SAARC ENERGY CENTRE

Energy for Peace & Prosperity

Regional Power Trade in *South Asia*

ESCAP-GTI Seminar on Energy Cooperation in North-East Asia

7 July 2021



Presentation Contents

- Energy Connectivity in South Asia
- Power Trade: Current and Future
- Emerging Trends and Challenges

Energy Connectivity in South Asia

Rationale

→ All SAARC Member States are net-importers of energy; most depend on imported oil, coal and gas

→ **Enablers**: resource availability and diversity, seasonal variations/ demand patterns, energy security

→ **Benefits**: optimal use of resources, affordable energy access and sustainable development.

Energy Connectivity in South Asia

Vision

→ SAARC Energy Ring envisioned by the SAARC Leaders in 2004.

→ The concept of SAARC Energy Ring involves building power and gas rings interconnecting Member States of the region for across border trade of power/gas between the member states

→ Objective is optimum utilization of regional energy resources for the betterment of the people of the region

Energy Connectivity in South Asia

SAARC Framework Agreement for Energy Cooperation (Electricity)

→ Signed in November 2014. An historic landmark for cooperation in electricity trade in South Asia

→ Agreement enables cross-border trade of electricity (CBET) on voluntary basis subject to the laws, rules and regulations of the respective Member States

→ Consists of 20 articles addressing various aspects of CBET

Energy Connectivity in South Asia

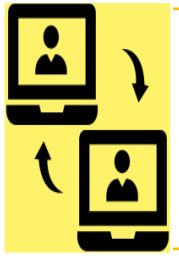
Features of SAARC Framework Agreement for Energy Cooperation (Electricity)



Non-discriminatory access to transmission grids



Coordination in transmission planning, system operations, and energy accounting



Relevant Information sharing between Member States



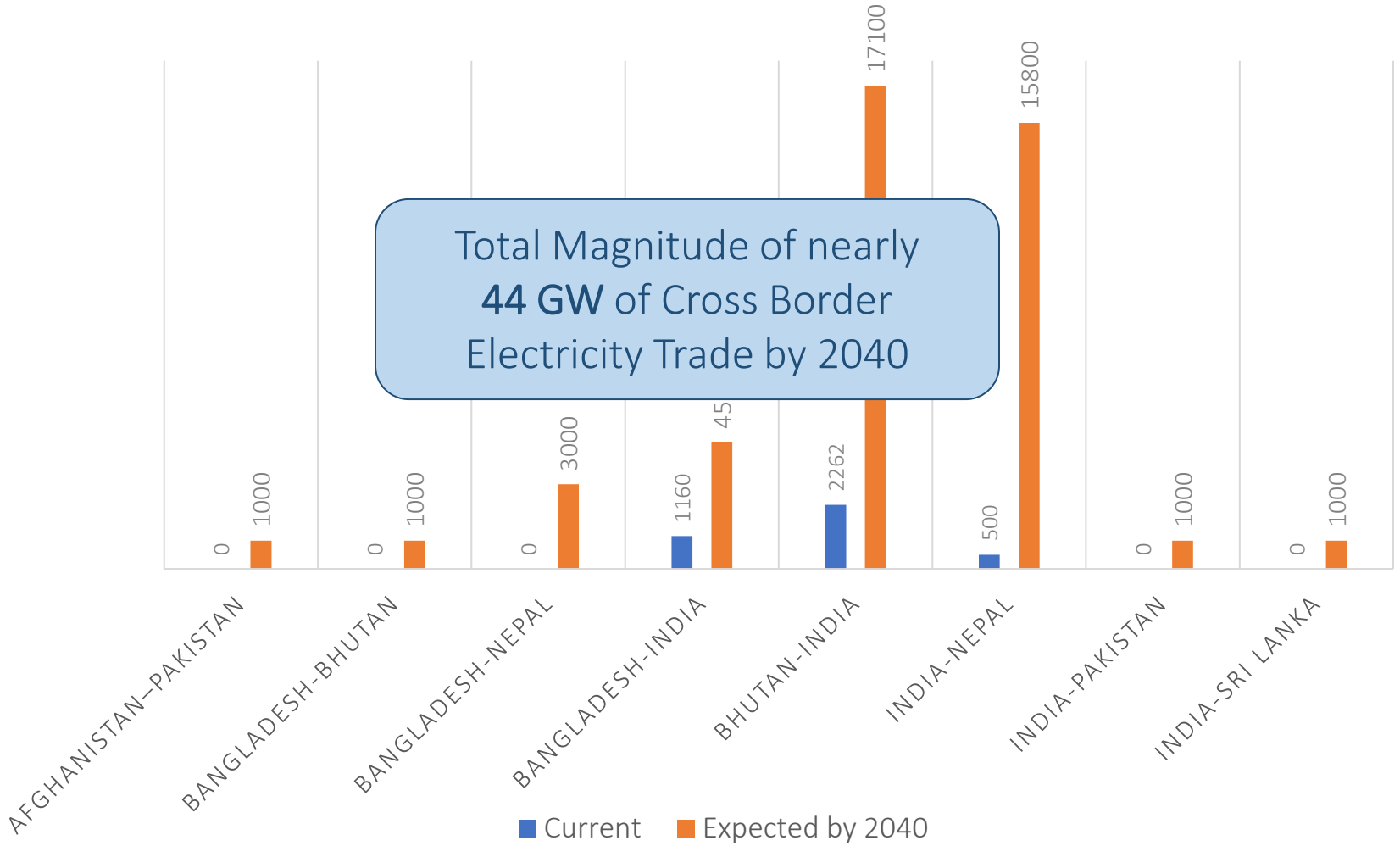
Member states to reform power sectors to promote competition



Member states to develop structure functions and institutional mechanisms to resolve regulatory issues

Energy Connectivity in South Asia

Summary of Electricity Trade (MW)



Source: Compiled from various sources including reports published by SAARC Energy Centre, SARI/EI, Central Electricity Authority India.

Energy Connectivity in South Asia

Present & Future Electricity Trade Projects

Trading Countries	Completed	Ongoing	Future
 Afghanistan  Pakistan	--	CASA-1000 (1000 MW)	--
 Bangladesh  Bhutan	--	--	Via India: Bongaigaon/Rangia-Jamarpur (~1000 MW)
 Bangladesh  Nepal	--	--	Via India: Purnea-Barapkuria & Bheramera-Baharampur (~3000 MW)

Source: Compiled from various sources including reports/articles published by SAARC Energy Centre, SARI/EI, Central Electricity Authority India and ADB.

Energy Connectivity in South Asia

Present & Future Electricity Trade Projects

Trading Countries	Completed	Ongoing	Future
 Bhutan  India	Tala (1020 MW) Chhuka (336 MW) Kurichhu (60 MW) Mangdechhu (720MW) Dagachhu (126 MW)	Punatsangchhu-I (1020 MW) Punatsangchhu-II (1200 MW) Nikachhu (118 MW) Kholongchhu (600 MW)	Expected to reach 17100 MW by 2040
 Bangladesh  India	Baharampur–Bheramara (1000 MW) Tripura-Comilla (160 MW)	Jharkand-Bogura (1496 MW) Purnea-Barapkuria (1000 MW) Kuri 1 (1125 MW)	Expected to reach 4500 MW by 2040

Source: Compiled from various sources including reports/articles published by SAARC Energy Centre, SARI/EI, Central Electricity Authority India and ADB.

Energy Connectivity in South Asia

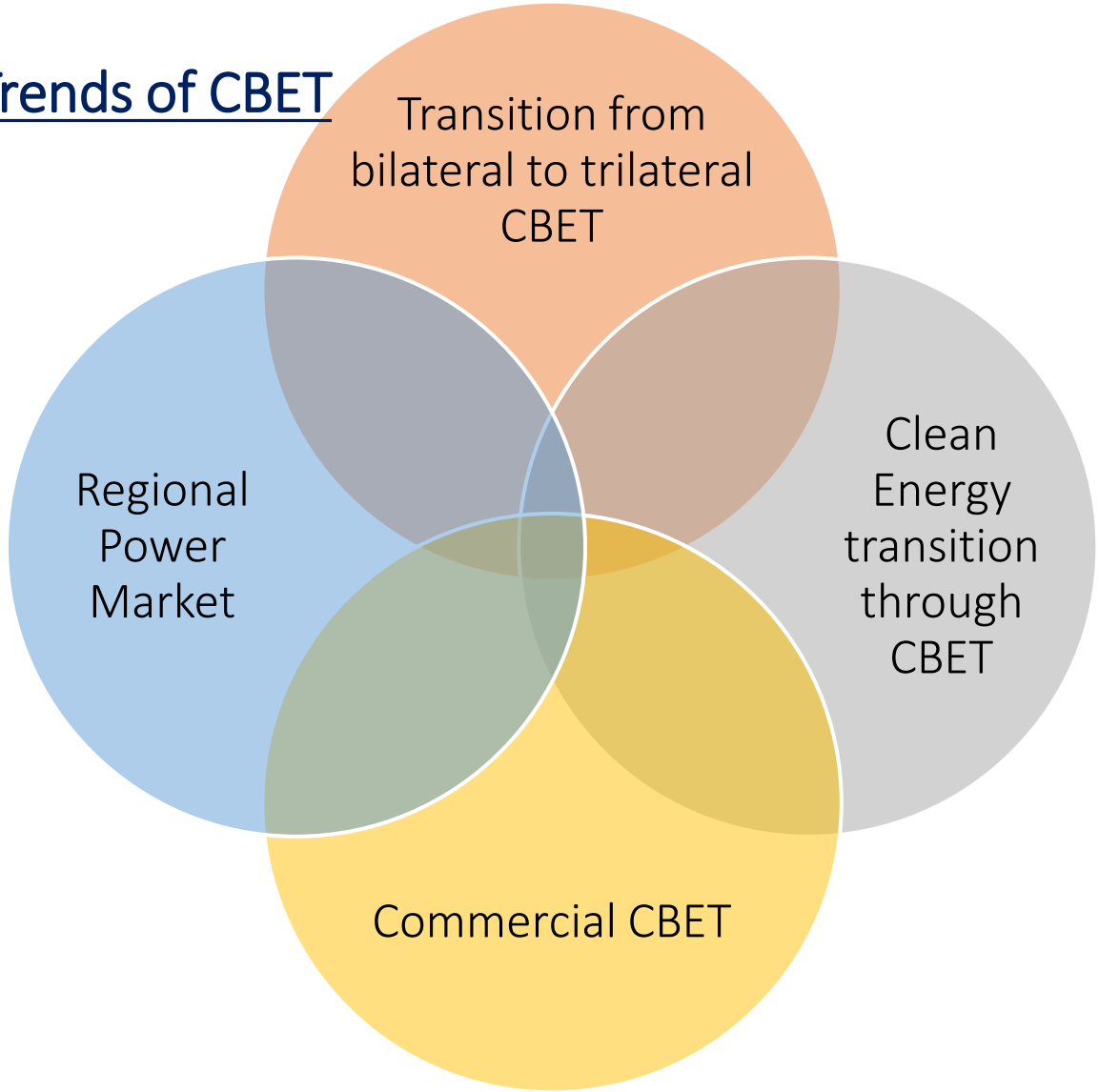
Present & Future Electricity Trade Projects

Trading Countries	Completed	Ongoing	Future
 India  Nepal	Muzaffarpur–Dhalkebar (237 MW) Tanakpur Link (350 MW) Multiple links of 11 kV, 33 kV and 132 kV lines	--	Expected to reach 15800 MW by 2040

Source: Compiled from various sources including reports/articles published by SAARC Energy Centre, SARI/EI, Central Electricity Authority India and ADB.

Energy Connectivity in South Asia

Emerging Trends of CBET



Energy Connectivity in South Asia

Main Areas of Ongoing Work to Support CBET

- ❑ Establishment and operation of competitive power markets
- ❑ Harmonization of grid codes and regulatory frameworks
- ❑ Pricing mechanism of electricity
- ❑ Regional system planning
- ❑ Open access to transmission systems
- ❑ Dispute settlement mechanism

Energy Connectivity in South Asia

Challenging Areas for CBET

- Political will for regional level cooperation
- Institutional Capacity
- Modern Technology requirements
- Participation of private sector
- Regional planning for projects & interconnections.

Energy Connectivity in South Asia

Challenging Areas for CBET

- Uniform and competitive power pricing mechanism for CBET
- Harmonization of regulations & operational guidelines
- Dispute settlement mechanisms / forums
- Open access regulation across member states
- Impact of COVID-19

Conclusion

- CBET is important for achieving energy security, affordable energy access and transition towards clean energy.
- With the growing energy demand in the region, rapid growth of CBET is expected in the near future in South Asia
- Member States can further boost CBET by working on areas like regional outlook/planning, power market reforms, open access, dispute settlement mechanisms and regional coordination.

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THANK YOU
FOR YOUR ATTENTION

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