

# Provisions of Electricity Act, Policies and Regulations for Cross Border Electricity Trade – Bhutan

2<sup>nd</sup> Meeting of Task Force-1 on “Coordination of Policy, Legal and  
Regulatory Framework”

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# Overview

- Policy & Regulatory - Overview
- Policy, Act and Regulatory – Key Provisions
- SHDP – Salient Features
- Concluding Remarks

# Bhutan – Policy and Regulatory Framework

	Generation	Transmission	Distribution	System Operator	Electricity Trade
Enabling Act/Policy	EAB 2001/ SHDP 2008	EAB 2001	EAB 2002	EAB 2003	EAB 2001/SHDP 2008
Regulations	Dam safety Guidelines (under formulation)	Grid Code	Distribution code	Grid Code	PPAs/BAs
Licensing / Nodal Authority	BEA / DHPS, MoEA	BEA / DHPS, MoEA	BEA / MoEA	BEA/MoEA	BEA / MoEA
Operational Entity	DGPC / SPVs	BPC	BPC	NLDC (BPC)	DGPC / SPVs

# Policy, Act & Regulatory – Key Provisions

SN	Ingredients for CBET	Relevant Provisions of Act/Reg/Policy	Remarks
1	Trading and Generating License	<ul style="list-style-type: none"> <li>• EA 18 – Duty to obtain a license</li> <li>• EA 22.1 ( vi) – Trading is covered as a distinct license activity</li> <li>• Deemed Trading License for Generating Licensee</li> <li>• Exemptions &lt; 500 kW</li> <li>• EA 40 – Bulk Supplier (wholesale supply incl EXIM)</li> </ul>	<p>Not envisaged except establishment of power consolidator - enabling environment for trading small and other renewable energy generators</p>
2	Open Access of Transmission Network	<ul style="list-style-type: none"> <li>• Implicit provisions under transmission &amp; distribution license; BEA's function – EAB 11.2 “<i>ensure non-discriminatory access to the transmission and distribution system</i>”. Provided in the Grid code as well.</li> </ul>	<ul style="list-style-type: none"> <li>• No regulations developed</li> <li>• Reform exercise to be undertaken - Unbundling transmission and distribution utility; element of subsidy targets</li> </ul>
3	Open access of Distribution Network	<ul style="list-style-type: none"> <li>• SHDP – Developer’s mandate upto National Grid</li> </ul>	

# Policy, Act & Regulatory – Key Provisions

SN	Ingredients for CBET	Relevant Provisions of Act/Regulations/Policies	Remarks
4	Coordinated System Operation and Treatment of System Imbalances	<ul style="list-style-type: none"> <li>• EA 39 – System Operator (coordinate power system balance, dispatching, transmission outages, monitor EXIM electricity)</li> <li>• Grid code ( grid code is based on non-commercial regulatory mechanism to regulate the grid discipline)</li> <li>• UI exempted for bilateral projects</li> </ul>	<ul style="list-style-type: none"> <li>• Grid discipline and reduce incentive for gaming</li> <li>• No provisions for settling imbalances from scheduled CBET.</li> <li>• Develop a regional grid code for coordinated system operation incl. a regionally coherent commercial mechanism for system imbalances</li> <li>• India’s ancillary Mkt. concepts</li> </ul>
5	Transmission Planning	<ul style="list-style-type: none"> <li>• Ministry’s mandate</li> <li>• National Transmission Master Plan &amp; Power System Master Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Regional Grid MP</li> </ul>

# Policy, Act & Regulatory – Key Provisions

SN	Ingredients for CBET	Relevant Provisions of Act/Regulations/Policies	Remarks
6	Energy Accounting, Clearing and Settlement	<ul style="list-style-type: none"> <li>• PPAs for bilateral electricity trade</li> <li>• Net-off basis</li> </ul>	<ul style="list-style-type: none"> <li>• Back to Back tie ups</li> <li>• POC charges &amp; other transit fees</li> </ul>
7	Policy for Regional Electricity Trade	Umbrella Agreement 2006 (Bilateral)	<ul style="list-style-type: none"> <li>• Inter-governmental framework for Regional energy cooperation</li> <li>• Principles of reciprocity &amp; value addition</li> </ul>
8	Import Duty, Export Tax and Transit Tax	No duty, export tax or transit tax on bilateral electricity trade	covered under regional framework cooperation
9	Dispute Resolution	<ul style="list-style-type: none"> <li>• EA does not mandate BEA to look at dispute resolution of cross border power trade</li> <li>• Bilateral resolution</li> </ul>	Regional Resolution (Regulatory framework/Agreement required among regulators)

# Policy, Act & Regulatory – Key Provisions

10	Tariff Determination	<ul style="list-style-type: none"><li>EA 11.1 (b) – Tariff setting including tariff for generation not regulated by PPA</li></ul>	<ul style="list-style-type: none"><li>Not mandated to regulate tariff for power export/import through power exchange but if power procured through exchange is to be sold to the internal customers by the Licensees, BEA will required to regulate the prices as per Section 11.1(b).</li><li>CBET to be limited to wholesale regime</li><li>Clarity required on roles and responsibilities of regulators of individual country relating to price determination and approval of power sold through the spot mkts.</li></ul>
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# SUSTAINABLE HYDROPOWER DEVELOPMENT POLICY

- ✓ Investment model and period – BOOT & 30 years ( Above 25 MW HEPs)
- ✓ Project Ownership – Public-Public, Public-Private, IPP, Strategic Partnership
- ✓ Bidding based on Upfront Premium (fixed) and Royalty Energy (min 12% for 12 yrs and 18% thereafter)
- ✓ Certified Emission Reduction (CER) or any other credits will be the property of the Project Proponents. (Dagachhu 1<sup>st</sup> transboundary CDM project. Puna-I registered as largest transboundary CDM project – 4.2 million CERs annually!)
- ✓ Social consideration –
  - ❖ Land acquisition as per Land Act (land compensation in cash/substitution)
  - ❖ 10,000 Units per acre per year (Perpetual)
  - ❖ 1% of project cost for R&R
  - ❖ Basic infrastructure as part of project (local area development)
  - ❖ Employment (1 member of PAFs)



## Concluding Remarks

- Existing regulatory and policy framework is amenable to cross border trade (Bhutan-India).
- Institutional restructuring – Transmission, Distribution, System Operator & Trading Utilities
- The critical step towards enabling exchange of power in the region is the establishment of bilateral grid connectivity between member nations. Initiatives underway between India and neighboring countries.
- Based on market assessment and evaluation of entry strategy models, what could be the most appropriate and practical route to pursue? Idealistic vs reality!
- Harmonization of legal & regulatory framework for seamless cross-border trade of electricity in the long-run (review should contain rationalized recommendations in lieu of open ended statements)
- Need for strong political commitments of the member states to implement the recommendations of the studies in a time bound manner (bilateral to multilateral approach)  
– Inter-govt framework for regional energy cooperation
- Investment in cross border generation and transmission infrastructure
- 9 • Finally – need to increase the task force member for effective and meaningful engagement