

# Template project management assignment

[Business](#), [Management](#)



| PowerPac Mutiara Khulna Power Plant Ltd. (PPMKPPL) | | LOAN PROPOSAL FOR IMPLEMENTATION OF A 100+10% MW HFO FIRED POWER PROJECT ON A BUILD OWN OPERATE (BOO) BASIS AT KHULNA, BANGLADESH | | 242, Tejgaon Industrial Area, Dhaka-1208, Bangladesh | | R & R Holdings Limited | | 10/25/2011 | PROJECT SUMMARY 1.

Name of the Project : PowerPac Mutiara Khulna Power Plant Ltd. (PPMKPPL) 2. Project Location: Khulna, Bangladesh. 3. Head office: 242, Tejgaon Industrial Area, Dhaka-1208. 4. Status of the Company: Private Limited 5. Type of product & its Specification: Independent Power Plant (100+10% MW HFO Fired) 6. Brief Description of the Project: PowerPac Mutiara Khulna Power Plant Ltd. (PPMKPPL) is an industrial unit, which will operate electric power plant for local consumption. Power Pac is a joint venture between in Sikder Group of Companies (SGC) of Bangladesh and Mutiara Consolidated Sdn Bhd of Malaysia.

This SGC is well established business entity in Bangladesh which is involved in banking, healthcare, education, real estate, construction, trading, infrastructure development and Power generation. PPMKPPL has planned to establish a 100+10% MW HFO Fired Power Project at Khulna, Bangladesh on BOO Basis. Total capital outlay for the project has been estimated Tk. 802.50 Crore. It is expected that the project will run at 100 %, 100 % and 100 % at 1st year, 2nd year and 3rd year respectively and will generate net profit of Tk. 1660.06 Lac, Tk. 2002.70 Lac and Tk. 2345.35Lac respectively. 7.

Joint Venture (JV) Partnership: A shareholding between PowerPac Holdings Ltd. and Mutiara Consolidated Sdn Bhd for the Equity Contribution will be as

follows: ??? PowerPac Holdings Limited-60% ??? Mutiara Consolidated Sdn-40% 8. Date of Contract Sign with BPDB: August 25, 2011. 9. Cost of the Project: Total Capital Investment (Fixed) = Tk. 802. 50 Crore 10. Means of Finance: A) Bank loan: i. Term Loan= Tk. 112. 35 Crore ii. IPPF\* Fund of Bangladesh Bank = Tk. 449. 40 Crore Total Loan= Tk. 593. 85 Crore B) Equity: i. Entrepreneur= Tk. 160. 50 Crore ii. Preference Share= Tk. 80. 25 Crore

Total= Tk. 240. 75 Crore 11. Debt-Equity Ratio : Debt -Equity Ratio of the project is 70: 30. 12. Proposed Plant Engine: Wartsila Brand New Reciprocating Engine, Model No 18V46. 13. Fuel: Heavy Fuel Oil (HFO) 14. Contract Period: 15 years from the Commercial Operation Date (COD) 15. Engineering, Procurement & Construction (EPC) Contractor: Ital Thai Power Company Ltd. , 2034/161 Italthai-Tower, 43rd Floor, New Petchburi Road, Bangkok, Huaykwang, Bangkok, Thailand 10310. 16. O & M Contractor: Wartsila Finland, John Stenbergin Ranta 2FI-00530 Helsinki, Finland. 17. Financial Aspects:

The project has found financial viability. The details are shown in the following: A. Project Cost: | Sl. | Particulars | Total Cost in BDT | | 1. | EPC Contract (Guaranteed Price) | 7, 535, 250, 000 | | 2. | Pre operating Expenses & Contingency | 168, 750, 000 | | 3. | Interest During Construction Period (IDCP) | 321, 000, 000 | | Total Project Cost | 8, 025, 000, 000 | Perpetrating Expenses and Contingencies: 2. 24% of the EPC Contract Price. ??? Interest During Construction Period (IDCP): IDCP is the 4% of Total Project Cost. B. Capacity Utilization: Khulna 100+10% HFO Fired Power Project is expected to

be commissioned in the November, 2012. During the initial year the capacity utilization is expected to be 100% of the Plant Capacity Factor. C.

Profitability: The highlights of the income statements of the Khulna Power

Project are given below: Head | Year 1 | Year 2 | Year 3 | Total in 15 Years | |

Total Revenue | 5, 862, 192, 000 | 5, 862, 192, 000 | 5, 862, 192, 000 | 87,

932, 880, 000 | | Gross Profit | 1, 331, 666, 000 | 1, 331, 666, 000 | 1, 331,

666, 000 | 20, 267, 177, 862 | | Total Variable Cost | 173, 190, 515 | 173,

190, 515 | 173, 190, 515 | 2, 859, 781, 069 | | Total Fixed Cost | 130, 500,

000. 0 | 130, 500, 000. 00 | 130, 500, 000. 00 | 1, 957, 500, 000. 00 | |

Operating Profit | 679, 975, 485 | 679, 975, 485 | 679, 975, 485 | 10, 567,

396, 793 | | Net Operating Profit | 166, 005, 709 | 200, 270, 361 | 234, 535,

012 | 6, 455, 638, 584 | | Net Profit | 166, 005, 709 | 200, 270, 361 | 234,

535, 012 | 6, 455, 638, 584 | D. Taxation:

The proposed project will have a tax holiday of 15 years approved by the

National Board of Revenue. E. Debt Service Coverage(DSC): The financial

projections indicate the following debt service cover ratios for the project: |

Year | Yr-1 | Yr-2 | Yr-3 | | Debt Service Cover | 1. 09 | 1. 13 | 1. 18 | F.

Internal Rate of Return: Based on the operating cash flows-OCF, the project

IRR works out to 12. 19%. G. Financial Evaluation (Operating Result):

Particulars | Operating Years | | | 1st year | 2nd year | 3rd year | | Capacity |

100% | 100% | 100% | | Sales | 58, 621. 92 | 58, 621. 92 | 58, 621. 2 | | Gross

profit | 13316. 66 | 13316. 66 | 13316. 66 | | Gross profit to sales or Turnover

(%) | 22. 72% | 22. 72% | 22. 72% | | Operating profit | 6799. 75 | 6799. 75 |

6799. 75 | | Operating profit to sales (%) | 11. 60% | 11. 0% | 11. 60% | | Net

profit to sales (%) | 2. 83% | 3. 42% | 4. 00% | | Net profit to equity (%) | 9.

40% | 10. 18% | 10. 65% | | Debt/Equity Ratio | 80. 06% | 19. 94% | | | Debt service coverage (times) | 1. 9 | 1. 13 | 1. 18 | | Internal rate of return (IRR) | | 11. 05% | | | Break even capacity of 3rd yr. operation | | | 85. 67% | | Benefit cost ratio | 1. 56 | 1. 00 | | | Break even sales (in Tk. | | | 50, 221. 59 | | Contribution to GNP (in Tk. ) | 7, 924. 75 | 7, 924. 75 | 7, 924. 75 | | Per Capita Investment & Employments | 91. 09 | 87 | Nos | | Date & Time of the Appraisal | Tuesday, October 25, 2011 |

H. Financial Institutions applied for Loan: Commercial Bank/Financial Institution & Investment Promotion & Financing Facility of Bangladesh Bank.

18. Marketing Aspects: Currently, Bangladesh Power Development Board is the only customer in the demand side of PowerPac Mutiara Khulna Power Plant Ltd. As per the contract between PowerPac Mutiara Khulna Power Plant Ltd. and BPDB, the government is bound to pay the fixed component of the tariff on a monthly basis disregarding actual capacity utilization of the plant.

Since the fuel cost is a pass through component the only other variable source of revenue for the project is the O & M cost, which according to our quoted tariff is USD 0. 0024 and Reference Fuel Price (RFP) (Taka/kWh) = 5. 6420 We have been very conservative when determining the O & M cost and the primary driver of this is the lube oil consumption of the plant. Since the lube oil price was determined at the time of bidding and it is strongly correlated to both value of US dollar and crude prices we believe that there is some profit potential from the variable O & M cost of this plant as crude prices decline globally.

The scope of marketing effort for this project comes down to really keeping utilization high due to the positive surprise element of lower O & M cost (than previously estimated) and future contract extensions of this project beyond the 15 (Fifteen) years of initial operation. Even without capacity and/or time extension beyond the 15 (Fifteen) years initial contract period, the project is extremely viable as manifested by the financial analysis. The Reference Tariff (RTn) for HFO is 9.5600 USD Cents / kWh. Current Scenario of the Electricity: ??? Present Generation Capability: 6208 MW Maximum Demand Served So Far: 4936 MW (18/7/2011) ??? Electricity Growth: 10.67 % in FY-2010 (Av. 7 % since 1990) ??? Total Consumers: 20.67 Million ??? Access to Electricity: 48.5 % ??? Transmission Lines: 5818 Ckt. KM (132 Kv), 2647 Ckt. KM (230 KV) ??? Distribution Lines: 2,70,000 km ??? Distribution Losses: 13.1 % ??? Per Capita Generation: 236 kWh (incl. Captive) Source: Bangladesh Power Development Board 19. Economic Aspects: 87 persons will be employed in different units of the projects. The project will contribute about Tk. 7924.75 Lac per year (from 3rd year) to GNP at a market value.

The macro-economic effect will change the socioeconomic condition of directors, the employee and the country as a whole. 20. Land Schedule: The project land for the project will be acquired by the PowerPac Mutiara Khulna Power Plant Ltd. The total requirement of land for this project is 5.00 acre at Khulna, Bangladesh. 21. Conclusion: The detail feasibility study forecast shows that the project is viable considering all aspects. The sponsors are educated and experienced in various leading businesses. They are also financially sound and have the real capacity for efficient management.

The demand of proposed product i. e. Power/Electricity is very high at present in our country. Therefore it can be concluded that the project has the potential for investment and the Bank may consider providing loan assistance for the implementation of the project successfully so that they can contribute for the ultimate development of the country. 1.

INTRODUCTION 1. BACKGROUND: Development of a country depends on various types of constructions. If people intend for construction of small industry, commercial building, or any electrical works, power plant is essential to fulfill the purpose.

Although a number of power plant have been established in the country, they are not fully capable to meet up the existing and potential demand. The main machinery is to import from foreign countries. With this end in view, the sponsors are going to set up a power plant in the name and style of PowerPac Mutiara Khulna Power Plant Ltd. (PPMKPPL) at Khulna, Bangladesh.

1. 2 OBJECTIVE: The objective of the study is to assess the feasibility of the proposed project in respects of market demand as well as technical, financial, economic and environmental viability of the project. . SCOPE OF WORKS: The study is limited to the following aspects of the projects: 1. To assess the financially and technical viability of the project. 2. To analyze the market demand and prospect of power plant especially for electricity. 3. To conduct a financial evaluation and sensitivity analysis of the project. 4. To assess the socio-economic and environmental implications of the project. 1.

4 METHODOLOGY: The report has been prepared with the following ways: ???  
The technical study has been done with the guidelines of Industrial project.  
The market study has been carried out mainly on data / information collected

through field visits, discussion with prominent business personnel and organizations. ??? The financial and economic analysis has been done as per UNIDO (United Nations Industrial Development Organization) guidelines on real data obtained from engineering estimation and professional judgments. ??? The Environmental Assessment has been conducted with the guideline of UNEP (United Nations Environment Programme) and DoE (Department of Environment) of Bangladesh Govt.

### 1. 5 LIMITATION:

The major difficulty faced in carrying out the study was collection of data/information for estimation of demand and market prospect of power industry. But there has been so much kind help of different organizations and information and communication technology.

### 1. 6 REPORT ARRANGEMENT:

Introduction is in the first chapter; management aspects of the project have been discussed in the second chapter, technical and market aspects in the third and fourth chapter respectively. The findings of the financial analysis are placed in fifth chapter. The Economic aspects and Environmental Assessment are included in chapter six and seven respectively.

Chapter eight includes the Risk Analysis of the project and chapter nine includes conclusion and recommendation. All relevant data, assumptions and calculations are shown in Annexure.

## 2. ORGANIZATION & MANAGEMENT ASPECTS

### 1 Introduction

The Company should have an effective and well-organized management system according to the Companies Act, XVIII of 1994 of Government of Bangladesh. As the sponsors are directly related to various export-import business and trade, it will sufficiently help them to manage the PowerPac Mutiara Khulna Power Plant Ltd. PPMKPPL) efficiently.



1 Address and location: Project Location : Khulna, Bangladesh. Head office: 242, Tejgaon Industrial Area, Dhaka-1208. 2 company structure: The Company is a private limited company (joint venture) within the meaning of section 2(1) clause of the Companies Act, 1994. The following are the share taken by the each subscriber of the directors. TABLE 2. 3. 1: SHAREHOLDING STRUCTURE: | Sl. No. | Name of the Institutions | Percentage of share | | 1. POWERPAC HOLDING LIMITED | 60 | | 242 TEJGOAN INDUTRIAL AEAR | | | DHAKA. | | | 2. | MUTIARA CONSOLIDATED SDN BHD (COMPANY NO. 89719-M) LEVEL U1, MENARA YANYASAN TUN RAZAK, 200 | 40 | | JALAN BUKIT BINTANG, 55100 KUALA LUMPUR MALAYSIA. | | 2. SHAREHOLDING STRUCTURE OF POWER PAC HOLDINGS LIMITED | Sl. | Name & Address | Position | Percentage of share | | 1. | Mr. Rick HaqueSikder | Chairman | 50 | | | S/o Mr. ZainulHaqueSikder | | | 2. | Mr. Ron HaqueSikder | Managing Director | 50 | | | S/o Mr.

ZainulHaqueSikder | | 2. 5Brief of PowerPac Holdings Ltd. Power Pac Holdings Ltd. is the concern of Sikder Group. Sikder group is involved in diversified business activities namely Banking, Healthcare & Education, Leisure, Real Estate & Construction, Trading & Distribution, Power Generation Sector. | 1951 | The Chairman of the group, Mr. Zainul Haque Sikder started his career in Real Estate Development and construction and | | | subsequently diversified into the above mentioned fields.

The Group has overall 55 years of experience in Business. The | | | key milestones of Sikder Group’s business strategic growth are given in Annex. | | 1982 | The Chairman of the group moved to California, USA. The success

story of Sikder. Family represents the selected few Asian | | Families who have made it to the top in USA. | | 2004 | Thailand was selected as a key investment destination. The group decided to invest in selected business depending on | | | country specific politico-economic environment.

The sectors identified are hotel and related businesses, | | | restaurant/lounges, etc. | | 2009 | The Group diversified into Infrastructure Development and Electricity Generation Sector. | Mrs. Parveen Haque Sikder, Mr. Rick Haque Sikder and Mr. Ron Haque Sikder, who are Sikder Family members, will be the promoter shareholders and board member of the project. 1 Bangladesh It was decided to concentrate on the following

businesses only in Bangladesh. The group operates these selected businesses through professional management. The main focus will be on: . 5.

1. 2 Existing Businesses: | i) Banking | National Bank Limited; First Generation Private Sector Bank in Bangladesh, established in 1983 has extensive | | | network of 115 Branches all over the country. Listed in stock exchanges in Bangladesh. | | ii) Healthcare & Education | H. Sikder Women's Medical College & Hospital, not for profit company, (established to assist women to | | | have access to higher education (MBBS) and help average Bangladeshis to have proper health care). | iii) Real Estate | Involved in few selected developments for family business needs. | | iv) Power Plants | Keraniganj 100 MW HFO Fired Power Plant will be connected to the National Grid in September 2011. | | | Jamalpur 100 MW Dual Fuel (HFO/Gas) Fired Power Plant be connected to the National Grid in November 2012. | | | Khulna 100 MW HFO Fired Power Plant be connected to the National Grid in November 2012. | 2. 5. 1. 3 Identified Future Business Ventures (1 to 3

years' time horizon): i) Wall & Floor Tiles | Sikder Fu-Wang Ceramic Tiles manufacturing Company. | | ii) Hotel and related businesses | A Bangladesh Taiwan Joint Venture. | | iii) The Privilege Club | High end Club for the aristocrats of Bangladesh | It was also decided to move away from Retail trading, Automobile Business. 2 USA USA will remain the focal point of the group, where it is well recognized for its high end Japanese and Italian food, and also number of car washing plants. 1 SustainableGrowth???

HighendRestaurantandlounge business www. koirestaurant. com) 1 KOI Restaurant & Lounge, Los Angeles; 1 Bridge Restaurant & Lounge, Los Angeles 2 KOI Restaurant & Lounge, New York; 1 KOI Restaurant & Lounge, Las Vegas The next destinations for KOI Restaurant are Florida and London for USA and UK respectively. 2 Sustainable Growth ??? Car wash business, California, USA. 3 Thailand Thailand has been selected as Investment Destination for Hotel and related businesses. The reason being stable economy, growth in tourist arrivals during the past 15 years and growth potential for Hotel related properties and proximity to Bangladesh. KOI Restaurants Limited operates the following in Bangkok: ??? KOI Restaurant & Lounge, Bangkok; ??? Bridge Restaurant, Bangkok; ??? FTV Lounge, Bangkok. Within a very short span of time, since inception, KOI and Bridge Restaurant Chain have drawn the attention of Gourmet Circle of Bangkok, Thailand. A short list of their achievements testify for them, as given below: ??? Winner of American Express Awards 2005 “ My Favorite Restaurant” ??? Winner of Thailand Tatler Awards 2006 and 2007 ??? Thailand Best Restaurant Guide 2006 ??? Best New Restaurant Awards 2006 by BK Magazine Top 5 Best Bangkok Restaurants by Bangkok Post ??? Best

Top 3 restaurants by Bangkok Dinning & Entertainment ??? Most Stylish Restaurant 2007 by BK Magazine ??? Bridge – Thailand Tatler Best Restaurant 2008 ??? Koi – Thailand Tatler Best Restaurant 2009 ??? Sikder Group Limited, Thailand (established in 2004). Centara Grand Laguna Resort, Phuket ??? 102 Luxury Villas and 100 Room project with 200 unit-condominium project; CentaraJomtien Resort, Pattaya ??? 4, 000 sqm Retail Commercial property, 160 Room Hotel, 40 Nature Villa project and 160 unit-condominium Both the projects are in development stage.

Identified Future Business Ventures in Thailand (1 to 3 yearstime horizon)  
 Quick Service Restaurant: The Group decided to diversify into “ Quick Service Restaurant”. In order to reduce risk of fine dining restaurants, the group has entered into franchise agreement with Carl’s JR Restaurant of LA, USA. The Group will establish 25 restaurants in Thailand during next 5 years.  
 Note: The group will also establish 14 Restaurant in Bangladesh during the same period. This business opportunity will create direct employment of 500 people and indirect employment of 2, 500 people. SHAREHOLDING

STRUCTURE OF MUTIARA CONSOLIDATED SDN BHD. | SI No | Name of the share Holders | Percentage of share | | 1 | Mr. Shabaruddin Bin Ibrahim | 50 | | | S/O Ibrahim Bin Mohamed | | | Level U1, MenaraYanyasanTunRazak , 200 Jalan Bukit Bintang, 55100 Kuala Lumpur

Malaysia | | | 2. | Mr. Shorbaini bin Abdulghani | 50 | | | S/o mr. Abdul Ghani Bin Sulaiman | | | NO. -1, JalanLapanKemensha Heights, Hulu Kelang 6800, Ampang, selangor, malaysia. | | 8 Brief of Mutiara Consolidated Sdn. Bhd. 1 Mutiara Consolidated Sdn. Bhd.

Mutiara Consolidated SdnBhd is a subsidiary company of Pesaka Ventures And Bhd. , Malaysia. Pesaka Consolidated Group of Companies has registered annual sales of almost RM 1 billion through its eight (8) companies with its workforce and management personnel of high degree of integrity, competencies and credibility who are committed and dedicated to go an extra mile in pursuing the Group's Mission to ensure successful fruition of each business venture in order to achieve the Group's Vision to be a preferred long- term strategic business partner. Pesaka Consolidated SdnBhd was incorporated on 9 May 2006.

During a short period of less than three (3) years it has positioned itself credibly in the Malaysia business fraternity. Through its wholly owned investment holding company, Pesaka Ventures SdnBhd, Pesaka Consolidated Group has secured and developed several valuable investments. Pesaka Consolidated Group of Companies comprise of eight (8) active subsidiaries i. e. TeknologiTenaga Perlis Consortium SdnBhd (TTPC), EPE Switchgear (M) SdnBhd (EPE), PesakaPowertechSdnBhd, Rasmadi Corporation SdnBhd, Pesaka Technologies SdnBhd, Pesaka Resources SdnBhd and Pesaka Utilities SdnBhd, and one (1) active associate i. . Central Cables Berhad (CCB). All investee companies are based in Malaysia with exporting potential and ability. Pesaka Consolidated Group of Companies are actively involved in Energy Business mainly in Power Sector via its TTPC's 650MW combined cycle power plant with annual sales of over RM800 million, CCB's manufacturing of power cables are wires with annual sales of over RM100 million, and EPE's manufacturing of medium voltage switchgears and services with annual sales of almost RM70 million. Other companies in Energy

Business are PesakaPowertech and Pesaka Technologies. The Group is also active in AgrobasedBusiness under Rasmadi Corporation, Utilities Business under Pesaka Utilities, and Construction & Trading Business under Pesaka Resources. With a credible start-up, Pesaka Consolidated Group is poised for further expansion locally and globally to be a GLOCAL company of Malaysia.

Corporate Structure Power Generation | TeknologiTenaga Perlis Consortium SdnBhd | | Pesaka Technologies SdnBhd | | Mutiara Consolidated SdnBhd | | Manufacturing | Central Cables Berhad | | Services | PesakaPowertechSdnBhd | | Production | Rasmadi Corporation SdnBhd | | Utilities Business | Pesaka Utilities SdnBhd | | Construction and Trading Business | Pesaka Resources SdnBhd | 650 MW Combined Cycle Gas Turbines Power Plant in Perlis since 2003: TeknologiTenaga Perlis Consortium SdnBhd (TTPC) (incorporated on 11th July 1996), was granted licence by the Ministry of Energy to build, own and operate a Power Plant with a capacity of 650MW to supply electricity to TenagaNasionalBerhad.

The Power Purchase Agreement was signed with TNB on 26th May 1998 for 21 years concession period. TIPC achieved its Commercial Operation Date on 31st March 2003. The Operation and Maintenance of the Power Plant is being done by Global E-Technic SdnBhd, a wholly owned subsidiary of TTPC. The Power Plant is built on an area of 37.5 hectares at the coastal site of Kuala Sung Bharu of Kuala Perlis. TIPC is a combined cycle gas fired plant comprises of three ALSTOM GT13E2 gas turbines, three-heat recovery generator system and one-steam turbine generator. The Plant configuration is capable of producing a total Plant capacity of 675MW on combined cycle operation.

The electricity generated is transmitted via a 17km 275kV double circuit transmission line connected to TNB 275kV system and two short 132kV double-circuit connected to TNB 132kV system. Natural gas supply is via a 25km of 18 inches gas lateral pipeline connected from Petronas Peninsular Gas Utilization pipeline. Achievements: ??? Bronze Award of Commendation under the Engineering Award 2004 in Category 2 – M Engineering from the Association of Consulting Engineers Malaysia, August 2004. ??? SIRIM QAS International a triple accreditation of I\$09001, I\$04001 and OHSAS\$18001, October 2004. ??? Gold Award under the Utilities (Electricity) Category from the Malaysian Council of Occupational Health & Safety (Human Resource Ministry), February 2007. 9 INSTITUTIONAL POLICIES FOR EFFICIENT MANAGEMENT 1. Mr.

Ron Haque Sikder shall be the Managing Director of the company and he shall remain in this office for a period of five years until or unless determined decided by the Board of Directors, unless he voluntary resigns or become this qualified. 2. For the service to be rendered by the Managing Director Shall receive such allowances and the Board of Directors will determine remuneration from time to time. 3. The Board of Directors with the Managing Director shall have the following power: a) To receive all money and securities of the company and to pay out the fund of the company all costs, charges and expenses as preliminary and identical of the formation establishment and registration of the company and all other necessary expenses for carrying on the business affairs of the company. ) To have general direction, management, superintendence and control of the company and of is business transaction, property affairs and concerns with

full power to purchase, acquire sale, or other dispose of any goods, merchandise, property, rights or privileges at such price and on such terms and conditions as he thinks fit with the approval of the Board of Directors. c) To appoint, suspend, promote, degrade, engage, and dismiss all officers, employees, experts, clerks, labours and all other persons for temporary, permanent or special service and to pay them out of the fund of the company. d) To purchase, take on lease, or otherwise acquire for the company and any property rights or privileges, which the company is authorized to acquire such price and generally on such terms and conditions as he thinks fit with the approval of the Board of Directors.

1 BACKGROUND AND EXPERIENCES OF THE PROMOTERS: 1. CURRICULUM VITAE OF THE CHAIRMAN 1. Name: Rick Haque Sikder 2. Father's Name: Mr. Zainul Haque Sikder 3.

Mother's Name: Mrs. Monowara Sikder 4. Permanent Address: 265, Eidgah Road, Road # 15, West Dhanmondi, Dhaka- 1209. 5. Educational Qualification: Bachelor of Business Administration from USA 6. Occupation: Business 7. Business Position: ??? USA Director- Sikder Incorporated Director- Sikder Group Incorporated Director- ZMS Incorporated Director- ZMS Group Incorporated Director- M. Sikder Holdings Incorporated Partner- KOI, Los Angeles, California Partner- KOI, New York ??? Bangladesh Chairman- A1 Motors Limited Chairman- PowerPac Battery Manufacturing Industries Ltd. Partner- A1 Trade Centre Partner- A1 Workshop Partner- The Privilege Club Partner- PowerPac



Director Admin. – Z. H. Sikder Women’s Medical College & Hospital Ltd.

Director- Sikder Real Estate Pvt. Limited Managing Director- The River ???

Singapore Chairman- Sikder Group Pte Ltd. Managing Director- Inter-Asia

Group Pte Ltd. ??? Thailand Chairman- KOI, Bangkok, Thailand Managing

Director- Sikder Group Ltd. Managing Director- Sikder Holdings Ltd. ??? Hong

Kong Chairman- R&R Holdings Ltd. 8. Business Experience: 17 (Seventeen)

years of Business Experience in Healthcare, Banking, Real Estate, Power

Sector, Importer, Exporter & Service Sector. 2. CURRICULUM VITAE OF THE

Managing Director 1. Name: Ron Haque Sikder 2. Father’s Name: Mr. Zainul

Haque Sikder 3.

Mother’s Name: Mrs. Monowara Sikder 4. Permanent Address: 265, Eidgah

Road, Road # 15, West Dhanmondi, Dhaka- 1209. 5. Educational

Qualification: Bachelor of Business Administration from USA 6. Occupation:

Business 7. Business Position: ??? USA Director- Sikder Incorporated Director-

Sikder Group Incorporated Director- ZMS Incorporated Director- ZMS Group

Incorporated Director- M. Sikder Holdings Incorporated Partner- KOI, Los

Angeles, California Partner- KOI, New York ??? Bangladesh Director- National

Bank Limited Director Finance- Z. H. Sikder Women’s Medical College &

Hospital Ltd. Ex- Chairman- Executive Committee of First Security Bank

Limited. From August, 1999 to May, 2005) Managing Director- A1 Motors

Limited Managing Director- PowerPac Battery Manufacturing Industries Ltd.

Managing Partner- A1 Trade Centre Managing Partner- A1 Workshop

Managing Partner- The Privilege Club Managing Partner- PowerPac Director-

Sikder Real Estate Pvt. Limited Managing Director- Multiples Holdings

Managing Director- H2O Holdings ??? Singapore Managing Director- Sikder

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Group Pte Ltd. Managing Director- Inter-Asia Group Pte Ltd. ??? Thailand  
 Managing Director- Sikder Group Ltd. Managing Director- Sikder Holdings  
 Ltd. Managing Director- KOI, Bangkok, Thailand ??? Hong Kong Managing  
 Director- R Holdings Ltd. 8.

Business Experience: 15 (Fifteen) years of Business Experience in  
 Healthcare, Banking, Real Estate, Power Sector, Importer, Exporter & Service  
 Sector. 2 management and organization: The management structure of the  
 proposed POWERPAC MUTIARA KHULNA POWER PLANT LTD. (PPMKPPL) is  
 designed in two different styles ??? one during project development and  
 implementation phase and another being during operation. Organogram of

the Company: 3 manpower requirement and compensation: The manpower  
 requirement of the proposed project is as follows: Administrative Staff and  
 their salary and Wages: | Designation | Number of Employee | Salary per  
 Month in Tk. Salary per Year | | | | Tk in Lac | | Plant Manager | 1 | 125, 000 |  
 1. 25 | | Deputy Manager | 1 | 100, 000 | 1. 00 | | Maintenance Engineer | 2 |  
 70, 000 | 1. 40 | | Shift engineer | 4 | 30, 000 | 1. 0 | | Shift Operator | 28 | 20,  
 000 | 5. 60 | | Accountants | 3 | 20, 000 | 0. 60 | | Electrician/Technician | 10 |  
 17, 000 | 1. 70 | | Workshop Technician | 6 | 8, 000 | 0. 48 | | Skilled Worker |  
 12 | 8, 000 | 0. 6 | | Drivers | 4 | 8, 000 | 0. 32 | | Security Officer | 1 | 12, 500  
 | 0. 13 | | Logistic Officer | 1 | 12, 500 | 0. 13 | | Inventory Controller | 1 | 15,  
 000 | 0. 15 | | Security | 12 | 7, 000 | 0. 4 | | Foreign technicians' payment | 1  
 | 1, 050, 000 | 10. 50 | | Total | 87 | | 26. 25 | Total manpower = 87 nos. Total  
 Salary, Wages, Director Remuneration & Festival Bonus = Tk. 26. 25 Lac

Moreover, during the 9-months construction period, hundred of man-months  
 will be required for successful implementation of the proposed project. The

cost of which has been incorporated with the project cost. 3. TECHNICAL ASPECTS 5 Project Description: 1. Introduction:

The proposed project envisages for setting up a modern power plant in the name and style of POWERPAC MUTIARA KHULNA POWER PLANT LTD.

(PPMKPPL) to be located at Khulna, Bangladesh. The project will not only play a major role to meet the demand of local market but also give an opportunity to the local investors for the economic development of the country. 3. 1. 2

The objective of the project: The objectives of the project are as follows: 1. To establish a power plant to meet the demand of local market. 2. To meet the demand of industrial sector. 3. To support the industrial works specially. 4. To create employment opportunities. 5. To earn optimum benefit through honest investment. 6.

To contribute for the ultimate development of the country. 6 Technology & process description: The technology of power plant unit is not new one in the country. In this proposed industry, the most updated technology will be used which can be easily understood from imported machinery observation. 3.

Production Capacity and Sales: After implementation of the project by refurbished importable machinery and equipment, the production capacity of the project base on one shift operation of 24 (Twenty four) hour per day for its production units and for all the section 365 working days per year at 100% capacity utilization will be as follows: Production:

Heavy Fuel Oil Power Plan: Total Production per year =  $100\text{MW} * 1000 = 100000 \text{ KW}$   
 $100000 \text{ KW} * 8760 \text{ hr/year} = 876000000 \text{ KWH}$   
 Sales price per Unit =  $8760, 00, 000 \text{ KWH} * 6. 692 \text{ Tk.} = \text{Tk. } 58, 621. 92 \text{ Lac}$

Materials: In Lac BDT | HFO |= | Total Cost Tk. 49, 423. 92 Lac 8 project location and its suitability: The project of PowerPac Mutiara Khulna Power Plant Ltd. (PPMKPPL) will be located at Khulna, Bangladesh. The project will avail road & river transport communications. All infrastructure facilities like water, powers etc. are already available in the project area. 9 Lay-out PLAN:

The detail master plan of the proposed project has been shown in the separate design sheet. 11 land development: The project land for the project will be acquired by the PowerPac Mutiara Khulna Power Plant Ltd. The total requirement of land for this project is 5. 00 acre at Khulna, Bangladesh. The land development cost Tk. 300. 00 Lac. Therefore the value of land has not been included in the fixed cost of the project. 12 STRUCTURAL DESIGN & SPECIFICATION: The structural design and specification of the civil engineering works will be completed according to the guidelines of Bangladesh National Building Code of 1993. 13 project cost estimation

Cost computation has enumerated under different sub heads, namely: 1. Cost of land including registration; 2. Land Development; 3. Building and Civil Construction; 4. Furniture and Fixtures; 5. Machinery and Equipment; 6. Erection and Installation; 7. Transportation Cost; 8. Power and Fuel; 9. Security Deposit; 10. Preliminary Expenses & 11. Manpower etc. The major cost components are described briefly in the following paragraphs. Details of cost break down of the project are shown in Annexure. 3. 6. 1 Building and Civil Construction: A. Civil Construction: | Sl. No. | Name of Structure | Type of Construction | Amount Tk. n Lac | | 1. | Plant House 2 nos | Pre-fabricated | 1600. 00 | | 2. | Fire Water Shelter Shade | Pre-fabricated | 50. 00 | | 3. |

Administration Building | Pre-fabricated | 100. 00 | | 4. | Maintenance Building  
 | Pre-fabricated | 50. 00 | | 5. | Plant Substation | Pre-fabricated | 40. 00 | | 6.  
 Maintenance BAY | Pre-fabricated | 30. 00 | | 7. | Control Room | Pre-  
 fabricated | 30. 00 | | 8. | Fuel Treatment Building | Pre-fabricated | 100. 00 |  
 | Total | 2000. 00 | B. Other Civil Construction: | Sl. No. | Type of Construction  
 | Amount Tk. in Lac | | 1. HFO / DFO Unloading Station | 75. 00 | | 2. | Water  
 Treatment Plant Construction | 100. 00 | | 3. | Fire Water Tank Foundation &  
 Related Civil works | 100. 00 | | 4. | Main Gate 2 nos | 25. 00 | | 5. | Car  
 Parking Facilities & Internal Road | 25. 00 | | 6. | Lube Oil unloading Station |  
 25. 00 | | 7. Telecommunication Station | 25. 00 | | 8. | Waste Water TIE in  
 Point | 50. 00 | | 9. | Service Tank (Large) : | | | a. DFO Storage Tank  
 Foundation & Related Civil works | 250. 00 | | | b. HFO Storage Tank  
 Foundation & Related Civil works | 250. 00 | | | c.

HFO Storage Tank Foundation & Related Civil works | 250. 00 | | 10. | Service  
 Tank (Small) : | | | a. HFO Service Tank Foundation & Related Civil works |  
 125. 00 | | | b. Wastage Oil Storage Tank Foundation & Related Civil works |  
 100. 00 | | | c. Lube Oil Storage Tank Foundation & Related Civil works | 100.  
 0 | | Total | 1500. 00 | Total Value Building & All Related Civil Works = Tk.

3500. 00 Lac 3. 6. 2 Furniture and Fixtures: This cost head includes the cost  
 of essential furniture for the Management Office, Security personnel,  
 Operators and necessary office equipment. Lump sum cost for this purpose  
 is considered Tk. about 20. 00 Lac. 2 Machinery and Equipment: A. Imported  
 Machinery Price in Euro: a. Capital Machine= 54, 074, 100. 00 Euro b.  
 Supporting Machine= 18, 341, 551. 67 Euro Total= 72, 415, 651. 67 Euro

Exchange Rate: 1 Euro = Tk. 89. 00 Total Cost of Imported Machinery = Tk. 64, 449. 93 Lac

Annexure Supply Contract with Wartsila. B. Local Machinery Total Cost of Local Machinery = Tk. 2087. 02 Lac 3 Erection and Installation For erection, installation and commissioning of different machinery and equipment will be at amount of Tk. 200. 00 Lac estimated in the project cost. 4 Transportation: The cost for transportation of the project is considered in selling expenses. 3. 7 project implementation schedule: Taking into consideration the time generally required for execution of similar project in our country, it has been estimated that approximately nine months will be required to put the mill into commission from the commencement of execution work.

The major physical work to be involved for execution of the project includes construction of power house buildings, workshop & warehouse and ancillary works, opening of L/C and other activities concerning procurement of imported machinery, procurement of local machinery, and equipment, erection and installation of the machinery and equipment, trial run etc. Many of the works will be undertaken simultaneously while some activities will be dependent on completion of others. The detail implementation schedule will be shown in the separate sheet of Civil Construction. The project has taken time 9 (Nine) months for implementation of the plan. Implementation schedule of the project are given below: - | 01. | Buy of the Land Position & Earth filling |: | 15 days | | 02. Construction of power house building and other civil works |: | 6 month | | 03. | L/C opened for imported machinery's |: | 1st month | | 04. | Electrification and load connection |: | 4th month | | 05. |

Arrival of Imported machineries at the project side |: | 3rd month | | 06. |  
 Erection & Installed of machineries (both foreign & local) |: | 7th month | | 07.  
 | Trail production |: | 8th month | | 08. Commercial production |: | 9th month |

3. 8. OPERATING LIFE OF THE PROJECT: the proposed power plant being set up with the new and updated machinery is expected to be in economic operation for at least 15 years without any major BMRE. 3. 9 REPAIR AND maintenance It includes continuous repair and replacement of different items of works required to be done to keep the project fit for use or to save it from further damage. It covers the works of repair at different parts of equipment of the production unit. The technical staff of the project may generally do it. Routine maintenance will also cover the maintenance of the pumps, generator or any other parts.

The estimated yearly expenses for repair and maintenance for machinery and building are as follows: Table 3. 9: Repair and maintenance (Tk. in lac) |

Repair and maintenance	1st year	2nd year	3rd year	Building
	5. 00	7. 00	10. 00	
Machinery	5. 00	7. 00	10. 00	
Total	10. 00	14. 00	20. 00	

3. 10 SAFETY PROVISION: The project will have adequate safety provisions to fight against fire. The cost of fire fighting has been included in cost of local machinery the project. 3. 11 TECHNICAL SERVICES AND QUALITY CONTROL: The project will have adequate provisions of technical services for ensuring quality control. The project will have the provision of training of the technical person in home and abroad. 4. 0 MARKETING ASPECTS

APPLICATION OF PRODUCTS / SERVICES: This chapter provides an overview of country's power sector including historic and projected demand-supply scenario, utilization, policy framework, regulatory authority, pricing etc.

The chapter also presents a detailed analysis on the off-taker focusing on off-taker's existing and projected demand and supply of electricity, tariff structure, operational and financial position.

#### 4. 1 POWER SECTOR OVERVIEW:

A. INSTITUTIONS: Power sector of Bangladesh is regulated by Electricity Act of 1910. Government, through Power Division under the Ministry of Power, Energy and Mineral Resources (“ MPEMR”), bears overall responsibility for power sector institutions, with exclusive control over policy formulation, appointment of key personnel as well as investment decisions. The most dominant player in Bangladesh power sector is Bangladesh Power Development Board. BPDB is responsible for the development of national grid and distribution of electricity in major cities of the country.

It owns and operates about 5, 493 MW[1] (Generation by BPDB is 3, 812 MW and generation by Independent Power Producers and Rental Power Plant are 1, 330 MW and 351 MW) of installed capacity with a current generation capability of 5, 166[2] MW. Other major sector players include Rural Electrification Board (“ REB”), Palli Bidyut Samities (“ PBS”), Dhaka Electric Supply Authority (“ DESA”), Dhaka Electric Supply Company (“ DESCO”), Power Grid Company of Bangladesh (“ PGCB”) and Power Cell. A pictorial depiction of power sector structure of Bangladesh is shown below: Figure 4 –

1 B. DEMAND: Bangladesh has been experiencing severe power shortages over the last decade. Increased demand of electricity is mainly due to continued economic growth. High level of load-shedding also indicates that significant suppressed demand for electricity exists in the country.



While electricity demand has grown at about 8% – 9% annually, absence of new and large plants, low plant utilization factor and inadequate investment have resulted in significant gap between demand and supply. The situation is further aggravated due to maintenance of old plants, poor bill collection, system loss due to technical problems etc. The Power System Master Plan (“PSMP”) study, prepared in 1995 and updated in 2005 and 2006, projected that electricity demand will increase by about 8% per year; and that peak demand will reach 17, 304 MW by 2020. Year-wise demand forecast

according to PSMP is presented below: Table 4 – 1 : Projected Demand for Electricity[3]

Year	Demand (MW)
2011	6765
2012	7518
2013	8349
2014	9268
2015	10, 283
2016	11, 405
2017	12, 644
2018	14, 014
2019	15, 532
2020	17, 304

C. GENERATION: BPDB’s available generation capacity is now about 6, 208 MW against peak demand of 6, 765 MW. Maximum electricity generation in Bangladesh was 4, 936 MW [18-07-2011]. Following table presents net electricity generation, generation by IPP and losses due to distribution and transmission from 2001 to 2009[4]:

Table 4 – 2: Net Electricity Generation, Generation by IPP and Losses due to Distribution and Transmission

Year	Net generation (GWh)	IPP Generation (GWh)	Gross system loss (%)
2001	14, 828. 18	2, 192. 68	13. 85
2002	14, 449. 56	3, 771. 19	12. 62
2003	12, 880. 77	6, 298. 1	11. 35
2004	13, 342. 08	7, 478. 18	10. 16
2005	14, 067. 00	7, 939. 19	9. 29
2006	15, 416. 95	8, 286. 07	7. 86
2007	15, 494. 70	8, 244. 54	7. 03
2008	16, 155. 6	9, 137. 71	6. 92
2009	16, 430. 64	10, 173. 31	6. 58

The gap between supply and demand of electricity has increased over the years. The shortfalls was about 100-150 MW in 1992 but

increased substantially during 1997-1999, when maximum unserved demand reached about 700 MW per year. Following table and graph present projected energy demand, generation and demand-supply gap as indicated in PSMP during 2009 -2025: Table 4 – 3: Projected Energy Demand, Generation and Demand-Supply Gap as indicated in PSMP

Year	Net generation (MW)	Peak Demand (MW)	Demand-supply gap (MW)
2010	3862	6608	2746
2011	4181	7148	2967
2012	4526	7732	3206
2013	4900	8364	3464
2014	5304	9047	3743
2015	5743	9786	4043
2016	6173	10512	4339
2017	6636	11291	4655
2018	7134	12128	4994
2019	7669	13027	5358
2020	8245	13993	5748
2021	8800	14924	6124
2022	9394	15917	6523
2023	10027	16977	6950
2024	10703	18107	7404
2025	11425	19312	7887

Figure 4 – 2: Electricity Demand, Supply and Gap Projection

D. AGE OF POWER PLANTS

Age Group (Years)	Installed Capacity (MW)
40 +	80
31 - 40	305
21 - 30	1105
11 - 20	1378
01 - 10	3068
Total	5936

E. LOAD CURVE ON AUGUST 20, 2010 (SO FAR MAXIMUM PEAK) Energy Generation: 99. 13 M kWh Energy Not Served: 3. 13 M kWh

F. TRANSMISSION Power grid Company of Bangladesh Limited (PGCB) was established in 1996 and is responsible for electricity transmission.

Electricity transmission system consists of a fairly well integrated network of 230-kV lines (734 km) and 132-kV lines (2, 760 km) and 66-kV line (167 km) covering the main load centers in the country. The route length of transmission lines has increased from 994 km in 1971-72 to 4, 514. 84 km (for 230 and 132 kV) at present. The system supplies the distribution

networks through 230/132 kV and 132/33 kV grid substations with a total capacity of about 6, 625 mega volt-amperes (“ MVA”) and 9, 529 MVA, respectively. Some of the substations need augmentation or supplementation by new grid substations to handle the distribution loads more efficiently, particularly in the major cities such as Dhaka, Chittagong, and Khulna. G. ENERGY GENERATION BY FUEL TYPE IN FY 2010: [pic] H.

EXPECTED FUEL MIX IN FY 2013 [pic] I. POWER GENERATION PROJECTS UP TO 2016 (CALENDAR YEAR) | YEAR | 2010 (MW) | 2011 | 2012 | 2013 | 2014 | | Commissioned |(MW) |(MW) |(MW) |(MW) | | Peak demand served – BPDB (MW) | 3, 751 | 3, 812 | 3, 559 | 4, 130 | 4, 162 | The table above indicates that average growth in serving demand for electricity has increased only marginally during 2003 ??? 2007.

This is indicative of the fact that during this period BPDB has not been able to increase its generation capacity by setting up new power plants. On basis of this information electricity demand of BPDB is forecasted below: Table 4 – 7: Projected Electricity Demand of BPDB | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | | Billing rate | BDT/KWh | 2. 27 | 2. 19 | 2. 26 | 2. 36 | 2. 56 | | System loss as % of net generation |% | 9. 29% | 7. 82% | 6. 89% | 6. 92% | 6. 8% | | Gross billing | Million BDT | 43, 958. 34 | 43, 948. 89 | 48, 189 | 53, 486 | 61, 332 | | Gross collection | Million BDT | 39, 887. 02 | 40, 384. 26 | 53, 134. 17 | 54, 060 | 58, 995 | Major points indicated by the above table are: ???

Average growth in energy sales of BPDB during 2005-09 is about 9% p. a. ??? Average billing rate increased gradually during 2005 – 2009; ??? System loss declined over the years with an average system loss of 7. 50% p. a. ???

Gross billing amount and gross collection at 9% p. a. and 11% p. a. , respectively during 2005 -2009. A. roposed Tariff Fuel Type | HFO | | Contract Year | 15 years | | Reference Foreign Non – Escalable Capacity Price (RNECPn) ??? | | | USD / kW Month | 7. 3812 | | Reference Foreign Escalable Capacity Price | | |(RECP(US)n) ??? USD / kW- Month | 0. 9226 | | Reference Local Escalable Capacity Price | | |(RECP(TK)n) – BDT / kW – Month | 64. 852 | | Reference Capacity Price | | |(RCPn) – USD /kWh | 0. 0126 | | Fuel Cost | | | BDT / kWh | 5. 6420 | | Reference Foreign Variable O&M Price | | | (RVOMP(US)n) – USD /kWh | 0. 0004 | | Reference Local Variable O&M Price | | |(RVOMP(TK)n) – BDT /kWh | 0. 400 | | Reference Energy Price | | | USD /kWh | 0. 0798 | | Total Reference Tariff | | |(RTn) – US Cents / kWh | 9. 5600 | 5.

#### FINANCIAL ASPECTS 5. 1 ASSUMPTION FOR FINANCIAL CALCULATION:

Profitability potential of the project has been estimated for three years of operation to assess the financial viability of the project.

The financial projections include estimates of sales, operating cost, administrative and selling expenses and financial overheads. The statement showing forecasts is shown in concerned Annexure. The assumptions underlying the earning forecast are as under: a) The project will operate for 365 days in a year three shifts operation basis of 24 hours per day (three shift basis=  $8 \times 3 = 24$  hours). b) The capacity build up has been assumed to be achieved gradually at the rate 100 %, 100 % & 100 % of estimated attainable capacity in the 1st, 2nd & 3rd yr. of operation and onwards; c) The price of raw materials and finished goods have been assumed to remain constant throughout the projected years of operation with the assumption hat any increase in the price of raw materials will be offset by the

corresponding increase in the price of finished goods; d) Economic life of the project has been assumed to be 15 years without any major replacement. e) Construction period- 09 months. 5. 2 project cost and mode of financing: The estimated fixed cost of the project is Tk. 802. 50 Crore. The means of finance is Cost of the Project : Total Capital Investment (Fixed)= Tk. 802. 50 Crore Means of Finance : A) Bank loan: iii. Term Loan= Tk. 112. 35 Crore iv. IPFF Fund of Bangladesh Bank = Tk. 449. 40 Crore Total Loan= Tk. 593. 85 Lac B) Equity: iii. Entrepreneur= Tk. 160. 0 Crore iv. Preference Share= Tk. 80. 25 Crore Total= Tk. 240. 75 Crore The item-wise summarized project cost and proposed mode of financing is shown in Annex. 5. 3 CAPITAL investment plan: It is assumed that 70 % of the project cost will be financed through Bank loan and the sponsors will finance rest 30 % of the project cost. The ratio and amount of debt and equity for the project is shown in Table 5-3.

Table 5. 3: Capital investment plan of the project | Item | Percentage | Amount Taka in Lac | | Total

Project Loan	70 %	59, 385. 00	Sponsor's Equity	20 %	16, 050. 00	Preferred Equity
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