

Bangladesh

1st Grid Interconnection between Bangladesh & India

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

PRESENT TRANSMISSION SYSTEM



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, 603MVA
(HVDC BtB Station)
- **230/132 kV Sub- Station** : 18 Nos, 8775 MVA
- **132/33 kV Sub- Station** : 111Nos,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. (NWPGL)
- Independent Power Producers (IPPs)

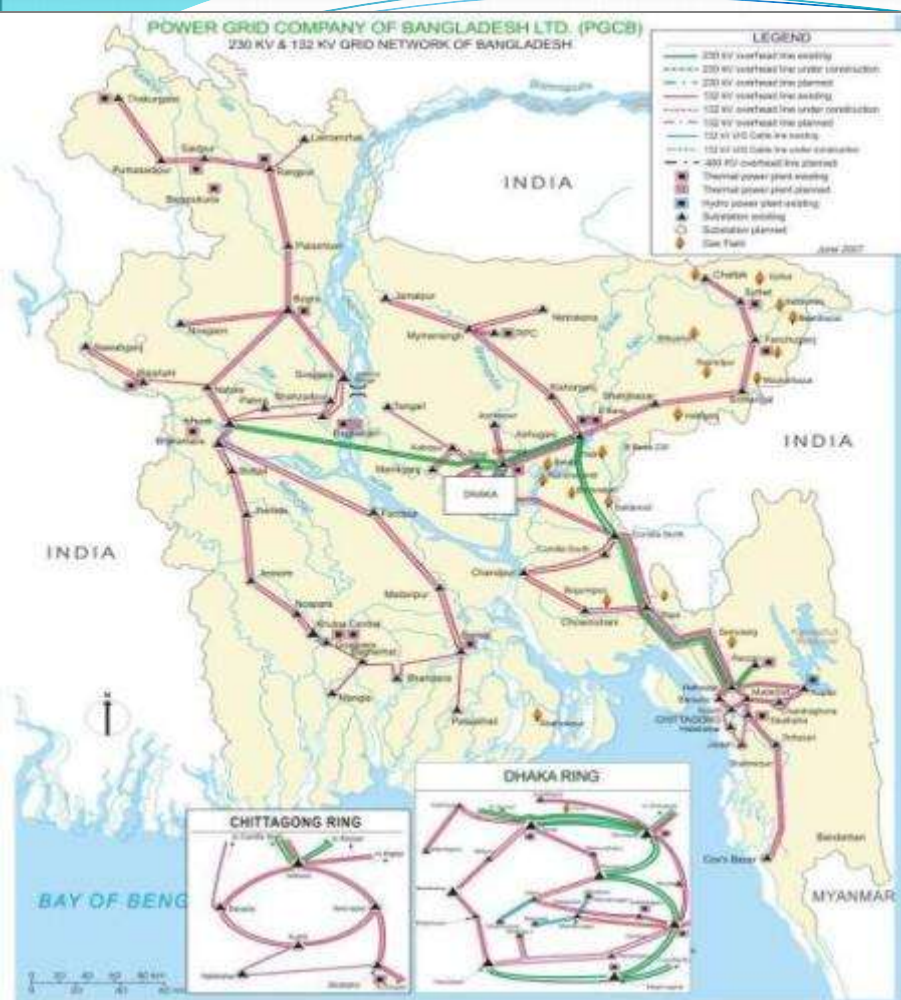
Transmission

- Power Grid Company of Bangladesh Ltd (PGCL)

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)

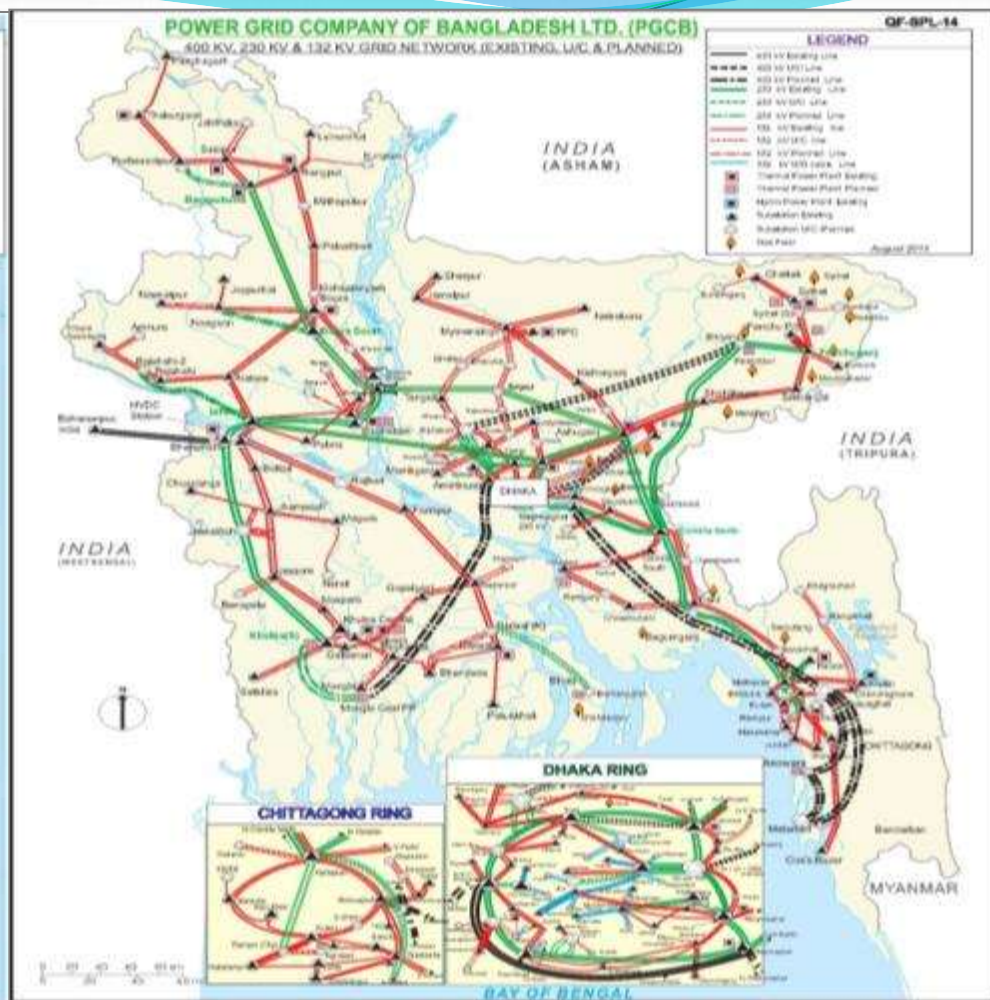
Bangladesh Grid Network



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

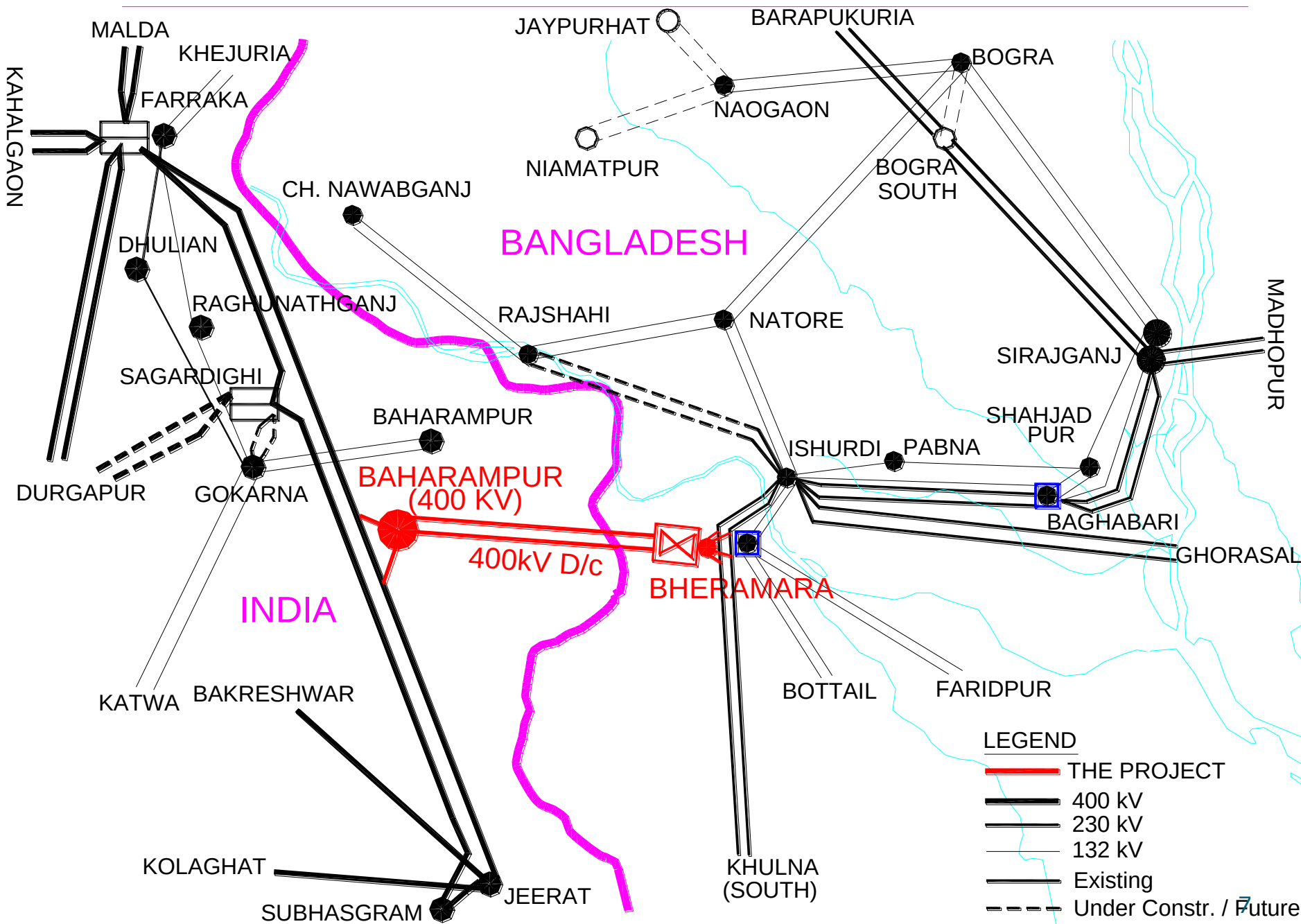
400/230kV SS: 01 (603 MVA)
230/132kV SS: 18 (8775 MVA)
132/33kV SS : 111 (14543 MVA)

Bangladesh

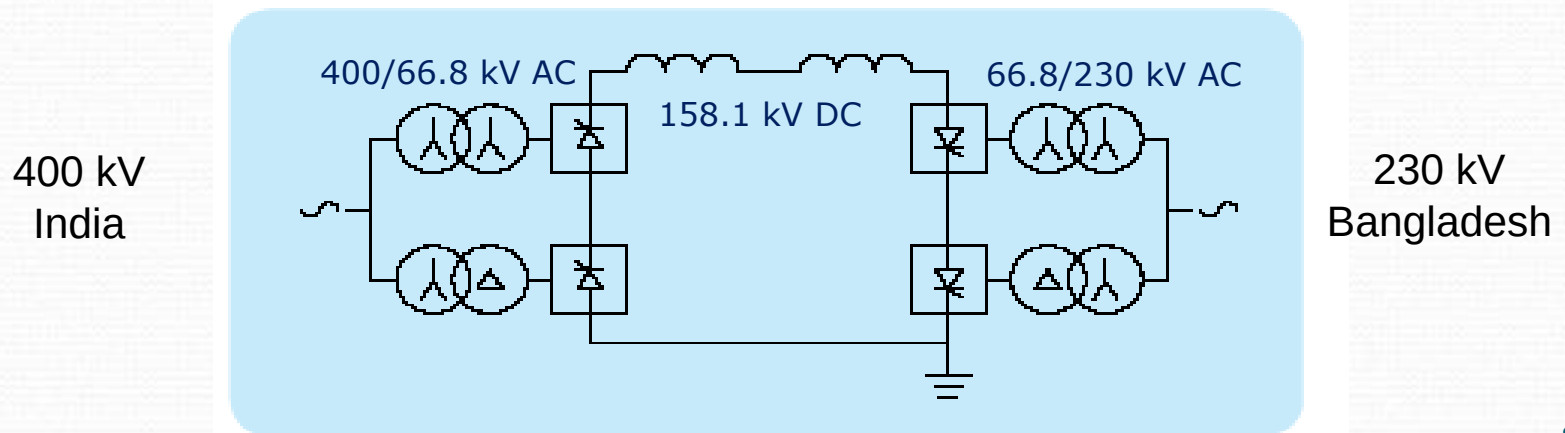
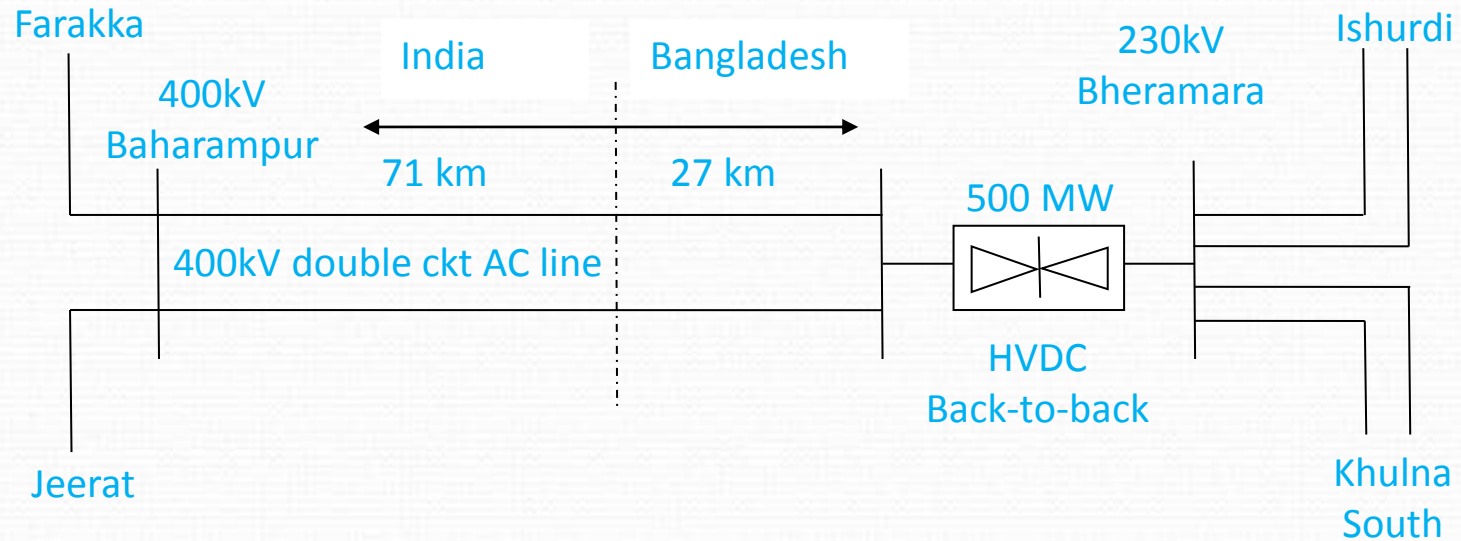
**1st Grid
Interconnection
between
Bangladesh
&
India
Date of
Commercial
Power flow:
5-10-2013**



INTERCONNECTION BETWEEN INDIA AND BANGLADESH GRIDS



1st Grid Interconnection between Bangladesh & India

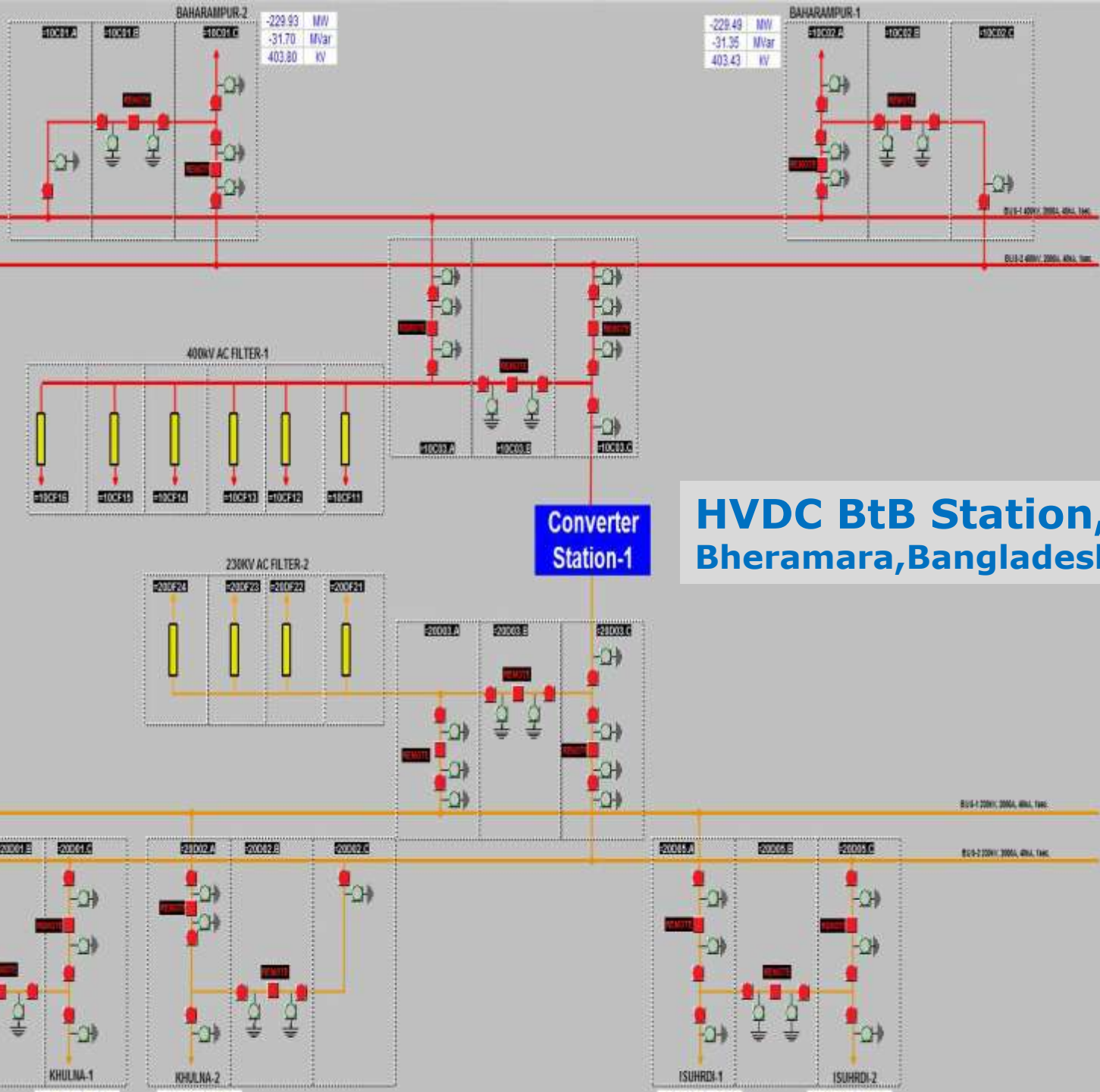


V-RY	403.09	KV
V-YB	410.18	KV
V-BR	402.55	KV
F	50.01	Hz

V-RY	406.16	KV
V-YB	413.64	KV
V-BR	404.91	KV
F	50.01	Hz

V-RY	228.33	KV
V-YB	227.28	KV
V-BR	228.43	KV
F	51.09	Hz

V-RY	230.21	KV
V-YB	228.75	KV
V-BR	229.48	KV
F	51.09	Hz



Converter
Station-1

**HVDC BtB Station,
Bheramara, 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

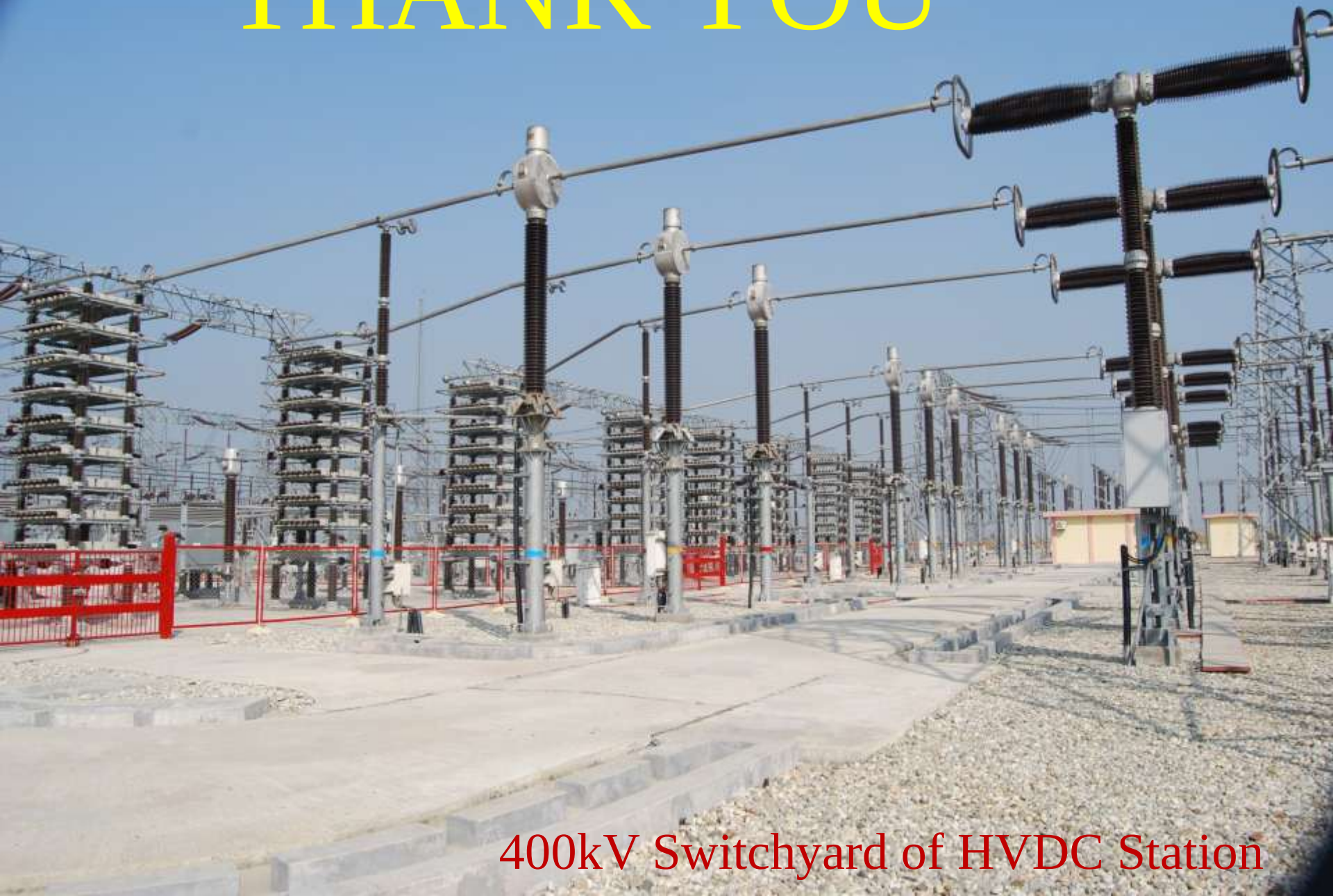
- ❖ Improved System stability

- ❖ Fault Isolation

- ❖ Asynchronous link

- ❖ Control of load flow (DC Power can be exactly Controlled)

THANK YOU



400kV Switchyard of HVDC Station