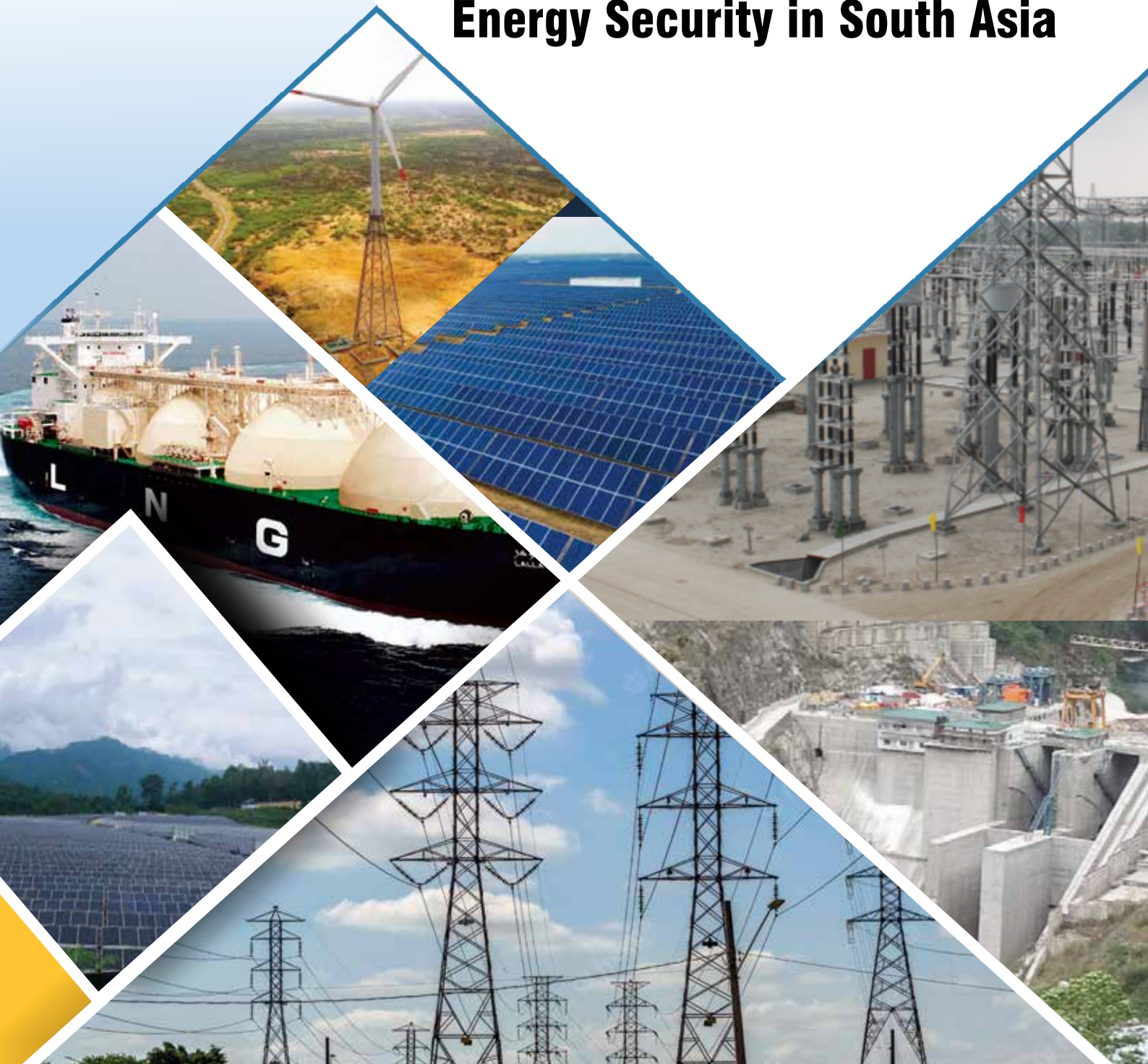


SOUTH ASIA REGIONAL INITIATIVE FOR ENERGY INTEGRATION (SARI/EI)

A USAID Initiative to strengthen Energy Security in South Asia





प्रधान मंत्री
Prime Minister
MESSAGE



I am glad to learn that a Regional Conference on “Enhancing Energy Integration in South Asia” is being organized at New Delhi on 30-31 August under the auspices of Integrated Research and Action for Development (IRADe).

There is lots to gain from enhanced regional energy integration. By matching the sources of energy production and its demand centres, it will synergize the economies of the region. India has a special role to play in helping the region to realize this shared destiny of prosperity.

I hope that the regional conference will be an occasion for energy experts and policy makers to deliberate on enhancing the energy integration in the region. I convey my best wishes for the successful conclusion of the conference.

(Narendra Modi)



R.K. Singh
Honorable Minister of State (IC)
(Power and New & Renewable Energy)

“Mankind is still in the process of learning, therefore, we should come together to share individual competitive advantages in the quest for development and ensure better and improved lifestyles of people around.

Power trade will enable sharing of competitive advantage and will bring prices down for everyone in the region. We have seen the benefits of power trade bilaterally and we must now extend it regionally. There is a huge journey ahead which we have to do together.”

“I applaud all our colleagues in the region for joining in this pursuit of regional grid integration. The United States is proud to partner with each country to ensure energy security, expand prosperity, and promote a rules-based order in South Asia.

I would like to thank USAID’s implementing partner for this Initiative – Integrated Research and Action for Development – for its excellent work over the past six years. By bringing together policy makers, regulators, financial institutions, and other members of the private sector from different countries, our roadmap toward a regional electricity market will proceed forward with good momentum.”



Kenneth I. Juster
United States
Ambassador to India

Introduction

The exponential growth story of South Asia region over the past two decades has been acknowledged by the World Bank, declaring it the fastest growing region across the globe in 2022. This robust macroeconomic growth has translated into declining poverty and significant improvements in the region that is home to more than one-fifth of the world's population.

Alongside this amplified growth, the challenge of energy security arose to sustain the pace of development. The South Asian countries are working in close cooperation with each other to counter the energy demand-supply deficit. The evolutionary requirement for this has led to the emergence of Cross Border Energy Trade (CBET) mechanism, and increased focus on tapping the vast potential of clean energy resources.

Both CBET and clean energy mechanisms promote resource optimization and competitive market dynamics, while providing returns to investors and affordable electricity supply to consumers. Additionally, the complementary geographic, economic and cultural aspects, coupled with seasonality of demand in these nations, offer natural avenues of exchange of energy and electricity in the South Asia region. This offers an opportunity to transcend geographical boundaries, not just within the region, but also to reach out to the neighbouring countries in South East Asia in future, thereby enhancing the overall outreach and benefits.

The US Agency for International Development (USAID) initiated the South Asia Regional Initiative for Energy (SARI/E) program in the year 2000, covering the eight countries in South Asia, viz. Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. In the first three phases, the program focused on increasing awareness on regional energy markets, supporting transmission interconnections and building capacity. The program, aiming to promote energy security in South Asia, worked on three focus areas: Cross Border Energy Trade (CBET); Energy market formation; and Regional Clean Energy development. SARI/E played a key role in integrating and promoting the energy policy and technology linkages across the South Asian nations.

The fourth and current extended phase of the program, called the South Asia Regional Initiative for Energy Integration (SARI/EI) program, started in 2012 and is scheduled to end in September 2022. SARI/EI program is aimed at advancing regional grid integration through cross border power trade, and is implemented by Integrated Research and Action for Development (IRADe), the leading South Asian Think Tank. In its extended phase (2018-2022), SARI/EI will focus on moving the region from bilateral to trilateral and multilateral power trade, ensuring sustainability of Cross border Energy Trade through institutionalisation, and establishing the South Asia Regional Energy Market (SAREM).

SARI/EI program is a key program under USAID's Asia EDGE (Enhancing Development and Growth through Energy) Initiative. The program aims to enhance the economic and energy security of South Asian countries by promoting a more affordable and reliable energy system that is also more globally accessible. One of the key objectives under Asia EDGE is to accelerate the growth of the region's energy markets through regional energy trade and integration, which will unlock billions of dollars in the regional energy market through the development of power markets and regional energy exchanges.

Integrated Research and Action for Development (IRADe), a leading South Asia Think Tank, is the implementing partner for phase IV (2012-22) of the SARI/EI program through a cooperative agreement with USAID. IRADe acts as the Secretariat, and works to provide technical inputs to build consensus among member countries as per the program objectives. Established in 2002, IRADe is a non-profit, fully autonomous institute for advancing multidisciplinary research and policy analysis to aid action programs. IRADe works in the thematic areas of Energy, Climate Change, Urban Development, Poverty, Gender Equity, Agriculture and Food Security.

SARI/EI Structure & Function (2012 – 2022)

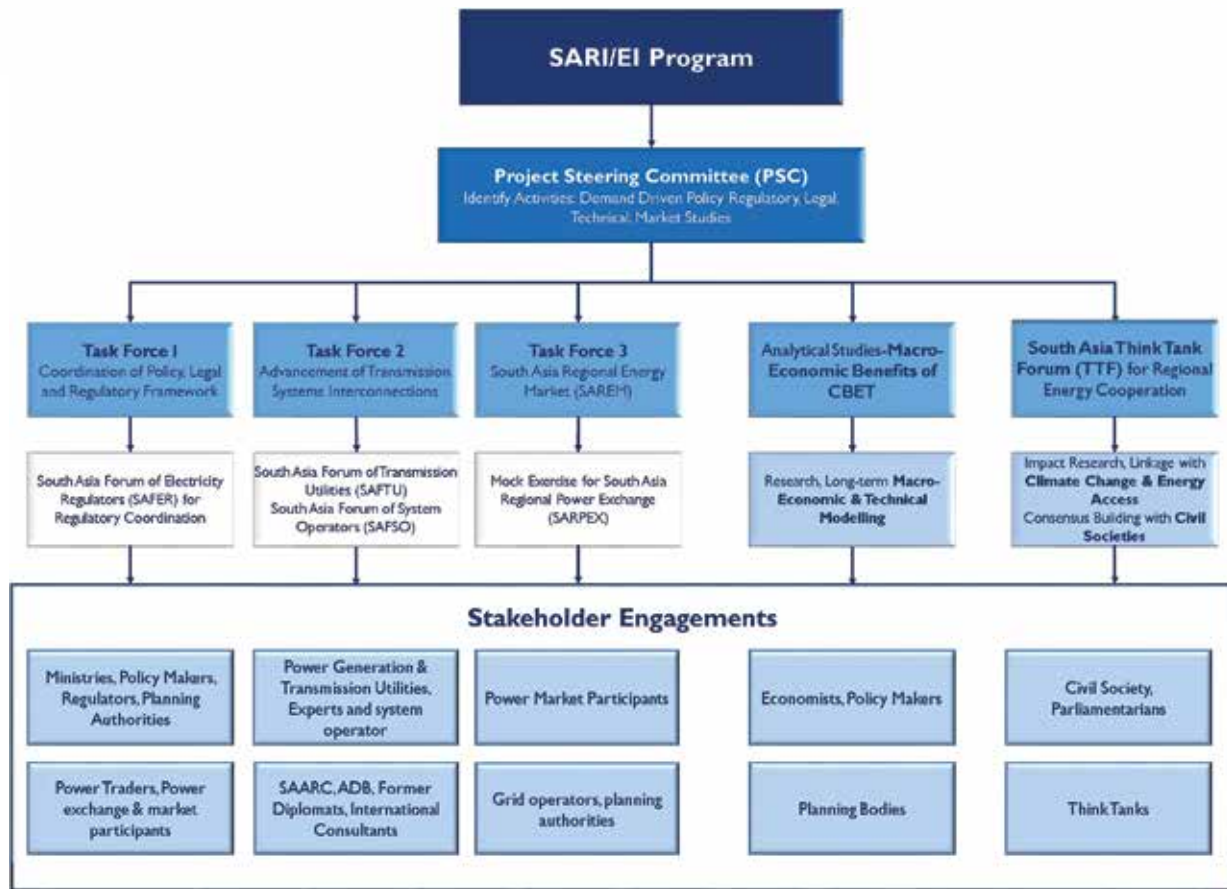
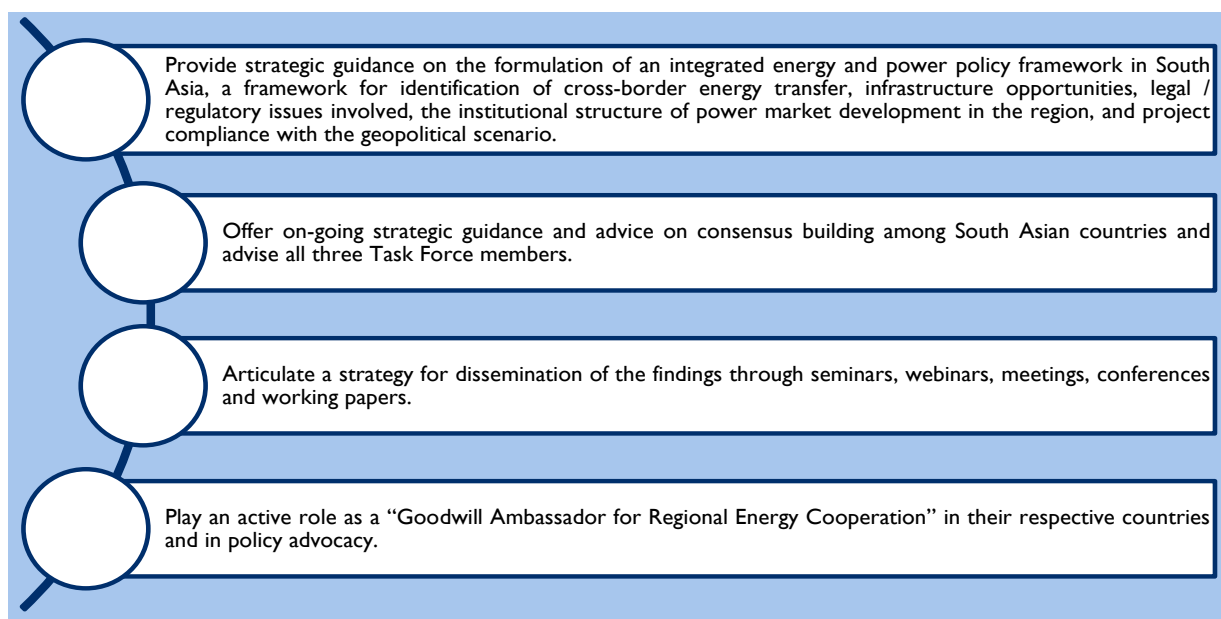


Figure 1: SARI/EI Program Structure

Project Steering Committee (PSC) is the apex body providing overall strategic directions to the SARI/EI program and has the following functions:



The three dedicated **Task Forces (TF)** address various issues related to CBET and provide practical and concrete recommendations for expanding CBET in the region during SARI/EI Phase IV (2012-2022). The brief details of each of the Task Forces are described below.

Task Force 1 (TF1)	“Harmonizing Policy, Legal and Regulatory Issues” to create the enabling systemic conditions for a sustainable market for investment, institutionalisation and implementation of sustainable CBET.
Task Force 2 (TF2)	“Advancing Transmission Systems Interconnections” to create enabling, systemic conditions for a sustainable market for investment and implementation of sub-regional transmission interconnections in the eastern sub-region of South Asia.
Task Force 3 (TF3)	“Establishment of South Asia Regional Electricity Markets” by creation of enabling and systemic conditions for a sustainable energy trading and exchange market in the eastern sub-region of South Asia.

Peek into the Past: History and Prior Phases (2000-2012)

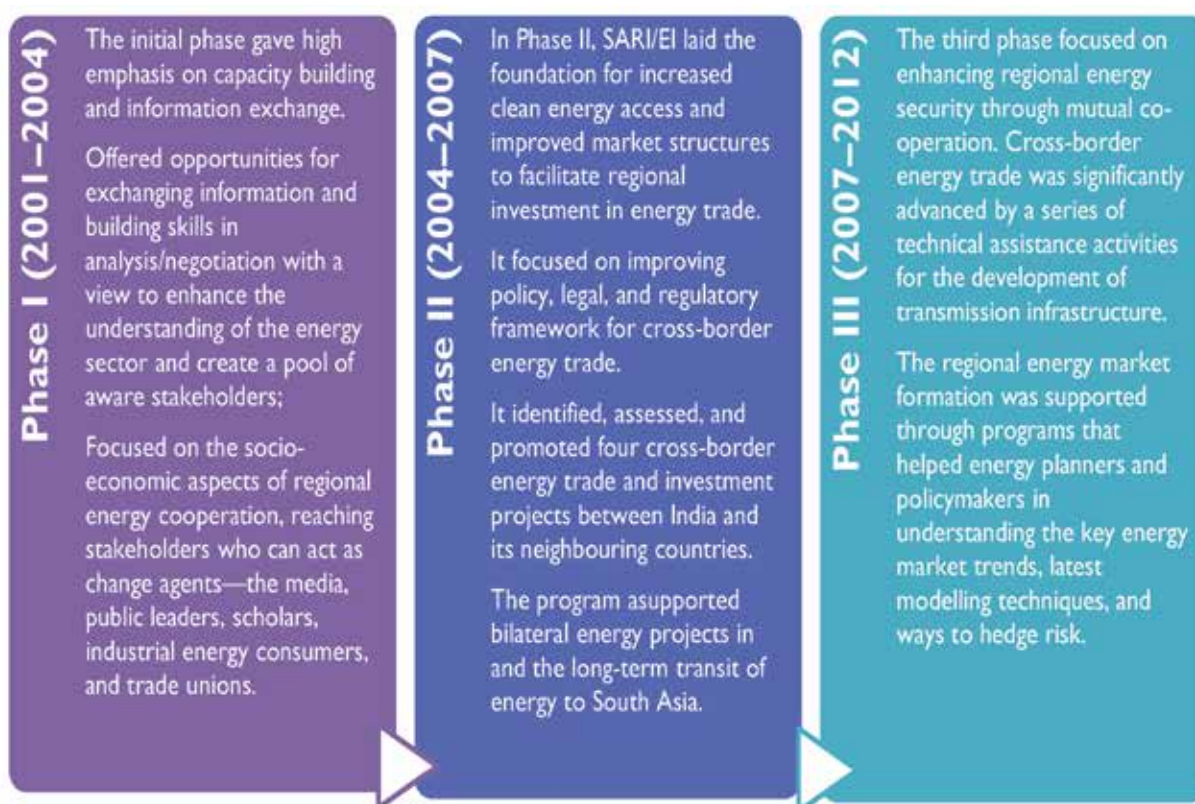


Figure 2: Phase-wise historic activities of SARI/EI

Current Scenario of Cross-Border Electricity Trade (CBET)

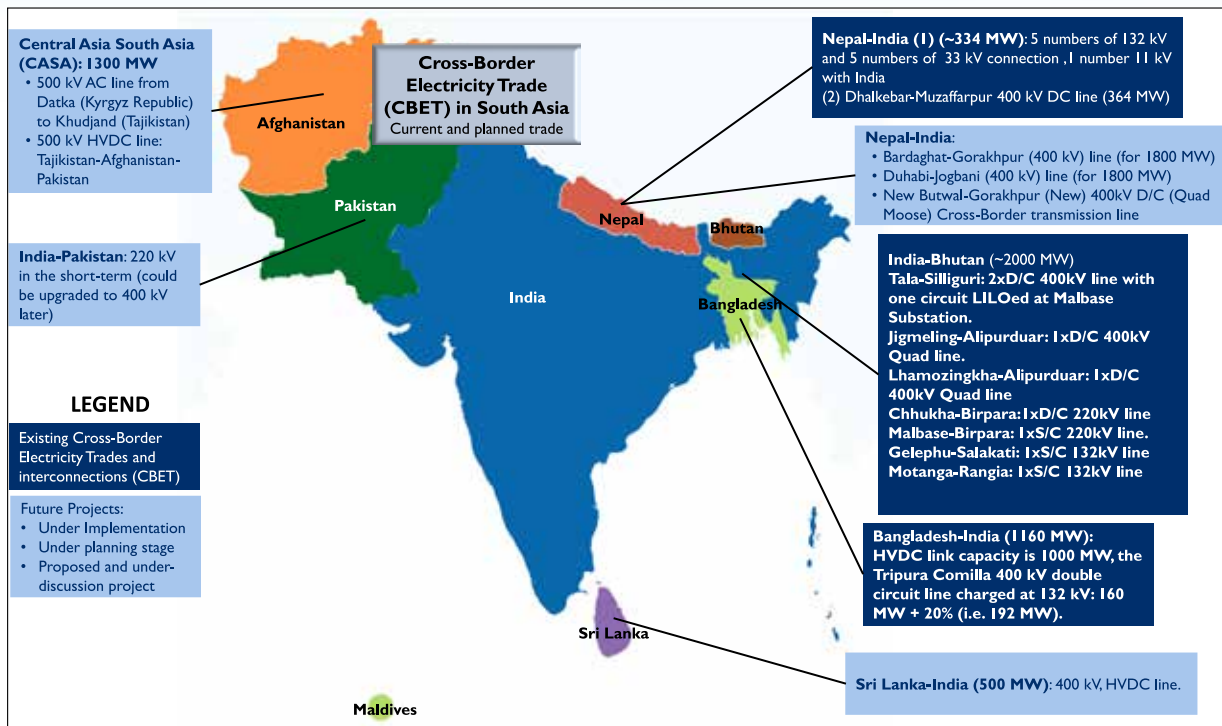


Figure 3: Current Scenario of Cross-Border Electricity Trade (CBET) in South Asia region

SARI/EI Phase IV and Extended phase (2012-2022)

SARI/EI works with government departments and ministries, energy utilities, regulators, energy experts, diplomats, think tanks, businesses, academicians, regional institutions, multilateral development Banks, financial institutions, industry bodies, and other agencies to promote enhanced energy integration and cross border energy trade (CBET) in South Asian countries and South East Asia (BIMSTEC region).

In the extended phase (2018-2022), SARI/EI is focused on implementation of CBET through institutionalization by proposing creation of regional bodies, graduating from bilateral to trilateral and multilateral trades and creation of a regional energy market.

The SARI/EI program established a Think Tank Forum (TTF) to engage bureaucrats, policy makers, media, civil society and citizens to fast-track the agenda of CBET and regional energy cooperation among South Asian countries. The Program has also envisioned the formation of a Parliamentary Forum, a high level policy level forum of Parliamentarians of South Asian Countries to discuss, deliberate, share knowledge for advancing energy cooperation and energy trade in South Asia.

One of the most important objectives of the program is to create an enabling energy market in South Asia, not only to ensure a fair mechanism for CBET, governed by universally accepted market rules, along with technical rules, but also to attract private investment in the sector, and investment from multilateral funding institutions.

SARI/EI program enhances knowledge-sharing among regional stakeholders through quarterly SAFIR Regulatory newsletters, South Asia Energy Database, weekly Power Bulletin Compendium of Electricity Regulations of South Asian countries.

Stakeholder Engagement

In the fourth and current extended phase, SARI/EI has been involved in more than 150 events and published 45 reports around themes related to CBET, as part of its stakeholder engagement and guidance mandate. These regular interventions during the last decade has resulted in successfully engaging more than 3000 stakeholders across various institutions, including government, energy utilities and energy sector related organizations, diplomats, international financial institutions, and think tanks/research institutions.

Achievements and Outcomes

The three Task Forces took up demand-driven studies with tangible outcomes such as Regional Regulatory Guidelines (RRG) for Promoting CBET in South Asia, suggested changes/amendments in Electricity Laws, Regulation and Policies, Grid Code provision required for CBET, Model Power Purchase Agreements and Transmission Service Agreements, Framework guidelines on Trading License and Market Design & Rules for South Asia Regional Power Exchange, Power Pricing Mechanism in South Asia, creating Regional Technical Institutional mechanism in South Asia Region for promoting CBET, Regulatory interventions for grid discipline and grid reliability in South Asia, creating South Asia Forum of System Operators for promoting CBET, Strategy paper for creating the South Asia Forum for Electricity Market for promoting CBET, Assessing the potential of gas for regional energy cooperation, Cross Border Natural Gas Trading potential in the South Asian countries, Transition of bilateral power trade to trilateral and multilateral power trade in South Asia, Study on South Asia Energy/Electricity Regulations to develop Regulatory Road Map for Electricity/Energy Exchange and Energy Cooperation (EC) among South Asian Countries, Regional Parliamentary Forum on Energy Cooperation and Energy Trade in South Asia, and Promoting CBET through the Power Exchange in India, by all South Asian nations, South Asia Forum on Energy Investments (SAFEI), Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration and Suggesting a Framework for Ancillary Service Market in the South Asia Region, Empanel Think Tanks for creation of an outreach and dissemination forum to fast-track the agenda of Cross-border Energy Trade (CBET) and regional energy cooperation among South Asian countries (refer to Figure 5).

Key stakeholders from South Asian countries worked together in a highly consultative and participatory manner for almost a decade and have taken steps to advance CBET in the region. The SARI/EI Secretariat also worked closely with regional institutions such as South Asian Association for Regional Cooperation (SAARC), South Asia Forum for Infrastructure Regulation (SAFIR), and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

Key Outputs	Intended Results
Analytical Study to Assess the Potential of Gas / LNG for Regional Energy Cooperation in BBINS Region	<ul style="list-style-type: none"> ● Build consensus on cross border trading of natural gas for optimum utilization of this precious resource of energy
Prospects for Sustainable Energy Infrastructure Development and Role of Cross Border Energy Trade in South Asia	<ul style="list-style-type: none"> ● Build consensus for common transmission infrastructure for CBET and utilization of the renewable energy sources of the Region
Regional Energy Cooperation for Accelerating Cross Border Electricity/ Energy Trade & Mobilizing Investment in BIMSTEC Region	<ul style="list-style-type: none"> ● Promotion of CBET in the BIMSTEC Region
Paper on Successful “9 PM, 9 minutes” event Highlights the Outstanding Cooperation in Electricity Grid Management in South Asia	<ul style="list-style-type: none"> ● Highlighting the benefits of CBET through an event
Paper on Impact of COVID-19 Pandemic on South Asian Power sector	<ul style="list-style-type: none"> ● Highlighting the benefits of CBET through an event
Prospects of Regional Energy Cooperation and Cross-border Energy Trade in the BIMSTEC region	<ul style="list-style-type: none"> ● Promotion of CBET in the BIMSTEC Region
Compendium of Electricity Regulations of South Asian countries	<ul style="list-style-type: none"> ● To act as a ready reference for all the member states to study the Regulations for other countries, so as to be able to engage meaningfully in cross border trade in electricity, as well as learn from each other in the region.
SAFIR Quarterly Newsletter	<ul style="list-style-type: none"> ● Provide a platform for dissemination of news, updates and experience sharing, amongst the energy regulators of South Asia.
Paper on Risk Mapping and Impact Assessment of COVID-19 on South Asian Power Sector	<ul style="list-style-type: none"> ● Experience sharing of how all the countries tackled the impact of COVID 19 on the power sector in the South Asia Region and recommendations for mitigating the risk on the sector in the future.
Regional Regulatory Guidelines (RRG) for CBET	<ul style="list-style-type: none"> ● Harmonized regulatory framework for CBET
Amendments in Electricity Laws, Policies	<ul style="list-style-type: none"> ● Remove legal, policy barriers for CBET
Harmonization of Grid Codes and standards	<ul style="list-style-type: none"> ● Uniform technical standards, transmission planning; integrated South Asia power grid operation
Macro Economic Benefits of CBET	<ul style="list-style-type: none"> ● Build consensus for accelerating CBET
Gains from multilateral Electricity trade	<ul style="list-style-type: none"> ● Promote multilateral Cross Border Electricity Trade
South Asia Power Exchange Mock Exercise	<ul style="list-style-type: none"> ● Demonstrate case for day-ahead power trade, market design and rules
CBET Impact on livelihoods, gender (Nepal, Bhutan) Implementation of NDCs, Collaboration among SAARC think tanks	<ul style="list-style-type: none"> ● Support CBET expansion by demonstrating its multi-dimensional benefits ● South Asia Think Tank Forum
White Paper on South Asia Forum of Electricity Regulators (SAFER)	<ul style="list-style-type: none"> ● Institutionalization of Regulatory Forum, Working Group for Regulatory Harmonization
Transmission Pricing and tariff mechanisms	<ul style="list-style-type: none"> ● Facilitate power trade and tariff harmonization
Framework on non-discriminatory open access in transmission	<ul style="list-style-type: none"> ● Create condition for open access-essential to regional market development
BIMSTEC Energy Outlook	<ul style="list-style-type: none"> ● Promote BIMSTEC Cross border power trade; linking South Asia with South East Asia power system
Regional investment Framework and Policy Guidelines on Cross border power projects	<ul style="list-style-type: none"> ● Create conducive environment for investment in cross border power projects.

Figure 5: Key Outputs and Intended Results of SARI/EI Program (2012-2022)

The efforts of SARI/EI have paved the way for several transformational changes since 2012. The BBIN region is better integrated with more interconnections developed between India and Bhutan, India and Bangladesh, as well as India and Nepal.

Due to the encouraging policy developments, CBET doubled to 18734 million units in 2020-21 from 9377 million units in 2014-15, which further increased to 23000 million units in 2021-22, which has also given co-benefits of Green House Gas (GHG) emission reductions at a regional level (refer Figure 6).

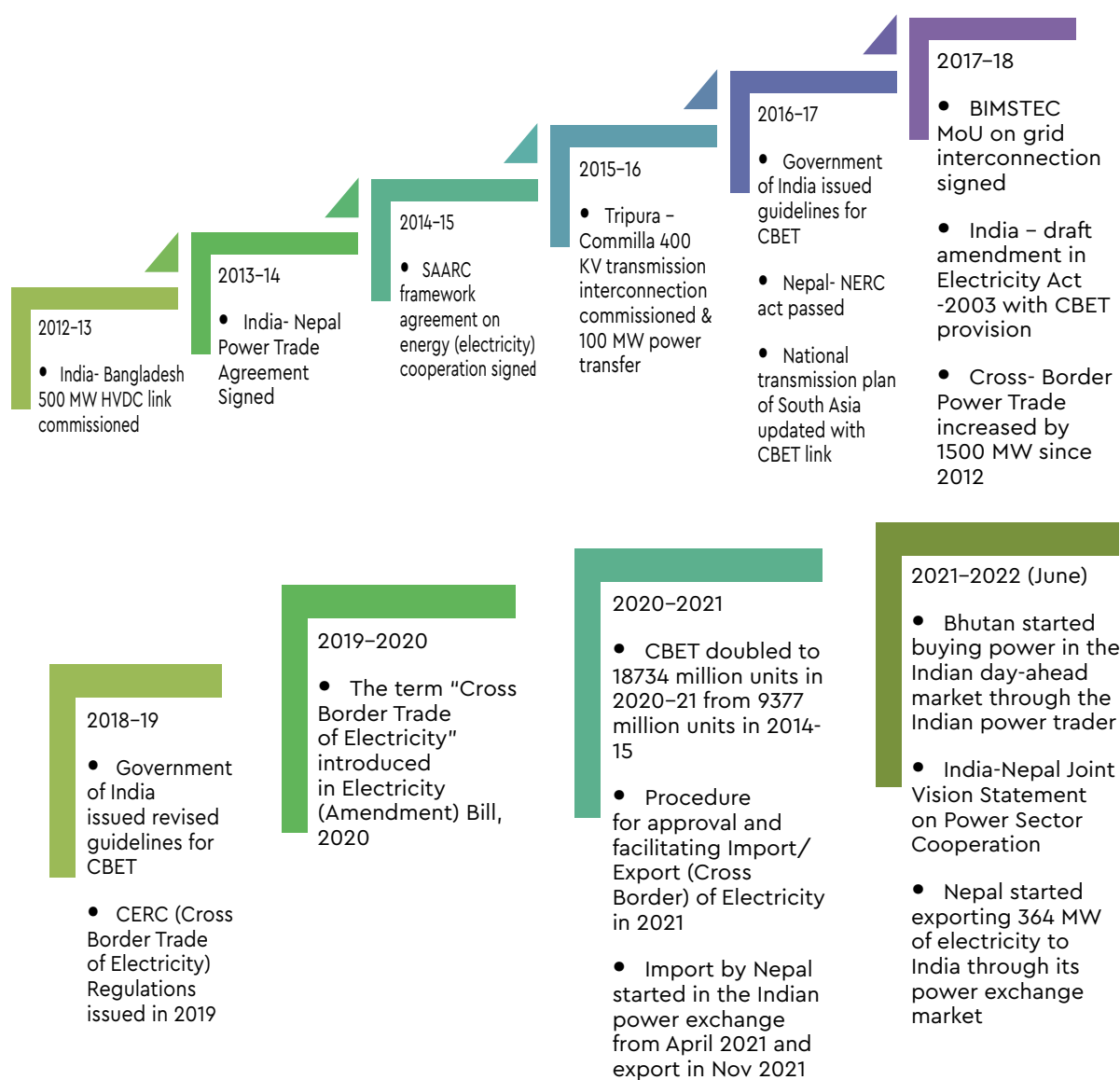
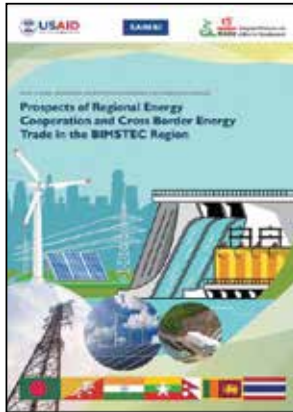
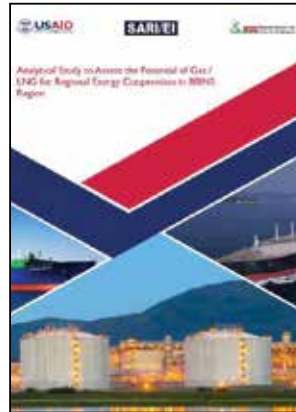


Figure 6: Key Cross-border Electricity Trade Developments during 2012-22

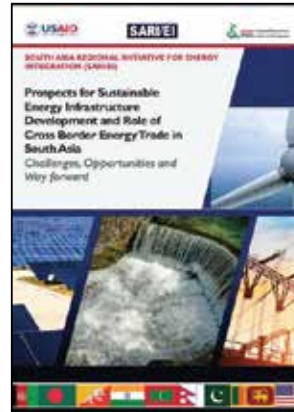
Recent Reports during 2019 – 2022 (June)



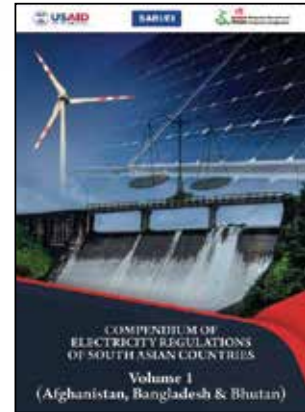
Prospects of Regional Energy Cooperation and Cross-border Energy Trade in the BIMSTEC region



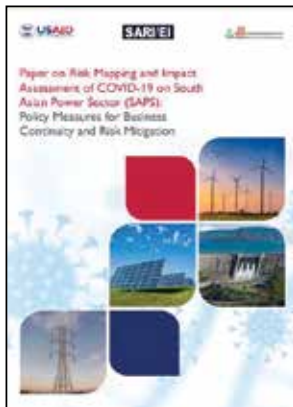
Analytical Study to Assess the Potential of Gas / LNG for Regional Energy Cooperation in BBINS Region



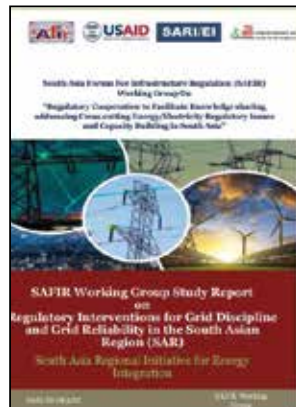
Prospects for Sustainable Energy Infrastructure Development and Role of Cross Border Energy Trade in South Asia



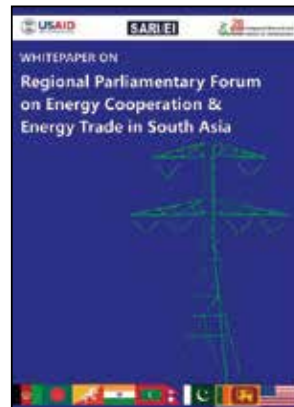
Compendium of Electricity Regulations of South Asian countries



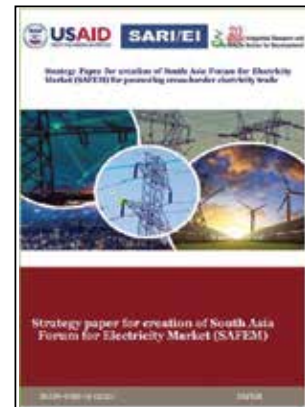
Paper on Risk Mapping and Impact Assessment of COVID-19 on South Asian Power Sector



SAFIR Working Group Study Report on Regulatory Interventions for Grid Discipline and Grid Reliability in the South Asian Region



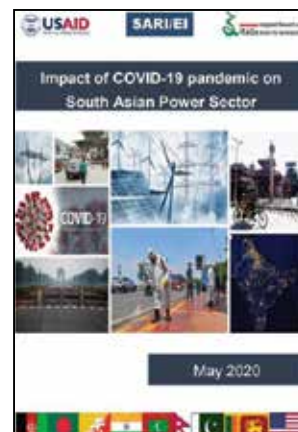
Whitepaper on Regional Parliamentary Forum for Energy Cooperation & Energy Trade in South Asia



Strategy Paper for creation of South Asia Forum for Electricity Market (SAFEM) for promoting cross-border electricity trade



Strategy Paper for creation of South Asia Forum for Electricity Market (SAFEM) for promoting cross-border electricity trade



Paper on Impact of COVID-19 Pandemic on South Asian Power sector

Reports published during 2012 – 2018

- Gains from Multilateral Electricity Trade among BBIN Country
- South Asian Regional Power Exchange (SARPEX) Mock Exercise-Key Findings
- Impact of CBET on Livelihoods and Gender in Nepal and Bhutan
- Implementation of NDCs for Renewable Energy in Sri Lanka: Addressing Gaps in Policies and Regulations
- South Asian Countries Power Pricing Mechanism & Recommendation for CBET
- Economic Benefits of Bangladesh–India Electricity Trade
- Framework & Guidelines for Non-discriminatory Open Access in Transmission for Facilitating Cross Border Electricity Trade in South Asia
- Economic Benefits of Nepal–India Electricity Trade
- SARI Regional Conference Proceedings: Enhancing Energy Cooperation and Integration in South Asia
- Regional Investment Framework and Guidelines for Promoting Investment in Power Sector in South Asian Power Sector and in Cross Border Electricity Trade in South Asia Region
- Regional Regulatory Guidelines (RRGs) for Promoting Cross-Border Electricity Trade in South Asia
- Suggested Changes/ Amendments in Electricity Laws, Regulations and Policies of South Asian Countries for Promoting Cross Border Electricity Trade in South Asia Region
- Regional Energy/Electricity Regulatory Institutional Mechanism in South Asia: South Asia Forum of Electricity/Energy Regulators (SAFER)
- Model Framework for Trading Licence Regime and Guidelines for grant of trading licence to facilitate CBET in South Asia Region
- Model Framework for non-discriminatory Open Access regime in transmission and Guidelines for grant of Open Access to initiate power Trading and facilitate CBET in South Asian Countries
- Harmonization of Grid Codes, Operating Procedures and Standards to Facilitate Cross-Border Electricity Trade in South Asia
- Assessment of Commercial Terms and Conditions for CBET and Suggested Model of Power Exchange in South Asian Region
- “Assessment of the Electricity Trading Potential in the South Asian Region”
- Standard Power Purchase Agreement
- Standard Transmission Service Agreement
- South Asian Regional Power Exchange - Market Design and Rules
- BIMSTEC Energy Outlook 2030
- Formulation of 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
- Implementation of Nationally Determined Contributions (NDCs) for Renewable Energy in Sri Lanka
- Roadmap for - South Asian Regional Power Exchange (SARPEX)
- SARPEX-Market Design and Rules
- Assessment of Socio-economic Impacts of CBET in Bangladesh
- Linking South Asia with Burma & Southeast Asia to Advance Cross Border Electricity Trade: A Political Economy Study
- Potential for Power Trade in Western Part of South Asia: Techno-Economic Rationale
- Prospects for Regional Cooperation on Cross-Border Electricity Trade in South Asia
- Study Tour Report-STUDY TOUR TO EUROPEAN REGIONAL POWER MARKET AMSTERDAM & PARIS
- Learning from Nord Pool region- Power Market Development

Glimpses of Key Stakeholder Engagements ...



SARI/EI Regional conference on Enhancing Energy Cooperation and Integration in South Asia, 30th-31st August 2018, New Delhi



6th SARI/EI Project Steering Committee Meeting, 8th-9th March 2018
Colombo, Sri Lanka



Dr. Tawfiq-e-Elahi Chowdhury, Adviser to the PM of Bangladesh, launching SARI/EI Report on "Prospects of Regional Energy Cooperation and Cross-border Energy Trade in the BIMSTEC Region", in Dhaka, Bangladesh, 25th-26th February 2020



'Power System Modelling and Simulation' organised jointly with India's National Grid operator POSOCO, New Delhi, India, 18th-29th April 2022



Launch of "SARI/EI Compendium of Electricity Regulations of South Asia", by South Asia Electricity Regulators, New Delhi, India, 19th February 2020



Two-week training program on 'Power System Modelling and Simulation' jointly organised with POSOCO, 18th to 29th April 2022



South Asian study tour to Europe on renewable energy integration and cross-border electricity trade best practices, 10th May 2022



Launch of South Asia Energy Database, New Delhi, India, 22nd June 2022



SARI Power Market & Power Exchange through Power Exchange Platform- Bangladesh, 13th-14th November 2019



SARI Power Market & Trade through Power Exchange Platform in Kathmandu, Nepal, 23rd July 2019



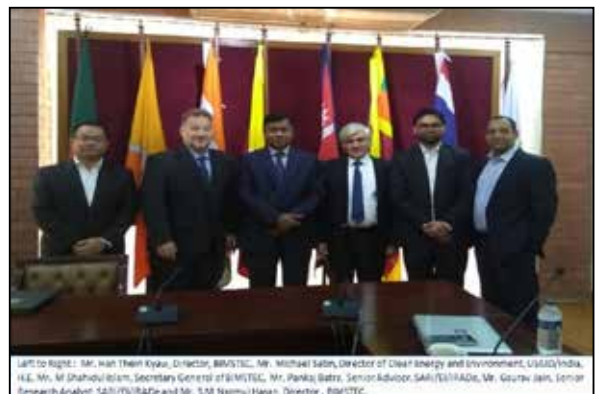
SARI/EI Stakeholder Consultation meeting with Sri Lanka Utilities-SL Sustainable Energy Authority, Public Utilities Commission of Sri Lanka, 14th January 2020



Workshop for South Asian Energy stakeholders on Power System Operation, Trading & Exchange Platform, New Delhi, India, 5th-7th November 2019



2nd Meeting of SAFIR Working Group 4th Dec 2019 Bangladesh



SARI-EI extended phase Inception meeting with Bangladesh Stakeholders on 11th-12th December 2018 at Dhaka Bangladesh

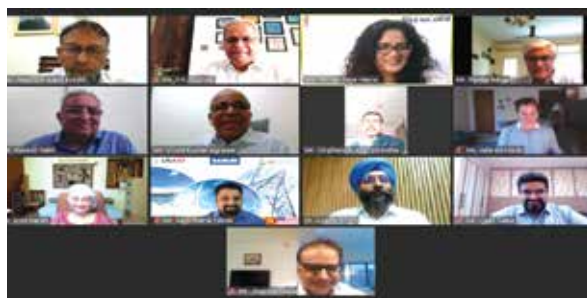
Due to Covid-19 restrictions during 2020-21, most of the conferences/meetings/stakeholder consultations were conducted in a virtual manner. Some of the glimpses of these virtual events are depicted below.



Report Release Webinar on "Analytical Study to Assess the Potential of Gas/LNG for Regional Energy Cooperation in BBINS Region", 27th July 2021



Annual SAFIR – SARI/EI Conference on "Sustainable Energy Infrastructure Development and Role of Cross Border Energy Trade in South Asia: Challenges, Opportunities and way forward", 15th March 2021



Webinar on Importance of Regional Technical Institutional Mechanism for harmonizing Power System Operation in South Asia, 23rd March 2021



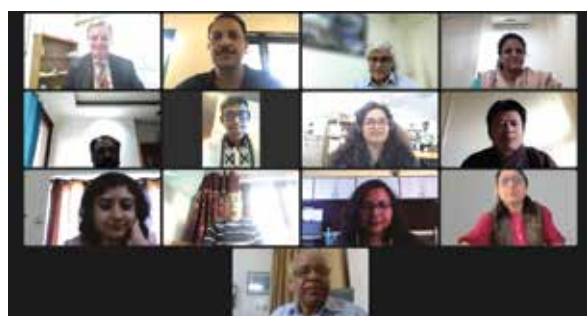
Webinar with Powerline on 'Establishing a Regional Power Market in South Asia', 26th October 2021



Consultation with Indian stakeholders on Assessment of Cross Border Natural Gas Trading Potential in South Asian Countries, 7th June 2022



Release of White Paper on Regional Parliamentary Forum on energy cooperation and energy trade in South Asia, 26th April 2022



Webinar on Importance of Regional Technical Institutional Mechanism for harmonizing Power System Operation in South Asia, 23rd March 2021



Webinar on report release of "Strategy Paper on creation of a South Asia Forum on Energy Markets, 19th April 2022

Through the media's lens...

Energyworld.com
 OPINION: Proposed power distribution reforms to empower Make in India

Electricity is an essential commodity, along with water and air, unlike cars or microwaves. We need to use these judiciously, but we run out of them.

By **Praveen Kumar** | June 10, 2020 | 10:15 AM



New Delhi: The Ministry of Power has proposed broad steps in the amendments to the Electricity Act, 2003 that will see path breaking when it comes out in 2023. One such programme will relate to distribution. Since electricity supply has to reach the consumer through the supply chain of generation, transmission and distribution, any inefficiency in any of these supply chain areas will affect the consumer. We have the most advanced technology in the generation sector and the transmission sector, but not in the distribution sector except for the private distribution companies.

Increasing Connectivity
 Decoding the Common Minimum Grid Code for South Asia

By **Praveen Kumar** | June 10, 2020 | 10:15 AM

The common grid code for South Asia is a significant step towards regional electricity integration. It will ensure that the grid is stable and secure, and that the supply and demand are balanced. This is a crucial step towards achieving the goal of a common regional grid.




Infraline Plus
 Your Monthly Energy Sector Guide

DISPLAY OF OUTSTANDING REGIONAL COOPERATION IN ELECTRICITY GRID MANAGEMENT DURING 9 PM, 9MINUTE EVENT

By **Praveen Kumar** | June 10, 2020 | 10:15 AM

The 9 PM, 9 Minute event is a testament to the regional cooperation in electricity grid management. It shows that the grid is stable and secure, and that the supply and demand are balanced. This is a crucial step towards achieving the goal of a common regional grid.



Energyworld.com
 South Asian power grid will require an investment of Rs 45,000 crore by 2030: Pankaj Batra, SARI/IEI

The power transfer potential of cross-border electricity grids would be about 1,000,000 MW globally, which by 2030 is expected to witness a rise to about 10,000 MW.


By **Praveen Kumar** | June 10, 2020 | 10:15 AM



Pankaj Batra is the Project Director of South Asia Regional Initiative for Energy Integration (SARI/IEI) program funded by United States Agency for International Development (USAID) and supported by Integrated Research and Action for Development (IRADe). Taking to ET Energyworld as an exclusive interview, he talks about how the program is pushing cross-border power trade and setting up a common regional grid.

SPECIAL FEATURE
CROSS-BORDER ELECTRICITY
 TRADE BROUGHT TO THE FOREFRONT IN THE AMENDMENT TO THE ELECTRICITY ACT 2003

The latest proposed changes to the Electricity Act, 2003 are aimed at a wide array of issues in the grid sector. The amendments will see a rise in the power transfer potential of cross-border electricity grids. This is a crucial step towards achieving the goal of a common regional grid.



CROSS-WIRING TO ILLUMINATE SOUTH ASIA REGION

By **Praveen Kumar** | June 10, 2020 | 10:15 AM



The formation of a robust cross-border framework in the South Asia region is expected to bring down the cost of electricity and allow India to achieve the flexibility to regulate the generation of power according to the local and global market.

Experts call for regional grid BIMSTEC nations

By **Praveen Kumar** | June 10, 2020 | 10:15 AM



Government officials are embracing energy cooperation in the BIMSTEC region in the wake of the Covid-19 pandemic. The meeting was held in New Delhi, India, and was attended by officials from all seven member countries.

IT WOULD BE A WIN-WIN FOR ALL S ASIAN COUNTRIES

By **Praveen Kumar** | June 10, 2020 | 10:15 AM



Cross-border electricity trading, each country can gain for lesser capacity as well as lesser reserves that may be required when trading happens. It is always economically beneficial to interconnect and share resources. Regional energy gain from the sale of its hydro-power to the rest of the region will be a win-win for all. India will gain from flexible hydro resources to manage the intermittency of renewable energy sources.

LET THERE BE LIGHT
 (It changed together when politics came to the table in Bangladesh. Last time)

By **Praveen Kumar** | June 10, 2020 | 10:15 AM



The latest proposed changes to the Electricity Act, 2003 are aimed at a wide array of issues in the grid sector. The amendments will see a rise in the power transfer potential of cross-border electricity grids. This is a crucial step towards achieving the goal of a common regional grid.

Electricity for peace and development: South Asian grid connectivity is an idea whose time has come

Praveen Kumar

South Asian grid connectivity is an idea whose time has come. For many years, the region has been plagued by power shortages and unreliable supply. This is a crucial step towards achieving the goal of a common regional grid.



As fierce India-Pakistan tensions subside, it's time to think of more lasting peace initiatives which can be cautious and within comfort zones of both countries. Such an initiative can be electricity trade.

South Asian grid connectivity is an idea whose time has come. For many years, the region has been plagued by power shortages and unreliable supply. This is a crucial step towards achieving the goal of a common regional grid.



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Green Pathway
 Accelerating the clean energy transition in South Asia

While countries across the world are grappling with the clean energy transition, they differ in their motivations, starting conditions, resource bases and problems. Each country has to find its own path in the transition to clean energy. South Asian countries have much in common in terms of motivations and starting conditions, as well as clean energy transition pathways. The region is characterised by low per capita energy consumption, and the countries are focusing on accelerating energy access for their populations. Climate change and high per capita energy bills add to the woes of these countries.

South Asia has huge renewable energy potential, which can facilitate the transition towards clean energy. Over time, renewable energy can become cheaper. The South Asian countries have also undertaken various supply-side (replacing fossil fuels with renewable energy) and demand-side measures (promoting e-mobility and electric cooking) for transition to clean energy. In their clean energy transition journey, South Asian countries can benefit from mutual cooperation. These countries have promised ambitious emission reduction targets and goals at COP26 in Glasgow as well as other conferences, as a part of the Paris Agreement. There is a need to find a common path that helps all the countries in the region speed up their energy transition.

At a recent webinar on 'Accelerating Clean Energy Transition in South Asia', organised by USAID's South Asia Regional Initiative for Energy Integration programme (currently being implemented by Integrated Research and Action for Development (IRADe) and Power Line, Dr. Praveen Kumar, executive director, IRADe; Tarun Kapoor, former secretary, Ministry of Petroleum and Natural Gas, India; Mohammad Alauddin, chairman, Sustainable and Renewable Energy Development Authority, Bangladesh; Madhu Prasad Bhartiwal, joint secretary, Ministry of Energy, Water Resources and Irrigation, Nepal; Praveen Kumar, chief engineer, Department of Renewable Energy, Ministry of Technical Affairs, Human Eng. Sanjib Sepala, chairman, Sri Lanka Sustainable Energy Authority, Sri Lanka.

Trade Expansion
 Creating regional-level institutions to facilitate CBET in South Asia

Cross-border electricity trade (CBET) is growing by leaps and bounds. It has doubled in the last six years from 9 BWh to 18 BWh in 2021 and continues to grow. All the South Asian nations agree in principle that such a trade is beneficial to all nations and would help facilitate the process of electricity access as well as reduce the average cost of supply. This would, in turn, result in GDP growth of the countries and improve the standard of living, leading to increased productivity. As the region moves towards greater CBET, there is a need for regional-level institutions to deliberate on and harmonise various technical, operational, regulatory, legal and commercial aspects of CBET.

Trade (CBET) in South Asia, organised by USAID's South Asia Regional Initiative for Energy Integration (SARI/IEI) programme, currently being implemented by Integrated Research and Action for Development (IRADe) and Power Line, Pankaj Batra, project director, SARI/IEI; IRADe; Raj Man Ghoshing, managing director, Nepal Electricity Authority; Nepal; Md. Ghofar Hossain, chairman, Bangladesh Energy Regulatory Commission; Damitha Kumaranasinghe, director general, Public Utilities Commission of Sri Lanka; Dr. Sobit Sen, executive director, TIE, Power Grid Corporation of India Limited; Nima Thibetung C., director, Bhutan Electricity Authority; Dr. Praveen Kumar, chairman, chief of Energy Sector Group, Sustainable Development and Climate Change Department, Asian Development Bank (ADB); and Manoj Zeys Bhatt, regional energy manager and clean energy specialist, UNAD, discussed the role of regional-level institutions in promoting efficient and sustainable CBET, their objectives and responsibilities, effective financing mechanisms as well as issues and challenges. Excerpts from the discussion...

To address the environmental concerns and mitigate climate change, countries would have to focus on capacity addition through non-fossil fuel sources such as solar, wind and hydro. Since the countries have limited non-renewable energy potential, regional integration by setting up cross-border transmission interconnections can be beneficial. Notably, India has already issued guidelines for CBET in 2018, which were superseded by other guidelines in 2020. CBET regulations 2018 and the procedure for approval and facilitating import/export (trades

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