Country Presentation: Bangladesh

Welcome

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Enhancing Renewable Energy Ambitions: Exploring the Role of Cross-Border Power Trade in Bangladesh's Energy Transition

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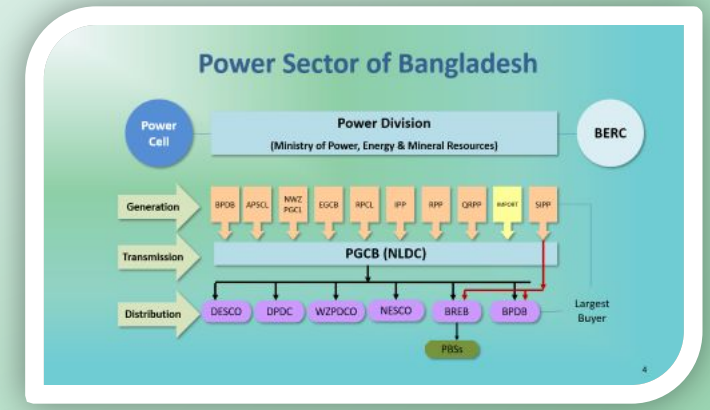
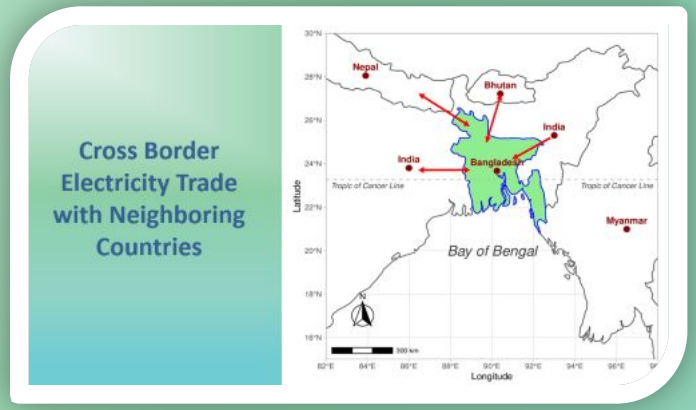
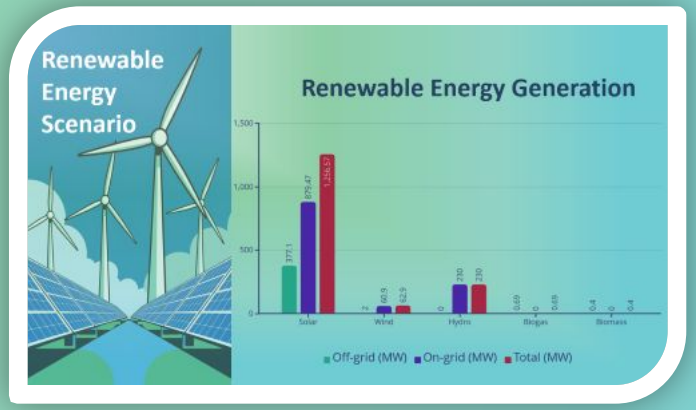
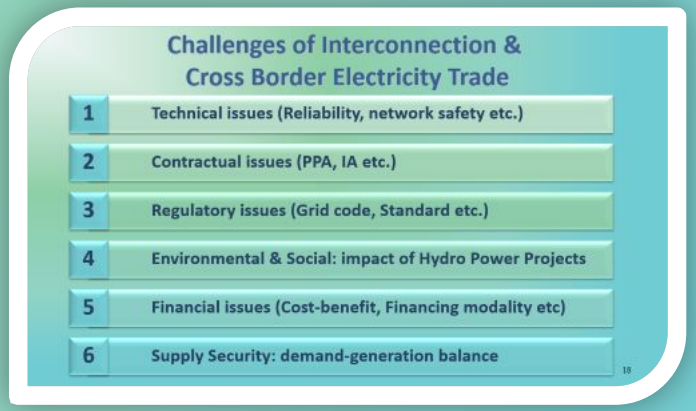
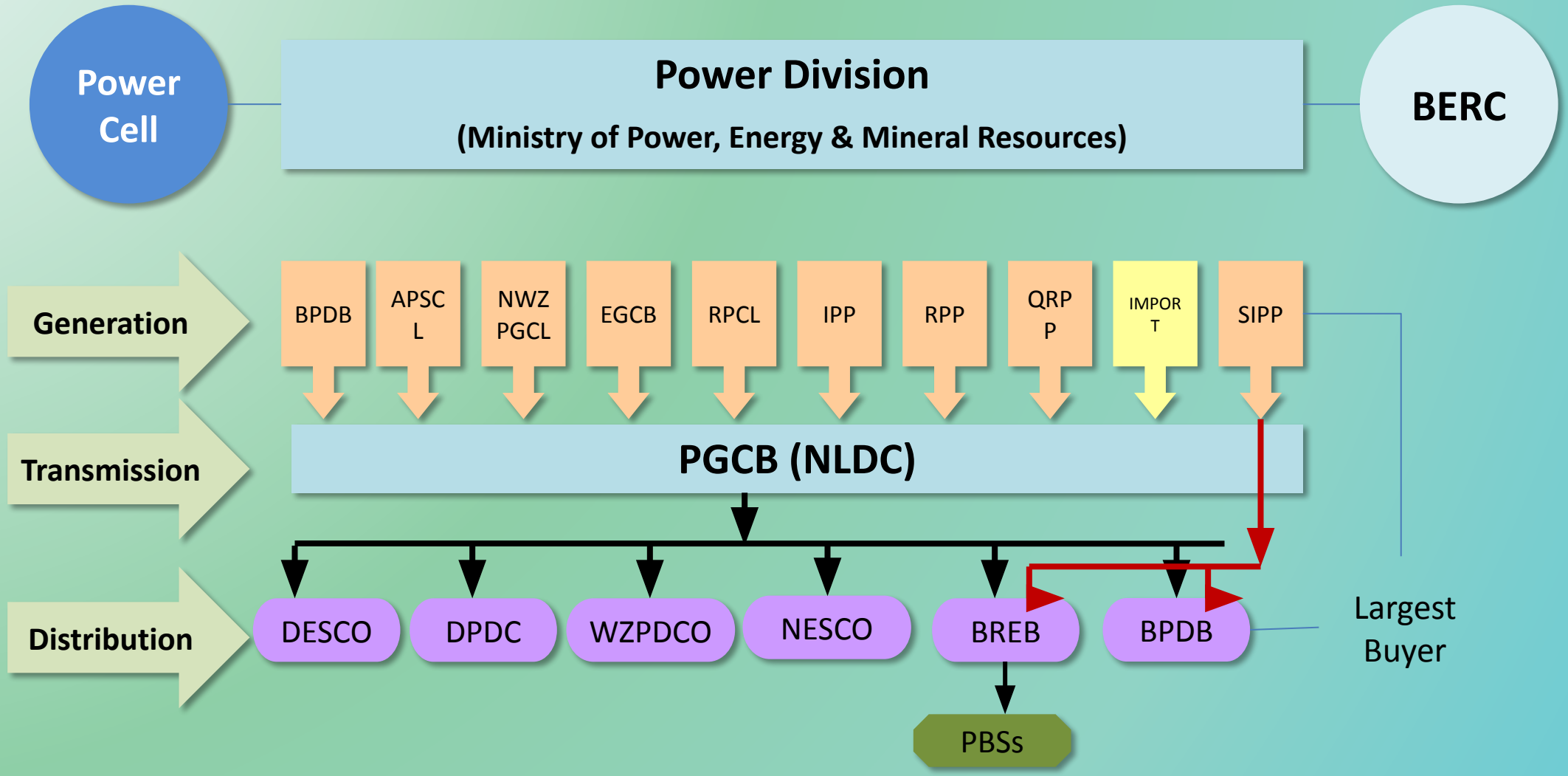




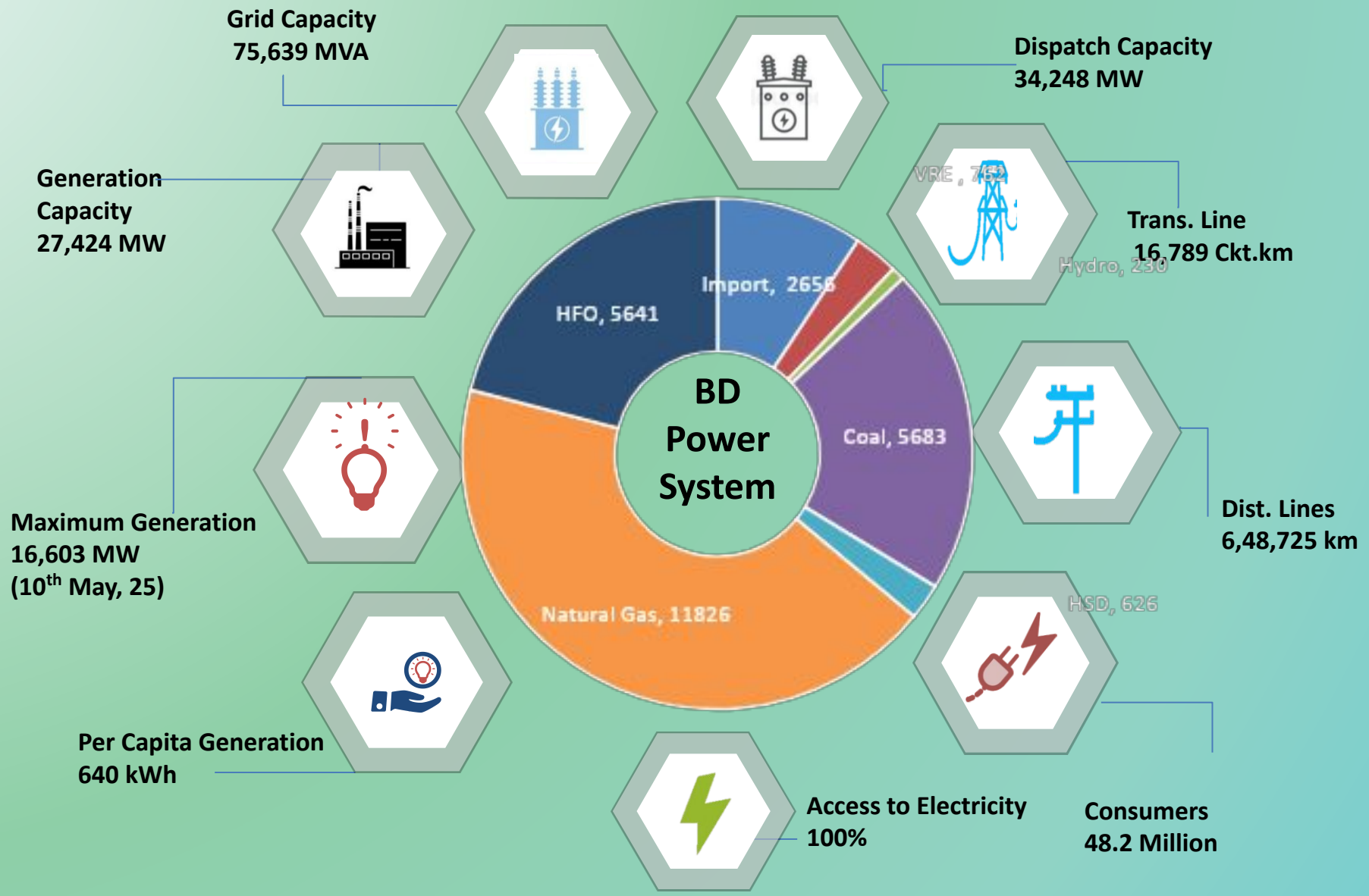




Power Sector of Bangladesh



Power System at a Glance



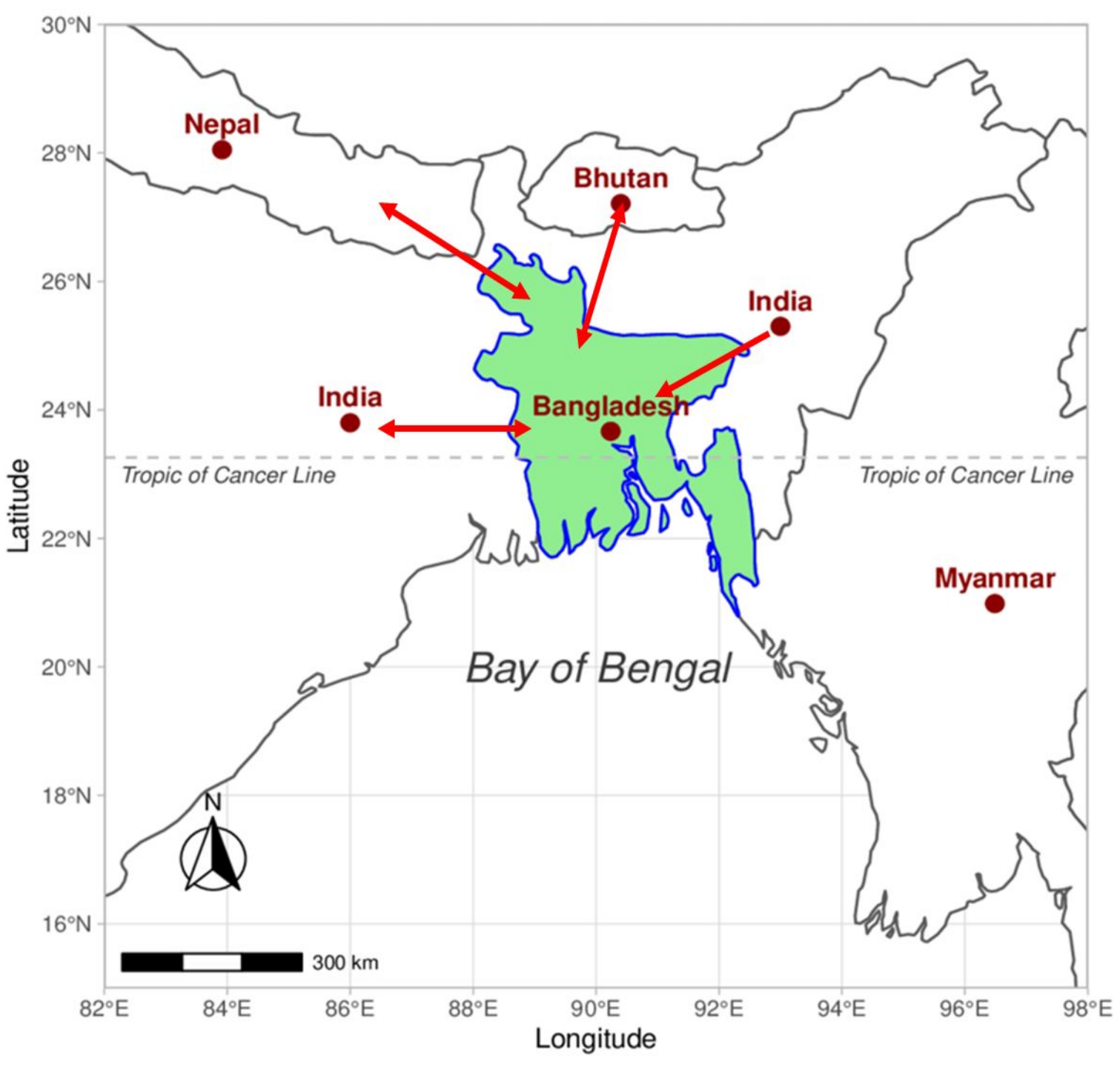
Category wise Power Generation (Random 24-Hour Data)

Category	Generation (KWH)	% of National Grid
Renewable	4,801,569	1.58%
Non-Renewable	248,336,951	81.69%
Imports	50,863,550	16.73%
Total	304,002,070	100%

Renewable Percentage

- **Solar**: 3,636,389 KWH (75.72%)
- **Hydro**: 957,600 KWH (19.94%)
- **Wind**: 208,320 KWH (4.34%)

Cross Border Electricity Trade with Neighboring Countries



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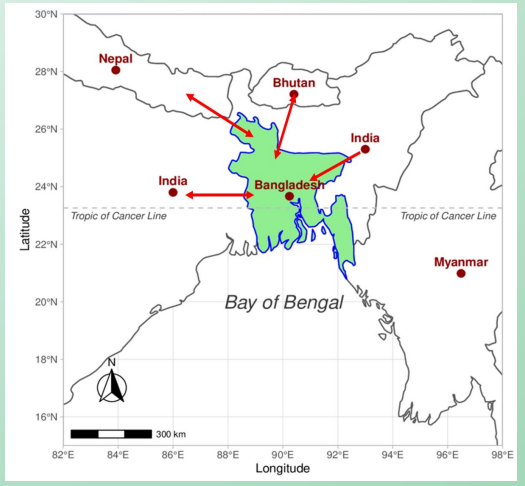

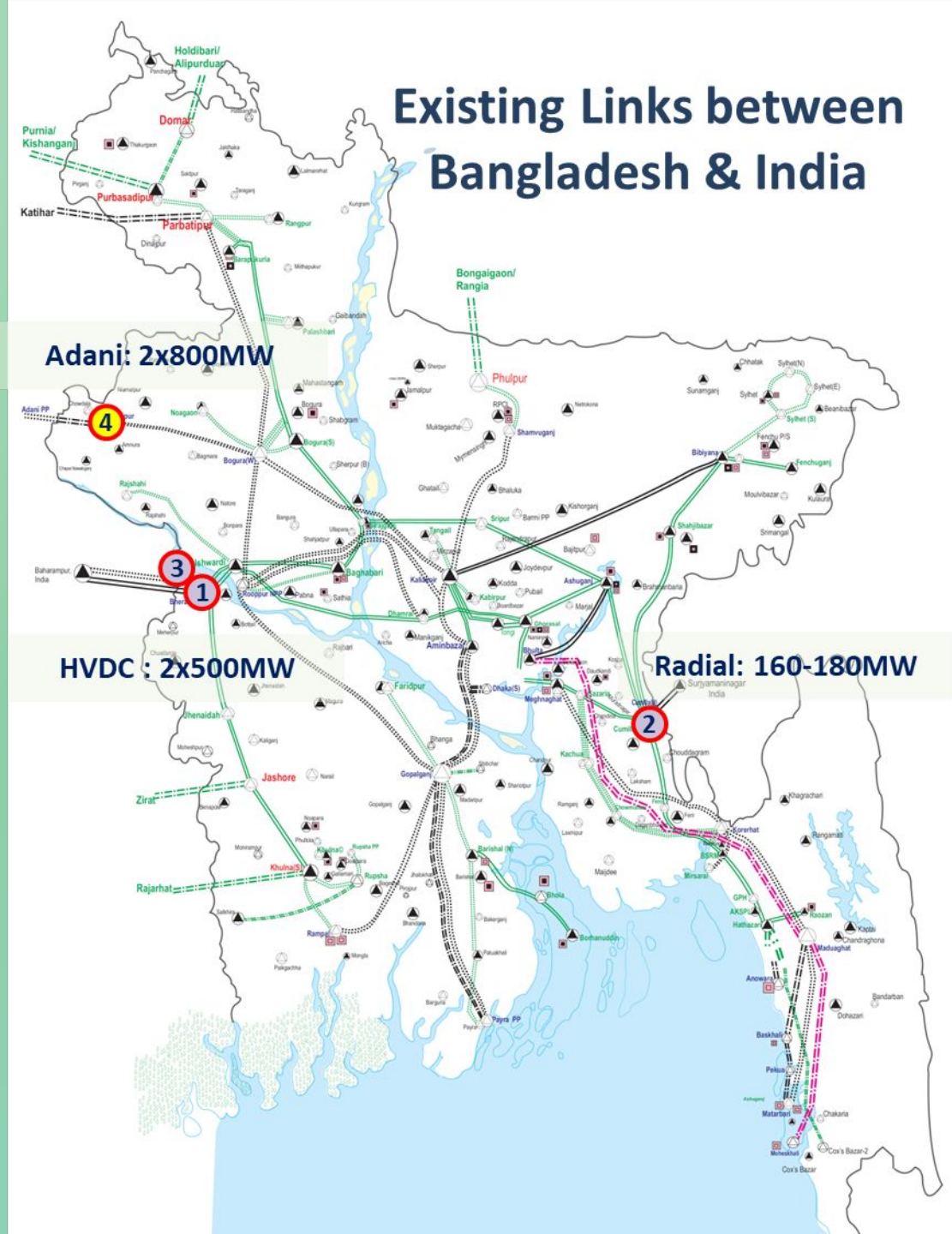

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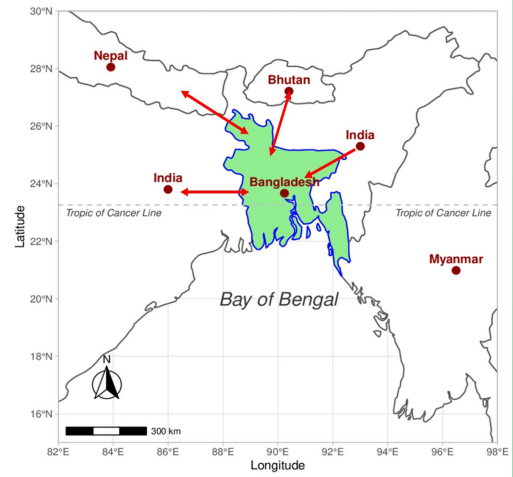
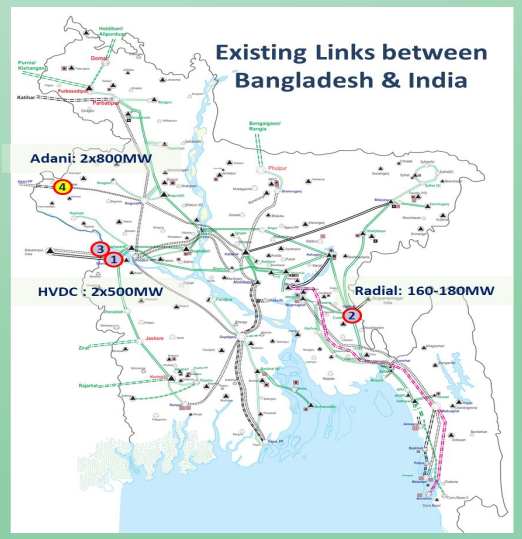


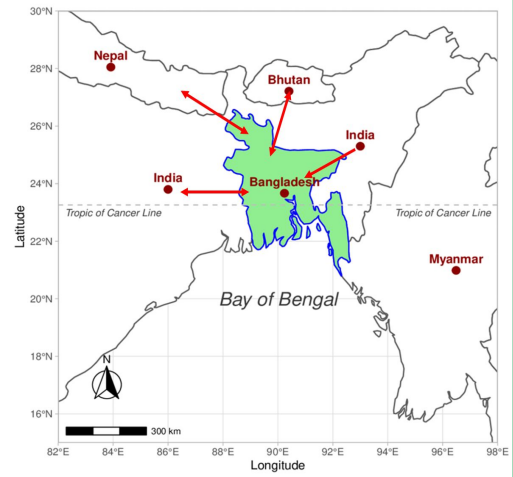


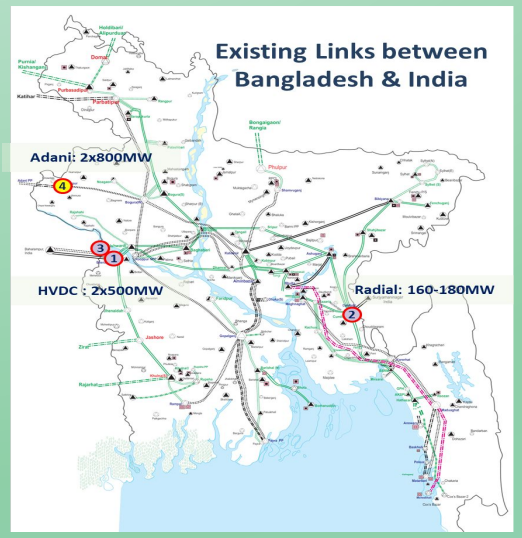
Cross Border Interconnections with India

	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 (radial connection)	23rd March, 2016	Initially 100 MW Present 160 MW
03	Capacity Upgradation (500MW) of Existing Bheramara HVDC Station Project	10th September 2018	500 MW
04	Adani 1500 MW Power Plant at Godda, Jharkhand, India	2023	1496 MW

Cross Border Import from India: 2656 MW

Cross Border Electricity Trade with Neighboring Countries





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Cross Border Import from India: 2656 MW

Cross Border Import from Nepal

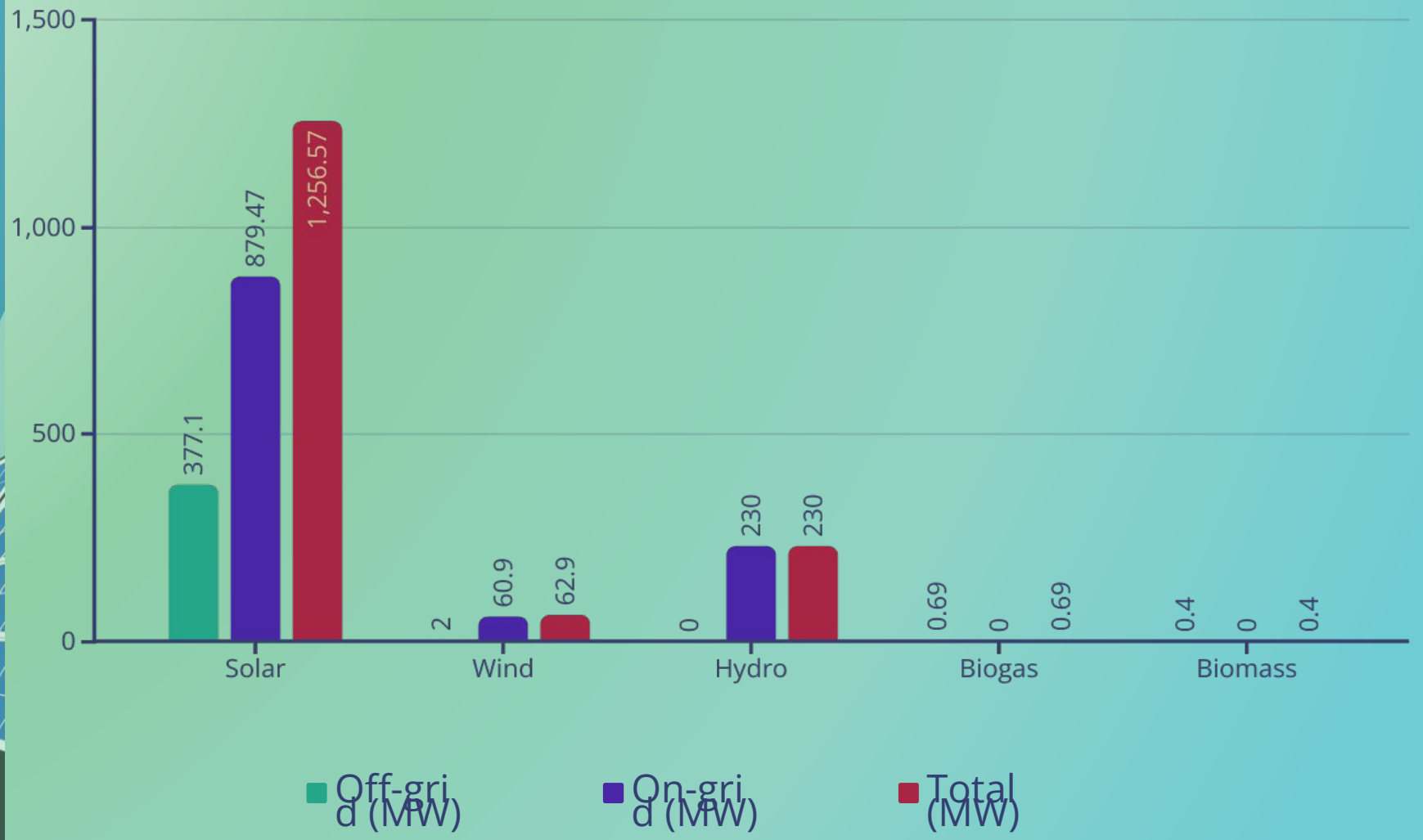
SL	Particulars	Status
1	Import of 40 MW Power from Nepal through Indian Grid.	▪ Using existing HVDC import has been started for six months.

Import from Nepal : 40 MW

Total Import : 2,696 MW (20% of local demand)

Renewable Energy Scenario

Renewable Energy Generation



Renewable Energy Scenario

Renewable Energy Targets

1

2030 Target

Bangladesh aims to achieve 20% of its Demand Capacity from renewable energy by 2030.

2

2040 Vision

Looking ahead to 2040, the country plans to reach 30% of its Demand Capacity from renewable energy.

3

Implementation Hurdles

Meeting these ambitious targets faces challenges due to slow implementation, requiring concerted efforts to accelerate project deployment.

Renewable Energy Scenario

Solar Power Growth

Operational solar power plants generating clean energy

- **16 Current Plants**

Power generation from solar installations

- **993 MW Current Capacity**

Additional plants in development to expand renewable energy portfolio

- **13 Future Plants**

Future power generation from planned solar installations

- **420 MW Added Capacity**

Private Sector Engagement

Competitive Bidding Initiative for Solar Energy

12 Packages Below 50MW
Total Capacity: 353 MW
Near 12 Different Sub-Stations

10 Packages of 50 MW Each
Total Capacity: 500 MW
Near 10 Different Sub-Stations

19 Packages 51-100 MW
Total Capacity: 1,780 MW
Near 19 Different Sub-Stations

14 Packages Above 100MW
Total Capacity: 2,605 MW
Near 14 Different Sub-Stations

Total- 55 Package, 5238 MW

Inclusive Growth Perspective

SDG 7: Affordable, Reliable, Sustainable Energy for All

1 Universal Access to Energy

Achieving target 7.1. is crucial. It ensures everyone can access modern energy. This access supports basic needs and drives development.

2 Increase Renewable Energy

Target 7.2 focuses on boosting renewable energy. Solar, wind, and hydro are key. This shift reduces emissions and enhances sustainability.

3 Improve Energy Efficiency

Target 7.3 promotes energy efficiency. Using less energy for the same output. This reduces costs and environmental impact.

Sustainable Energy Transition

1

Scenario-Based Pathways

Strategic roadmaps customized to Bangladesh's geographic, economic, and infrastructure realities, balancing rural electrification needs with urban energy demands.

2

Optimal Technology Mixes

Balanced integration of solar, wind, biomass, and efficient grid systems to achieve universal energy access while minimizing costs and maximizing reliability.

3

Comprehensive Analysis

Rigorous assessment of economic viability, carbon emissions reduction potential, energy security benefits, and social impacts including job creation and health improvements.

4

Stakeholder Collaboration

Fostering partnerships between government agencies, private sector investors, international organizations, and local communities to ensure successful implementation and sustainable outcomes.

EE&C Related Plans and Policies

1. Energy Efficiency and Conservation Master Plan up to 2030
2. The Energy Efficiency and Conservation Rules, 2016
3. Energy Efficiency Labeling Regulations for Electrical Appliances
4. The Energy Audit Regulation, 2018
5. Building Energy Efficiency & Environmental Rating (BEEER)
6. Country Action Plan for Clean Cookstove 2030

Challenges of Interconnection & Cross Border Electricity Trade

1. Technical issues (Reliability, network safety etc.)
2. Contractual issues (PPA, IA etc.)
3. Regulatory issues (Grid code, Standard etc.)
4. Environmental & Social: impact of Hydro Power Projects
5. Financial issues (Cost-benefit, Financing modality etc)
6. Supply Security: demand-generation balance

Thank You

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