Investment Opportunity in Power Sector of Bangladesh

Md. Nurul Aktar
Bangladesh at a glance

- **Official Name**: People’s Republic of Bangladesh
- **Political System**: Parliamentary Democracy
- **Area**: 147,570 Skm
- **Population**: 156 million
- **Total Exports**: USD 31 billion (FY 2014 -15)
- **Total Imports**: USD 38 billion (FY 2014 -15)
- **Remittance**: USD 7487.19 mil (FY 2015)
- **Forex Reserve**: USD 26 billion
- **Per Capita income**: USD 1,316 (FY 2016)
- **Power Capacity**: 14,271 MW
Vision

Providing reliable Electricity to all in a cost-effective and affordable manner

* www.bpdp.gov.bd
Ensuring reliable electricity for all by 2021 through integrated development of generation, transmission and distribution system
Present Energy Scenario

* www.bpdp.gov.bd
Present Energy-mix Scenario

Installed Capacity by Fuel Type as on March 2016
(Total Installed Capacity 12,229 MW)

- Imported Power
- Coal
- Diesel
- Furnace Oil
- Natural Gas
- Renewable

21% Imported Power
62% Natural Gas
8% Renewable
5% Coal
2% Diesel
2% Furnace Oil

* www.bpdp.gov.bd
Summary: Energy Scenario

Generation Capacity
14,500 MW (with Captive)

Peak Generation
8177 MW

9800 km
Transmission Lines

341000 km
Distribution Lines

Consumer
20 Million

Per Capita Generation
371 Kwhr

Electricity Growth
9.5%

Electricity Access
75%

Retail Tariff
4.14~11.85 Cents/Unit
## Year-wise Generation

<table>
<thead>
<tr>
<th>Year</th>
<th>Electricity Generation</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2009</td>
<td>26,533</td>
<td></td>
</tr>
<tr>
<td>2009-2010</td>
<td>29,247</td>
<td>10%</td>
</tr>
<tr>
<td>2010-2011</td>
<td>31,355</td>
<td>7%</td>
</tr>
<tr>
<td>2011-2012</td>
<td>35,118</td>
<td>12%</td>
</tr>
<tr>
<td>2012-2013</td>
<td>38,229</td>
<td>9%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>42,195</td>
<td>10%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>45,836</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Average Growth Rate</strong></td>
<td></td>
<td><strong>9.5%</strong></td>
</tr>
</tbody>
</table>
## Power Sector Road Map

1. Develop domestic primary energy resources
2. Establish power system portfolio by fuel diversification
3. To introduce high efficient power supply and low carbon emission
4. Build necessary infrastructure through joint coordination of multi sector
5. Build an effective and efficient mechanism, organization & regulations
6. Reduce poverty through socio-economic growth

[www.bpdp.gov.bd](http://www.bpdp.gov.bd)
Generation, Transmission, Distribution and EE&C Plan
Generation Plan

2016
14500 MW
(with Captive)

2021
24000 MW

2031
39000 MW

2041
60000 MW
Generation Plan (2021)

Net generation capacity

Expected Demand

MW


0  5000  10000  15000  20000  25000  30000
Generation Plan (2030)

- Domestic Coal, 11250
- Imported Coal, 8400
- Natural Gas/LNG, 8850
- Nuclear, 4000
- Regional Grid, 3500
- Oil, Hydro & RE, 2700

Total: 39,000 MW (Approx.)

*Power System Master Plan – 2010 (Vision 2030) - as per SREDA*
## Transmission Plan (2021)

<table>
<thead>
<tr>
<th>Voltage (kV)</th>
<th>Length (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>132</td>
<td>10,297</td>
</tr>
<tr>
<td>230</td>
<td>5,081</td>
</tr>
<tr>
<td>400</td>
<td>3,711</td>
</tr>
</tbody>
</table>

*as per SREDA*
**Distribution Plan (2021)**

<table>
<thead>
<tr>
<th>Distribution Plan</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution Line (km)</td>
<td>4,80,000</td>
</tr>
<tr>
<td>Sub-station (MVA)</td>
<td>35,700</td>
</tr>
<tr>
<td>Prepaid Meter</td>
<td>100%</td>
</tr>
<tr>
<td>Consumers (Million)</td>
<td>24</td>
</tr>
<tr>
<td>Access to Electricity</td>
<td>100%</td>
</tr>
<tr>
<td>Grid</td>
<td>90%</td>
</tr>
<tr>
<td>Off-grid (RE)</td>
<td>10%</td>
</tr>
</tbody>
</table>

*as per SREDA*
## EE&C Plan

"...the greenest power is the power you don't have to produce..."

<table>
<thead>
<tr>
<th>Year</th>
<th>EE&amp;C Target</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>By 2021</td>
<td>-15% of primary energy consumption per GDP</td>
<td>Primary energy consumption per GDP in FY 2013-2014</td>
</tr>
<tr>
<td>By 2030</td>
<td>-20% of primary energy consumption per GDP</td>
<td></td>
</tr>
</tbody>
</table>
Policy, Incentives and Security Mechanism for Investment in Power Sector
Private Sector Power Generation Policy

- **Investment friendly**
- **Tariff based bidding**
  
  Capacity Charge: ensures reasonable ROI
  
  Energy Charge:
  
  Renewable projects payment on net energy output basis

- **Entertain Unsolicited proposal**
- **Sovereign guarantee through Implementation Agreement**
- **Attractive incentive packages**

*As per SREDA*
Major Incentives for IPP’s

- Exemption of Corporate Income Tax (Period: 15yrs)
- Exemption of Custom Duties, VAT & other Surcharges**
- Repatriation of Equity along with Dividends
- Avoidance of Double Taxation through Bi-lateral Agreements
- BDT is freely convertible for FDI

*As per SREDA
Investment Requirement in Generation & Transmission

- **Transmission**: $7.53 Bn.
- **Renewable Energy**: $4.5 Bn.
- **Hydro & RE**: $0.5 Bn.
- **Diesel**: $0.56 Bn.
- **Furnace Oil**: $5.89 Bn.
- **Natural Gas**: $7.63 Bn.
- **Imported Coal**: $12.47 Bn.
- **Domestic Coal**: $13.92 Bn.

Total: $53 Billion

*As per SREDA*
**Investment Plan in Distribution**

**Investment Plan (Bn. US $)**

<table>
<thead>
<tr>
<th>Company</th>
<th>Investment (Bn. US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WZ</td>
<td>$0.486 Bn.</td>
</tr>
<tr>
<td>DESCO</td>
<td>$0.466 Bn.</td>
</tr>
<tr>
<td>DPDC</td>
<td>$0.656 Bn.</td>
</tr>
<tr>
<td>BPDB</td>
<td>$1.14 Bn.</td>
</tr>
<tr>
<td>BREB</td>
<td>$2.57 Bn.</td>
</tr>
</tbody>
</table>

Total Investment: $5.318 Bn.

*As per SREDA*
Conclusion

- Government is committed to realize its ‘Vision’ for the power sector for sustained economic development
- Huge Investment is required for Infrastructure Development
- Govt. is establishing new E-Zone’s—one of which is exclusively dedicated for Japan
- Keeping in mind Present Energy Mix Vs. Future Plan the LNG, Coal, Renewable & EE Sector have a very promising prospect for investment
- Hence through such initiative Govt. is ensuring a Golden Opportunity for Japanese Investor for uninterrupted Business Opportunity in Bangladesh
Thank You