# Bangladesh Status of Transmission System Interconnection for CBET

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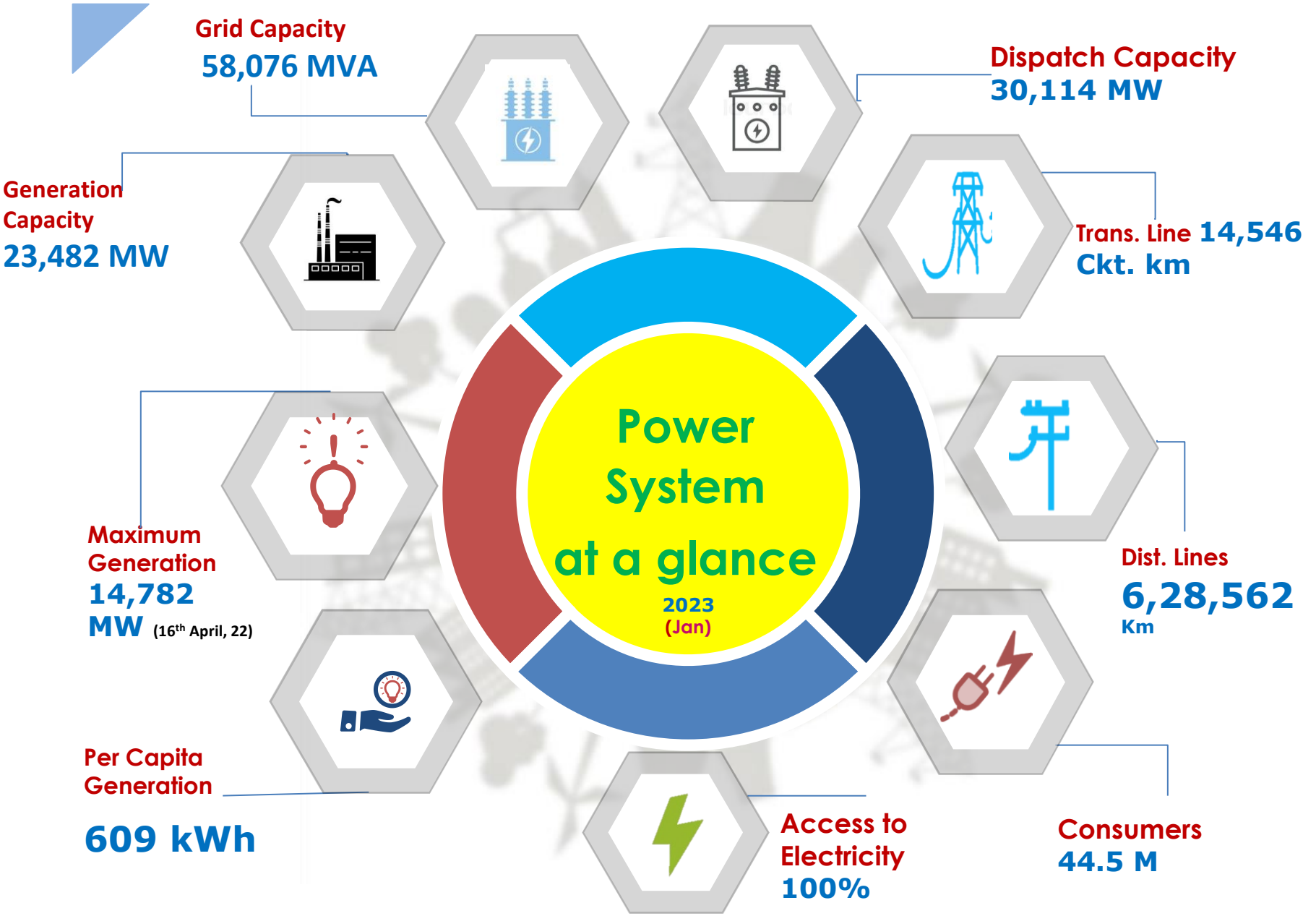
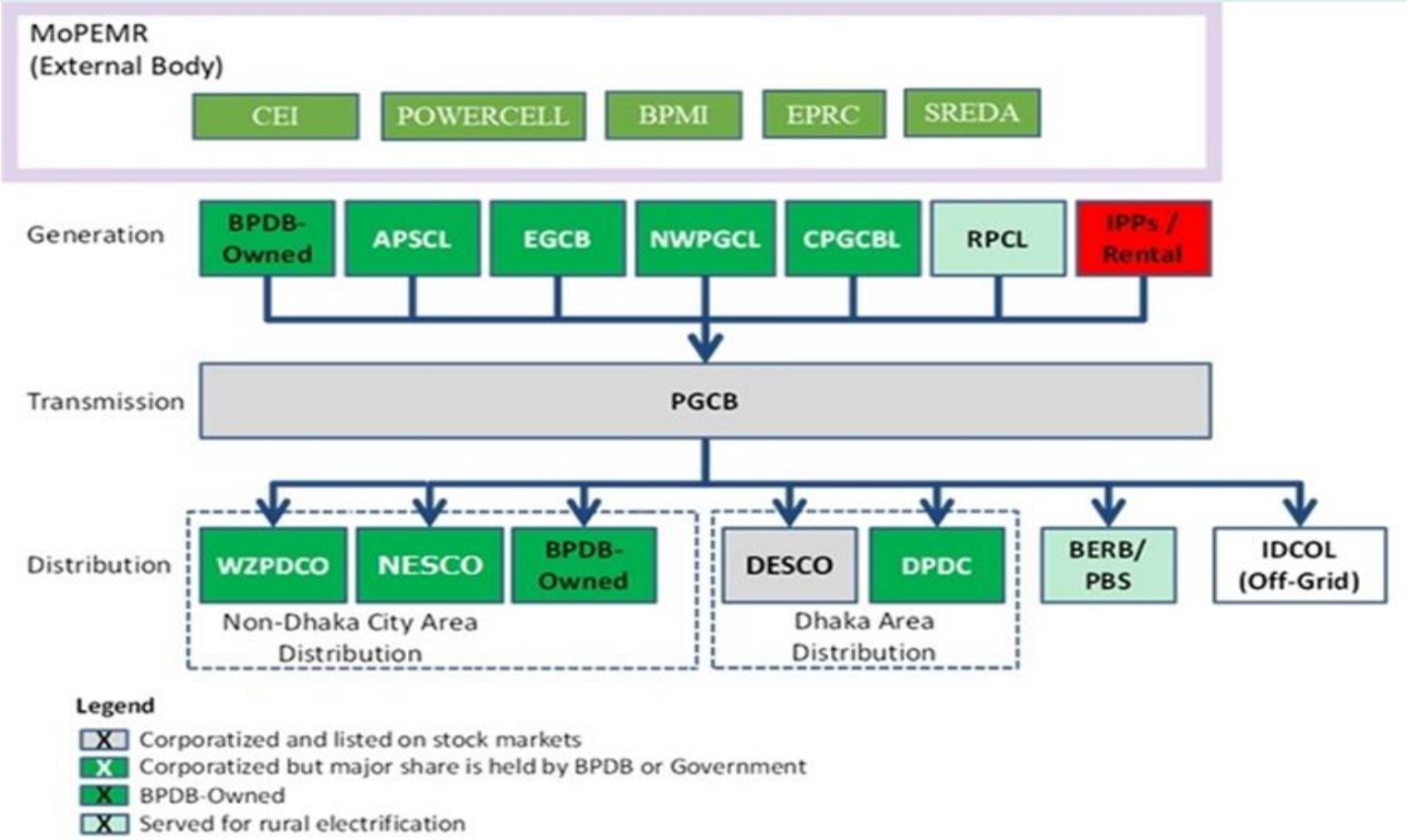

Grid Capacity
58,076 MVA
Dispatch Capacity
30,114 MW
Generation Capacity
23,482 MW
Trans. Line 14,546 Ckt. km
Power System at a glance
2023 (Jan)
Maximum Generation
14,782 MW (16th April, 22)
Dist. Lines
6,28,562 Km
Per Capita Generation
609 kWh
Access to Electricity
100%
Consumers
44.5 M

# Structure of the Bangladesh Power Sector




***Abbreviations:***

| | | |
|---|---|---|
| *BERC* | : | *Bangladesh Energy Regulatory Commission* |
| *BPDB* | : | *Bangladesh Power Development Board* |
| *APSCL* | : | *Ashuganj Power Station Company Ltd* |
| *NWZPGCL* | : | *North-West Power Generation Co. Ltd.* |
| *EGCB* | : | *Electricity Generation Company of Bangladesh* |
| *RPCL* | : | *Rural Power Company Limited* |
| *IPP* | : | *Independent Power Producer* |
| *RPP* | : | *Rental power Plant* |
| *QRPP* | : | *Quick Rental power Plant* |

| | | |
|---|---|---|
| ***PGCB*** | | ***Power Grid Company of Bangladesh Ltd.*** |
| *DPDC* | : | *Dhaka Power Distribution Company Limited* |
| *DESCO* | : | *Dhaka Electric Supply Company Limited* |
| *NESCO* | : | *Northern Electricity Supply Company Ltd* |
| *WZPDCO* | : | *West Zone Power Distribution Company Ltd.* |
| *BREB* | : | *Bangladesh Rural Electrification Board* |
| *PBSs* | : | *Dhaka Palli Bidyut Samity* |
| *IMPORT* | : | *Import from Neighboring Country* |
| *SIPP* | : | *Small Independent power producer* |

# Summery of Demand & Generation Forecast

## As per PSMP-2016 & Revisiting 2018

| Year | Peak Demand | Generation Plan | Transmission Plan (PGCB Plan) |
|---|---|---|---|
| 2025 | 20 GW | 30 GW | 67 GW |
| 2030 | 28 GW | 40 GW | 87 GW |
| 2035 | 36 GW | 50 GW | 107 GW |
| 2041 | 48 GW | 60 GW | 138 GW |

# Cross Border Present Status (India)

# Completed Cross Border Interconnection with India

| SN | Name of the Project | Inauguration | Importing Power |
|---|---|---|---|
| 01 | Grid Interconnection between Bangladesh (Bheramara) and India (Baharampur) | 05th Oct 2013 | 500 MW |
| 02 | Tripura (India)- Comilla(Bangladesh) Grid Interconnection Project | 23rd March 2016 | Initially 100 MW<br>**Present 160 MW** |
| 03 | Capacity Upgradation(500MW) of Existing Bheramara HVDC Station Project | 10th September 2018 | 500 MW |

**Total: 1,160 MW**

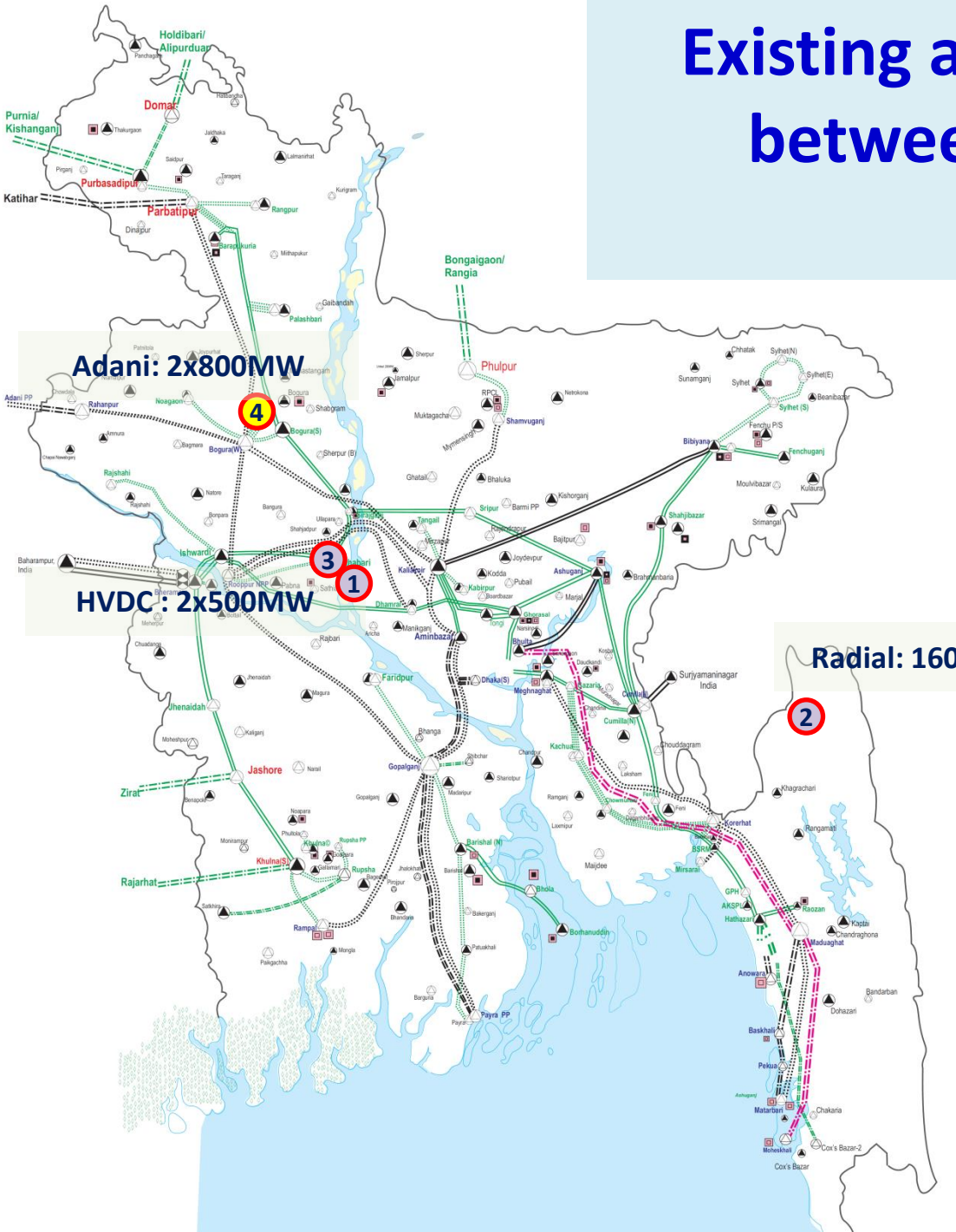
# Ongoing Cross Border Interconnection with India

| SN | Name of the Project | Inauguration | Importing Power |
|---|---|---|---|
| 04 | Adani 1,600 MW Power Plant at Godda, Jharkhand, India | December, 2022 | 1600 MW |

**Total: 1,600 MW**

**Total Import with Existing Facilities: 2,760 MW**

# Existing and Ongoing Link between Bangladesh & India

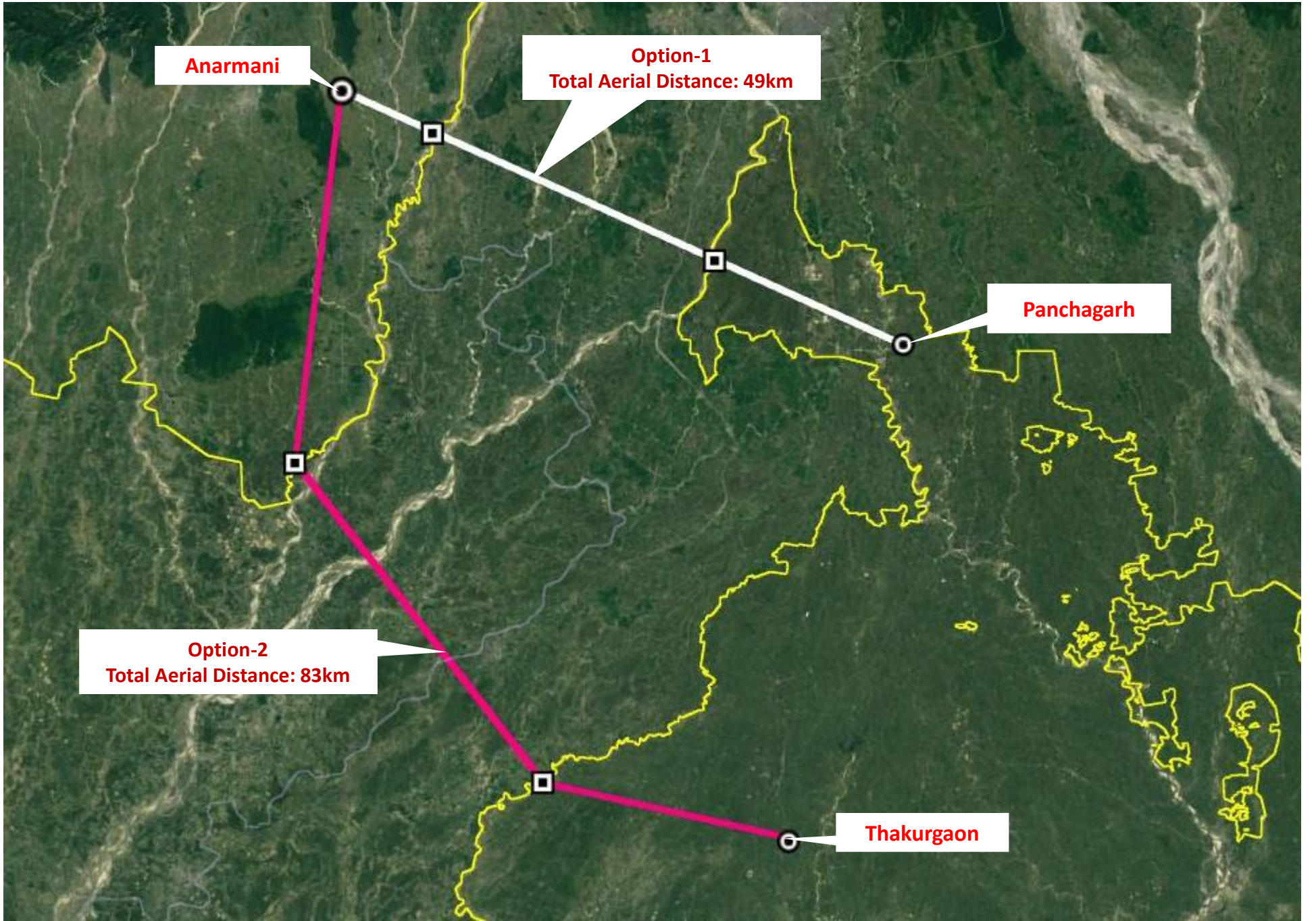


# Cross Border Present Status (Nepal)

# Proposed Dedicated Transmission Line between Bangladesh-Nepal across India

| Option | Interconnection Point | Total Line Length | Line Length in India Territory |
|---|---|---|---|
| 1. | Anarmari (Nepal)- Panchagarh (Bangladesh) | 49 km | 24 km |
| 2. | Anarmari (Nepal)- Thakurgaon (Bangladesh) | 83 km | 33 km |

# Proposed Dedicated Transmission Line between Bangladesh-Nepal across India



# 400kV Backbone Network

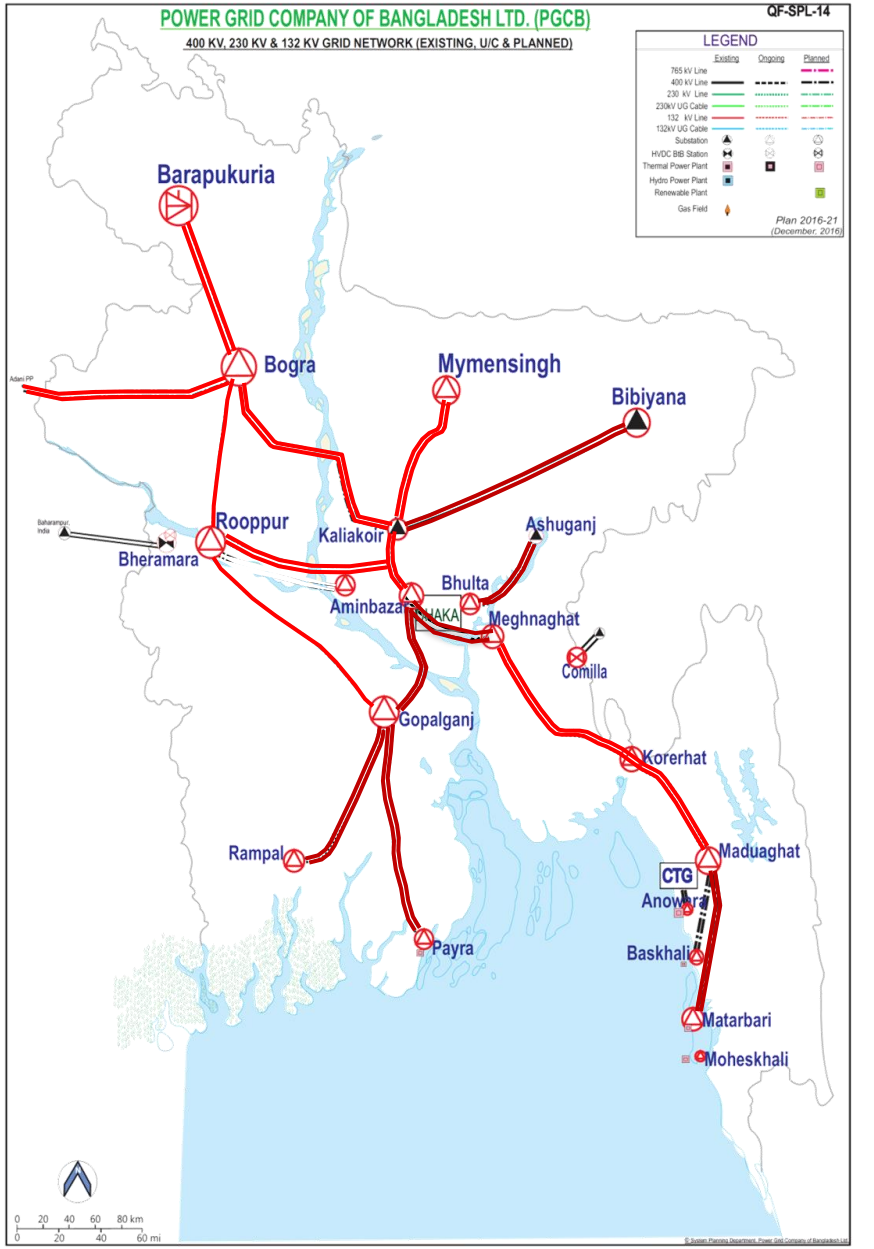
## Completed 400kV line:

1. Meghnaghat-Aminbazar
2. Bibiyana-Kaliakoir
3. Ashuganj-Bhulta
4. Payra-Gopalganj
5. Gopalganj-Aminbazar;
6. Rampal-Gopalganj;
7. Matarbari-Madunaghat

## Ongoing 400kV line:

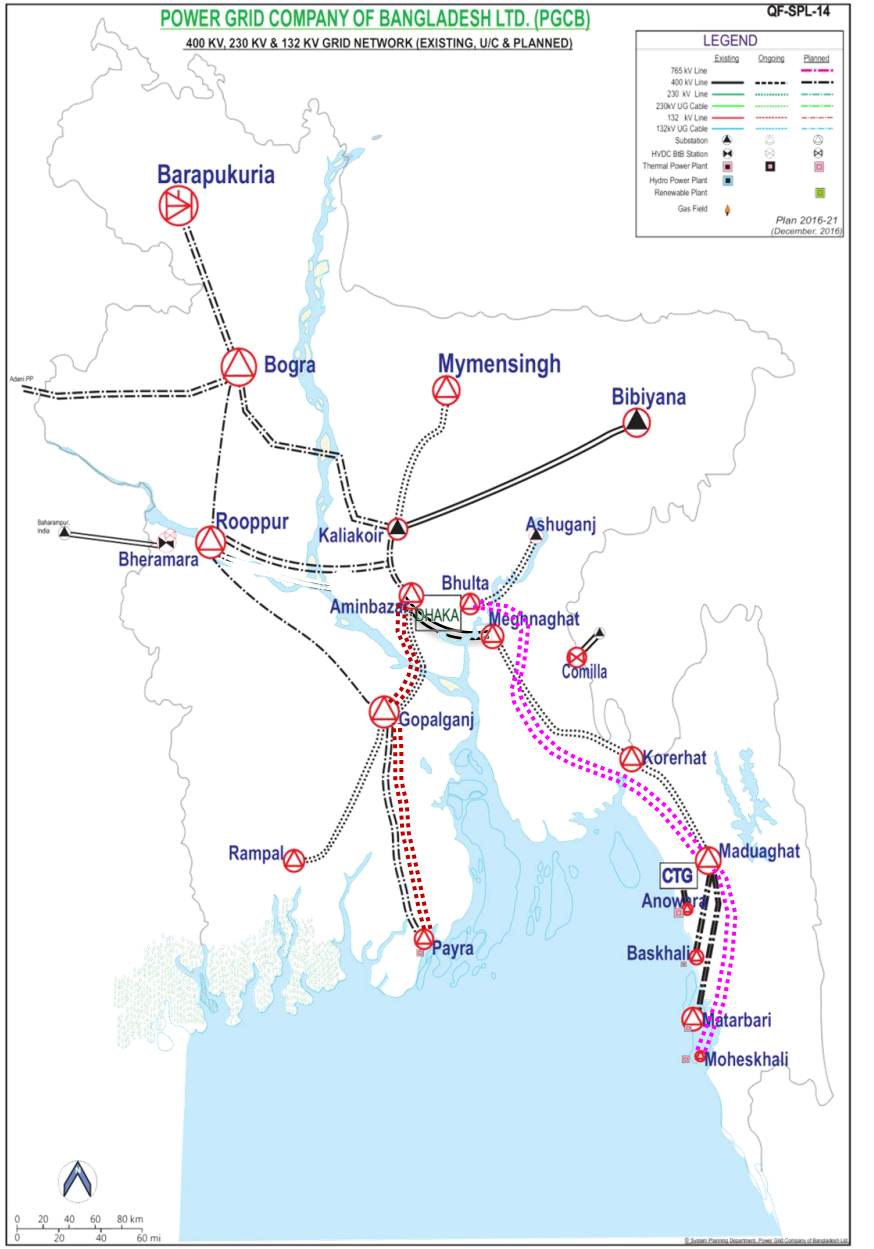
1. Meghnaghat-Madunaghat; Expected COD: June,2023
2. Rooppur-Dhaka; Expected COD: June 2024
3. Roopur-Gopalganj; Expected COD: June,2024
4. Roopur-Bogura; Expected COD: June,2024
5. Kaliakoir-Mymensingh; Expected COD: Dec,2024
6. Kaliakoir-Bogura; Expected COD: June,2025
7. Bogura-Barapukuria; Expected COD: June,2024
8. Bogura-Rahanpur; Expected COD: Feb,2023

****400kV line per circuit capacity: 1000-3000 MW**



# Moheskhali & Payra Power Hub Evacuation Network

1. Moheskhali-Madunaghat 765kV
2. Madunaghat-Bhulta 765kV line
3. Payra-Gopalganj 400kV 2nd line
4. Gopalganj-Aminbazar 400 kV 2nd line



# Revisiting Report PSMP-2018

## Recommendation on Power Import

1. The total share of imported power through CBET should not exceed 12% of the total generation capacity. The import of power should be commensurate with seasonal demand.

2. In order to maintain grid stability, import of power through a single point shall not exceed 10% of the instantaneous generation against demand

3. The surplus power in lean seasons may be exported to the neighboring countries maintaining the reserve margin.

# Challenges and Issues

# Present Challenges

**With sustained GDP Growth, Electricity demand is increasing at a rate of 9 - 12 %**

**Power sector are facing following challenges to meet this demand growth :**

- **Shortage of primary fuel supply**
- **Financing capital intensive power projects**

# Challenges of Interconnection

- Technical issues
- Contractual issues
- Regulatory issues
- Environmental & Social
- Supply Security: demand-generation balance
- Harmonization of the bureaucracies of partner Countries
- Financial issues

# Challenges for Improving System Reliability

- Completion of ongoing & upcoming PGCB's projects in time
- Development of effective demand scheduling & draw mechanism by all distribution utilities.
- Most power plants shall have to be brought under Primary Control (FGMO). Secondary (AGC) & Tertiary Control will have to be implemented in required number of plants.
- Power Plants shall have to be run in AVR mode
- Improvement of NLDC's EMS functions.
- Developments of Distribution SCADA & DSM.
- Moving towards the SMART GRID

# THANK YOU