

# **ENERGY CONNECTIVITY WITH NEIGHBOURING COUNTRIES: CHALLENGES AND OPPORTUNITIES FOR BANGLADESH**

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## **Introduction**

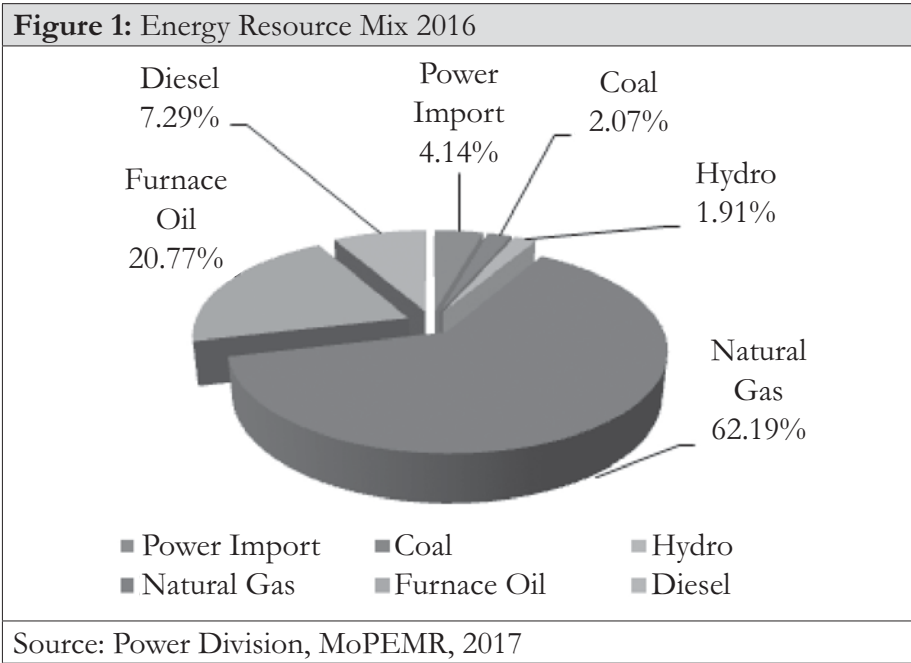
Bangladesh is an energy starved country. In order to continue its pursuit for sustainable development it needs a continuous supply of energy at an affordable cost. Its immediate neighbours have energy resources in near proximity of its borders. Recently, Bangladesh has started getting electricity from India. However, there have not been substantial progress for Bangladesh in exploiting the energy sources of all the neighbouring countries, i.e. India, Nepal, Bhutan and Myanmar.

There exist a number of potential areas where Bangladesh can explore the benefit of energy connectivity with her neighbours. However, this paper will limit its scope to connectivity in electrical power and gas pipeline. Studies by World Bank, Asian Development Bank (ADB) and other organizations found that, the barriers to stronger regional energy cooperation were predominantly political and economic in nature. However, institutional and infrastructural incapacities are also posing challenges to successful energy connectivity between regional nations. Nevertheless, there is a new era of opportunities for Bangladesh in sub regional energy connectivity with India, Nepal and Bhutan. Similar cooperation with Myanmar could be highly beneficial on many accounts. However, it needs favourable political climate in Myanmar and relentless diplomatic persuasion by Bangladesh to get connected in the energy sector. This paper will look into the entire gamut of challenges and opportunities faced by Bangladesh in energy connectivity.

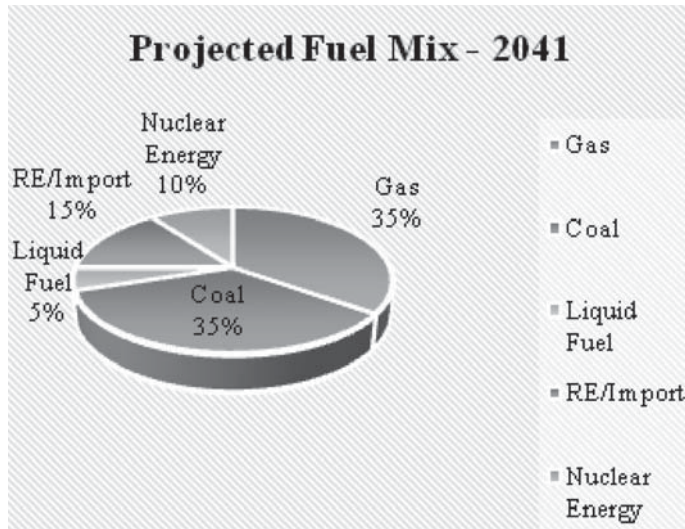
## Energy Resources in Bangladesh and its Neighbourhood

### Energy Resource Mix

The energy sector of Bangladesh is facing a constant challenge to keep up with a high rate of economic growth. Energy sector is facing a rise of 10 percent demand every year. The need for energy typically grow by 2-3 percent over the GDP growth rate simply to match the economic development. The country must therefore address critical energy concerns that will determine not only its national economic expansion plans, but also its ability to bring the entire population onto the energy grid. The energy resource mix in 2016 and projected fuel mix in 2041 are shown below.



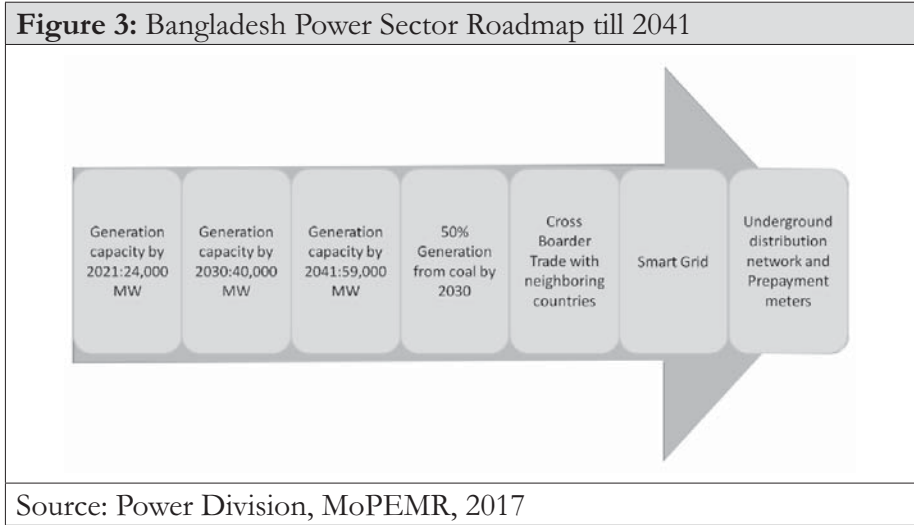
**Figure 2: Projected Fuel Mix 2041**



Source: Power Division, MoPEMR, 2017

### Power Generation Scenario

The present installed power generation capacity including captive power reached 15,379 MW including 600 MW import from India. The actual power generation recorded on 21 June 2017 was 7581 MW during day peak and 9166 MW during evening peak. (BPDB Website, 2017). PSMP-2010, published by the Power Division, MoPEMR had a vision to provide power supply to all by 2021. PSMP-2016, published in September 2016, envisages achieving a power generation target of 24,000 MW by 2021, 40,000 MW by 2030 and 59,000 MW by 2041. The report also includes plan of energy import from neighbouring countries like India, Nepal, Bhutan and Myanmar. (Power Division, MoPEMR, 2016).



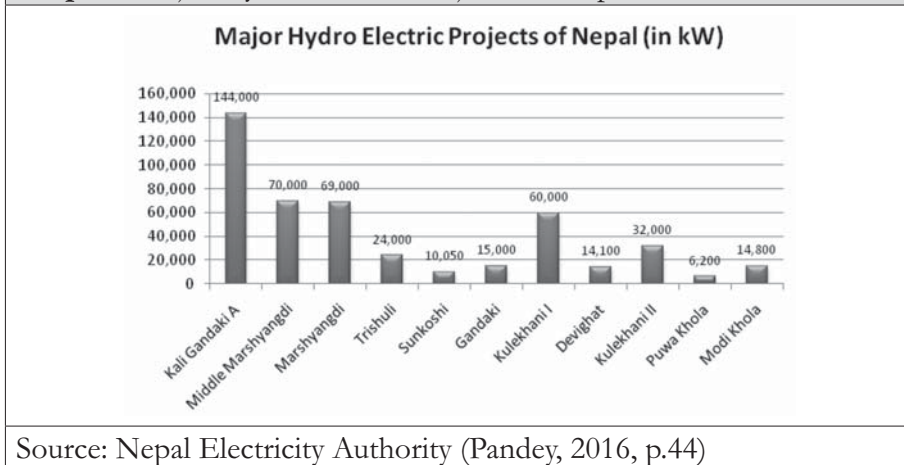
Sources of Cross Border Energy

**Hydro Power Potentials in BBIN Sub-region:** India, Bhutan and Nepal have great potentials to produce hydropower. In reality, more than 90% of the resources are still unutilized in Nepal and Bhutan, combined. In case of India, about 50% is already explored and utilized. Therefore, in future Nepal and Bhutan can meet not just their own electricity needs, but also serve energy needs of Bangladesh and India. India already has ongoing power sector cooperation with Bhutan and Nepal. To harness the huge hydropower potentials of Nepal or Bhutan, India has to be taken onboard. Because the onward transmission will have to take place through Indian territory.

**Power Exported by India:** The power export to Bangladesh from India has increased in recent years. Bangladesh started power import with 500 MW from NTPC of India through Baharampur-Bheamara grid line in 2012. The export to Bangladesh was augmented by commissioning of second cross border interconnection between Surjyamaninagar (Tripura) in India and Comilla, Bangladesh in March 2016. At present, 660 MW power is being exported by India to Bangladesh. (Power Division, 2017)

**Power Potentials of Nepal:** Nepal has huge potential for hydropower development. Only 460 MW has been developed so far from the major projects out of the potential capacity of 42 GW. The current major hydro power projects are presented in Graph 1.

**Graph 1: Major Hydro Electric Projects of Nepal**



BPDB officials have stated that, Bangladesh intends to import at least 2000 MW of power from Nepal's potential hydro-electric projects.

**Sources of Energy in Bhutan:** So far Bhutan has identified and assessed as technically feasible some 23.76 GW out of an estimated potential of 30 GW. Total installed capacity is currently 1.488 GW. This is generated by four large hydropower projects. A further four large projects are in various stages of construction. (Price & Mittra, 2016). Bhutan's ambitious 10/20 program, is to create 10,000 MW power by 2020. This is expected to come from 10 mega projects (Dharmadhikary, 2015). As per BPDB officials, Bangladesh intends to import more than 1000 MW power from Bhutan's potential hydro-electric projects.

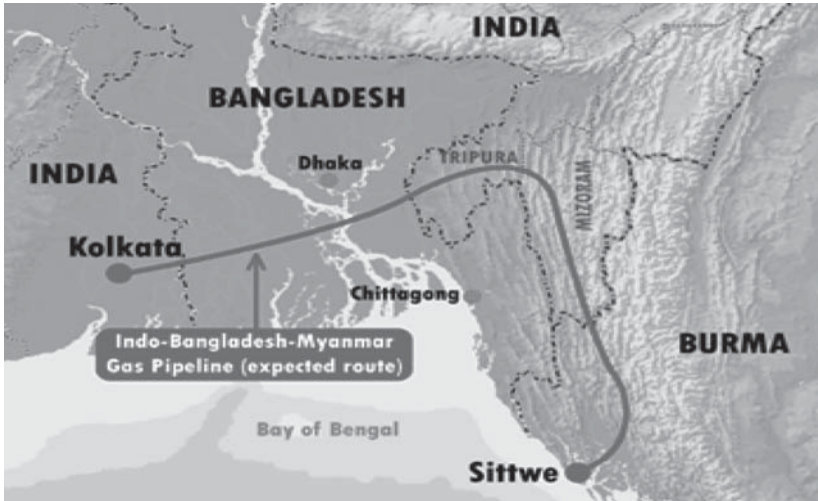
**Hydro Power in Myanmar:** Myanmar is endowed with abundant hydropower potential of around 39,720 MW. At present, Myanmar is a major exporter of hydropower and natural gas in the region, and in

particular to China. Following 2011 general elections, Myanmar government launched several political and economic reforms to come out of decades of isolation. According to estimates of Directorate of Investment and Company Administration of Myanmar FDI in oil and gas is over \$15 billion and in power sector it is \$13.29 billion (Kattelus et al., 2015). With increasing demand on electric power in China and throughout South and Southeast Asia, large hydropower is being planned by Myanmar (Adam Smith International, 2015).

**MBI Pipeline:** The proposal for a gas pipeline from Myanmar to India through Bangladesh territory was first tabled in 1997 by the Dhaka-based private firm Mohona Holdings. This 900 km, one billion dollar pipeline was meant to transfer an estimated 5 billion cubic metres of gas from the Shwe field off the Bay of Bengal through the Rakhine State in Southern Myanmar, from where it would turn east to enter the Indian state of Tripura. The pipeline would then enter Bangladesh at Brahmanbaria and traverse the country till it exited at Jassore and terminated at the West Bengal state of India (Muniruzzaman, 2011, p.148).

For Bangladesh, in addition to the option of retaining some of the gas, transit fees of an estimated \$125 million per annum and an investment of \$100 million would have greatly assisted the country's economy. However, due to lack of foresight and absence of strong political will in the three countries the proposal was practically abandoned by end of 2005 (Agrawal, 2009).

**Figure 4:** Myanmar, Bangladesh, India Proposed Pipeline



Source: <http://voices.nationalgeographic.org>

## Existing Regional Energy Cooperation and Challenges to Energy Connectivity

### Efforts for Power Sector Integration by Regional Organizations

**SAARC:** In January 2000, a Technical Committee on Energy was set up by SAARC. The first meeting of the SAARC Energy Ministers was held in Islamabad, Pakistan, on 1st October 2005. India organized the South Asia Energy Dialogue on March 5, 2007, to bring together experts, academic think-tanks and other stakeholders in the region and to make recommendations to promote energy sector cooperation. The Energy Ministers in the third meeting held in Colombo, Sri Lanka, in January 2009, approved the concept of a South Asia Energy Ring (Usman, 2015).



**Figure 5: Proposed SAARC Energy Ring Power Grid**



Source: The 8th Japan-SAARC Energy Symposium on Medium Term Vision for Energy Connectivity in the SAARC Region, Islamabad, 2015

**SAARC Energy Centre (SEC):** The 13th SAARC summit held in Dhaka in 2005 decided to establish the SEC in Islamabad. In the Dhaka Declaration, the Heads of the State or Government welcomed the joint statement of the first SAARC Energy Ministers meeting held in October 2005 in Islamabad. They also agreed to:

- Promote development of energy resources, including hydropower.
- To trade energy within the region.
- To develop renewable and alternative energy resources and
- To promote energy efficiency and conservation in the region.

**BIMSTEC:** The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) instituted the ‘BIMSTEC Trans Power Exchange and Development Project’ for power trade between BIMSTEC countries. After the First BIMSTEC Energy Ministers’ Conference in 2005 the BIMSTEC Energy Center (BEC) was established. The 15th Ministerial Meeting of BIMSTEC was held on 11-12 August 2017 in Kathmundo, Nepal. The Foreign Ministers agreed to sign the MOU on BIMSTEC Grid



Connection at the earliest. It was also decided that the next meeting of the Energy Ministers will be arranged by Nepal in early 2018 (MEA India, 2017). MoPEMR officials stated that, Bangladesh plans to import around 3,500 MW of additional electricity through bilateral and sub-regional joint ventures from India, Myanmar, Nepal and Bhutan by 2030, under the umbrella of BEC, if possible.

### **Challenges to Energy Cooperation**

In the South Asian regional context, the risks associated with forging an intra-regional, cross-border energy cooperation which include political, legal, and institutional challenges would be greatly mitigated if the economic benefits were given priority. Other barriers to energy trade include lack of trans-national infrastructures, such as transmission networks and gas pipelines; inconsistent framework for regional planning; incongruent pricing policies and access regulations; differences in energy subsidization policies; and lack of coordination among regional transmission utilities.

**Regional Political Dilemma:** South Asia as a region has great potentials in terms of rapidly growing economies, human resources and untapped energy potentials. The countries within themselves have forged a good number of regional, sub-regional and multilateral organizations for mutual cooperation. However, other regions like Europe or South East Asia, have flourished tremendously in regional cooperation. But, as a region, South Asia has not been able to attain such pace. The Geo-politics have always dominated Geo-economics in the regional affairs. As such, all sectors of cooperation have been affected including energy cooperation.

**Political Climate with India:** During Indian Prime Minister Narendra Modi's two-day visit to Bangladesh in 2015, India and Bangladesh opened a new chapter in improving economic relations including energy connectivity and cooperation. The bilateral relationship reached newer heights with the visit of Prime Minister Sheikh Hasina to India in April 2017. The two countries signed 22 agreements to link their economies. Concurrently, 11 agreements/MOUs have been signed in the energy sector

cooperation both between the two Governments and private sectors of both countries. However, continuity and consistency in bilateral relations is critically important for maintaining and also enhancing cooperation in the energy sector.

**Political Impediments with Myanmar:** Bangladesh's relations with Myanmar could not reach any significant level and the relationship quite often become strained or uneasy due to the influx of large number of Rohingya refugees from Myanmar to Bangladesh. These bilateral irritant between Bangladesh and Myanmar has regularly affected any cooperative efforts, including energy sector cooperation. From the Bangladesh Embassy officials in Myanmar and the officials of Petrobangla it is learnt that, since 2010, Bangladesh has attempted to revive the energy connectivity initiative with Myanmar. Accordingly, a Joint Working Group (JWG) was formed to carryout technical feasibility with experts from both countries. Two possible options were discussed at the JWG meetings; those are:

- A hydro power project on the Laymro River of Myanmar with a target of producing 500 - 600 MW power.
- A second hydro power project on a River in North Buthidaung of Rakhine State. This had a target of producing 70 - 80 MW power.

Unfortunately, due to the Rohingya crisis of 2012, the JWG proposals were shelved. As per the statement of incumbent Bangladesh Ambassador to Myanmar, Bangladesh took renewed initiative to enhance bilateral ties with Myanmar with a broader canvas in 2014. The Adviser to the Honourable Prime Minister on Energy visited Myanmar on 01 February 2014. In the meeting between the two sides, Bangladesh proposed to invest in the energy sector of Myanmar especially in Rakhine and Chin States. In addition, proposals were given by Bangladesh for Joint exploration and data sharing of Maritime gas blocks. Lastly, in August 2017, Honourable Deputy Minister for Power, Energy and Mineral Resources Mr. Nasrul Hamid visited Myanmar. However, officials of Petrobangla stated that,

the latest crisis arising from Rohingya issue has practically stalled any possibility of energy cooperation, at least for the time being.

### **Economic Challenges**

In South Asia, most countries are energy-deficient and lack the capacity to trade in electricity. Large-scale investments are necessary to attain long-term benefits. Ironically, both decision makers and the people at large perceive short-term improvements in domestic power availability as higher investment priorities. Moreover, retail power prices remain subsidized in Bangladesh and northern India. (Gippner, 2010). Nevertheless, some of the project locations in Nepal with comparatively lower cost of production were earmarked for exports. Overall, though, the cost of developing new projects in Nepal is often higher than a similar investment in Bhutan and India.

### **Institutional and Infrastructural Barriers**

The challenges arising from importing power and their countermeasures are discussed below (Power Division, MoPEMR, 2016).

**Energy Security:** In the case of importing power from other countries, the risk of supply interruption caused by adverse relationships between the two countries needs to be considered. Electric power, which is different from other types of supply, is technically easy to shut down even in minutes. So it is necessary to avoid excessive reliance on other countries in order not to place oneself in a serious situation. Specifically, the capacity of imported power from one country should ideally be within the limit of generating reserve margin and also 10% of all supply capacity in order to continue the supply in the event of unforeseen interruption.

**Massive Blackout due to Large Scale Power Loss of Supply:** It is desirable to import as much power as possible through one connecting point from the viewpoint of economic efficiency. However, if a huge amount of power is transmitted through one connecting point, it can lead

to the risk of massive blackout. Such a massive blackout occurred on 1st November 2014, triggered by 500 MW power loss / break down on the inter-connection line from India. In order to avoid such risk, the maximum level of import capacity in one inter-connection point has to be decided through proper technical study.

**Mutual Interference due to Grid Accidents:** Conducting power trading means transmission lines are connected between two neighbouring countries, which will lead to the possibility of mutual interference due to grid accidents. But the influence can be minimized by connecting DC lines. Current inter-connection lines between India and Bangladesh apply DC lines or non-connected lines by switching the load. There may be a few mutual interferences due to grid accidents in Bangladesh. The probability of interference will vary with the share of power import vis-a-vis own power supply.

### **Key Issues for Sub-Regional Power Market**

As per the statement of PGCB officials, before entering into a common energy market, the following issues of the existing power infrastructure of Bangladesh are to be considered:

- There are occasional congestion in the national grid at certain places at some peak hours. The grid system needs up-gradation to avoid such congestion. The future power traffic must also be catered while upgrading the existing transmission system.
- The transmission lines in Bangladesh are either 11 kV/ 132 kV/ 230 kV/ 400 kV lines. For cross border and long distance interlinks 800 kV HVDC lines are necessary in future.
- Currently, PGCB has undertaken a total of 19 projects for constructing new grid stations, transmission lines and other associated development works.
- Power connectivity with another country needs matching of systems as a starter. Subsequently, an agreed 'Grid Code' needs to be adhered to by the connected parties.

## **Exploration of Opportunities and Future Prospects**

### **Future Programs**

The government has outlined its vision targeting to become a developed country by 2041. In keeping with the Vision 2041 the PSMP-2016 has been prepared. As per PSMP- 2016:

- New power plants will be established under public, private and PPP.
- 3500 MW Power will be imported from the neighbouring countries.
- 1500 MW electricity will be generated from renewable energy resources.
- Coal based power plants of 4000 MW will be established by 2017 and 20,000 MW by 2030.
- Nuclear power plants for 4000 MW will be established by 2030.

### **Cooperation with India - Future Potentials**

Some future plans in power sector cooperation (bilateral and sub-regional) as learnt from MoPEMR, BPDB, PGCB and Petrobangla officials through the interview are mentioned below:

- India has agreed to export another 500 MW power through Bheramara-Bahrapore grid Interlink after the capacity expansion programme is completed on bothsides of the border.
- A major power transmission line is planned to be constructed from Assam (Bornagar) to Bihar (Katihar) across Bangladesh. Bangladesh would access this transmission line for importing 1,000 MW of electricity by setting up a grid substation at Barapukuria, Parbatipur.
- Adani Power Limited of India signed an MOU with BPDB to supply 1600 MW of power from its plant under construction in Jharkhand, India. This power plant will be a dedicated one for exporting power to Bangladesh.

The MoPEMR of Bangladesh is currently working to import further 2000 to 3000 MW of power from India from following offers / options:

- Supply of 400 MW power from Haldia Power Plant of West Bengal.
- Import of 340 MW power from NTPC Power Plant at Bongaigaoun, Assam.
- Supply of 1000 - 1500 MW power from Sagardighi Power Station, West Bengal.
- Sale of up to 1100 MW power by December 2019 from Palatana Project of ONGC Tripura Power Company Ltd (OTPC).

### **Prospect of Cooperation with Bhutan and Nepal**

**Bhutan:** Bangladesh has been pursuing to make a deal with Bhutan to invest in hydropower project in the landlocked country to re-import the electricity. It is part of a regional power trade. The Power Division under the MoPEMR has already given its consent on the draft MOU with Bhutan. Bangladesh has completed preliminary talks with Bhutan as well as India to facilitate import of hydroelectricity crossing over Indian territories (Rahman, 2017). Once the MOU is signed by the governments of Bangladesh, India and Bhutan, all three countries will jointly participate in the construction of the 1,125 MW Kuri - 1 hydropower project in Bhutan. The project construction is expected to start soon while the costs are expected to reach US\$1.25bn, of which US\$1bn will be provided by Bangladesh (Energy world, 2017).

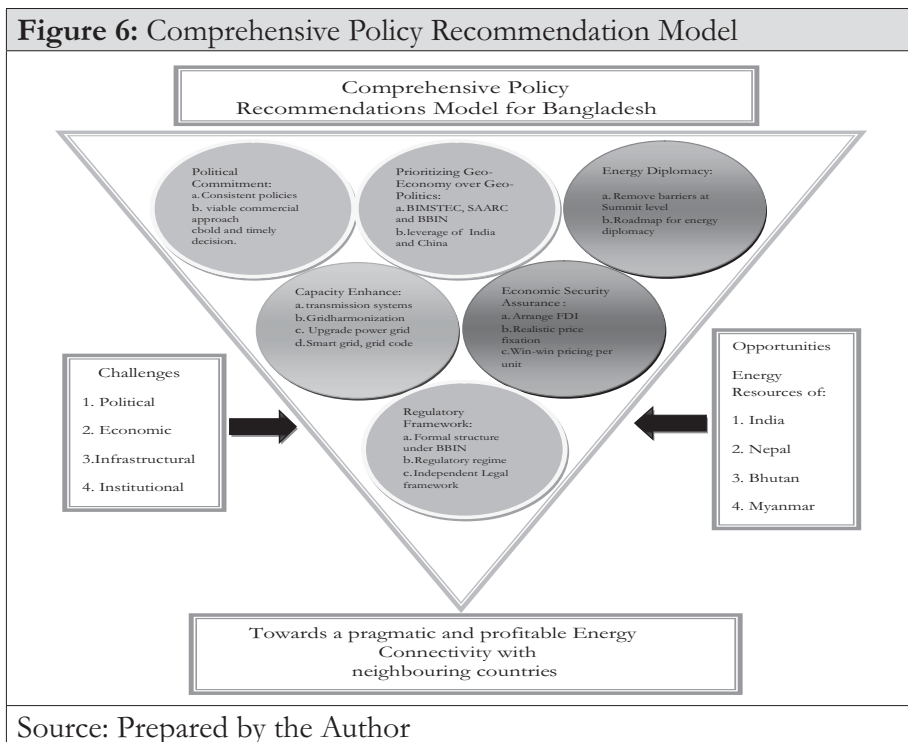
**Nepal:** Nepal and Bangladesh began holding discussions on power trading in August 2014. Preparations to sign a power trade agreement between the Governments of Nepal and Bangladesh are underway. The draft outlines protocols for conducting energy trade between the two countries, in line with SAARC Framework Agreement for Energy Cooperation (SASEC, 2016). Meanwhile, during the visit of Honourable Prime Minister of Bangladesh to India in April 2017 an MOU was signed between National Thermal Power Corporation (NTPC) Limited of India and BPDB. Within the scope of a three-nation cross-border connectivity initiative, NTPC Ltd of India entered into a preliminary pact with BPDB for supply of power from Nepal. The estimated value of the deal is US\$3.15 billion. (Rahman, 2017)

## Energy Cooperation with Myanmar

With the total completion of construction of the Kaladan Multi-Modal Transit Transport Project there is a feasibility of building a pipeline upto Mizoram. Alongwith the roadway, a gas pipeline could traverse. Pragmatically, India may continue to engage with Bangladesh on connecting the pipeline from Mizoram to Kolkata. The advantage of going through Bangladesh is that, a large amount of Indian investments can take place in Bangladesh (Thandi, 2013).

## Policy Recommendations for Bangladesh

Bangladesh has to carry the key responsibility for advancing energy cooperation with its neighbours. The recommended policy options for Bangladesh are depicted in the model given below. The details are enumerated in subsequent paragraphs.





**Consistent Political Commitment:** Bangladesh, like any other country in the world has outstanding bilateral issues with both its neighbours: India and Myanmar. However, in the greater interest of peaceful coexistence Bangladesh has to:

- Display firm and consistent policies towards the bilateral relations with its immediate neighbours.
- Adopt a sustainable and viable commercial approach to power and energy trade rather than a politically popular adhoc approach.
- Take bold and timely political decision to avail opportunities / offers of multilateral energy connectivity.

**Prioritizing Geo-Economy over Geo-Politics:** Despite the geo-political and security concerns, efforts are to be made to prioritize geo-economic considerations in the cross border energy trade. The policy recommendations are:

- Through the regional and sub-regional organizations like BIMSTEC, SAARC and BBIN the prospect of energy cooperation has to be constantly pursued by Bangladesh.
- By utilizing the leverage of powerhouses like India and China, Bangladesh may enter into tripartite energy connectivity with Myanmar.

**Energy Diplomacy:** Bangladesh needs to pursue effective energy diplomacy in bilateral level as well as in multilateral forums. Following measures are recommended:

- At the summit level talks of BBIN, Bangladesh's major objective has to be to remove the barriers for regional power grid connectivity with Bhutan and Nepal through Indian territories.
- MoFA may seek assistance of veteran diplomats and energy experts to devise a roadmap to bolster diplomatic efforts and

pursue it constantly for effective bilateral and sub-regional energy diplomacy.

**Capacity Enhancement:** On its part, Bangladesh has to take measures to enhance its own capability in power sector for safe and efficient power transmission. Following measures are recommended:

- Wherever necessary separate transmission systems and operators are to be generated for sub-regional power connectivity.
- Power grids are to be harmonized and synchronized with the neighbouring countries, which will also facilitate conventional imports and exports.
- Upgrading (765 to 800 kV HVDC) and enhancing capacities of domestic power grid every year to allow for enhanced future power supply and transmission.
- Cooperation may also be sought from developed as well as neighbouring countries to introduce smart grid, grid code, technology transfer etc. to achieve energy efficiency.

**Economic Security Assurance:** Together with its immediate neighbours, Bangladesh needs to create an environment of security for private and foreign investors. The suggested measures are:

- FDI may be arranged not only for large scale power generation plants but also to upgrade sub-regional energy infrastructure as a whole.
- In order to pay back the investors and also to ensure economic well being of the people, the price fixation has to be realistic based on reliable market signals.
- The imported power price per unit also needs to be set to ensure win - win situation for both the buyer (Bangladesh) and the seller (neighbouring country).

**Regulatory Framework Improvement:** To increase energy cooperation, some important future steps are to be taken. The recommended measures are:

- Bangladesh may pursue for a formal structure under BBIN for sub-regional power exchange to review the power systems in individual countries. The structure has also to take into account commercial requirements and compatibility for cross-border trade.
- Establishment of independent regulatory regime may be proposed to improve investment environment for the private sector for both electricity generation and transmission.
- Independent legal framework may be proposed to deal with cross-border trade. This body may also be given the authority for resolution of disputes arising from energy trade between two or more countries.

## Conclusion

Energy is the key ingredient for the development of any country. This research analyzed the current state of the energy sector of Bangladesh, as well as the energy potentials in her immediate neighbourhood. It attempted to highlight the existing cross-border energy connectivity in the region and sub-region, involving Bangladesh. The political, economic infrastructural and institutional challenges posing barriers to energy connectivity with the neighbouring countries i.e. India, Nepal, Bhutan and Myanmar was deliberated upon. An analysis of various initiatives and efforts taken by the government for energy connectivity vis-a-vis the intent of immediate neighbours offering opportunities in the sector of energy cooperation was explored.

In the immediate neighbourhood of Bangladesh, forging an intraregional, cross-border energy cooperation is primarily affected by political barriers. However, it can be effectively minimized if the long term economic benefits are better understood. Lack of trans-regional energy infrastructures, such as transmission networks and gas pipelines; inconsistent regulatory framework for regional planning; payment risks; incongruent pricing policies and access

regulations; differences in energy subsidization policies; and the lack of compatibility among regional transmission utilities also need to be addressed. Balanced against these challenges and barriers are several benefits of cross border energy cooperation. In theory, cross border trade among the sub regional countries could lead to lower relative prices and the improved welfare of participating countries. For example, both Bangladesh and India could fulfil their growing economic needs through imported hydropower from Bhutan and Nepal. Bangladesh could also benefit from the huge energy potentials of Myanmar, which also has huge hydroelectric power potential, either by having bilateral or regional arrangements. Practically, though, any bilateral cooperation with Myanmar seems to be a remote possibility under the shadow of deepening Rohingya crisis.

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### **Interviews/Interactions**

19. Rahmat Ullah Mohd. Dastagir, ndc, Additional Secretary, Power Division, MoPEMR interviewed at BPDB Head Office, Dhaka
20. Sheikh Faezul Amin PEng, Joint Secretary (Development), Power Division, MoPEMR, interviewed at Bangladesh Secretariat, Dhaka

21. H.E. Mohammad Sufiur Rahman, Ambassador of Bangladesh to Myanmar, interacted at the Ministry of Foreign affairs and later interviewed over telephone
22. Engr. Pranab Kumar Roy, Chief Engineer (P&D), Power Grid Company of Bangladesh Ltd. (an Enterprise of BPDB), interviewed at PGCB Office, Dhaka

## **Author**

Commodore Nazmul was commissioned in the Executive Branch of Bangladesh Navy on 1st July 1986. He completed his initial training from Britannia Royal Naval College, UK. Commodore Nazmul did his long Navigation course from Cochin, India in 1993. He is a distinguished graduate of Defence Services Command and Staff College, Mirpur and Naval War College, USA. He also attended Naval Command Course at US Naval War College. His academic qualifications include Bachelor of Science degree from Chittagong University and Masters in Defence Studies from National University, Bangladesh. Commodore Nazmul has a blend of Command, Staff and Instructional appointments throughout his career. He worked as Director General, Civil Military Relations at Armed Forces Division, Naval Operations and Director Naval Intelligence, Naval Head Quarters. His instructional career started as the Naval DS at Bangladesh Military Academy, as a Directing Staff (DS) and a Director at BNA and as DS in DSCSC. He was also appointed as the Commandant of Bangladesh Naval Academy. His Sea Commands include BN Ships BISHKHALI, TISTA, MADHUMATI and training frigate, BNS UMAR FAROOQ. He also commanded the Navy's Special Force (SWADS). Commodore Nazmul has received the third prize in the Indian Ocean Naval Symposium (IONS) Essay Competition 2015. He has also written an article in the UN Peacekeeping Journal 2016 published by the Armed Forces Division, Bangladesh.