



# Country Updates On “” Coordination of Policies, Legal and Regulatory Frameworks For CBET

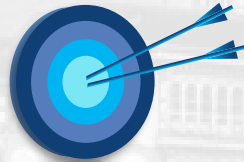
Department of Energy  
Ministry of Energy and Natural Resources  
9-11 October 2023

# DEPARTMENT OF ENERGY



## VISION

Energy security for economic prosperity, social progress and the wellbeing of Bhutanese.



## MISSION

Achieve energy security by harnessing green energy resources, and adoption of transformative and innovative technological solutions

- Generation Scenario
- Existing Transmission System
- Transmission System Constraints
- Existing Status of CBET
- Need for a Regional Inter-Connectivity
- Challenges and Opportunities

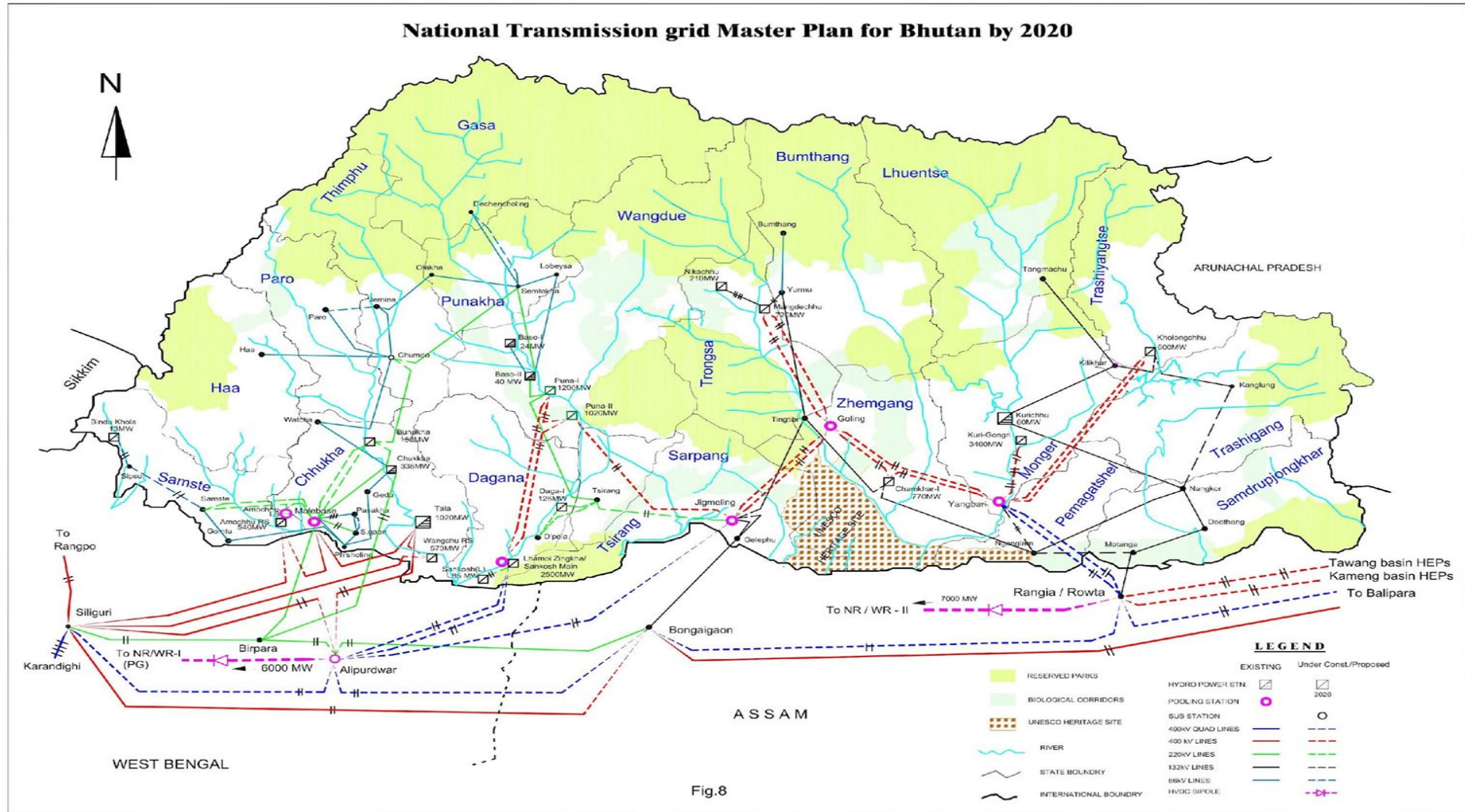


# Generation Scenario

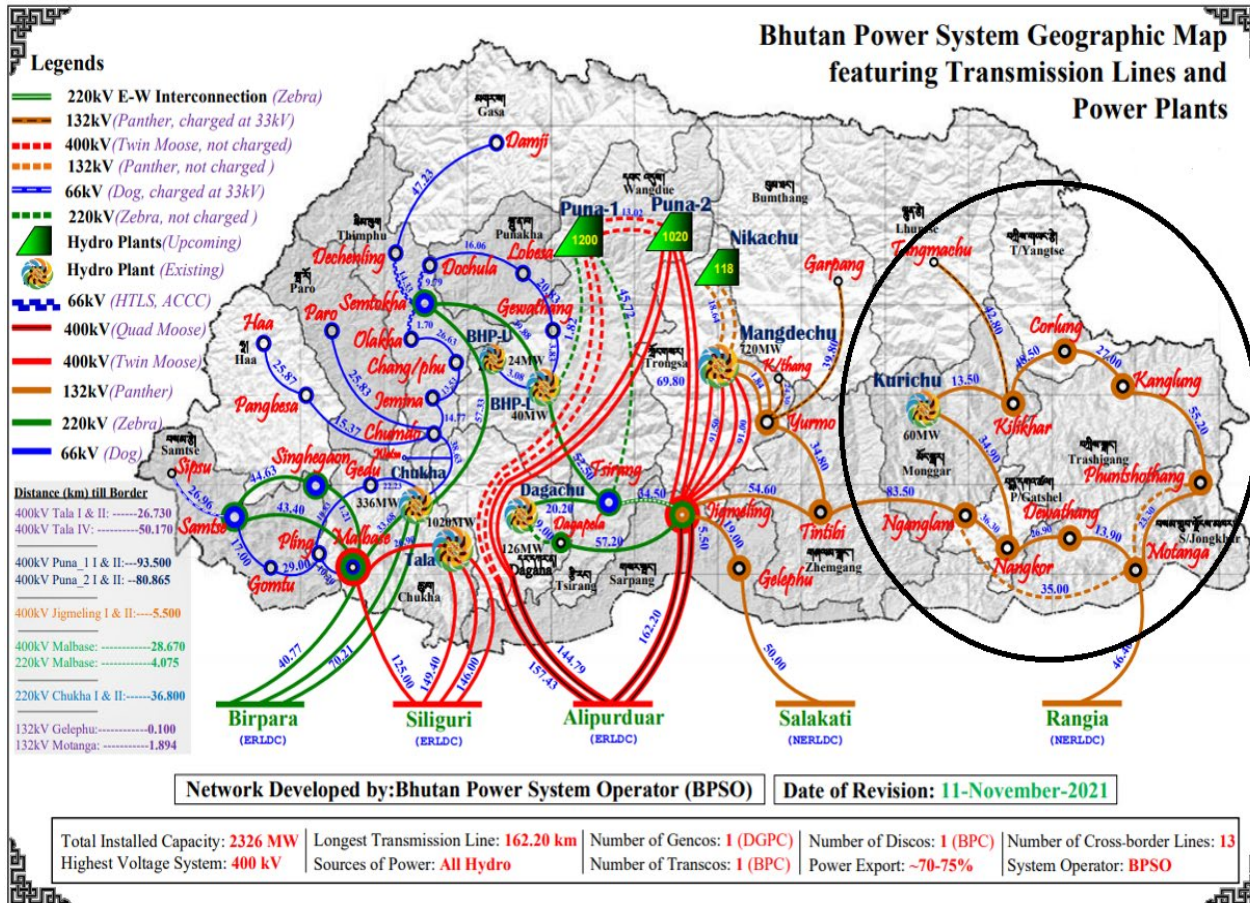
Sl. NO	Plants	IC	Firm power (MW)	Design Energy (MU)
1	Chukha	336.00	79.88	1,800.00
2	Tala	1,020.00	190.78	4,865.00
3	Kurichhu	60.00	18.73	400.00
4	Baso-U & L	64.00	15.64	291.00
5	Dagachhu	126.00	15.80	515.00
6	Mangdechhu	720.00	90.00	3,303.70
7	Mini Micro	7.72	4.00	22.00
		<b>2,451.72</b>	<b>437.38</b>	<b>11,688.22</b>



# Existing Transmission Network



# Transmission system constraints



- Our Eastern Grid is very weak with only 132kV systems
- There is Plan to strengthen the East-West link through 400kV lines.
- There is immediate need of 400kV interconnecting feeders with India from Eastern Bhutan, in addition to existing 132kV line.



# Existing Status of CBET

- CHP, THP, KHP and MHEP are under long term PPA with PTC India for the sale of surplus power from Bhutan
- Dagachhu HEP sells its power to TPTCL India
- DGPC was appointed as trading entity from Bhutan
- DGPC signed SNA Agreement with NVVN in Dec. 2022
- Power Import from Indian Energy Exchange(IEX):
  - from 1st Jan-16th March 2022 up to 400MW
    - Total volume bid: 240 MU
    - Actual net import: 203MU
  - from 1st Jan - 30th April 2023 up to 600 MW
    - Total volume bid: 349 MU
    - Actual net import: 311 MU
  - from 1st Dec 2023 - 30 April 2024 up to 850 MW (anticipated)

# Need for a Regional Inter-Connectivity



- There is a tremendous growth in energy consumption in South Asia, and it is met from fossil fuel, which had serious environmental & climate change impacts
- Countries within region are endowed with wide variety of resources:
  - ✓ Hydropower: Bhutan, Nepal, India, Myanmar
  - ✓ Gas: Bangladesh and Myanmar
  - ✓ Wind and Solar: India and Sri Lanka
  - ✓ Coal : India
- Huge scope for energy cooperation in the region to provide clean and green energy at affordable tariff.
- Sharing of Renewable Energy Resources, which are geographically concentrated and not uniformly distributed across countries



# Challenges and Opportunities



- Some countries provide open access by being energy connector and facilitate multilateral energy trade.
  - ✓ Example: Thailand serves as a energy connector country facilitating export of electricity from Laos to Malaysia and Singapore.
- Therefore, we must collectively formulate a necessary Vision to achieve inter-connectivity and pursue actions on the ground.
- High-level engagements in the pursuit of realizing regional connectivity.

**SOLAR**  
**RELIABLE HYDROPOWER**  
**SECURITY SOCIO-ENVIRONMENT SUSTAINABLE**  
**CLEAN ENERGY AFFORDABLE WIND**  
**PEOPLE PROSPERITY GREEN HYDROGEN**  
**INNOVATION PROGRESS**

# Thank You

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