



# **X-BORDER TRADE OF ELECTRICITY IN SAARC REGION**

Sher Singh Bhat

# X-BORDER TRADE OF ELECTRICITY IS SPECIAL

S. No.	Particulars	Details
1.	Specific Nature of Electricity as commodity	<ul style="list-style-type: none"><li>▪ It is intangible commodity and cannot be checked at the custom point for custom clearance.</li><li>▪ It cannot be stored and has to be consumed at the moment it is generated.</li><li>▪ It needs a hard wire connection from generation to point of consumption.</li></ul>
2.	Item list of general trade agreements exclude electricity due to its specific nature.	<ul style="list-style-type: none"><li>▪ Typical Agreement/s between/among the countries for X- Border trading of electricity.</li></ul>
3.	Pre-requisites for X- border trade of electricity	<ul style="list-style-type: none"><li>▪ Separate bilateral, sub-regional, regional agreement/s for X- Border trade of electricity</li><li>▪ Agreed market mechanism (rules) by trading countries</li><li>▪ Requisite transmission fabric of hardwires</li></ul>

# **WHY DO STATES WISH X-BORDER TRADE OF ELECTRICITY?**

## **OBJECTIVE - 1**

- Balancing (managing surplus and deficits) the TOD and seasonal demand and supply in the national power systems of SMS.
- Trading in relatively small volumes, short term nature

## **OBJECTIVE - 2**

- Harness the energy sources available as comparative advantage in SMS for export of electricity and attain economic growth through it.
- Trading intended for relatively larger volumes, long term.

## **OBJECTIVE - 3**

- Take advantage of price arbitrage in two national markets

## **X-BORDER TRADING OF ELECTRICITY AMONG SMS: STATUS**

- Currently Bhutan, Bangladesh & Nepal having X-border transaction of electricity with India.
- But this transaction is mostly under G2G facilitation.
- Most power transactions with India are routed through Indian public sector trader (NVVN).
- India have demonstrated strong preference to bilateral G2G for X- border transaction of power.
- Transaction between any other two countries needs use of Indian transmission system.
- But SMS have not been successful to garner this support from India.
- So level of X-Border trading of electricity in SAARC Region is not up to mark.
- Indian preference for bilateral G2G impeding electrically interconnected SAARC region as a whole.

# **INITIATIVES TO ENHANCE ELECTRICITY TRADE AMONG SMS**

**Despite poor regional connectivity and trading of electricity, initiatives undertaken in following 4 directions to enhance level of electricity trade among SMS:**

- 1. Regional and Bilateral Agreements for energy cooperation and trade of electricity.**
- 2. Development of requisite X- Border Infrastructure for connectivity and trade.**
- 3. Ramification of domestic systems of SMS to adapt X-border power trade.**
- 4. Regional and bilateral instruments to gear up connectivity and trade through frequent communications.**

## **AGREEMENTS FOR ENERGY COOPERATION AND TRADE OF ELECTRICITY**

- **At Regional Level**

- SAARC Intergovernmental Framework Agreement on Energy Cooperation

- **At Bilateral Level**

- Umbrella Agreement on cooperation between India and Bhutan
- Power Trade Agreement between Nepal and India
- Agreement between Bangladesh and India for cooperation

## **DEVELOPING REQUISITE X- BORDER INFRASTRUCTURE TO FACILITATE TRADE**

- **Between India and Bhutan:**
  - Tala – Kholga - Binnagurhi- New Siligurhi 400 kV D/C line in operation
  - Tala – Pagli / Malbase – Binnagurhi – New Siligurhi 400 k V D/C Line in operation
- **Between India and Nepal :**
  - Muzaffarpur-Dhalkebar 400 k V line in operation but still in radial mode
- **Between Bangladesh and India :**
  - Behrampur –Bheramaara 400 k V DCBTB in operation
- **Between India and Sri Lanka:**
  - Madurai – Anuradhapura +/- 400 k V HVDC Bi-pole including Dhanushkodi - Talaimannar submarine cable. Still at conceptual level.

## **RAMIFICATION OF DOMESTIC SYSTEMS TO ADAPT X-BORDER POWER TRADE**

- **Amendments in domestic regulations**
  - MOP(GOI) Memo dated Dec 18, 2018 on X-Border imports.
- **Reinforcements of domestic infrastructure**
  - Reinforcement in Muzaffarpur Substation (India) and related transmission lines to facilitate the power flow through Muzaffarpur-Dhalkebar 400 k V line.

But these reinforcements are not sufficient.



## **INSTRUMENTS TO ACCELERATE CONNECTIVITY AND TRADE**

- **Regional Level**

- SAARC Energy expert Group: has not been effective

- **Bilateral level**

- Joint Steering Committees, Joint Working Group, Joint Technical Committee formed under the respective bilateral agreements

- **Domestic Level**

- Domestic Task forces have been formed to support the bilateral and regional working groups.

It has been observed that bilateral instruments have been functional but the regional instruments are almost defunct.

# **REASONS FOR POOR CONNECTIVITY AND TRADING AMONG SMS**

## **1. Geographical proximities not supportive for X-Border Trade**

- Except Afghanistan, all SMS have common border with India.
- No other countries have common borders except Pakistan and Afghanistan.
- India is at the King Pin position for X-Border Trade of Electricity among SMS

## **2. Infrastructure**

- Certain X-border infrastructure has been developed between India and other few countries in last few years to facilitate bilateral trade with India.
- But this also does not facilitate third country trade or regional trade.

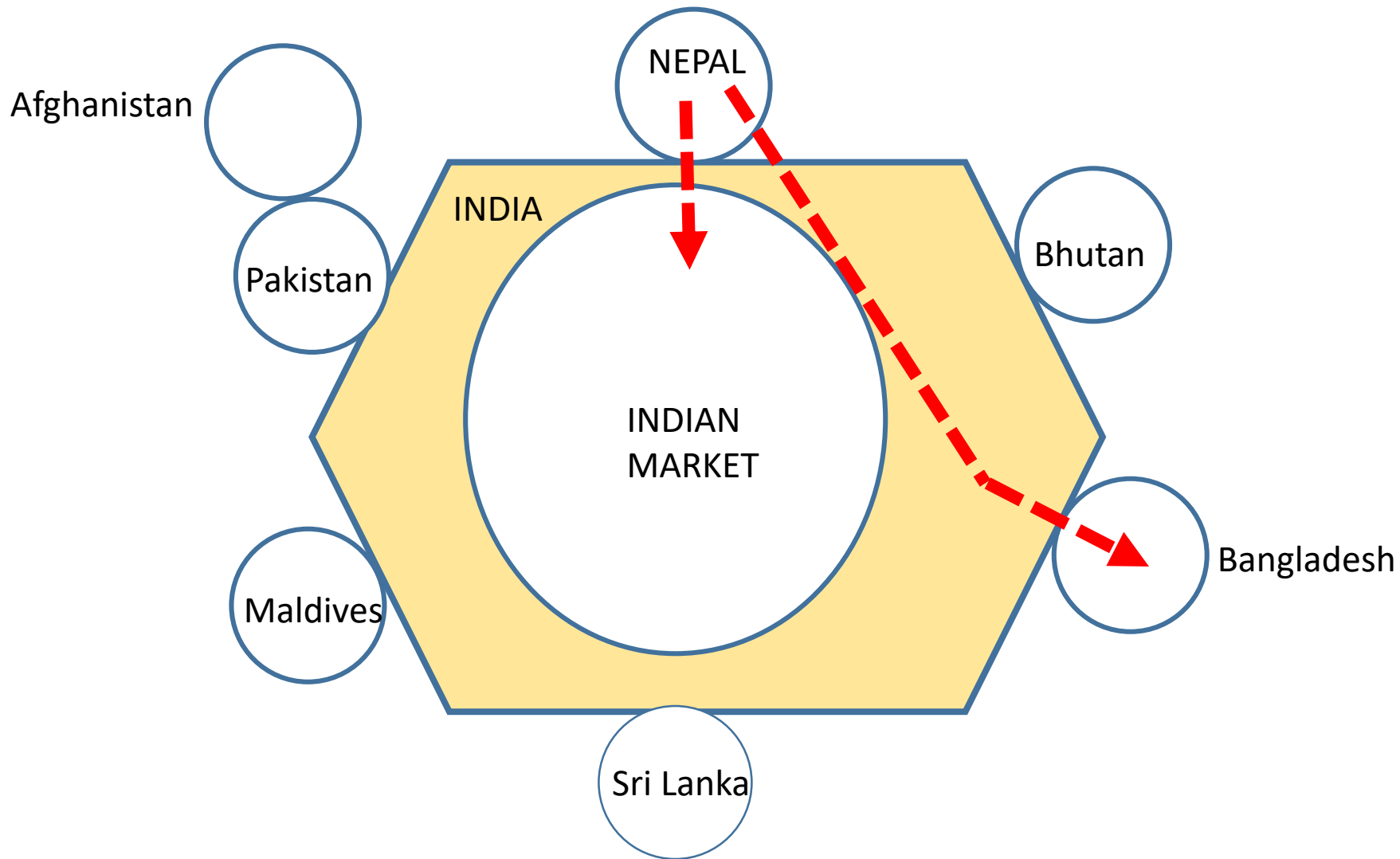
## **3. Careful Indian Move**

- India has been treating electricity as strategic commodity with its neighbors.
- For that reason India has strong preference over bilateral trade in G2G model.
- India has been ring fencing its domestic market through internal regulations allowing limited access to selected SMS to it and that also through G2G facilitation.

## **4. Geo-political Relations Factor**

- Indo-Pakistan geo-political relations are not supportive to regional trade of electricity.
- Indian bidders (service providers or developers) in negative list in international bids in Pakistan.
- India seemingly adopts bilateral G2G option to reciprocate it in electrical connectivity and trade.

# GEOGRAPHICAL PROXIMITIES NOT SUPPORTIVE FOR X-BORDER TRADE



# INCONSISTENT INDIAN POLICIES

Event	Details	Remarks
Indian Import Policy 2009-2014	Classified electricity as import restricted item	Market concealed for import
SAARC summit in 2011	Signed SAARC IGFA on Energy cooperation but remained reluctant to gear it up	Positive signal but pull back in action
Indian Import Policy 2014-2019	Excluded electricity from the list of import restricted item	Positive signal
Indo-Nepal Power Trade Agreement 2014	India signed Power Trade Agreement with Nepal in 2014 but remained reluctant to actually implement it.	Positive signal but pull back in action
Increased export to Nepal through 400 k V D-M line	Volume of export to Nepal increased but all export routed through NVVN intercepting the export through PTC in past.	Only G2G model
MOP (GOI) Memo of December 18, 2018	These internal guidelines seemingly allowing export of power by neighboring countries to India and to third market through Indian Grid	Seems push forward
Union Budget 2020	Imposed BAT on import of electricity in India	Push back

## MY CONCLUDING IMPRESSION

- Selected SMS already making power transaction with India under bilateral G2G arrangement using this opportunity for objective no. 1 i.e. balancing the system.
- India is moving very carefully on opening its domestic market to neighboring SMS. A good experience and comfortable situation on bilateral G2G transactions may lead to third country transactions among selected/limited SMS in future.
- Once India agrees to provide its transmission system for third country transactions of selected/limited SMS in practical terms, such SMS can exercise objective no.2 i.e. harnessing the resources for economic growth.
- With these two experiences, India might open its domestic market to selected/limited SMS and then trading for third objective i.e. price arbitrage may be realized.
- But SAARC Regional Power Exchange, SAARC Regional Electricity Market, SAARC Regional Grid have been and may remain as a good academic exercises for long time in future also unless there is dramatic change in geopolitical relations among SMS. Although trading among selected limited SMS may grow in accordance with Indian preference but very slowly.

**THANKS**