

Power Sector Overview- Bangladesh



**Capacity Building Program-2nd
SARPEX Mock Exercise**

**4th -5th October, 2017
New Delhi, India**

**Presentation by Bangladesh
Team Members**

Background of Cross Border Power Imports

- GoB & GOI, MOU made on January 11, 2010 for power trading between Bangladesh and India.
- NVVN has been designated as the “Nodal Agency” by Ministry of Power, Govt for cross border trading of power with Bangladesh.

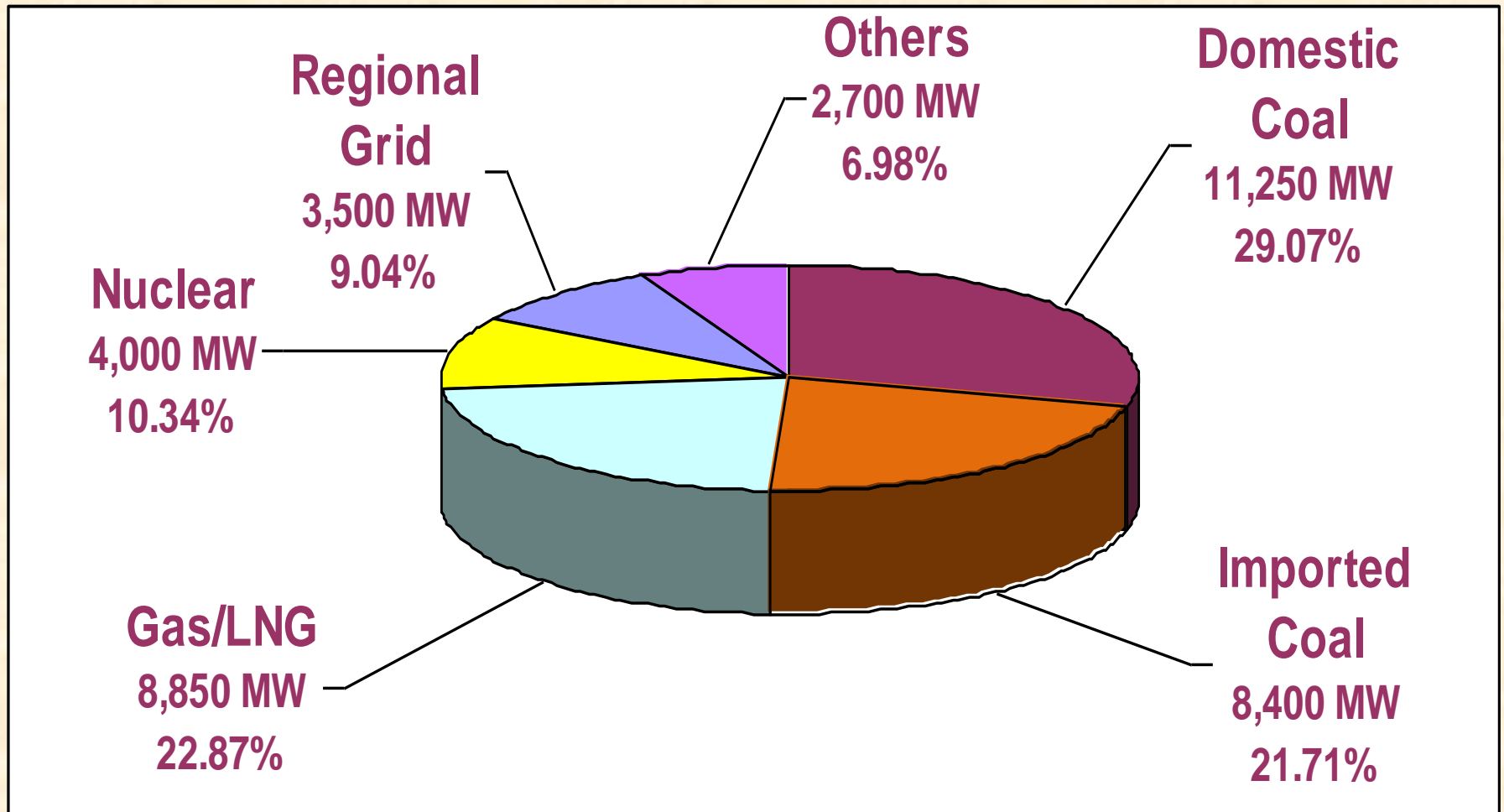
Existing Power Trade

Country	Contracts quantum and duration	Type
Bhutan → India (1450 MW)	Contract with PTC for Chukka (336 MW), Kurichhu (60 MW) Hydro Projects (Long Term)	G to G
	Contract with PTC for Tala (1040 MW) Hydro Project (Long Term)	G to G
	Contract with TPTCL for Dagachhu (126 MW) Hydro Project (Long Term)	Commercial
India → Bangladesh (600 MW)	BPDB 25 years contract with NVVNL for 250 MW	G to G
	BPDB 3 years term contract with PTC for 250+40 MW	Commercial
	Tripura – Comilla 100+60 MW contract	G to G
India → Nepal (250 MW)	NEA Bilateral contracts / Treaties to the tune of 237 MW	G to G
	NEA Past contracts with PTC (2011-2015) during December-April months for ~20-30 MW	Commercial

Future Power Generation by 2030

Sl. No.	Description	Capacity (MW)	Probable Location (s)
1	Domestic Coal	11,250	North West Region at Mine Mouth
2	Imported Coal	8,400	Chittagong and Khulna
3	Domestic Gas/LNG	8,850	Near Load Centers
4	Nuclear	4,000	Ruppur
5	Regional Grid	3,500	Bahrampur - Bheramara, Agartola - Comilla, Silchar - Fenchuganj, Purnia-Bogra, Myanmar - Chittagong
6	Others (Oil, Hydro and Renewable)	2,700	Near Load Centers
Total		38,700	

Probable Power Generation: Primary Fuel Sources by 2030



Total Generation Capacity in 2030: 38,700 MW

Per Unit Cost of Base Load Candidate Plant

Fuel Cat	\$/MMBT U	Fuel Cost (C/kWh)	Capacity Charge (C/kWh)	F&V O&M	Total (C/kWh)	Total Tk/kWh
Domestic Coal	4.77	3.74	2.80	0.80	7.50	6.00
Imported Coal	5.82	4.81	3.50	0.80	9.00	7.20
Nuclear	0.91	0.94	5.80	1.30	8.10	6.45
CC (LNG)	14.00	9.37	1.80	0.65	11.80	9.40
Cross Border (incl. Trans)					8.00	6.40

Import through IEX

- ❖ In addition to L/T & Mid term contract for power purchase, Bangladesh is interested to enter into IEX to participate in Day ahead market.
- ❖ Policy intervention of Indian Govt . and regulatory framework needs to be updated accordingly. Necessary amendment for this regulation is required before finalization of the document.

Challenges

- ❖ Nepal and Bhutan are synchronously connected with India which requires minimum investment.
- ❖ Bangladesh grid capacity is moderately large compare to Nepal and Bhutan . As such all the inter connection with India for existing and upcoming are through HVDC station which involves about 2,000 crore BDT for every 500 MW block. It impacts on tariff.
- ❖ Lack of multiple robust interconnection facilities and wide fluctuation of system frequency. These are main two hindrances for establishing synchronous inter connection with India.
- ❖ Internal transmission networks constraints.

Thank You