



# **Internship Report on Industry Analysis: Power Industry of Bangladesh**

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# **Industry Analysis: Power Industry of Bangladesh**

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## **LETTER OF TRANSMITTAL**

Date: January 19, 2012

**Ms. Samina Haque**

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Dear Madam,

With great gratification I am submitting my internship report on “**Industry Analysis: Power Industry of Bangladesh**” that you have assigned me as an essential requirement of the Internship program. It is really an enormous prospect for me to congregate vast information and grasp the subject matter in an appropriate way. I have found the study is quite interesting, beneficial and insightful. I have put my best effort to prepare an effective and creditable report.

I honestly, not only anticipate that my analysis will assist to provide a clear idea about the overall condition of the Power Industry of Bangladesh, but also optimistic enough to believe that you will find this report’s worth for all the labor I have put in it. I appreciate your involvement in this highly enriching project. I sincerely hope that you would consider my endeavor and find the report satisfactory.

Yours Sincerely,

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**MD. Munim Bakhtiar**

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<b>Full Term</b>	
1. Ashuganj Power Station Company Limited	APSCL
2. Electricity Generation Company of Bangladesh	EGCB
3. Small Independent Power Producer	SIPP
4. Bangladesh Power Development Board.	BPDB
5. Rural Electricity Board	REB
6. Dhaka Electric Supply Co. Ltd	DESCO
7. Dhaka Power Distribution Co. Ltd.	DPDC
8. West Zone Power Distribution Co. Ltd	WZPDCL
9. North West Zone Power Distribution Co. Ltd	NWZPDCL
10. South Zone Power Distribution Company Ltd	SZPDCL
11. City Bank Limited	CBL
12. Mega Watt	MW
13. Kilo Watt	KW
14. Kilo Watt Hour	KW/h
15. United States	US

### **List of Abbreviation**

## **Executive Summary**

The report is originated in result of my internship program which I have done as a requirement of BBA program. This report is completed based on my three months internship in The City Bank Ltd & an Industry Analysis as a requirement of my internship report. This report contains the real life experience of my internship in City Bank and an Industry Analysis on the Power Industry of Bangladesh.

The report includes my internship experiences and job responsibilities in City Bank. At the same time this report also includes the analysis on the power industry of Bangladesh. The report describes the overview of City Bank, vision, mission and values of the bank. It also describes the products and services of the bank. Then it describes the job responsibilities and observations and recommendation about the job responsibilities.

In the project part, this report analyzes the power industry of Bangladesh. It finds out the present scenario of the industry. It includes the government vision and future plans regarding the industry. Then it describes the sector wise percentage of power production. It also gives information about the government incentives for the investors. The report also gives the information on the initiatives taken by the government. This report summarizes the all projects that would be implemented by the government within the next four years.

As a final point, the report includes a SWOT analysis of the power industry of Bangladesh. In the SWOT analysis it tells the most important strengths, weaknesses, opportunities and threats of the industry. By doing the analysis this report provides the most valuable part of this study. This analysis will be helpful to understand the prospect of the industry.

Lastly, the report gives a brief recommendation and conclusion on the power industry of Bangladesh. The recommendations provided in the report would be helpful to improve the industry. By implementing the recommendation the government can make the power industry an efficient industry to facilitate the overall development of the country.

# **CHAPTER -01: THE ORGANIZATION**

## 1.1: Overview of the City Bank

City Bank is one of the oldest private Commercial Banks operating in Bangladesh. It is a top bank among the oldest five Commercial Banks in the country that started their operations in 1983. The Bank started its journey on 27th March 1983 through opening its first branch at B. B. Avenue Branch in the capital, Dhaka city. It was the visionary entrepreneurship of around 13 local businessmen who braved the immense uncertainties and risks with courage and zeal that made the establishment & forward march of the bank possible. Those sponsor directors commenced the journey with only Taka 3.4 crore worth of Capital, which now is a respectable Taka 330.77 crore as capital & reserve.

City Bank is among the very few local banks which do not follow the traditional, decentralized, geographically managed, branch based business or profit model. Instead the bank manages its business and operation vertically from the head office through 4 distinct business divisions namely

1. Corporate & Investment Banking
2. Retail Banking (including Cards)
3. SME Banking &
4. Treasury & Market Risks.

Under a real-time online banking platform, these 4 business divisions are supported at the back by a robust service delivery or operations setup and also a smart IT Backbone. Such centralized business segment based business & operating model ensure specialized treatment and services to the bank's different customer segments.

The bank currently has 83 online branches spread across the length & breadth of the country that include a full fledged Islamic Banking branch. Besides these traditional delivery points, the bank is also very active in the alternative delivery area. It currently has 25 ATMs of its own; and ATM sharing arrangement with a partner bank that has 225 ATMs in place; SMS Banking; Interest Banking and so on. Soon its Customer Call Center is going to start operation. The bank has a plan to end the current year with 50 own ATMs.

City Bank is the first bank in Bangladesh to have issued Dual Currency Credit Card. The bank is a principal member of VISA international and it issues both Local Currency (Taka) & Foreign Currency (US Dollar) card limits in a single plastic. VISA Debit Card is another popular product which the bank is pushing hard in order to ease out the queues at the branch created by its astounding base of some 400,000 retail customers. The launch of VISA Prepaid Card for the travel sector is currently underway.

City Bank prides itself in offering a very personalized and friendly customer service. It has in place a customized service excellence model called GAP (Graceful-Appropriate-Pleasing) that focuses on ensuring happy customers through setting benchmarks for the bank's employees' attitude, behavior, readiness level, accuracy and timelines of service quality.

City Bank is one of the largest corporate banks in the country with a current business model that heavily encourages and supports the growth of the bank in Retail and SME Banking. The bank is very much on its way to opening many independent SME centers across the country within a short time. The bank is also very active in the workers' foreign remittance business. It has strong tie-ups with major exchange companies in the Middle East, Europe, Far East & USA, from where thousands of individual remittances come to the country every month for disbursements through the bank's large network of 83 online branches.

The current senior management leaders of the bank consist of mostly people from the multinational banks with superior management skills and knowledge in their respective "specialized" areas. The bank this year, is celebrating its 25th year of journey with the clear ambition of becoming the no.1 private commercial bank in the country in 3 years time. The newly launched logo and the pay-off line of the bank are just one initial step towards reaching that point.

## **1.2: Vision, Mission & Values of the City Bank**

### **Vision**

The Financial Supermarket with a Winning Culture Offering Enjoyable Experiences.

### **Mission**

- Offer wide array of products and services that differentiate and excite all customer segments.
- Be the 'Employer of choice' by offering an environment where people excel and leaders are created.
- Continuously challenge processes and platforms to enhance effectiveness and efficiency.
- Promote innovation and automation with a view to guaranteeing and enhancing excellence in service.
- Ensure respect for community, good governance and compliance in everything we do.

### **Values**

- Result Driven
- Engaged & Inspired
- Accountable & Transparent
- Focused on Customer Delight
- Courageous & Respectful

### 1.3: Organogram of CBL



*Figure 01:* Organogram of CBL

## 1.4: Products of City Bank

The City Bank Ltd offers a wide range of products to its customers. Wholesale banking and retail banking both offer the best financial products and services for all its clients. "**City Retail - add a little city to your life**" is the new brand-mantra, the pay-off line for City Retail. The different products of The City Bank Ltd are described below:

### Deposit Products

City Bank offers a wide variety of deposit products to meet financial needs of the customers. From current and savings accounts to Fixed Deposits and Pension Schemes each account is designed to give the best value for making money.

### Current Account

Current account of City Bank meets the needs of individual and commercial customers through its schedule benefit. The Initial deposit for this account is Tk. 10,000 and Minimum balance required is Tk. 5,000. There is no Interest on this account. The customers get different benefits from this account like: Cheque-book facility, Opportunity to apply for safe deposit locker facility, Collect foreign remittance, Transfer of fund from one branch to another by Demand Draft, Mail Transfer, Telegraphic Transfer, Transfer of fund on Standing Instruction Arrangement, Collection of cheques through Clearing House and Online banking service.

### Savings Account

It is a sound savings for retail customer. The Initial deposit required is Tk. 5,000 where the minimum balance has to be only Tk. 500. In this account customers enjoy a Interest rate of 6.50% on their savings balance. The different benefits that customers enjoy in this account: Cheque-book facility, Opportunity to apply for - safe deposit locker facility, Utility payment service, Collect foreign remittance, Transfer of fund from one branch to another by-Demand Draft, Mail Transfer, Telegraphic Transfer, Transfer of fund on Standing Instruction Arrangement, Collection of cheques through Clearing House and Online banking service.

### City Onayash

Any Bangladeshi National who is At least 18 years is eligible to get this service of City Bank. City Onayash is a unique kind of savings account which calculates interest on your daily balance and pays interest to you every month. The initial deposit is Tk. 10,000. And the customers get a Interest rate of 5.50% in this account. It is a major departure from the conventional savings account available in the market. All such accounts calculate interest on the average or lowest balance of the month, while City Onayash does on daily product basis. Not only that, while those conventional savings accounts pays interest only twice a year - in December and June - City Onayash pays it every month.

## Short Term Deposit

Short Term Deposit is also a special scheme offered by City Bank Limited for the savings of customers. The Initial deposit for this account is Tk. 10,000 where the customers get an Interest rate of 5%.

## Fixed Deposit

Fixed deposit is a scheme for the savings of the customers .The minimum amount of deposit in this scheme is Tk. 50,000. The different interest rates that the customers enjoy in different deposit schemes are shown in the table:

Term of Deposit	Interest Rate
1 month	10.00
3 months	12.00
6 months	11.50
1 year	
Below Tk. 1.00 crore	12.50
Tk. 1.00 crore to below Tk. 20.00crore	13.00
Tk. 20.00 crore and above	13.50
2 years	12.00

*Chart 01: Fixed Deposit Rate*

## City Ichchapuron

Any Bangladeshi National who is At least 18 years can be Eligible to get a City Ichchapuron account. It is a great opportunity to earn against the savings every month. This product allows earning interest and enjoying interest every month that accrues in the fixed deposit account, no matter what the term of the deposit is.

## City Shomriddhi

City Shomriddhi is a unique offer from City Bank. This is an exceptional DPS product that is distinctly more attractive than the prevalent DPS products in the market. It offers a hefty sum at the end of the term against customer's monthly deposit of small installments. The main features of this account are: No initial deposit required is required, Monthly installment deposit ranges from Tk. 500 to Tk. 20,000, Flexible tenor of 3, 5, 7 and 10 years, On premature encashment.

## **City Projonmo**

City Projonmo is a financial safety for your future generations backed by complete immense protection. This is a unique monthly deposit scheme that is opened for the kids to safeguard their future against all uncertainties and risks. As a guardian of the child one can open this account which builds great & unmatched savings over the years. By the time he/she child is past his or her school age, there is this sufficient cash in your hand to take care of his / her higher education, marriage or other such large expenses. However, the most interesting part of this scheme is the full insurance protection that the account holder automatically enjoys. This simply means, in case of death or total physical collapse of the parent or guardian, the bank will pay the full value of the scheme for the full term no matter in reality how many months or years have been actually completed by.

## **Loan Products**

### **City Drive**

City drive is an Auto Loan scheme for salaried person, business person & self employed individuals. Car for one's family is now a matter of fulfilling a necessity. Appreciating that basic need, City Bank introduces City Drive, a tailor-made auto loan scheme for individuals. In this scheme the Loan amount is ranged from Tk. 300,000 to Tk. 2,000,000. The customers also enjoy some other facilities like: Lower interest rate & up to 100% financing for loan against cash security, Loan tenor 12 to 60 months, No hidden charges, Competitive interest rate and Loan processing fee of 1% of loan amount.

### **City Solution**

City Solution is an any purpose loan where the customers can get any personal loan from City Bank to solve their problems and to fulfill all their dreams. The Loan amount is ranged from Tk. 50,000 to Tk. 1000,000 where No guarantor required for the loan amount up to Tk. 3 lac. Loan tenor is 12 to 60 months and there will be No hidden charges. The customers also enjoy a Competitive interest rate and only 1% processing fee.

## **City Cards**

### **Debit Cards**

The Visa debit card of City Bank is one of the most popular cards available in the country. Visa Debit Card from City Bank makes life of people hassle-free and safe. The customers can enjoy the facility of Cash withdrawal from 500+ Visa ATMs all over the country. Shop and dine at hundreds of merchant Visa outlets all over the country. They can have their b

alance enquiry anytime in any of the ATM both. The customers can also transfer Fund from their account to credit cards. The cardholder also enjoys the facility of PIN Change and Mini statement.

## **Credit Cards**

There are different eligibility criteria for different types of credit cards. First of all the card holder must be a Bangladeshi Nationals. Age range for primary card holder is 18 years to 60 years, Age range for supplementary card holder is 18 year to 60 years but Age bar can be relaxed for secured cards. The Minimum Gross Monthly Income for silver card is Tk. 12,000 and the Minimum Gross Monthly Income for gold card is Tk. 30,000. A Minimum of 6 month permanent employment for salaried executives is required. On the other hand 1 year of experience in business or practice for self employed professionals and business person is required. The different Features of City Bank credit cards are: Variable Interest Rate, Balance Transfer, Round the clock cash withdrawal facility at any Visa branded ATM throughout the world, Round the clock purchasing power for goods and services at any Visa branded POS outlet, 24% interest on Cash Advance, No cash Advance fee at CITY ATMs, Lowest Annual/Renewal Fee, International Roaming facility, Internet Transaction, Convenient Repayment option, E-statement, Limited Lost Card Liability and 24 hours customer service help desk. City Bank is the first bank to issue Dual Currency Credit Card in Bangladesh. This card enables the customers' simultaneous usage of their cards both in home and in abroad.

# **CHAPTER -02: JOB RESPONSIBILITIES & OBSERVATION**

## **2.1: Job Responsibilities**

During my internship program I was assigned to work in the Security and Protocol department of the General Administration Division at the Head Office of The City Bank Ltd. My responsibility was to collect data from different sources and compiling all those in a comprehensive database. These databases ultimately facilitate the efficiency of the department. The different databases that I prepared during my internship are described below.

### **Arms and Ammunition statement**

This is a comprehensive database of all existing arms and ammunition of the company. Recently the authority conducted a countrywide survey for the current situation of all arms and ammunition in all branches. From the report of this survey I had to build up a comprehensive database. This database includes branch wise position of guns and cartridges. It also gives important information like: quantity of guns and cartridges, type and model of guns and cartridges, current situation, license renewal date etc.

### **Existing Alarm System**

This is the CMS (Central Monitoring System) database. This database contains all existing information of installed alarm system. Collecting various data from different sources and compiling all those data in one excel file using six spreadsheets results in this database.

### **Fire training Database**

This database contains the record of all participants of fire training. The security and Protocol department arranges fire training where employees, security guards, attendants participate. This training aims to give the participants idea about emergency evacuation and fire fighting during a fire accident. This database contains the name and ID of all participants of five fire training arranged so far.

### **Guard Database**

This is the database of security guards. This database contains all the locations where security guards have been deployed. It includes the vendor company name, deployment date, how many security supervisors and guards are performing in which shift.

## **Fire Extinguisher Database**

This is the database of all fire extinguisher installed in all CBL locations. This database contains the type of fire extinguisher, quantity installed in a location, installation date, refilling date of extinguisher etc.

## **Access Control Device & time Attendance Device Database**

This database consists of all the information of access control device and time attendance device. It contains information about the entire installed access control device in different location. It also compiles the information of all time attendance devices. For both type of devices it contains the type and model of device, installed location, installed quantity etc.

## **Contact Details of all Establishment**

This is a comprehensive database of all CBL establishments. This database has the detail address and contact number of one concern person of the specific establishment. This database includes all Branches, Broker houses, offices, SME Centers, godowns, ATMs and all other establishment of CBL.

## **Bill Processing Database**

Bill processing database is the comprehensive database of all bills of security and Protocol department. It contains the data that which vendor claims the bill for what service, in which date the bill is presented, who is the concern person to sign and approve the bill, in which date the bill is approved, after approving the bill when the bill will be given to finance department for payment etc.

## **Mobile Distribution List**

This is a database of mobile distribution. In three different phases mobile handsets with postpaid connection was distributed among security guards of different locations. Preparing the list for distributing mobile sets based on priority was the aim of this database. This database also can give the security contact numbers of all those locations.

## **Umbrella Distribution List**

Umbrella distribution list is the list of all distributed umbrellas. For three different security company's guards the security department distributed umbrella with the logo of The City Bank Ltd. This list compiles all information about the distribution of the umbrellas.

## **Preparing Meeting Minutes**

Meeting minutes is the detailed written document of all issues and discussion points of the meeting. It documented the issues of the meeting and required action for the issues. It also defines the responsible person for the specific task and deadline to finish the task. These meeting minutes also gives information on the pending issues and follow-ups of previously assigned tasks. During the internship program, for the regular weekly meeting and follow up meeting, preparing the meeting minutes and circulate to the concern persons was my responsibility.

## **Working in different departments**

During the internship program I also worked in the Infrastructure Maintenance (IM) department which is another department of General Administration Division. In this department I prepared the Purchase Requisition Form (PR Form) for different maintenance materials. I also prepared the Payment Approval Notes for different maintenance works in different ATMs. In this department I also made s database of all the utility bills. This database compiles all monthly utility bills of the different establishments of the City Bank.

## **2.2: Observation and Recommendation**

Working at CBL was a great experience for me. I have learnt many things during my internship program. From my little knowledge what I have observed and some recommendations are here:

- Work environment is very friendly and employees are co-operative.
- Employees are active and sincere to their assigned responsibilities.
- All employees are committed to the new Vision, Mission and Values of CBL.
- Although the office hour is 10:00 am to 06:00 pm, still most of the employees do not leave office before 07:00 pm.
- PCs used in CBL are of older versions. These PCs should be upgraded to the newer versions to increase the efficiency of the employees.
- If there is a rotation system in the internship program then the learning scope of the interns would be greater.

**CHAPTER- 03:  
THE PROJECT: - INDUSTRY  
ANALYSIS**

## **3.1: Description of the Project**

### **3.1.1: Objectives of the Project**

#### **General Objective**

The prime objective of this Project is to do a detail analysis of the power industry of Bangladesh.

#### **Specific Objective**

- To understand the power industry of Bangladesh.
- To find out the main producers of the industry.
- To identify the percentage of public and private producers of total production.
- To know how the power industry of Bangladesh operates.
- To find out the demand and supply and the deficit of supply in the industry.
- To identify the percentage of all entities those are involved in the industry.
- To know the government visions and initiatives about this industry.
- To understand the present scenario of the power industry of Bangladesh.
- To analyze the strengths, weaknesses, opportunities and threats of the industry.
- To make some recommendations based on the SWOT Analysis of the industry.

### **3.1.2: Methodology**

In conducting this study the following methodology was adopted in collecting data and information as well as preparation of the report.

#### **Research Type**

This is a descriptive research, which briefly reveals the overall scenario of the power industry of Bangladesh. It also analyzes the present situation of the industry. This report will also provide a critical SWOT Analysis of the industry.

#### **Sources of Data**

This report does not use any primary data; rather it uses secondary data to conduct the research. Newspapers, Articles, ADB (Asian Development Bank) reports and different websites were used as the sources of data.

## Analysis

This report provides a SWOT Analysis of the power industry of Bangladesh. In this critical analysis different data have been used to make the best analysis and find out the strengths, weaknesses, opportunities and threats of the industry. This SWOT Analysis will give a clear view about the present situation of the power industry of Bangladesh.

### 3.1.3: Limitations

Though I have given utmost effort to prepare this report still there are some limitations of the study. The main constrain of the study was the insufficiency of primary data. For this reason, I was not able to collect the updated information and strategy of the government.

## 3.2: Industry Analysis:- Power Industry of Bangladesh

The Government of Bangladesh through the Ministry of Energy and Mineral Resources (MEMR)] bears overall responsibility for the power sub-sector in Bangladesh. Consumption of commercial energy per head in Bangladesh is one of the lowest in Asia, if not the world. A lack of commercially priced sources of electricity has been a major factor in deterring foreign investment hindering GDP growth. Per-capita generation of electricity was 110 kWh in 1997/98, according to Bangladesh Economic Survey, Ministry of Finance (2000). With about 22% of households receiving electricity, most commercial energy is consumed by industrial and residential customers. Frequent power failures due to inadequate maintenance continue to disrupt industrial production, water supplies and irrigation. In 2000, the currently installed capacity of public power plants as listed by the World Bank, is 3,300 MW, though actual daily generating capacity is often reduced to 2,400 MW, against a total daily demand of 2,675 MW to 2,725 MW. This usually results in extensive load shedding, which has now become a factor of daily life in Dhaka. The situation is worse outside the capital city. In 1999, there were some recorded 1,690 hours of load shedding. There is considerable foreign investor interest in the power sector. Contracts for four barge mounted power plants (BMPPs) with a total capacity of 470MW have already been signed and several other contracts are in the pipeline. A total of US\$750 million of FDI in this sector is expected in the next three years, reflecting principally the external financing of imported power plants and auxiliary equipment. The estimated capital requirement for the power sector during the next five years is \$5-6 billion. Since the Government of Bangladesh cannot finance the power system's expansion and development programmes from their own resources, they are now seeking multilateral and bilateral assistance, as well as private sector investments for adequate and sustainable development of the power sector. The Power Development Board's Master Plan stipulates raising present generation capacity from 2900 MW to 10,000 MW by 2015. As part of the plan, about 2000 MW of power generation capacity is expected to be added by 2005 at a cost of \$1.2 billion through foreign investment by Independent Power Producers (IPPs). At the suggestion of the Infrastructure Investment Facilitation Center (IIFC), the Government has recently agreed to license privately owned remote area power supply.

### 3.2.1: Vision, Mission Statement and Major Functions

#### Vision

To provide access to affordable and reliable electricity to all by the year 2020.

#### Mission Statement

Ensure uninterrupted and quality power supply for all by 2020 through improvement in generation, transmission and distribution systems.

#### Major Functions

- All activities related to power generation, transmission and distribution;
- Manage all matters and policies related to the Power sector;
- Expand, rehabilitate and modernize power generation, transmission and distribution services in line with the increasing national demand and prepare action plans and programmes accordingly;
- Encourage private and joint venture investment in the Power sector in addition to the government investment;
- Improve the standard of living of the rural poor through rural electrification and the introduction of renewable energy;
- Monitor revenue earnings and commercial activities.

### 3.2.2: Bangladesh Power Sector: At a glance

Sl. No.	Items	FY 2010-11 (Up to 15 June'11)
1.	Generation Capacity, MW	6,727
2.	Maximum Generation, MW (June 13, 2011)	4,890
3.	Net Generation, MWh (FY2009-10)	29,247
4.	Transmission Line, km	8,500
5.	Grid Substation Capacity, MVA	
	(a) 400 KV & 230 KV	6,850
	(b) 132 KV	9,899
6.	Distribution Line, km	2,70,000
7.	Number of Consumers (million)	12.00
8.	Number of Village Electrified	53,281
9.	Per Capita Generation, kWh	236
10.	Access to Electricity	49%

*Figure 02:* Power Sector at a glance

## Summary of Present Generation Capacity (15 June, 2011)

Presently total generation capacity is 6727 MW. Of this capacity 3534 MW is from public sector and 3193 MW is from the private sector, which is 53% and 47% respectively of the total generation capacity.

		Generation Capacity (MW)
<b>S/N</b>	<b>Public Sector</b>	
<b>1</b>	<b>BPDB</b>	<b>2620</b>
<b>2</b>	<b>APSCL</b>	<b>659</b>
<b>3</b>	<b>EGCB</b>	<b>255</b>
	<b>Subtotal</b>	<b>3534 (53%)</b>
<b>Private Sector</b>		
<b>1</b>	<b>IPPs</b>	<b>1271</b>
<b>2</b>	<b>SIPPs (BPDB)</b>	<b>99</b>
<b>3</b>	<b>SIPPs (REB)</b>	<b>226</b>
<b>4</b>	<b>15 YR. Rental</b>	<b>168</b>
<b>5</b>	<b>3/5 YR. Rental</b>	<b>441</b>
	<b>Quick Rental</b>	<b>988</b>
	<b>Subtotal</b>	<b>3193 (47%)</b>
	<b>Total</b>	<b>6727</b>

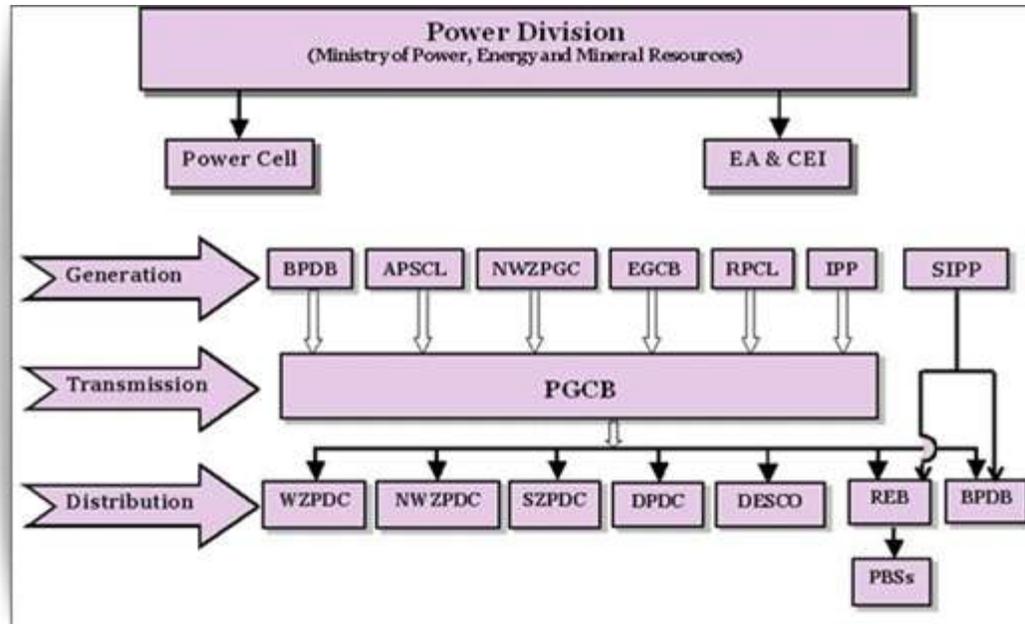
*Chart 02: Present generation capacity*

Considering 10 - 15 % Maintenance and Forced Outage, Available Generation Capacity is in the range of 4600 – 4900 MW without fuel constraint.

### 3.2.3: Power Sector Structure

Power Division is responsible for formulating policy relating to power and supervise, control and monitor the developmental activities in the power sector of the country.

To implement it's mandate the Power Division is supported by a number of organizations, related with generation, transmission and distribution. The organizational linkage is as follows:



*Figure 03: Power sector structure*

## Office of the Electrical Advisor & Chief Electric Inspector and Energy Monitoring Unit

The office of the Electrical Advisor and Chief Electrical Inspector (EA & CEI) is established, in order to ensure proper control and safety of life and property in the generation, transmission and distribution of electricity. Main responsibility of this office is to inspect installations, substation and lines and grant license for high tension and medium tension consumers. Besides, it issues license to electrical contractors, engineers and electricians. Energy Monitoring Unit is a sub-unit under this office. The objective of EMU is to ensure efficient use of energy in industries and to induce energy conservation.

## Power Cell

Power Cell was established in 1995 to assist Power Division in order to design, facilitate and monitor reform measures in power sector. It acts as Think Task to Power Division. Since inception, Power Cell has played vital role in reforming and unbundling the sector, private power generation, power tariff evaluation and establishing regulatory commissions. Power Cell is headed by a Director General, appointed by the Govt. and assisted by three Directors.

## **Power Generation**

The following government entities are involved in generation of power:

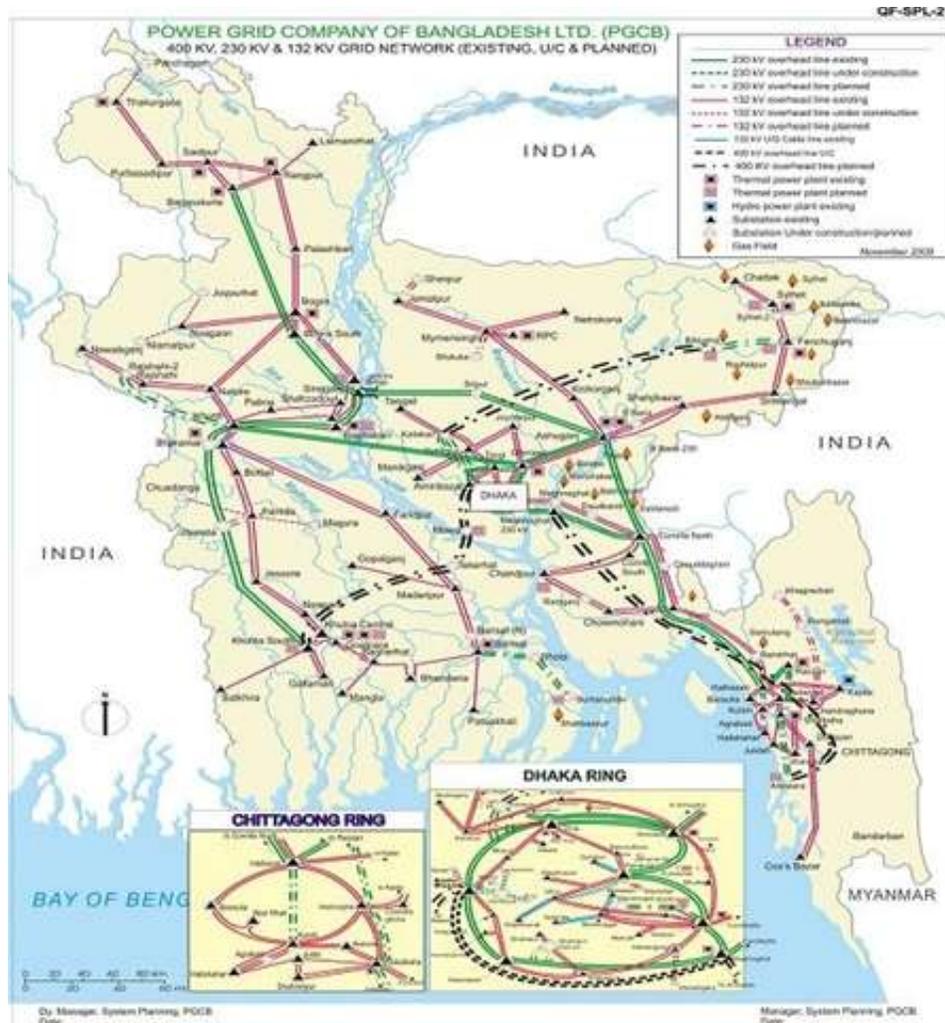
1. Bangladesh Power Development Board. (BPDB)
2. Ashuganj Power Station Co. Ltd (APSCL)
3. Electricity Generation Company of Bangladesh Ltd. (EGCB)
4. Rural Power Company Ltd. (RPCL)
5. North West Power Generation Company Ltd. (NWPGCL)
6. Independent Power Producers (IPPs)

## **Power Transmission**

Power Grid Company of Bangladesh (PGCB) is involved in power transmission in the country. This company solely transmitters power for all the producers.

### **Bangladesh Transmission Network**

Power generated in different power plants all over the country is transmitted to the national grid through 230 kV and 132 kV transmission lines. Power Grid Company of Bangladesh Ltd. (PGCB) is responsible for operation, maintenance and development of transmission system all over Bangladesh. In 1996 when PGCB was formed, the total lengths of 230 kV and 132 kV line were 838 ckt km and 4755 ckt km respectively. At present the lengths of 230 kV and 132 kV transmission lines are stood at 2644.5 ckt km and 5715 ckt km. The grid network across the country is shown below:



*Figure 04:* Transmission Network

## Transmission Projects of PGCB

Govt. has undertaken a massive plan to strengthen the transmission system and fulfill the future demand of electricity with the aim of reaching electricity to all by 2020.

## Major Upcoming Transmission Projects of PGCB

- Bibiyana-Kaliakoir 400 kV and Fenchuganj-Bibiyana 230 kV Transmission Line;
- Barisal-Bhola- Burhanuddin 230 kV transmission Line;
- Bibiyana-Comilla(N) 230 kV transmission line;
- Anowara-Meghnaghat 400 kV Transmission Line;
- Aminbazar-Maowa-Mongla 400kV & Mongla-Khulna 230 kV Transmission Line;
- 400 KV Grid Interconnection between Bangladesh (Bheramara) and India Baharampur

## **Power Distribution**

The following entities are involved in power distribution:

1. Bangladesh Power Development Board. (BPDB)
2. Rural Electricity Board (REB)
3. Dhaka Electric Supply Co. Ltd (DESCO)
4. Dhaka Power Distribution Co. Ltd. (DPDC)
5. West Zone Power Distribution Co. Ltd (WZPDCL)
6. North West Zone Power Distribution Co. Ltd (NWZPDCL)
7. South Zone Power Distribution Company Ltd (SZPDCL)

### **Bangladesh Power Development Board (BPDB)**

Bangladesh Power Development Board was established in 1972 as a public sector organization to boost the power sector. BPDB is the authority for planning, construction and operation of power generation through out Bangladesh and for distribution in urban areas. Besides its own generation, BPDB purchases power from other generating companies and sells to its consumers and other distribution companies. BPDB consists of a chairman and six members appointed by the Govt.

### **Rural Electrification Board (REB)**

Rural Electrification Board was established in 1977 as a semi autonomous government agency. It is responsible for electrification in rural areas. As of today, there are 70 operating rural electricity co-operatives called *Palli Bidyuit Samity* (PBS), which bring service to approximately 79,00,000 connections. REB has expanded its distribution networks significantly in past years and has thus made immense contribution in increasing agricultural products and rural development. REB consist of a Chairman, four full time members appointed by the government and four part time members nominated from relevant departments.

### **Power Grid Company of Bangladesh (PGCB)**

Power Grid Company of Bangladesh is a public limited company registered under companies Act and incorporated in November, 1996 with an authorized capital of Tk. 10 billion. It is entrusted with the responsibility to operate the national power grid and to develop and expand the same with efficiency. PGCB has taken over all transmission assets from BPDB and DESA on 30.12.02.

### **Ashuganj Power Station Company Ltd (APSCL)**

Ashuganj Power Station owned by APSCL is the second largest power station in the country. At present, the total capacity of its 8 units is 642 MW. It fulfills about 15% of loads throughout the country. APSCL is a public limited company registered under companies Act. It was incorporated on 28 June 2000.

### **Electricity Generation Company of Bangladesh Ltd (EGCB)**

Electricity Generation Company of Bangladesh Ltd (EGCB) is incorporated with Register of Joint Stock Companies on February 16, 2004. It has existing power plants at two sites, namely Siddirganj 210 MW Power Station and Haripur 100 MW Power Station (to be over hundred soon). One unit of 2x120 MW peaking power plant is launched on February 2010. EGCB Board of Director consists of Chairman and nine members.

### **Rural Power Company Ltd (RPCL)**

Rural power company Ltd is the first Bangladeshi Independent Power Producer (IPP). RPCL is registered as a public limited company under companies Act and is incorporated on 31 December 1994. Its entire equity investment is mobilized locally. Rural Electrification Board (REB) owns 20% share and rest 80% owned by 9 Palli Bidyut Samity (PBS). Mymensingh Power Station (MPS) is one of its power generation plants with capacity of 210 MW power. This company has a plan to establish some other installations to different parts of the country.

### **North-West Power Generation Company Ltd (NWPGL)**

North-West Power Generation Company Ltd (NWPGL) is an enterprise of Bangladesh Power Development Board, intends to establish three power plants at different locations in North-Western Zone of Bangladesh. Its vision is to generate more electricity to meet the present shortfall and the growing future demand of electricity in the country. Present demand at north western zone is 900 MW. Present generation capacity is 600 MW. Proposed power plant of NWPGL is:

1. Sirajgonj 150MW peaking power plant project-Expected to be commissioned by December 2011.
2. Khulna 150MW peaking power plant project-Expected to be commissioned by December 2011.
3. Bheramara 360MW Combined Cycle Power Development Project- Expected to be commissioned by September 2015.

### **Dhaka Electric Supply Co. Ltd (DESCO)**

Dhaka Electric Supply Co. Ltd (DESCO) is the first electric distribution company, registered under companies Act, 1994, and established on November, 1996. Its distribution comprises 220 sq. kms. of Dhaka Mega City area namely, Mirpur, Pallabi, Kafrul, Kalyanpur, Cantonment, Gulshan, Banani, Uttara, Uttarkhan, Dakkhinkhan, Badda, Baridhara and Tangi. DESCO Board of Directors consists of Chairman and 9 members.

### **Dhaka Power Distribution Company Ltd (DPDC)**

Dhaka Power Distribution Company Ltd (DPDC) is registered on the 25 October, 2005 and has started its function as company from July, 2008. DPDC distribution area comprises 350 sq. kms of Dhaka and Narayanganj. DPDC Board of Directors consists of Chairman and 10 members.

### **West Zone Power Distribution Co. Ltd (WZPDCL)**

West Zone Power Distribution Co. Ltd (WZPDCL) is registered on 4 November, 2002. WZPDCL is responsible for electricity distribution in 21 districts of Khulna and Barisal Division and greater Faridpur District. It has started its function from March, 2005.

### **North West Zone Power Distribution Company Ltd (NWZPDCL)**

North West Zone Power Distribution Company Ltd (NWZPDCL) is registered on August 3, 2005. Its distribution area is entire Rajshahi Division. It has not started its operation as yet.

### **South Zone Power Distribution Company Ltd (SZPDCL)**

South Zone Power Distribution Company Ltd (SZPDCL) is established on 6 May, 2008. It has not started its operations as yet.

### **Bangladesh Energy Regulatory Commission (BERC)**

Bangladesh Energy Regulatory Commission (BERC) was established in April, 2004 under an Act. BERC frames rules and regulation to ensure transparency in the management, operation and tariff determination in Electricity, Gas and Petroleum sector. The commission protects consumers and industry interest and promotes competitive market. It is an independent autonomous organization. The commission consists of a Chairman and 5 members.

### 3.2.4: Power Industry in recent times

At present, 48.5% of the total population of Bangladesh is enjoying the electric facilities. As of April 2010, the total numbers of transmission and distribution lines are recorded to 8,359 km and 266,460 km respectively. However, 53,281 villages have been electrified so far. In Bangladesh per capita generation is 220 KW hr which is comparatively lower than other developed countries in the world.

#### Recent Status

Installed capacity (Feb 2011)	6,658 MW
Derated generation capacity	5,480 MW
Generation	3,900-4,300 MW
Maximum generation (Feb 2011)	4,699 MW
Peak demand	5,800 MW
Access to electricity	47%
Per capita generation	220 KW hr

*Chart 03: Recent Status of Power Industry*

Figures other than Installed Capacity and Maximum Generation are of June 2010.

Public and private sector produces 63% and 37% of electricity respectively. Public sector produces electricity through Bangladesh Power Development Board (BPDB), Ashuganj Power Station Company LTD (APSCL) and Electricity Generation Company of Bangladesh (EGCB). On the other hand, private sector produces power through small independent power producers and rental that government buys at a constant price. BPDB individually produces 46% of the total production.

#### Electricity Production, 2010, by Sector

Sector	Public			Private			
	BPDB <sup>1</sup>	APSCL <sup>2</sup>	EGCB <sup>3</sup>	SIPP <sup>4</sup>	SIPP (BPDB)	SIPP (REB) <sup>5</sup>	Rental
Derated electricity capacity (MW)	2,522	606	310	1,271	99	226	446
Total	3,438			2,042			

*Chart 04: Electricity production by sector*

<sup>1</sup>Bangladesh Power Development Board

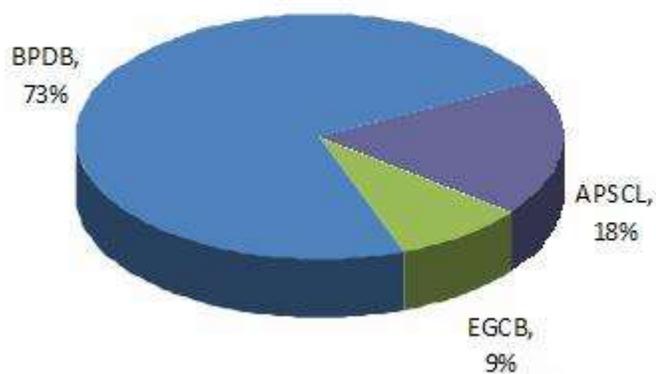
<sup>2</sup>Ashuganj Power Station Company Limited

<sup>3</sup>Electricity Generation Company of Bangladesh

<sup>4</sup>Small Independent Power Producer

<sup>5</sup>Rural Electrification Board

### Electricity Production (Public), 2010, by %



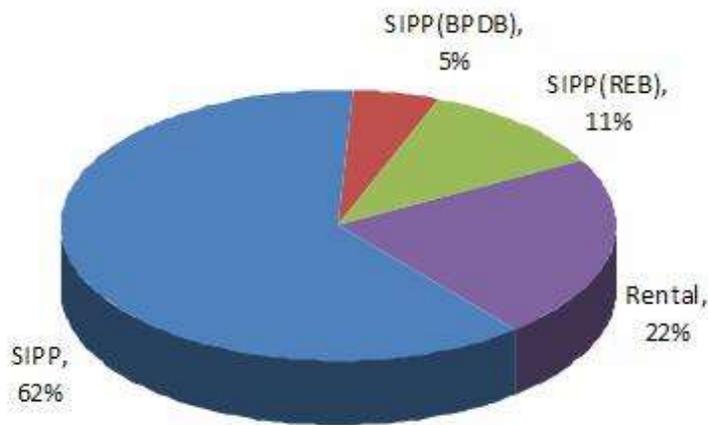
*Figure 05:* Electricity Production (Public), 2010, by %

Bangladesh Power Development Board

Ashuganj Power Station Company Limited

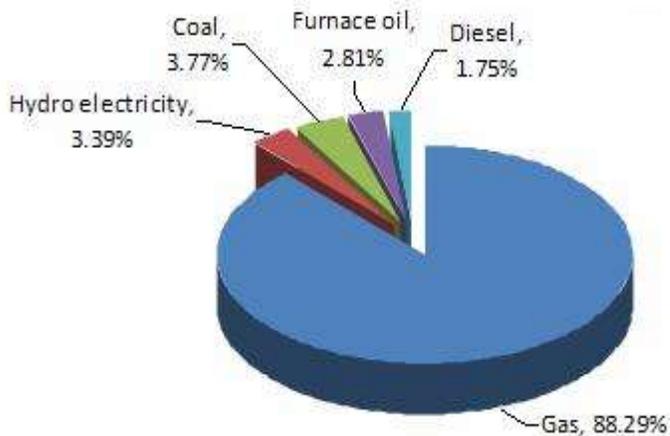
Electricity Generation Company of Bangladesh

## Electricity Production (Private), 2010, by %



*Figure 06:* Electricity Production (Private), 2010, by %

## Raw material used to produce electricity, 2010, by %



*Figure 07:* Raw material used to produce electricity, 2010, by %

## Government Vision for the Power Industry

Electricity is a key ingredient for the socio-economic development of the country. The government has given top priority to development of the sector considering its importance in the overall development of the country. The government has set the goal of providing electricity to

all citizens by 2021. Adequate and reliable supply of electricity is an important pre-requisite for attracting both domestic and foreign investment.

As the power sector is a capital-intensive industry, huge investments are required in order to generate addition to the capacity. Competing demands on the government resources and declining levels of external assistance from multilateral and bilateral donor agencies constrained the potential for public investment in the power sector. Recognizing these trends, the government of Bangladesh amended its industrial policies to enable private investment in the power sector.

The Power Cell, created under the Power Division of Ministry of Power, Energy and Mineral Resources, received the mandate to lead private power development. The government is strongly committed to attract private investment for installing new power generation capacity on build-own-operate basis.

### **Fiscal Incentives for Private Power Companies**

A number of fiscal incentives are provided to the private power companies. Some of them are as follows:

- Exemption from corporate income tax for a period of 15 years.
- Allowed to import plant and equipment and spare parts up to a maximum of ten percent (10%) of the original value of total plant and equipment within a period of twelve (12) years of commercial operation without payment of customs duties, VAT and any other surcharges as well as import permit fee except for indigenously produced equipment manufactured according to international standards.
- Repatriation of equity along with dividends allowed freely.
- Exemption from income tax for foreign lenders to such companies.
- The foreign investors will be free to enter into joint ventures but this is optional and not mandatory.

### **Facilities and Incentives for Foreign Investors**

There are number of facilities and incentives would be provided to the foreign investors. Some of them as follow:

- Tax exemption on royalties, technical know-how and technical assistance fees, and facilities for their repatriation.
- Tax exemption on interest on foreign loans.
- Tax exemption on capital gains from transfer of shares by the investing company.
- Avoidance of double taxation case of foreign investors on the basis of bilateral agreements.

- Exemption of income tax for upto three years for the expatriate personnel employed under the approved industry.
- Remittance of up to 50% of salary of the foreigners employed in Bangladesh and facilities for repatriation of their savings and retirement benefits at the time of their return.
- No restrictions on issuance of work permits to project related foreign nationals and employees.
- Facilities for repatriation of invested capital, profits and dividends.

Under the Private Sector Power Generation Policy, so far power plants with a capacity of 1,290 MW have been established and are under operation. Moreover 1,590 MW of electric power are planned to be generated in the near future.

A list of existing Independent Power Producers (IPPs) is shown here:

Sl. no.	Name of power plant	Fuel type	Installed capacity (MW)	Generation capacity (MW)	Established	Contracted leveled tariff (US cents/kWh)
1	Khulna Power Company Ltd. (KPCL), Engine Generator	F.Oil	110	110	1998	5.83 (For liquid fuel) 4.40 (For gas)
2	Baghabari, WESTMONT, GT	Gas	90	90	1999	4.31
3	NEPC Consortium, Gas Generator	Gas	110	110	1999	4.41
4	Rural Power Co. Ltd. (RPCL), GT	Gas	140	140	2001	4.30
5	AES, Haripur CC	Gas	360	360	2001 (SC) 2001 (CC)	2.73*
6	AES, Meghnaghat CC	Gas	450	450	2002	2.79*
7	Summit Power Co. Ltd.	Gas	30	30	2003	
	<b>Total</b>		<b>1,290</b>	<b>1,290</b>		

\* Based on indicative Gas price: 2.40 US\$/GJ.

*Chart 05: Independent Power Producers (IPPs) list*

### 3.3: Power Industry Development Plan

In order to realize the government's vision to provide electricity to most of the population at a reasonable price and to achieve overall socio-economic development of the country, the government of Bangladesh has initiated a Power and Energy Sector Development Roadmap (2010-2021) which targeted to produce 8,500 MW by 2013, 11,500 MW by 2015 and 20,000 MW by 2021. However, to ensure overall and balanced development of this sector government has taken various plans in terms of duration. The plans have been developed based on a techno-economic analysis and a least-cost option. These plans include balanced development in generation, transmission and the distribution system to achieve a desired level of reliability of supply. A summary of the development plan is given as follows:

#### Short Term Plan (2011)

According to the short-term plan, liquid fuel based 12-24 months of implementable power stations will be established. However, government has initiated to implement a power station with a capacity of 920 MW.

#### Mid Term Plan (2012-2015)

Under this plan, government has taken into account to establish 3 to 5 years of implementable coal based power stations with a capacity of 2,600 MW to the total capacity of 7,714 MW.

#### Long Term Plan

As of the Power and Energy Development Roadmap (2010-2021), government expects to meet the desire destination (20,000 MW by the year 2021) through the increment of 10% production per year towards reaching the per capita consumption to 600 Kw.

#### Projected Surplus Electricity Production (Year wise)

Year	Public sector	public sector	Total (MW)
2011	920	-	920
2012	505	1,764	2,269
2013	725	950	1,675
2014	1,170	-	1,170
2015	-	2,600	2,600
Total surplus			9,426

Chart 06: Projected Surplus Electricity Production

### Projected Electricity Demand and Supply (Year wise)

Projected data	2011	2012	2013	2014	2015
Projected demand (MW)	6,298	6,832	7,709	8,699	9,812
Capacity retired (MW)	-	-	448	378	-
Projected supply (MW) (excluding quick rental)	5,177	7,029	8,326	9,545	11,625
Projected supply (MW) (including quick rental)	6,363	8,683	9,764	10,527	12,601
Shortage/surplus (MW) (exlcuding quick rental)	-1,121	197	617	846	1,813
Shortage/surplus (MW) (including quick rental)	65	1,851	2,055	1,822	2,789

Chart 07: Projected Electricity Demand and Supply

Bangladesh is steadily climbing up the development ladder. Energy and power needs to act as a key catalyst in helping Bangladesh in this endeavour. Industries are being automated and the country is gradually moving from a labor-intensive economy to a capital intensive one. Electricity and power are vital to the nation at such a stage. Bangladesh has a vast market as far as power and electricity is concerned and good prospects for constructing power generation plants exist in the country in terms of resources available and government policies.

### 3.4: Projects to be implemented

#### List of projects that are supposed to be implemented by 2011

SI No.	Name of the Power Station	Capacity (MW)	Fuel	Expected time of Completion	Current Status
<b>Public Sector (PDB)</b>					
1	Faridpur Peaking Power Plant	50	HFO	July 2011	Contract signed on 26/04/2010
2	Dohazari, Chittagong Peaking Power Plant	100	HFO	July 2011	Contract signed on 26/04/2010

3	Baghabari Peaking Power Plant	50	HFO	July 2011	NOA9 Accepted on 31/03/2010
4	Hathazari Peaking Power Plant	100	HFO	July 2011	Contract signed on 26/04//2010
5	Daudkandi, Comilla Peaking Power Plant	50	HFO	July 2011	NOA Accepted on 31/03/2010
6	Katakhali, Rajshahi Peaking Power Plant	50	HFO	September 2011	Contract signed on 04/05/2010
7	Bera, Pabna, Peaking Power Plant	70	HFO	September 2011	Contract signed on 26/04/2010
8	Gopalganj Peaking Power Plant	100	HFO	September 2011	Contract signed on 26/04/2010
9	Santahar, Naogaon Peaking Power Plant	50	HFO	September 2011	Retender floated on 04/05/2010
10	Sylhet 150MW Combined Cycle Power Plant	150	Gas	December 2011	Contract signed on 08/02/2010
11	Chandpur 150MW Combined Cycle Power Plant	150	Gas	December 2011	Construction work underway
<b>Total</b>	<b>920</b>				

*Chart 08:* List of projects that are supposed to be implemented by 2011

## Medium Term

Under the medium term plan, initiatives have been taken to set up power plants with a total generation capacity of 7714 MW that are implementable within 3 to 5 years time of which, 2600 MW will be coal based.

### List of projects that will be implemented by 2012

Sl No.	Name of the Power Station	Capacity (MW)	Fuel	Expected time of Completion	Current Status
<b>Public Sector</b>					
1	Ghorashal Peaking Power Plant (PDB)	200-300	Gas / Diesel	June 2012	Retender floated on

					22/04/2010
2	Khulna 150MW Gas Turbine (GT) (NWPGC10)	150	Gas / Oil	June 2012	Evaluation of financial proposal underway
3	Shirajganj 150MW Gas Turbine (PDB)	150	Gas / Oil	June 2012	Tender evaluation in final stage
4	Kaptai Solar Plant (PDB)	5	Solar	June 2012	Under scrutiny of the Ministry
5	Katakhali, Rajshahi Peaking Power Plant, IPP (PDB)	50	HFO	April 2012	Evaluation of PQ11 underway
6	Syedpur Peaking Power Plant, IPP (PDB)	100	HFO	April 2012	Evaluation of PQ underway
7	Jamalpur Peaking Power Plant, IPP (PDB)	100	Gas / HFO	May 2012	PQ announced on 05/04/2010
8	Chapainawabganj Peaking Power Plant, IPP (PDB)	100	HFO	May 2012	PQ announced on 28/03/2010
9	Comilla Peaking Power Plant, IPP (PDB)	50	Gas / HFO	May 2012	PQ announced on 28/03/2010
10	Khulna Peaking Power Plant, IPP (PDB)	100	HFO	May 2012	PQ announced on 28/03/2010
11	Wind Power Plant, IPP (PDB)	100	Wind	June 2012	PQ announced on 12/04/2010
12	Solar Power Plant, IPP (PDB)	9	Solar	January 2012	PQ announced on 07/04/2010
13	Tangail 20MW, IPP (REB12)	20	HFO	June 2012	-

14	Chandpur 15MW, IPP (REB)	15	HFO	June 2012	-
15	Bhola 150-225MW, CCPP(2nd unit, SC13)(GT14)	100	Gas	June 2012	Evaluation of PQ underway
16	Keraniganj 150-225MW, CCPP , SC (GT)	100	Gas / HFO	July 2012	PQ announced on 05/04/2010
17	Madanganj 150-225MW, CCPP , SC (GT)	100	Gas / HFO	July 2012	PQ announced on 05/04/2010
18	Bibiana 300-450MW (1 <sup>st</sup> unit), CCPP , SC (GT)	200	Gas	August 2012	RFP15 given
19	Bibiana 300-450MW (2 <sup>nd</sup> unit), CCPP , SC (GT)	200	Gas	October 2012	Evaluation of PQ underway
20	Meghnaghat 300-450MW Combined Cycle(2nd unit), Duel Fuel: GT unit	200	Gas / HFO	October 2012	Evaluation of PQ underway
<b>Both Public &amp; Private Sector</b>					
21	Mymensingha Peaking Plant, (PDB and RPCL16)	150	Gas / HFO	June 2012	-
22	Gazipur (RPCL)	50	Gas / HFO	June 2012	-
23	Rauzan, Chittagong (RPCL)	20	Gas / HFO	June 2012	-
	Total	2269			

*Chart 09:* List of projects that will be implemented by 2012

### List of projects that will be implemented by 2013

Sl. No.	Name of the Power Station	Capacity (MW)	Fuel	Expected time of Completion	Current Status
<b>Public Sector</b>					
1	Shidhdhirganj 2*150MW GT (EGCB)	300	Gas	June 2013	Tender evaluation report sent to World Bank
2	Bhola 150MW CCPP	150	Gas	June 2013	Feasibility

	(PDB)				study underway
3	Barapukuria 125MW (3 <sup>rd</sup> unit) (PDB)	125	Coal	June 2013	Preparation of DPP17 underway
4	Ashuganj 150 MW CCPP (APSCL18)	150	Gas	June 2013	Preliminary study underway
<b>Private Sector</b>					
5	Savar Peaking Power Plan	100	Gas / HFO	January 2013	Preparation of PQ underway
6	Kaliakoir Peaking Power Plan	100	Gas/HFO	January 2013	Preparation of PQ underway
7	Bibiana 350-450MW CCPP (ST)	100	Gas	August 2013	RFP issued
8	Srirajganj 300-450MW CCPP	300	Gas	June 2013	Purchase process will start shortly
9	Bhola 150-225 MW CCPP (2nd unit) (SC) (GT)	50	Gas	June 2013	Evaluation of PQ underway
10	Keraniganj 150-225 MW CCPP (ST)	50	Gas/HFO	July 2013	PQ announced on 05/04/2010
11	Madanganj 150-225 MW CCPP (ST)	50	Gas/HFO	July 2013	PQ announced on 05/04/2010
12	Bibiana 300-450MW (2 <sup>nd</sup> unit, ST)	100	Gas	October 2013	Evaluation of PQ underway
13	Meghnaghat 300-450 MW (2 <sup>nd</sup> unit) (ST)	100	Gas/HFO	October 2013	Evaluation of PQ underway
	<b>Total</b>	<b>1675</b>			

*Chart 10:* List of projects that will be implemented by 2013

### List of projects that will be implemented by 2014

Sl. No.	Name of the Power Station	Capacity (MW)	Fuel	Expected time of Completion	Current Status
<b>Public Sector</b>					
1	Haripur 360 MW CCPP (EGCB)	360	Gas	June 2014	Evaluation of PQ underway
2	Bheramara 360 MW CCPP (NWP GC)	360	Gas	June 2014	Scrutiny of DPP in the Ministry underway
3	Shidhdhirganj 450 MW CCPP (EGCB)	450	Gas	June 2014	
	<b>Total</b>	<b>1170</b>			

*Chart 11:* List of projects that will be implemented by 2014

### List of projects that will be implemented by 2015

Sl. No.	Name of the Power Station	Capacity (MW)	Fuel	Expected time of Completion	Current Status
<b>PPP/IPP</b>					
1	Chittagong , PPP (Joint Venture)/IPP	1300	Coal	March 2015	Feasibility study will start soon
2	Khulna (South), PPP (Joint Venture)/IPP	1300	Coal	March 2015	Draft contract with NTPC under process
	<b>Total</b>	<b>2600</b>			

*Chart 12:* List of projects that will be implemented by 2015

**CHAPTER- 04:  
ANALYSIS:-  
SWOT ANALYSIS**

## **4.1: SWOT Analysis of Power Industry of Bangladesh**

By analyzing all the data I have collected and by analyzing various reports I have made the following SWOT Analysis. This analysis contains the most featured parameters of the power industry of Bangladesh.

### **Strengths**

#### **Government incentives**

Bangladesh government has announced Fiscal incentives and incentives for foreign investors to facilitate the investment in the power plants. Exemption from corporate income tax for a period of 15 years has been announced for the investors. They are also allowed to import plant and equipment and spare parts up to a maximum of ten percent (10%) of the original value of total plant and equipment within a period of twelve (12) years of commercial operation without payment of customs duties. For foreign investors government announced tax exemption on royalties, technical know-how and technical assistance fees. The foreign investors are also exempted from paying tax on interest on foreign loans. They are also enjoying tax exemption on capital gains from transfer of shares by the investing company.

#### **Demand for electricity**

The biggest strength of the power industry of Bangladesh is the high demand of power within the country. As automation in businesses and industrialization is taking place all over the country, the demand for power is also increasing at the same time. Demand is also increasing with the improvement of living standard, increase of agricultural production, development of existing industries as well as overall development of the country. On the other hand, only 47% of people have access to power in the country. So, government is also trying to increase the production of power to ensure enough supply to the people. Government has a plan to ensure power for all by 2021.

### **Weaknesses**

#### **Decreasing supply of Natural Gas**

The only natural resource that Bangladesh has got enough is natural gas. But the supply of natural gas is decreasing day by day. Although government is trying to lease the gas blocs to the

foreign investors still the total supply of Natural Gas, Coal and any other fossil fuels to the national grid is quite low and it is not sufficient to ensure enough supply to the upcoming gas based power projects.

### **Capital Intensive Industry**

Power industry is a capital intensive industry as a small power plant needs a huge investment to establish and operate. SME based entrepreneurs cannot invest in this industry due to its initial huge investment. Only investors with large capital or joint ventures projects or foreign investors are coming to invest in power plants.

### **Energy infrastructure**

Bangladesh's energy infrastructure is quite small, insufficient and poorly managed. And no initiative is taken to improve the infrastructure. With this type of poor infrastructure it is quite difficult to reach the goal of the government to produce the additional power in the coming years.

### **Lack of necessary maintenance and rehabilitation of old power plants**

Due to lack of necessary maintenance and rehabilitation of old power plants, it is not possible to utilize the total installed capacity of the power plants. The shortage of electricity can be from the load-shedding made during the peak demand of summer which is about 1800 Megawatt each day. If all the existing plants could be maintained properly the supply of electricity could have been more.

### **Dependency on single energy (gas) and entity for electricity generation**

In Bangladesh, commercial energy consumption is mostly natural gas (around 66%), followed by oil, hydropower and coal. Power plants in Bangladesh are dependent on gas significantly. On the other hand, 63% of total electricity is produced by public sector and 37% is produced by private sector. Among the 63% production of public sector 40% is produced by BPDB (Bangladesh Power Development Board) only.

### **Participation of private sector**

Investment or participation of private sector in electricity generation is at the minimum. The private sector is producing only 37% of the total electricity production. No new private investment is coming to this industry to increase the power production.

### **Huge system losses**

Shortage of electricity is not attributed to generation alone but transmission and distribution are also responsible for the existing short fall. There is a huge amount of system loss in the power

production process. These system losses are also taking place during the transmission and distribution of power.

### **Delays in completion of new plants**

Delays in completion of power projects are very common in all power plants. The projects cannot meet the deadline for its completion time. Hence, this delay leads to a crisis in the production and distribution of power according to its demand and supply within the required time.

## **Opportunities**

### **Joint venture with India**

Bangladesh is going to establish joint venture power plants with India especially with its north eastern states. Indian govt. invites Bangladesh to invest in power sector in joint venture basis which will increase both countries power generation. Bangladesh government recently got an invitation from the state government of Tripura to invest in a joint venture power plant from which Bangladesh will get 100 MW power in its national grid.

### **Renewable energy**

Bangladesh has great opportunity in using renewable power sources. Bangladesh has 15 MW solar energy capacities through rural households and 1.9 MW wind power in Kutubdia and Feni. Bangladesh has planned to produce 5% of total power generation by 2015 & 10% by 2020 from renewable energy sources like air, waste & solar energy. Using more renewable power sources will increase the total power production.

### **Nuclear power plant**

Bangladesh recently signed a contract to set up a 1,000 MW power plant at Rooppur, 200 km (125 miles) northwest of the capital Dhaka. After completion of this project there will be an addition of 1,000 MW supply to the national grid. This project will also attract other foreign investors to invest in nuclear power plants in Bangladesh which ultimately increase the power production of the country.

## **Threats**

### **Increasing price of raw material**

The price of oil in the international market is increasing since the depression of 2009. Recently the economic crisis in Europe and political instability of Middle East leads the international market of oil towards an unpredictable situation. As oil is one of the main raw materials for power plants and Bangladesh government imports most of their oil from international market, the increasing price of oil in the international market will be a treat for our power industry.

### **Political influence in the industry**

The political influence is a treat for the power industry. In Bangladesh, there are political influences in the bidding process of tender and even in the selection process of Concern Company. Donor agencies withdraw their donation on the specific projects due to the political influence. Sometimes the donors withdraw their donation even in the last stage of selection process because of this political influence.

### **Small reserve of oil and coal**

Most of the existing power plants are oil or coal based in our country although Bangladesh has a very small reserve of oil and coal both offshore and onshore. From this small reserve Bangladesh cannot get the enough supply of oil and coal for its power plants. This small reserve could lead to a crisis of raw materials for the oil and coal based power plants.

### **Own Power Plants of Industries**

Sometimes the big industries or business entities establishes own power plants for their factories. The insufficient supply of power from the government leads them to build up their own mini power plants. This tendency could be a treat for the typical power producers of the country.

# **CHAPTER- 04: RECOMMENDATION & CONCLUSION**

## 5.1: Recommendation

From the above report now I have a clear idea about the present situation of power industry of Bangladesh. The power industry of Bangladesh has a lot of weaknesses but at the same time it has a lot of opportunities also. The prospect of the industry is positive. It is a promising industry. From my study on this industry, I recommend the following for the betterment of the industry.

- 1) The government should enter joint venture projects with the government of India and with other foreign investors.
- 2) Bangladesh government should encourage foreign investors by providing more attractive incentives.
- 3) The industry needs more private investors to facilitate the production. Giant private business groups should enter in this industry.
- 4) Proper maintenance and rehabilitation of existing power plants is very essential to increase the production.
- 5) Other power producers except BPDB should involve more and increase their production to reduce the dependency on BPDB.
- 6) Bangladesh government should improve the energy infrastructure of the country with the involvement of the private sector.
- 7) The government needs to improve the distribution and transmission network of the country to ensure the best distribution and transmission process.
- 8) The tender and selection process for power producers need to be transparent to get the loans of the donor agencies.
- 9) Bangladesh government should ensure enough supply of gas and oil to the power plants to increase the production.

10) The ongoing power plant projects must be finished to increase the production and at the same time the upcoming projects must meet the deadline to reach the estimated increase in production.

## **5.2: Conclusion**

In conclusion, now I can say the power industry of Bangladesh has a lot of opportunity although there are many obstacles present in the industry. If the government can implement all the projects that are initiated to increase power production then the industry could be a very effective industry for the country. As development of business is very much dependent on the power industry, so if this industry can reach to its maximum then other business sectors will also get the facility of this development. Hence, the development of power industry is essential for the development of business as well as the overall economic development of the country. The goal of the government regarding this industry is optimistic and promising. If the government reaches its goal then the industry will surely be an independent industry which will facilitate the development of the country.

Finally, I can say that the government should take necessary actions to improve the power industry of Bangladesh so that this industry can operate efficiently and facilitate the national development of the country.

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