SAARC Perspective Workshop on the past, Present and future of High Voltage DC (HVDC) Power Transmission.

PRESENT TRANSMISSION SYSTEM

1st Grid Interconnection between Bangladesh & India

Control Building of HVDC Station, Bangladesh

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Bangladesh Power Outlook 2015

- Installed Capacity: 11,683 MW
- Generation Capacity (Present): 11,088 MW
- Day Peak Generation: 7,000 MW
- Evening Peak Generation: 8,000 MW
- Electricity Growth: 9-12%
- Total Consumers: 15.4 Million
- Per Capita Consumption: 324 kWh
- Access to Electricity (including 8% RE): 68%
Bangladesh Power Outlook 2015

- **Transmission Voltage Levels**: 400 kV, 230 kV, & 132 kV
- **Total Transmission Line**: 9,500 Circuit Km
- **400 kV Level**: 164.70 Circuit Km
- **230 kV Level**: 3044.45 Circuit Km
- **132 kV Level**: 6263.63 Circuit Km
- **Total Sub-Station & Capacity**: 130 Nos, 24000 MVA
  - **400/230 kV**: 01 Nos, 603 MVA (HVDC BtB Station)
  - **230/132 kV Sub-Station**: 18 Nos, 8775 MVA
  - **132/33 kV Sub-Station**: 111 Nos, 14543 MVA
- **Distribution Lines**: 300,000 km
**Present Structure of Power Sector**

**Apex Institution**
- Power Division, Ministry of Power, Energy & Mineral Resources (MPEMR)

**Regulator**
- Bangladesh Energy Regulatory Commission (BERC)

**Generation**
- Bangladesh Power Development Board (BPDB)
- Ashuganj Power Station Company Ltd. (APSCL)
- Electricity Generation Company of Bangladesh (EGCB)
- Rural Power Company Ltd. (RPCL)
- North West Power Generation Company Ltd. (NWPGCL)
- Independent Power Producers (IPPs)

**Transmission**
- Power Grid Company of Bangladesh Ltd (PGCB)

**Distribution**
- Bangladesh Power Development Board (BPDB)
- Dhaka Power Distribution Company (DPDC)
- Dhaka Electric Supply Company Ltd (DESCO)
- West Zone Power Distribution Co. Ltd (WZPDCL)
- Rural Electrification Board (REB) through Rural Co-operatives
- North West Zone Power Distribution Co. Ltd (NWZPDCL)
Bangladesh Grid Network

2000

400kV Line: 0 ckt. km
230kV Line: 1365 ckt. km
132kV Line: 4961 ckt. km
400/230kV SS: 0 (0 MVA)
230/132kV SS: 7 (3150 MVA)
132/33kV SS: 63 (5507 MVA)

2015

400kV Line: 165 ckt. km
230kV Line: 3044 ckt. km
132kV Line: 6264 ckt. km
400/230kV SS: 01 (603 MVA)
230/132kV SS: 18 (8775 MVA)
132/33kV SS: 111 (14543 MVA)
1st Grid Interconnection between Bangladesh & India
Date of Commercial Power flow: 5-10-2013
INTERCONNECTION BETWEEN INDIA AND BANGLADESH GRIDS

THE PROJECT

LEGEND
- 400 kV
- 230 kV
- 132 kV
- Existing
- Under Constr. / Future
1st Grid Interconnection between Bangladesh & India

- **India**
  - **400kV Baharampur**
  - **230kV Bheramara**
  - **27 km**
  - **400kV double ckt AC line**
  - **500 MW HVDC Back-to-back**

- **Bangladesh**
  - **Jeerat**
  - **Khulna South**
  - **400/66.8 kV AC**
  - **158.1 kV DC**
  - **66.8/230 kV AC**

- **Ishurdi**
- **Farakka**

**Grid Details**
- **400 kV India**
- **230 kV Bangladesh**
Observation of Regional HVDC Link

- Socio-economic development of these region by energy cooperation.

- Reduce power crisis, Specially in summer season.

- Power quality improvement.

- Milestone for further regional cooperation.
Observation of Regional HVDC Link

- **Improved System stability**

- **Fault Isolation**

- **Asynchronous link**

- **Control of load flow (DC Power can be exactly Controlled)**
THANK YOU

400kV Switchyard of HVDC Station