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**SARI/EI**



# ***South Asia Regional Initiative for Energy Integration***

## ***Presentation on “Regional Energy Cooperation in South Asia”***

*Presented by*

*Mr. Pankaj Batra (Project Director, SARI/EI IRADe) & Mr. Rajiv Ratna Panda (Associate Director, SARI/EI IRADe)*

Interaction with International Solar Alliance, World Bank, Electricité de France (EDF), The One Sun One  
World One Grid (OSOWOG) Vision & Roadmap Study Team  
Fri May 7, 2021, 4pm – 5pm (IST)



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-  Brief of SARI/EI Program
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  -  South Asia Forum for Electricity Market (SAFEM)
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# Overview SARI/EI Program: South Asia Regional Initiative for Energy Integration (SARI/EI)

- SARI/E is a long standing program of USAID started in the year 2000.

- Program has consistently strived to address energy security in South Asia by focusing
  - 1) Cross Border Energy Trade
  - 2) Energy Market Formation and
  - 3) Regional Clean Energy Development.

- **SARI/EI–Phase IV (2012-2018): Key Outcomes.**

Three Key Development Outcomes:

1. *Coordinate policy, legal and regulatory issues.*
2. *Advance transmission interconnections.*
3. *Establish South Asia Regional Electricity Markets.*

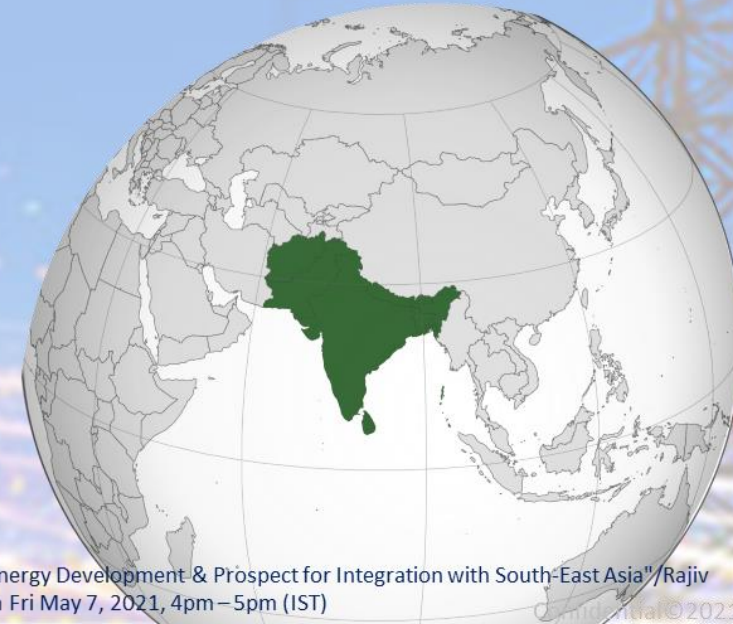
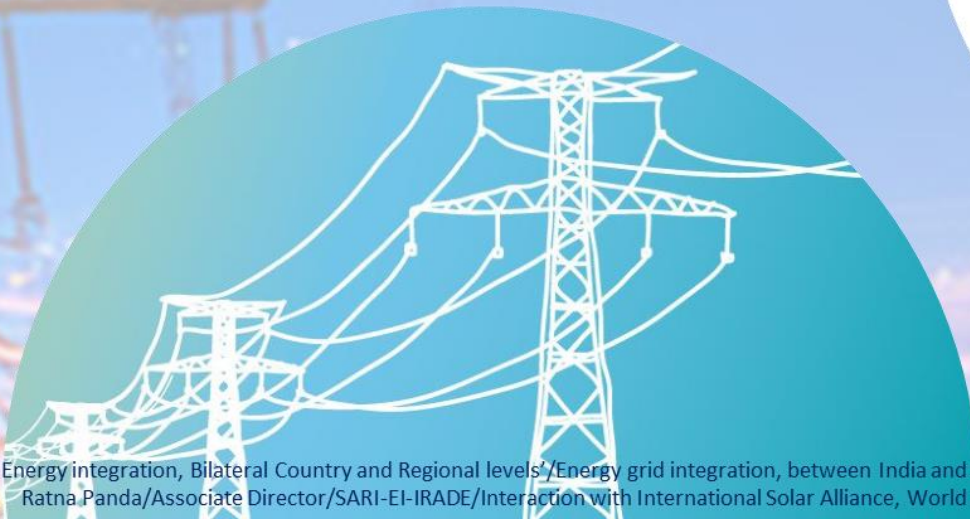
- Demand Driven ‘Bottom Up’ Approach

- IRADe, a regional organization, is implementing partner



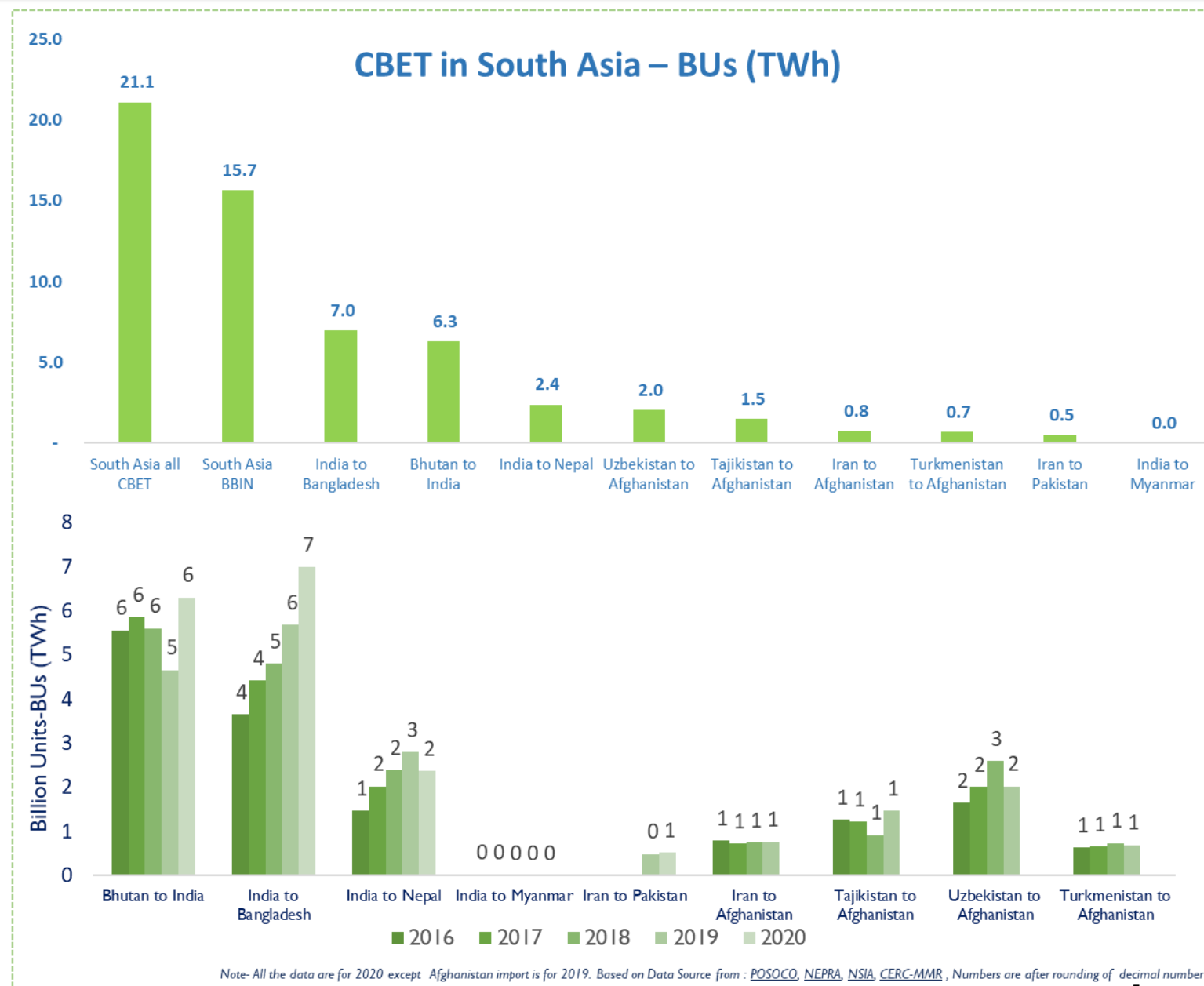
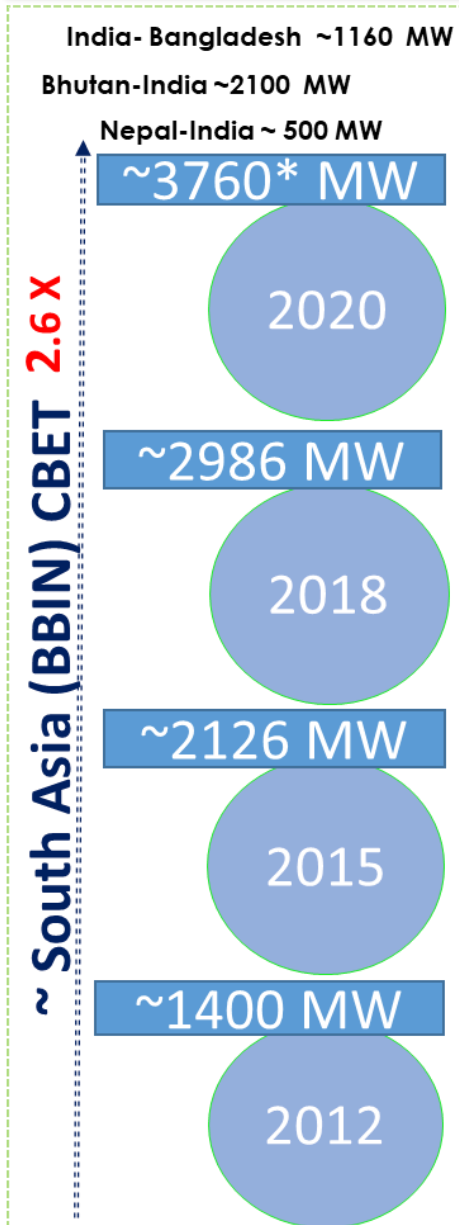


# Cross Border Electricity Trade in South Asia : Current Status & Future Scenario





# Cross Border Electricity Trade in South Asia : Current Scenario



# Cross Border Electricity Trade South Asia (SA) : Future Scenario

## SA CBET Outlook



~43.8 GW, Cross Border  
Interconnection Capacity by 2040



Transitioning from Bilateral to  
Trilateral CBET in SA



Renewable Energy based CBET  
(One Sun One World One Grid)



Commercial form of CBET, Trade  
Through Power Exchange Platform



Regional Power Market  
Development & Market  
Integration

## Enabling Policy & Regulatory Frameworks



Guidelines for the Import / Export  
(Cross Border)-2018 of Electricity

Section 3.1, 5.3, 8.6



Central Electricity Regulatory  
Commission (Cross-Border Trade of  
Electricity) Regulations, 2019

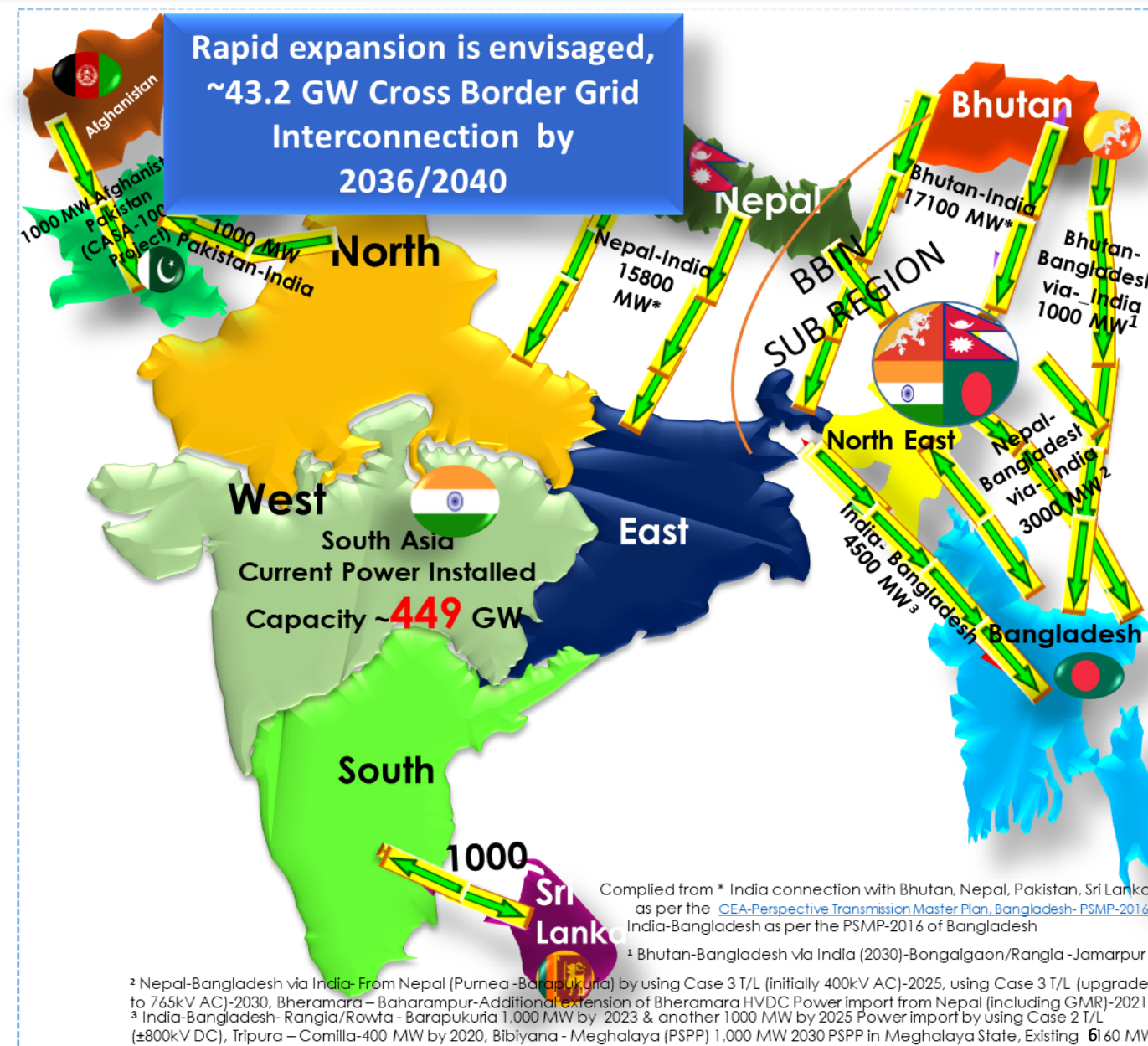
Section 3 (2), 6, 12 (6)



Procedure for approval and  
facilitating Import/Export (Cross  
Border) of Electricity by the DA  
Authority-Feb, 2021

Section 8, Annex-V, 6.5, 6.6 (iii), Annex-III

Rapid expansion is envisaged,  
~43.2 GW Cross Border Grid  
Interconnection by  
2036/2040







# Our Experience of Energy Integration (EI) & Cross Border Electricity Trade (CBET) in South Asia (SA)







# Experiential Insights from the Journey of Energy Integration & Cross Border Electricity Trade in South Asia



Political, Political-Economy, Consensus Building



*Process of building Consensus takes time*

*Trust Building, Geopolitical Realities*

*Political Capital & Will, Cooperation Spirit*

*Required sustained efforts, Continuity*



Policy, Regulatory, Market, Technical



*Different level/stage of Policy, Regulatory, Market, Technical (PRMT) Frameworks, Harmonisation*

*Implementation of agreements, lack of clear PRTM framework*

*Power Market Development & Competition*



Financial/Commercial feasibility, Investment attractiveness, focused Investment Facilities



*Project Feasibility, Financial Challenges of building Hydro*

*Sharing of cost of cross border transmission*

*Lack of Dedicated Investment Facilities*

*Policy, Regulatory Risks Amplifies viability*



Trilateral, Multilateral, Regional Institutional Platforms



*Moving from Bilateral, Building consensus on Trilateral took time*

*Sharing of cost of cross border transmission*

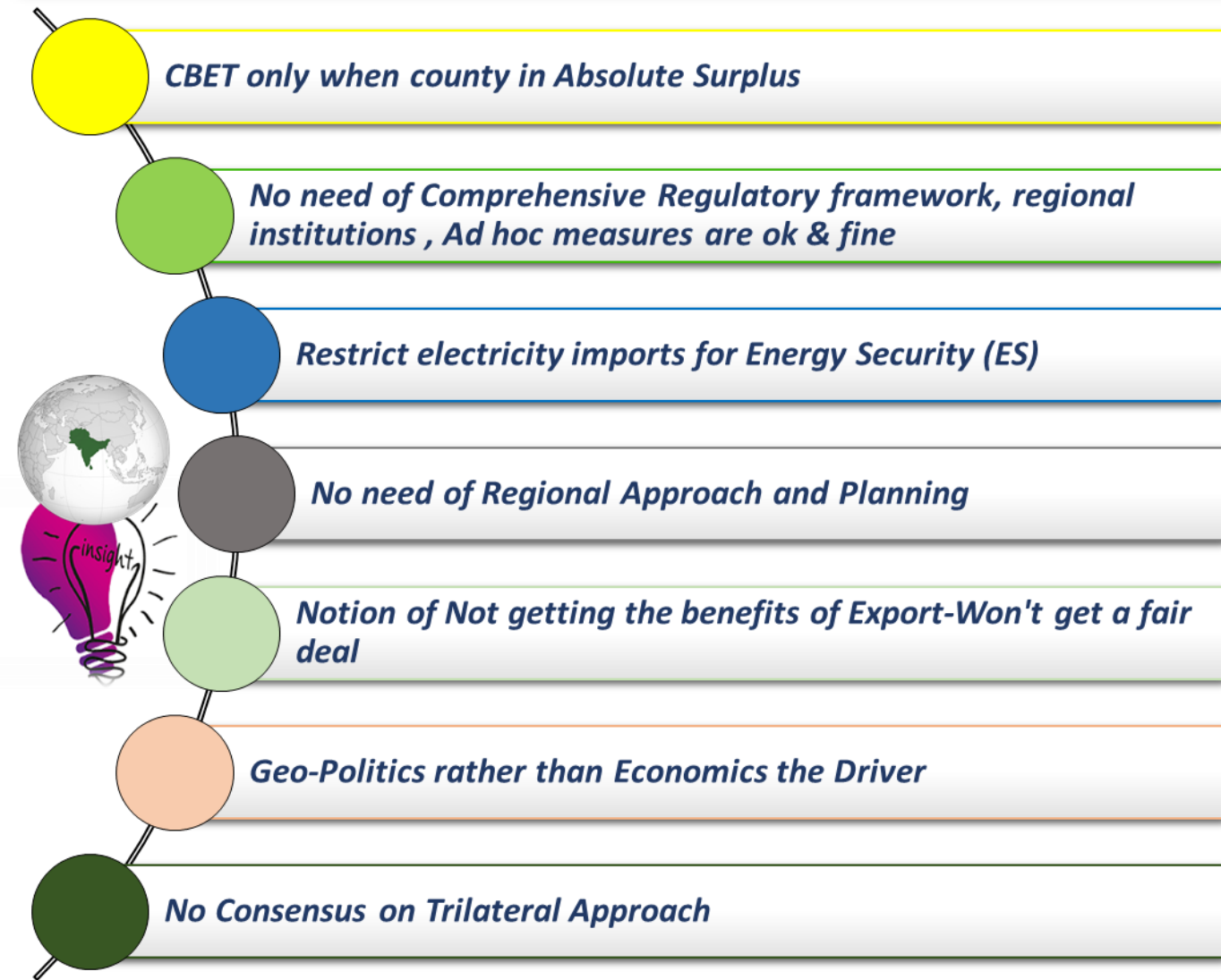
*Lack of Dedicated Regional Institutional Platforms*

*Enabling Procedure*

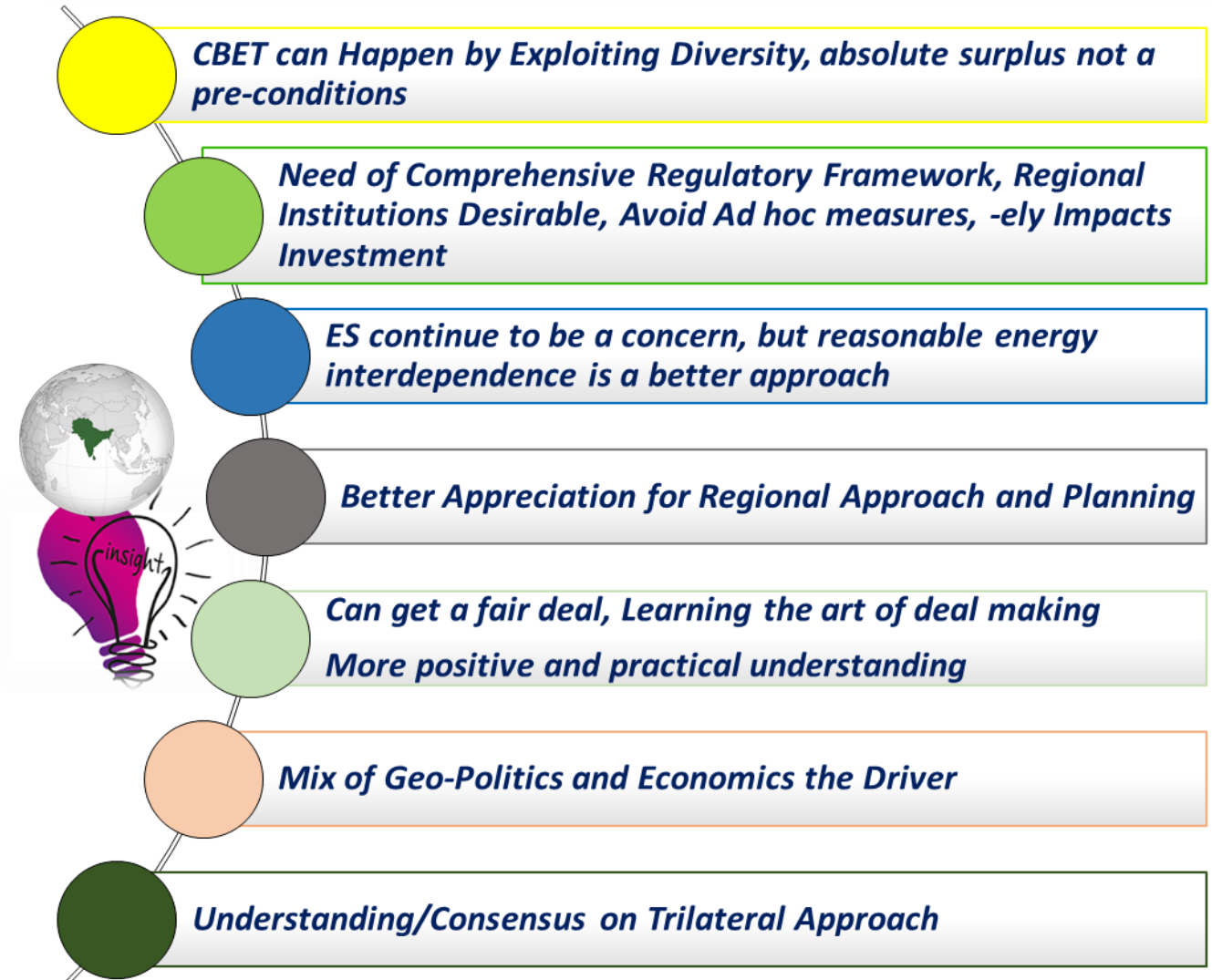


# Experiential Insights from the Journey of Energy Integration & Cross Border Electricity Trade in South Asia: Evolution in Thinking, Narrative and General discourse

## Preconceived Notions & Dominant Thoughts



## Changed/Changing Thoughts





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# Brief of SARI/EI Extended phase : Key activities and Deliverables



## South Asia Regional Initiative for Energy Integration (SARI/EI) Program (Extended Phase - 2018-2022)



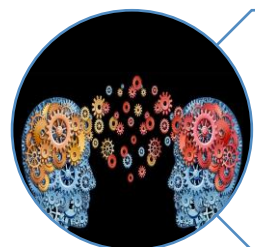
**SARI/E** is a long-standing program of USAID started in the year 2000.



Program **addressed energy security in South Asia** 1) Cross Border Energy Trade 2) Energy Market Formation 3) Clean Energy Development

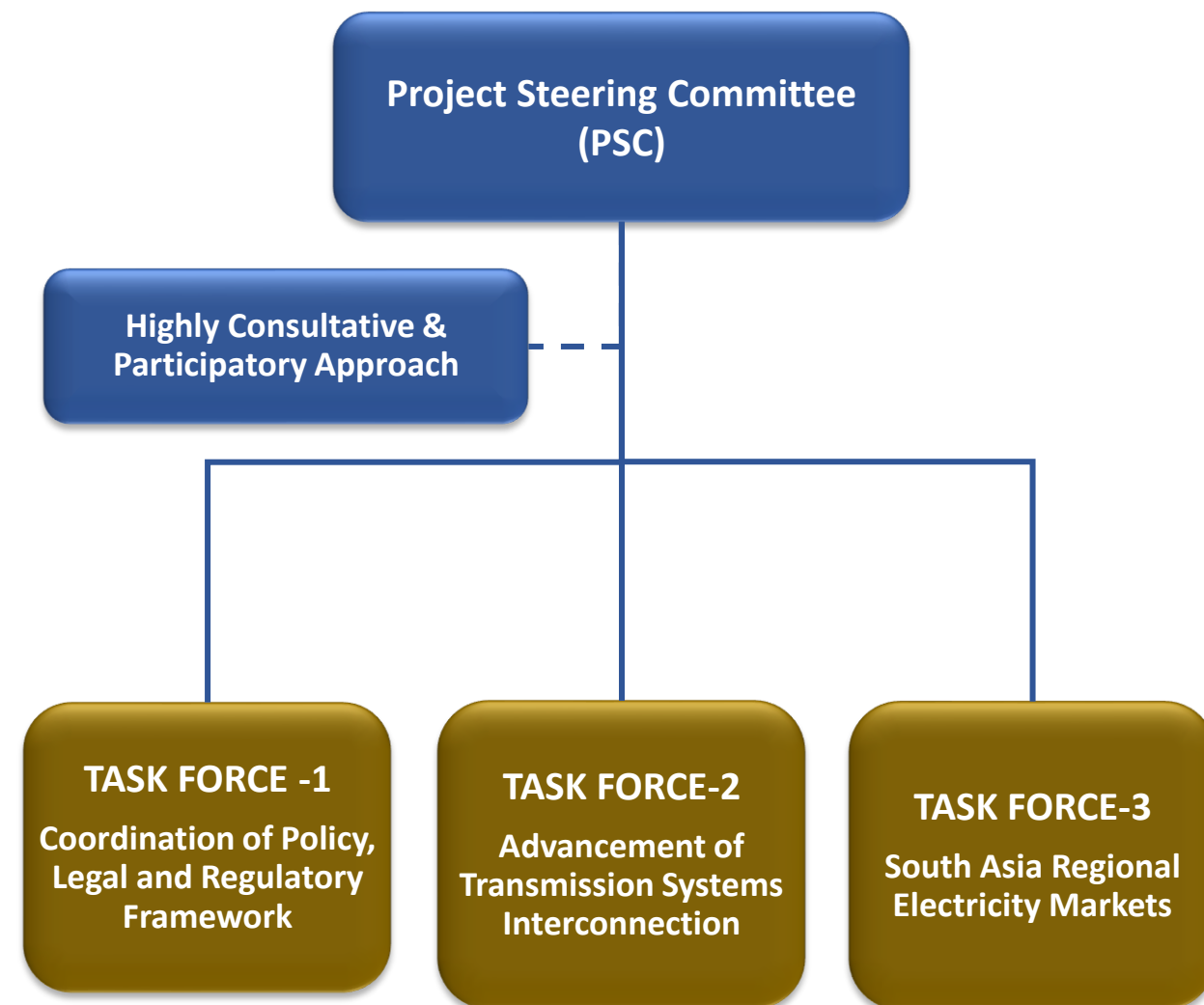


Extended Phase 2018-2022)-**Focused on establishing & strengthening institutional mechanisms**, carry forward the legacy of SARI/EI



**Transfer knowledge/learning** from USAID/India's bilateral projects to rest of the region

### Program Operating Structure



# Inception Meetings 2018-19

2019

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



# Inception meetings November 2018 - Bhutan



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



# Inception meetings November 2018 - Bhutan



# Inception meetings December 2018 - Bangladesh



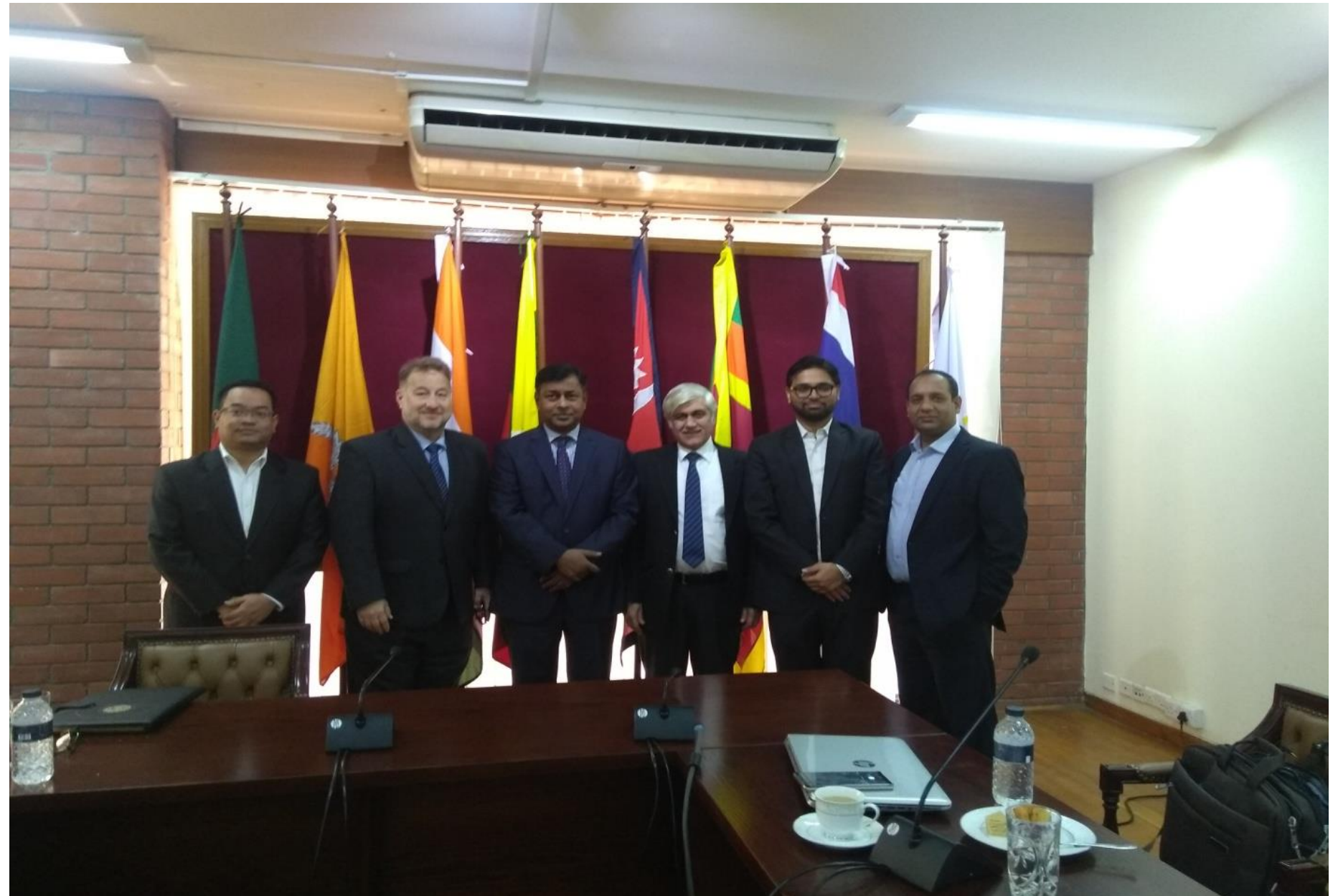


# Inception meetings December 2018 - Bangladesh

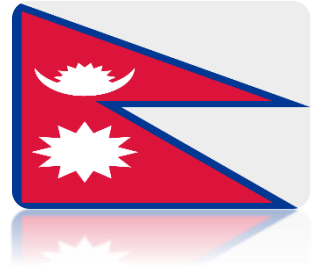




# Inception meetings December 2018 - Bangladesh

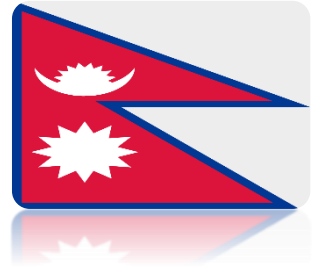


# Inception meetings Feb-March 2019 - Nepal



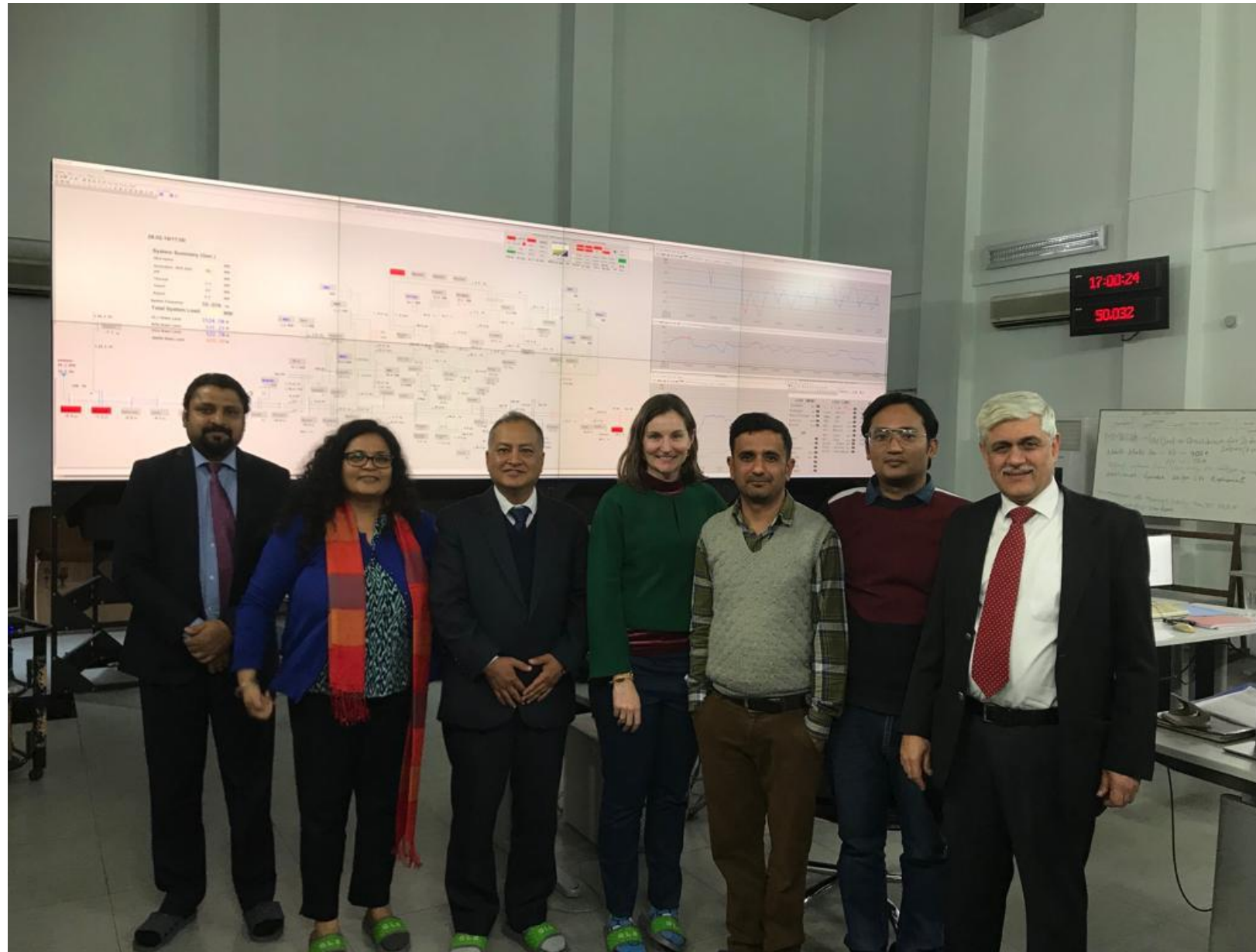
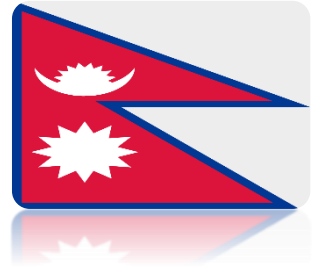


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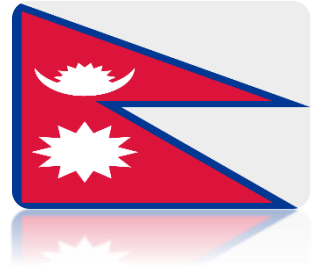




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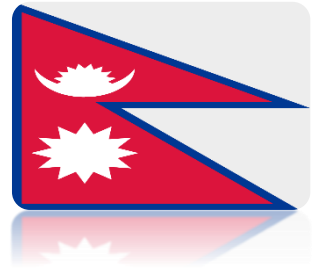


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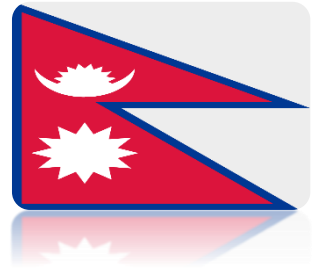


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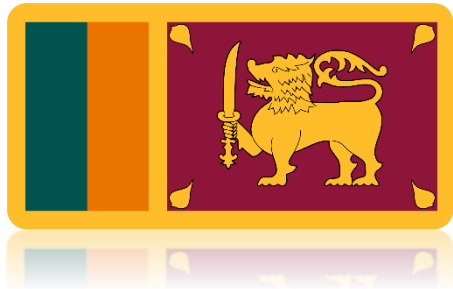




# Inception meetings Feb-March 2019 - Nepal



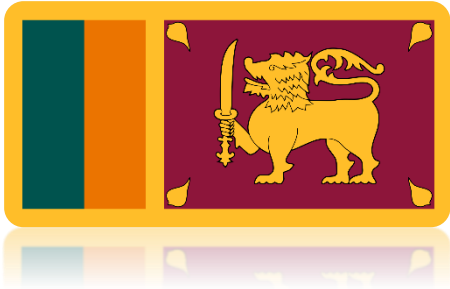
# Inception meetings April 2019 – Sri Lanka



Left to Right : Ms. Monali Zeya Hazra, Regional Energy Manager and Clean Energy Specialist , USAID, India, Mr. Rajiv Kandanaarachchi, 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

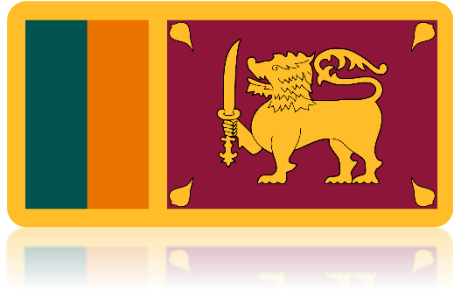


# Inception meetings April 2019 – Sri Lanka



Left to Right : Mr. Rajiv Kandamarachchi, 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

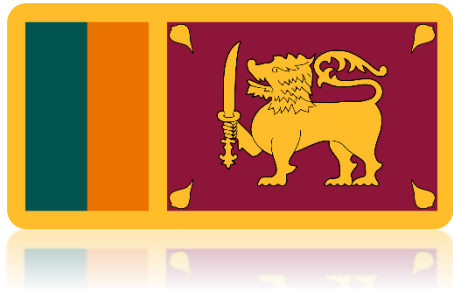
# Inception meetings April 2019 – Sri Lanka



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

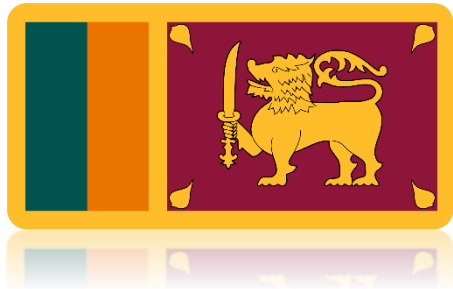


# Inception meetings April 2019 – Sri Lanka



Left to Right : Mr. Rajiv Kandamarachchi, Project Management Specialist , USAID, Sri Lanka, Mr. Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe, Ms. Monali Zeya 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. Chamila Jayasekera, Director (Strategy), SLEA and Mr. H.A Vimal Nadeera, Deputy Director General(Supply Side Management), SLEA.

## Inception meetings April 2019 – Sri Lanka



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



# Key Deliverables of the SARI/EI Extended Phase (2018-2022)



Institutionalization of South Asia Forum of Energy Regulators (**SAFER**)



Institutionalization of South Asia Forum of Transmission Utilities (**SAFTU**) & South Asia Forum of System Operators (**SAFSO**)



Institutionalization of South Asia Forum for Electricity Market (**SAFEM**)



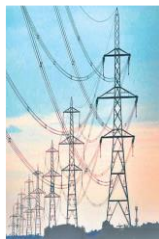
**Operationalization** of South Asia Regional Power Exchange (**SARPEX**)



Institutionalization of South Asia Forum for Energy Investment (**SAFEI**)



A coordinated **transmission** and generation **master plan**



**Pre-feasibility study** on potential **transmission links**



**Framework** for Regulatory **market monitoring** and oversight



Transmission network with common **operating standards** & **grid code**



An environment that promotes **private sector investment**



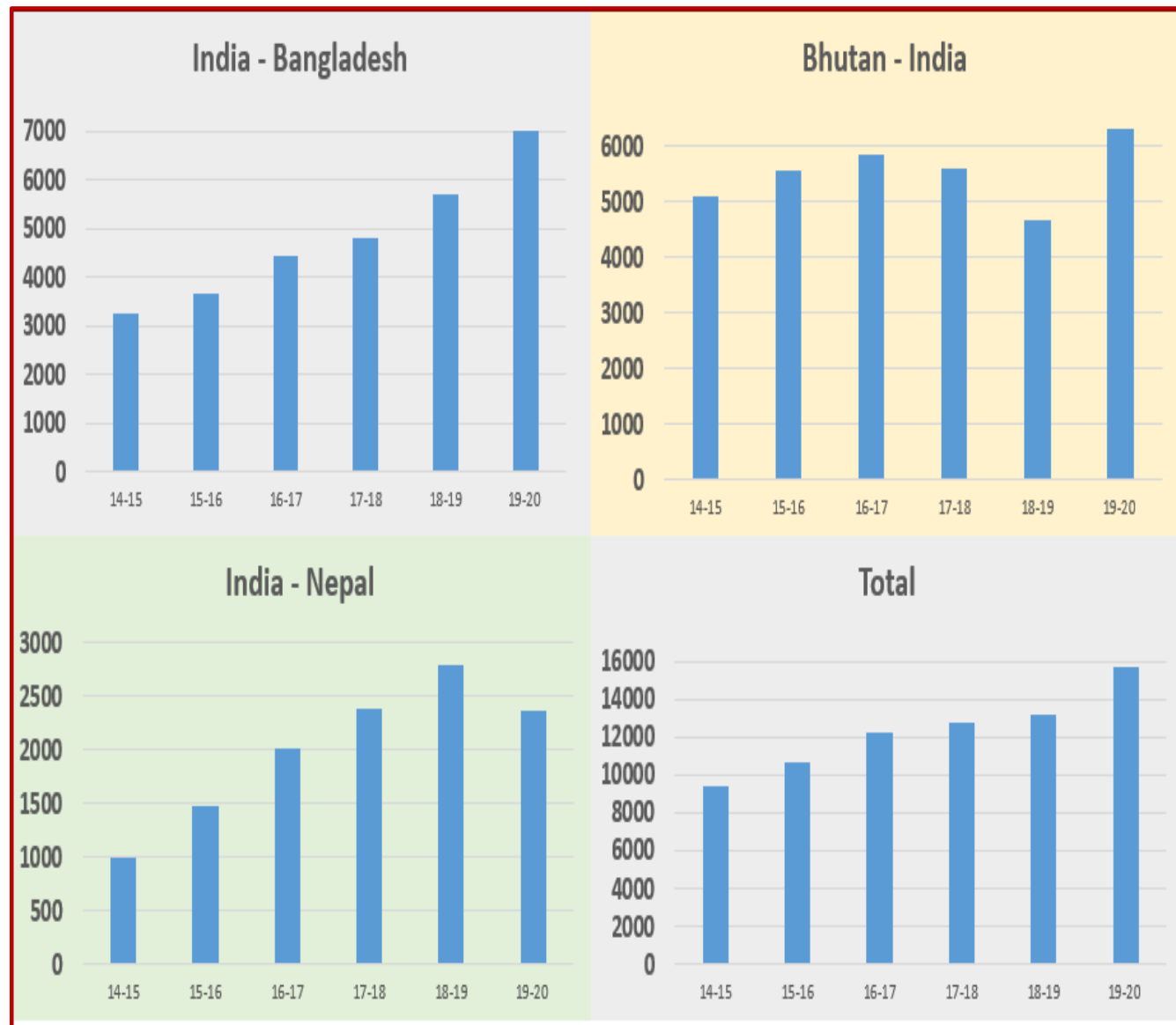
Assessment of **potential of gas** in South Asia and South East Asia till 2030



All round institutional and human **capacity building**

## Growth of Cross Border Energy Trade in BBIN Region during last 6 Years

Year	India - Bangladesh	Bhutan - India	India - Nepal	Total
14-15	3271	5109	997	9377
15-16	3654	5557	1469	10680
16-17	4419	5863	2021	12303
17-18	4808	5611	2388	12807
18-19	5690	4657	2798	13145
19-20	6987	6311	2373	15671







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# SARI-EI Key Events Since July, 2019

# Key Events Since July, 2019

**Number of  
Workshops/Co  
nferences/We  
binar**

**11**

**Number of  
Technical  
Studies  
Initiated**

**7**

**Number of  
Reports  
Published &  
Paper**

**3**

**Number of  
Technical  
studies are at  
advance level  
of award**

**2**

**Number of  
Engagements\*  
with Regional  
Institutions  
(SAARC, SAFIR,  
BIMSTEC)**

**10**

\* Includes Joint Workshop, Participating in the formal meetings and  
conference organized by Regional Institutions



## Workshops and Stakeholder Consultations with the participants of Bhutan

### 16<sup>th</sup> – 20<sup>th</sup> July 2019 : Workshops & Stakeholder Consultations

- Power Market and Power Trade through Power Exchange Platform;
- Indian Power Exchange – Operation and Products;
- Transmission Losses, Charges, Deviation Settlement Charges and other Charges;
- Models of Trilateral/Multilateral Trade and Case Studies (LTMS)
- Common Minimum Grid Code Discussions;



## Workshops and Stakeholder Consultations with the participants of Nepal

### **23<sup>rd</sup> -25<sup>th</sup> July 2019 : Workshops & Stakeholder Consultations**

23<sup>rd</sup> July 2019 – Workshop on Power Trade Through Power Exchange;

24<sup>th</sup> July 2019 – Workshop on Enhancing Energy Cooperation between India-Nepal

25<sup>th</sup> July 2019 – Common Minimum Grid Code Review

### **21<sup>st</sup> -22<sup>nd</sup> November 2019 : Power Summit Nepal**

21<sup>st</sup> November 2019 – Workshop on Power Trade Through Power Exchange;

22<sup>nd</sup> November 2019 – Participation in the Session- Transition of South Asia from Bilateral to Trilateral and Multilateral CBET





## Workshops and Stakeholder Consultations with the participants of BD

### 12<sup>th</sup> -14<sup>th</sup> November 2019 : Workshops & Stakeholder Consultations

- Evaluation of Power Trading in India;
- Indian Power Exchange – Operation and New Products;
- Regional Grid Integration and role of Independent System Operator;
- Models of Trilateral/Multilateral Trade and Case Studies (LTMS)
- Common Minimum Grid Code Review



## Workshops and Stakeholder Consultations with the participants of Sri Lanka

### 14<sup>th</sup> -16<sup>th</sup> January 2020 : Workshops & Stakeholder Consultations

- SAARC-SARI Workshop on “Harnessing Regional Cooperation in Energy Sector and Energy Trade through Partnership between SAARC and USAID/SARI-EI” 16th January 2020, Sri Lanka

- **Workshop Recommendations**

- ✓ Joint Regional Programmes on emerging critical issues such as Energy Security & Policy, Renewables and Climate change.
- ✓ Conducting collective Research work on latest global trends in the areas of Energy Co-operation.
- ✓ Collaboration on pragmatic & practical solutions through executing Pilot projects
- ✓ SAARC Clean Energy Transition 2040 Roadmap SAAR Regional transmission grid master plan.
- Sri Lanka Stakeholder Consultation on Common Minimum Grid Code.





## Roundtable on Interconnection of Regional Grids in Asia: SAARC GRID - GCC GRID - ASEAN GRID

### India Smart Grid Forum (ISGF) jointly with USAID's SARI/EI, 06 MARCH 2020

- Trans-regional power interconnections ;
- Transition towards market-based trading.
- Power trade and Power Market in South Asia ;
- Open access in transmission and markets
- Participants
- Ministry of Power, GoI;
- Power utility; system operator, UNESCAP, Think tank, representatives from Government of Bhutan & SriLanka. Private power sector.





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# **SARI/EI Active Engagement with Regional Institutions- Pre COVID-19 and Post COVID-19**



# SARI/EI Active Engagement with Regional Institutions- Pre COVID-19

BIMSTEC



**BIMSTEC -SARI/EI "Workshop on Enhancing Energy Cooperation in the BIMSTEC Region, 25-26 Feb,2020**

SAFIR



**SAFIR & SARI/EI Conference on "Regional Energy Integration & Cross Border Energy Trade, 19th February 2020**

SAARC



**Fourth Meeting of SAARC Energy Regulators, 06-07 Feb. 2020, Thimphu, Bhutan**

SAFIR



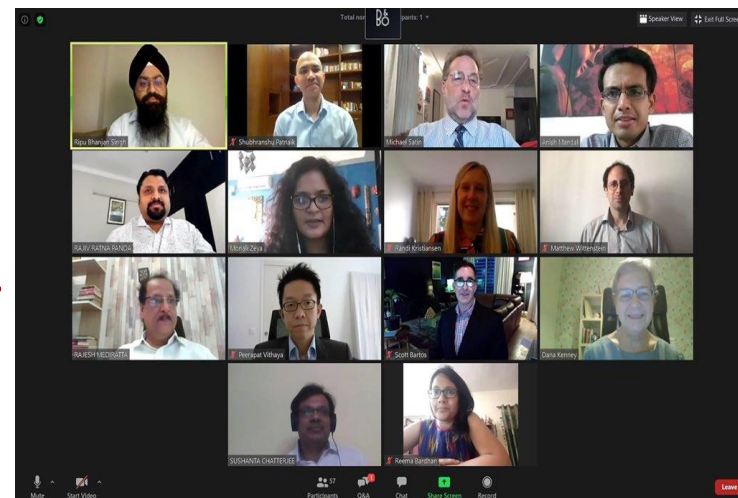
**18th SAFIR ECM Meeting, 5th December 2019, Bangladesh**

SAFIR



**2nd SAFIR Working Group meeting 4th December 2019**

ADB/ACEF



**Asia Clean Energy Forum-On June 16, 2020, Cross Border Power Trade and Future Energy Markets**



# Engagement with Regional Institutions- Post COVID-19

SAFIR



**SARI/EI**



South Asia Regional Initiative for Energy Integration

Presentation  
on

Updates on the Activities of the SAFIR Working group and Plan for Implementation of Key Activities

19<sup>th</sup> South Asian Forum for Infrastructure Regulation (SAFIR) Executive Committee Meeting (ECM)

(Virtual Meeting), 11:00 AM, Friday, 28<sup>th</sup> August 2020, New Delhi, India

Presented by

Mr. Pankaj Batra (Project Director, SARI/EI IRADe) & Mr. Rajiv Ratna Panda (Technical-Head, SARI/EI IRADe)



19<sup>th</sup> South Asian Forum for Infrastructure Regulation (SAFIR) Executive Committee Meeting (ECM),  
28<sup>th</sup> August 2020, New Delhi, India



**SARI/EI**



South Asia Regional Initiative for Energy Integration

Presentation  
on

Updates on the Activities of the SAFIR Working group and Plan for Implementation of Key Activities

26<sup>th</sup> South Asian Forum for Infrastructure Regulation (SAFIR) Steering Committee Meeting (SCM)

(Virtual Meeting), 12:15 PM, Friday, 28<sup>th</sup> August 2020, New Delhi, India

Presented by

Mr. Pankaj Batra (Project Director, SARI/EI IRADe) & Mr. Rajiv Ratna Panda (Technical-Head, SARI/EI IRADe)



26<sup>th</sup> South Asian Forum for Infrastructure Regulation (SAFIR) Steering Committee Meeting (SCM)  
28<sup>th</sup> August 2020, New Delhi, India

SAARC Energy Centre



**SARI/EI**



South Asia Regional Initiative for Energy Integration

Presentation  
on

Cross Border Electricity Trade in SAARC Region:  
Current Status & Future Outlook

SAARC Energy Centre's Webinar on "Cross Border Electricity Trade (CBET) in SAARC Countries"  
11:30 AM (IST), Tuesday, 11<sup>th</sup> August 2020

Presented by

Rajiv Ratna Panda (Technical-Head, SARI/EI IRADe)



SAARC Energy Centre's Webinar on "Cross Border Electricity Trade (CBET) in SAARC Countries" 11<sup>th</sup> August 2020

SAARC Energy Centre



**SARI/EI**



South Asia Regional Initiative for Energy Integration

Deepening Power System Integration & Cross Border Electricity Trade in SAARC Region: Current Status & Future Outlook

SAARC Energy Centre's Video Conference on "Roadmap for the Implementation of SAARC Framework Agreement on Energy Cooperation—Electricity (SAARC FAEC(E))"  
Tuesday, 22 September, 2020

Presented by

Rajiv Ratna Panda (Technical-Head, SARI/EI IRADe)



SAARC Energy Centre's Video Conference on "Roadmap for the Implementation of SAARC Framework Agreement on Energy Cooperation—Electricity (SAARC FAEC(E))", Tuesday, 22 September, 2020



**SARI/EI**



South Asia Regional Initiative for Energy Integration

Common Minimum Grid Code (CMGC) for South Asia  
&

Updates on the Activities of the SAFIR Working group on "Regulatory Cooperation to Facilitate Knowledge sharing, addressing Crosscutting Energy/ Electricity Regulatory Issues and Capacity Building in South Asia"

2<sup>nd</sup> meeting of the Joint Working Group (JWG) of SAFIR "To study, formulate and recommend for facilitating Power trade development in South Asia"

(Virtual Meeting), 11:00 AM, Monday, 28<sup>th</sup> September, 2020 from 11:00 AM IST, New Delhi, India

Presented by

Mr. Pankaj Batra (Project Director, SARI/EI IRADe) & Mr. Rajiv Ratna Panda (Technical-Head, SARI/EI IRADe)



2<sup>nd</sup> meeting of the Joint Working Group (JWG) of SAFIR "To study, formulate and recommend for facilitating Power trade development in South Asia" 28<sup>th</sup> September, 2020 from 11:00 AM IST, New Delhi, India





# South Asia Forum of Electricity Regulators (SAFER) Activities

## South Asia Forum of Electricity Regulators (SAFER) & Related Key Technical Studies



### South Asia Forum For Infrastructure Regulation (SAFIR) Working Group On

“Regulatory Cooperation to Facilitate Knowledge sharing, addressing Cross cutting Energy/Electricity Regulatory Issues and Capacity Building in South Asia”

- **SARI/EI is providing the technical Knowledge support /assistance**



### SAARC Council of Experts of Energy (Electricity) Regulators

- **SARI/EI is providing the technical support /assistance**



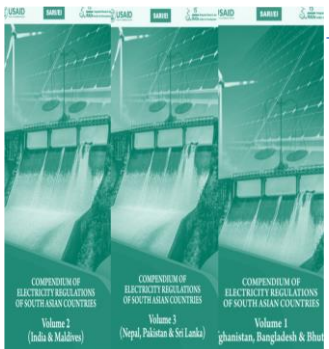
## Key Activities of the SAFIR Working Group



### Research & Technical Studies - (Three Studies)



### SA Energy Sector **Training & Capacity Building** program on energy regulation for Energy Cooperation & exchange of electricity in SA.



### South Asia Energy/Electricity **Regulatory Compendium (SAERC)** (Released on 19th February, 2020)



### South Asia Energy/Electricity Knowledge Resource Database (**SAKERD**)



### SAFIR-Regulatory Newsletter (**SRNL**)



### SAFIR Working Group Meeting

## Study/Research under SAFIR Working Group



**Study /Research on South Asia electricity/electricity regulations to develop regulatory pathway/Road Map for Electricity/Energy exchange and Energy Cooperation (EC) in SA**



**Regulatory interventions for Grid discipline and Grid reliability in the South Asian Region**



**Study on Cross Border Trade of Electricity- Potential Optimum Utilisation and Reduction in Cost of Supply**



# South Asia Energy/Electricity Knowledge Resource Database (SAKERD)

*Aims to Create a Comprehensive Energy/Electricity Sector Data Base*

*{Online, user friendly, data Analytic, Indicative Graphs, pie charts and Figures, Info graphics, Annual Energy Data Book }*

Power Related Time Series  
Data

Energy Met, Actual  
Generation , Energy & peak  
deficits, Rate & volume  
transaction of PXs

Cross Border (MU & MW),  
Frequency Profile, Diversity  
Factor, T & D losses

Electricity Generation  
Capacity and Transmission  
Network

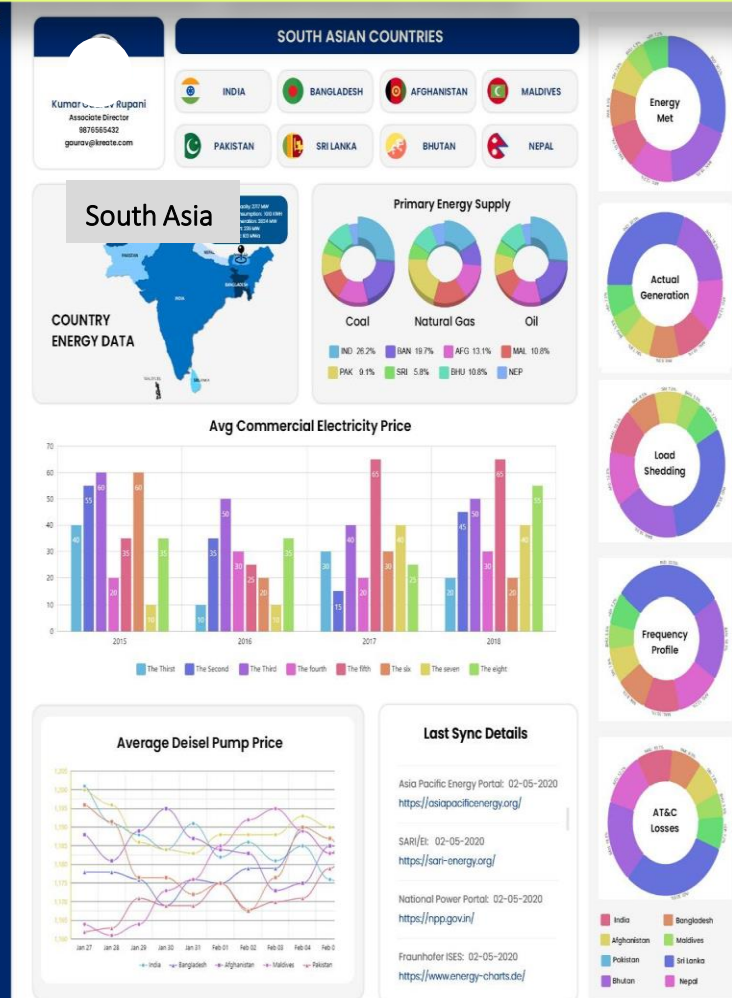
Installed capacity & Fuel Mix,  
Transmission sector

Regional Power Transfer  
Capacity, Power Plant details

Per capita energy  
consumption, Energy resource  
Primary Energy Supply &  
Demand

Energy consumption, Energy  
Balance, Energy access

Energy & Power Related Laws,  
Policy, Regulations



# SAFIR Regulatory News Letter (SRNL)



Regulatory updates & Policy Developments in the Region



Analysis on the Energy Regulatory and Policy Developments



Will capture Important development, can have Guest Columns outside of the Region



It includes power, oil and gas sector



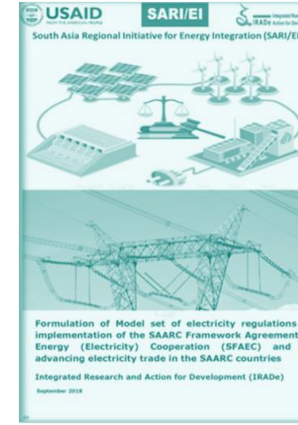
To be circulated in SA Countries in electronic format. (Quarterly)



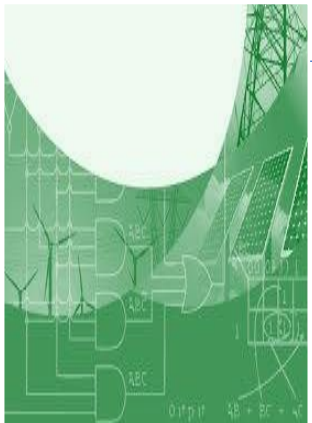
## Technical Knowledge support /assistance to SAARC council of experts of Energy (Electricity) Regulators



SARI/EI is consistently providing **technical assistance, input and advice** to the SAARC council of experts of Energy (Electricity) Regulators since its inception.



Earlier finished **Model set of electricity regulations** for implementation of the SAARC Framework Agreement for Energy (Electricity) Cooperation (SFAEC) and for advancing electricity trade in the SAARC countries



Study on **Harmonization of Technical Standards** for interconnecting South Asia and Central Asia Transmission Infrastructure



**Standard Power Purchase Agreement Template** for Buying and Selling Entities engaged in energy trade in SAARC



# South Asia Forum of Transmission Utilities (SAFTU) Activities



# South Asia Forum of Transmission Utilities (SAFTU)

1

Act as a **platform for crosscutting deliberations, exchange of ideas** on system planning, technical standards & other related issues for advancing CBET.

2

Facilitate **regional system planning of the integrated transmission network.**

3

Facilitate integrated system/network development in a coordinated & consultative manner & steer the work towards the development of **Regional Transmission Master Plan.**

4

Facilitate the work towards the adoption & implementation of guidelines for CBET, grid Codes etc.;

5

Provide technical support & assistance to **Regional Regulatory Institutional mechanism** in existence and to bilateral Government mechanisms of coordination, by undertaking technical studies & discussions, wherever desired.

6

**Knowledge sharing, high quality Capacity Building & Training** in System planning, network development, RE integration, etc.

7

Undertake **Research, technical studies**, and come up with **white paper, discussion briefs, issue briefs**, and discussion notes in relevant areas of integrated system planning

**Draft strategy  
paper on  
SAFTU  
finalised**



# South Asia Forum of System Operator (SAFSO) Activities



# South Asia Forum of System Operator (SAFSO) Activities

Act as a platform for crosscutting deliberations and exchange of ideas towards promoting safe, secure, reliable and efficient system operation in South Asia;

Facilitate the work of development and implementation of common procedures/guidelines and frameworks in the matter of system operation and market operation;

Provide technological support and assistance towards harmonization of system operation practices and compliance with reliability standards, in the matter of cross border connections;

Facilitate development of power market and ancillary services market in the region on harmonious principles;

Promote and render assistance towards capacity building in power system/market operation and development of a Code of Ethics for Load Despatchers in South Asia;

Provide inputs and technical support and assistance to Regional Regulatory Institutional mechanism and Regulators of South Asian Countries (SACs) on the matters related to system operation;

Act as a Secretariat to the various technical Groups/Committees formed under SAFSO;

Draft strategy  
paper on SAFSO  
is under  
preparation



# South Asia Forum for Electricity Market (SAFEM) Activities



## South Asia Forum for Electricity Market (SAFEM) Activities

The proposed SAFEM will be a neutral body, which aims to facilitate regional electricity market development and creation.

SAFEM will help in adoption and implementation of guidelines and policies by advising the South Asian countries on power trade and markets in the region.

Strategy paper for creating the South Asia Forum for Electricity Market (SAFEM) is under Preparation.

Paper to recommend the role, functions, operating structure of SAFEM.

9 Months study.

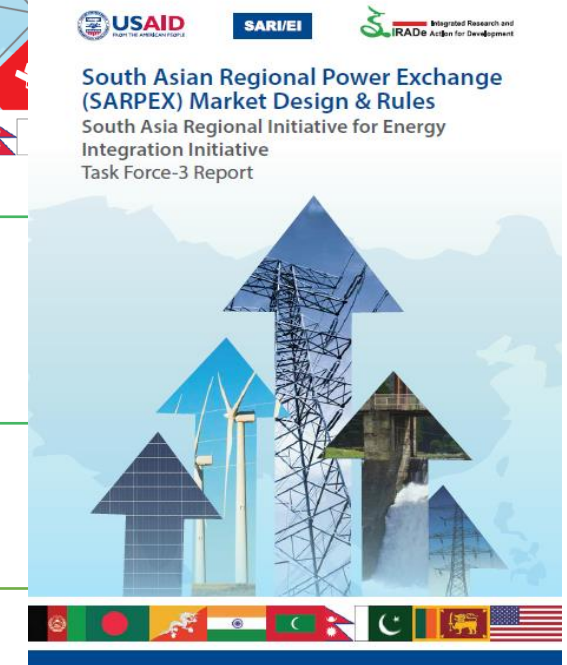
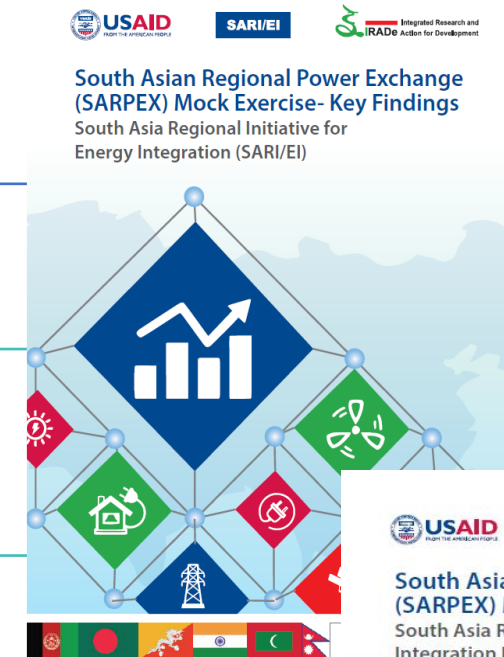
# Operationalising of South Asia Regional Power Exchange

Demand Diversity- Daily, weekly ,Monthly, Seasonal.

PXs– Fair, Transparent, Neutral Market Place, Competitive price discovery.

TOR for Operationalization of SARPEX is under preparation

Activity will implement the recommendation of earlier study on SARPEX

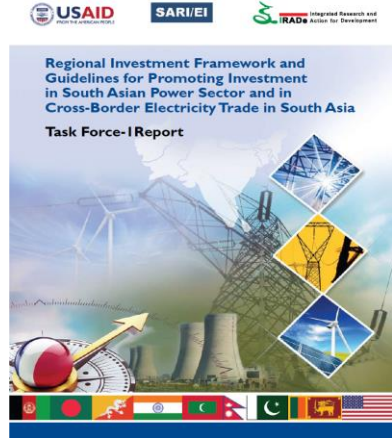






# South Asia Forum for Energy Investment (SAFEI) Activities

# South Asia Forum for Energy Investment (SAFEI) Activities



**“Regional Investment Framework and Guidelines for Promoting Investment in South Asian Power Sector and in Cross-Border Electricity Trade in South Asia ”**



**Recommended creation of a “Regional CBET investment Facilitation forum”**



**Focus on creating an eco-system to promote regional investment in energy infrastructure in the region and De-Risking**

**TOR on SAFEI is under preparation –A forum of key stakeholders and financial institutions**



**SARI/EI will partner with regional institutions such as the SAARC Chambers of Commerce and Industries (SAARC- CCI) for SAFEI**



**Private investors will be engaged through workshops, conferences and focus group discussions.**



**Under SAFEI “Developing a Regional Risk Management Framework with clear risk sharing mechanisms for regional energy projects & infrastructure in SA”**





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# Other Technical Activities

## Ongoing Other Technical Activities - Draft Reports

**Second Edition of BIMSTEC Energy Outlook (A biennial Report).**

**Common Minimum Grid Code (CMGC)**

**Analytical Study to assess the potential of gas for Regional Energy Cooperation**

**Paper on Risk Mapping and Impact Assessment of COVID-19 on South Asian Power Sector (SAPS): Policy Measures for Business Continuity and Risk Mitigation.**



# Common Minimum Grid Code (CMGC): Objective

- The Common Minimum Grid Code for South Asia : lays down the **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.



*Facilitation of cross border trading of power, while **ensuring secure, reliable, economic and efficient** operation of the grid.*

*Facilitation of the **coordinated optimal** operation of the South Asian Grid.*

*Facilitation of coordinated and optimal maintenance planning of generation and transmission facilities in the South Asian grid.*



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# Thank You