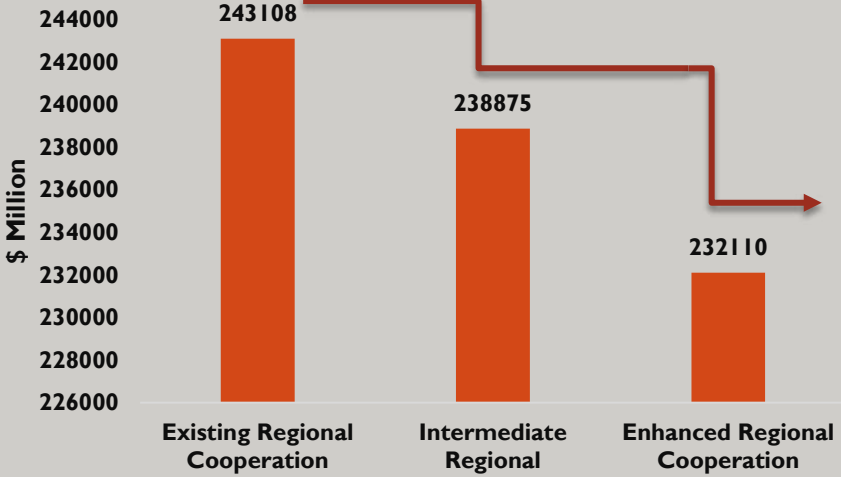
Key Findings of the Study

Establishing such collaboration today has the potential to achieve cumulative savings of **\$11 billion** by 2035, demonstrating the immense value of a unified approach to energy planning and resource sharing

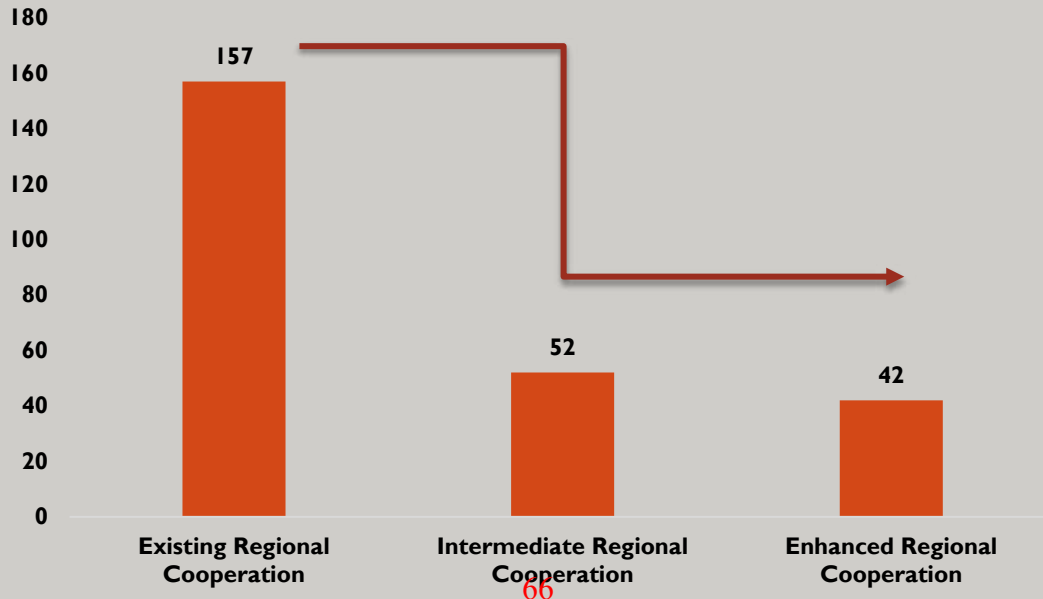
Declining Costs in 2019



Declining Costs in 2035

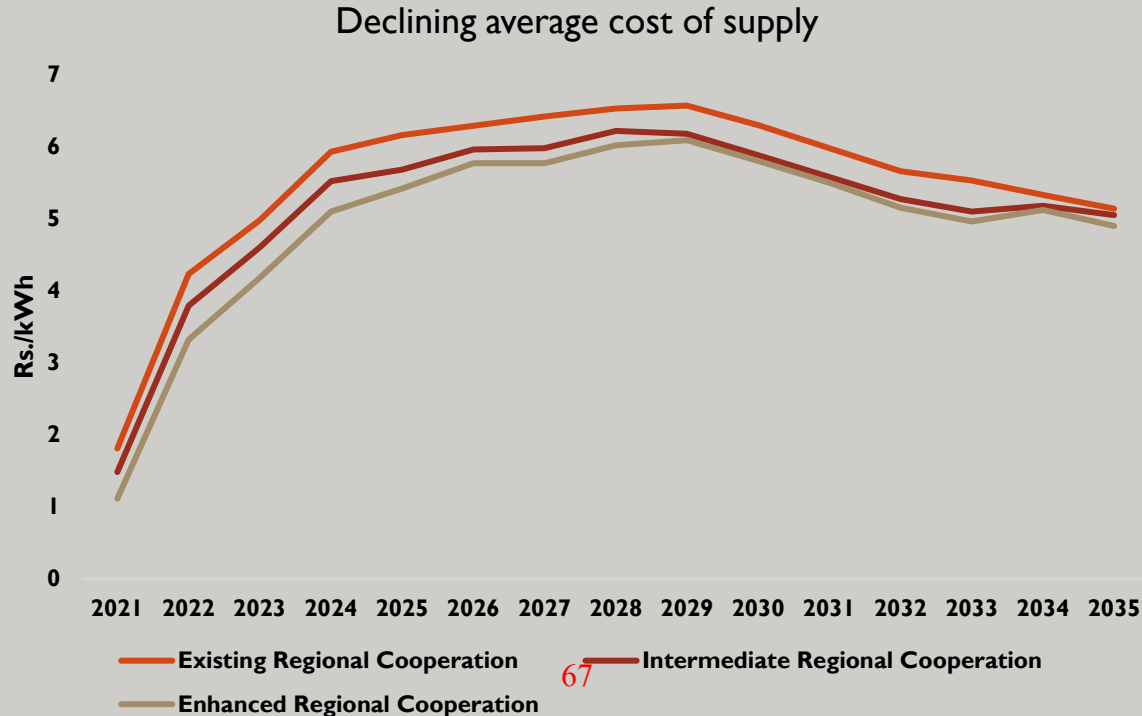


Declining Startup & Shutdown Costs



5% Decline in Average Cost of Supply (Rs./kWh)

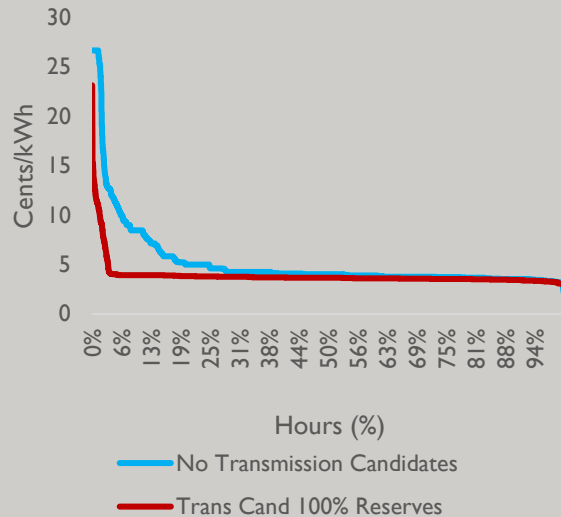
Enhanced regional cooperation could result in 5% reduction in average cost of supply in 2035 in the South Asian region.



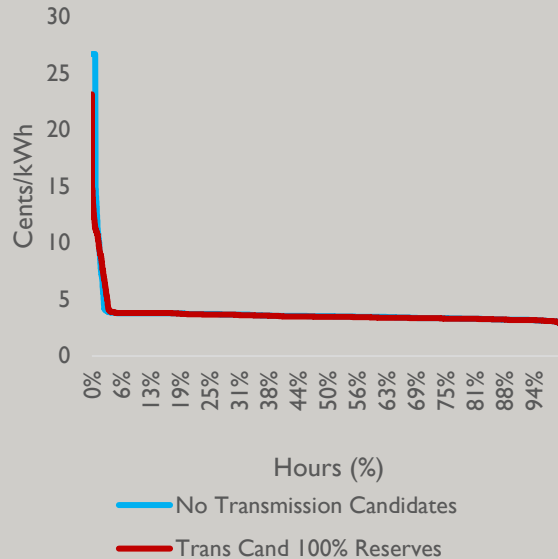
Reduction in System Marginal Prices by a factor of 1.4

The system marginal price of South Asian nations in 2019 is, on average, **1.4** times as high with existing regional cooperation when compared to enhanced regional cooperation.

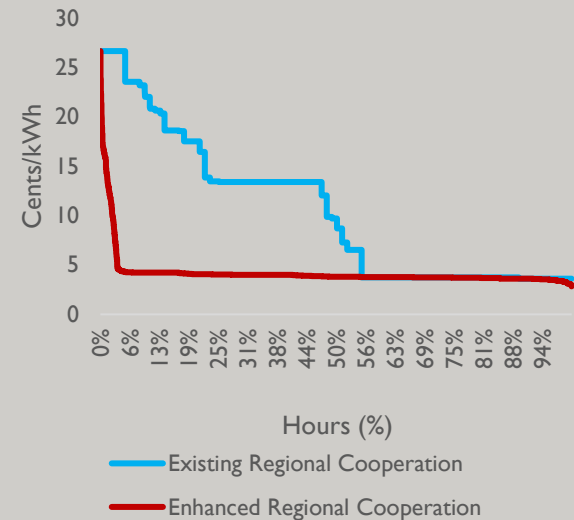
System Marginal Price of Bangladesh



System Marginal Price of Nepal

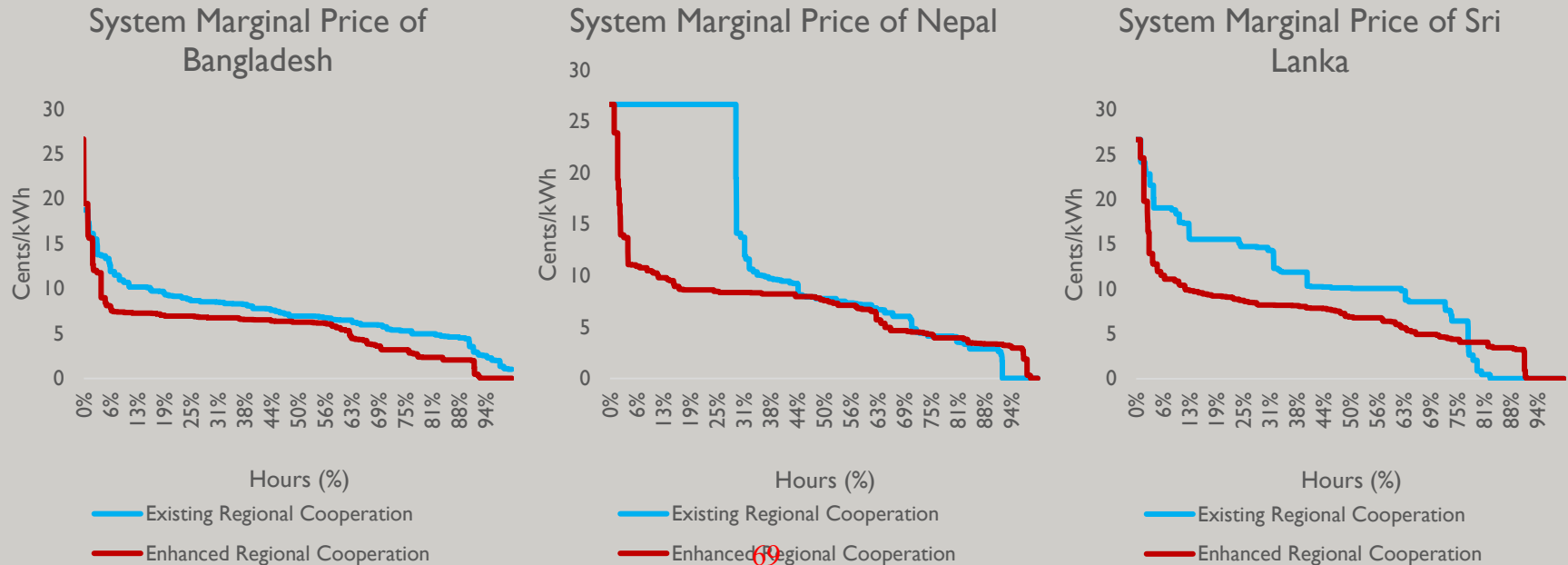


System Marginal Price of Sri Lanka

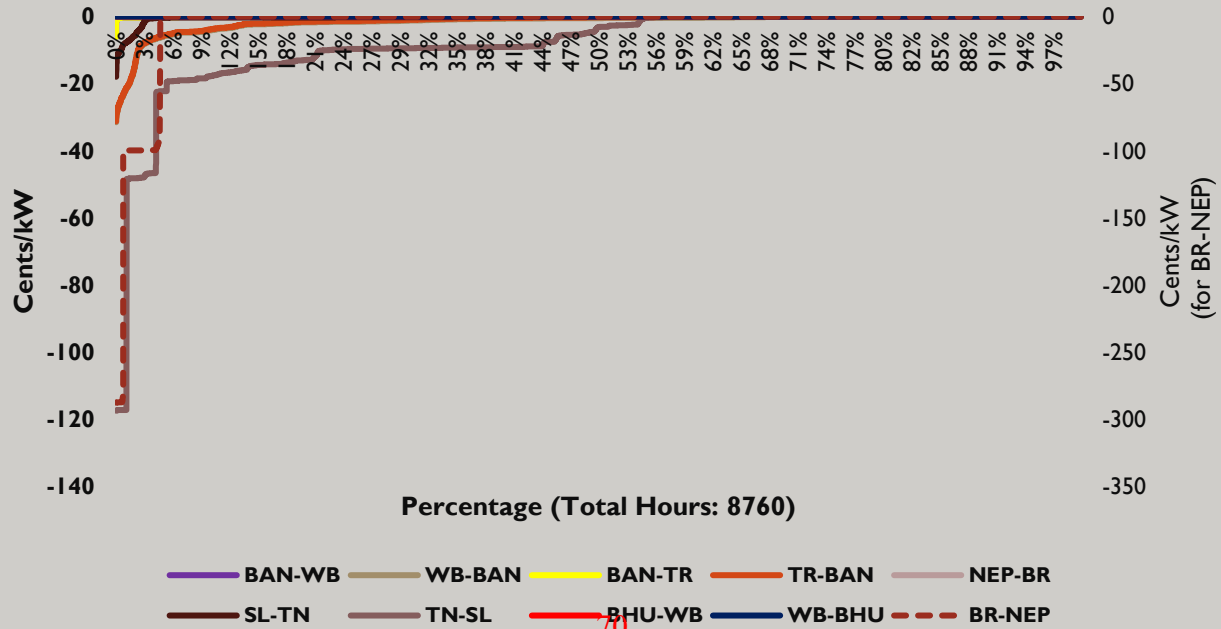


Future Potential for Price Reduction

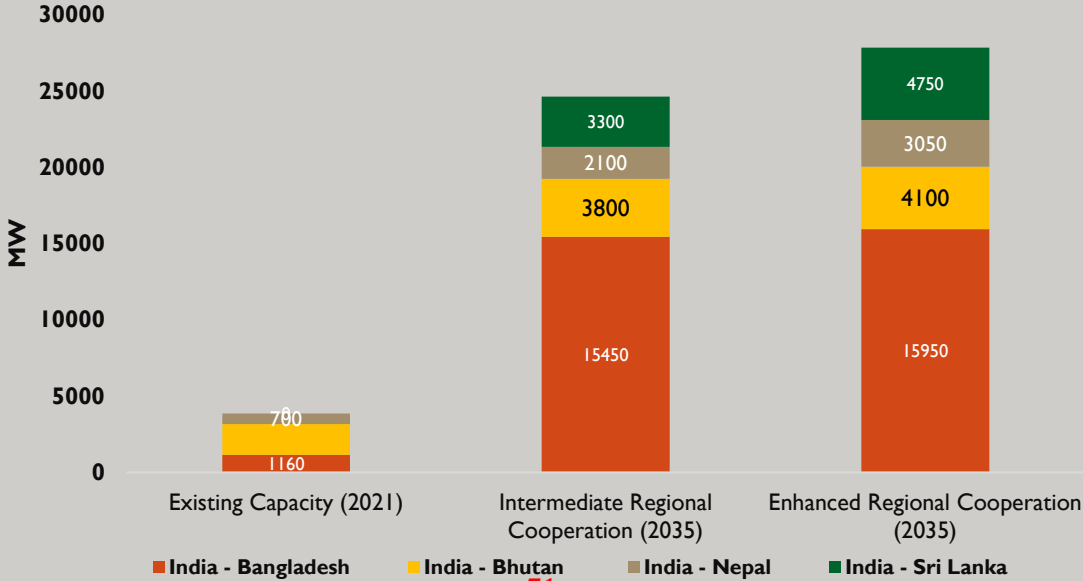
Projections for 2035 show that system marginal prices could be **1.6 – 2** times higher without regional cooperation. Future analysis shows a significant increase in cross border trading activity, with dual curves remaining greater than 0 for 90% of 8760 hours.



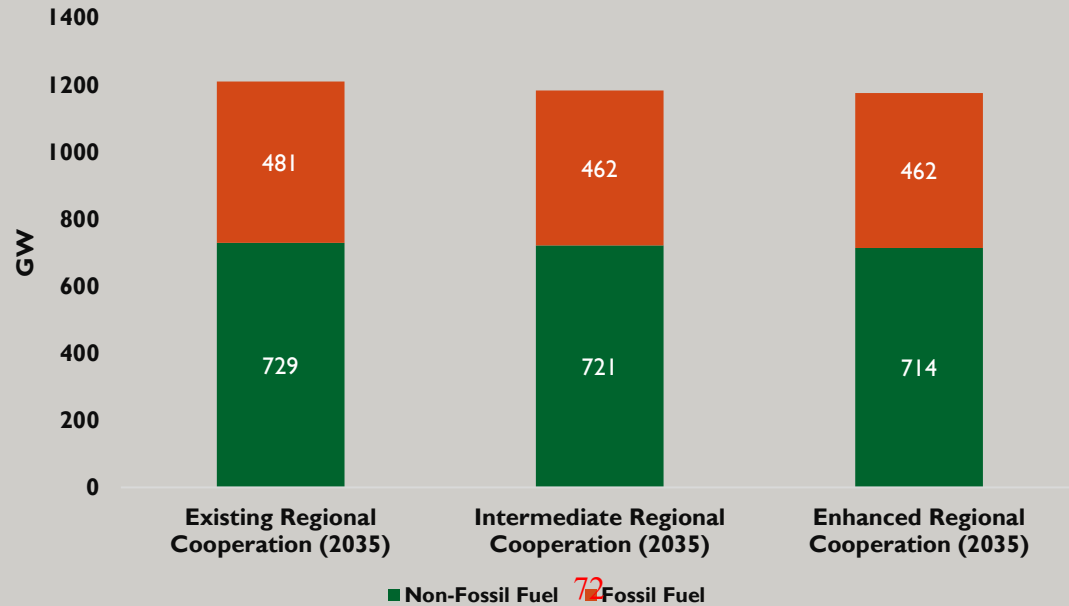
Increasing Utilization of Transmission Capacity

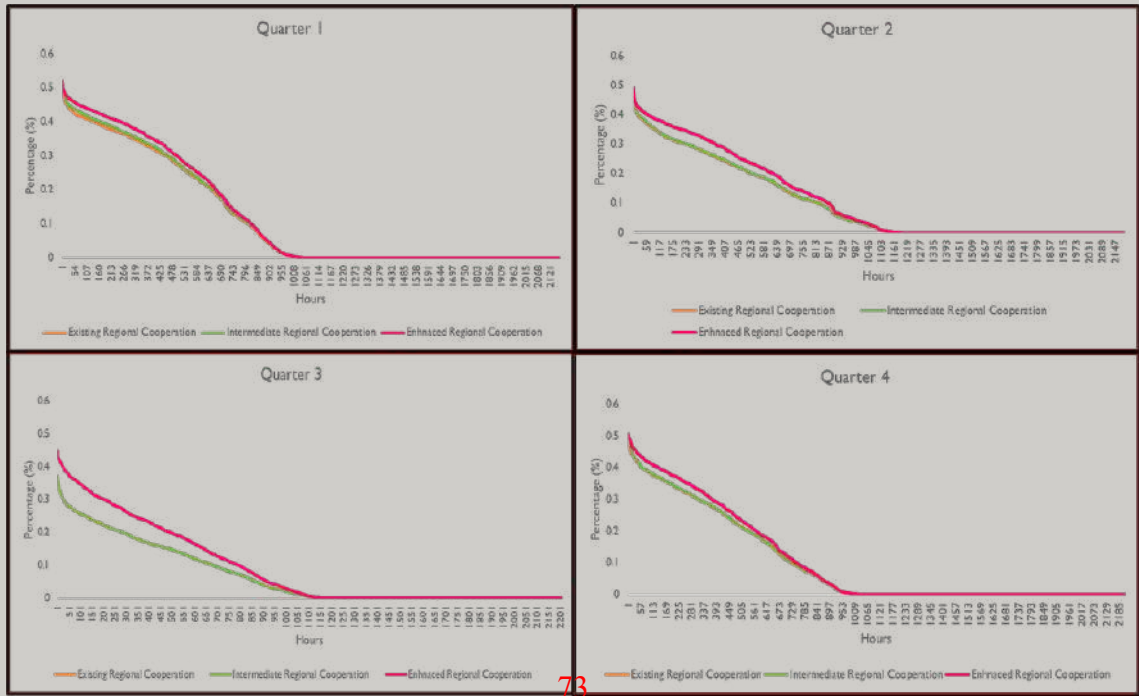


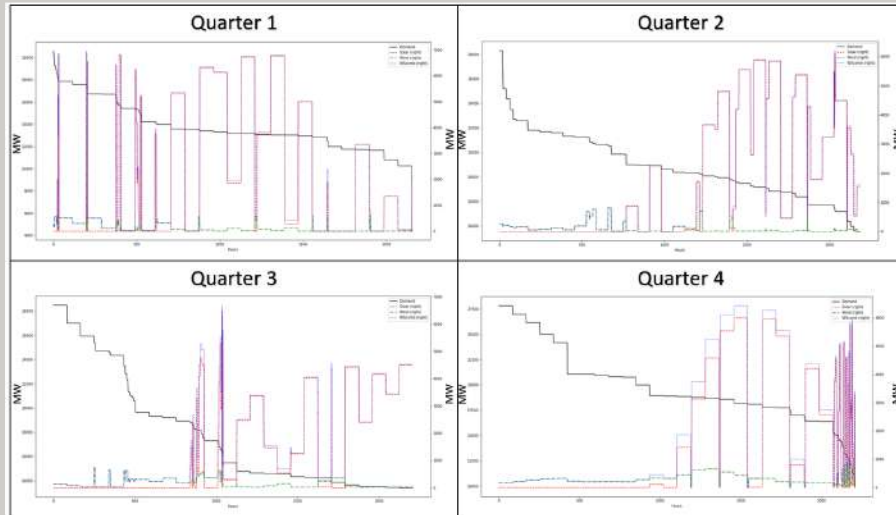
Increasing Cross Border Transmission Capacity



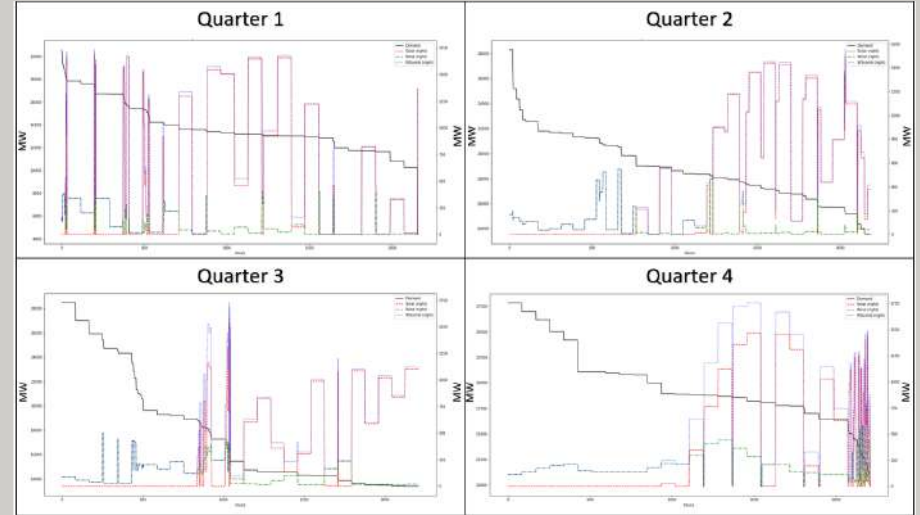
Optimal Capacity Mix







Existing Regional Cooperation - Bangladesh



Enhanced Regional Cooperation - Bangladesh



Ancillary Services Framework

Need for Ancillary Services Market in BBINS

Progress in BBINS so far

- ❑ Cross-border cooperation and sharing of resources in BBIN
- ❑ Energy exchange through traders and power exchanges

Benefits of Cooperation

- 1 *Enhanced Grid Stability and Reliability (for better management of grid fluctuations)*
- 2 *Cost-Effectiveness (by reducing the need if each country to maintain large expensive reserve margins)*
- 3 *Efficient integration and utilization of Renewable Energy (by making it easier for nations to balance RE fluctuations more efficiently)*
- 4 *Enhanced Energy Security (facilitated through cross border sharing of reserves/ continuous power availability)*

Framework for Cross Border Analysis

1. Assessment of requirement of ancillary services through a common methodology

- Forecasting and Demand Supply Balancing
- Standardized Frequency Metrics
- Collaborative Data Sharing
- Renewable Energy Integration

2. Procurement of ancillary services from neighboring nations

- Regional Ancillary Services Market
- Harmonized Grid Codes
- Utilization of Existing Frameworks
- Bilateral Agreements

3. Pricing of ancillary services for cross border trading

- Operating Costs
- Opportunity Costs
- Economic Valuation of Grid Stability
- Shadow Price



USAID
FROM THE AMERICAN PEOPLE

Annexure

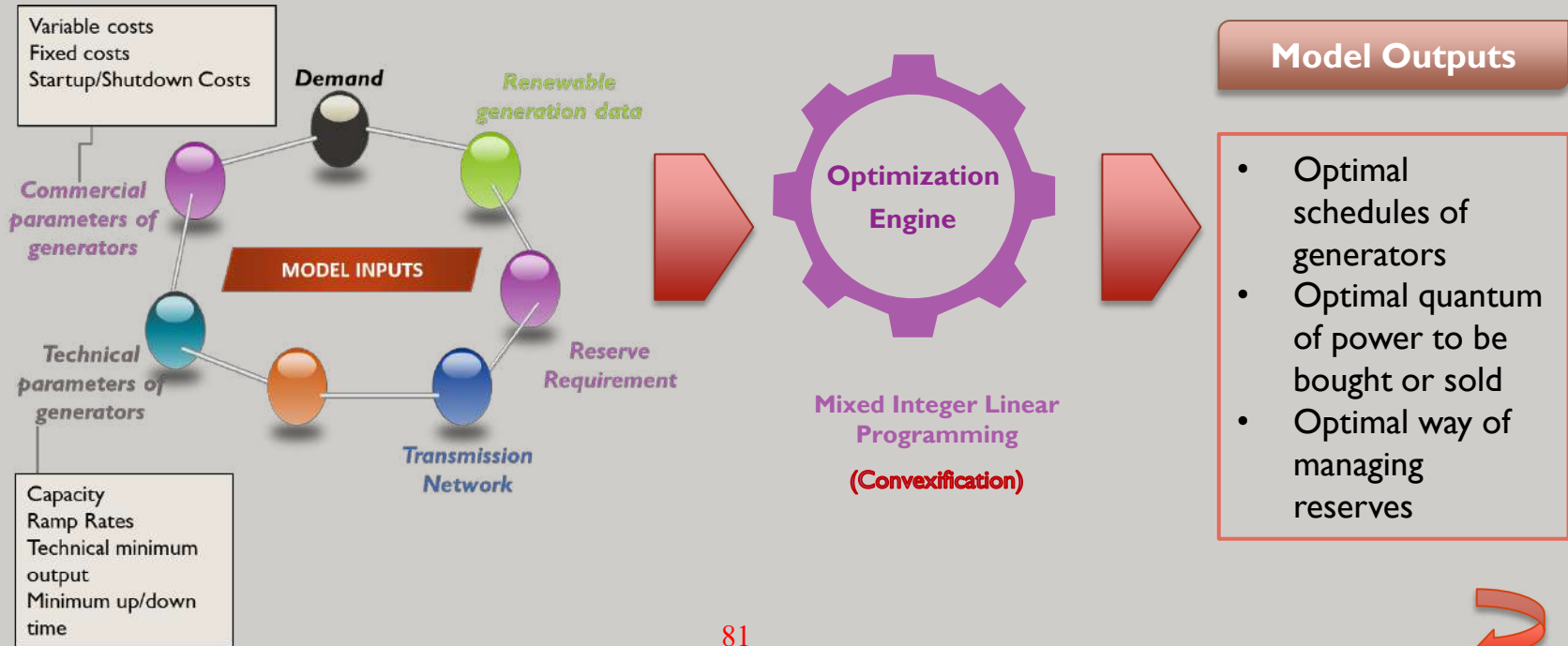


Scenario	Assumption on Inter Country Transmission Expansion Candidates	Assumption of Reserve Management
Existing Regional Cooperation	No Transmission Expansion	Local Management of Reserves for each zone
Intermediate Regional Cooperation	Transmission Expansion Candidates Considered	Local Management of Reserves for each zone
Enhanced Regional Cooperation	Transmission Expansion Candidates Considered	No restriction on import of reserves (100% Cross-Border Reserve Sharing)

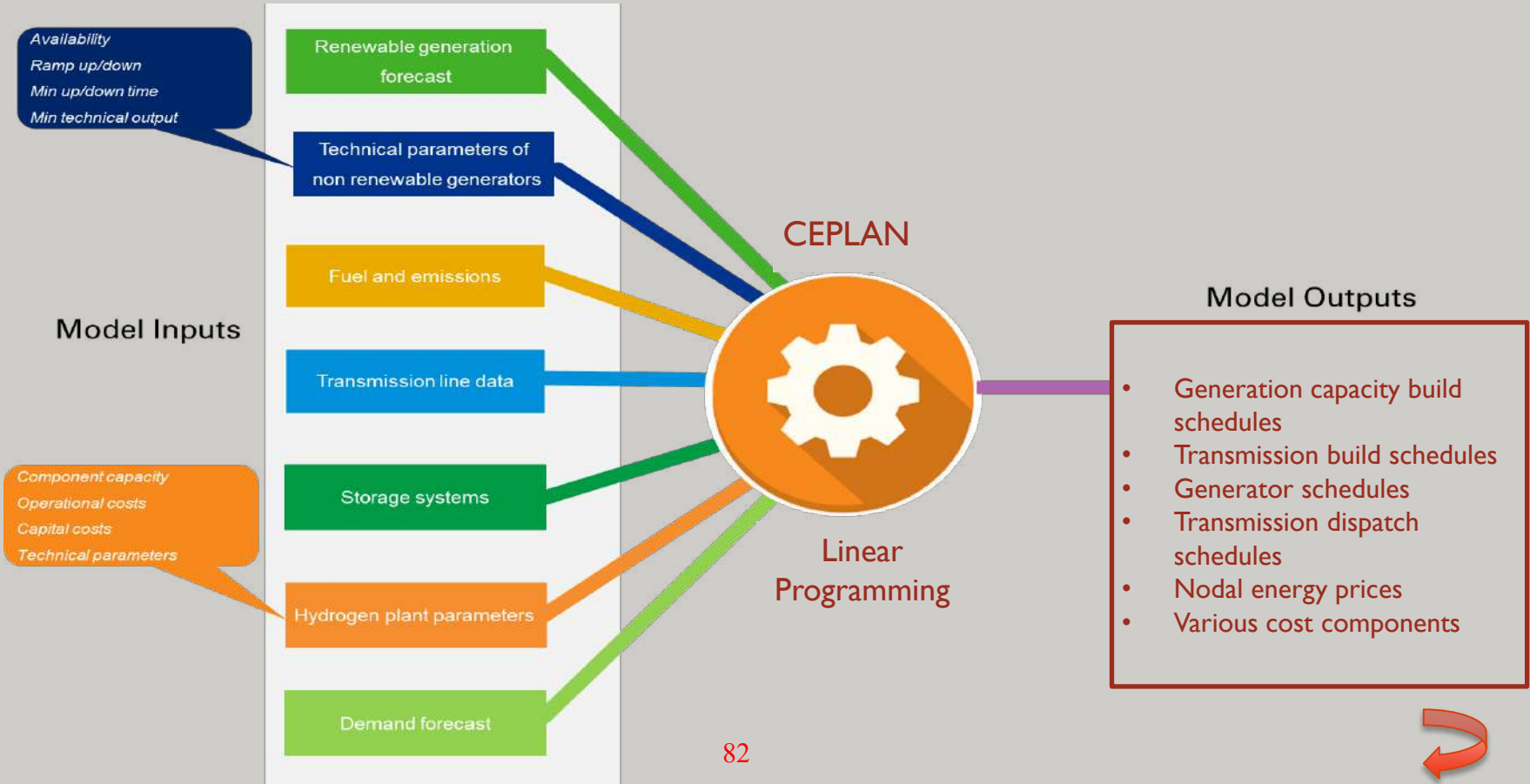


Methodology – Unit Commitment Modelling for 2019

UCM runs for 10 days at a time, in a recursive dynamic way (where the final “state” of the power system for the previous day would be assumed as a “start point” for the following day), summing up to model runs for 8760 hours in a year

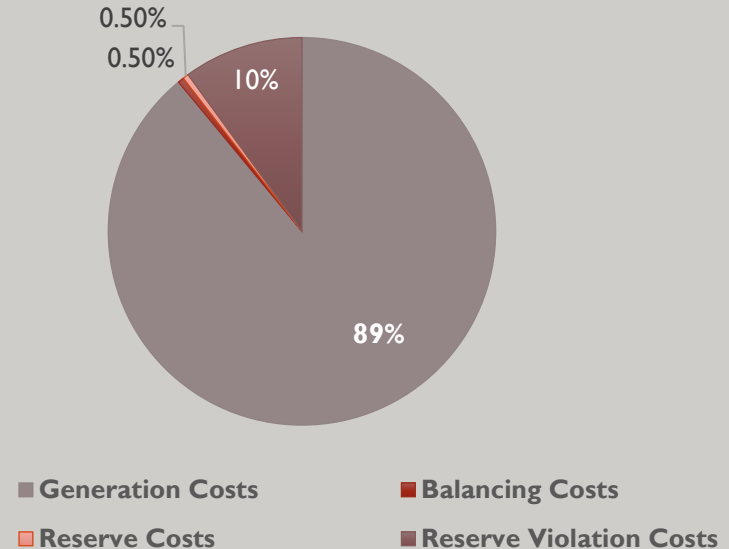


Methodology – Capacity Expansion Modelling for 2021-2035



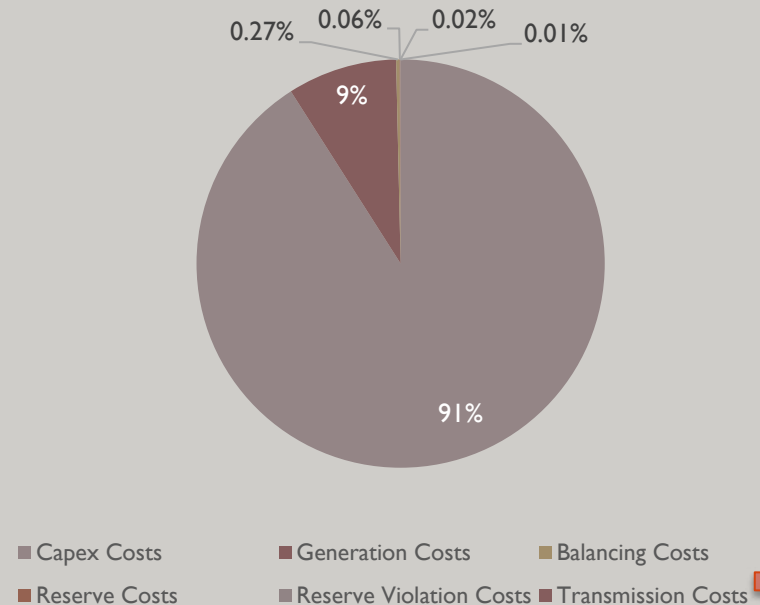
- **Generation Costs**
 - The variable costs per unit of production of energy.
- **Balancing Costs**
 - The startup and the shutdown costs of the generators.
 - Reduction in Energy Costs due to higher PLFs (by lower SHR and auxiliary consumption)
- **Reserve Costs**
 - The costs incurred while maintaining a quantum of reserves.
- **Reserve Violation Costs**
 - The costs incurred for meeting the unmet reserves.

Contribution of Cost Components

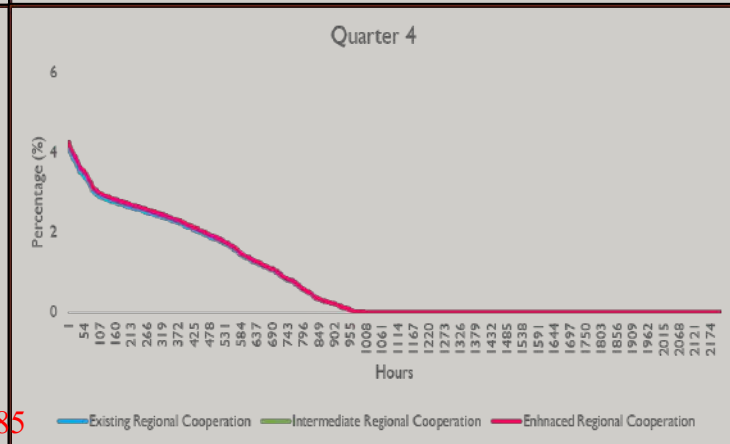
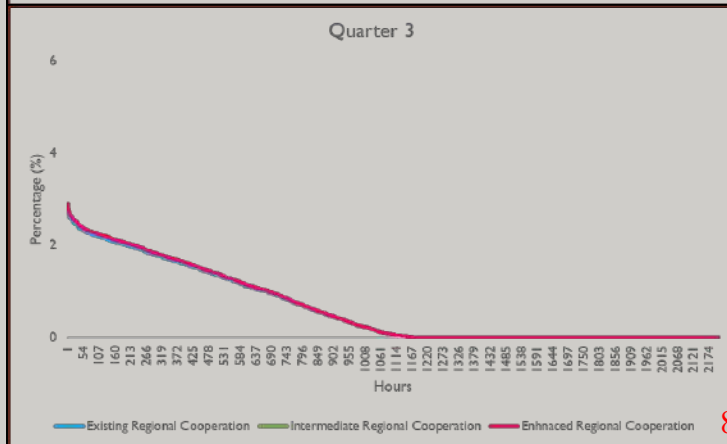
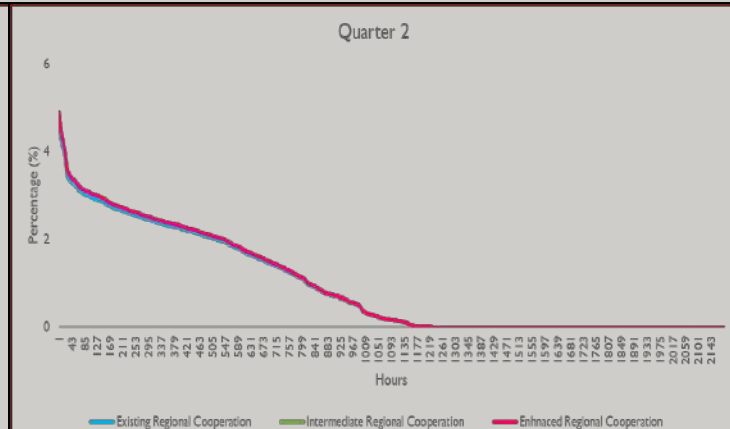
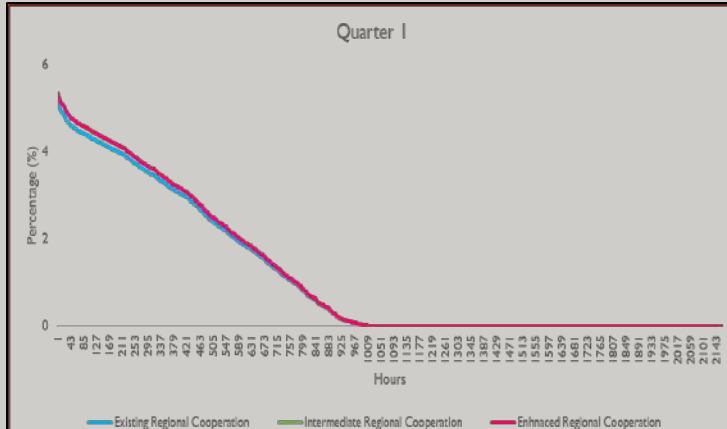


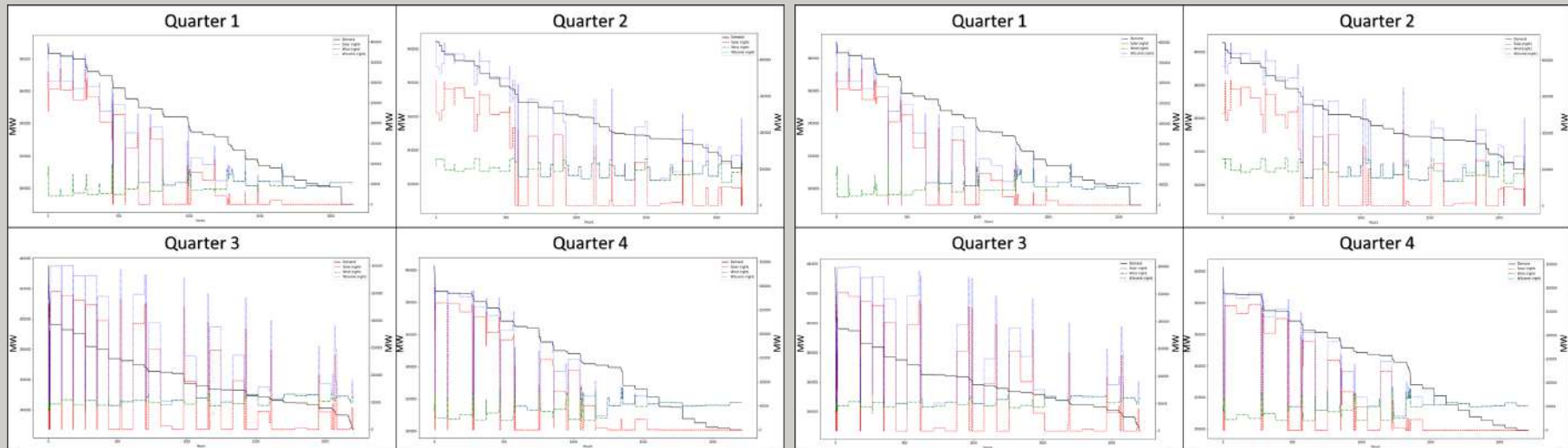
- **Capex Costs**
 - The cost in investing in new capacity/ scaling up existing capacity.
- **Generation Costs**
 - The variable costs per unit of production of energy.
- **Balancing Costs**
 - The startup and the shutdown costs of the generators.
 - Reduction in Energy Costs due to higher PLFs (by lower SHR and auxiliary consumption)
- **Reserve Costs**
 - The costs incurred while maintaining a quantum of reserves.
- **Reserve Violation Costs**
 - The costs incurred for meeting the unmet reserves.
- **Transmission Costs**
 - The costs incurred while expanding the intercountry transmission capacity.

Contribution of Cost Components



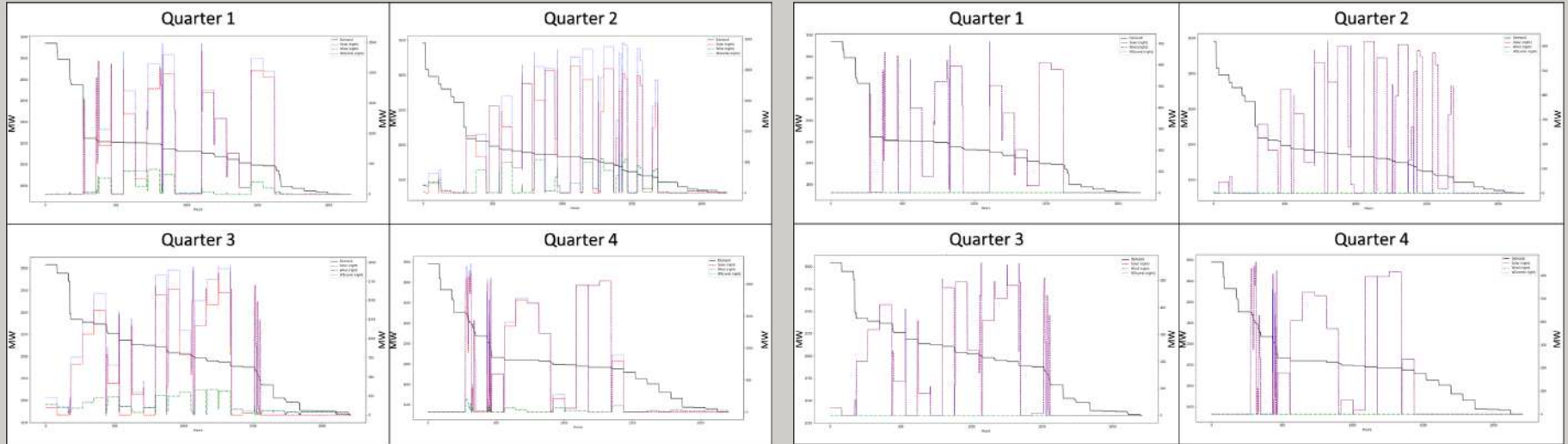
Capacity Credits of Nepal – 2019





Enhanced Regional Cooperation - India

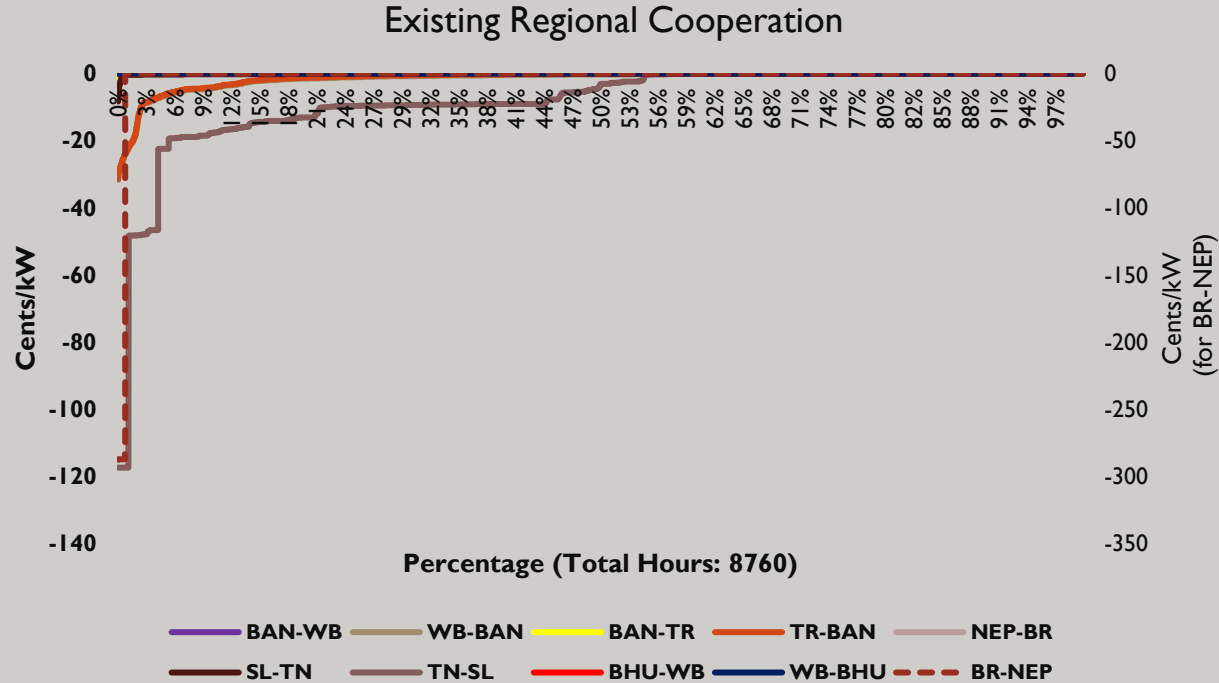




Enhanced Regional Cooperation - Nepal



Opportunity Value of Cross Border Transmission Capacity





FOR MORE INFORMATION AND UPDATES, VISIT THE
SAREP WEBSITE : <https://sarepenergy.net>



USAID
FROM THE AMERICAN PEOPLE