
Dhaka, Bangladesh
25th Feb 2020

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BIMSTEC - The bridge between South Asia & South East Asia

- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising seven Member States around the Bay of Bengal.
- The group expanded in 2004 with the admission of Nepal and Bhutan.
About BIMSTEC

- BIMSTEC is a sector-driven regional cooperation organization.
- Began with identified **six priority sectors of focused cooperation, including energy**; however, **over time, eight more sectors were identified for cooperation**.
- Given the importance of **energy** in the economic development of the country, various initiatives were taken in the
  - a) oil and gas sector
  - b) power/electricity sector
  - c) non-conventional sources of energy.
### BIMSTEC Resource Potential

<table>
<thead>
<tr>
<th>Country</th>
<th>Coal (Million Tonnes)</th>
<th>Oil (Million Tonnes)</th>
<th>Gas (Trillion Cubic Feet)</th>
<th>Biomass# (MT)</th>
<th>Hydro (GW)</th>
<th>Renewable * (GW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>3,300</td>
<td>-</td>
<td>5.7</td>
<td>218</td>
<td>-</td>
<td>3.67</td>
</tr>
<tr>
<td>Bhutan</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>625</td>
<td>23.8</td>
<td>12.76</td>
</tr>
<tr>
<td>India</td>
<td>3,19,020</td>
<td>600</td>
<td>45.5</td>
<td>4,150</td>
<td>145</td>
<td>1000</td>
</tr>
<tr>
<td>Myanmar</td>
<td>120</td>
<td>64.3</td>
<td>41.3</td>
<td>3,303</td>
<td>100</td>
<td>60.7</td>
</tr>
<tr>
<td>Nepal</td>
<td>&lt;1</td>
<td>-</td>
<td>-</td>
<td>1,056</td>
<td>42</td>
<td>4.829</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>155.5</td>
<td>2</td>
<td>11.6</td>
</tr>
<tr>
<td>Thailand</td>
<td>1,063</td>
<td>-</td>
<td>6.6</td>
<td>1,838</td>
<td>15.2</td>
<td>23.0</td>
</tr>
<tr>
<td><strong>BIMSTEC Total</strong></td>
<td><strong>3,23,504</strong></td>
<td><strong>664</strong></td>
<td><strong>99</strong></td>
<td><strong>11,346</strong></td>
<td><strong>328</strong></td>
<td><strong>1,117</strong></td>
</tr>
</tbody>
</table>

- Either resource is nil or value less than 0.5; *Solar, Wind & Small Hydro; # Forest & Other Wooded Land

Drivers of economic growth in BIMSTEC

• Energy Access
• Per capita electricity consumption
• Per capita GDP and its growth
• Foreign Direct Investment
• Cheap electricity
Countries with low electricity access in BIMSTEC

Source: NEA Annual Report, BPDB Annual Report, Press Release of Myanmar’s President’s Office
Values for Bhutan, Myanmar and Nepal are calculated from sales and population.

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP (Current Price) Per Capita</th>
<th>GDP (Constant Price) Growth Rate</th>
<th>Consumer Price Inflation</th>
<th>Average Exchange Rate for National Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>1,827 #</td>
<td>8.13% #</td>
<td>5.5</td>
<td>83.47 Taka</td>
</tr>
<tr>
<td>Bhutan</td>
<td>3,331</td>
<td>3.03%</td>
<td>2.7</td>
<td>68.39 Ngultrum</td>
</tr>
<tr>
<td>India</td>
<td>1,899</td>
<td>6.80%</td>
<td>4.9</td>
<td>68.39 Indian Rupee</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1,185</td>
<td>6.80%</td>
<td>6.8</td>
<td>1,429.81 Kyat</td>
</tr>
<tr>
<td>Nepal</td>
<td>1,034</td>
<td>6.81%</td>
<td>4.1</td>
<td>108.93 Nepali Rupee</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>4,104</td>
<td>3.21%</td>
<td>2.1</td>
<td>162.46 Sri Lankan Rupee</td>
</tr>
<tr>
<td>Thailand</td>
<td>7,069</td>
<td>4.00%</td>
<td>1.1</td>
<td>32.31 Baht</td>
</tr>
<tr>
<td>BIMSTEC</td>
<td>2,091##</td>
<td>6.46%##</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# - CY/FY 2019; All other figures related to CY/FY 2018
## - Weighted average with population as the weight
### - Weighted average with total current GDP as the weight

# Foreign Direct Investment

<table>
<thead>
<tr>
<th>Grouping</th>
<th>FDI Inflows (USD Billions)</th>
<th>Share in world FDI (%)</th>
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<th>Share in world FDI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEAN</td>
<td>144.2</td>
<td>10%</td>
<td>148.6</td>
<td>11%</td>
</tr>
<tr>
<td>BRICS</td>
<td>269.5</td>
<td>18%</td>
<td>261.28</td>
<td>20%</td>
</tr>
<tr>
<td>BIMSTEC</td>
<td>54.4</td>
<td>3.6%</td>
<td>61.7</td>
<td>4.8%</td>
</tr>
<tr>
<td>SAARC</td>
<td>47.3</td>
<td>3.2%</td>
<td>50.7</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

*Source: UNCTAD Country Reports 2018*
Cheaper costs of imports

Source: BPDB, NEA, NVVNVL, PTC India
Evolution of Energy Cooperation, CBET - Key Policy & Regulatory Development

1954
Kosi Project agreement between Nepal & India

1961*
Jaldhaka agreement for Indo-Bhutan hydropower cooperation

1971
Indo-Nepal Power exchange

Mar 1974 **
Agreement between Govt. of India and Royal Govt. of Bhutan on Chuka hydro power project to India (Plant Inaugurated on October 21, 1988)

1992
Nepal-India Power Exchange Committee (PEC) constituted

5th Mar, 1996
Agreement between Govt. of India and Royal Govt. of Bhutan on Tala Hydro Power Project - 1020 MW - first unit commissioned on July 31, 2006 & last unit on March 30,

Jul 2006
Agreement between Govt. of India and Royal Govt. of Bhutan on cooperation in Hydroelectric Power

Jan 2010
MoU between Govt. of India and Govt. of Bangladesh, on cooperation in power sector (500 MW trade started on 5th October, 2013)

Jun 2010
MoU for carrying out a feasibility study for interconnection of the India-Sri Lanka electricity grids (Signed among GOI, GSE, CER, PSCL)

20th Sept, 2011
MoU on CASA 1000 Project*** signed among 4 participating countries (Project was conceived in 2008)

Apr 2014
Inter-Governmental Agreement between Bhutan and India on development of JV Hydropower Projects

20th Sep 2014
Indo-Nepal Power Trade Agreement

Nov 2014
SAARC Inter-governmental Framework Agreement on Energy Cooperation

April, 2015
Core project agreements viz. Master Agreement and the Power Purchase Agreements between 4 participating countries

52 Years

Sub-Regional Cooperation between Bangladesh, Bhutan, India and Nepal (BBIN)

Oct 2015
MoU on Cooperation in the field of Power Sector signed between Myanmar & India

5th Dec, 2016
Ministry of Power, India - Guidelines on Cross Border Electricity Trade (CBTE) issued

14th Dec, 2016
Ministry of Power Designates Nodal agency for CBTE

16th Feb 2017
CERC (India)'s draft notification on CBET Regulations

6th June 2017
NEPRA (Import of Electric Power Regulations)

October 2017
CEA issued CBR for facilitating process of approval CBTE

Aug 2018
MoU on CBTE

2018
Moi-Govt. of Nepal and Govt. of Bangladesh, on co-operation in power sector

9 Years

Draft CBR of the DA (DA) for facilitating CBTE.

Primary Energy Supply Forecast – Expected to grow at CAGR 3.3% for the period 2014-30

Country-wise

Source-wise

Bangladesh | Bhutan | India | Myanmar | Nepal | Sri Lanka | Thailand

Coal | Oil Products | Natural Gas | Hydro | Nuclear | Bio Fuels | Electricity (Net Imports)
BIMSTEC’s generation capacity is projected to increase three fold, from 364 GW in 2014 to almost 904 GW in 2030.

Country-wise

Source-wise
Renewable based capacity addition is expected to grow at an annualized rate of 16.3%
Primary Energy Consumption in the region is likely to grow at CAGR of 3.7%

Almost 71% of the increase in energy consumption will be contributed by India and 17% by Thailand. Bangladesh is the third largest consumer of energy in the region and will contribute 6% to the overall increase in energy consumption of the region.
Peak Electricity Demand will grow at CAGR of 6.5% to reach 482 GW by 2030

Almost three fourth of the peak demand will come from India and the remaining one fourth from the other countries in the BIMSTEC region.
GOI GUIDELINES FOR IMPORT/EXPORT (CROSS BORDER) OF ELECTRICITY-2018

• Objective:

a) Facilitate *import/*export of electricity between India and neighbouring countries;

b) Evolve a *dynamic and robust* electricity infrastructure for *import/*export of electricity;

c) Promote *transparency, consistency and predictability* in regulatory mechanism pertaining to import/*export of electricity in the country;

d) Reliable grid operation and transmission of electricity for import/*export.
Difference between old and New Guidelines

Old (2016)
• Investment Restriction
• Only TAM (Term Ahead Market) in Power Exchange
• No explicit provision for Trilateral Power trade

New (2018)
• No Investment Restriction
• All products of PX are allowed in cross border through Power Exchange
• Provisions for Trilateral Power trade
Thank You

Source: National Electricity Plan for Transmission, India and Power System Master Plan 2016, Bangladesh