



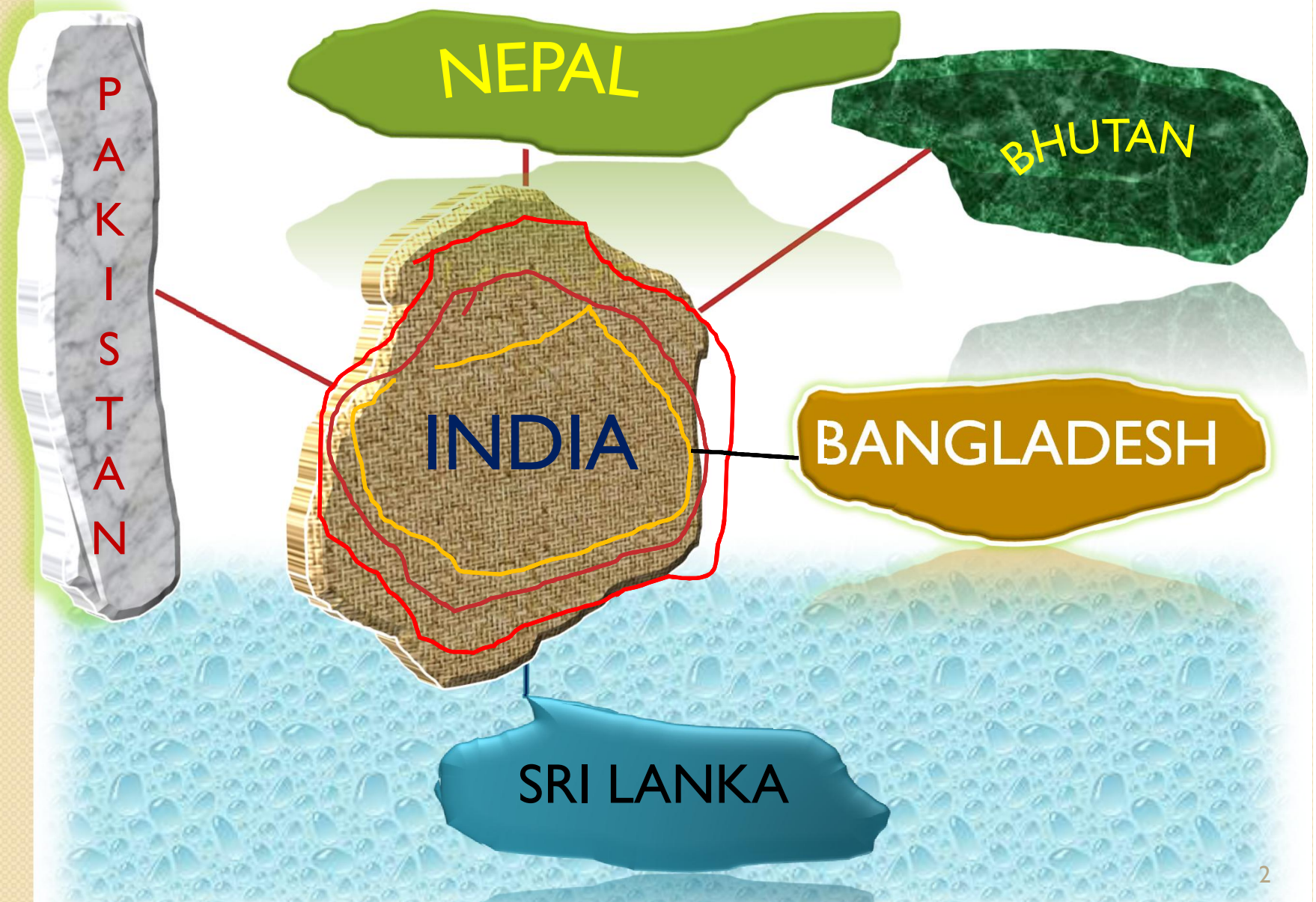
Cross-border trade: Existing scenario & future prospects

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Power is transferred by displacement



Cross-border electricity trade: Challenges

1. Social acceptability
2. Security of transmission corridor
3. Political decision
4. Economic viability
5. Financing
6. Technical feasibility of interconnection
7. Long-term PPA and acceptability of tariff
8. Planning/building interconnection
9. Scheduling & settlement
10. Commercial terms & conditions
11. Dispute resolution

Bangladesh-India

- 500 MW HVDC interconnection.
- Baharampur (India)-Bheramara (Bangladesh) 400kV double circuit line : 27km
- COD 5th October 2013
- Average 10 MUs per day
- Need to go up from 470MW to 500MW

Bangladesh-India

- Agreement to double the HVDC terminal capacity to 1000MW
- A radial feed to Bangladesh at North Comilla from Tripura, India at 220kV to supply 100MW
- To route a 6000MW HVDC line from Assam via north Bangladesh and to set up 500/1000MW HVDC terminal at Jamalpur/Barapukuria for drawing power for Bangladesh.

Bhutan-India

- Power generated from Chukha (336MW), Kurichu (60MW) and Tala (1020MW) HEPs in Bhutan is exported to India
- Synchronously connected
- Exported 5555MUs to India in 2013-14
- HEPs under construction with Indian assistance: Punatsangchhu-I (1200MW), Punatsangchhu-II (1020MW), Mangdechhu(720MW)

Bhutan-India

- Bhutan's export to cross 16,000MUs p.a. by 2018
- Another 21,000 MW to be harnessed.
- Many DPRs ready/under preparation.
- Transmission plan ready
- US\$ 15 billion required for 10,000MW
- **Financing is the main issue**
- **Related: Company structure, FDI, Free power, tariff, UI settlement**

Nepal-India

- Trading since 1971. Bihar, UP, Uttarakhand, Tanakpur
- Current level 150MW at 132kV, 33kV & 11kV
- 400 kV Muzaffarpur (India)- Dhalkebar (Nepal) double circuit line under construction
- Future prospects depend on the ability of the IPPs in Nepal to supply across the border at competitive rates

Pakistan-India

- Proposal under discussion
- Amritsar-Lahore, 500MW, HVDC plus 220kV radial for a quick start
- Possibilities:
- Gujarat (India) to Sindh
- Central Asia to Pakistan/ India via Afghanistan
- Iran to Pakistan/ India

India-Sri Lanka

- $\pm$ 400kV HVDC bi-pole line, 500MW
- Overhead line from Madurai to Panaikulam in India, 130km,
- Panaikulam (India) to Thirukketiswaram (Sri Lanka) submarine cable, 120km
- Overhead line from Thirukketiswaram to New Anuradhapura in Sri Lanka, 110km.