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BANGLADESH'S PERSPECTIVE ON PARTICIPATION IN POWER EXCHANGE TO ENHANCE CBET

**BANGLADESH
ADVANCING
DEVELOPMENT AND
GROWTH THROUGH
ENERGY (BADGE)**

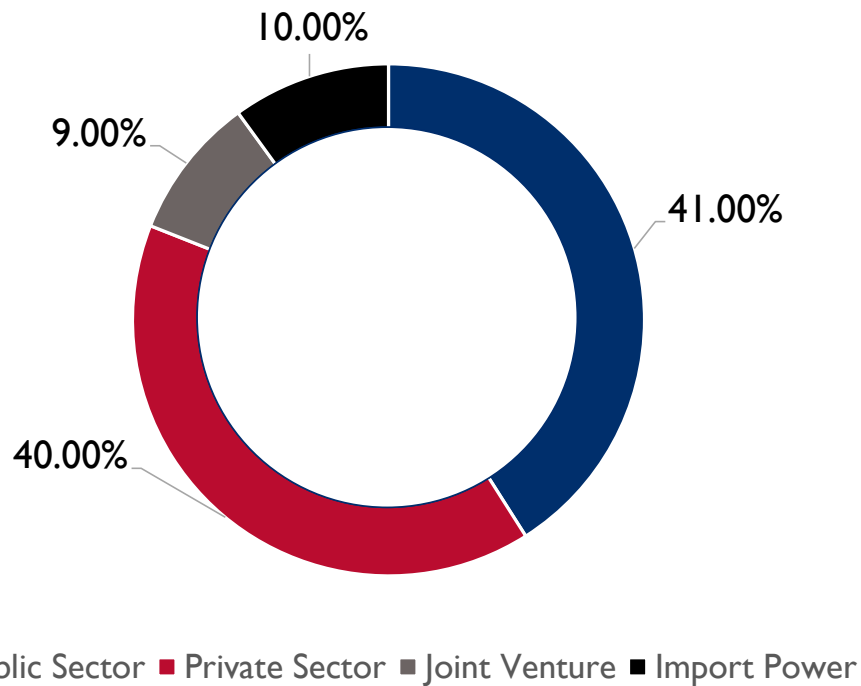
July 01, 2024



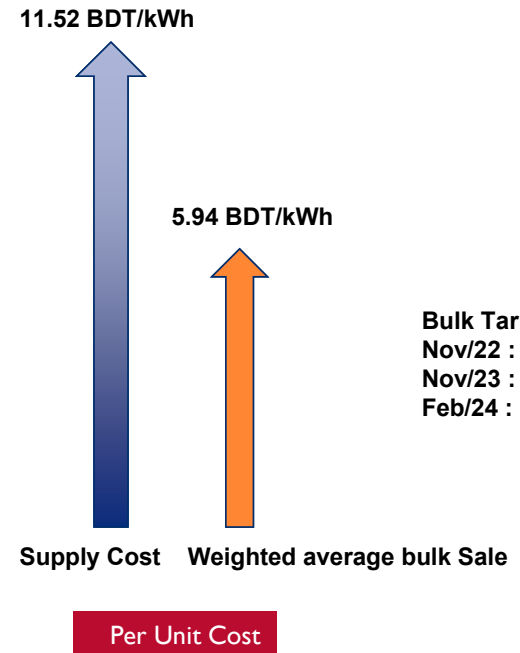
BANGLADESH POWER SECTOR

CURRENT SCENARIO [April/24]

- **System Total Installed Capacity : 27,054 MW**
- **Maximum Peak Generation : 16,477 MW**



Electricity Generation Cost



Bulk Tariff*
Nov/22 : 6.20 BDT/kWh
Nov/23 : 6.70 BDT/kWh
Feb/24 : 7.04 BDT/kWh

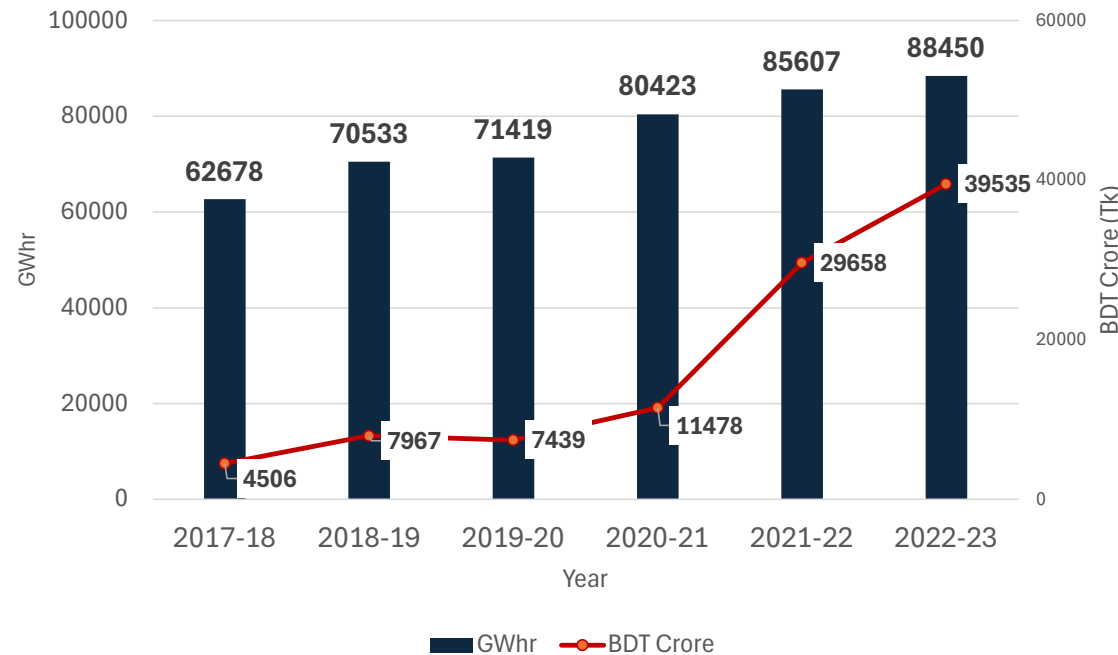
BPDB Annual report FY 23-24
*Bulk Tariff Order

BANGLADESH POWER SECTOR

REASONS BEHIND HIGH SUBSIDY IN POWER SECTOR

- ✓ Volatile nature of Fuel Market
- ✓ Tariff in US\$ & devaluation of currency
- ✓ Surplus generation
- ✓ Capacitive Charge w/o taking energy
- ✓ High contribution of liquid fuel-based generation and installed capacity
- ✓ Single buyer model, absence of competitive attitude

TREND OF BUDGETARY SUPPORT VS GENERATION



POSSIBLE WAYS TO IMPROVE POWER SECTOR

- Finding alternative cost-effective source of electricity
- Participation in Indian power market and as well as establish internal wholesale market
- Initiative for effective implementation of grid code, develop DISCOM code, formulation of policy supporting CBET, formation of ISO
- Ensure the system stability for synchronous connectivity
- Increase the share of CBET percentage
- Effective regional cooperation for formation of regional electricity market
- Service provider or commercial attitude

CROSS - BORDER ELECTRICITY TRADE – KEY DRIVERS FOR BANGLADESH

- Cheaper than domestic generation reducing overall energy costs
 - Existing import price **8.77 Tk/kWh** (bilateral agreements) – Reduces Subsidy
- Improves the reliability and stability of Bangladesh's power grid with infrastructure upgrades
- Diversified electricity sources help manage climate-related risks and maintain resilience
- Fosters regional cooperation and **stronger** political and economic ties
- Improves Bangladesh competitiveness and its ability to retain and develop exports.

CBET PROCUREMENT MODALITIES AND CURRENT STATUS

1- Bi-lateral agreements

- Existing: 2656 MW through multiple agreements with India
- Ongoing discussions:
 - 1000 MW RE based power from Rajasthan, India

2- Tri-lateral agreements

- Nepal (Bangladesh-India-Nepal)
 - Upcoming: 40 MW from 2 small hydro power plants in 2024
 - Ongoing Discussion:
 - 500 MW from GMR Upper Karnali Hydro Limited (GUKHL)
 - 683 MW from Sunkoshi 3
- Bhutan
 - Ongoing Discussions:
 - 3000 MW from Bhutan; draft Mou under discussion

3- India Power Exchange (IEX)

- Planned 10-15 MW from the Indian power exchange, and 50 MW during dry season

ROADMAP FOR BANGLADESH TO PARTICIPATE IN THE POWER EXCHANGE

The following topics were discussed in the roadmap:

- Importance of CBET in Bangladesh
- Status of CBET In Bangladesh
- Power Market of India
- Market Participation
- Preparatory Requirements for Trading Through PX
- Risk Analysis and Potential Mitigation Measures



ROADMAP REPORT RECOMMENDED THREE PHASES FOR ENROLMENT IN PX



Phase-1:

Administrative Approval

- Internal decision of participation in the PX platform
- Identification of an Indian trader
- Power Trading Agreement (PTA) with a trader
- Settlement Nodal Agency (SNA) agreement with SNA
- Submission of application to DA for approval to purchase power from PX
- Submission of application to DA for approval to sell power to PX



Phase-2:

Phase 2: Statutory/PX Approval

- DA Approval for power purchase
- DA Approval for power sell
- Documentation for becoming a client in the PX platform
 - Client registration form
 - Member Client Agreement (MCA/PPA)
 - Risk Disclosure Document (RDD)
 - NOC (No Objection Certificates) from NLDC India
 - Client fees
- Receipt of PX clearance to become a client member of PX through a trader



Phase-3:

Phase 3: Recommended Execution Phase

- Formation of a Power Exchange Trading Cell (PXTC) in BPDB with the necessary authority to make decisions related to day-to-day buying and selling from the PX platform.
- Formation of a Power Exchange Coordination Group (PXCG among BPDB, PGCB) for day-to-day coordination for everyday PX bidding through traders, ensuring power draw per approval in exchange and maintaining a check on the deviation settlement mechanism (DSM) amount.
- Day-to-day bidding for volume and price on PX and submission of bids by the authorized trader per PX rules and procedures.

PARTICIPATION APPROACHES



Short-Term (Immediate) Approach

- Participation in the PX by following the DA application procedure without any major changes
- Available Transfer Capability (ATC) can be utilized

Long-Term Approach

Creating Regulations, codes, rules, and procedures guided by the national policy

- Infrastructure upgradation
- Transmission planning: new interconnection routes

OVERCOMING THE CONSTRAINTS TO ENHANCE CBET

Capacity development in electricity trading by participating in the PX

Simultaneously taking initiative for internal wholesale market

Formulating Policy & Guidelines, rules & Regulations for CBET

Establish independent system operator

Strictly implemented the Grid Code and action needed to make it standard

Develop DISCOM Code

USAID'S SUPPORT FOR CBET IN BANGLADESH

ASSIST GOB IN THE PROCESS OF ENROLMENT IN PX

- ❖ Step-by-step handholding support in preparatory requirements
- ❖ Assistance with bidding and subsequently bringing efficiencies in power market operations.
- ❖ Conduct training and other capacity-building programs
- ❖ Promoting the regional approach involving all countries and expedite the enrolment process through CBET Working Group & Project Steering Committee

USAID'S SUPPORT FOR CBET IN BANGLADESH

MAJOR EVENTS:

- Day-ahead Market for Cross Border Electricity Trade workshop **March 31, 2022**
- Grid Modernization (Smart Grid) and Transmission Planning for CBET workshops **February 7-8, 2023**
- Bangladesh Grid Code for Off-takers, Generation, and Transmission Entities workshop **May 24-25, 2023**
- Consultations Meeting with Development Partners **July 2023**
- USAID Session on Regional Climate Summit: A Common Vision: The Benefits of Energy Connectivity through Enhanced Regional Cooperation **September 2023**
- USAID Session on Bay of Bengal Conversation: Regional energy connectivity in mitigating climate change impacts in the Indo-Pacific **October 2023**
- Roundtable discussion on Cross-Border RE PPA Template **April 29, 2024**

PEER EXCHANGE VISITS

- Bangladesh- India Utility Peer Exchange Program to India **Aug 29- Sep 02, 2022**
- Study Tour on Operations of A Regional Power Pool and Market **January 2023**
- Peer Exchange Visit to Nepal on Market Participation and Hydro Project Development **February 2024**

REPORTS:

- Constraints on Cross-border Electricity Trade in Bangladesh **June 2022**
- Roadmap for Bangladesh to Participate in the Regional Power Market (Day Ahead Market) **August 2023**
- Cross-Border Power Trade Between Bangladesh and Nepal: Key Considerations in the PPA and Wheeling Agreement **October 2023**





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THANK YOU

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