

**BEFORE
THE NATIONAL ELECTRIC
POWER REGULATORY AUTHORITY**

**APPLICATION FOR THE GRANT OF A GENERATION LICENSE UNDER
SECTION 15 OF THE REGULATION OF GENERATION, TRANSMISSION AND
DISTRIBUTION ACT 1997**

**IN RESPECT OF
350 MW IMPORTED COAL POWER PROJECT AT
PORT QASIM, SINDH**

Dated: 31st March 2015

**Filed for and behalf of:
SIDDIQSONS ENERGY LIMITED**

**Through;
RIAALAW**
ADVOCATES & CORPORATE COUNSELORS
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APPLICATION FOR THE GRANT OF A

GENERATION LICENSE

1. NEPRA's Participation in the Process

1.1. Section 15 of the Regulation of Generation, Transmission, and Distribution of Electric Power Act, 1997 (the "**Act**") provides, *inter alia*, that:

"(1) No person except under the authority of a license issued by the Authority under this Act and subject to the conditions specified in this Act and as may be imposed by the Authority, construct own or operate a generation facility.

(2) An application for the grant of a license for a generation facility shall specify-

(i) the type of facility for which the license is applied;

(ii) the location of the generation facility; and

(iii) the expected life of the generation facility."

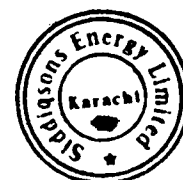
1.2. Furthermore, Regulation 3 of the National Electric Power Regulatory Authority (Application and Modification Procedure) Regulations, 1999 (the "**AMP Regulations**") provides that an application for a license shall be made in the form specified in the AMP Regulations and further enumerates the documents required to be submitted to the Authority along with the requisite application.

1.3. This Application for the grant of a generation license is made pursuant to, *inter alia*, Section 15 of the Act and Regulation 3 of the AMP Regulations (this "**Application**").

2. Introduction of the Sponsors/Applicant

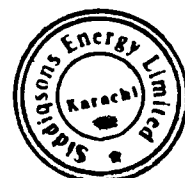
2.1. As required under the Section 24 of Act, Siddiqsons Energy Limited (the "**Applicant**" or the "**Company**") is an entity incorporated under the Companies Ordinance, 1984, to act as a special purpose vehicle (the "**SPV**") and develop a 350MW Imported Coal Power Project at Port Qasim, Sindh Province, Pakistan (the "**Project**"), sponsored by Siddiqsons Limited.

2.2. The Applicant is developing a 350 MW imported coal power project under the upfront tariff regime prescribed by National Electric Power Regulatory Authority



("NEPRA") *vide* its determination dated 6 June 2013, as amended (the "**Upfront Tariff**").

- 2.3. The Company obtained Letter of Intent ("**LOI**") dated 13 February 2015 from the Private Power & Infrastructure Board ("**PPIB**") and is diligently working towards the early implementation of the Project.
- 2.4. By way of background and introduction, the sponsors of the Project consist of:
- Siddiqsons Limited, the Main Sponsor, and Harbin Electric International Company Limited, the co-sponsor, have signed a consortium agreement on 22 December 2014 to jointly establish a 350 MW coal fired power plant on supercritical technology at Port Qasim, Karachi.
 - Siddiqsons Group was initiated in 1959 and is engaged in a diverse portfolio of industry segments including textile, real estate, banking, theme parks and dairy.
 - **Textile:** In textile, Siddiqsons Limited is pioneer in manufacturing of denim in Pakistan. The Company has the largest fully integrated denim manufacturing under one roof in Pakistan.
 - **Real Estate:** Siddiqsons' real estate business includes mega projects such as Ocean Towers, the tallest standing building in Pakistan with a height of 491 feet. It also has over 2 million square feet projects in pipeline.
 - **Banking:** The Group is also a significant shareholder in MCB, since its privatization in 1991.
 - **Theme Park:** Group has a majority share in Theme Park Industry in Pakistan; some of the parks include Aladdin Water Park in Karachi and Joyland Lahore.
 - **Dairy:** Siddiqsons Group, in 2013, has diversified into dairy business, with an aim to produce high quality milk through strict quality assurance mechanism. Siddiqsons Dairies (Private) Limited has initially started with a herd size of 2500 animals.
 - Siddiqsons Group's latest venture is in energy sector through the establishment of Siddiqsons Energy Limited, the Project Company, under Siddiqsons Limited



to establish a 350 MW coal-fired supercritical power plant. For this purpose, Siddiqsons Limited has collaborated with Harbin Electric International Company Limited as their strategic technical partner to establish the project. Harbin Electric International, HEI, is one of the top Original Equipment Manufacturers of People's Republic of China. HEI has vast experience of providing equipment and complete turnkey EPC solutions for various thermal projects (coal technology with supercritical boilers) on a global scale. Widely regarded as one of the premier EPC companies, HEI has set benchmarks in the Chinese and worldwide electric power market. HEI has installed over 30,000 MWs of Power Plants globally with 3,330 MWs projects in Pakistan.

- The sponsors have further collaborated with professional firms that are highly qualified and committed to developing and commissioning the Project on a fast track basis. Collectively, the sponsors along with their professional alliances, presents a vastly experienced team of power sector professionals of international repute.

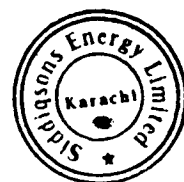
3. The Project Overview

3.1 Project Company

- 3.1.1 As submitted above, the Company is developing its Project under the NEPRA Upfront Tariff regime. It is anticipated that the construction of 1x350MW power plant on supercritical technology will take approximately 36-40 months from the issuance of notice to proceed to the project EPC contractors. The plant is targeting its commissioning in the fourth quarter, 2018.

3.2 Issuance of "Letter of Intent" by PPIB

- 3.2.1 PPIB issued the Notice to Proceed on 19 January 2015 and on 13 February 2015, the LOI was issued by PPIB for the development of a 350MW imported coal Project, annexed herewith as Annex - 9 hereto.
- 3.2.2 Though it is not required for the Projects being developed under the Upfront regime the Company has, to evaluate technical and commercial viability, undertaken to conduct the following studies / investigations; some of which have already been completed while others are on-going:
- a. Bankable Feasibility Study including transportation & site access studies;
 - b. Preparation of the Invitation to Bidders / Request for Proposal;
 - c. Social & Environmental Impact Assessment;



- d. Interconnection Study to include load flow, short circuit and transient stability studies;
- e. GeoTech investigations;
- f. Hydrological survey including bathymetry of the area;
- g. Seismic survey; and
- h. Topographical survey.

4. **Power Purchaser**

- 4.1. The entire power generated by the Project will be sold to National Transmission and Despatch Company (the "**Power Purchaser**") for the term of 30 years from the commercial operations date.
- 4.2. The Project is being developed under the Policy for Power Generation Projects 2002 (the "**PPIB Policy**") read with other policy and guidelines prescribed by the government.
- 4.3. The 30 year tariff concession period is in line with the design life of the technology (boiler and turbines etc.), as they are designed to have a very low probability of failure within 30 years life. The Grid and Transmission Lines to evacuate power will be made available by the Power Purchaser.

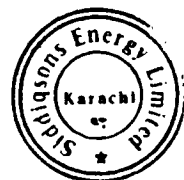
5. **Site**

- 5.1. The Company is in the process of acquiring land measuring 100 acres in the Eastern Industrial Zone of Port Qasim, Karachi, Sindh (the "**Site**"). The Land Coordinates are as follows:
 - (i). 24° 47' 20.09"N, 67° 22' 59.38E
 - (ii). 24° 46' 48.16"N, 67° 23' 1.05"E
 - (iii). 24° 47' 21.99"N, 67° 23' 14.19"E
 - (iv). 24° 46' 48.88"N, 67° 23' 15.82"E

6. **The Project**

Since its inception, the Company has initiated the following in respect of the development of the Project:

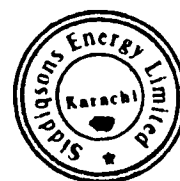
- a. Consortium Agreement has been signed with Harbin Electric International on December 20, 2014 for provision of desired engineering support to the Company throughout development phase of the Project;



- b. Sargent & Lundy has been engaged as the Technical Advisor to prepare the Bankable Feasibility Study Report and the ITB/RFP;
- c. Services of RIAA Law have been acquired as Legal Counsel of the Project;
- d. United Bank Limited has been appointed as Financial Advisor and Lead Arranger;
- e. Land measuring 100 acres is being acquired in the Eastern Industrial Zone of Port Qasim, Karachi;
- f. Environmental Management Consultants have been appointed to undertake Social and Environmental Impact Assessment;
- g. An MoU has been signed with Pakistan Bulk International Terminal (PIBT) for handling of coal required for the Project;
- h. Site Assessment is on-going (Geotechnical, Topography, Bathymetry, Metrology, Hydrology, and Seismic Survey);
- i. Requisite data and demand draft has been submitted to NTDC to undertake the Interconnection Study; and
- j. NTDC has issued a letter No. GM(WPPO)/NTDC/HUB-147/1128-32 dated 9 February 2015 confirming that the Power Purchaser shall procure power generated by the Project at the rates determined by NEPRA.

7. **Engineering, Procurement and Construction (EPC)**

- 7.1. A comprehensive RFP document is being prepared by the Technical Advisor of the Company which shall apart from commercial terms include, *inter alia*, Minimum Functional Specifications / Technical Specifications of the Project along with complete set of guidelines, instructions and information required for the submission of bids. The RFP shall be sent to no less than 5 bidders. These bids will be evaluated by the Technical Advisor in consultation with the Company and its team of consultants.
- 7.2. Once the Company receives bid evaluation and recommendation from the Technical Advisors, EPC negotiations shall commence with one most technically capable and commercially viable bidder.
- 7.3. The envisaged scope of work shall be complete EPC of 1x350MW Imported Coal Power Project on a turnkey basis, including but not limited to the following:
 - a) Supply of Turbine, Boiler, and Generator;
 - b) Supply of Balance of Plant Equipment;
 - c) All civil work, including foundations and piles, site leveling & grading, buildings, above and below ground utilities, drainages, pipe works, etc.
 - d) Electrical, mechanical, instrumentation & controls works;



- e) Construction of open coal storage area, conveyor hopper for delivery of coal to the bunker bay, coal handling equipment (covered conveyors, coal crusher, local conveyors in the open storage area, coal unloading area), water treatment facilities, condensate polishing equipment, chlorination plant, MCC, Switchgear, DCS, PLC, fly ash electrostatic precipitator(s) with ash handling conveyors, bottom ash handling conveyors, ash storage silo, ash pond with minimum two years of ash disposal capacity;
- f) Training of staff;
- g) Erection, Testing and Commissioning of the Plant;
- h) Performance guarantees;
- i) Minimum of 2 years Warranty Period;
- j) Quality Assurance Services of plant during 2 years Warranty Period; and
- k) Operations and Maintenance Services for the plant on annual basis for a total of 5 years i.e. 03 years after expiry of Warranty shall be an optional item during EPC contract negotiations.

8. Power Purchase Agreement / Implementation Agreement

- 8.1. The PPIB will finalize and approve the standardized the IA and PPA for the projects being developed under the upfront tariff regime. It has been learned that in pursuance to the direction of NEPRA, the PPA under the Upfront Tariff regime is being finalized.
- 8.2. While awaiting the PPA to be finalized under the upfront tariff regime, the legal, the Company has reviewed the broad terms of the PPA available for cost plus projects, to familiarize itself with the contractual transaction. The Company is currently aiming to formally engage PPIB for preliminary discussions on PPA and IA in the month of April 2015 or as soon as the security documents along with their annexures and schedules are approved by the Government of Pakistan.

9. Operations & Maintenance Arrangement

The Company intends to outsource the Operation and Maintenance (O&M) works to a party which has the ability, capacity and is more suited to undertake such works. One of the options at this stage is to engage the EPC Contractor for O&M services. However, this option shall be thoroughly evaluated before any decision is taken. In any case, the O&M contractor shall be engaged well in time to enable it to participate and provide vital inputs in design reviews, staff training, pre-commissioning and commissioning activities.



10. Financing

The United Bank Limited *vide* its letter dated February 25, 2015 has provided an in-principal interest in structuring and providing debt arrangement services for the Project debt of approx. USD 448 million for funded project finance along with non-funded facilities, such as Letter of Credit etc. At this stage, the entire Project would be 100% locally financed, however the Company may go for mix of local and foreign financing at a later stage.

11. Selection of Technology

The Company intends to erect and commission a 1x350MW supercritical power plant on imported coal with a guaranteed plant efficiency of 39% (on LHV). The annual availability factor shall be 85% with auxiliary load not exceeding 9%.

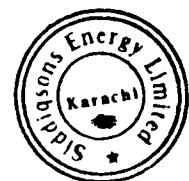
Supercritical technology has been selected because of obvious advantages such as higher efficiency, lower NO_x, SO_x and particulate emissions, significant reduction in CO₂ emissions. The supercritical pulverized coal boilers require less coal per megawatt-hour, leading to lower emissions per megawatt (including carbon dioxide and mercury), and lower fuel costs per megawatt, leading to higher efficiency and lower fuel costs. In short, they provide the best overall balance in performance, reliability, lower emissions and cost.

Supercritical boiler shall have a temperature and pressure of 571°C and 254 bar respectively (at BMCR) with 1080 tonnes/hr steam generation capacity (BMCR). Exhaust from the steam turbine will be condensed in a seawater cooled condenser.

The boiler island will comprise of various systems including coal bunkers, coal feeders, pulverizers, burners, heat transfer surfaces, economizer, air heater, steam re-heater, soot blowers, water washing, emission control system, particulate collection etc.

Each steam turbine generator is connected to the local 500 kilo Volt (kV) AC system of the national grid through a step-up transformer.

The Project shall have seawater intake and outfall pipes to carry water to and from the steam turbine condenser. The requirements of NEQS shall be met with regards to discharge temperature of the seawater. The plant will be equipped with either a Multistage Flash Distiller or a reverse osmosis coupled with Electro Deionization for power cycle makeup.



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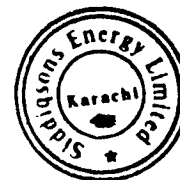
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The coal shall be imported either from South Africa or Indonesia and offloaded at Pakistan International Bulk Terminal (PIBT). The Company has signed a MoU with PIBT to utilize its facilities, inter alia, for the import of coal where the coal will be unloaded from bulk coal carrying vessels and temporarily stored at PIBT. From PIBT, trucking to the Project site shall be the preferred option; however, barge transportation up to the Project site shall also be evaluated during the Feasibility Study.

The Plant shall be designed, engineered, constructed and commissioned, in all respects, in accordance with sound engineering practices, prudent electrical practices, NTDC Grid Code requirements and as NTDC may reasonably deem necessary to be incorporated in the design and installation of the Interconnection and Transmission Facilities.

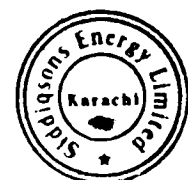
For dispatch of power, the Plant will be connected to 500kV AC transmission system of NTDC. The point of interconnection between the Plant and new 500kV transmission line shall be the switchyard of the Plant. The design of the interconnection as well as grid protection scheme shall be consistent with NTDC standards and its subsequent approval. The generator (at 20kV generation voltage) shall be connected to the 500kV switchyard via a step-up transformer.

Main and backup revenue metering system shall be installed to measure the units sent to the national grid. The accuracy class of main and backup meters shall comply with NTDC requirements.

The unit will be furnished with a DCS system. The DCS shall interface with the package control systems provided with the turbine and generator, boiler. PLCs shall be provided for water treatment system, water & steam sampling and chemical dosing control system, ash handling system, sea water desalination system, compressor air system, waste water treatment control system, cooling water treatment control system, coal handling control system and continuous emissions monitoring system (CEMS). BOP operator stations shall be provided in a centralized control room.

The Project shall meet local regulatory emissions limits. Also, dry low NO_x burners (implemented in an overall low NO_x combustion system) shall be installed in conformance with the local regulations for emission control. Extractive systems shall be used to monitor NO_x and SO₂.

Continuous Emission Monitoring System (CEMS) shall be provided to measure emissions and produce all required data logging and reporting. The analyzer system shall include extractive analyzers, sample probes, sample conditioning,



heated sample lines where required, a fully programmed controller, calibration gas bottles for zero and span, calibration accessories, and mounting hardware for installation to provide a complete and operable system. The data logging and reporting system shall store adequate amount of data and automatically produce reports as required. Only those systems which have been field-proven, engineered, programmed, and fully integrated shall be selected and deployed.

According to the air dispersion modeling, if coal having Sulphur contents in excess of 0.5% is used then the Project may require a Flue Gas Desulphurization (FGD) unit. However, to keep flexibility in coal specifications and sourcing, it is envisaged that a FDG shall be installed to meet the mandatory regulatory environmental requirements.

The chimney, whose height is expected to be 180m, shall consist of a reinforced concrete shaft and steel inner flue gas path that will be lined with a corrosion resistant liner or have sufficient thickness for corrosion allowance suitable for the flue gas chemistry and temperature. Access galleries will be provided for services of equipment and lighting.

Electrostatic Precipitators (ESP) will be designed and installed which will be capable of being operated such that emissions do not exceed the limit of 50 mg/Nm³ when firing design coal. Design gas volume will be at least 110% of BMCR gas flow when burning design coal.

One set of pneumatic fly ash conveyor system will be provided which will be located under the electrostatic precipitator's hoppers, economizer ash hoppers and air-preheater hoppers. Fly ash from hoppers will drop into the ash transportation equipments and then be transported to the fly ash silos through pipes. The capacity of pneumatic conveyor system would meet fly ash quantity which is produced when boiler will be burning design coal at BMCR condition.

There will be a concrete fly ash silos capable of storing the fly ash produced in 14 days when the boiler will be burning design coal at BMCR condition. There will be discharge outlets at the bottom of fly ash silo which will be equipped with humidifying device to discharge wet fly ash which will be transported to ash yard by dump trucks.

The bottom ash handling system shall provide for the collection and removal of bottom ash from the steam generator (pulverized coal type) furnaces. A completely dry type bottom ash removal system shall be provided. The boiler shall have one bottom ash removal system. The bottom ash handling system



shall be compatible with the boiler design and the requirement to transport bottom ash by truck to ash storage area.

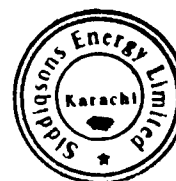
One set of dry bottom ash handling system will be provided. The cooled bottom ash will be smashed by crusher, and then crushed bottom ash drops into steel bottom ash silo for storage of up to 14 days of bottom ash at 100% BMCR conditions. Bottom ash will be transported from bottom ash silo to ash yard by trucks. The bottom ash silos will be provided with bag filters, the exhaust air will have emission level within the limits allowed by NEQS. The bottom ash silo will also include feeder, pressure relief valve, level indicators and etc. There will be electromagnetic pulsator around the cone part of the bottom ash silo to prevent from blocking up and ensure the loading of bottom ash.

There will be two discharge outlets at the bottom of bottom ash silo. One will be equipped with humidifying device to discharge wet bottom ash, and the humidified bottom ash will be transported to ash yard by dump trucks. The other one will be equipped with dry bottom ash unloader to discharge dry bottom ash.

Fly Ash and Bottom Ash from the Project will be transported by truck to the ash disposal pond that will be located within the Project site. The ash pond will have a raised bund. For ease of operation, the ash pond plot will be divided into smaller plots. This enables the ponds to be filled properly. The ash pond shall be lined with a layer of HDPE membrane or compact clay liner in order to avoid water seepages to the ground or the sea. Adequate measures shall also be taken to prevent ash dust dispersion during disposal operations. The bottom ash and fly ash generated by the operation of the Plant will be used in land reclamation or disposed to the cement industry, road works or batching plants.

12. Health and Safety

- 12.1. During the construction and operation of the Project, the guideline of "safety first, (accident) prevention foremost" will be practiced. Comprehensive management and supervision will be applied to all staff members and the whole operation process, in order to ensure safe operation of the equipment and personal safety of workers.
- 12.2. The Company shall ensure that the EPC Contractor shall take all due precautions to ensure the safety of its employees, agents and subcontractors and, in collaboration with and to the requirements of the local health authorities, to ensure that suitable arrangements such as medical staff, first aid equipment and stores, sick bay and suitable ambulance services are available at all times throughout the



period of the construction period as necessary and that suitable arrangements are made for all necessary welfare and hygiene requirements..

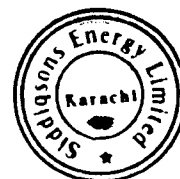
- 12.3. The EPC Contractor shall maintain records concerning safety, health and welfare of persons and damage to property, and make such reports, as are consistent with Good Utility Practice and shall report details of any accident to the Company as soon as possible after its occurrence.
- 12.4. All measures suitable and necessary in accordance with Good Utility Practice and all applicable legal requirements shall be taken to ensure the protection, security and the safety of the site and personnel.
- 12.5. The Company shall ensure that the EPC Contractor shall prepare and implement a comprehensive Health, Safety and Environment (HSE) policy and associated procedures, that will govern the EPC Contractor's actions at all times during the design preparation and construction of the Project as well as during the operating phase. In addition to the other requirements of EPC relating to the standards to be adopted by the EPC Contractor in the overall design of the Project, the EPC Contractor shall submit a detailed construction safety plan, that will demonstrate EPC Contractor's commitment to the highest standards of personal and general safety standards during construction of the Project, as well as the concept of an accident and injury free Project.

13. Evidence/relevant correspondence:

- 13.1. Copies of the pertinent correspondence are enclosed herewith for the learned Authority's assistance and consideration.
- 13.2. The Applicant would be pleased to provide any other assistance that the learned Authority may require in the matter of grant of Generation License.
- 13.3. This Application and its Annexures are being submitted in triplicate, with certain documents certified as necessary, each in accordance with Regulation 3(4) of the AMP Regulations.

14. Additional Grounds

- 14.1. The Applicant seeks to raise further additional grounds in support of this Application at the hearing stage or any subsequent stage after the filing of this petition.



PRAYER

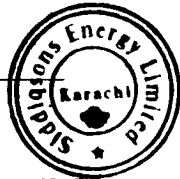
It is most humbly prayed to the esteemed Authority as follows:

- A. That the Applicant be granted a Generation License for the development of the Project.
- B. That the terms of the Generation License may kindly be made consistent with the terms of the GoP concession documents.
- C. That the Authority may be pleased to treat the Applicant's request for the grant of Generation License on a non-discriminatory basis and any concession offered to comparable projects on the date of filing of this Applicant and at any stage subsequent to the grant of license may kindly be granted to the Applicant as well.
- D. That the appropriate modifications required in the grid code may also be incorporated in the Generation License.
- E. Any further, proper and better relief that the Authority may deem appropriate in the circumstances may kindly be granted to the Applicant.

We hope the information/explanation provided above meets your requirements, and remain available to assist you if you have any further queries.

Respectfully submitted for and on behalf of the Applicant:


Yours Sincerely,



SIDDIQSONS ENERGY LIMITED

31 March 2015

The Registrar


National Electric Power Regulatory Authority
2nd Floor, OPF Building,
Sector G-5/2,
Islamabad

SUBJECT: Application for a Generation License

I, Abdur Rahim Rafi, CEO, being the duly authorized representative of Siddiqsons Energy Limited by virtue of Board Resolution dated 31 March 2015, hereby apply to the National Electric Power Regulatory Authority for the grant of a Generation License to Siddiqsons Energy Limited pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

I certify that the documents-in-support attached with this application are prepared and submitted in conformity with the provisions of the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999 ("AMPR"), and undertake to abide by the terms and provisions of the above-said regulations. I further undertake and confirm that the information provided in the attached documents-in-support is true and correct to the best of my knowledge and belief.

Pay Order No. 9692310 dated March 5, 2015, of United Bank Limited, Shaheed-e-Millat Road Karachi Branch, amounting to Six Hundred Seventy-Seven Thousand Three Hundred Sixty Only, being the non-refundable license application fee calculated in accordance with Schedule II of the AMPR, is also attached herewith. Further, additional documents/information, pursuant to the AMPR, are attached herewith.


Abdur Rahim Rafi
Chief Executive Officer
Siddiqsons Energy Limited



PLANT DETAILS

1. General Information

i.	Name of Applicant	Siddiqsons Energy Limited
ii.	Registered Office	7th Floor, Siddiqsons Tower, 3 J.C.H. Society, Block 7 & 8, Shabrae Faisal, Karachi, Pakistan
iii.	Business Office	26th Floor, Ocean Tower, Plot G-3, Block-9, Clifton, Karachi, Pakistan
iv.	Plant Location	Plot No. P-12, Eastern Industrial Zone, Port Qasim, Karachi, Pakistan
v.	Type of Generation Facility	Thermal Power Generation

2. Plant Configuration

i.	Plant Size Installed Capacity (Design Conditions)	350MW
ii.	Type of Technology	Supercritical
iii.	Number of Technology	01
iv.	Number of Units/Size (MW)	01 (350MW)
v.	De-rated Capacity at Mean Site Conditions	To be calculated at various site conditions
vi.	Auxiliary Consumption	9%
vii.	Commissioning and Commercial Operation Data (COD)	December 2018 (assuming financial close by end December 2015)
viii.	Expected Life of the Facility from COD	30 years

Serial no.	Documents required by (NEPRA)	Status (SEL)
1.	SEL is required to submit the balance of fee amounting to Rs. 1,520/- pursuant to Regulation 3(2) of the Regulation.	A cheque # 9875738 dated 20 April 2015 drawn from United Bank Karachi of PKR 1520/- is attached herewith.
2.	The MOA submitted by SSL with the subject application does not contain the electricity clause as a business object of the Company.	<p>Kindly note that the SSL is not the Project Company. The Project Company is SEL.</p> <p>The Certified true copy of the MOA, AOA and Certificate of Incorporation for <u>SEL</u> (Project Company) is already placed on record as <u>Annex- 1 Sub-Section B-1, B-2 and B-3.</u> We have also appended the constitutive documents of the Main Sponsor i.e. SSL see <u>Annex- 1.</u></p>
3.	Profile of Sub-contractors, if any, along with expressions of interest of such sub-contractors as required pursuant to Regulation 3(5) (d) (v) of the Regulations.	Profile of Contractors and Sub-Contractors is appended with the Generation License as <u>Annex-6</u>
4.	Feasibility study of the project as required pursuant to Regulation 3(5) (h) and 3(6) (A) (a) (16) of the Regulations.	<p>It may be noted that the project is being developed under the upfront regime and as such the approval of feasibility study is not required by the Panel of Experts of PPIB.</p> <p>The <u>feasibility study</u> developed by the Sponsors/Project Company is appended herewith.</p>
5.	Interconnection with national grid company, distance and name of nearest grid, voltage level (single line diagram) as required pursuant to Regulation 3 (6) (A) (a) (6) of the Regulations.	The Interconnection Study has already been filed in National Transmission & Despatch Co. Ltd (" <u>NTDC</u> ") Please refer to <u>Annex -12</u> attached to the Generation License.
6.	Information regarding Infrastructure (roads, rail, staff colony, amenities) as required pursuant to Regulation 3 (6) (A) (a) (7) of the Regulations.	Realizing the importance of infrastructure in such project the required infrastructure is available for transportation purpose.

		As mentioned in the Generation License application paragraph 11- <i>"Fly Ash and Bottom Ash from the Project will be transported by truck to the ash disposal pond that will be located within the Project site. The ash pond will have a raised bund. The ash pond shall be lined with a layer of HDPE membrane or compact clay liner in order to avoid water seepages to the ground or the sea. Adequate measures shall also be taken to prevent ash dust dispersion during disposal operations. The bottom ash and fly ash generated by the operation of the Plant will be used in land reclamation or disposed to the cement industry, road works or batching plants"</i> .
7.	System studies, load flow, short circuit, stability, reliability as required pursuant to Regulation 3(6) (A) (a) (12) of the Regulations	Please refer to Annex 12 of the Generation License of SEL.
8.	Control, metering, instrumentation and protection as required pursuant to Regulation 3 (6) (A) (a) (14) of the Regulations.	Please refer to paragraph 11 of the Generation License Application. It states that <i>"The main and backup revenue metering system shall be installed to measure the units sent to the national grid. The accuracy class of main and backup meters shall comply with NTDC requirements"</i> .
9.	Training and development plan as required pursuant to Regulation 3 (6) (A) (a) (14) of the Regulations	<p>The project is being undertaken by turnkey EPC contractor and will be thereafter operated and maintained by the O&M contractor.</p> <p>Additionally please refer to paragraph 9 of the Generation License Application which states that Training Plan will be developed in consultation with the EPC Contractor.</p>

10.	<p>SEL is also required to submit the following documents to process the subject application:</p> <ul style="list-style-type: none"> I. Approval of Feasibility Study by concerned agency. II. Approval of Environmental Study ("EIA") of the project by the concerned agency. 	<p>Regarding the Feasibility Study since this is in the Upfront Tariff regime there is no requirement of the feasibility Approval. However, SEL has undertaken the feasibility study; the same has been attached herewith.</p> <p>Environmental Study- There is a dedicated regulator which deals with the environment. The EIA approval will be obtained in compliance with the prescribed procedures and submitted to NEPRA once it is available.</p>
-----	--	---

We hope that our aforesaid responses and documentation in relation to your letter adequately satisfies the items highlighted (above). We look forward to your continued support in helping the Project achieve its goal.

For any further information/clarification in the matter, please feel free to contact us.

Sincerely,

RiaaLaw

RIAAALAW

3. Fuel Details

i.	Primary Fuel	Coal
ii.	Back-up Fuel (emergency/Start up only)	Light Diesel Oil
iii.	Fuel Source (Imported/Indigenous)	Imported Coal (Indonesia / South Africa)
iv.	Fuel Supplier	Dharti Commodities General Trading
v.	Supply Arrangement	Coal from Panamax vessels will be unloaded at Pakistan International Bulk Terminal (PIBT). Trucking operation will be undertaken from PIBT up to the plant which is approximately 7 km.
vi.	No. of Storage Tanks	90 days of coal storage capacity – including onsite storage, in transit and on confirm order
vii.	Storage Capacity of each Tank	Same as in (vi) above
viii.	Gross Storage (total)	Same as in (vi) above

4. Emission Value

i.	SO _x	>100	Tonnes/Day
ii.	NO _x	>200	ng/J
iii.	CO	>100	mg/Nm ³
iv.	PM ₁₀	>100	mg/Nm ³

5. Cooling System

i.	Cooling Water Source/Cycle	Cooling medium will be Seawater. Intake and outfall channels/pipes will be
----	----------------------------	--

		constructed to provide cooling water to the condensers.
--	--	---

6. Project Cost

i.	Total (USD)	US\$ 597.5 million
ii.	Debt (USD)	US\$ 448.125 million (75%)
iii.	Equity (USD)	US\$ 149.375 million (25%)

7. Plant Characteristics

i.	Generation Voltage	20kV
ii.	Frequency	50 Hz ($\pm 5\%$)
iii.	Power Factor	Preliminary 0.8 to 0.9 (to be discussed as part of the PPA)
iv.	Automatic Generation Control	To be discussed as part of the PPA
v.	Ramping Rate	To be discussed as part of the PPA (attached is only an indicative chart)
vi.	Time required to Synchronize to Grid and loading the complex to full load.	Preliminary 200 min (to be discussed as part of the PPA)

FEASIBILITY STUDY-

Serial no.	Annexure	Document
1.	4	Financial Arrangement and Bank Certificates
2.	5	Encumbrances Over Project Assets
3.	8	Prospectus
4.	11	Environmental Impact Assessment ("EIA")
5.	12	Grid Interconnection
6.	14	The Location, Size (Capacity in MW), Technology, Interconnection, Arrangement, Technical Limits, Technical Functional Specifications and Other details specific to the Generation Facilities of the licensee.
7.	15	The Net Capacity of the Licensee's Generation Facilities

ANNEX - 4

FINANCIAL ARRANGEMENT AND BANK CERTIFICATES

February 25, 2015

Mr. Abdur Rahim Tariq
Chief Operating Officer
Siddiqsons Limited
Karachi.

Dear Sir,

Expression of Interest – Setting up of a 350 MW Coal Based Power Plant ('Project') near Port Qasim, Sindh by Siddiqsons Limited ('Siddiqsons' or the 'Sponsor')

This is with reference to our various meetings and discussions with you and your team on the above. We understand that Siddiqsons Limited is planning to setup a 350 MW (Gross) Coal based Power Plant ('Project') near Port Qasim, Sindh through a Special Purpose Vehicle ('Project Company'). We further understand that the capital cost of the Project is currently estimated at USD 597.5 Million which is expected to be funded through a debt to equity ratio of 75:25. The Project debt of up to USD 448 Million ('Project Debt') along with non-funded Letters of Credit is expected to be arranged either through a combination of foreign and local currency financing or entirely through local currency financing.

In this connection, we are pleased to express United Bank Limited's ('UBL') in-principle interest in structuring and providing debt arrangement services for the Project Debt along with non-funded Letters of Credit, including but not limited to participation in the said Project Debt and non-funded Letters of Credit, subject to internal approvals.

Please note that our interest in assisting the Project Company for debt arrangement and participation in Project Debt and non-funded Letters of Credit is based on our best assessment of the Project, given the currently available limited information and may not be construed as a commitment on part of UBL or any of its subsidiaries or affiliates to arrange the required financing, or any part thereof, at this point in time. Our final decision to arrange the Project Debt, will amongst other things, be subject to: a) satisfactory due-diligence of key stakeholders and the Project, including but not limited to financial, technical, insurance, and legal considerations, b) evidence of the satisfactory contractual arrangements being in place *inter-alia* concessionary framework (as applicable) and those with respect to supply of equipment and the works, c) completion and presentation of bankable feasibility of the Project, d) formal internal credit approvals of all participating institutions, including UBL, and f) the execution of definitive agreement(s) between UBL (along with other participants, if applicable) and Project Company pertaining to the provision of Debt Arrangement services.

For and on behalf of United Bank Limited



Ali Afzal
SVP & Unit Head
Corporate Banking Group
Email: Ali.Afzal@ubl.com.pk
Phone: +9221 99033 2905



M. Umer Khan
SVP & Head Project & Structured Finance
Investment Banking Group
Email: Umer.Khan@ubl.com.pk
Phone: +9221 3241 1846



UNITED BANK LTD.

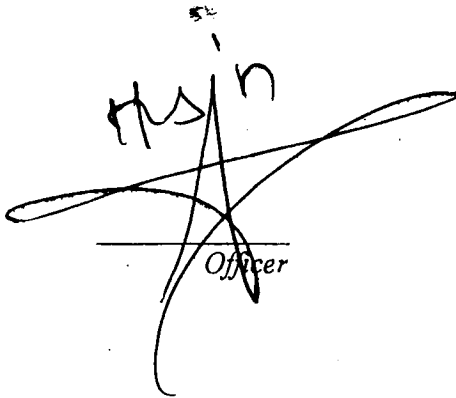
Corporate Centre (0525)
State Life Building # 1,
I.I. Chundriger Road, Karachi

Date: 10-FEB-2015

TO WHOM IT MAY CONCERN

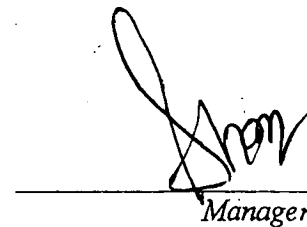
This is to certify that SIDDIQSONS ENERGY LIMITED.. 7TH FLOOR SIDDIQSONS TOWER 3 JCHS SHAHRA E FAISAL KARACHI is our valued client and maintaining satisfactorily conducted PKR Account # 219868581 with us since 15-JAN-2015

This certificate is being issued on the specific request of the customer without engaging any risk and responsibility on the part of this bank or any of its officials.



Officer





Manager

Feb 11, 2015

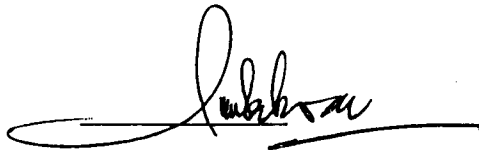
TO WHOM IT MAY CONCERN

Dear Sir/Madam,

This is to certify that **M/S Siddiqsons Ltd.** is maintaining Account No. **4361-4** with us since **20th - Mar- 2008**

We consider them satisfactory for their business engagement and we value our banking relationship with them.

This report is being communicated to you at the request of the named client in the strict confidence and without any responsibility, recourse or liability to National Bank of Pakistan or any of its employee.



S. Imtiaz A. Subzwari
AVP/Chief Manager



HABIBMETRO

10-Feb-2015

TO WHOM IT MAY CONCERN

This is to certify that M/s. SIDDIQSONS LIMITED - SPINNING UNIT of 7TH FLOOR, SIDDIQSON TOWERS, 3.J.C.H.SOCIETY, MAIN SHAHRAH-E-FAISAL, KARACHI is/are maintaining Account under Demand Deposits Number 20311-714-261120 with us since 24-Nov-2010.

This certificate is being issued at the specific request of our customer and without any risk and responsibility on the part of this bank or any of its officers.

For Habib Metropolitan Bank Limited

Authorised Signatory

SYED ADIL H. SHAH
P. A. # B-937

Authorised Signatory

AHMAD AZIZ BILGRAMI
P. A. # A-517



Prepared by: Audit/Compliance, 2015-01-10 11:43:30 AM



HABIBMETRO

10-Feb-2015

TO WHOM IT MAY CONCERN

This is to certify that M/s. SIDDIQSONS LIMITED of 7TH FLOOR, SIDDIQSONS TOWER, 3.J.C.H.SOCIETY, MAIN SHAHRAH-E-FAISAL, KARACHI is/are maintaining Account under Demand Deposits Number 20311-714-261144 with us since 24-Nov-2010.

This certificate is being issued at the specific request of our customer and without any risk and responsibility on the part of this bank or any of its officers.

For Habib Metropolitan Bank Limited

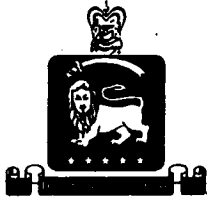
Authorised Signatory
SYED ADIL H. SHAH
P. A. # B-937

Authorised Signatory

AHMAD AZIZ BILGRAMI
P. A. # A-517



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HABIBMETRO

10-Feb-2015

TO WHOM IT MAY CONCERN

This is to certify that M/s. SIDDIQSONS LIMITED- GARMENT UNIT of 7TH FLOOR, SIDDIQSONS TOWERS, 3.J.C.H.SOCIETY, MAIN SHAHRAH-E-FAISAL, KARACHI is/are maintaining Account under Demand Deposits Number 20311-714-261112 with us since 24-Nov-2010.

This certificate is being issued at the specific request of our customer and without any risk and responsibility on the part of this bank or any of its officers.

For Habib Metropolitan Bank Limited

Authorised Signatory
SYED ADIL H. SHAH
P. A. # B-937

Authorised Signatory

AHMAD AZIZ BILGRAMI
P. A. # A-517



Printed by: Anwar-ul-Haq, 1011-402-01, 1011-402-01



中国进出口银行 黑龙江省分行

THE EXPORT-IMPORT BANK OF CHINA HEILONGJIANG BRANCH

ORIGINAL

Credit Facility Reference

Date of issue: 2014/12/23

Name of the bank: The Export-Import Bank of China Heilongjiang Branch

To: All parties concerned;

Harbin Electric International Company Limited (hereinafter called the Company)

entrusts our bank (hereinafter called the Bank) to issue this credit certification

for M/S Siddiqsoort port qasim 1X350MW power project. To confirm the

Company's credit facility situation as follows:

The client holds a settlement account with the Bank since 2009.

During the year of 2014, the amount of the company's comprehensive bank line

of credit is RMB 10,000,000,000.00, with expire date to 2016/12/31, and RMB

8,662,000,000.00 of the total amount has been guaranteed by Harbin Electric

Company Limited.

By the time of 2014/12/23, the unutilized balance of the credit facilities are

RMB 9,132,342,577.61.

The client held no past-due loan or unpaid interest owed to the Bank, had no bad record in the aspect of Capital settlement during the cooperation with the Bank, and performed well in the compliance with relevant regulations.



The Export-Import Bank of China Heilongjiang Branch

中国银行黑龙江省分行

Bank of China, Heilongjiang Branch,

No.19 Hongjun St, Harbin,

Heilongjiang Province, P.R.C.

(Tel):+86(451)53626840

(Fax):+86(451)53647071

Credit Facility Reference

Date of issue: 22nd December, 2014

Name of the bank: Bank of China, Heilongjiang Branch

To: All Parties Concerned;

Harbin Electric International Co., Ltd entrusts our bank (hereinafter called the Bank) to issue this credit certification for M/S Siddiqsons Port qasim 1X350MW power project. It is to confirm the Company's credit facility situation as following:

The Company holds a settlement account with the Bank since 30th September, 2001.

During the year of 2014, the amount of the Company's comprehensive bank line of

credit is RMB ¥ 16,500,000,000.00, and it has been guaranteed by credit. It is the bank's responsibility to annually audit the amount of the Company's comprehensive bank line of credit and to ensure that the line of credit is valid.

By the time of 22nd December, 2014, the unutilized balance of the credit facilities is RMB ¥ 8,815,920,000.00.

The client held no past-due loan or unpaid interest owed to the Bank, had no bad record in the aspect of Capital settlement during the cooperation with the Bank, and performed well in the compliance with relevant regulations.

The above Information is given to you on a strictly private and confidential basis and without any responsibility on the part of our bank or any of our officers.

Bank of China Heilongjiang Branch





中国进出口银行 黑龙江省分行

THE EXPORT-IMPORT BANK OF CHINA HEILONGJIANG BRANCH

ORIGINAL

Credit Facility Reference

Date of issue: 2014/12/23

Name of the bank: The Export-Import Bank of China Heilongjiang Branch

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By the time of 2014/12/23, the unutilized balance of the credit facilities are RMB 9,132,342,577.61.

The client held no past-due loan or unpaid interest owed to the Bank, had no bad record in the aspect of Capital settlement during the cooperation with the Bank, and performed well in the compliance with relevant regulations.

The Export-Import Bank of China Heilongjiang Branch

(stamp)

公 证 书

(2015)黑哈证外经字第30号

申请人：哈尔滨电气国际工程有限责任公司，住所：黑龙江省哈尔滨市香坊区(原动力区)三大动力路39号。

法定代表人：郭宇，男，公民身份号码：230103196712115557。

公证事项：资信证明

兹证明中国进出口银行黑龙江省分行公司业务一处于二〇一四年十二月二十三日发给哈尔滨电气国际有限责任公司的《资信证明》原件与前面的复印件相符，原件属实。

中华人民共和国黑龙江省哈尔滨市哈尔滨公证处

公 证 员

张秋燕



二〇一五年十二月十二日



NOTARIAL CERTIFICATE

(Translation)

(2015)HHZ, WJZi, No. 30

Applicant: Harbin Electric International Company Limited,
Address: No. 39, Sanda Dongli Road, Xiangfang District
(former Dongli District), Harbin City, Heilongjiang Province

Legal Representative: Guo Yu, male, Citizen's ID No.
230103196712115557.

Issue under notarization: Credit Facility Reference

This is to certify that the foregoing copy of Credit
Facility Reference issued to Harbin Electric International
Company Limited by the Export-Import Bank of China
Heilongjiang Branch on Dec. 23, 2014 conforms to the original,
and that the original document is authentic.



Notary Public: Zhang Qiubin (Seal of signature)

Harbin Notary Public Office (Seal)

Harbin City

Heilongjiang Province

The People's Republic of China

Feb. 12, 2015

中国银行黑龙江省分行

Bank of China, Heilongjiang Branch,

No.19 Hongjun St, Harbin,

Heilongjiang Province, P.R.C.

(Tel):+86(451)53626840

(Fax):+86(451)53647071

Credit Facility Reference

Date of issue: 22nd December, 2014

Name of the bank: Bank of China, Heilongjiang Branch

To: All Parties Concerned;

Harbin Electric International Co., Ltd entrusts our bank (hereinafter called the Bank) to issue this credit certification for M/S Siddiqsons Port qasim 1X350MW power project. It is to confirm the Company's credit facility situation as following:

The Company holds a settlement account with the Bank since 30th September, 2001.

During the year of 2014, the amount of the Company's comprehensive bank line of credit is RMB ¥ 16,500,000,000.00, and it has been guaranteed by credit. It is the bank's responsibility to annually audit the amount of the Company's comprehensive bank line of credit and to ensure that the line of credit is valid.

By the time of 22nd December, 2014, the unutilized balance of the credit facilities is RMB ¥ 8,815,920,000.00.



The client held no past-due loan or unpaid interest owed to the Bank, had no bad record in the aspect of Capital settlement during the cooperation with the Bank, and performed well in the compliance with relevant regulations.

The above Information is given to you on a strictly private and confidential basis and without any responsibility on the part of our bank or any of our officers.

Bank of China Heilongjiang Branch



公 证 书

(2015) 黑哈证外经字第31号

申请人：哈尔滨电气国际工程有限责任公司，住所：黑龙江

省哈尔滨市香坊区(原动力区)三大动力路39号。

法定代表人：郭宇，男，公民身份号码：23010319671211

5557。

公证事项：资信证明

兹证明中国银行股份有限公司黑龙江省分行于二〇一四年

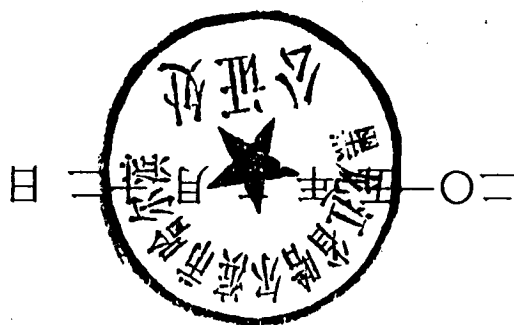
十二月二十二日发给哈尔滨电气国际工程有限责任公司的《资

信证明》原件与前面的复印件相符，原件属实。

中华人民共和国黑龙江省哈尔滨市哈尔滨公证处



公 证 员 张秋海



1169741353

NOTARIAL CERTIFICATE

(Translation)

(2015)HHZ, WJZi, No. 31

Applicant: Harbin Electric International Company Limited,
Address: No. 39, Sanda Dongli Road, Xiangfang District
(former Dongli District), Harbin City, Heilongjiang Province

Legal Representative: Guo Yu, male, Citizen's ID No.
230103196712115557.

Issue under notarization: Credit Facility Reference

This is to certify that the foregoing copy of Credit
Facility Reference issued to Harbin Electric International
Company Limited by Bank of China Heilongjiang Branch on
Dec. 22, 2014 conforms to the original, and that the original
document is authentic.

Notary Public: Zhang Qiubin (Seal of signature)

Harbin Notary Public Office (Seal)

Harbin City

Heilongjiang Province

The People's Republic of China

Feb. 12, 2015



ANNEX – 11

EIA STUDY

INTRODUCTION & OBJECTIVES

This Environmental Impact Assessment (EIA) evaluates the potential environmental, social, economic, cultural, and ecological impacts of the proposed 350 MW Siddiqsons Energy Coal Fired Power Plant in the Eastern Industrial Zone of Port Qasim Karachi (Fig 1). The main objective of this project is to:

- Respond to the urgent need to close the gap between power generation and demand;
- Provide an economically viable and environmentally acceptable power generation system to make the coal available for use in power production;
- Ensure stable and sustained power generation for the Country;
- Respond to the need of improvement in quality of life through sustainable energy resource development.

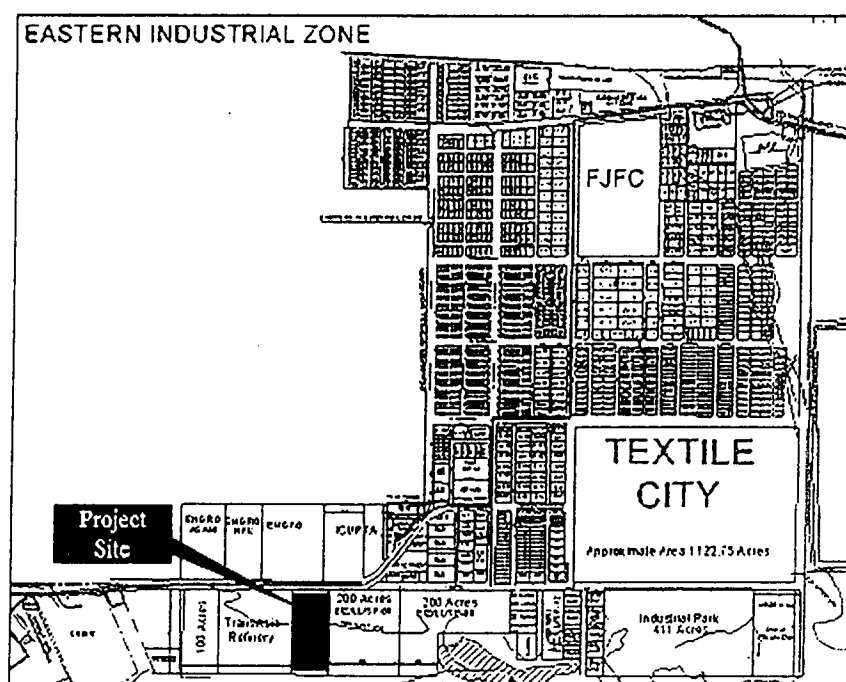


Figure 1: Project Location in Eastern Industrial Zone of PQA

NEED FOR ENVIRONMENTAL ASSESSMENT

Section 17 of Sindh Environmental Protection Act 2014 requires that every new development project in Sindh has to be preceded by an Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) depending on the nature and severity of impacts anticipated on commissioning of the project.

In order to comply the provisions of SEP Act 2014 and the rules and regulations framed thereunder, Siddiqsons Energy (Pvt.) Ltd. (the Proponent) contracted Environmental Management Consultants (EMC) Pakistan Private Limited (the Consultant) to conduct a detailed assessment (EIA) of the proposed Coal Fired Power Plant Project. The EIA study aimed at developing the environmental and socioeconomic profile of the project area so as to evaluate the existing physical, biological and socioeconomic aspects leading to respective impacts due to construction and operations at the Coal Fired Plant site.

The main purpose of the EIA study is to ensure that:

- Any major adverse impact on the environment (physical, ecological and social) during different phases of projects viz. siting, design, construction and operation are identified.
- Adverse impacts are appropriately addressed and adequate mitigation measures are incorporated in the siting, design, construction and operation phases of project.
- Socioeconomic aspects are identified, and mitigated.
- Alternatives to achieve the objectives are analyzed.
- Environmental Management Plan (EMP) for sustainable development and operation of the project is developed for implementation and monitoring of the project activities.

Accordingly, the present EIA report has identified the significant environmental aspects and screened them for severity, if any, to ensure 1) that the likely impacts due to proposed activities during construction, installation of equipments and operation of the proposed power plant, and the residual impact on adoption of mitigation measures have been critically assessed, & 2) that all activities comply with the Sindh Environmental Protection Act 2014, and the World Bank & IFC Guidelines / Standards.

THE PROJECT

The pulverized coal supercritical boiler technology will be employed for the project. Pulverized coal boiler technology is well developed, and there is substantial number of such operational units around the world. Supercritical plants operate above the critical point of water (temperature 540°C and pressure 165 bar). Efficiency of supercritical plants is about 39%. This system has many advantages such as they offer more flexibility in meeting the steam generating demands, improved steam turbine efficiency, higher overall plant efficiency resulting in lower fuel requirement and lower greenhouse gas emission.

The new construction will include installation of new boilers, boiler bunker and fan mill. The boiler will be designed to use lignite as primary fuel. Light Diesel Oil will be used for start-ups. Each boiler will be designed to provide approximately 1080 tonnes/hr of steam at 254 bar pressure and 571°C temperature. For the boiler exhaust, stack will be constructed whose height is envisaged to be 180 meters. In addition coal handling facility, coal crusher, local conveyors in the open storage area, fly and bottom ash handling facility, ash storage and waste water treatment and enclosed conveyer belts will be constructed to transfer coal to the coal boilers. All coal handling facilities will have dust prevention, and fire monitoring and prevention facilities. The steam generated by the boilers will be passed to steam turbine coupled to a generator which shall be capable to produce rated gross capacity of 350 MW.

The key components of the proposed project include construction of:

- An open coal storage area covered with wind shield
- Conveyor hopper for delivery to the unit
- Coal handling covered conveyors
- Coal crusher and local conveyors in the open storage area
- Truck unloading system

- Water treatment facilities
- Condensate polishing equipment
- Ash Electrostatic Precipitator(s) with ash handling conveyors
- Bottom ash handling conveyors
- Ash storage silo, and
- An Ash Pond.

COAL REQUIREMENT

Coal for the plant will be imported from South Africa & Indonesia, with expected calorific value in the range of 4,800 and 5,000 kilocalories per kilogram (kcal/kg). The ash content is expected to be between 2% and 8% however, the ash pond is designed assuming ash content to be 10%. The expected sulfur content is between 0.18 and <1.0%. The planned facility will thus have the provision to use Thar lignite which when available in suitable quantities would require blending with imported coal so as to achieve the design specifications of the coal fired boilers. Coal requirement for the boiler will depend on the heating values of the coal. According to the design, boiler will require continuous feeding of coal at a rate of 3,500 tons of coal per day which translates to an annual demand of 1.3 million tons for at 90% load factor.

The coal specs under consideration are as follow:

RBCT – SOUTH AFRICA:

i. Proximate Analysis

- Calorific Value: 4900 (Rejection 4700 GAR)
- TM: 30%
- IM: 18%
- Ash Content: 8%
- Sulphur: <1%
- VM: 40%
- HGI: 50

ii. Ultimate Analysis

- Carbon: 65%
- Hydrogen: 3.5%
- Nitrogen: 1.5%
- Oxygen: 25%

ENVIRO-COAL – INDONESIA:

i. Proximate Analysis

- Calorific Value: 5000/4800
- TM: 40%
- IM: 27%
- Ash: 2%
- VM: 37%
- FC: 34%

- Sulphur: 0.18%
- HGI: 60

ii. Ultimate Analysis

- Carbon: 69%
- Hydrogen: 5%
- Nitrogen: 1.5%
- Oxygen: 22%

COAL IMPORT AND TRANSPORT

Coal will be transported to Pakistan through shipping vessels. The preferred vessel for shipment of coal is Handymax. Handymax are bulk carriers with a capacity typically between 35,000 and 50,000 DWT. These types of vessels are well suited for small ports with length and draught restrictions, or ports lacking transshipment infrastructure. Coal handling facilities are available both at Port Qasim and the Karachi Port. It is envisaged that the coal supplier shall use Port Qasim jetty dedicated for imported coal to be consumed in this project or alternatively use the Pakistan International Bulk Terminal (PIBT) at Port Qasim which is currently under-construction. PIBT is expected to be operational by 2016. Provision will be made to transport coal from either the dedicated jetty or PIBT to the Project site via the Port Qasim Road using trucks of capacity 20 to 40 tons and covered with tarpaulin or any other suitable material to control coal dust emissions. Provision for receiving and offloading of coal from trucks will be made at the plant's coal yard. In the future, a rail option to deliver indigenous coal to the power plant will be necessary once the Thar coal fields are producing sufficient amounts of coal. The Pakistan Railways is currently studying the feasibility of various options for transport of Thar lignite by rail to the planned power projects in the country. Railway siding will be constructed adjacent to Pakistan Steel Mills channel towards the east.

COAL STORAGE

There will be 2 coal stacking areas. Coal Yard 1 shall have a capacity of 10 days while Coal Yard 2 shall accommodate 70 days of coal at full load. The Coal Yards will be divided into several sections to identify the different coal charges. Coal Yard 1 will be equipped with supplementary crusher which will partially crush the coal before transferring it to the conveyer system for transportation to coal bunker for storage. Coal weighing arrangement will be provided in the Coal Yard 1 along with the coal conveyer system. The Coal Yards will have appropriate firefighting system. Coal Yard 2 area is currently partially under the water level which will be reclaimed. The access to coal yard will be developed during the detailed design stage.

COAL HANDLING

Primarily coal will be stored in Coal Yard 2 along with the ash disposal area. Coal is envisaged to be transferred from Coal Yard 2 to Coal Yard 1 either by conveyer system or trucks, which will be decided during detailed design stage. From Coal yard 1, coal will be transported to the boilers via conveyer belts. The belts will be enclosed to minimize dust formation.

ASH STORAGE SILO/ASH POND

Fly ash, bottom ash, and pyrites left over from combustion will be removed from their respective points of accumulation. Fly ash will be removed with the help of Electrostatic Precipitator (ESP). Bottom ash will be removed from the boiler's bottom ash hopper, and pyrites from the pulverizer's pyrite collection hoppers. The ash content is expected to be between 5% and 10%, however, the ash pond shall be designed to contain 2 year's ash deposit; assuming ash content to be 15%. This will result in an annual ash production of about 130,000 tonnes.

An ash disposal area (ash pond) will be developed on the land that shall be reclaimed on the southern boundary of the plant along with Coal Yard 2. Currently the area remains submerged during high tide and becomes dry in low tide. The ash pond will have a raised bund. For ease of operation, the ash pond plot will be divided into smaller plots. This enables the ponds to be filled properly. The ash pond shall be lined with a layer of HDPE membrane or compact clay liner in order to avoid water seepages to the ground or the sea.

The fly and bottom ash produced in the respective silos will be transported to the ash pond through trucks where ash shall be properly dumped. All collected ash will be disposed of in ash pond located south of the plant. This ash shall serve the purpose of reclamation of land. Any additional ash will be sold to other industries like cement, road works and batching plants.

WATER SUPPLY & WASTEWATER MANAGEMENT

Water requirement for the plant will be met by seawater Reverse Osmosis (RO) water treatment plant. RO plant will take seawater as input which will be purified to required level through RO membranes and an Electrodionization (EDI) unit. It is envisaged that the RO plant will comprise of two stages; seawater RO and brackish water RO plant. The output of brackish water RO will be used for boiler and plant auxiliary cooling while output from seawater RO will be used as feed for brackish water RO and service water requirements of the plant.

A waste water treatment plant will be provided for treatment of waste water (effluents) containing oil, suspended solids and chemicals including clarifier, dissolved air flotation (DAF), chemical dosing, sludge separation and dewatering, filtration and neutralization. The treated water will meet the applicable NEQS discharge limits. The effluents from the plant include the boiler blow down, cooling water and waste water from the plant.

A separate waste water treatment system will be supplied for the treatment of waste water from the coal storage and handling areas. It will consist of basins for wastewater retention, settling and clarified water storage, filtration vessels, chemical feed systems, associated pumps and piping.

PHYSICAL ENVIRONMENT BASELINE

Physical environmental baseline data has been compiled using both primary and secondary data. Overall the area constitutes of barren land with industrial units installation towards the north of the plant. General elevation of the area is less than 10 m. Due to its close proximity to the sea, the project area is windy and humid. The climatic data has been acquired from Pakistan Meteorological

Department Karachi Airport Meteorological Station. Soil and water quality data has been reported using sample collected in the field. Air monitoring surveys were conducted in close proximity of the plant site to establish ambient air baseline.

GEOLOGY & SOIL: The geomorphology of the study area is dominated by tidal flats, channels and creeks. Tidal flats slope very gently towards the sea from the high tide level down to a little below the low tide level. Tidal flats and at the edge of the sea or in major tidal channels the floor of which lie below the lowest tide levels. Like major tidal channels, tidal creeks flow across tidal flats: these are shallower than tidal channels and run down to low tide level.

On muddy tidal flats, tidal creeks often display a dendritic pattern with widening courses and point bars. Tidal flats are built up from clay size and fine silt size sediments carried to the course by river. Clay particles meeting salt water flocculate and settle down as a result provide substrate for colonization of salt tolerant plants i.e. mangroves.

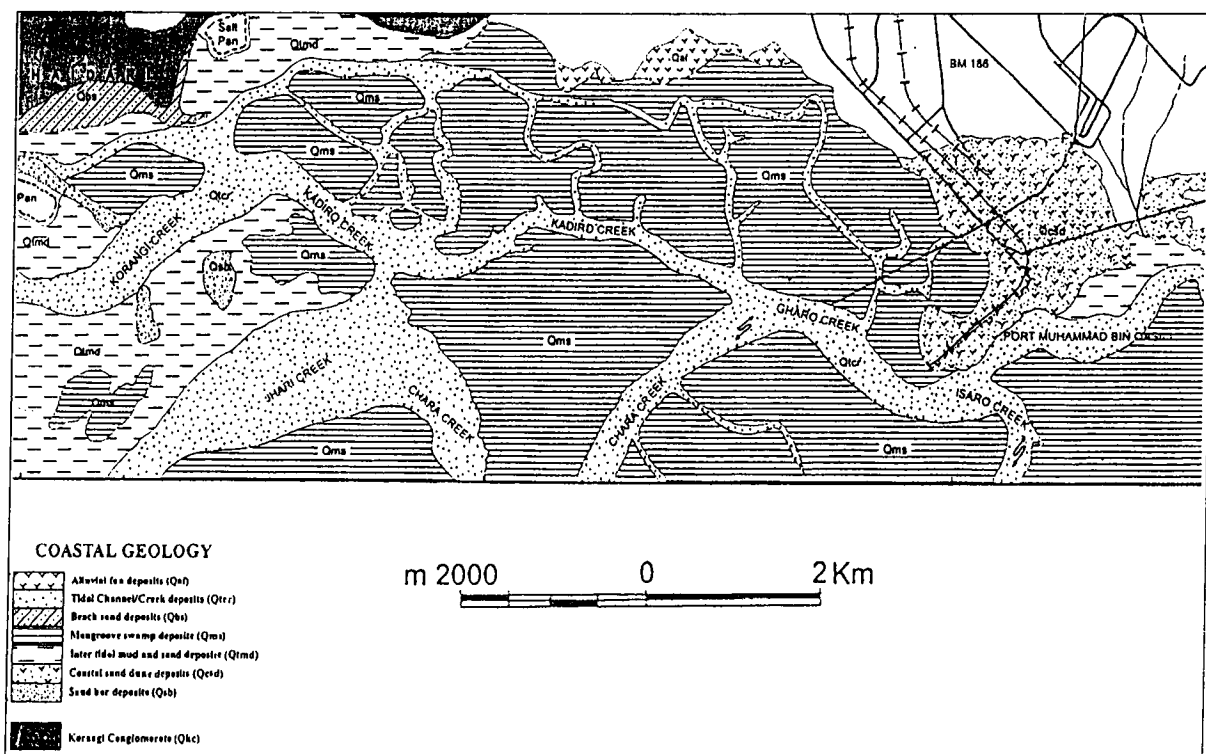
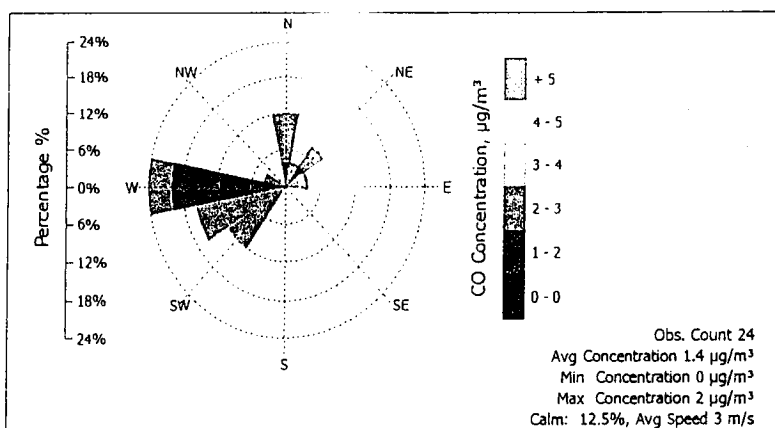


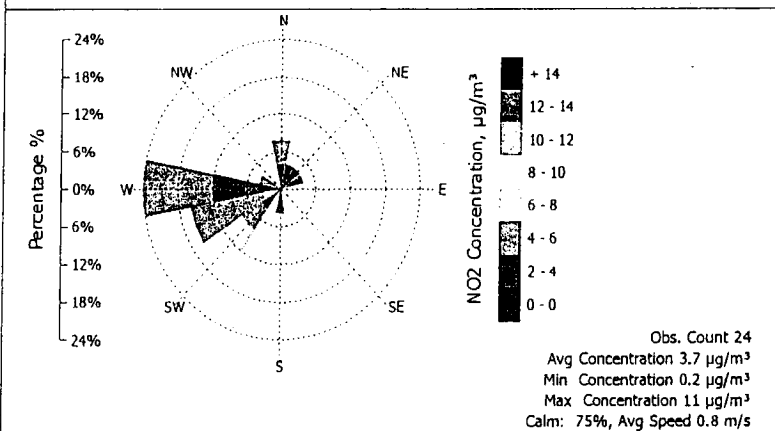
Figure 2: Geological features of Project Area

AMBIENT AIR QUALITY: There are numerous small and large stationary sources of gaseous emission around the plant site as it is an industrial area. Emissions from these sources consist of oxides of nitrogen (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO) and particulate matters.

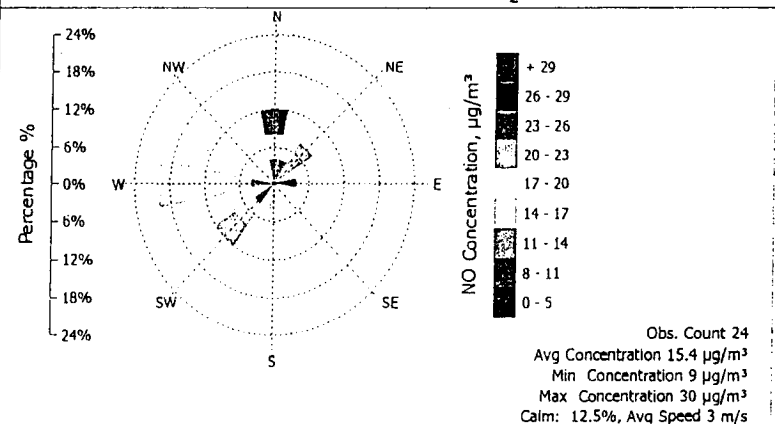
To assess the ambient air quality monitoring was conducted with the assistance of SUPARCO. Ambient air quality sampling was performed at two locations. The air monitoring results show that ambient air concentration of all parameters i.e., SO₂, NO₂, NO, CO, PM₁₀, PM_{2.5} in the area meets Sindh Ambient Air quality Standards.



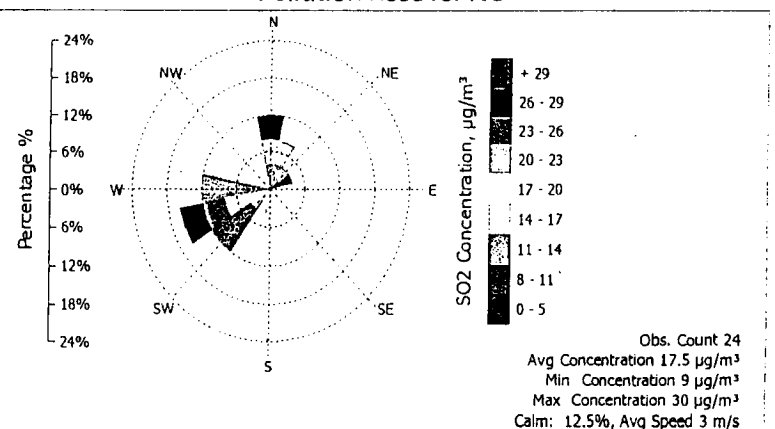
Pollution Rose for CO



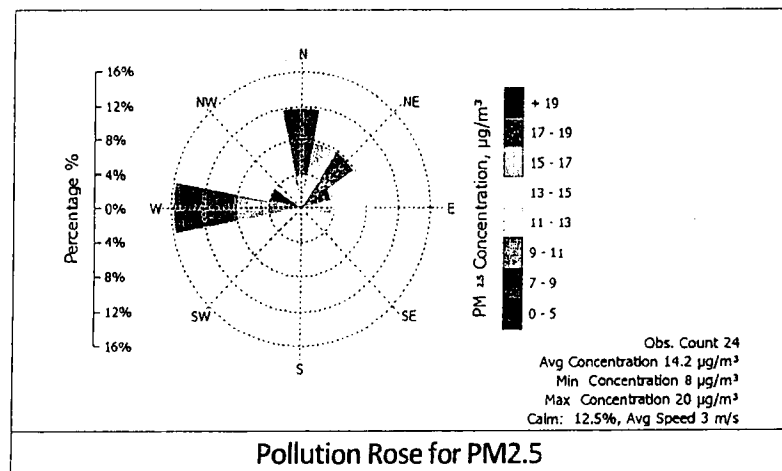
Pollution Rose for NO₂



Pollution Rose for NO



Pollution Rose for SO₂



ECOLOGICAL BASELINE: An ecological survey was conducted at low tide (0.6m) in the exposed tidal mudflats. The sampling was carried out within an area of approximately 2 km radius of the Project site. The habitat components with the highest likelihood of being affected by the project were examined. These included:

- Mangrove habitat,
- Mudflats habitats, surface benthic invertebrates and burrowing animal forms,
- Coastal marine fishery,
- Birds,
- Marine mammals, turtles, and Endangered Species.

In the microenvironment of project area the most dominant species is also *Avicenna marina* that forms a thick green cover over area. The Mangrove population of *Avicenna marina* is highly dense in the microenvironment of project site.

- The density of mangrove trees was between 50-60/100 m^2 . The height of the individual tree within the established *Avicenna marina* habitats was mostly greater than 3 m.
- The mangrove trees growing 200-300 m away from the creek (seawater) in the land ward direction showed an overall decline in the height of the mangrove plantations.
- The density of mangrove vegetation was randomly evaluated in an area of 100 m^2 . The trees were characterized (visual observations) according to the arbitrary height of the plants.
 - The height of mangrove seedling were characterized as <0.5 m
 - Mangrove sapling height 0.5 -1.0 m
 - Short mangroves trees were characterized as having 1-2 m height.
 - Medium height mangroves trees had were characterized as having 2-3 m height.
 - High mangroves trees had were characterized as having more than 3 m height.

Benthic fish community includes detritus feeders, small and large herbivores, and small and large carnivores. Grey mullets, gizzard shads, flat fishes, many skates and rays are some of the fish which prefer to live on soft bottom and feed on bottom detritus. At low tide, when a large part of muddy bottom is exposed, crabs, mudskippers and birds are seen in large numbers picking up their food

which includes worms and different animals left behind by the receding tide. Local fishing community members fish for mud crabs *Scylla serrata* during low tide.

Many different types of birds are found in the mangroves ecosystem. The mangroves of the Indus Delta provide abundant food and shelter to a number of endemic species of birds. Dolphins have been reported in the Indus deltaic region and in the Port Qasim area. The survey team did not observe any dolphins in the area during the survey. There is no published information available with regards to the number of Cetaceans that visit the Port Qasim area.

Turtles are known to prefer sandy substrates instead of muddy substrates (as found in Port Qasim Area) which are mostly found east of Karachi (Sand spit and Hawkes Bay). During survey based on visual observation, the team did not find any turtles, turtle remnants or turtle tracks on the muddy shores in the vicinity of the Project. No turtle nest was observed.

SOCIOECONOMIC BASELINE: There are no settlements within ten kilometers of the Project. The detail in the sections to follow commensurate the understanding of the socioeconomic aspects described above and focuses more on Karachi city and the angler communities that are located closest to the Project, i.e., Goth Rehri and Goth Ibrahim Haideri.

The settlements of Goth Rehri and Goth Ibrahim Haideri are located approximately 20 km west of the site, at the shore of the Arabian Sea. Goth Rehri has an estimated population of 25,000 people. Goth Ibrahim Haideri is the larger of the two villages, almost three times higher in terms of population. The settlements are fisherman's villages but the dwellers are engaged in other occupations as well, such as, labor services and trade. The employment and earnings of a large section of population in the area is variable, heavily dependent on fisheries and seasonal variations. Prawn and shrimp fishing from inshore waters is the main source of income of the majority.

However, quite a substantial number are employed on deep-sea fishing boats. The relatively low level of income in this rural setting is reflected in the poor conditions of housing, with water supply and sanitation being too inadequate. The houses within the settlements are of adobe construction mostly, with very few being masonry. The nearby urban areas are better served with civic amenities, schools, colleges and hospitals.

Education conditions of Goth Ibrahim Haideri are much better than that of Goth Rehdi owing to its proximity to the developed Korangi town.

Mangroves are a valuable resource for these villages. They are primarily used as a source of fuel and fodder and provide the feeding grounds for prawn and shrimp. However, the coastal villages have been overexploiting this resource over recent years. Camel herds comprising hundreds of camels are fed from these denuding the trees of the leaves and cutting the tree trunks for wood.

The fishermen of Rehri Goth earn their livelihood through the capture and sale of mud crabs and fish. They use small gill set nets across small tidal creeks to trap between two to 10 kg of fish in a day. The local fishermen are also engaged in catching undersize juveniles of fish that is converted into trash fish, swimming crabs and juvenile shrimps from the area.

PROJECT POTENTIAL IMPACTS AND MITIGATION MEASURES

The potential environmental and social impact of a development activity is identified on the basis of baseline environmental study, technology selection, modeling emission and concerns raised by stakeholders, technical guidelines, and professional opinion of the project team.

EMISSION CONTROL

During operation, major gaseous emission from proposed coal based power plant would be SO_x, NO_x, H₂O, CO₂, CO and particulate matter. The proposed project will be based on imported coal that will involve handling and storage of large volume of coal while the daily coal requirement is about 3,500 Tons per day. Handling and storage facilities of coal shall be equipped with dust suppression system. The conveyor belt shall be covered and the transfer point shall be equipped with dust suppression system. Hence, dust generation from coal handling and storage activities shall be minimum and within the limit of SEQs, 2014. Nevertheless, sometime, within the close proximity of the handling and storage facilities, SPM of the local air might rise but automatic dust sensor and suppression system shall control the generated dust within limit of SEQs. On the other hand, there is no dense settlement within the 5 km radius from the stockyard; hence, dust generation from the power plant may not be a health risk issue for the local community.

The coal combustion process will produce maximum 8% ash from the total coal inflow. Ash residue left from coal combustion process will be managed with efficient ash collecting, conveying and storage system. The total process may include Bottom ash collector, Fly ash collector (filtered by Electrostatic Precipitator with the efficiency of 99.9%), Pneumatic ash conveying system, Ash storage silo and Ash pond. All the setup will be installed to limit the outlet ash emission to within 150 µg/Nm³ in compliance with the Particulate Matter emission standard of Sindh. The project also plans utilization of generated ash. The ash slurry and bottom ash shall be used for land filling and the fly ash may be sold at cement plants. Despite efficient ash management system, some fugitive ash might be produced and dispersed to the surrounding area but the impact will not be significant as the amount will be too low and no settlement is located within the 5 km vicinity of the plant. On the other hand, accidental release of ash from ash separation and handling system might have impact on surrounding air quality. The accidental release of ash through stack due to failure of ash separation system may be dispersed to the locality and deposited on water bodies, agricultural land, and settlements around the proposed power plant. However, this impact will be short term and reversible and possess less health risk as because the dense settlements are located 5 km away from the stack point. The plant adopts centrally controlled automatic monitoring and controlling system to prevent any accidental event.

Mathematical models are used to compute the distribution of pollutant concentrations in air, given the rate and height of emission and the relevant meteorological data. Mathematical models are the basic and very important tools to quantify the impacts of existing (or) a proposed project. In this study, the industrial source complex short-term ISCST3 models have been used for estimating short-term concentrations of SO₂, NO_x and PM. Hence, ISCST3 are the preferred model of USEPA, which have been validated with field data. These models are based on Gaussian dispersion equation which is widely used all over the world. The industrial source

complex (ISC) short-term model provides options to model emissions from a wide range of sources that might be present at a typical industrial source complex. The basis of the model is the straight – line on steady state Gaussian Plume equation. The algorithm used to model point source types are described in detail in the following section, (EPA, 1995).

The modeling for the proposed TCPC Coal Fired Power Plant was carried out using the US EPA ISCST3 - Industrial Source Complex – Short Term Model (Version 02035). The model is capable of handling multiple sources, including point, volume, area and open pit source types. However, in the present scope the model was used for point emission (chimney) source type. In the run stream setup file, default mode (regulatory dispersion modeling options) of operation for the model was selected.

Parameter	Value
Source type	Point
Dispersion Coefficient	For Rural
Emission Rate (SO ₂) without FGD	810 g/s
Emission Rate (SO ₂) with FGD (95%)	40.5 g/s
Emission Rate (NO _x) without control	1,983 g/s
Emission Rate (NO _x) with control	95.6 g/s
Emission Rate (PM ₁₀) without ESP control	3,241 g/s
Emission Rate (PM ₁₀) with ESP control (99.9%)	3.241 g/s
Emission Rate (PM _{2.5}) without control	1620.5 g/s
Emission Rate (PM _{2.5}) with control	1.6205 g/s
Stack Height	180 m
Stack inside diameter	5.5 m
Velocity	25 m/s
Stack Gas Exit Temperature	403.15 K

The worst incremental 24 hourly average GLC value of SO₂, NO_x, PM₁₀ and PM_{2.5} from the project at full operating load with 180 m high stack will be 6.2 µg/m³, 14.6 µg/m³, 0.4 µg/m³ and 0.2 µg/m³ respectively in the downwind ENE direction (at 2.0 km distance). The worst incremental annual average GLC vale of SO₂, NO_x, PM₁₀ and PM_{2.5} from the project at full operating load will be 1.4 µg/m³, 3.3 µg/m³, 0.1 µg/m³ and 0.1 µg/m³ respectively in the downwind ENE direction (at 1.8 km distance). The maximum incremental GLC is superimposed over the maximum baseline ambient air level and the resultant values (24 -hour average in µg/m³) are found within SEQS, 2014.

The 180 m tall stack heights with high momentum and buoyancy takes the plume above the highest mixing height. 99.98%. PM emissions are controlled using ESP, SO₂ by FGD and NO_x by Low NO_x burners. This results in lowest ground level concentration of air pollutants in the study area. The values of the emissions at the fallout distance are within the Sindh Environmental Quality Standards (SEQS). The value of PM₁₀ & PM_{2.5} which is the parameter of concern in coal fired power plants is much within the limits suggested by SEQS. As such

Figure 1 is a circular map showing the spatial distribution of suspended particulate matter (SPM) concentration in the Port Qasim area. The map uses a polar coordinate system with distance in meters (0 to 5000) on both axes. Concentration levels are indicated by grayscale shading, with a legend on the right ranging from 0.0 to 28.0 $\mu\text{g}/\text{m}^3$. Key locations labeled include Port Qasim, Arabian Sea, and various roads. A central point is marked 'ST'.

Figure: Isopleth of Maximum Predicted ANNUAL Average Ground – Level Concentrations of SO_2 ($\mu\text{g}/\text{m}^3$) without Control

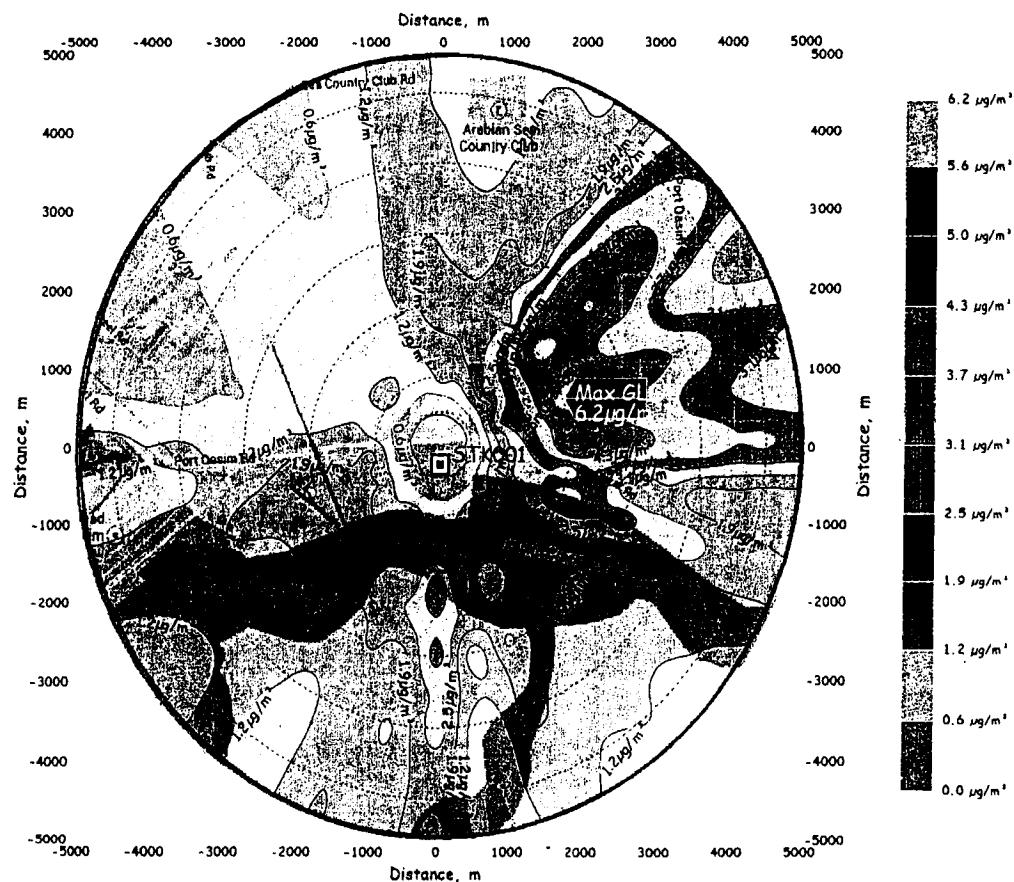


Figure: Isopleth of Maximum Predicted 24-HOUR Average Ground – Level Concentrations of SO_2 ($\mu\text{g}/\text{m}^3$) with Control!

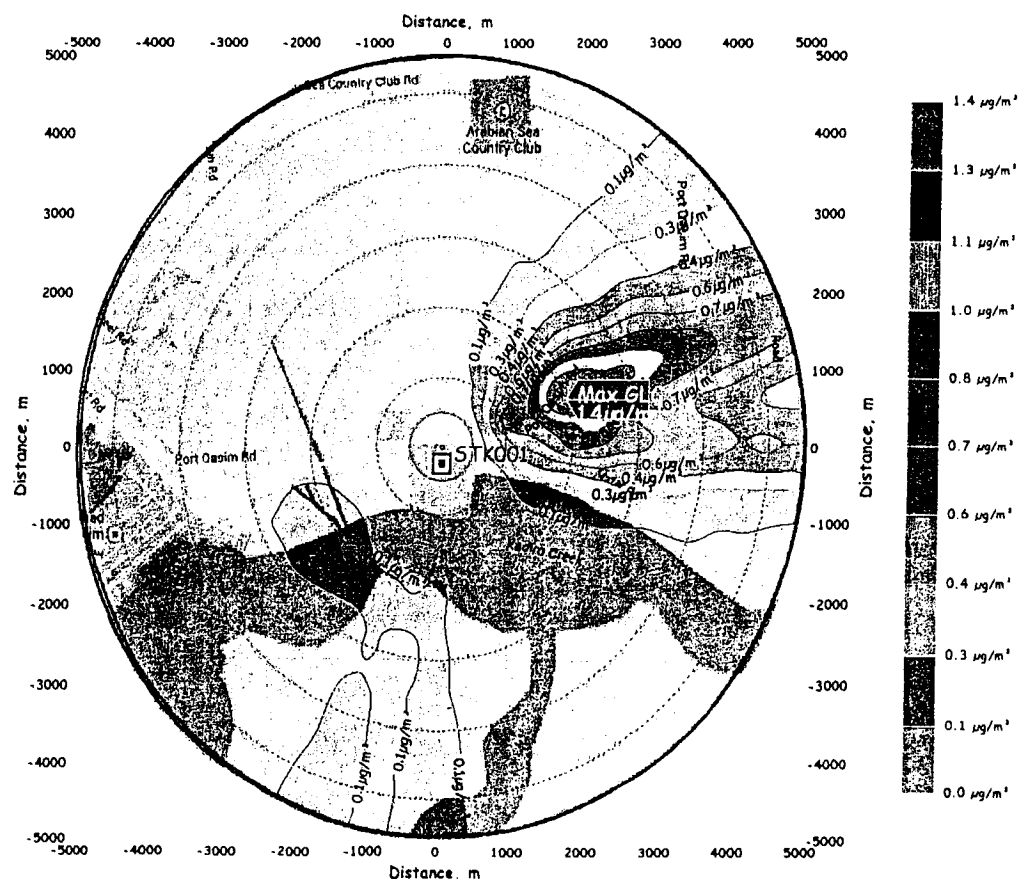


Figure: Isopleth of Maximum Predicted ANNUAL Average Ground – Level Concentrations of SO_2 ($\mu\text{g}/\text{m}^3$) with Control





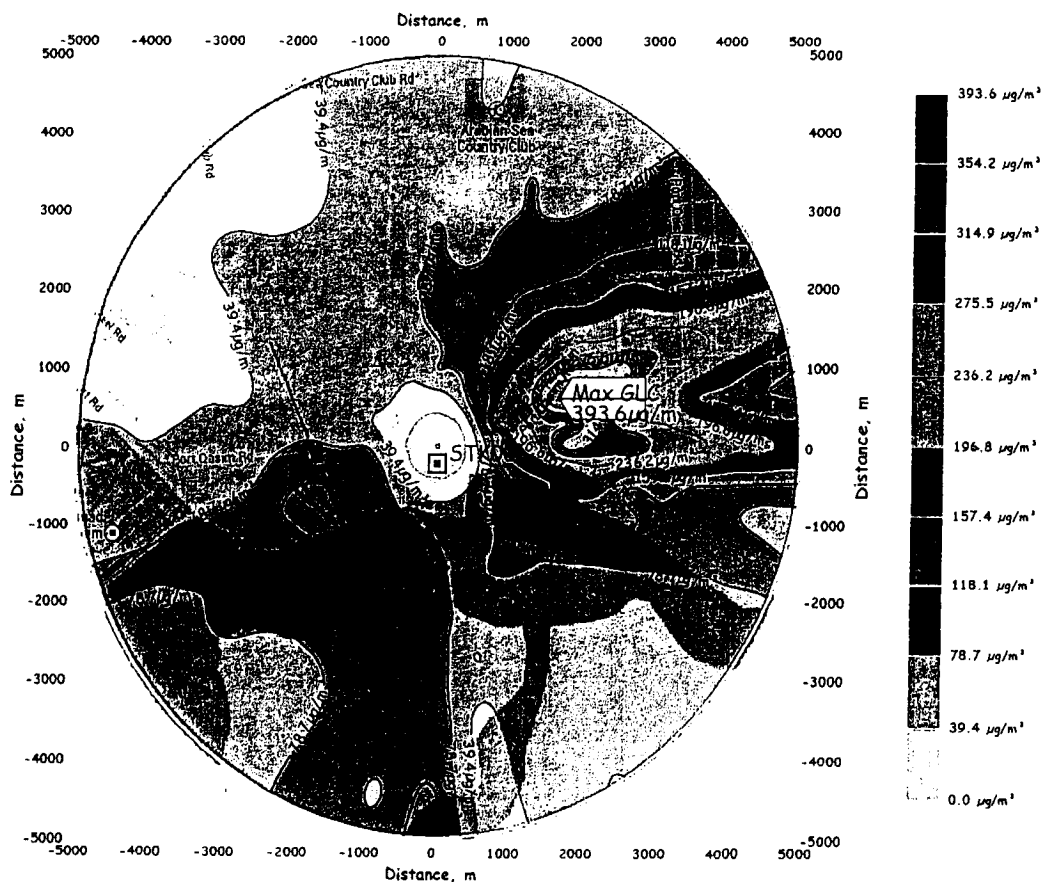


Figure: Isopleth of Maximum Predicted 24-HOUR Average Ground – Level Concentrations of PM10 ($\mu\text{g}/\text{m}^3$) without Control

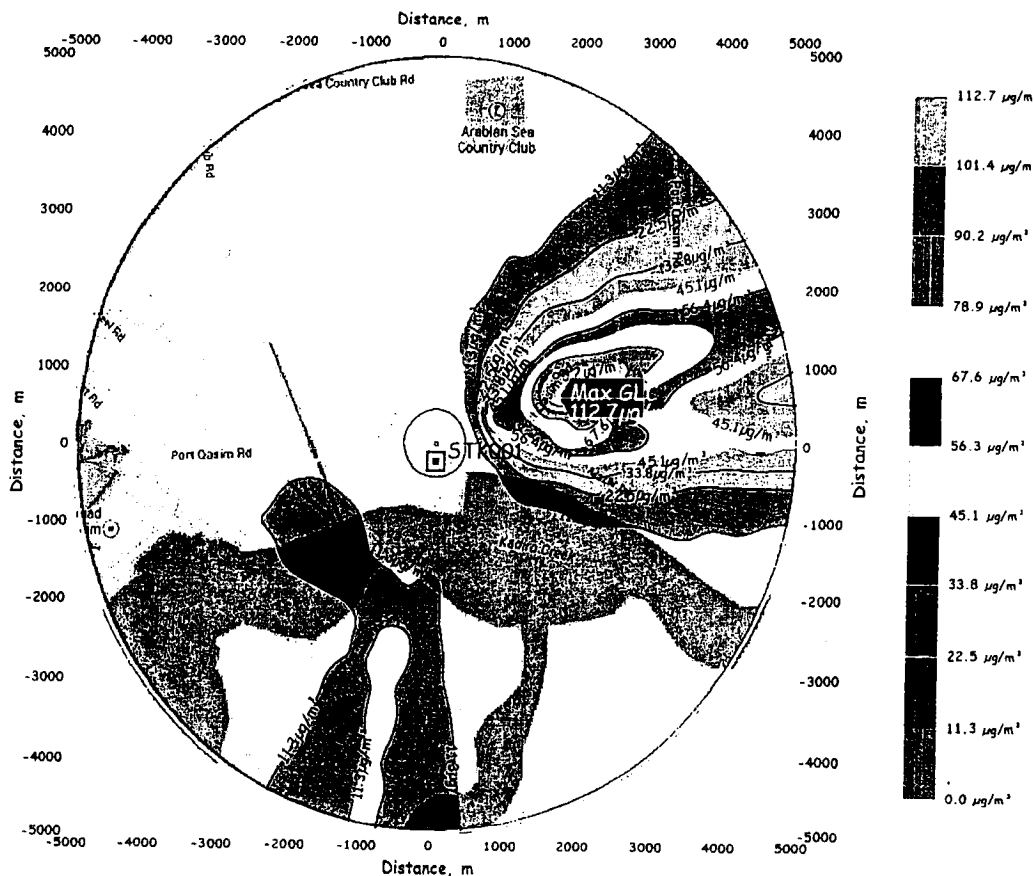


Figure: Isopleth of Maximum Predicted ANNUAL Average Ground – Level Concentrations of PM10 ($\mu\text{g}/\text{m}^3$) without Control

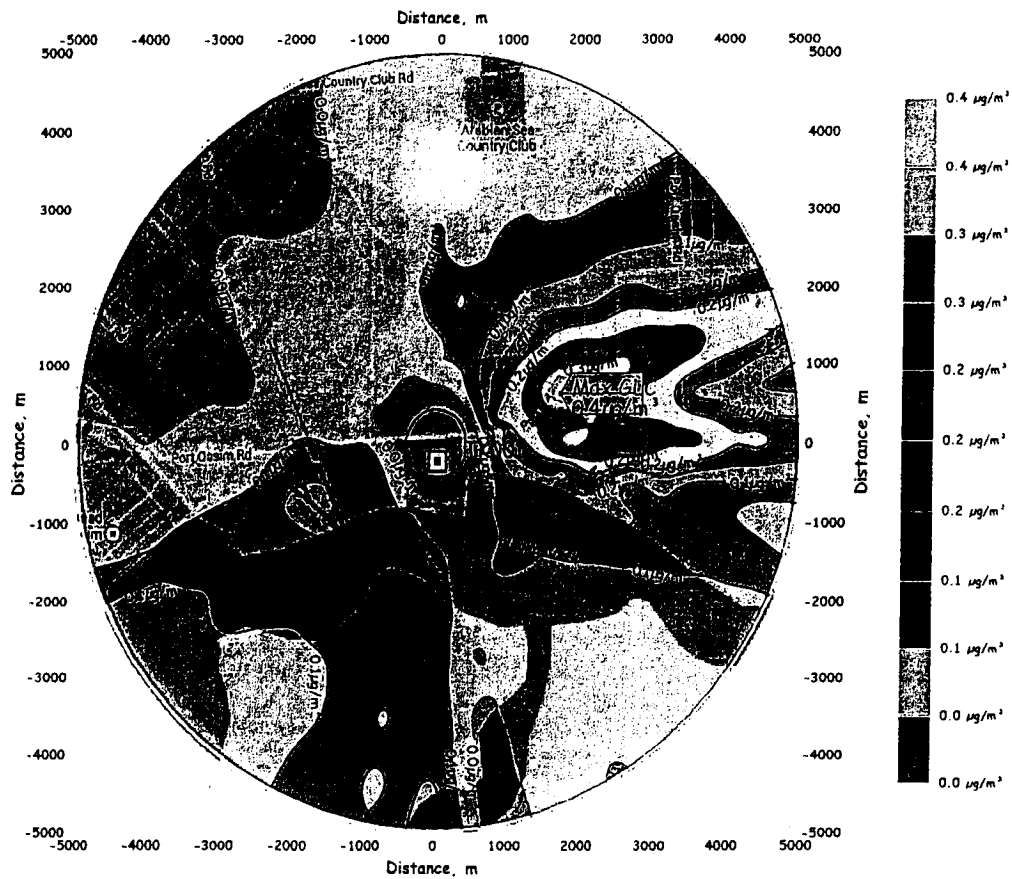


Figure: Isopleth of Maximum Predicted 24-HOUR Average Ground – Level Concentrations of PM10 ($\mu\text{g}/\text{m}^3$) with Control

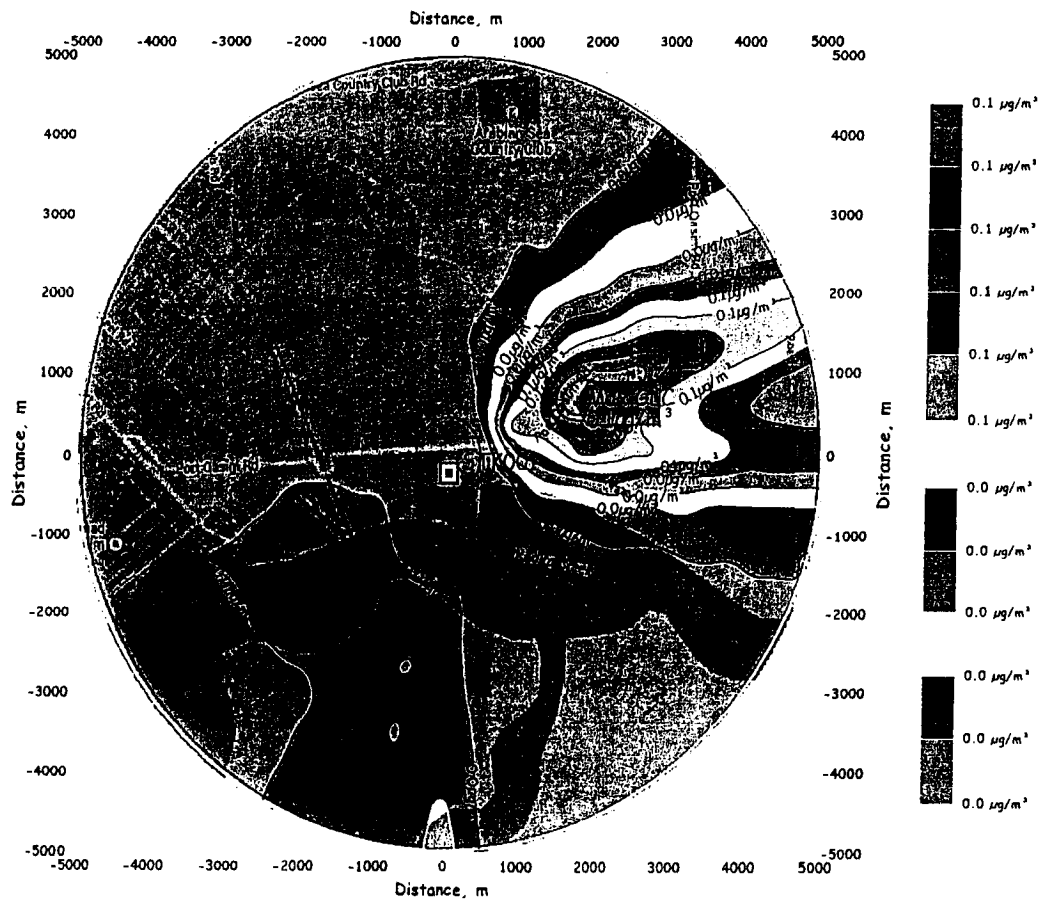


Figure: Isopleth of Maximum Predicted ANNUAL Average Ground – Level Concentrations of PM10 ($\mu\text{g}/\text{m}^3$) with Control



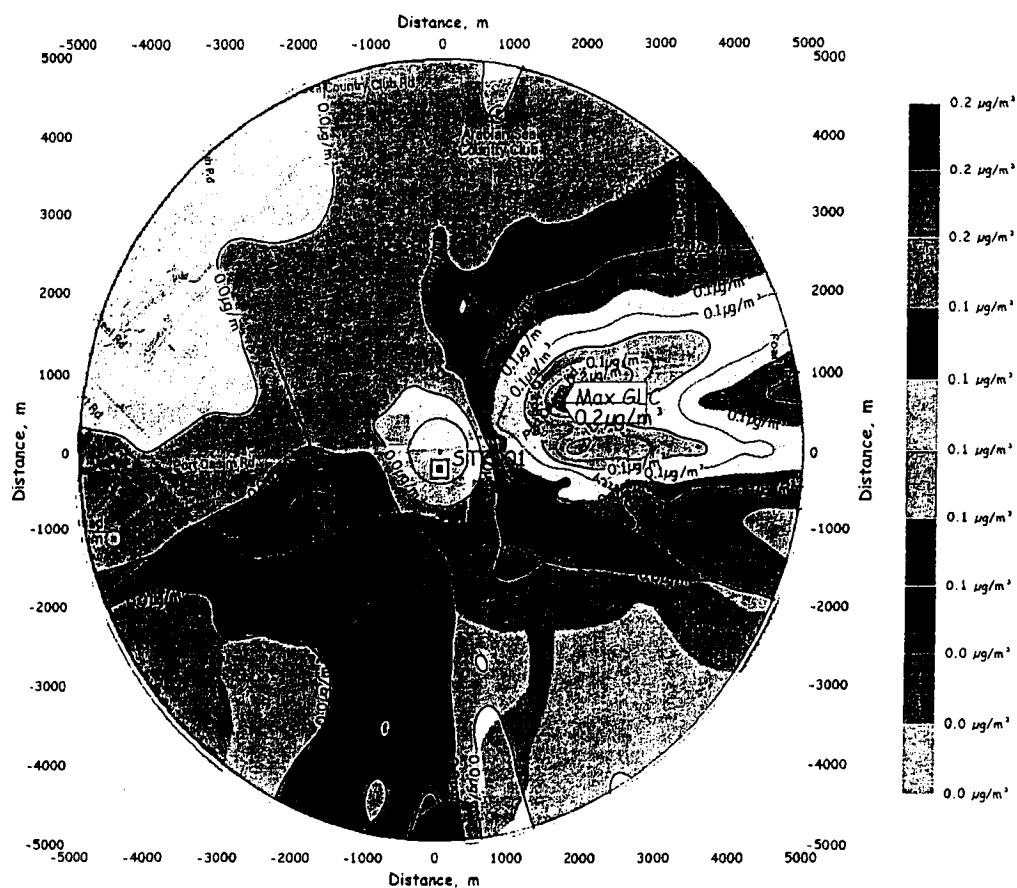


Figure: Isopleth of Maximum Predicted 24-HOUR Average Ground – Level Concentrations of PM2.5 ($\mu\text{g}/\text{m}^3$) with Control

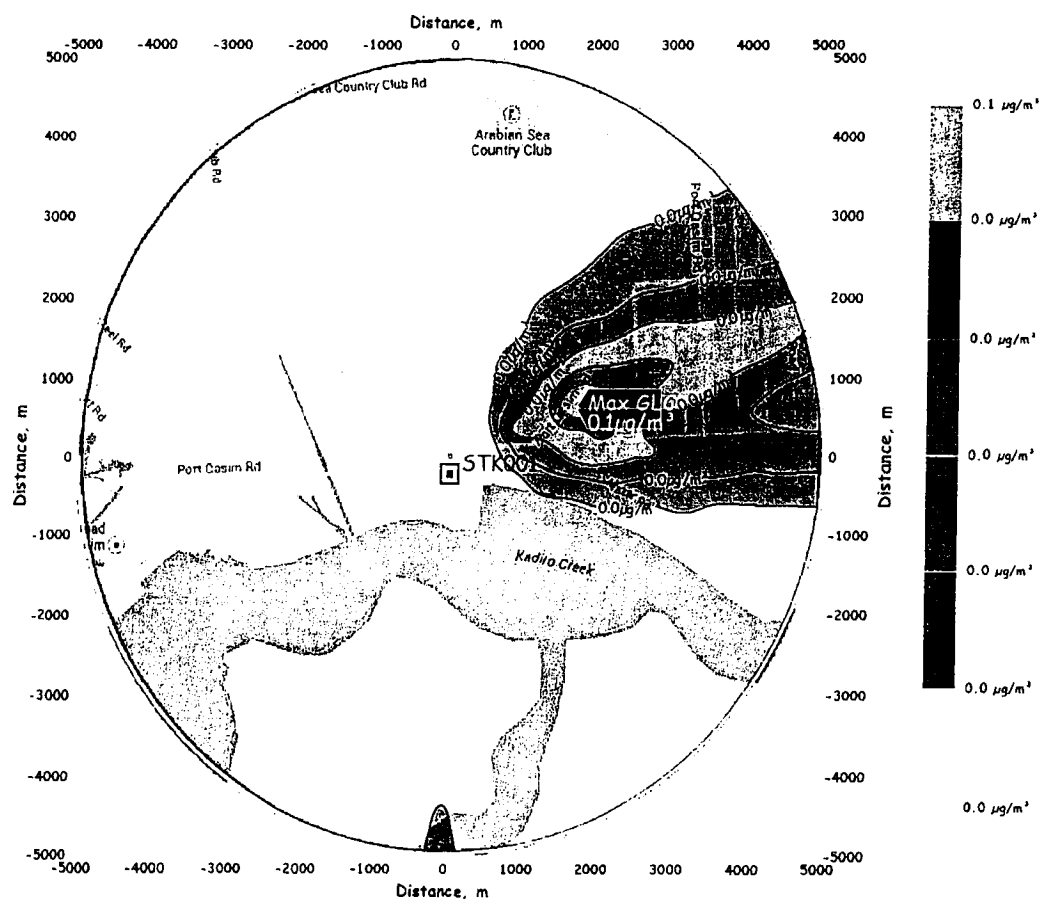


Figure: Isopleth of Maximum Predicted ANNUAL Average Ground – Level Concentrations of PM2.5 ($\mu\text{g}/\text{m}^3$) with Control

The following management measures are envisaged during operation phase.

- 180 m tall flue stack (1 No.) shall be constructed in order to reduce the ground level concentration of gaseous pollutants, as per the regulatory requirements.
- Particulate emission level below the prescribed EPA limit of $150 \mu\text{g}/\text{Nm}^3$, will be achieved by the use of electrostatic precipitators having efficiency not less than 99.95%.
- Use of low sulphur containing coal (<0.5%) will be maintained to reduce SO_2 emission. Besides, adequate space will be provided for installation of Flue Gas Desulphurization plant, if required in future.
- As Dry Low NO_x burners (DLNB) will be installed to control NO_x emission from the combustion process, routine checking of the DLNB performance will be done during the boiler maintenance period. Boiler will be designed with sufficient over fire air to further improve NO_x control.
- High combustion efficiency will be achieved by ensuring proper air to fuel ratios and providing adequate turbulence and residence time for combustion of fuels within the furnace, thus ensuring compliance with the permissible emission levels for residual carbon monoxide.
- Continuous online monitoring system for SPM, CO, SO_2 and NO_x with computer display and recording facility will be installed to facilitate regular checkup of air emissions and ensure compliance with the prescribed standards. Any faults in the system will be reflected in the computer of control room. Display will be also provided at plant gate and EMD.
- ID fan will be interlocked with the ESP tripping so that the operating boiler can be stopped / adjusted till the defect is rectified.
- Coal dust will be suppressed by water spraying arrangements at suitable locations such as unloading yard, transfer points, etc. Transfer towers and crusher house will be provided with dust extraction systems. In addition, water sprinklers will be provided in the coal storage area to suppress the coal dust generated during stacking and re-claiming of coal.
- All major roads within the plant boundary will be paved and periodically cleaned by mechanical sweeping machines to avoid any re-suspension of air borne dust particles.
- Ash handling including conveying system will be monitored for timely intervention and control in case of leakages detected in the line.
- Ash pond will have a freeboard of 1 m. Ash disposal method (location and duration) in the pond will be controlled so that there is no unwarranted build-up of ash at one location. A minimum water depth of 1 feet will be maintained in the ash pond to prevent ash from blowing with surface wind.

COAL DUST CONTROL

The dust control system will consist of the dust suppression system and dust collection system. Dust suppression by water sprinkling is considered appropriate. An improved stockpile water spray system, designed to be effective in high wind conditions and more efficient in where and when sprays are activated. Coal is not allowed to remain dry since such conditions can create an explosion hazard. Vacuum filters would not work with wet coal and hence pollution control will be achieved by a water spraying system that will be installed for dust suppression at the Coal Yard.

Continuous water sprinkling shall be carried out on the top of the heap at regular intervals to prevent dusting, fire & smoke. To prevent fugitive emission during loading/unloading, fixed pipe network with sufficient water storage and pump shall be installed. Water sprinkling shall be carried out at each and every stage of handling to avoid generation of coal dust or other dust within premises.

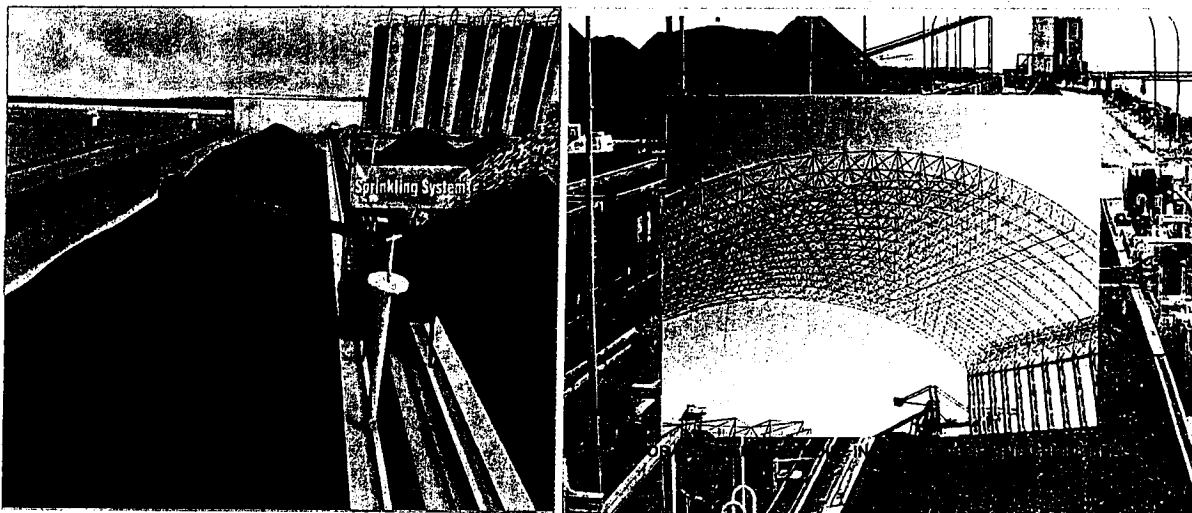
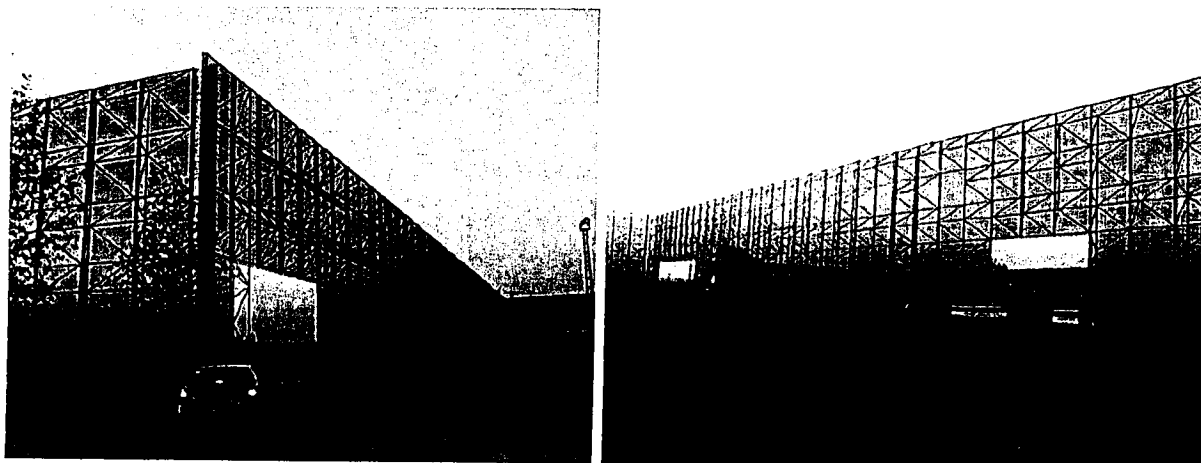


Fig 3: Example of Sprinkler system (left) and Coal Storage Shed with built-in heat sensor & sprinklers (right)

Contractors and operators must be mandated to use new generators and to regularly maintain them so that the emission levels are within acceptable range. Mitigation measures including proper maintenance of construction equipment and controlling unnecessary idling of equipment will be implemented. The dust collection system will be provided for transfer tower, crusher house, and coal bunkers. Wash down systems will be provided in transfer tower, crusher house, tunnels and trestles. Water spray will be provided in coal storage yard. Coal conveyers will be equipped with bag house at suitable intervals to capture the coal dust formed within the enclosed conveyers.

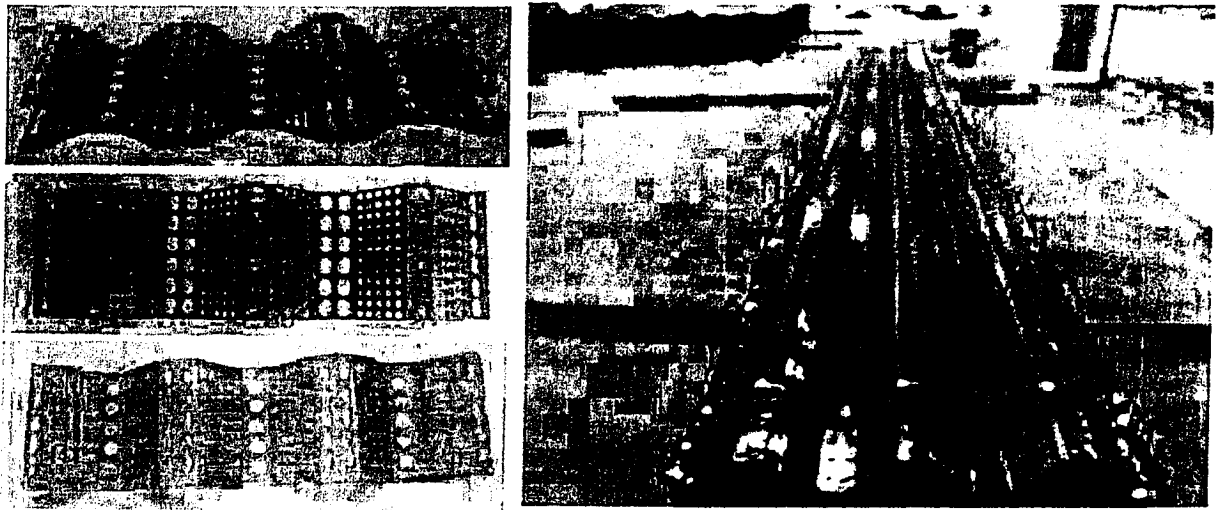
To reduce emission of dust from coal yard, wind break will be installed around the coal yard. Wind breaks are made of steel mesh. The height of the walls is typically kept at least 30% more than the height of the coal pile. Typical wind break and the profile of each element in the windshield are shown in following figures.



Typical wall Structure

Figure 4: Coal Pile Wind Break

Wind break ensures that no wind enters the coal yard and cause propagation of coal dust. The advanced steel windbreak can effectively control the dust pollution of bulk material in the open air. It is claimed that the technology can reduce dust emission from coal yard by more than 80%.



Wall Material and Profile

Different types of wind breaks are available in the world, for example: *DustTAMERWind Fence System*. The DustTAMERWind Fence System can reduce the amount of air infiltration into a coal pile. At Storage Piles, air infiltration is a major contributor to coal fragmentation & contributes to the risk of spontaneous combustion. Spraying water onto the pile can also add to spontaneous combustion risk. DustTAMER, for example can reduce or eliminate the need for watering. If a coal pile is treated with water or chemicals, DustTAMER can slow the evaporation and drying effect, allowing for infrequent watering, saving time & BTUs.

DustTAMER is a much less expensive alternative to Chemical Treatment, Domes and Buildings. The fabric is designed to withstand winds in excess of 100 MPH and is resistant to the effects of UV Rays. Some installations are approaching 20 years of service with no significant fabric deterioration.

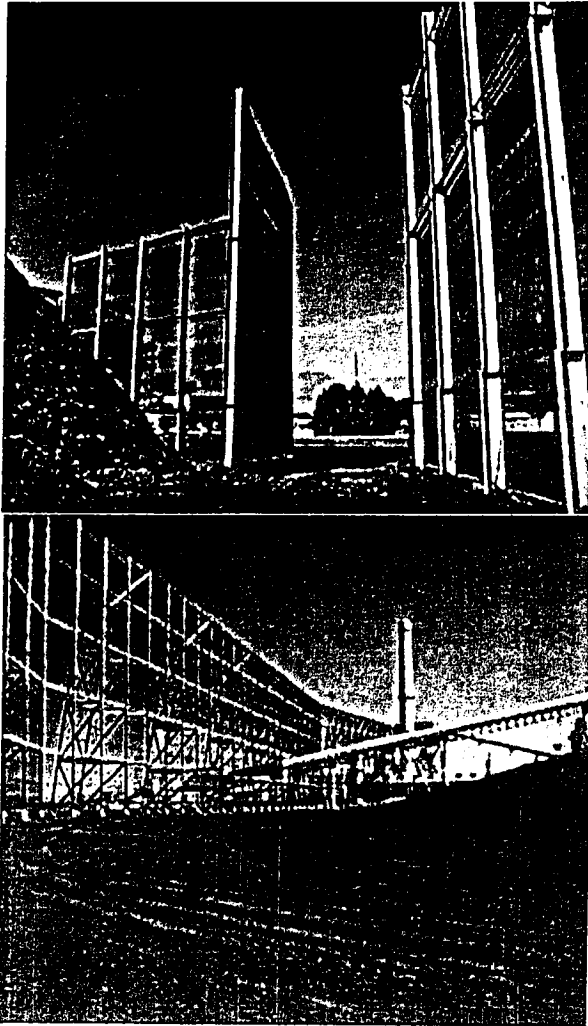


Figure 5: DustTAMERWind Fence System

WASTEWATER MANAGEMENT

A separate waste water treatment system will be supplied for the treatment of waste water from the coal storage and handling areas. It will consist of basins for wastewater retention, settling and clarified water storage, filtration vessels, chemical feed systems, associated pumps and piping.

- The entire wastewater will be treated and reused within the plant premises. Effluents from the DM plant resin regeneration circuits, generally acidic from the cation units and alkaline from the anion units, will be neutralized in a neutralizing pit. The neutralized effluent shall comply Sindh Environmental Quality Standards (SEQS) for effluent. The neutralized effluents will be led into the central monitoring basin and ultimately to the ash water pond for ash sluicing purpose.
- The run-off from the coal handling area will be collected in the drains suitably provided at various places in the coal yard. The run-off collected in this manner will be led to a common sump from where it will be reused for coal dust suppression.
- Boiler blow down water will be collected in ash water pond and shall be used for ash handling purpose. Clarifier sludge and filter back wash shall be pumped to ash slurry sump and from there it will be disposed to ash dyke along-with ash slurry.

- Sewage from the various buildings in the power plant and staff colony will be conveyed to a sewage treatment plant. The treated water from sewage treatment plant will be reused for green belt development and other horticulture purpose.

GREENBELT DEVELOPMENT PLAN

- About 20% of total land area will be developed as green belt, lawns and other forms of greenery. Over 5000 trees will be planted in and around the project area. The plantation width will vary from 25 – 100 m, depending upon the space available. After the site is prepared for starting the construction activity and boundary wall is completed, the land portion earmarked for green will be fenced. Plantation will start soon after. Landscaping and development of lawns, horticulture and gardens will start when the construction activity is complete. The main objective of greenbelt is to provide a barrier between the sources of pollution and the surrounding habitation.
- The greenbelt will help to capture the fugitive dust and attenuate the noise apart from improving the aesthetics. Greenbelt and greenery development also prevent soil erosion and washing away of top soil besides helping in stabilizing the functional ecosystem, make the climate more conducive and restore water balance.

NOISE MANAGEMENT

- Proper encasement of noise generating sources will be done to control noise level below 70 dB (A) at the plant boundary all the time. Suitable vibration control measures will also be provided for major equipment. Turbines will be provided with acoustic enclosure to the maker's standards. Noise damping accessories such as silencers and mufflers will be used wherever necessary.
- Besides, ear muffs/plugs will be provided to the personnel in the close vicinity of noise sources. Noise proof cabin will be given to operators working in noisy conditions. Due care will be taken to reduce noise by all means from anticipated sources.

ASH UTILIZATION OPTIONS

As a partial solution to the ash disposal problem, fly ash and bottom ash can be utilized as a raw material/blending material along with other primary raw materials in the manufacture of various construction products. Apart from this fly ash also finds its use as aggregate in many construction activities. Following are some of the possible areas of utilization of fly ash.

- As a pozzolanic material in the manufacture of Cement
- For manufacturing fly ash based bricks and blocks
- As partial replacement of cement in concrete & mortar
- For manufacturing of cellular light weight concrete building blocks and slabs
- For preparation of base and sub-base course for roads, highways and runways for airports etc.
- As a fill material in mine stowing
- For manufacture of lightweight aggregates, ceramic products, etc.
- As a filler for refractory bricks
- For recovery of cenospheres and rare metals

- As soil improvement and conditioning agent for agricultural purposes
- As replacement of cement in roller compacted concrete in large & small dams

PROTECTION OF MARINE ENVIRONMENT

As no significant terrestrial fauna is found in the project vicinity, no impact is envisaged. The proposed project is not expected to change the pollutant load since no untreated liquid effluent will be discharged into the creek and the profile of the thermal plume will remain unchanged. Therefore, there is no incremental impact on the marine biodiversity from Project operation. However during land reclamation of coal yard and ash pond the possibility of bank erosion and discharges of waste and other materials can temporarily affect the marine environment.

To mitigate the affect during land reclamation the following mitigation measures are proposed:

- To the extent possible a dyke or soil berm will be constructed first marking the limit of the land reclamation area. The land between the berm & shore shall be then filled with the landfill material;
- To the extent possible, construction and reclamation activities during the spawning period of coastal fish (July – August) will be avoided;
- Possible leakage from the prospective ash disposal site due to seepage will be prevented by incorporating the design features;
- For any mangrove plant destroyed due to Project activities, plant five mangrove seedlings in another part of the coast in presence of independent observers such as IUCN-P, WWF-P and provide necessary care until they reach maturity.

SOCIOECONOMIC IMPACT

The Project activities will result mostly in positive impact on the existing socioeconomic environment of the area in the vicinity of Port Qasim as well as the broader region. The Project will contribute to stimulating economic growth through employment and outsource opportunities for in-country suppliers, increase in the stock of skilled human capital and enhancement in labor-productivity due to transfer of knowledge and skill under the Project. The major socio economic impacts due to the Project activities include:

- The reduction in power generation cost due to use of cheaper source and consequent benefit to the Karachites;
- Employment opportunities mainly during the Project's construction phase benefitting the labor force in Karachi;
- Marine traffic generated by the project between Port Qasim and the Project site interfering with the fishing activities in the area and potentially affecting the livelihoods of the angler communities.

No specific monitoring or mitigation measures is required for the impact as the Project will create positive impacts by community development, empowerment of vulnerable groups through increased participation in Project and economic decline at closure.

SAFETY AND OCCUPATIONAL HEALTH

Plant safety and industrial hygiene measures will be given utmost attention as per provisions stipulated in the Factories Act. Hazardous chemicals shall be handled and stored in plant as per the guidelines provided in Hazardous Substances Rules, 2014. Fire protection with ring system and fire hydrant points at every 30 m intervals will be provided around the coal storage yard. Adequate number of hand held fire extinguishers and wall-mounted CO₂ fire extinguishers would be kept at other locations to be used in the case of fire.

Workers exposed to mechanical accident-prone areas will be provided with personal protective equipment (PPE). The non-respiratory PPE includes tight rubber goggles, safety helmets, welders hand shields and welding helmets, plastic face shields, ear plugs, ear muffs, rubber aprons, rubber gloves, shoes with non-skid soles, gum boots, safety shoe with toe protection which will be provided to workers. All safety and health codes prescribed by the OSHA will be strictly implemented in the plant.

The work environment will be monitored for occupational accidents, diseases and dangerous occurrences. A proper record of the same will be maintained. The following will be adopted to ensure good health condition of employees.

- Pre- employment checkup
- Awareness programme
- Routine checkup
- Periodic vaccination programme etc.

A well-equipped medical center with adequate number of qualified medical staff will be available at the plant. First aid facilities, medicines and ambulance are available to meet any emergency situation.

ADOPTION OF GREEN BUILDING CONCEPTS

Several green building concept will be used in the project, as described below:

- The project will be designed with 'Green Buildings' concept. Compact Fluorescent Lamps (lighting system), energy efficient refrigerators and air-conditioners, water-cooled screw type HVAC system, CFC and HCFC free refrigerants and chillers, solar water heaters on major buildings are some recommended energy saving devices that shall be considered in this project.
- Energy efficient building materials shall be considered for construction of structures. Natural ventilation system comprising screen walls, low emissive double glazed glass with U value of less than 2.8 W/m²K, shading coefficient of 0.5 shall be considered for the buildings. Fenestration with UPVC framing that reduces solar heat gain shall be considered.
- Landscaping with deciduous tree canopy shall be considered for reducing heat gain into the structures (by blocking sun rays in summer and permitting penetration during winter).
- Energy efficient process & building structures will achieve 20% reductions in energy consumption.
- Siddiqsons Energy Pvt. Ltd shall undertake yearly energy audit for their entire manufacturing process and ancillary facilities.

ENVIRONMENTAL MANAGEMENT PLAN

Compliance with EMP will be the responsibility of Siddiqsons Energy Pvt. Ltd's (SEPL) Management at each stage of project. SEPL Management will ensure that all executive activities during construction stage do not create adverse environmental effects. Contractor and sub-contractor will work in environment friendly manner under the supervision of HSE department of SEPL. All the regulatory agencies including Sindh EPA will be contacted as and when required to get advice for environmental management and they will be kept informed of the environmental conditions of the area periodically by SEPL management and their contractors/sub-contractors.

The contractor will carry out field activities as part of the proposed SEPL Project that includes relevant and subsidiary construction work. The contractor will have certain liabilities under the environmental laws of the country, which will be specified in the contract document with the SEPL Management.

Some of the approaches to be followed during the environmental management practices are given below:

- Complying with the relevant legislation and regulations;
- Regularly reviewing of the impacts on the environment;
- Developing appropriate indicators to monitor core impacts;
- Setting appropriate annual objective, targets and publicly reporting on progress;
- Monitoring supplier's environmental management arrangements;
- Using sustainable materials for office supplies & environmentally safe raw materials with recycling options where appropriate;
- Communicating openly with internal and external stakeholder on environmental issues.

The EMP is prepared on the basis of detail currently available on the construction & operation phase of the project. As and when a construction contractor is appointed and further information is available, the EMP will be amended to reflect the changes. However, no mitigation measures committed in the EIA can be changed.

The EMP consists of the following:

- Mitigation Plan for Construction and Operation
- Waste Management
- Communication and Documentation
- Change Management
- Environmental Training
- Construction Management Plan
- Coal Dust Management Plan
- Ash Management Plan
- Spill Management
- Grievance Redress Mechanism

CONCLUSION

Review of Guidelines for classification of polluted and unpolluted sites with respect to their airshed, watershed, soil, sensitivity of ecosystem including fauna, flora, wildlife, aquatic life, historical and archaeological sites and their values, along with assessment of impact by using the "Checklist of actions affecting environment and significance of their impact" has been used in this EIA Study for assessment of impact of different activities for establishment of Siddiqsons Energy Coal Power Project. The EIA has documented all major environmental concerns associated with the project. A series of mitigation and monitoring measures have been included to address the concerns for these measures. Assuming effective implementation of the mitigation measures and monitoring requirements, the adverse environmental and social impacts of the proposed Project are likely to be within the acceptable limits.

This EIA Study finds that the proposed Project would fulfill the requirements of sustainable development by being socially equitable, and economically viable in improving the quality of life for all citizens of Pakistan, without altering the balance in the resources of the ecosystem of the region.

The Study therefore recommends that:

- EIA should be approved with the condition that all mitigation measures recommended in EIA report, suggestions of stakeholders and recommendations of experts committee will be adhered to by Siddiqsons Energy (Pvt) Ltd. and the legal requirements as well as the Environmental Management & Monitoring Plan shall be implemented in letter & Spirit.
- The monitoring shall be conducted by Independent Monitoring Consultant (IMC) in association with stakeholders including relevant active NGOs including IUCN & WWF.
- Siddiqsons Energy (Pvt) Ltd shall facilitate SEPA officers/officials as and when required for confirmation of compliance to approval conditions and commitments made in EIA. The monitoring reports shall be submitted to Sindh EPA on monthly basis.

A001654



SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
COMPANY REGISTRATION OFFICE, KARACHI

CERTIFICATE OF INCORPORATION

[Under section 32 of the Companies Ordinance, 1984 (XLVII of 1984)]


Corporate Universal Identification No. 0088316

I hereby certify that **SIDDIQSONS ENERGY LIMITED** is this day incorporated under the Companies Ordinance, 1984 (XLVII of 1984) and that the company is **limited by shares.**

Given under my hand at **Karachi** this **Fifteenth** day of **May**, Two **Thousand** and **Fourteen.**

Incorporation fee Rs. 3,22,000/= only




(Sidney Custodio Pereira)
Joint Registrar of Companies
Karachi

THE COMPANIES ORDINANCE, 1984

--: 0 :--

(COMPANY LIMITED BY SHARES)

--: 0 :--



Articles of Association
of

SIDDIQSONS ENERGY LIMITED

I. PRELIMINARY

1. TABLE "A" Not to Apply

The regulations in Table 'A' in the First Schedule to the Companies Ordinance, 1984 shall not apply to the Company except so far as the same are repeated or contained in these articles.

2. DEFINITIONS

Unless the context otherwise requires, the terms used in these articles shall have the meanings set out below:

- (a) **"Articles"** mean these articles of association of the company as originally framed or as from time to time altered by in accordance with the law.
- (b) **"Board"** means the group of directors in a meeting duly called and constituted or, as the case may be, the directors assembled at a board.
- (c) **"Book and paper"**, "book or paper" or "books of account" mean accounts, deeds, vouchers, writings and documents, maintained on paper or computer network, floppy, diskette, magnetic cartridge tape, CD-Rom or any other computer readable media;
- (d) **"Buy-back of shares rules"** mean the Companies (Buy-Back of Shares) Rules, 1999 or any modification or re-enactment thereof.
- (e) **"Company"** means **Siddiqsons Energy Limited**.
- (f) **"Central depository"** means a central depository as defined in clause (ca) of section 2 of the Securities and Exchange Ordinance, 1969 (XVII of 1969) and registered with the Securities and Exchange Commission of Pakistan under section 32 A of the said ordinance.
- (g) **"Central Depositories Act"** means the Central Depository Act, 1997 or any modification or re-enactment thereof.
- (h) **"Central Depository Regulations"** mean the central depository company of Pakistan limited regulations made pursuant to section 35(1) of the Central

Depository Act, 1997 or any modification or re-enactment thereof.

- (i) **"Central Depository Register"** means a computerized electronic register maintained by a central depository in respect of book-entry securities.
- (j) **"Code"** means the code of corporate governance.
- (k) **"Commission"** means the Securities and Exchange Commission of Pakistan established under section 3 of the Securities and Exchange Commission of Pakistan Act, 1997.
- (l) **"Directors"** mean the directors for the time being of the company including alternate directors and, subsequently elected pursuant to Companies Ordinance, 1984 or as the case may be, the directors assembled at a board.
- (m) **"Dividend"** includes cash dividend, dividend in species and bonus shares.
- (n) **"Electronic"** includes electrical, digital, magnetic, optical, bio-metric, electro-chemical, wireless or electromagnetic technology.
- (o) **"Electronic transactions ordinance"** means the Electronic Transactions Ordinance, 2002 or any modification or re-enactment thereof.
- (p) **"In Person"** includes attendance and/or voting at a meeting, personally or by video or telephone-conference or other facility whereby all the participants of the meeting can hear and / or see each other unless expressly stated otherwise by the directors.
- (q) **"Instrument of transfer"** includes transfer deeds and any record of transfer of book-entry securities in the central depository register, provided by the central depositories act and the central depository regulations.
- (r) **"Issue of capital rules"** mean Companies (issue of capital) Rules, 1996 or any modification or re-enactment thereof.
- (s) **"Listing requirements"** mean the listing regulations of the stock exchanges.
- (t) **"Member"** means a person whose name is for the time being entered in the register of members by virtue of his being a subscriber to the memorandum of association of the company or of his holding by allotment or otherwise any share, scrip or other security which gives him a voting right in the company including but not limited to the account holders of a central depository.
- (u) **"Memorandum"** means the memorandum of association of the company as originally framed or as from time to time altered in accordance with law.
- (v) **"Month"** means calendar month according to the English calendar.
- (w) **"Office"** means the registered office for the time being of the company.
- (x) **"Ordinance"** means the Companies Ordinance, 1984 or any modification or re-enactment thereof for the time being in force.
- (y) **"Preference shares"** not being ordinary shares mean preference shares whether redeemable or irredeemable, cumulative or otherwise with the rights, privileges and conditions attaching thereto as are provided by the articles.

- (z) **"Preference shareholders"** not being ordinary shareholders mean, in relation to the Company, every person to whom the company has allotted, or who becomes the holder of such shares and whose name is entered in the register of members.
- (aa) **"Proxy"** includes an attorney duly constituted under a power of attorney.
- (ab) **"Record"** includes, in addition to a written or printed form, any disc, tape, sound-track, film or other device in which sounds and / or other data is embodied so as to be capable (with or without the aid of some other instrument or machine) of being reproduced there from in audible, legible or visual form.
- (ac) **"Register"** means, unless the context otherwise requires, the register of members and include the register of debenture-holders or holders of other securities maintained on paper or computer network, floppy, diskette, magnetic cartridge tape, CD-Rom or any other computer readable media; to be kept pursuant to section of the ordinance and / or central depository register under the central depositories act and the central depository regulations.
- (ad) **"Registrar"** means a registrar, defined in section 2 (1) (31), performing the duty of registration of companies under the ordinance.
- (ae) **"Regulations"** mean the rules of governance of the company made by the board from time to time.
- (af) **"Seal"** means the common or official seal of the company.
- (ag) **"Section"** means section of the ordinance.
- (ah) **"Share Capital Rules"** mean the companies' Share Capital (Variation in Rights and Privileges) Rules, 2000.
- (ai) **"Sign" and "Signature"** unless otherwise provided in these articles, include respectively lithography, printing facsimile, "advanced electronic signature" which is capable of establishing the authenticity and integrity of an electronic document, as defined by section 2(e) of the electronic transactions ordinance, and names impressed with a rubber or other kind of stamp.
- (aj) **"Special Resolution"** means the special resolution of the company as defined in section 2(1) (36) of the ordinance.
- (ak) **"Stock Exchanges"** mean the Islamabad, Lahore and Karachi stock exchanges and such other stock exchanges as may be established in Pakistan.

3. INTERPRETATION

In these articles, unless the context otherwise requires:

- (a) the singular includes the plural and vice versa and words denoting any gender shall include all genders;
- (b) references to any act, ordinance, legislation, the code, the listing requirements, rules or regulations or any provision of the same shall be a reference to that act, ordinance, legislation, the code, the listing requirements, rules or regulations or provisions, as amended, re-promulgated or superseded from time to time;

- (c) the terms "include" or "Including" shall mean include or including without limitation;
- (d) Expressions referring to writing shall, unless the contrary intention appears, be construed as including references to printing, lithography, photography, and other modes of representing or reproducing words in a visible form, including but not limited to, electronic transmission such as facsimile, and electronic mail or any other electronic process, as prescribed by section 3 of the electronic transactions ordinance.
- (e) words importing persons shall include bodies corporate; and
- (f) words and expressions contained in these articles shall bear the same meaning as in the ordinance.

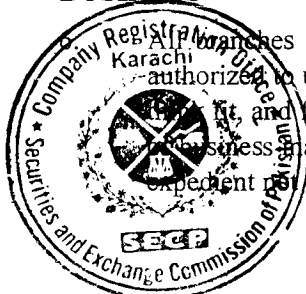
REGISTERED OFFICE

- 4. The registered office of the company shall be in the Province of Sindh as the directors shall from time to time appoint.

PUBLIC LIMITED COMPANY

- 5. The company is a public limited company within the meanings of section 2(1), Clause (30) of the Companies Ordinance, 1984.

BUSINESS



All branches or kind of business which the company is either expressly or by implication authorized to undertake may be undertaken by the directors at such time or times as they shall fit, and further may be allowed by them to be in abeyance, whether such branch or kind of business may have been actually commenced or not, so long as the directors may deem it expedient not to commence or proceed with such branch or kind of business.

II. CAPITAL

SHARES

- 7. The minimum Subscription upon which the Directors may proceed to make First Allotment is fixed at Rs.5,000,000/- (Rupees: Five Million Only).
- 8. The Authorized Capital of the Company is Rs.100,000,000/- (Rupees One Hundred Million Only) divided into 10,000,000 (Ten Million Only) (ordinary shares of Rs.10/= each, but the Company may from time to time by a Special Resolution increase, consolidate, sub-divide, reduce or otherwise re-organize the share capital of the Company, subject to the provisions of Section 108 of the Companies Ordinance, 1984
- 9. Subject to section 90 of the ordinance and any rules in that regard made under the ordinance, and without prejudice to any special rights previously conferred on the holders

of any existing shares or class of shares, any share in the company may be issued with different rights, restrictions and privileges, including but not limited to the following as may be approved by the company by special resolution:

(1) different voting rights; voting rights disproportionate to the paid-up value of share held; voting rights for specific purposes only; or no voting rights at all;

(2) different rights for entitlement of dividend, right shares or bonus shares or entitlement to receive the notices and to attend the general meetings;

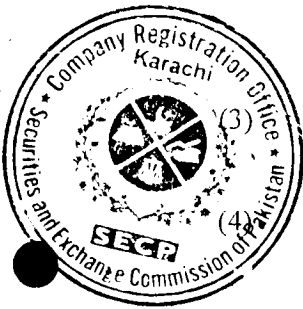
(3) rights and privileges for indefinite period, for a limited specified period or for such periods as may from time to time be determined by the company;

(4) different manner and mode of redemption, including redemption in accordance with the provisions of these articles, subject to sections 85 and 95 (4) of the ordinance, including but not limited to, by way of conversion into shares with such rights and privileges as determined by the company in the manner and mode provided in these articles; and

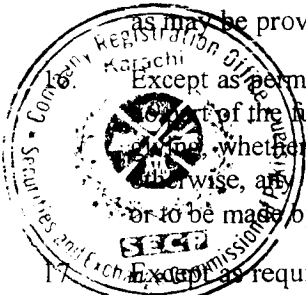
(5) Different rights and privileges for listing or non-listing of any class of shares.

10. Subject to section 95(4)(a) of the ordinance and any rules in that regard made under the ordinance, the company may issue shares which are to be redeemed or any other redeemable security, on such terms and in such manner as may be provided in the said section and rules.

11. Subject to provisions of the ordinance and these articles and subject to any special rights or privileges for the time being attached to any issued shares, the shares in the capital of the company for the time being, including any new shares resulting from an increase in the authorized capital, shall be under the control of the directors who may allot or otherwise dispose of the same or any of them to such persons (subject to article 43), on such terms and conditions, and with such rights and privileges annexed thereto as the resolution creating the same shall direct, and if no direction be given, as the directors shall determine and at such times and in such manner as the directors think fit, either at par or at a premium or subject to section 84 of the ordinance at a discount, with power to the directors to give any person the right to call for and be allotted shares of any class of the company at par or at a premium or, subject as aforesaid, at a discount, such option being exercisable at such time, and for such consideration as the directors think fit. Provided that the shares in the capital of the company shall always be issued as fully paid shares and no shares shall be issued as partly paid shares. The directors shall, as regards any allotment of shares, duly comply with such of the provisions of sections 67 to 73, the central depositories act, the central depository regulations, the issue of capital rules and the share capital rules, as may be applicable to the company.



12. The directors may allot and issue shares in the capital of the company as payment or part payment for any property sold or transferred, or for services rendered, to the company in the ordinary course of its business, and shares so allotted shall be issued as and shall be deemed to be fully paid shares.
13. The board shall, as regards any allotment of shares, duly comply with such provisions of sections 67 to 73 of the ordinance as may be applicable.
14. The company may at any time pay a commission to any person for subscribing or agreeing to subscribe (whether absolutely or conditionally) for any shares, debentures or debenture stock in the company or procuring or agreeing to procure subscriptions (whether absolutely or conditionally) for any shares, debentures or debenture stock in the company; Provided, that, if the commission in respect of shares shall be paid or payable out of capital, the statutory requirements and conditions shall be observed and complied with, and the amount or rate of commission shall not exceed such percentage on the shares, debentures or debenture stock in each case subscribed or to be subscribed, as may be determined by the board subject to any limits required by law. The commission may be paid or satisfied, either wholly or partly, in cash or in shares, debentures or debenture stock. The company may also on any issue of shares pay such brokerage fees as may be lawful; Provided that such brokerage fees shall not exceed such percentage of the shares, debentures or debenture stock paid-up as may be determined by the board, subject to any limits required by law.
15. Subject to section 95A of the ordinance and any rules in that regard made under the ordinance, the company may purchase its own shares on such terms and in such manner as may be provided in the said section and rules.
16. Except as permitted in the ordinance and any rules in that regard made under the ordinance, of the funds of the company shall be employed in the purchase of its own shares or in the purchase, whether directly or indirectly and whether by means of a loan, guarantee, security or otherwise, any financial assistance for the purpose of or in connection with a purchase made or to be made by any person of or any shares in the company.
17. Except as required by law, no person shall be recognized by the company as holding any share upon any trust, and the company shall not be bound by or be compelled in any way to recognize (even when having notice thereof) any equitable, contingent, future or partial interest in any share or any interest in any fractional part of a share or (except only as by these Articles or by law otherwise provided or under an order of a court of competent jurisdiction) any other rights in respect of any share except any absolute right to the entirety thereof in the registered absolute right to the entirety thereof in the registered holder.
18. Save as herein otherwise provided, the company shall be entitled to treat the registered holder of any share as the absolute owner thereof and accordingly shall not, except as ordered by a court of competent jurisdiction or as by statute required, be bound to



recognize (even when having notice thereof) any benami, equitable, contingent, future, partial or other claim or right to or interest in such share on the part of any other person.

19. Shares may be registered in the name of persons, any limited company or other corporate body. Not more than four persons shall be registered as joint-holders of any share.
20. If any share or shares stand in the name of two or more persons, the person first named in the register shall, as regards receipt of dividend or bonus or service of notices and all or any other matters connected with the company except voting at the meeting and the transfer of shares, be deemed the sole holder.

RIGHTS PRIVILEGES AND CONDITIONS ATTACHED TO SHARES

21. As regards income, the profits which the company may determine to distribute in respect of any financial year or other period for which the accounts shall be made up, shall be applied in the following order of priority;

(1) In paying the holders of the preference shares, the right to a cumulative preferential dividend as determined by the board on the capital paid up thereon payable as regards each financial year out of the profits of the company resolved to be distributed in respect of that year, but shall not be entitled to any further participation in profits; and

(2) Subject to the rights of any class of shares for the time being issued, in distributing the balance amongst the holders of the ordinary shares according to the amounts paid up on the ordinary shares held by them respectively.

22. As regards conversion, the company may partly or wholly convert the preference shares at the option of the holders of the preference shares in accordance, respectively, with the terms and conditions of their issue.

22. As regards capital, on a return of capital in a winding up or otherwise (except upon the redemption of shares of any class of preference shares or the purchase by the company of its own shares), the surplus assets of the company remaining after payment of its liabilities shall be applied in the following order of priority:

(1) in paying to the holders of the preference shares, the capital paid up on the same without any further right to participate in profits or assets; and

(2) subject to the rights of any other class of shares for the time being issued, in distributing the balance amongst the holders of the ordinary shares according to the amounts paid up on the ordinary shares held by them respectively.

23. As regards entitlement to bonus or right shares, the holders of preference shares shall not be entitled to bonus or right shares in the event that the company increases its capital by the issue of further shares or otherwise.

24. As regards voting rights, the holders of the preference shares shall not be entitled to receive notice of, attend, or vote at, any general meeting of the company, except as otherwise provided by the ordinance, whereby the holders of such shares would be entitled to vote separately as a class, that is, with respect to voting entitlement of the preference shareholders on matters affecting, respectively, their substantive rights and liabilities. Without prejudices to the foregoing, the holders of preference shares may attend the general meeting of the company as observers with prior permission of the chairman.

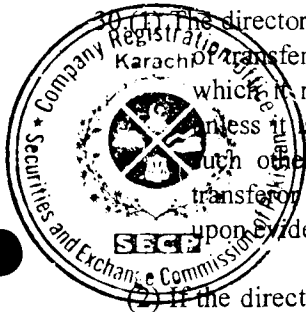
CERTIFICATES

25. The Certificates of title to shares and duplicate thereof shall be issued under the seal of the company and signed by two of the directors or by one such director and the secretary provided that such signatures may if necessary be printed lithographed or stamped subject to the approval of the directors.
26. Every member shall be entitled to one certificate for all the shares registered in his name, or, if the directors so approve, to several certificates each for one or more of such shares, but in respect of each certificate for less than one hundred shares, the directors shall be entitled to charge a fee of Rupees 10 or such lesser sum as they may determine. Every certificate of shares shall specify the number and denoting numbers of the shares in respect of which it is issued.
27. The company shall within ninety days after the allotment of any shares, debentures or debenture stock and within forty-five days (or where the transferee is a central depository, within five (5) days) after receipt by the company of the application for transfer of any such shares, debentures or debenture stock complete and have ready for delivery the certificate (such expression shall hereinafter be deemed to include book-entry security as defined in the central depositories act, and the central depository regulations) of all shares, the debentures and the certificate of all debenture stock allotted or transferred, and unless sent by post or delivered to the person entitled thereto within the period aforesaid the company shall immediately thereafter give notice to that person in the manner prescribed in these articles for the giving of notices to members that the certificate is ready for delivery.
28. If a certificate of shares, debenture or debenture stock is proved to the satisfaction of the company to have been lost or destroyed or, being defaced or mutilated or torn, is surrendered to the company, and the company is requested to issue a new certificate in replacement thereof, the company shall, after making such enquiry as it may deem fit, advise the applicant within thirty days from the date of application the terms and conditions (as to indemnity and otherwise and as to payment of the actual expenses incurred on such enquiry and of a fee not exceeding ten rupees) on which the company is prepared to issue a new certificate and a time for compliance therewith or of the reasons why the company is unable to issue a new certificate, as the case may be, and in the former case if the applicant shall within the time allowed comply with the terms and conditions specified, the company shall issue a new certificate to the applicant within

forty five days from the date of application.

29. The company shall not be bound to issue more than one certificate in respect of a share or shares held jointly by two or more persons and delivery of a certificate for a share to any one of joint holders shall be sufficient delivery to all.

TRANSFER AND TRANSMISSION



30. (1) The directors shall not refuse to register the transfer of fully paid shares unless the instrument of transfer is defective or invalid or is not accompanied by the certificate of the share(s) to which it relates. The directors may also decline to recognise any instrument of transfer unless it is accompanied, in addition to the certificate of the shares to which it relates, by such other evidence as the directors may reasonably require to show the right of the transferor to make the transfer. The directors may waive the production of any certificate upon evidence satisfactory on them of its loss or destruction.

(2) If the directors refuse to register a transfer of any shares they shall, within thirty (30) days (or where the transferee is a central depository, within five (5) days) after the date on which the instrument of transfer was lodged with the company, send to the transferee and the transferor notice of the refusal indicating the reason for such refusal; provided that if the directors refuse to register a transfer of shares on account of a defect in or the invalidity of the instrument of transfer, the transferee shall be entitled, after removal of such defect or invalidity, to re-lodge the instrument of transfer with the company.

31. Shares in the company shall be transferred in accordance with the central depositories act and the central depository regulations. If the shares of the company are not registered in the central depository, the same may be transferred through the instrument of transfer. The instrument of transfer of any share shall be in writing in the usual common form, or in the following form, or as near thereto as circumstances will admit:

"I/We, of
son/daughter/wife of being a national(s) of
..... in consideration of the sum of Rupees
..... only (Rs.) paid to me/us by
..... of son/daughter/wife of
..... being a national(s) of (hereinafter called the 'said transferee(s)') do hereby transfer to the said transferee(s) share(s) numbered standing in my/our name(s) in the books of **SIDDIQSONS ENERGY LIMITED**, to hold unto the said transferee(s) his/her/their executors, administrators and as signs, subject to the several conditions on which I/we hold the same at the time of execution hereof, and I/we the said transferee(s) do hereby agree to take the said share(s) subject to the conditions aforesaid.

As witness our hands the day of thousand and"

Signed by the said transferor in the
presence of

Transferor's signature.....

Transferor's occupation.....

Witness 1

Witness 2

Occupation

Occupation.....

Address.....

Address.....

Signed by the said transferee in
the presence of Transferee's occupation

Transferee's signature

Witness 1

Witness 2

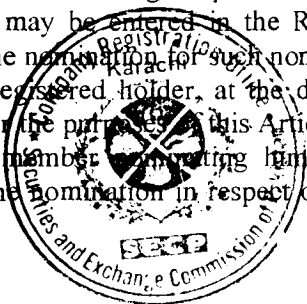
Occupation

Occupation

Address.....

Address.....

32. No transfer shall be made to a minor or person of unsound mind.
33. All registered instruments of transfer shall be retained by the company, but any instrument of transfer which the directors may decline to register shall be returned to the person depositing the same.
34. The instrument of transfer of any share in the company shall be duly stamped and executed both by the transferor and transferee, and the transferor shall be deemed to remain holder of the share until the name of the transferee is entered in the register in respect thereof.
35. On giving seven days previous notice in the manner provided in the ordinance and articles, the transfer books and register may be closed during such time as the directors think fit, not exceeding in the whole forty-five days in each year, but not exceeding thirty days at a time.
36. Any member may make and deposit with the Company a nomination in writing specifying one or more eligible persons who or each of whom, in the event of the death of the Member, may be entered in the Register as the holder of such number of shares specified in the nomination for such nominee or each such nominee of which the member remains the registered holder, at the date of his death. A person shall be eligible for nomination for the purposes of this Article only if he is a spouse, parent, brother, sister or child of the member nominating him and the applicable relationship all should be specified in the nomination in respect of each nominee. A member may at any time by

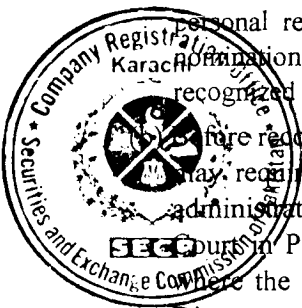


notice in writing cancel, or by making and depositing with the company another nomination before his death vary any nomination already made by him pursuant to this Article. In the event of the death of a member any person nominated by him in accordance with this Article may, on written application accompanied by the relative share certificates and evidence establishing the death of the member, request the company to register himself in place of the deceased member as the holder of the number of shares for which the nomination in his favour had been made and deposited with the company, and if it shall appear to the Directors that it is proper so to do, the Directors may register the nominee as the holder of those shares in place of the deceased member.

(a) in the case of the death of a member who was a joint-holder of shares the survivor or survivors shall be the only persons recognized by the company as having any title to his interest in the shares. If the deceased member was a sole holder of shares, the nominee or nominees of the deceased where a nomination under Article 37 is effective, and the legal personal representatives, executors or administrators, of the deceased where no such nomination has been made and deposited with the company, shall be the only persons recognized by the company as having any title to his interest in the shares.

Before recognizing any legal representative or executor or administrator, the Directors may require him to obtain a grant of succession certificate or probate or letters of administration or other legal representation, as the case may be, from some competent court in Pakistan having effect in Karachi; provided nevertheless that in any case where the Directors in their absolute discretion think fit, it shall be lawful for the Directors to dispense with the production of succession certificates or probates or letters of administration or such other legal representation, upon such terms as to indemnity or otherwise as the Directors, in their absolute discretion, may consider necessary.

37. The executors or administrators or the nominee appointed under section 80 of the ordinance of a deceased member (not being one of several joint-holders) shall be the only person recognized by the company as having any title to the shares registered in the name of such member, and in case of the death of any one or more of the joint-holders of all registered shares (such expression shall hereinafter be deemed to include registration as a sub-account holder of a central depository under the central depositories act and the central depositories regulations), the survivors shall be the only persons, recognized by the company as having any title to or interest in such shares, but nothing herein contained shall be taken to release the estate of a deceased joint-holder from any liability on shares held by him jointly with any other person. Before recognizing any executor or administrator, the directors may require him to obtain a grant of probate or nomination as mentioned above or letters of administration or other legal representation, as the case may be, from some competent court in Pakistan having effect in Karachi. Provided nevertheless that in any case where the board in their absolute discretion think fit, it shall be lawful for the directors to dispense with the production of probate or letters of administration or such other legal representation upon such terms as to indemnify or otherwise as the directors, in their absolute discretion, may consider necessary.

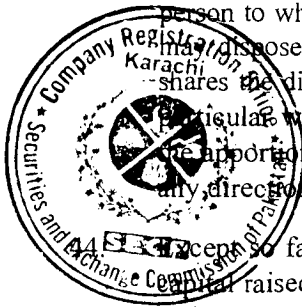


38. Any person becoming entitled to a share in consequence of the death or insolvency of a member may upon such evidence being produced as may from time to time properly be required by the Directors and subject as hereinafter provided, elect either to be registered himself as the holder of the share or instead of being registered himself, to make such transfer of the share or instead of being registered himself, to make such transfer of the share as the deceased or insolvent person could have made but the Directors shall, in either case, have the same right to decline or suspend registration as they would have had in the case of a transfer of the share by that member before his death or insolvency as the case may be.
39. Any committee or guardian of a lunatic or minor member or any person becoming entitled to a share in consequence of the death or bankruptcy or insolvency of any member upon producing such evidence that he sustains the characters in respect of which he proposes to act under this article, or of his title, as the directors think sufficient, shall have the right to be registered as a member in respect of such share, or may, subject to the regulations as to transfer hereinbefore contained, transfer such share.
40. Neither the company nor the directors nor any other officer of the company shall incur any liability for registering or acting upon a transfer of shares apparently made by sufficient parties, although the same may, by reason of any fraud or other cause not known to the company or the directors or any other officer of the company, as aforesaid, be legally inoperative or insufficient to pass the property in the shares proposed or professed to be transferred, and although the transfer may, as between the transferor and transferee, be liable to be set aside, and, notwithstanding that the company may have notice that such instrument of transfer was signed or executed and delivered by the transferor in blank as to the name of the transferee or the particulars of the shares transferred, or otherwise in defect in any manner. And in every such case the person registered as transferee, his executors, administrators and assigns alone shall be entitled to be recognized as the holder of such shares and the previous holder shall, so far as the company is concerned, be deemed to have transferred his whole title hereto.

ALTERATION OF CAPITAL

41. The company may, by ordinary resolution and subject to compliance with the requirements of section 92 of the ordinance increase the authorized share capital by such sum, to be divided into shares of such amount, as the resolution shall prescribe.
42. Subject to the provisions of section 92 (1) (d), 92(3) and 93 and section 13 of the central depositories act, the company may, by ordinary resolution;
- (a) consolidate and divide its share capital into shares of larger amount than its existing shares;
 - (b) by sub-division of its existing shares or any of them, divide the whole or any part of its share capital into shares of smaller amount than is fixed by the memorandum of association;
 - (c) cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

43. The directors may from time to time increase the issued share capital by such sum as they think fit. Except as otherwise permitted by section 86 of the ordinance, rule 5 of share capital rules, the listing requirements and section 14 of the central depositories act, as are applicable to the company and subject to any special rights or privileges for the time being attached to any issued shares, all shares intended to be issued by the directors shall, before issue, be offered to the members strictly in proportion to the amount of the issued shares held by each member (Irrespective of class); provided that fractional shares shall not be offered and all fractions less than a share shall be consolidated and disposed of by the company and the proceeds from such disposition shall be paid to such of the entitled members as may have accepted such offer. Such offer shall be made by notice specifying the number of shares offered, and limiting a time within which the offer, if not accepted, will be deemed to be declined, and after the expiration of that time, or on the receipt of an intimation from the person to whom the offer is made that he declines to accept the shares offered, the directors may dispose of the same in such manner as they think fit. In respect of each such offer of shares the directors shall comply with the provisions of section 86 of the ordinance and in particular with the provisions of sub-sections (3), (4) and (5) thereof. Any difficulty in the apportionment of shares amongst the members, such difficulty shall, in the absence of any directions given by the company in general meeting, be determined by the directors.



44. Except so far as otherwise provided by the conditions of issue or by these articles, any premium raised by the creation of new shares shall be considered part of the original capital and shall be subject to the provisions herein contained with reference to transfer and transmission and otherwise.
45. Subject to the provisions of sub-section (2) of section 86 of the ordinance, if, owing to any inequality in the number of new shares to be issued and the number of shares held by a member entitled to have the offer of such new shares, any difficulty shall arise in the apportionment of such new shares or any of them amongst the members, such difficulty shall, in the absence of any direction in the resolution creating the shares or by the company in general meeting, be determined by the directors.
46. The company may, by special resolution, reduce its share capital in any manner, with and subject to, any incident authorized and consent required by law.
47. The share premium account maintained pursuant to section 83(1) of the ordinance may, be applied by the company:
- (a) in writing off the preliminary expenses of the company;
 - (b) in writing off the expenses of, or the commission paid or discount allowed on, any issue of shares or debentures of the company;
 - (c) in providing for the premium payable on the redemption to any redeemable preference shares or debentures of the company; or
 - (d) in paying up un-issued shares of the company to be issued as fully paid bonus shares.

48. Subject to the provisions of section 96 to 105 inclusive of the ordinance, the directors may accept from any member the surrender on such terms and conditions as shall be agreed of all or any of his shares.

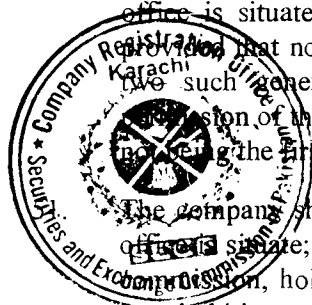
VARIATION OF SHAREHOLDERS' RIGHTS

49. Whenever the capital is divided into different classes of shares, all or any of the rights and privileges attached to each class may, subject to the provisions of section 108 of the ordinance, be modified, commuted, affected, abrogated or dealt with by agreement between the company and any person purporting to contract on behalf of that class provided such agreement is (a) ratified in writing by the holders of at least three-fourths in nominal value of the issued shares of the class or (b) confirmed by a special resolution passed at an extraordinary general meeting of the holders of shares of that class and all the provisions hereinafter contained as to general meetings, shall, mutatis mutandis, apply to every such meeting. This article shall not by implication curtail the power of modification which the company would have if this article were omitted.

III. MEETINGS

CONVENING OF GENERAL MEETINGS

50. Except as may be allowed under section 158(1) of the ordinance and listing requirements, the company shall hold a general meeting once at least in every calendar year within a period of four months following the close of its financial year in the town in which the office is situate and at such time and place as may be determined by the directors, provided that no greater interval than fifteen months shall be allowed to elapse between two such general meetings. The company may, for any special reason and with the permission of the commission, extend the time within which any annual general meeting, including the first such meeting, shall be held.



- The company shall hold its annual general meeting in the town in which the registered office is situate; provided that, it may, for any special reason and with permission of the commission, hold the said meeting at any other place. Save as aforesaid, the company may hold its general meeting at two (2) or more venues using any technology that gives the members as a whole a reasonable opportunity to participate in the meetings.
52. All general meetings of the company, other than the statutory meeting or any annual general meeting, shall be called extraordinary general meetings, and shall be subject to listing requirements.
53. The directors may, whenever they think fit, and they shall, on the requisition of the holders of not less than one-tenth of the issued capital of the company, forthwith proceed to convene an extraordinary general meeting of the company. If at any time there are not within Pakistan sufficient directors capable of acting to form a quorum, any director of the company may call an extraordinary general meeting in the same manner as nearly as

possible as that in which meetings may be called by the directors, and in the case of such requisition the following provisions shall have effect:

- (1) The requisition must state the objects of the meeting and must be signed by the requisitioners and deposited at the office and may consist of several documents in like form each signed by one or more requisitioners.
- (2) If the directors do not proceed within twenty-one days from the date of the requisition being so deposited to cause a meeting to be called, the requisitioners or a majority of them in value may themselves convene the meeting, but any meeting so convened shall not be held after three months from the date of the deposit.
- (3) Any meeting convened under this article by the requisitioners shall be convened in the same manner as nearly as possible as that in which meetings are to be convened by the directors but shall be held at the office.
- (4) A requisition by joint-holders of shares must be signed by all such holders.

54. (1) Notice of a general meeting shall be sent in the manner hereinafter mentioned at least twenty one (21) days before the date on which the meeting is to be convened to all persons as are under these articles or the ordinance entitled to receive such notices from the company and shall specify the place and the day and hour of the meeting and the nature of the business to be transacted thereat.

In the case of an emergency affecting the business of the company, an extraordinary general meeting may be convened by such shorter notice than that specified in article 54(1) as the registrar may authorize.

Where any special business, that is to say, business other than consideration of the accounts, balance sheet and the reports of the directors and auditors, the declaration of dividend, the appointment and fixation of the remuneration of auditors and, where the notice convening the meeting provides for the election of directors, the election of directors (all such matters being herein referred to as ordinary business) is to be transacted at a general meeting, there shall be annexed to the notice of such meeting a statement setting out all such facts as may be material for the consideration of such business including the nature and extent of the interest (whether direct or indirect) of any director, and where the item of business involves approval of any document, the time and place appointed for inspection thereof, and to the extent applicable such a statement shall be annexed to the notice also in the case of ordinary business to be transacted at the meeting.

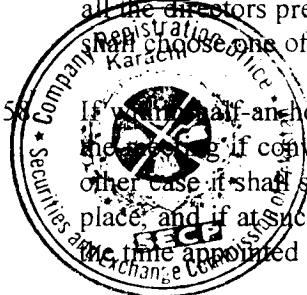
- (4) Where a resolution is intended to be proposed for consideration at a general meeting in some special or particular form, a copy thereof shall be annexed to the notice convening such meeting.
- (5) If a special resolution is intended to be passed at a general meeting, the notice convening that meeting shall specify the intention to propose the resolution as a special resolution.
- (6) A notice for a general meeting at which an election of directors is to take place shall state the number of directors to be elected at that meeting and the names of the

retiring directors.

- (7) The notice of every general meeting shall prominently specify that a proxy may be appointed who shall have the right to attend, demand or join in demanding a poll and vote on a poll and speak at the meeting in the place of the member appointing him and shall be accompanied by a form of proxy acceptable to the company.
- (8) The company shall comply with the provisions of section 160(1) and section 50 of the ordinance with regard to giving notices of general meetings.
55. The accidental omission to give any such notice to, or the non-receipt of notice by, any of the members shall not invalidate the proceedings at any such meeting.

PROCEEDINGS AT GENERAL MEETINGS

56. No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business; save as herein otherwise, provided ten (10) members present in person or by proxy representing twenty five percent (25%) of the total voting power shall be a quorum.
57. The chairman of the board of directors shall preside as chairman at every general meeting of the company, or if there is no such chairman, or if he shall not be present in person within fifteen minutes after the time appointed for the holding of the meeting or is unwilling to act, the chief executive shall preside as chairman of the meeting, or if the chief executive is absent or unwilling to act, any one of the directors present in person may be elected to be chairman of the meeting, or if no director be present in person, or if all the directors present in person decline to take the chair, the members present in person shall choose one of their member to be chairman of the meeting.
58. If within half an hour from the time appointed for the meeting, a quorum is not present, the meeting, if convened upon such requisition as aforesaid shall be dissolved, but in any other case it shall stand adjourned to the same day in the next week at the same time and place, and if at such adjourned meeting a quorum is not present within half an hour from the time appointed for it, the meeting shall be dissolved.
59. The chairman may adjourn the meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for more than seven days, notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.
60. In the case of an equality of votes the chairman shall, both on a show of hands and at the poll, have a casting vote in addition to the vote or votes to which he may be entitled as member.
61. (1) At any general meeting a resolution put to the vote of the meeting shall be decided on a



show of hands, unless a poll is (before or on the declaration of the result of the show of hands) demanded in accordance with paragraph (2) of this article, and unless a poll is so demanded, a declaration by the chairman of the meeting that a resolution has, on a show of hands, been carried, or carried unanimously, or by a particular majority, or lost, and an entry to that effect in the book or electronic record of the proceeding of the company shall be conclusive evidence of the fact, without proof of the number or proportion of the votes recorded in favour of, or against, the resolution.

(2) Any of the following persons may demand a poll:

- (a) The chairman of the meeting; or
- (b) Ten members having the right to vote on the resolution and present in person or by proxy; or
- (c) Any member or members present in person or by proxy having not less than one-tenth of the total voting power in respect of the resolution.

62. If a poll is demanded, as aforesaid, it shall be taken (subject to section 168 of the Companies Act, 1947) in such manner and at such time and place as the chairman of the meeting directs, and either at once or after an interval or adjournment of not more than fourteen days from the day on which the poll is demanded, and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was held. The demand for a poll may be withdrawn at any time by the person or persons who made the demand. In case of any dispute as to the admission or rejection of a vote, the chairman of the meeting shall determine the same, and such determination made in good faith shall be final and conclusive.

63. Any poll duly demanded on the election of a chairman of a meeting or on any question of adjournment shall be taken at the meeting and without adjournment. A poll demanded on any other question shall be taken at such time, not being more than 14 days from the day on which the poll is demanded as the chairman of the meeting directs.

64. The demand of a poll shall not prevent the continuance of a meeting for the transaction of any business other than the question on which a poll has been demanded.

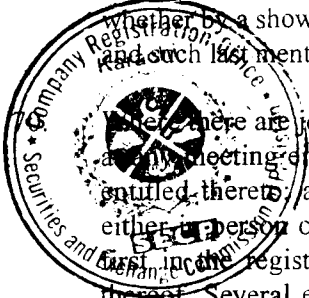
VOTES OF MEMBERS

65. Subject to section 160 and any rights or restrictions for the time being attached to any class or classes of shares, every member present in person (where all the participants of a general meeting can see each other) shall have, whether on a show of hands or on a poll, votes proportionate to the paid up value of the shares or other securities carrying voting rights held by him according to the entitlement of the class of such shares or securities, as the case may be provided that, the provisions of section 178 shall apply in the case of the election of directors.

66. Without prejudice to articles 69 and 79, on a show of hands, every member present in person shall have one vote and upon a poll every member present in person or by proxy

shall have one vote in respect of each share held by him. Provided always that in the case of an election or removal of a director, the provisions of articles 91 and 94 respectively shall apply.

67. On a poll a member entitled to more than one vote need not, if he votes, use all his votes or cast all the votes he uses in the same way.
68. Any company or other corporation which is a member of the company may by resolution of its directors or other governing body authorize such person as it thinks fit to act as its representative at any meeting of the company or of any class of members of the company, and the person so authorized shall be entitled to exercise the same powers on behalf of the company or corporation which he represents as that company or corporation could exercise if it were an individual member of the company, present in person. The production before or at the meeting of a copy of such resolution purporting to be signed by a director or the secretary of such company or corporation and certified by him as being a true copy of the resolution shall be accepted by the company as sufficient evidence of the validity of the appointment of such representative.
69. Any person entitled under article 39 to any shares may vote at any general meeting in respect thereof in the same manner as if he were the registered holder of such shares, provided that forty-eight hours at least before the time of holding the meeting or adjourned meeting, as the case may be, at which he proposes to vote he shall satisfy the directors of his right to such shares, or the directors shall have previously admitted his right to vote at such meeting in respect thereof. If any member be a lunatic, idiot or non compos mentis, he may vote, whether by a show of hands or at a poll, by his committee, curator bonis or other legal curator and such last mentioned persons may give their votes by proxy.
70. Where there are jointly registered holders of any share, any one of such persons may vote at any meeting either in person or by proxy in respect of such share as if he were solely entitled thereto, and if more than one of such joint-holders be present at any meeting, either in person or by proxy, that one of the said persons so present whose name stands first in the register in respect of such share shall alone be entitled to vote in respect thereof. Several executors or administrators of a deceased member in whose name any share stands shall for the purposes of this article be deemed joint holders thereof.
71. On a poll votes may be given either in person (including without limitation a representative of a company duly authorized under article 68) or by proxy.
72. No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes. Any such objection made in due time shall be referred to the chairman of the meeting, whose decision shall be final and conclusive.
73. The instrument appointing a proxy shall be in writing under the hand of the appointer



(such expression shall exclude any reference to the electronic transactions ordinance in accordance with section 31 (1) of the electronic transactions ordinance) or of his attorney duly authorized in writing (such expression shall exclude electronic transmission as prescribed by section 3 of the electronic transactions ordinance) or if such appointer is a corporation under its common seal or signed by an officer or an attorney duly authorized by it (such expression shall exclude any reference to the electronic transactions ordinance in accordance with section 31 (1) of the electronic transactions ordinance). Save as provided by article 80, no person shall be appointed a proxy who is not a member of the company and qualified to vote.

74. Subject to article 73 hereof, the instrument appointing a proxy and the power of attorney or other authority (if any) under which it is signed, or a copy of that power or authority duly notarized, shall be deposited (such expression shall hereinafter include, where permitted by law, receipt in accordance with section 15 of the electronic transactions ordinance) at the office not less than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote, and in default the instrument of proxy shall not be treated as valid.

75. A vote given in accordance with the terms of an instrument appointing a proxy shall be valid notwithstanding the previous death or insanity of the principal or revocation of the instrument or transfer of the share in respect of which the vote is given, provided no intimation in writing of the death, insanity, revocation or transfer of the share shall have been received at the office before the meeting. Provided nevertheless that the chairman of any meeting shall be entitled to require such evidence as he may in his discretion think fit of the due execution of an instrument of proxy and that the same has not been revoked.

76. Every instrument appointing a proxy shall, as nearly as circumstances will admit, be in the form or to the effect following and shall be retained by the Company:

SIDDIQSONS ENERGY LIMITED

I, _____ of _____, being a member of **SIDDIQSONS ENERGY LIMITED**, hereby appoint _____ of _____ (or failing him _____ of _____ or failing him _____ of _____) as my proxy in my absence to attend and vote for me and on my behalf at the (Annual or Extraordinary, as the case may be) general meeting of the company to be held on the _____ day of _____ and at any adjournment thereof.

As witness my hand this _____ day of _____.

Signed by the said

In the presence of

Provided always that an instrument appointed a proxy may be in the form set out in regulation 39 of table A of the first schedule to the ordinance.

IV. DIRECTORS

NUMBER OF DIRECTORS

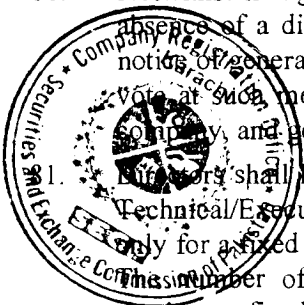
77. Subject to the provisions of these articles and the ordinance, all directors shall be elected by the members in general meeting.
78. The company shall have at least six directors. Subject to the said minimum, the directors themselves shall determine from time to time in the manner provided in this article the number of directors that the company shall have. At least thirty-five (35) days before the date of every general meeting at which directors are intended to be elected, the directors shall fix the number of elected directors that the company shall have from the effective date of the election and the number of such directors who shall be elected at the meeting. The number of elected directors so fixed by the directors shall not be changed except with the prior approval of the company in general meeting. The following persons shall be the first directors of the Company and shall hold the office up to the date of First Annual General Meeting:
- (1) Mr. Muhammad Tariq Rafi
- (2) Mr. Abdul Rahim
- (3) Mrs. Niglat Tariq
- (4) Mrs. Rabina Ibrahim
- (5) Mrs. Alia Sajjad
- (6) Mrs. Anum Abdur Rahim

ALTERNATE DIRECTORS

79. When any director intends to be, or is living outside Pakistan, he may with the approval of the directors appoint any person to be his alternate director, and such alternate director during the absence of the appointer from Pakistan, shall be entitled to receive notice of and to attend and vote at meeting of directors and shall be subject to and entitled to the provisions contained in these articles with reference to directors and may exercise and perform all such powers, directions and duties as his appointer could have exercised or

performed including the power of appointing another alternate director. An alternate director so appointed shall not be required to hold any qualification. Such appointment shall be recorded in the director minute book. A director may at any time by notice in writing to the company remove an alternate director appointed by him. The alternate director shall cease to be such provided that if any director retires but is re-elected at the meeting at which such retirement took effect any appointment made by him pursuant to this article which was in force immediately prior to this retirement and re-election and which has not otherwise ceased to be effectively shall continue to operate after his re-election as if he had not so retired. An alternate director shall not be deemed to be the agent of the director appointing him but shall be reckoned as one with his appointer. All appointments and removals of alternate directors shall be effected by writing under the hand of the director making or revoking such appointment and left at the office. For the purpose of assessing a quorum in accordance with the provisions of article 99 hereof an alternate director shall be deemed to be director. Any director may act an alternate director for any one or more directors, as well as being able to act as a director in his own right. An alternate director may resign as such upon giving thirty (30) days prior notice to the board to this effect. An alternate director need not be a member of the Company.

80. Notwithstanding article 164, an alternate director, even if not a member, shall, in the absence of a direction to the contrary in the instrument appointing him, be entitled to notice of general meetings of the company and (subject to the provisions of article 73) to vote at such meetings on behalf of his appointer, if his appointer is a member of the company, and generally to represent his appointer.



81. Directors shall have power at any time and from time to time to appoint any person as Technical/Executive Director and such Technical/Executive Director may be appointed only for a fixed period in such special remuneration as may be determined by the Board. The number of such directors appointed shall not be counted within minimum or maximum fixed for number of directors in these articles. Such Technical/Executive Directors would be the senior executives of the company and will not have any representation on the Board of the company unless specially invited by the members to assist them in the proceedings of the meeting of the Board of Directors of the company.

CHIEF EXECUTIVE AND OTHER PRINCIPAL OFFICERS OF THE COMPANY

82. The company shall have an office of chief executive which shall be filled from time to time by the directors who may appoint a director or (subject to section 201 of the ordinance) any other person to be the chief executive of the company for a period not exceeding three years and on such terms and conditions as the directors may think fit, and such appointment shall be made within fourteen days from the date on which the office of chief executive falls vacant. If the chief executive at any time is not already a director he shall be deemed to be a director of the company notwithstanding that the number of directors shall thereby be increased and he shall be entitled to all the rights and privileges and shall be subject to all liabilities of the office of director. Upon the expiry of his period of office, a chief executive shall be eligible for re-appointment. The chief executive may be removed from office in accordance with the provisions of section 202 of the ordinance notwithstanding anything contained in these articles or in any agreement between the company and the

chief executive.

83. No person who is ineligible to become a director of the company shall be appointed or continue as the Chief Executive except as permitted by Section 187.
84. The Chief Executive retiring under Article 82 continue to perform his functions until his successor is appointed unless non-appointment of his successor is due to any fault on his part or his office is expressly terminated.
85. The directors may appoint other principal officers of the company including chief operating officer, chief financial officer, head of internal audit and the company secretary (who is to be a full time employee of the company as required by section 204 A), and give such officer such designations and with such terms and conditions as the directors may determine from time to time.
86. A chief executive of the company shall receive such remuneration as the directors may determine and it may be made a term of his appointment that he be paid a pension and/or gratuity and/or other benefits on retirement from his office.
87. The directors may from time to time entrust to and confer upon the chief executive for the time being such of the powers exercisable under these articles by the directors as they may think fit, and may confer such powers for such time, and to be exercised for such objects and purposes, and upon such terms and conditions, and with such restrictions as they think expedient; and they may confer such powers, either collaterally with, or to the exclusion of, and in substitution for, all or any of the powers of the directors in that behalf; and may from time to time, revoke, withdraw, alter or vary all or any of such powers.

QUALIFICATION AND REMUNERATION OF DIRECTORS

88. Any director who serves on any committee or who devotes special attention to the business of the company, or who otherwise performs services which in the opinion of the directors are outside the scope of the ordinary duties of a director, may be paid such extra remuneration as the directors may determine from time to time. The remuneration of a director for attending meetings of the board shall from time to time be determined by the directors.
89. Each director of the company may, in addition to any remuneration receivable by him, be reimbursed his reasonable travelling and hotel expenses incurred in attending meetings of the directors or of the company or otherwise whilst employed on the business of the company.
90. The qualification of an elected director, in addition to his being a member, where required, shall be his holding share of the nominal value of Rs. 10 at least in his own name, but a director representing the interests of a member or members holding share of the nominal

value of Rs. 10 at least shall require no such share qualification. A director shall not be qualified as representing the interests of a member or members holding shares of the requisite value unless he is appointed as such representative by the member or members concerned by notice in writing addressed to the company specifying the shares of the requisite value appropriated for qualifying such director. Shares thus appropriated for qualifying a director shall not, while he continues to be such representative, be appropriated for qualifying any other director. A director shall acquire his share qualification within two (2) months from the effective date of his appointment as director.

91. The continuing directors may act notwithstanding any vacancy in their body so long as their number is not reduced below the number fixed by or pursuant to these articles as the necessary quorum of directors.

92. The office of a director shall ipso facto be vacated if:

- (a) he ceased to hold the share qualification, if any, necessary for his appointment; or
- (b) he is found to be of unsound mind by a court of competent jurisdiction; or
- (c) he is adjudged an insolvent; or has applied to be adjudicated as an insolvent and his application is pending or is an un-discharged insolvent; or

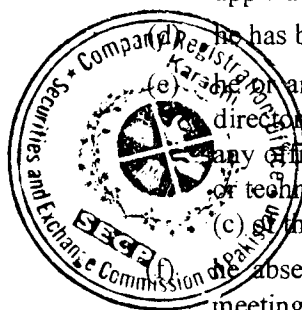
he has been convicted by a court of law for an offence involving moral turpitude;

he or any firm of which he is a partner or any private company of which he is a director without the sanction of the company in general meeting accepts or holds any office of profit under the company other than that of a chief executive or legal or technical adviser or a banker in contravention of the provisions of section 188 (i) of the ordinance;

he absents himself from three consecutive meetings of the directors or from all meetings of the directors for a continuous period of three months, whichever is the longer, without leave of absence from the board of directors; or

- (g) he or any firm of which he is a partner or any private company of which he is a director accepts a loan or guarantee from the company in contravention of section 195 of the ordinance; or
- (h) he acts in contravention of section 214 of the ordinance; or
- (i) by notice in writing to the company he resigns his office; or
- (j) he is removed from office by resolution of the company in general meeting in accordance with section 181 of the ordinance; or
- (k) his appointment is withdrawn by the authority nominating him as director; or
- (l) he has betrayed lack of fiduciary behavior and a declaration to the effect has been made by the court under section 217 of the ordinance at any time during the preceding five years.

93. Subject to authorization being given by the directors in accordance with section 196(2)(g)



of the ordinance, a director shall not be disqualified from contracting with the company either as vendor, purchaser or otherwise, nor shall any such contract or arrangement entered into by or on behalf of the company with any company or partnership of or in which any director of the company shall be a member or otherwise interested, be avoided, nor shall any such director so contracting or being such member or so interested be liable to account to the company for any profit realized by any such contract or arrangement by reason of such director holding that office or of the fiduciary relationship so established. A director who, or whose spouse or minor child, is in any way, whether directly or indirectly, concerned or interested in any contract or arrangement or proposed contract or arrangement with the company shall disclose the nature of such concern or interest in accordance with section 214 of the ordinance that is to say:

- (a) in the case of a contract or arrangement to be entered into, at the meeting of the directors at which the question of entering into the contract or arrangement is first taken into consideration or, if the director was not, on the date of that meeting, concerned or interested in the contract or arrangement, at the first meeting of the directors held after he becomes so concerned or interested; and
- (b) in the case of any other contract or arrangement, at the first meeting of the directors held after the director becomes concerned or interested in the contract or arrangement.

A general notice that any director of the company is a director or a member of any other named company or is a member of any named firm and is to be regarded as interested in any subsequent transaction with such company or firm shall, as regards any such transaction, be sufficient disclosure under this article. Provided, however, that any such general notice shall expire at the end of the financial year in which it was given and may be renewed for a further period of one financial year at a time by giving fresh notice in the first month of the financial year in which it would otherwise expire.

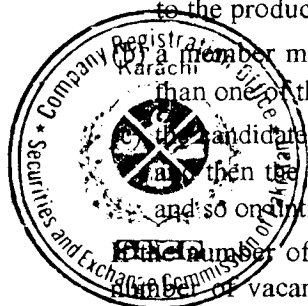
94. Except as provided in Section 216 of the Ordinance, a Director shall not vote in respect of any contract or arrangement in which he is either directly or indirectly concerned or interested and shall his presence count for the purpose of forming a quorum at the time of any such vote and if he does so vote, his vote shall not be counted.

95. Whereby any contract or resolution of the directors an appointment or a variation in the terms of an existing appointment is made (whether effective immediately or in the future) of a chief executive, whole time director or secretary of the company, in which appointment of any director of the company is, or after the contract or resolution becomes, in any way, whether directly or indirectly, concerned or interested, or whereby any contract or resolution of the directors, an appointment or a variation in the terms of appointment is made (whether effective immediately or in the future) of a chief executive, the company shall inform the members of such appointment or variation in the manner required by section 218 of the ordinance and shall comply with the requirements of that section in regard to the maintaining of such contracts and resolutions open for inspection by members at the office, the provision of certified copies thereof and extracts there from and otherwise.

96. In accordance with section 219, the company shall maintain at its office a register or electronic record, in which shall be entered separately particulars of all contracts, arrangements or appointments in which the directors are interested. Such register or electronic record shall be open to inspection to the members during business hours, subject to any reasonable restriction that may be imposed by the company in general meeting.
97. A director of the company may be or become a director of any other company promoted by the company or in which the company may be interested as a vendor, shareholder or otherwise, and no such director shall be accountable for any benefits received as a director or member of such other company.

ELECTION OF DIRECTORS

98. The number of directors determined by the directors under articles 78 shall be elected to office by the members in general meeting in the following manner, namely:
- (a) a member present in person or by proxy shall have such number of votes as is equal to the product of voting shares held by him and the number of directors to be elected, and a member may give all his votes to a single candidate or divide them between more than one of the candidates in such manner as he may choose, and the candidate who gets the highest number of votes shall be declared elected as director and then the candidate who gets the next highest number of votes shall be so declared, and so on until the total number of directors to be elected has been so elected.
- (b) the number of persons who offer them to be elected as directors is not more than the number of vacancies for which elections are being held, such persons being otherwise eligible shall be deemed to have been elected as directors from the date on which the election was proposed to be effective.
99. A director elected under article 98 shall hold office for a period of three years unless he earlier resigns or becomes disqualified from being a director, or otherwise ceases to hold office.
100. A retiring director of the company shall be eligible for re-election.
101. The company in general meeting may remove a director from office by a resolution passed with the requisite number of votes determined in accordance with the provisions of section 181 of the ordinance.
102. Any casual vacancy occurring among the directors may be filled up by the directors within a time period prescribed by the code, and the person so appointed shall hold office for the remaining period of the director in whose place he is appointed. Provided that the directors may not fill a casual vacancy by appointing any person who has been removed from the office of a director of the company under article 101.



103. No person including a retiring director of the company shall be eligible for election to the office of director of the company at any general meeting unless he has, not less than fourteen days before the date of the meeting, left at the office, a notice in writing, and duly signed, signifying his candidature for the office.
104. The company shall keep at the office a register of the directors and officers, containing the particulars required by section 205 of the ordinance and the company shall otherwise comply with the provisions of that section as regards furnishing returns to the registrar and giving inspection of the register.

PROCEEDINGS OF DIRECTORS

105. The directors shall meet together at least once in each quarter of a year for the despatch of business, adjourn and otherwise regulate their meetings and proceedings as they may think fit in accordance with the ordinance, the code and the listing requirements. Questions arising at any meeting shall be decided by a majority of votes and in case of an equality of votes the chairman shall have a second or casting vote.
106. The quorum necessary for the transaction of the business of the directors shall be one-third of the number of directors or two directors, whichever is greater, present in person. An alternate director whose appointment is effective shall be counted in a quorum. If all the directors except one are disqualified from voting, the matter should be decided in general meeting.
107. A director may, and the secretary on the requisition of a director shall, at any time summon a meeting of the directors. Such meetings may be held using any technology consented to by all the directors, including but not limited to telephone and video conferencing. The consent may be a standing one, withdrawable by a director only within a reasonable period of time before the meeting. It shall not be necessary to give notice of a meeting of directors to any director for the time being absent from Pakistan.
108. The board of directors of the company shall from time to time elect one of the directors as chairman of the board of directors of the company and determine the period for which he is to hold office and his remuneration. The chairman or in his absence the chief executive shall preside over all meetings of the board of directors, but if at any meeting neither the chairman nor the chief executive is present in person within half an hour of the time appointed for holding the same, the directors present in person may choose one of their member to be chairman of the meeting.
109. A meeting of the directors at which a quorum is present shall be competent to exercise all or any of the authorities, powers and discretion by or under these articles for the time being vested in or exercisable by the directors generally.
110. The directors may from time to time delegate of their powers to committees consisting of such two members or more members of their body as they think fit, and may from time to time revoke such delegation. Any committee so formed shall, in the exercise of the

powers so delegated, conform to any regulations that may from time to time be imposed upon it by the directors.

111. The meeting and proceedings of any such committee consisting of two or more members shall be governed by the provisions herein contained for regulating the meetings and proceedings of the directors, so far as the same are applicable thereto and are not superseded by any regulations made by the directors under article 110.
112. All acts done by any meeting of the directors or by a committee of the directors or by any person acting as a director of the company shall, notwithstanding that it shall afterwards be discovered that there was some defect in the appointment or continuance in office of any such directors or person acting as aforesaid, or that they or any of them were disqualified or had vacated office, or were not entitled to vote, be as valid as if every such person had been duly appointed or had duly continued in office and was qualified and had continued to be a director and had been entitled to be a director. Provided that nothing in this article shall be deemed to give validity to acts done by any such director after the appointment of such director has been shown to be invalid.
113. A resolution, other than resolution in respect of any matter specified in section 196(2) of the ordinance circulated through fax or email or any form of electronic transmission to all the directors for the time being entitled to receive notice of a meeting of the directors, ~~passed without any meeting of the directors or of a committee of directors and signed or affirmed through fax or email or any form of electronic transmission, by a majority of all directors in writing under the hands of all directors (or in their absence their alternate directors) for the time being in Pakistan, being not less than the quorum required for meetings of the directors, or as the case may be of the members of the committee, shall be valid and effectual as if it had been passed at the meeting of the directors, or as the case may be of such committee, duly called or constituted. The resolution in writing of the company may consist of several copies of a document signed by one or more director(s) and takes effect at the date and time on which the last director, necessary for the resolution to be passed, signs a copy of the resolution; or a record of several signed electronic messages each indicating the identity of the sender, the text of the resolution and the sender's agreement or disagreement to the resolution, as the case may be and such a resolution takes effect on the date on which the last director's message, necessary for the resolution to be passed, is received.~~
114. If any director of the company, being willing, shall be called upon to perform extra services or to make any special exertions in going or residing away from his place of business for the time being for any of the purposes of the company or in giving special attention to the business of the company as a member of a committee of the directors, the company may remunerate such director so doing either by a fixed sum or by a percentage of profits or otherwise as may be determined by the directors, and such remuneration may be either in addition to or in substitution for his or their share in the remuneration above provided for the directors.

MINUTES

115. The directors shall cause minutes to be duly entered in books provided for the purpose of or as an electronic record, of;
- (a) all appointments of officers;
 - (b) the names of the directors present in person at each meeting of the directors and of any committee of the directors;
 - (c) all orders made by the directors and committees of the directors;
 - (d) all resolutions and proceedings of general meeting and of meetings of the directors and of the committees of the directors;
- and any such minutes of any meeting of the directors or of any such committee or of the company, if purporting to be signed by the chairman of such meeting or by the chairman of the next succeeding meeting, shall be prima facie evidence of the matter stated in such minutes.

POWERS AND DUTIES OF DIRECTORS

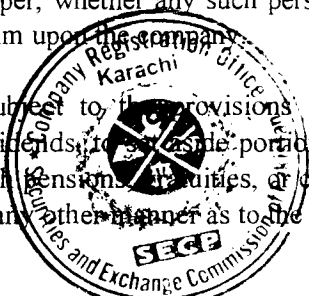
116. The directors shall duly comply with the provisions of the ordinance, the listing requirements and the code. In particular and without prejudice to the generality of the foregoing, the company shall comply with the provisions of the ordinance in regard to the registration of the particulars of mortgages and charges affecting the property of the company or created by it, to the keeping of a register of the directors, and to the sending to the registrar of an annual list of members and a summary of particulars relating thereto, and notice of any consolidation or increase of share capital, sub-division of shares, and copies of special resolutions and a copy of the register of directors and notifications of any change therein. All such information may be stored as an electronic record and transmitted accordingly, where possible.
117. The control of the company shall be vested in the directors, and the business of the company shall be managed by the directors who may exercise all such powers of the company and do all such acts and things as may be exercised or done by the company as by the ordinance or by these articles or by a special resolution expressly directed or required to be exercised or done by the company in general meeting, subject nevertheless to any regulations of these articles, to the provisions of the ordinance, and to such regulations being not inconsistent with the aforesaid regulations or provisions, as may be prescribed by the company in general meeting; but no regulation made by the company in general meeting shall invalidate any prior act of the directors which would have been valid if that regulation had not been made.
118. Without prejudice to the general powers conferred by article 117 and to any other powers or authorities conferred by these articles on the directors, it is hereby expressly declared that the directors shall have the following powers, that is to say, power:
- (1) To purchase or otherwise acquire for the company any property, rights or privileges which the company is authorized to acquire at such price and generally on such terms and conditions as they think fit, and to sell, let, exchange or otherwise dispose

of absolutely or conditionally any part of the property, privileges and undertaking of the company upon such terms and conditions, and for such consideration, as they may think fit.

- (2) At their discretion to pay for any property, rights, privileges acquired by or services rendered to the company either wholly or partially in cash or in shares (subject to the provisions of section 86 of the ordinance) bonds, debentures or other securities of the company. Any such bonds, debentures or other securities may be either specifically charged upon all or any part of the property of the company or not so charged.
- (3) To open account with any bank or financial institution and deposit into and withdraw money from such accounts from time to time.
- (4) To make, draw, endorse, sign, accept, negotiate and give all cheques, bills of lading, drafts, orders, bills of exchange, and other promissory notes and negotiable instruments required in the business of the company.
- (5) To secure the fulfillment of any contracts, agreements or engagements entered into by the company by mortgage or charge of all or any of the property of the company for the time being in such other manner as they may think fit.
- (6) Subject to the provisions of the ordinance, to appoint and at their discretion remove or suspend such agents (other than Managing Agents), managers, secretaries, officers, employees for permanent, temporary or special services as they may from time to time think fit, and to determine their powers and duties and fix their salaries or emoluments and to require security in such instances and to such amount as they think fit.
- (7) To appoint any person or persons (whether incorporated or not) to accept and hold in trust for the company any property belonging to the company or in which it is interested or for any other purposes, and to execute and do all such deeds, documents and things as may be requisite in relation to any such trust and to provide for the remuneration of such trustee or trustees.
- (8) To institute, conduct, defend, compound or abandon any legal proceedings by or against the company or its officers or otherwise concerning the affairs of the company and also to compound and allow time for payment or satisfaction of any debts due and of any claims or demands by or against the Company.
- (9) To refer claims or demands by or against the company to arbitration and observe and perform the awards.
- (10) To make and give receipts, releases and other discharges for money payable to the company and for the claims and demands of the Company.
- (11) To act on behalf of the company in all matters relating to bankrupts and insolvents.
- (12) To determine who shall be entitled to sign on the company's behalf bills, notes, receipts, acceptances, endorsements, cheques, releases, contracts and documents.
- (13) From time to time to provide for the management of the affairs of the company either in different parts of Pakistan or elsewhere in such manner as they think fit, and in particular to establish branch offices and to appoint any persons to be the attorneys or agents of the

company with such powers (including power to sub-delegate) and upon such terms as may be thought fit.

- (14) To invest and deal with any of the moneys of the company not immediately required for the purposes thereof upon such securities and in such manner as they may think fit, and from time to time to vary or realize such investments.
- (15) To execute in the name and on behalf of the company in favour of any director of the company or other person who may incur or be about to incur any personal liability for the benefit of the company, such mortgages of the company's property (present and future) as they think fit, and any such mortgage may contain a power of sale and such other powers, covenants and provisions as shall be agreed on.
- (16) To give to any person employed by the company, a commission on the profits of any particular business or transaction or a share in the general profits of the company, and such commission or share of profits shall be treated as part of the working expenses of the company.
- (17) To enter into all such negotiations and contracts and rescind and vary all such contracts and execute and do all such acts, deeds and things in the name and on behalf of the company as they may consider expedient for or in relation to any of the matters aforesaid or otherwise for the purposes of the company.
- (18) To establish, maintain, support and subscribe to any charitable or public object, and any institution, society, or club which may be for the benefit of the company or its employees, or may be connected with any town or place where the company carries on business; to give pensions, gratuities, or charitable aid to any person or persons who have served the company or to the wives, children, or dependants of such person or persons, that may appear to the directors just or proper, whether any such person, his widow, children or dependants, have or have not a legal claim upon the company.
- (19) Subject to the provisions of section 227 of the ordinance, before recommending any dividends, to set aside portions of the profits of the company to form a fund to provide for such pensions, gratuities, or compensation; or to create any provident or benefit fund in such or any other manner as to the directors may seem fit.
- (20) Subject to the provision of the ordinance to accept from any member on such terms and conditions as shall be agreed a surrender of his shares or any part thereof.
- (21) To make advances and loans without security or on such security as they may deem proper and as permissible under the law.
- (22) To make and alter rules and regulations concerning the time and manner of payment of the contributions of the employees and the company respectively to any such funds and the accrual,



employment, suspension and forfeiture of the benefits of the said fund and the application and disposal thereof, and otherwise in relation to the working and management of the said fund as the directors shall from time to time think fit.

(23) To delegate all or any of the powers hereby conferred upon them to such person or persons as they may from time to time think fit.

(24) Subject to section 213 of the ordinance to authorize the having an official seal of the company for use abroad.

REGISTER OF DIRECTORS SHAREHOLDINGS

119. In accordance with section 220, the company shall maintain at its office a register or electronic record of the directors, chief executive officer, chief financial officer (chief accountant), company secretary or head of internal audit who is or has been the beneficial owner of listed securities and every person who is directly or indirectly the beneficial owner of not less than ten percent (10%) of the beneficial interest in the company. This register or electronic record shall be open to inspection during business hours subject to subsections (5), (6) and (7) of section 220.

POWER OF ATTORNEY

120. The directors may from time to time and at any time by power of attorney appoint any company, firm or person (including any director or officer of the company) or body of persons, whether nominated directly or indirectly by the directors, to be the attorney or attorneys of the company for such purposes and with such powers, authorities and discretions and for such period and subject to such conditions as they may think fit, and any such powers of attorney may contain such provisions for the protection and convenience of persons dealing with any such attorney to delegate all or any of the powers, authorities and discretions vested in him; and without prejudice to the generality of the foregoing any such power of attorney may authorize the attorney to institute, conduct, defend, compound or abandon any legal proceedings by or against the company, whether generally or in any particular case.

AUDIT COMMITTEE

121. The Directors shall establish an Audit Committee which shall comprise not less than three members, including the chairman. Majority of the members of the Committee shall be from among the non-executive directors of the company and the chairman of the Audit Committee shall preferably be a non-executive director. The names of member of the Audit Committee shall be disclosed in each annual report of the company.

MANAGEMENT COMMITTEE

122. The Directors shall establish management committees to comply with the requirements of the code of the corporate governance and their own requirements for effective management and control. The Directors shall nominate members for each committee which may be from the board of directors or outside the board.

BORROWING POWERS

123. (1) The directors may exercise all the powers of the company to borrow money and to mortgage or charge its undertaking, property and assets (both present and future), and to issue debentures, debenture stocks, and other securities, whether outright or as collateral security for any debt, liability or obligation of the company or of any third party.

- (2) In exercising the powers of the company aforesaid the directors may, from time to time and on such terms and conditions as they think fit, raise money from banks and financial institutions and from other persons under any permitted system of financing, whether providing for payment of interest or some other form of return, and in particular the directors may raise money on the basis of the mark up on price, musharika, modaraba or any other permitted mode of financing, and without prejudice to the generality of the foregoing the directors may exercise all or any of the powers of the company arising under section 19(2) of the ordinance.

- (3) In regard to the issue of securities the directors may exercise all or any of the powers of the company arising under sections 19(2), 87 and 120 of the ordinance and in particular the directors may issue any security as defined in section 2(1)(34) of the ordinance or may issue any instrument or certificate representing redeemable capital as defined in section 2(1)(30A) of the ordinance or participatory redeemable capital as defined in section 2(1)(25) of the ordinance.

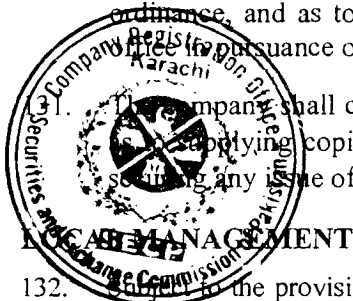
124. Debentures, debenture-stock, bonds and other securities may be made assignable free of equities between the company and the person to whom the same may be issued.

125. Any debentures, debenture-stock, bonds or other securities may be issued at a discount, premium or otherwise and with any special privileges as to redemption, surrender, drawing, allotment of shares, attending and voting at general meetings of the company, appointment of directors of the company or otherwise.

126. The directors shall cause a proper register to be kept in accordance with the provisions of section 135 of the ordinance, of all mortgages and charges specifically affecting the property of the company, and shall duly comply with the provisions of the sections of the ordinance, namely, sections 121 and 122 (Registration of mortgages and charges), section 128 (Endorsement of certificates), section 129 (Filing of prescribed particulars), section 130 (Keeping of a copy of every instrument creating any mortgage or charge by the company at the office) and section 132 (Giving of intimation of the payment or satisfaction of any charge or mortgage created by the company).



127. Every register of holders of debentures of the company may be closed for any periods not exceeding in the whole forty five days in any year and not exceeding thirty days at a time. Subject as aforesaid, every such register shall be open to the inspection of members or debenture holders. But the company may in general meeting impose any reasonable restrictions, so that at least two hours, in each day when such register is open, for inspection.
128. Subject to the provisions of section 76 of the ordinance, no transfer of registered debentures shall be registered unless a proper instrument of transfer duly stamped and executed by the transferor and transferee has been delivered to the company together with the certificate or certificates of the debentures.
129. If the directors refuse to register the transfer of any debentures, they shall, within thirty days from the date on which the instrument of transfer was lodged with the company, send or cause to be sent to the transferee and transferor notice of the refusal.
130. The company shall comply with the provisions of section 136 of the ordinance as to allowing inspection of copies kept at the office in pursuance of section 130 of the ordinance, and as to allowing inspection of the register of mortgages to be kept at the office in pursuance of section 135 of the ordinance.
131. The company shall comply with the provisions of sections 113 and 150 of the ordinance by supplying copies of any register of holders of debentures or of any trust deed for securing any issue of debentures.
132. In compliance with the provisions of sections 206 and 207 of the ordinance, directors may from time to time provide for the management of the affairs of the company outside Pakistan or in any special locality in Pakistan in such manner as they shall think fit and the following provisions shall operate without prejudice to the general powers hereby conferred.
- (1) The directors may from time to time and at any time establish any local boards or agencies for managing any of the affairs of the company outside Pakistan or in any specified locality in Pakistan and may appoint any persons to be members of such local board or any managers or agents and may fix their remuneration.
 - (2) The directors may from time to time and at any time delegate to any persons so appointed any of the powers, authorities and discretions for the time being vested in the directors and may authorize the members for the time being of any such local board or any of them to fill up any vacancies therein and to act notwithstanding vacancies and any such appointment or delegation may be made on such terms and subject to such conditions as the directors may think fit; and the directors may at any time remove any person so appointed and may annul or vary any such delegation.
 - (3) The directors may at any time and from time to time, by power of attorney under the seal of the company, appoint any person to be the attorneys of the company for such purposes and with such powers, authorities and discretions (not exceeding those



vested in or exercisable by the directors under these articles) and for such period and subject to such conditions as the directors may from time to time think fit; and any such appointment may, if the directors think fit, be made in favour of all or any of the members of any local board established as aforesaid, or in favour of any company or of the members directors, nominees or managers of any company or firm, and any such power of attorney may contain such provisions for the protection or convenience of persons dealing with such attorneys as the directors think fit.

- (4) Any such delegates or attorneys as aforesaid may be authorised by the directors to sub-delegate all or any of the powers, authorities and discretions for the time being vested in them.

V. ACCOUNTS AND DIVIDENDS

BOOKS OF ACCOUNT

(References to books of account, balance sheet, profit and loss accounts and auditors' report shall hereinafter mutatis mutandis include all electronic forms of record or storage of the company.)

133. The directors shall cause to be kept proper books of account with respect to the matters set out in section 230 of the ordinance.

134. The books of account shall be kept at the office or at such other place as the directors think fit, and shall be open to inspection by the directors during business hours. If the directors decide to keep the books of account at a place other than the office they shall comply with the directions contained in the proviso to section 230(1) of the ordinance.

135. The company shall preserve in good order the books of account of the company in respect of any financial year for a period of ten years following the close of that year or otherwise as provided in the section 230(6) of the ordinance.

136. The directors shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations the accounts and books of the company or any of them shall be open to the inspection of the members, and no member (not being a director of the company) shall have any right of inspecting any account or book or document of the company except as conferred by law or authorized by the directors or by the company in general meeting.

137. (1) The directors shall arrange to place before the annual general meeting of the company in every year a duly audited balance sheet and profit and loss account, conforming to the requirements of section 234, 237 and 238 of the ordinance and made up to a date not more than four months before the date of such meeting and having the auditor's report attached thereto, and a report of the directors conforming to the requirements of section 236 of the ordinance.

- (2) As required by section 241 of the ordinance the balance sheet and profit and loss account shall first be approved by the directors and when so approved shall be

signed by the chief executive and at least one director but if on account of his absence from Pakistan or other reason the signature of the chief executive cannot be obtained, the balance sheet and profit and loss account shall be signed by at least two directors for the time being in Pakistan, and in every such case a statement signed by those two directors shall be subjoined to the balance sheet and profit and loss account stating the reason why the signature of the chief executive was not obtained.

- (3) The directors may authorize the chairman or the chief executive to sign the report of the directors which may then be signed accordingly, but in the absence of any such authority the report of the directors shall be signed as required by section 236(3) of the ordinance in the same manner as the balance sheet and profit and loss account.

138. (1) A copy of the balance sheet, profit and loss account and the reports of the directors and auditors shall be sent not less than twenty one (21) days before the date of the annual general meeting to the members and other persons entitled to receive notices of general meetings in the manner in which notices are to be given hereunder and a copy thereof shall be kept for a period of at least fourteen (14) days before the meeting at the office for inspection by members. The company shall send, each stock exchange listing the shares of the company three hundred copies (or such number as may be prescribed from time to time), and to the registrar of companies and to the commission, five copies (or such number as may be prescribed from time to time), each of the balance sheet, profit and loss account and the reports of the directors and auditors at the same as they are dispatched to the members and other persons in accordance with this article.



- After the balance sheet, profit and loss account and the reports of the directors and auditors have been laid before the annual general meeting of the company, three copies thereof (or, such larger number as may be prescribed under section 242(1) of the ordinance) signed by the signatories thereto shall be filed with the registrar within thirty days from the date of the meeting and the company shall also comply with the provisions of section 242(2) of the ordinance where applicable.
- (3) Subject to provisions of sections 245 and the listing requirements, the company shall, within one month from the close of the first and third quarters and two month from the close of the second quarter, of the year of account of the company, prepare and transmit to the members one copy and to stock exchange listing the shares of the company three hundred copies (or such number as may be prescribed from time to time), each of the profit and loss account for that quarter and of the balance sheet as at the end of that quarter. Such quarterly profit and loss accounts and balance sheets need not to be audited but must be signed in the same manner as the annual profit and loss accounts and balance sheets are required to be signed. The directors shall also send, to the commission and to the registrar three copies (or such number as may be prescribed for the time being under section 245(1) (b) of the ordinance), each of such quarterly profit and loss accounts and balance sheets at the same time as they are sent to the members in accordance with this article.
- (4) The company may with the consent of shareholders and consultation of respective stock exchange(s), transmit quarterly accounts through web site of the company

subject to the approval of the commission.

139. The directors shall in all respects comply with the provisions of sections 230 to 247 of the ordinance, or any statutory modification thereof for the time being in force.

ANNUAL RETURNS

140. The company shall make the requisite annual returns in accordance with the provisions of section 156 of the ordinance.

DIVIDENDS

141. The company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the directors, provided that the company in general meeting may declare a smaller dividend.
142. No dividend shall be paid otherwise than out of the profits of the year or any other undistributed profits, and in the determination of the profits available for dividends the directors shall have regard to the provisions of the ordinance and in particular to the provisions of sections 83, 235 and 248 of the ordinance.
143. The declaration of the directors as to the amount of the net profits of the company shall be conclusive.
144. The directors may from time to time pay to the members such interim dividends as in their judgment the position of the company justifies.
145. Dividends shall be declared and paid according to the amounts paid on the shares. All dividends shall be apportioned and paid proportionally to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as from a particular date such share shall rank for dividend accordingly.
146. All dividends declared shall be paid within the periods specified in section 251 of the ordinance.
147. No dividend payable in respect of a share shall bear interest against the company.
148. The directors may retain any dividends on which the company has a lien and may apply the same in or towards satisfaction of the debts, liabilities or engagements in respect of which the lien exists.
149. Any general meeting declaring a dividend may resolve that such dividend be paid and satisfied wholly or in part in cash or by the distribution of specific assets, and in particular by the distribution of paid-up shares, debentures, debenture-stock or other

security of the company, or paid-up shares, debentures, debenture-stock or other security of any other company, or in any one or more of such ways.

150. Any general meeting may resolve that any moneys, investments, or other assets forming part of the undivided profits of the company standing to the credit of the reserve fund referred to in article 157 or in the hands of the company and available for dividend (or representing premiums received on the issue of shares and standing to the credit of the share premium account) be capitalized and distributed amongst such of the members as would be entitled to receive the same if distributed by way of dividend and in the same proportion on the footing that they become entitled thereto as capital and that all or any part of such fund be applied on behalf of such members in paying up in full any un-issued shares, debentures, debenture-stock or other security of the company, which shall be distributed accordingly, and that such distribution or payment shall be accepted by such members in full satisfaction of their interest in the said capitalized sum.

151. For the purpose of giving effect to any resolution under article 149 or article 150, the directors may settle any difficulty which may arise in regard to the distribution as they think expedient and may fix the value for distribution of any specific assets and may determine that cash payments shall be made to any members upon the footing of the value so fixed in order to adjust the rights of all parties and may vest any such cash or specific assets in trustees upon such trusts for the persons entitled to the dividend or capitalized fund as may seem expedient to the directors. Where requisite a proper contract shall be filed in accordance with the provisions of section 73 of the ordinance, and the directors may appoint any person to sign such contract on behalf of the persons entitled to the dividend or capitalized fund, and such appointment shall be effective.

152. A transfer of shares shall not pass the rights to any dividend declared thereon before the registration of the transfer.

153. The directors may retain the dividends payable upon shares in respect of which any person is under article 38 entitled to become a member or which any person under that article is entitled to transfer until such person shall become a member in respect thereof or shall duly transfer the same.

154. Any one of several persons who are registered as the joint-holders of any share may give effectual receipts for all dividend and payments on account of dividends in respect of such share.

155. The dividend in respect of any share shall be paid to the registered holder of such share or to his banker or to a financial institution (as defined in section 2(1) (15A) of the ordinance) nominated by him for the purpose. Unless otherwise directed, any dividend may be paid by cheque or warrant sent through post to the registered address of the member or person entitled thereto, or, in the case of joint-holders, to the registered address of that one whose name stands first on the register in respect of the joint-holding, or to such financial institution or bank as the member or person entitled thereto or such joint-holders, as the case may be.

direct, and every cheque or warrant so sent shall be made payable to the order of the person to whom it is sent, or to the order of the institution or bank, directed as aforesaid.

156. All dividends unclaimed for one year after having been declared may be invested or otherwise made use of by the directors for the benefit of the company until claimed and all dividends unclaimed for three years after having been declared may be forfeited by the directors for the benefit of the company, but the directors may annul the forfeiture wherever they may think proper.

RESERVE AND DEPRECIATION FUNDS

157. The directors may from time to time before recommending any dividend set apart any and such portion of the profits of the company as they think fit as a reserve fund to meet contingencies or for the liquidation of any debentures, debts or other liabilities of the company, for equalization of dividends or for repairing, improving, and maintaining any of the property of the company, and for such other purposes of the company as the directors in their absolute discretion think conducive to the interests of the company; and may invest the several sums so set aside upon such investments (other than shares of the company) as they may think fit, and from time to time deal with and vary such investments, and dispose of all or any part thereof for the benefit of the company, and may divide the reserve fund into such special funds as they think fit, with full power to employ the reserve funds or any part thereof in the business of the company, and that being bound to keep the same separate from the other assets.

158. The directors may, from time to time before recommending any dividend, set apart any and such portion of the profits of the company, as they think fit, as a depreciation fund applicable in the discretion of the directors, for providing against any depreciation in the investment of the company or for rebuilding, restoring, replacing or for altering any part of the buildings, work, plant, machinery, or other property of the company destroyed or damaged by fire, flood, storm, tempest, earthquake, accident, riot, wear and tear, or any other means whatsoever, and for repairing, altering and keeping in good condition the property of the company, or for extending and enlarging the buildings, machinery and property of the company with full power to employ the assets constituting such depreciation fund in the business of the company, and that without being bound to keep the same separate from the other assets.

159. All moneys carried to the reserve fund and depreciation fund respectively shall nevertheless remain and be profits of the company applicable, subject to due provision being made for actual loss or depreciation, for the payment of dividends and such moneys and all the other moneys of the company not immediately required for the purposes of the company may be invested by the directors in or upon such investment or securities as they may select or may be used as working capital or may be kept at any bank on deposit or otherwise as the directors may from time to time think proper.
160. The directors may also carry forward any profits which they may think prudent not to distribute, without setting them aside as a reserve.

VI. AUDIT

161. Auditors shall be appointed and their duties regulated in accordance with sections 252 to 255 of the ordinance or any statutory modification thereof for the time being in force.

VII. SEAL

162. The directors shall provide a common seal of the company which shall not be affixed to any instrument except by the authority of a resolution of the board or by a committee of directors authorized in that behalf by the directors, and two (2) directors, or one (1) director and the secretary of the company, shall sign every instrument to which the common seal is affixed.
163. The directors may provide for the use in any territory, district or place not situated in Pakistan, of an official seal which shall be a facsimile of the common seal of the Company, with the addition on its face of the name of every territory, district or place where it is to be used. The official seal shall not be affixed to any instrument except by the authority of a resolution of the board or by a committee of directors authorized in that behalf by the directors, and two (2) directors, or one (1) director and the secretary of the company, or such other person as the directors may appoint for the purpose, shall sign every instrument to which the official seal is affixed. The provisions of section 213 shall apply to the use of the official seal.

VIII. NOTICES

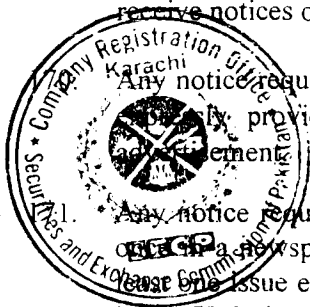
164. (1) Notice may be given by the company to any member either personally or by sending it by post to him at his registered address or (if he has no registered address in Pakistan) to the address, if any, within Pakistan supplied by him to the company for the giving of notices to him or in electronic form as prescribed by section 3 of the electronic transactions ordinance.

(2) Where a notice is sent by post, service of the notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the notice and, unless the contrary is proved, to have been effected at the time at which the letter would be delivered in the ordinary course of post.

165. In accordance with section 15 of the electronic transactions ordinance, a notice dispatched by electronic transmission shall be deemed to be received by the addressee at his place of business or where he ordinarily resides when it reaches the designated information system of the addressee. If no information system has been so designated, receipt will occur when the electronic notice reaches an information system of the addressee.
166. If a member has no registered address in Pakistan, and has not supplied to the company an address within Pakistan or an electronic address, for the giving of notices to him, a notice addressed to him or to the shareholders generally and advertised in a newspaper, circulating in the Province in which the office is situated and in at least one issue each of a daily newspaper in the English language and a daily newspaper in the Urdu language circulating in the province in which the stock exchange on which the company is listed is

situate, shall be deemed to be duly given to him on the day on which the advertisement appears.

167. A notice may be given by the company to the joint-holders of a share by giving the notice to the joint-holder named first in the register in respect of the share.
168. A notice may be given by the company to the persons entitled to a share in consequence of the death or insolvency of a member by sending it through the post in a prepaid letter addressed to them by name, or by the title of representatives of the deceased, or assignee of the insolvent or by any like description, at the address (if any) in Pakistan supplied for the purpose by the persons claiming to be so entitled or addressing it in a similar manner and dispatching it to a designed electronic address or until any such address has been so supplied, by giving the notice in any manner in which the same might have been given if the death or insolvency had not occurred.
169. Notice of every general meeting shall be given in same manner hereinbefore authorized to (a) every member of the company except those members who (having no registered address within Pakistan) have not supplied to the company either a postal address within Pakistan or electronic address for the giving of notices to them, and also to (b) every person entitled to a share in consequence of the death or insolvency of a member, who but for his death or insolvency would be entitled to receive notice of the meeting. Subject to the provisions of articles 80 and section 255(6), no other person shall be entitled to receive notices of general meetings.
- Any notice required to be given by the company to the members or any of them and not by advertisement shall be sufficiently given, if given by advertisement.
- Any notice required to be or which may be given by advertisement shall be advertised once in a newspaper circulating in the province in which the office is situate and in at least one issue each of a daily newspaper in the English language and a daily newspaper in the Urdu language circulating in the province in which the stock exchange on which the company is listed is situate.
172. Any notice given by advertisement shall be deemed to have been given on the day on which the advertisement shall first appear.
173. Every person who by operation of law, transfer or other means whatsoever shall become entitled to any share shall be bound by every notice in respect of such share which previously to his name and address being entered on the register shall be duly given to the person from whom he derives his title to such shares.
174. Any notice or document delivered or sent by post to or left at the registered address of any member in pursuance of these articles shall, notwithstanding that such member may be then deceased and whether or not the company shall have received notice of his decease, be



deemed to have been duly served in respect of any registered shares whether held solely or jointly with other persons by such member, until some other person be registered in his stead as the holder or joint-holder thereof, and such service shall for all purposes of these articles be deemed a sufficient service of such notice or document on his heirs, executors, or administrators, and all persons, if any, jointly interested with them in any such share.

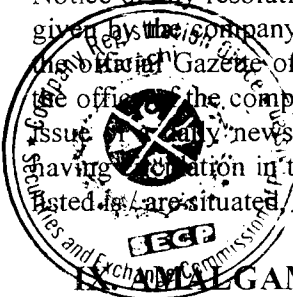
175. The signature to any notice to be given by the company may be written or printed.
176. In the event of a winding up of the company, every member of the company who is not for the time being normally resident in the town in which the office is situate shall be bound, within eight weeks after the passing of an effective resolution to wind up the company voluntarily or the making of an order for the winding up of the company, to serve notice in writing on the company appointing some householder residing in that town upon whom all summonses, notices, process, orders and judgments in relation to or under the winding up of the company may be served, and in default of such nomination the liquidator of the company shall be at liberty on behalf of such member to appoint some such person, and service upon any such appointee, whether appointed by the member or the liquidator, shall be deemed to be good personal service on such member for all purposes, and where the liquidator makes any such appointment he shall with all convenient speed give notice thereof to such member by advertisement in some newspaper circulating in the province in which the office is situated and in at least one issue each of a daily newspaper in the English language and a daily newspaper in the Urdu language circulating in the province in which the stock exchange on which the company is listed is situated or by a registered letter sent through the post and addressed to such member at his address as mentioned in the register, and such notice shall be deemed to be served on the day on which the advertisement shall first appear or on the day following that on which the letter is posted, as the case may be. The provisions of this article shall not prejudice the right of the liquidator to serve any notice or other document in any other manner prescribed by the regulations of the company.

PUBLICATION OF NOTICES IN NEWSPAPERS

177. Subject to such provisions of the listing requirements as may apply specifically to the manner in which certain notices are to be published in the newspaper(s):
1. Every prospectus issued by or on behalf of the company or by or on behalf of any person who has been engaged or interested in the formation of the company shall, in its full text or in such abridged form as may be prescribed, be published by the company in at least one (1) Urdu and one (1) English daily newspaper, in accordance with the provisions of sections 53, 57 and 64 not less than seven (7) days or more than thirty (30) days before the subscription list, as specified in the prospectus, is due to open. Provided that the company may, for special reasons and with permission of the commission, publish the advertisements of a prospectus more than thirty (30) days before the subscription list is due to open.
 2. The company may, on giving not less than seven (7) days notices by advertisement in a newspaper having circulation in the Province, or part of Pakistan not forming part of a province, in which the office of company is situated and, in addition, in a newspaper having circulation in the Province, or other part as aforesaid, in which the stock exchange(s) on which the company is listed is / are situated, close the register of members or debenture

holders, as the case may be, for any time or times not exceeding in the whole forty-five (45) days in a year and not exceeding thirty (30) days at a time, in accordance with section 151.

3. The notice of a general meeting of the company, whether annual or extraordinary general meeting, shall be published in at least one (1) issue each of daily newspaper in English language and a daily newspaper in Urdu language having circulation in the province in which the stock exchange(s) on which the company is listed is / are situated, in accordance with section 158(3) and 159(7).
4. All notices received by the company in pursuance of section 178 (3) for election as a director, shall be transmitted to the members not later than seven (7) days before the date of the general meeting at which the directors are to be elected, by publication in at least one (1) issue each of a daily newspaper in English language and a daily newspaper in Urdu language having circulation in the Province in which the stock exchange(s) on which the Company's securities are listed is / are situated, in accordance with section 178 (4).
5. If a resolution is to be passed at the company's annual general meeting appointing as auditors a person other than a retiring auditors, the company shall, not less seven (7) days before the date fixed for the annual general meeting, publish in at least one (1) issue each of a daily newspaper in English language and a daily newspaper in Urdu language having circulation in the province in which the stock exchange(s) on which the company is listed is / are situated, in accordance with section 253 (2).
6. Notice of any resolution for winding up a company voluntarily under section 358, shall be given by the company within ten (10) days of the passing of the same by advertisement in the official Gazette of Pakistan, and also in a newspaper circulating in the province where the office of the company is situated and, in addition, shall also published in at least one (1) issue each of a daily newspaper in English language and a daily newspaper in Urdu language having circulation in the province in which the stock exchange(s) on which the company is listed is / are situated, in accordance with section 361 (1).



IN AMALGAMATION, DIVISION AND RECONSTRUCTION

178. Subject to and in accordance with the provisions of section 287, the company may reconstruct, amalgamate into another company or divide into two (2) or more companies in the process of which the whole or any part of the undertaking, property or liabilities of the company or any other company, may be transferred to any other company or the company, respectively, as the case may be. Provided that any sale of the undertaking of the company, the directors, or the liquidator on a winding up, may, if authorised by a special resolution, accept fully paid shares, debentures or securities of any other company, whether incorporated in Pakistan or not, either then existing or to be formed, for the purchase in whole or in part of the property of the company, and the directors (if the profits of the company permit) or the liquidator (in a winding up) may distribute such shares, or securities, or any other property of the company amongst the members without realization, or vest the same in trustees for them, and any special resolution may provide for the distribution or appropriation of the cash, shares or other securities, benefits or property, otherwise than in accordance with the strict legal rights of the members or contributories of the company, and for valuation of any such securities or property at

such price in such manner as the meeting may approve, and all holders of shares shall be bound to accept and shall be bound by any valuation or distribution so authorised, and waive all rights in relation thereto, save only in case the company is proposed to be or is in the course of being wound up, such statutory rights (if any) under section 367 of the ordinance as are incapable of being varied or excluded by these articles.

X. SECRECY

179. Every director, manager, adviser, auditor, trustee, member of a committee, officer, servant, agent, accountant or other person employed in the business of the company shall, if so required by the directors before entering upon his duties, sign a declaration pledging himself to observe a strict secrecy respecting all transactions of the company with its customers and the state of accounts with individuals and in matters relating thereto and shall by such declaration pledge himself not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required to do so by the directors or by any meeting or by any court of law and except so far as may be necessary in order to comply with any of the provisions in these articles contained.
180. No member or other person (not being a director) shall be entitled to enter upon the property of the company or to inspect or examine the company's premises or properties of the company without the permission of the directors for the time being or, subject to the provisions of article 119, to require discovery of or any information respecting any detail of the company's trading or any matter which is or may be in the nature of a trade secret, mystery of trade, or secret process or of any matter whatsoever which may relate to the conduct of the business of the company and which in the opinion of the directors it is inexpedient in the interest of the members of the company to communicate.



XI. ARBITRATION

181. Whenever a difference arises between the company on the one hand and any of the members, their executors, administrators, or assignees on the other hand touching the true intent or construction or the incident or consequences of these presents, or of the status of enactment's of the legislature, or touching anything then or thereafter done, executed, omitted or suffered in pursuance of these presents or of the status of enactment's touching any breach or alleged breach or otherwise relating to the premises or to these presents, or to the status or to any of the affairs or officers of the company, the company by written agreement refer to arbitration in accordance with the Arbitration Act 1940 (X of 1940) and every such difference shall be referred to the decision of an arbitrator to be appointed by the parties in difference or if they cannot agree upon a single arbitrator, to the decision of two arbitrators, one appointed by such party, or in the event of disagreement of the arbitrators, to that of an umpire appointed by arbitrators themselves. The provisions of Arbitration Act 1940 (X of 1940) shall apply to all arbitrations between the company and persons having such difference.
182. The costs of, or incidental to any such reference and award shall be in the discretion of the arbitrator/arbitrators or umpire as the case may be who may determine the amount

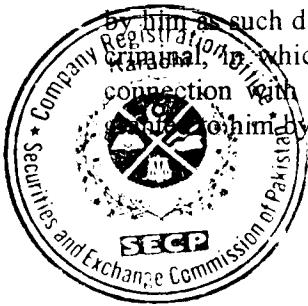
thereof and may award by whom, and to whom, and in what manner the same shall be borne and paid.

XII. WINDING UP

183. If the company shall be wound up and the assets available for distribution among the members, subject to the rights attached to any preference share capital, as such shall be insufficient to repay the whole of the paid-up capital, such assets shall be distributed so that as nearly as may be the losses shall be borne by the members in proportion to the capital paid up on the shares held by them respectively. And if in a winding up the assets available for distribution among the members shall be more than sufficient to repay the whole of the capital paid up at the commencement of the winding up, the excess shall be distributed amongst the members in proportion to the capital at the commencement of the winding up, paid up on the shares held by them respectively. But this article is to be without prejudice to the rights of the holders of shares issued upon special terms and conditions.
184. If the company shall be wound, whether voluntarily or otherwise, the liquidator may with the sanction of a special resolution divide among the members in specie or kind any part of the assets of the company, and may with the like sanction vest any part of the assets of the company in trustees upon such trusts for the benefit of the members or any of them as the liquidator with the like sanction shall think fit.

XIII. INDEMNITY

185. Every director or officer of the company and every person employed by the company as auditor shall be indemnified out of the funds of the company against all liability incurred by him as such director, officer or auditor in defending any proceedings, whether civil or criminal, in which judgment is given in his favour, or in which he is acquitted, or in connection with any application under section 488 of the ordinance in which relief is granted to him by the court.



Handwritten signature and date 13/3/11.

We, the several persons whose name and addresses are subscribed below, are desirous of being formed into a Company in pursuance of this Article of Association, and we respectively agree to take the number of shares in the Capital of the Company indicated herein below against our respective names:

Sr. No.	Name and Surname in Full	Father's / Husband's Name in Full	Nationality with any former Nationality	Occupation	NIC Number	Residential address in full	No. of Shares	Signature
1.	Muhammad Tariq Rafi	Muhammad Rafi	Pakistani	Business	42000-8453226-9	34-H, Block-6, PECHS, Karachi	1	
2.	Abdur Rahim	Muhammad Tariq Rafi	Pakistani	Business	42201-0409988-5	34/H-1, Block-6, PECHS, Karachi	1	
3.	Nighat Tariq	Muhammad Tariq Rafi	Pakistani	Business	42201-9906534-6	34-H, Block-6, PECHS, Karachi	1	
4.	Rahma Ibrahimi	Muhammad Tariq Rafi	Pakistani	Business	42301-0468767-6	House # 59, Street 19, Kh. Badban, DHA-V, Karachi	1	
5.	Ali Aslam	Sajjad Ahsan	Pakistani	Business	42000-7241258-4	House # 19, Kh. Hilal, DHA, Karachi	1	
6.	Anum Abdur Rahim	Abdur Rahim	Pakistani	Business	42201-8648714-6	34/H-1, Block-6, PECHS, Karachi	1	

Total Shares Taken: 6

Dated the 19th day of April 2014

Witness to above signatures.

Name: National Institutional Facilitation Technologies (Pvt.) Ltd.

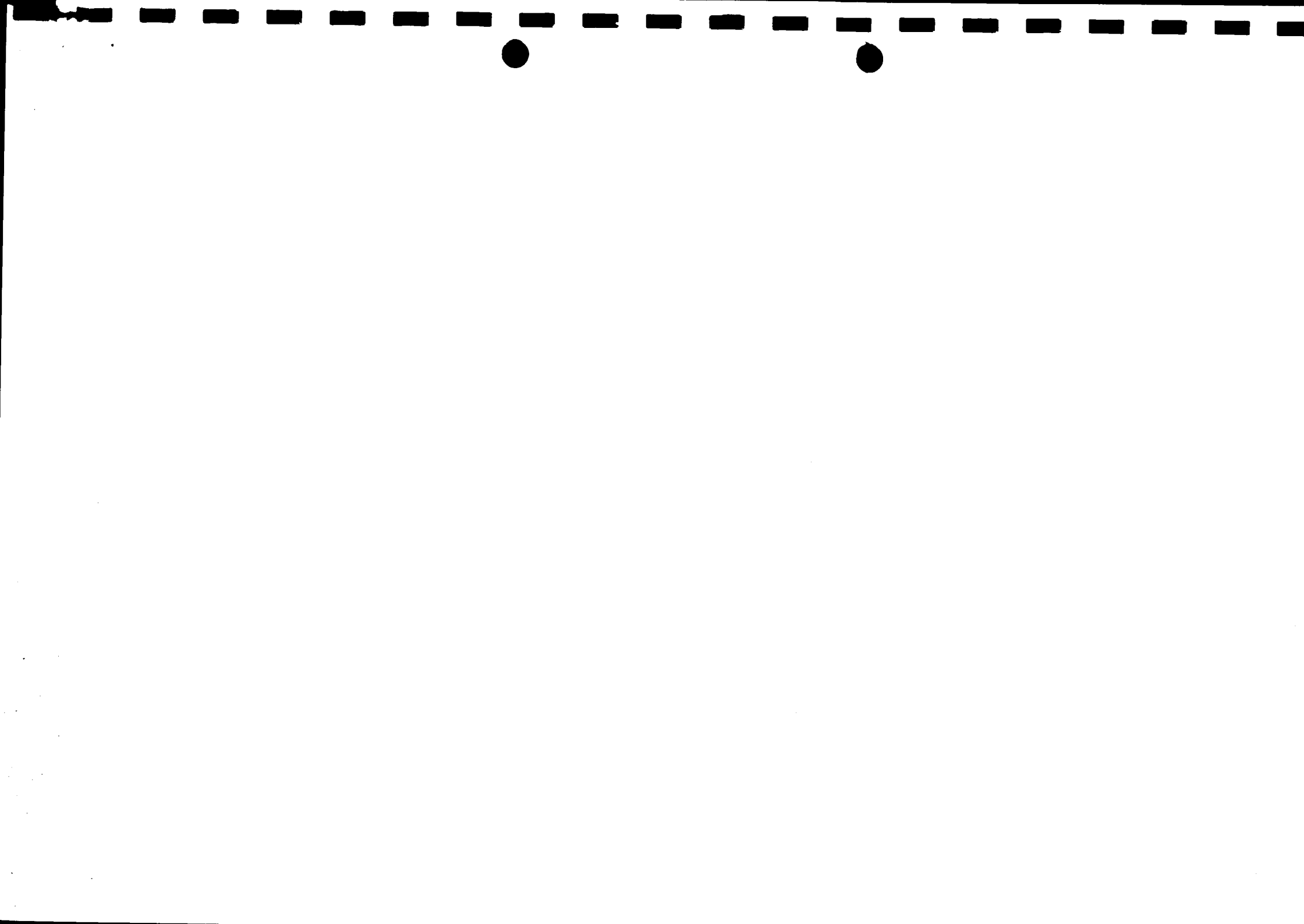
Nationality: Pakistani

Address: 5th Floor, AWT Plaza, I. I. Chundrigar Road, Karachi

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Serial No.
Name of Company
Brief Description of the company
Date of Registration

Joint Registrar of Companies
Company Registration Office,
Karachi



THE COMPANIES ORDINANCE, 1984

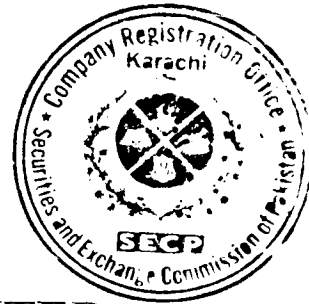
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(COMPANY LIMITED BY SHARES)

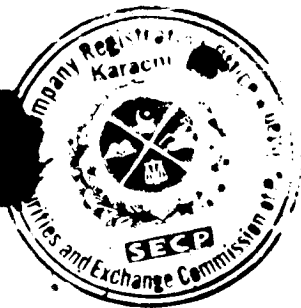
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Memorandum of Association
of

SIDDIQSONS ENERGY LIMITED



- I. The name of the Company is "SIDDIQSONS ENERGY LIMITED".
- II. The Registered Office of the Company will be situated in the Province of Sindh.
- III. The objects for which the Company is established are to do all or any of the following:
 1. To design, finance, insure, build, establish, own, operate, maintain, manage electric power generating plants for the generation, supply & transmission of electric power and in relation thereto, to establish, fix, carry out and maintain without limitation, any ancillary works, cables, wires, meter, lines, interconnect facilities, grid stations, transmission facilities, civil, electrical and mechanical works.
 2. To carry out a feasibility study for and to carry on the business of power generation and in relation thereto, to generate, accumulate, transmit, distribute and sell electric power anywhere in Pakistan, to the public sector, including the Water and Power Development Authority, National Transmission and Dispatch Company, Government and Government bodies, and the private sector subject to any permission required under the Law.
 3. To manufacture, purchase, import or otherwise acquire, construct, own, process, operate and maintain buildings, apparatus, fixtures, fittings, plants, machinery, materials, and things as may be necessary, incidental to or convenient in connection with power generating plant for the generation of electric power and or in connection with supply, transmission and distribution of electric power.
 4. To enter into any agreement or agreements with any government or other authority, supreme, municipal, local or otherwise, that may seem conducive to all or any of the objects of the Company and/or to obtain from such government or authority including the State Bank of Pakistan or National Electric Power Regulatory Authority (NEPRA) any rights, concessions or privileges, licenses which the Company may think desirable to obtain and to carry out, exercise and comply with any such arrangements, rights, privileges, concessions and licenses.



5. To buy, sell, manufacture, repair, alter, improve, exchange or let out, import, export and deal in all works legally permitted, plant, machinery, engines, tanks, cylinders, valves, regulators, testing equipment, tools, utensils, appliances, cookers, stoves, heaters, apparatus, products, materials, substances, raw materials, chemicals, natural gas, liquefied petroleum gas, fuel oil, coal, lubricants, articles and things and to manufacture, experiment with, render marketable and deal in all products legally permitted, incidental to or obtained in the business carried on by the Company.
6. To purchase, take on lease or tenancy or in exchange, hire, take options over or otherwise acquire for any estate or interest whatsoever and to hold, develop, work, cultivate, deal with and turn to account concessions, grants, decrees, licenses, privileges, claims, options, leases, property, real or personal or rights or powers of any kind which may appear to be necessary or convenient for the business of the Company but not to act as a leasing company or property developer.
7. To sell, exchange, mortgage, let on royalty or tribute, grant licenses, easements, options and other rights over and in any manner deal with or dispose of the Company's property or any part thereof for such consideration as may be thought fit and in particular for stocks, shares or securities of any company but in any event not to act as an investment company or leasing company.
8. To establish laboratories and to employ and promote scientific research and invention, patronize such invention and enter into manufacture in collaboration with outside parties for transfer of technology from abroad and to promote transfer of technology from Pakistan abroad, and to carry on business in all other allied fields permissible by law.
9. To invest and deal with any moneys of the Company not immediately for the time being required for any of the purposes of the Company in such investments as may be thought proper and to hold, sell or otherwise deal with such investments but in any event not to act as an investment company.
10. For the purposes of the business of the Company only, to advance money upon such terms as the Company may approve, and to guarantee the obligations and contracts of customers and others but not to act as a banking company.
11. To apply for, purchase or otherwise acquire and protect, prolong and renew whether in Pakistan or elsewhere any patents, patent rights, brevets d'invention, trademarks, design licenses, protections, concessions and the like conferring any exclusive or non-exclusive or limited right to use any secret or other information as to any invention, process or privilege which may seem capable of being used for any of the purposes of the Company or the acquisition of which may seem calculated directly or indirectly to benefit the Company and to use, exercise, develop, manufacture under grant, licenses, privileges in respect of, or otherwise turn to account the property, rights and information so acquired and to carry on any business in any way connected therewith.

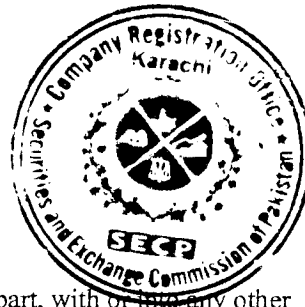


12. To get insured against losses, damages, risks, accidents and liabilities of all kinds which may affect the company whether in respect of its contracts, agreements, advances or securities or in respect of servants or employees of the company, or in respect of property belonging to or leased to or hired by the company, either by setting apart funds of the company or by effecting such insurance and in later case to pay the premium thereon.
13. To train personnel and workers, in Pakistan and/or abroad, to obtain technical proficiency in various specialties connected with the business of the Company.
14. To undertake and execute any project the undertaking whereof may seem desirable, and either gratuitously or otherwise.
15. To procure the Company to be registered or recognized in any foreign country or place.
16. To acquire and undertake all or any part of the business, property, goodwill and liabilities of any person or company carrying on any business which the Company is authorized to carry on or possessed of property suitable for the purposes of the Company.
17. To adopt such means of making known the business and/or services of the Company as may seem expedient and in particular by advertising in the press, or in the other media or by way of participation in exhibitions.
18. For the purposes of the Company, to purchase, manage, acquire by lease, mortgage, dispose of, sell, exchange, turn to account any part of the property and rights of the Company.
19. To employ or appoint any persons, experts, consultants, advisers, contractors (including O&M contractors), brokers in connection with the business of the Company.
20. To pay for any property or rights acquired by the Company, either in cash or fully paid shares or by the issue of securities, or partly in one mode and partly in another and generally on such terms as may be determined.
21. Only in connection with the business of the Company to open and operate any current, overdraft, loan, fixed or savings bank accounts for the Company, and draw, make, accept, discount, endorse, execute and issue promissory notes, bills of exchange, bills of lading and other negotiable or transferable instruments or securities and to deposit money, securities or property with any persons, firm or company and on any terms with or without security and to advance money to the Company's executives, officers and employees/agents/customers and others having dealings with the company but in any event not to act as an investment, banking or finance company.
22. In connection with the business of the Company only, to give guarantees and indemnities for the payment of money or the performance of contracts or obligations by this Company but in any event not to act as an investment, banking or finance company.



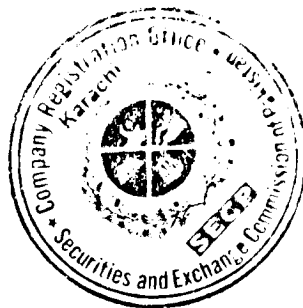
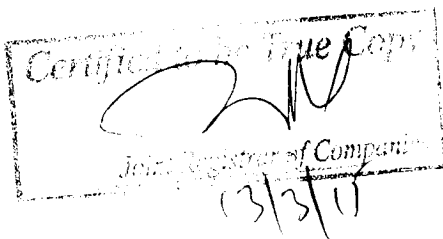
In connection with the business of the Company only, to borrow and where required, to secure the payment of money in such manner as the Company shall think fit and in particular by the creation of mortgages and charges over the (present and future) property, assets and/or undertaking of the Company and/or by issue of debentures, participation term certificates, term finance certificates and other securities charged upon all or any of the Company's property both present and future, and to purchase, redeem and pay off any such securities.

24. To lawfully raise moneys in such manner as the Company shall think fit and in particular by the issue of such securities, bonds and instruments payable to bearer or otherwise, and either permanent or redeemable or repayable convertible into shares and collaterally to secure the repayment of any such moneys so raised or any such securities or instruments of the Company by means of a trust deed or otherwise.
25. To take, or otherwise acquire, and hold shares in any other company having objects altogether or in part similar to those of this Company or carrying on any business capable of being conducted so as directly or indirectly to benefit this Company but in any event not to act as an investment company.
26. To issue all or any part of the original or enhanced share capital of the Company at par or at a premium or discount subject to any permission required under the law.
27. To enter into partnership or into any agreement or agreements for sharing profits, union of interests, cooperation, joint venture, reciprocal concession and/or facilities with any person or company whether or not having objects similar to those of this Company but in any event not to act as managing agents.
28. So far as is permissible in law, to offer stock option schemes to employees, to grant funds, donations, annuities, pensions, allowances, gratuities, bonuses to any employees or Directors or employees of the Company or any dependent thereof or to any charitable, religious, social, scientific, educational, industrial institutions or organization and to establish provident, gratuity and/or superannuation funds for the benefit of present or ex-employees or Directors or former directors of the Company
29. To pay all or any costs charges and expenses preliminary and incidental to the promotion, formation, establishment and registration of the Company and to pay any development costs incurred (whether before or after the incorporation of the Company) by the sponsors of the Company in connection with any project of the Company.
30. To pay brokerage or commission to any person or persons in consideration of his/their subscribing, or agreeing to subscribe, whether absolutely or conditionally, for any shares or debentures of the Company, or for procuring or agreeing to procure subscriptions whether absolute or conditional for the same which brokerage or commission may be paid either in cash or shares of the Company, credited as fully paid up.
31. To distribute any of the Company's property among the members in the event of winding up of the Company.



32. To amalgamate, consolidate, or merge, either in whole or in part, with or into any other companies, associations, firms or persons carrying on any trade or business of a similar nature to that which this Company is authorized to carry on.
33. To resolve, settle disputes by negotiation, conciliation, mediation, arbitration, litigation or other means, judicial or extra judicial, and to enter in compromise agreement with creditors, members and any other persons in respect of a difference or dispute with them and to exercise the power to sue and be sued and to initial or oppose all actions, steps, proceedings or application which may seem calculated directly or indirectly to benefit or prejudice, as the case may be, the interest of the Company or of its members.
34. To do all or any of the things herein in any part of the world either as principals, agents, contractors or otherwise, and either alone or in conjunction with others but in any event not to act as managing agents.
35. To provide engineering, construction, consultancy and design services and radio and other communication systems and services, and any facilities, equipment and installations whether related to such services and systems or otherwise.
36. To carry on any other business whether manufacturing or otherwise that may seem to the Company capable of being conveniently carried on in connection with the above objects or calculated directly or indirectly to enhance the value of or render profitable any of the Company's property or rights or which it may be advisable to undertake with a view to improving, developing, rendering or turning to account any property real or personal belonging to the Company or in which the Company may be interested and to do all or any of the above things either as principals, agents, contractors or otherwise, and either alone or in conjunction with others and either by or through agents, sub-contractors, trustees or otherwise, and to do all such things as are incidental or conducive to the attainment of the above objects but in any event not to act as managing agents.
37. To do all and everything necessary, suitable or proper or incidental or conducive to the accomplishment of any of the purposes or the attainment of any of the objects or the furtherance of any of the powers hereinbefore set forth, either alone or in association with other corporate bodies, firms or individuals or with any Government authority or public or quasi-public authority or any other authority, and to do every other act or thing incidental or appertinent to or arising out of or connected with the business or powers of the Company or part thereof, provided the same be lawful.
38. It is expressly declared that all the powers expressed therein are to be cumulative but in no case unless the context expressly so requires is the generality of any one sub-clause to be narrowed or restricted by the name of the Company or by the particularity of expression in the same sub-clause or by the application of any rule of construction such as the ejusdem generis rule, and accordingly none of such sub-clauses or the objects therein specified or the power thereby conferred shall be deemed subsidiary or auxiliary merely to the objects mentioned in any other sub-clause of this clause, and the Company shall have full power to exercise all or any of the powers conferred by any part of this clause in any part of the world.

39. IT IS HEREBY UNDERTAKEN that the Company shall not engage in the banking business, business of a finance, investment, leasing or insurance company, or as a modaraba management company, or the business of land development or a managing agent or any unlawful business and that nothing in the objects clause shall be construed to entitle it to engage in such business.
40. AND that none of such-clauses or the objects therein specified or the powers thereby conferred shall be or be deemed to be subsidiary or ancillary or ancillary merely to the objects mentioned in any of the other sub clause of this clause or any of them but the Company have full power to exercise all or any of the power conferred by any part of this clause in any part of the world, notwithstanding that the business undertaking property rights or acts proposed to be transacted, acquired, dealt with or performed do not fall within the objects of the earlier or any other sub-clauses of this clause or any of them.
- IV. The liability of the Members is limited.
- V. The authorized capital of the Company is Rs.100,000,000 (Rupees: One Hundred Million Only) divided into 10,000,000 (Ten Million only) shares of Rs.10 (Rupees Ten only) each, with power of the Company, specifically, to increase the authorized share capital to include a further issue including of preference shares and generally, to increase or reduce the capital and to divide the shares in the capital for the time being into several classes in accordance with the provisions of the Companies Ordinance, 1984 and any rules made there-under, and to attach thereto respectively such preferential, deferred, qualified or special rights, privileges or conditions as may be determined by or in accordance with the Articles of Association of the Company for the time being, and to vary, modify or abrogate any such rights, privileges or conditions in such manner as may for the time being be provided by the Articles of Association of the Company in accordance with law.



We, the several persons whose name and addresses are subscribed below, are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company indicated herein below against our respective names:

Sr. No.	Name and Surname in Full	Father's / Husband's Name in Full	Nationality with any former Nationality	Occupation	NIC Number	Residential address in full	No. of Shares	Signature
1.	Muhammad Tariq Rafi	Muhammad Rafi	Pakistani	Business	42000-8453226-9	34-H, Block-6, PECHS, Karachi	1	
2.	Abdur Rahim	Muhammad Tariq Rafi	Pakistani	Business	42201-0409988-5	34/H-1, Block-6, PECHS, Karachi	1	
3.	Nighat Tariq	Muhammad Tariq Rafi	Pakistani	Business	42201-9906534-6	34-H, Block-6, PECHS, Karachi	1	
4.	Rahma Ibrahim	Ibrahim Shamsi	Pakistani	Business	42301-0468767-6	House # 59, Street 19, Kh. Badban, DHA-V, Karachi	1	
5.	Alia Sajjad	Sajjad Ahsan	Pakistani	Business	42000-7241258-4	House # 19, Kh. Hilal, DHA, Karachi	1	
6.	Anum Abdur Rahim	Abdur Rahim	Pakistani	Business	42201-8648714-6	34/H-1, Block-6, PECHS, Karachi	1	

Total Shares Taken: 6

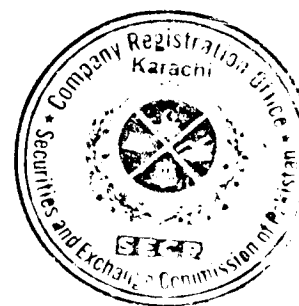
Dated the 19th day of April 2014

Witness to above signatures.

Name: National Institutional Facilitation Technologies (Pvt.) Ltd.

Nationality: Pakistani

Address: 5th Floor, AWT Plaza, I. I. Chundrigar Road, Karachi



Serial No. Page 7 of 7
Name of Company
Brief Description of the document
Date of Registration

Joint Registrar of Companies
Company Registration Office,
Karachi