Gulf Powergen

Gulf Powergen (Pvt) Limited
15-Peshawar Block, Fortress Stadium
Lahore 54810, Pakistan
Tel : 92 (42) 36675595, 36660085
Fax: 92 (42) 36673960, 36664349

Our Ref: GPPL/GLicense/04-221
Dated: April 07, 2014

Registrar
National Electric Power Regulatory Authority
Attaturk Avenue (East), NEPRA Tower,
Opposite Federal Flood Commission, G-5/1,
Islamabad.

APPLICATION FOR GRANT OF GENERATION LICENCE FOR 84 MW GULF POWERGEN THERMAL POWER PLANT

Dear Sir,

I, Haseeb Khan, Chief Executive Officer/Director of Gulf Powergen (Private) Limited (the "GPPL") (Formerly Gulf Rental Power (Private) Limited), duly authorized representative of GPPL having its registered office at 15, Peshawar Block, Fortress Stadium, Lahore, by virtue of the Company resolution dated April 06, 2014 (certified as true copy attached), hereby apply to the National Electric Power Regulatory Authority ("NEPRA") for the grant of a Generation License to GPPL pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

I, also 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 and undertake and confirm 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.

Demand Draft No: BBB10229801 dated April 07, 2014 issued by Allied Bank of Pakistan Limited, Fortress Stadium, Lahore, and payable at any ABL branch in Pakistan, for the sum of Rs.310, 000 (Pak. Rupees three hundred and ten thousand only), being the non-refundable Generation License application fee calculated in accordance with Schedule II to the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999, as amended, is also attached (in original) herewith.

Regards,

Yours Sincerely,
For Gulf Powergen (Private) Limited

Haseeb Khan
Chief Executive Officer

Encl: One original and two copies of Application for Generation License

Gulf Powergen

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RESOLUTION OF BOARD OF DIRECTORS OF
GULF POWERGEN (PVT) LIMITED
PASSED THROUGH CIRCULATION

1. RESOLVED that the draft 'Application for Grant of Generation License for 84 MW Thermal Power Plant at Eminabad, District Gujranwala, Punjab' is hereby approved for submission to the National Electric Power Regulatory Authority (NEPRA);

2. RESOLVED that Mr. Haseeb Khan, Chief Executive and Director of the Company, is hereby given the mandate and authorized to sign and submit to National Electric Power Regulatory Authority (NEPRA) or to its authorized nominee, for and behalf of the company and to proceed with and make any correction and amendment, if required, in finalizing the Application for Grant of Generation License for 84 MW Thermal Power Plant at Eminabad, District Gujranwala, Punjab, as per draft attached with the request for approval paper, prior to its submission to NEPRA;

3. RESOLVED that Mr. Haseeb Khan is hereby authorized to sign the Application for Grant of Generation License for 84 MW Thermal Power Plant at Eminabad, District Gujranwala, Punjab, for and on behalf of the Company; and

4. RESOLVED that these Board Resolutions shall remain in full force and effect until an amending resolution shall be passed by the Board.

Certified to be true copy of the Board Resolution passed through circulation.

A. Rehman B

GULF POWERGEN (PVT) LIMITED LAHORE

Abdur Rehman Babar
Company Secretary

Dated. 6th April, 2014

APPLICATION FOR GRANT OF GENERATION LICENCE

Details of the Applicant

Name and Address of the Applicant

1. **Gulf Powergen (Private) Limited**
   (Formerly Gulf Rental Power (Private) Limited)
   15, Peshawar Block, Fortress Stadium,
   Lahore, Pakistan.

   Phone: +92-42-36675595, +92-42-36660085 & +92-42-36673818

   Fax: +92-42-36664349 & +92-42-36673960

   Email: haseeb@khan.net

   Certificate of Incorporation (Corporate
   Universal Identification No: 0068410 (Copy at Attachment - I)

   Certificate of Incorporation on Change of Name
   021255 – No.ARL/2431 dated 7th August 2013(Copy at Attachment - II)

   Memorandum & Articles of Association (Copy at Attachment - III)

Project Sponsors

2. Major sponsors/shareholders are as under:

   a. White Crystal Limited,
   (a wholly owned subsidiary of **Al Jomaih Group**
   of Kingdom of Saudi Arabia) ..... Main Sponsor
   (Through Mr. Shan A. Ashary)

   b. Mr. Liaqat Khan
   c. Mr. Haseeb Khan
   d. Tanveer Makhdoomi

Grounds for Application

3. Under the "Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997), hereinafter referred to as the NEPRA Act, and the rules and regulations framed thereunder, a Generation Licence is required to be obtained from the National Electric Power Regulatory Authority (NEPRA) for operation of an electric power generation facility. Pursuant to it, Gulf Powergen (Private) Limited (the "**GPPL**") (Formerly Gulf Rental Power (Private) Limited (the "GRPPL")) (the "**Company**") intends to obtain a Generation Licence for its 83.835 MW (Gross Nameplate Rating) generation

facility set up in the year 2010 at Eminabad, Gujranwala, in Punjab province (the "**Project**").

4. A brief background of the Project is that in September, 2008, the GOP decided to allow projects to be set up on rental basis for a period of up to 5 years to meet the power requirements on short-term basis. The concept was that while new IPPs and certain other projects in the public sector would come on stream after 3 to 5 years, the gap was needed to be bridged or at least narrowed within the shortest possible time to maintain economic development and provide relief to the public who have been suffering for a long time due to persistent load-shedding. On 26th September, 2008, PPIB invited bids for the Fast Track Rental Power Projects through ICB (Package I – Rental). In response, the Consortium comprising Al Jomaih Holding Company and Mr. Haseeb Khan submitted a proposal for an RFO-Fired Used Reciprocating Engines-Based Simple Cycle Thermal Power Plant, having a net capacity of 62 MW, to be set up in the area of Gujranwala Electric Power Company **(GEPCO)**, for supply of power/energy to Northern Power Generation Company Limited ("**NPGCL**"). In accordance with the requirement of PPIB's 'Request for Proposal' **("RFP")** documents, the site for the proposed project was selected in Eminabad, District Gujranawala, in consultation with PEPCO. In response to the PPIB's Invitation to Bid, three bids were received which were evaluated by the PPIB in accordance with the provisions of the Bidding Documents. The Sponsor's bid was found to be the first lowest responsive bid. PPIB vide its letter no 1(102) PPIB-2030-04/09/PRJ dated 24th January, 2009 declared Gulf Rental Power (Private) Limited as the lowest qualified bidder and advised the sponsors to approach Northern Power Generation Company (NPGCL), Muzaffargarh, for providing any assistance required to obtain approvals (tariff and amendment in the Generation Licence) from NEPRA. The Consortium members established a new company namely 'Gulf Rental Power (Private) Limited' (**"GRPPL"**) for implementation of the Project. This project was thus awarded to GRPPL on merit through a transparent International Competitive Bidding process.

5. NPGCL, the Power Purchaser, applied to NEPRA on 17th February 2009, for the approval of the tariff for the two approved rental power projects including GRPPL. Meanwhile, GRPPL obtained necessary approvals for the Project including approval dated 28 March 2009 from the Government of Punjab's Environmental Protection Department (EPD). The copy of EPD's approval is placed at Attachment IV. NEPRA, after due consideration, approved the tariff for the Project through its determination dated 13th April 2009. Accordingly, PPIB issued Letter of Award ("**LOA"**) to the Company on 27th April 2009 (Copy of LOA placed at Attachment - V). After completing necessary formalities, the Rental Service Contract ("**RSC**") was signed between NPGCL and GRRPL on 6th September, 2009. NPGCL also obtained Generation Licence from NEPRA.

6. The used Reciprocating Diesel Engines of world renowned manufactures, MAN and Sulzer, fitted with Generators of Siemens and ABB, were selected for the project. All other equipment such as 132 kV substation including step-up transformers, cooling towers, auxiliary boilers, exhaust heat boilers, pumps, piping, cables, etc. was procured brand new

and in accordance with the international standards. The Engines, when procured from China, were in excellent condition and had completed only 23000 to 47000 operating hours as per detail given below:

(a) Three (3) Man-Diesel Engines, Model 9L58/64, 11.9 MW each, with Siemens Alternators. Each Engine had completed 47000 operating hours only;
(b) Two (2) Man-Diesel Engines, Model 9L58/64, 12.5 MW each, with Siemens Alternators. Each Engine had completed 27000 operating hours only; and
(c) Two (2) Wartsila Diesel Engines, Model 16ZAV40S, 11.52 MW each, with ABB Alternator. Each Engine had completed 23000 operating hours only.

The above status of the Engines has been certified by KEMA Netherland B. V., a world renowned consulting/testing firm which was appointed for inspection of the plant equipment and for witnessing testing/commissioning of the plant. KEMA's inspection report and certificates of successful testing and acceptance of the equipment are placed at Attachment VI.

7. The construction of the Plant was commenced in September, 2009. The entire work was completed and the plant was commissioned in about seven months. The Commercial Operations Date (**"COD"**) was successfully achieved on 28th April, 2010. It is added that GRPPL successfully completed all the specified operational tests. These tests were witnessed by the Independent Engineer, KEMA International BV, Holland. KEMA had issued Certificate of Acceptance of Equipment, Certificate of Guaranteed Electrical Output, Certificate of Successful Reliability Run Test to GRPPL, NPGCL, PPIB & Ministry of Water & Power (Copy of KEMA's Certificate of Successful Reliability Run Test and Certificate of Acceptance of Equipment is placed at Attachment - VI). Subsequently, major maintenance and overhauling of all the seven Engines has been carried out.

8. As-Built diagram of the Plant is appended with Schedule II attached to this Application. The Plant had been in commercial operations from COD (28th April, 2010) till 30th March, 2012, when the contract was rescinded on the orders dated 30th March, 2012 given by the Honourable Supreme Court of Pakistan in Suo Moto case & HRC No. 7734-G/2009 & 1003-G/2010 and HRC No. 56712/2010. Till rescission of the RSC, GRPPL had been operating the Plant for twenty three (23) continuous months in accordance with the RSC. Thereafter, the Plant is lying idle but is being properly maintained. As per directions given in the Supreme Court Judgment, NAB investigated the case. Under the aegis of NAB, GRPPL reconciled and settled accounts with NPGCL, pursuant to which, a Settlement Agreement was signed between NPGCL and GRPPL on 20th July, 2012 as witnessed by the representative of the NAB (Copy at Attachment - VII). In the Settlement Agreement, NPGCL has affirmed that the caution (if any) on the Company's properties and accounts stood removed and that the Company was free to dispose of its properties in any manner permitted by Law. It is added that the GPPL, formerly GRPPL, is the exclusive owner of the Plant and Equipment installed at Eminabad. Accordingly, NAB has confirmed through its letter dated 24th July, 2012 (Copy at Attachment - VIII) that the case against GRPPL

including its Sponsors, Directors, Co-Owners, Chairman, Chief Executive, legal heirs, representatives, successors-in-interest, or employees stood closed. As we understand, the Judgment of the Honourable Supreme Court of Pakistan does not debar GRPPL to contract and operate the Plant and sell its production to the Government/Power Utilities under any other Scheme.

9. Gulf Rental Power (Private) Limited) was established as a private limited company and registered under the Companies Ordinance 1984 exclusively for the generation of electric power. In July, 2013, the Board of Directors of the Company decided to rename it as 'Gulf Powergen (Private) Limited' (**"GPPL"**) and applied to the Security and Exchange Commission of Pakistan (SECP) for the proposed change of name. After completing necessary formalities, SECP has issued Certificate of Incorporation on Change of Name (Attachment II) certifying that the name of "Gulf Rental Power (Private) Limited" has been changed to "Gulf Powergen (Private) Limited".

10. The Company intends to operate this plant and is in the process of finding out the Power Purchaser(s) to sell its output. Various options, including the following, are under its active consideration:

    a. Sale of the output of the plant to NTDC as a Short-term Independent Power Producer Project for a period of three (3) years or longer in accordance with the ECC decision dated 27th March, 2014 for utilization of existing available generation capacity.

    b. Sale of the entire/part production capacity of the Plant to any interested bulk power customers like housing societies, industrial parks, etc. All legal requirements will be complied with.

    c. We understand that NEPRA envisages arranging development and operation of a Competitive Trading Market for the power sector in the near future for procurement of electric power through competitive bidding. The Company intends to participate in the Competitive Trading Market, as and when established.

11. The Company requires a Generation Licence before commencing electric power generation business under any of the above options. Therefore, pursuant to the requirements of the NEPRA Act and Rules and Regulations made thereunder, the Company hereby submits this application, in accordance with the NEPRA (Application and Modification Procedure) Regulations, 1999, as amended, for the grant of a Generation Licence for the Plant based on the technical data given in this Application. Documents-in-support as required by the said Regulations are listed hereinafter.

12. The documents-in-support required under Regulation 3(5) of the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999 are as follows:

DOCUMENTS-IN-SUPPORT

Under Regulation 3(5) of the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999

Sub-Regulation	Requirement	Compliance
(5)(a)	Certified copies of: i) Certificate of incorporation ii) Certificate of incorporation on Change of Name; iii) Memorandum & Articles of Association; iv) Last filed annual return;	Certified copies of the required documents are placed at: i) Attachment - I; ii) Attachment - II; iii) Attachment – III; iv) Attachment – IX.
(5)(b)	Profile of experience of applicant, management staff and members	Profiles of experience of Chief Executive, Executive Director/CFO, Project Director, and Maintenance Engineer are placed at Attachment-X.
(5)(c)	C.V's of senior management, technical and professional staff	CVs of the Company's Senior Management, Technical and Professional staff are presented at Attachment - XI.
(5)(d)	Evidence of availability of financial & technical resources: i) Cash balances with bank certificates; ii) Expression of Interest iii) Latest financial statements iv) Employment records of engineering and technical staff v) Profile of sub-contractors vi) Verifiable reference in respect of the experience of the applicant;	Construction of the Project is complete. However, the requisite information is as under: i) ABL, Fortress Stadium, Lahore, cash balance certificate is placed at Attachment - XII. ii) N/A as the construction of the Project is complete in all respects. iii) N/A. The plant has already been constructed, tested, commissioned and has been operating satisfactorily for about two years. iv) The list of engineering, technical and professional staff presently employed by the Company/O&M Contractor is at Attachment – XIII. v) N/A. Plant is already commissioned. vi) Verifiable reference in respect of the experience of the Applicant is placed at Attachment - XIV.
(5)(e)	Details of any charges or encumbrances attached to the Company's assets of going concern	No Charge or encumbrances are attached to the Company assets. However, the Company signed charge documents in favour of Habib Metropolitan Bank for a bank guarantee of

		Rs.375M. Certificate by the Company Secretary is placed at Attachment - XV.
(5)(f)	Technical and financial proposals for the operation and maintenance of a going concern	Technical and financial proposal for the operation and maintenance of the plant is placed at Attachment – XIX.
(5)(g)	Type, technology, model, technical details and design of the facilities	Type: Thermal Power Plant Technology: Reciprocating Engines-based RFO-Fired, Simple Cycle Technical Details/Design: In Attachment – XX.
(5)(h)	Feasibility report (for new facility)	N/A; being an already operating facility.
(5)(i)	A prospectus	Prospectus is placed at Attachment – XXI.

13. The technical, financial and other information as required under Regulation 3(6) of the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999 is as follows:

Schedule III [Regulations 3(6) – A (b)

of the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999

Item No.	Requirement	Details
1	Location (location maps, site map)	Location: Eminabad, District: Gujranwala, Province: Punjab; Location Map is attached with Schedule - II
2	Technology, number of units	Technology: Reciprocating Engines-based RFO-Fired, Simple Cycle Thermal Power Plant Number of Units: Seven (7)
3	Fuel: type, imported/indigenous, supplier, logistic, pipeline, etc.	High Sulphur Fuel Oil, Indigenous, Attock Petroleum Limited, Through Road Tankers
4	Emission values	SOx 705.3 mg/Nm^3 NOx 370.9 mg/Nm^3 PM_{10} 2.0 mg/Nm^3
5	Cooling water source: tube wells, sea/river/canal	Tube-wells
6	Interconnection with national grid company: distance and name of nearest grid, voltage level (single	Plant is interconnected with 132 kV Grid Stations at Eminabad and Kamoke through one 132 kV Circuit each. Single Line diagram is attached with

	line diagram)	Schedule II.
7	Installed Capacity, derated capacity, expected remaining life	Installed Capacity: 83.835 MW Derated Capacity: 65 MW Expected Remaining Life: Thirteen (13) years
8	Due diligence report	Placed at Attachment - XVI.
9	Rehabilitation plans, previous rehabilitation programme	N/A; being an existing facility.
10	Operational record including environmental monitoring data for last five years, constraints in dispatching	Operational Record placed at Attachment – XVII Environmental Monitoring/Audit report at Attachment – XVIII No constraint in dispatching
11	Project cost, information regarding sources and amounts of equity and debt	N/A. The project is already complete in all respects.
12	**Plant Characteristics:** generation voltage, frequency, power factor, automatic generation control, ramping rate, alternative fuel, auxiliary consumption, time(s) required to synchronize to grid	**Plant Characteristics:** a. Generation Voltage — a. 11 kV b. Frequency — b. 50 Hz c. Power Factor — c. Power Factor - Lagging — - 0.80 - Leading — - 0.90 d. AGC — d. No AGC e. Ramping Rate — e. 0.9 MW/Minute f. Alternative Fuel — f. No Alternative Fuel g. Auxiliary Load — g. 3 MW h. Time required to Synchronize to Grid — h. Attached with Schedule 1
13	Training and development	Already provided by the EPC Contractor. Refresher courses will be arranged on as needed basis.

Grant of Generation Licence

14. Authority is requested to grant Generation Licence to the Company i.e. Gulf Powergen (Private) Limited for operation of its 84 MW Thermal Power Plant at Eminabad in District Gujranwala, Punjab for ten (10) years.

ATTACHMENTS

I. Certificate of Incorporation

II. Certificate of Incorporation on Change of Name

III. Memorandum and Articles of Association

IV. Approval by Environmental Protection Department, Government of Punjab

V. Letter of Award Issued by PPIB

VI. KEMA's Inspection Report, Certificate of Successful Reliability Run Test and Certificate of Acceptance of Equipment

VII. Settlement Agreement dated 20th July, 2012 between NPGCL and GRPPL

VIII. NAB's Letter dated 24th July, 2012 regarding Closure of the Case

IX. Last Filed Annual Return u/s 156 of the Companies Ordinance

X. Profile of Experience of Senior Management and Details of Applicant

XI. CVs of the Company's Senior Management Technical and Professional Staff

XII. Bank's Certificate regarding Cash Balance

XIII. List of Engineering, Technical and Professional Staff

XIV. Verifiable Reference in respect of the Experience of the Applicant

XV. No Charge or Encumbrances Certificate

XVI. Due Diligence Report

XVII. Operational Record for the Years 2010, 2011 and 2012 (up to March, 2012)

XVIII. Environmental Monitoring/Audit Report

XIX. Technical and Financial Proposal for Plant Operation & Maintenance

XX. Technical Details and Design of the Plant

XXI. Prospectus

SCHEDULES

Schedule I

Schedule II

SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
COMPANY REGISTRATION OFFICE
(COMPANY REGISTRATION CELL)

Gulf Power

CERTIFICATE OF INCORPORATION

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

Corporate Universal Identification No. 0068410

I hereby certify that GULF RENTAL POWER (PRIVATE) 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 Islamabad this Second day of January, Two Thousand and Nine.

Fee Rs. 39,500/=

14/1/09

(Mumtaz Shahzadi)
Assistant Registrar of Companies

021255

SECP

SECURITIES AND EXCHANGE COMMISSION OF PAKI:

LAHORE

GULF Powergen

CERTIFICATE OF INCORPORATION ON CHANGE OF NAME

[Under section 40 of the Companies Ordinance, 1984 (XLVII of 1984)]

Company Registration No. 0068410

I hereby certify that pursuant to the provisions of section 38 or section 39 of the Companies Ordinance, 1984 (XLVII of 1984), the name of

"GULF RENTAL POWER (PRIVATE) LIMITED"

has been changed to

"GULF POWERGEN (PRIVATE) LIMITED"

and that the said company has been duly incorporated as a company limited by shares under the provisions of the said Ordinance.

This change is subject to the condition that for period of one year from the date of issue of this certificate, the company shall continue to mention its former name along with its new name on the outside of every office or place in which its business is carried on and in every document or notice referred to in clauses (a) and (c) of section 143.

Given under my hand at **Lahore** this **7th** day of **August, Two Thousand and Thirteen.**

Fee Rs.5,000/-

(LIAQAT ALI DOLLA)
Additional Registrar of Companies

No.ARL/ 2495 Dated: 7/8/2013

THE COMPANIES ORDINANCE, 1984

(COMPANY LIMITED BY SHARES)

MEMORANDUM OF ASSOCIATION

OF

GULF POWERGEN (PRIVATE) LIMITED

I. NAME

The name of the Company is Gulf Powergen (Private) Limited.

II. REGISTERED OFFICE

The registered office of the Company will be situated in the Province of Punjab.

III. OBJECT

The objects for which the Company is established are all or any of the following:

1. To develop, design, insure, construct, complete, own, possess, manage, operate and maintain electric power generation plant(s) in Pakistan at such location(s) as the applicable laws/policies permit, and in connection therewith to engage in the business of generation, transmission, sale, supply and distribution of electricity within Pakistan and to do all and everything necessary, suitable, proper, incidental or conducive to the accomplishment of this object and to do every other act or thing incidental or appurtenant to or arising out of or connected with this object.

2. To carry on and undertake the business of construction and development of power plants in all its forms and perspectives and for that purpose to own or acquire all types of land, building and requisite facilities and to do all such acts, deeds or things as would be required for the effective discharge of this object.

3. To acquire or purchase or take on lease or rent or in exchange or hire any kind of machinery, plant, equipment, spare parts, raw materials, natural fuel, supplies and related goods and services necessary and/or incidental to the development, ownership, construction, management, operation and maintenance of power plant(s).

4. To establish and maintain housing, transportation, communication and utility lines and other requisite logistic facilities for the construction, operation and maintenance of power plant(s).

5. To secure, subject to applicable laws, foreign equity and technical collaboration for the development, ownership, construction, operation and management of power plant(s).

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6. To obtain loans, credit and financial facilities in local and/or foreign currency from banks and other financial institutions operating in Pakistan, and subject to necessary approvals under the applicable laws/policies, financing from international sources, proceeds of which are to be used for the development, ownership, construction, operation and maintenance of power plant(s).

7. To mortgage, hypothecate, create charges and other encumbrances on the properties and assets of the Company in such manner and on such terms and conditions as the Company may determine.

8. To enter into any arrangement or agreement with purchasers of power from the power plant(s).

9. To carry out rental agreements of power generating services including services agreement of operation or maintenance with any company including WAPDA.

10. To enter into contracts for the purchase of fuel for the power plant(s), for construction of the power plant(s), for operation and maintenance of the same and other agreements as may be necessary in the conduct and furtherance of business of the Company and to take all actions before competent forums for the enforcement of such agreements and contracts.

11. To take out any insurance that the Company deems necessary or appropriate in connection with the ownership, construction, operation and maintenance of power plant(s) and to pay the premium thereof.

12. To enter into any arrangement with, obtain consents and approvals of, secure interim and final orders from the Government of Pakistan, and any other governmental agency or body and to undertake efforts to promote or modify laws, regulations and policies, and where required, to seek like dispensation from any government or public authority or any corporation or private persons, or any foreign government, authority or person to further the development, ownership, construction, management, operation or maintenance of power plant(s) and to oppose by legal means within or outside Pakistan any actions or measures as are taken by any-governmental or other authority which the Company considers likely to adversely affect the development, ownership, construction, management, operation or maintenance of power plant(s) and to obtain or endeavor to obtain from any governmental or other public authority any charters,

13. To guarantee the performance of contracts and obligations (including payment of loans) of any person providing goods or services in connection with the construction, operation or maintenance of power plant(s) or purchasing electricity generated by power plant(s) but not in any event to carry on the business of banking.

14. To operate, maintain and manage power generation facilities, power stations, power houses and grid stations together with all machinery, equipment and works ancillary thereto and plan, survey, design, supply equipment and to do all such acts, deeds and things, without limitation whatsoever, as may be necessary or desirable in furtherance of the exclusive object for which the Company has been incorporated.

15. To carry on the business as engineers, designers, architects, operators, concessionaries, surveyors, builders, masonry and general construction contractors, erectors and to establish, operate, manage, maintain, equip, construct, repair, renovate, improve, work on, industrial,, commercial and residential buildings, parks, clubs, roads, motorways, highways, playlands, stadiums, gymnasiums, railways, roadways, airports, runways, docks, harbors, wharves, canals, water courses, reservoirs, embankments, irrigations, reclamations, sewerages, drainage and other sanitary works and systems, water, gas, electric and other supply works, godowns, mills, factories, installation and related or other works of all kinds and description and to equip the same or any part thereof with all or any conveniences and utilities which include, but are not limited to, electricity, gas, telephone, internet, drainage and sewage facilities and to do all such acts, deeds or things as would be required for effective discharge of these objects.

16. To carry on the business of estimation, drawing up of specifications and contracts, quantity surveying, supervision and execution of construction works and all installation and maintenance thereof.

17. To equip and furnish any property for the purpose of letting or hiring the same to visitors as guests whether in single or double rooms, suites, chalets, cottages or otherwise.

18. To carry on and undertake trading business of all sorts and to act as indentors, importers, exporters, traders, suppliers and commission agents of products, commodities and materials in any form or shape manufactured or supplied by any company, firm, association of person body, whether incorporated or not, individuals, government, semi-government or any local authority.

19. To apply for, tender, offer, accept, purchase or otherwise acquire any contracts and concessions for or in relation to the projection, execution, carryout out, improvements, management, administrations or control of works and conveniences and to undertake, execute, carry out, dispose of or otherwise turn to account the same.

20. To carry on all or any of the business as manufacturers, buyers, sellers, indentors, importers, exporters, distributors, agents, factors, stockists, commission agents and dealers of engineering goods, machine tools, hand tools, small tools, metals, alloys, iron pipe fittings, nuts and bolts, bicycles and accessories, automobile parts, steel and stainless steel and iron products, cutleries, ores, and scraps.

21. To carry on agency business (except managing agency) and to acquire and hold selling agencies and to act as general agents, selling agents, mercantile agents, commission agents, carrier's agents, shipping agents, clearing and forwarding agents, indenting agents, managers, advertisers, stockists, manufacturers' representative and distributing agents of and for the distribution of all kinds of local and foreign merchandise, goods, commodities, products, materials, substances, articles and things whether finished, semi-finished, raw, under process, refined, treated or otherwise pertaining to trade and commerce and for that purpose to remunerate them and to open and maintain depots and branches.

22. To purchase, take on lease or in exchange, hire, apply for or otherwise acquire and hold for any interest, any rights, privileges, lands, building, easements, trade marks, patents, patent rights, copyrights, licenses, machinery, plants, stock-in-trade and any movable and immovable property of any kind necessary or convenient for the purposes of or in connection with the Company's business or any branch or department thereof and to use, exercise, develop, grant licenses in respect of or otherwise turn to account any property, rights and information so acquired, subject to any permission required under the law.

23. To act as representatives, for any local or foreign person, firm or company and to undertake and perform sub-contracts, and also act in the business of the Company through or by means of agents, sub-contractors and to do all or any of the things mentioned herein in any part of the world and either alone or in collaboration with others and by or through agents, sub-contractors or otherwise.

24. To enter into agreement(s) with any government or authority (foreign, supreme, municipal, local or otherwise) or any corporation, company or persons that may seem conducive to the Company's objects or any of them and to obtain from any such government, authority, corporation, company or person any charters, contracts, rights, privileges and commission which the Company may think desirable and to carry on exercise and comply with any such charters, contracts, decrees, rights, privileges and concessions.

25. To apply for and obtain necessary consents, permissions and licenses, rights, privileges and concessions from any local or foreign Government, State, Municipal, Local and other authorities or persons for enabling the Company to carry on its objects and to oppose any proceedings or application which may seem calculated directly or indirectly to prejudice the interests of the Company.

26. To, subject to the approval of the competent authority, make, amend and modify Articles of Association and rules and regulations not inconsistent with this Memorandum of Association to provide for all matters for which provision is necessary or expedient for the purpose of giving effect to the provisions of this Memorandum of Association and the efficient conduct of its objects.

27. To adopt such means of making known the Company as may seem expedient and in particular by advertising in the media, by circulars, by purchase and exhibition of works of art or interests, by publication of books and periodicals.

28. To appoint agents, sub-agents, attorneys, consultants, and contractors or to act as agent, sub-agent, attorney, consultant, and contractor in connection with the objects of the Company but not to act as managing agents.

29. To open, close and operate bank accounts of the Company with any bank or banks, financial institutions or co-operative societies and to draw, make, accept, endorse, discount, execute and issue promissory notes, bills of exchange, bills of lading, warrants, debentures and other negotiable or transferable instruments, but not to act as a finance or banking company.

30. To borrow or raise money in such manner as the Company shall think fit in pursuance of its objects, and in particular by the issue of debentures, or debenture stock (perpetual or otherwise), Modaraba Certificates, Participation Term Certificates, Term Finance Certificates or otherwise and by issue of all securities including securities not based on interest for raising redeemable capital, resource funds from banks or financial institutions and by issue of shares in lieu of outstanding balance of any loan and by issue of securities as required by the rules and regulations of the banks, financial institutions and loan giving agencies and to secure the repayment of any money borrowed, raised or owing by mortgage, charge or lien upon all or any of the property or assets of the Company (both present and future).

31. To sell, improve, manage, develop, exchange, lease, mortgage, enfranchise, dispose of or otherwise deal with, all or any part of the property, assets or undertaking of the Company for such consideration as the Company may think fit and to distribute among the members in specie any property of the Company, or any proceeds of sale or disposal of any property of the Company, but so that no distribution amounting to a reduction in capital may be made without the sanction of the Court, if required.

32. To make (subject to the applicable laws) loan, advance to any company and/or undertaking and/or person and/or give any guarantee or provide any security (including but not limited to charge, lien or mortgage of any of the company's assets) in order to secure the repayment of any loan, finance or advance obtained or to be obtained by such company and/or undertaking and/or person from any bank or financial institution.

33. To accept or give security, including but not limited to promissory notes, indemnity bonds, guarantees, assignments, receipts, bailments, pledges, hypothecations, liens, mortgages and charges, against the credit extended or moneys borrowed in connection with its objects.

34. To employ and remunerate managers and other officers, employees and servants of the Company or any person or firm or company rendering services to the Company upon such terms as the Company may determine.

35. To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension, superannuation funds for the benefit of, and give or procure the giving of donations, gratuities, pensions, allowances or emoluments to any person who are or were at any time in the employment or service of the Company, or who are or were at any time directors or officers of the Company and the wives, widows, families and dependents of any such persons, and also to establish and subsidise and subscribe to any institutions, associations, clubs or funds calculated to be for the benefit of or to advance the interest and well-being of the Company.

36. To enter into a joint venture or a partnership or cooperation with any person or company or other legal entity, local or foreign, or otherwise assist any such person or company or legal entity in furtherance of its objects.

37. To pay out of the funds of the Company all expenses of and incidental to the formation, registration, advertisement of the Company and the issue and subscription of the share or loan capital or placing or guaranteeing the placing of shares or any debentures, debenture-stock and other securities of this Company and also all expenses relating to the issue of any circular or notice and the printing, stamping, circulating of proxies and forms to be filled up by the members of the Company.

38. To insure the property, assets, and employees of the Company in any manner deemed fit by the Company, and to create any reserve funds, sinking fund, insurance fund or any other special fund whether for depreciation or for repairing, insuring, improving, extending or maintaining any of the property of the Company or for any other purpose conducive to its objects but not to act as an insurance company.

39. To subscribe for, take or otherwise acquire and hold shares, debentures or securities of 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 and to invest the moneys not immediately required for the business of the Company in, and to hold, sell and deal with the stocks, shares, bonds, debentures, debenture stocks, PTCs, TFCs, mutual fund certificates, NIT units, Modaraba certificates or certificates of investment obligations, notes and securities of any Government, Province, company, Corporation, Municipal or Local or other Body or Authority and to deal with the monies of the Company for such purposes conducive to the interest of the Company and to vary investments from time to time but not to act as an investment company.

40. To receive, declare and distribute profits and to capitalize such portion of the profits of the Company as are not distributed among shareholders of the Company in the form of dividends, and as the Directors of the Company may think fit, and to issue bonus shares, as fully paid up, in favour of the shareholders of the Company.

41. To subscribe or contribute or otherwise to assist or to guarantee money to charitable, benevolent, religious, literary, scientific, technical, national, public or any other institutions or for any exhibition or purpose.

42. To file or register any document required to be filed or registered under law, and to pay any fees, charges, expenses, rents, taxes, duties and other dues payable in connection with its objects.

43. To settle disputes by negotiation, reconciliation, arbitration, litigation or other means and to enter into compromise with creditors, members and any other persons in respect of any difference or dispute with them.

44. To establish laboratories, research and development centers to perform such research and development as the Company may deem advisable or feasible, and to expend money on experimenting upon and testing and improving or securing any process, or processes, patent or protecting any invention or inventions which the Company may acquire or propose to acquire or deal with in furtherance of its objects.

45. To develop and/or transfer technology and to acquire or pass on technical know-how incidental or conducive to the attainment of its objects.

46. To train personnel and workers, both in Pakistan and abroad to obtain technical proficiency in various specialties connected with its objects.

47. To do all such other things as may be deemed incidental or conducive to the attainment of the main objects or any of them in any part of the world, and as principals, agents, contractors, trustees or otherwise, and by or through trustees, agents or otherwise and either alone or in conjunction with others.

48. It is hereby declared that:

    (a) The word "company" in this clause except where used in reference to this Company, shall be deemed to include any partnership or other body of persons, whether corporate or un-incorporate, and whether domiciled in Pakistan or elsewhere.

    (b) The Company shall have full authority, power and competence to do any and all other things and acts to further the activities specified in sub-Clauses 1 to 47 in support of and in relation to (directly or indirectly) of the objects of the Company.

    (c) Notwithstanding anything contained in the foregoing Object Clause of this Memorandum of Association, nothing contained therein shall be construed as empowering the Company to undertake or indulge in the business of banking company, banking, leasing, investment, managing agency or insurance business directly or indirectly as restricted under law or in any lawful operation.

    (d) The Company would not indulge in any sort of real estate business, housing colonies/purchase and sale of plots and developments of land and housing finance company business as required by the applicable laws.

(e) The Company undertakes that the Company shall not, by advertisement, pamphlets, or by any other means or through negotiation offer for sale or take advance money for further sale of plots, houses, flats etc to the general public or individuals unless such plots, houses flats etc are owned and/or have been developed by the Company.

(f) Notwithstanding any thing stated in the foregoing Object Clauses of this Memorandum of Association, the Company shall obtain such other approval or license from competent authority, as may be required under any law for the time being in force, to undertake a particular business.

IV. LIABILITY

The liability of the members is limited.

V. SHARE CAPITAL

The Authorized Capital of the Company is Rs. 500,000,000/- (Rupees Five Hundred Million only) divided into 50,000,000 ordinary shares of Rs. 10/- (Rupees Ten only) each with powers to increase and reduce the Capital of the Company 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

We, the several persons whose names 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 as set opposite to our respective names.

Name and Surname (Present & Former) in Full (in Block Letter)	Father's / Husband's Name in Full	Nationality	Occupation	Residential Address (in Full)	Number Of shares taken by Each subscriber	Signature
1. White Crystal Limited		Cayman Island	Company	Citco Trustees (Cayman) Limited, Leeward One building, Corporate Centre, West Bay Road, Grand Cayman, Cayman Island	349	
Represented by Shan-E-Abbas Ashary, BA 508353	Ali Abbas Ashary	Canadian	Businessman	H.No. 15/1, Khayaban-i-Muhafiz, Phase-VI, DHA, Karachi		
2. Shan-E-Abbas Ashary, BA 508353	Ali Abbas Ashary	Canadian	Businessman	H.No. 15/1, Khayaban-i-Muhafiz, Phase-VI, DHA, Karachi	1	
3. Liaqat Ali 16302-4930437-1	Haji Munir Khan	Pakistani	Businessman	H.N 1015-C, Canal View, Lahore	100	
4. Haseeb Khan 35201-4261577-3	Sardar Abdul Muqeet Khan	Pakistani	Chartered Accountant	H.No 254, St 9, Cavalry Ground Ext Lahore (Cantt)	100	
5. Asian Energy Ventures Ltd		British Virgin Island	Company	3rd floor, Geneva Place, Waterfront Drive, P.O Box 3175, Road Town, Tortola, British Virgin Island	148	
Represented by Muhammad Tanvir Masroor Makhdomi 42301-2124786-9	Muhammad Sarwar Makhdomi	Pakistani	Businessman	H.No 12-B, 6th Central Lane, Phase-II, DHA, Karachi		
6. Muhammad Waqas Mohsin 42301-8916034-1	Muhammad Yousaf Mohsin	Pakistani	Businessman	H.No 41/2, St.25, Khayaban-i-Mujahid, Phase-5, DHA, Karachi	1	
7. Muhammad Tanvir Masroor Makhdomi 42301-2124786-9	Muhammad Sarwar Makhdomi	Pakistani	Businessman	H.No 12-B, 6th Central Lane, Phase-II, DHA, Karachi	1	
				TOTAL	1000	

Date this .....31st.... day of ...December...2008

Witness to the above Signature.

Full Name: .....Abdur Rehman Babar.....

Father's Name: .....Ghazanfar Hussain Khan.....

Signature.....

Nationality: .....Pakistani.....

occupation: .....Private Service.....

Full Address: ...15-Peshawar block, Fortress...

.....Stadium, Lahore (Cant).....

14/12/08

THE COMPANIES' ORDINANCE' 1984

-:o:-

(PRIVATE COMPANY LIMITED BY SHARES)

-:o:-

ARTICLES OF ASSOCIATION

OF

GULF POWERGEN (PRIVATE) LIMITED

PRELIMINARY

1. Subject as hereinafter provided, has Regulation contained in Table 'A' of the First Schedule to the Companies Ordinance, 1984, (hereinafter referred to as Table 'A') shall apply to the Company so far as those are applicable to Private Companies, with the exception of the Regulation which are modified, altered or added hereunder.

PRIVATE LIMITED COMPANY

2. The Company is a Private Company within the meaning of Clause (28) of Section 2(1) of the Companies Ordinance, 1984 and accordingly

   (a) No invitation shall be issued to the public to subscribe for any shares, debentures or debenture-stocks of the Company.

   (b) The number of members of the Company (exclusive of persons in the employment of the company) shall be limited to fifty provided that for the purpose of this provision whets two or more persons hold one or more shares in the Company jointly they shall for the purposes of this clause be treated as a single member and

   (c) The right to transfer shares in the Company is restricted in the manner and to the extent hereinafter appearing.

BUSINESS

3. The Company is entitled to commence business from the date of its incorporation.

4. The business of the company shall include all or any of its objects enumerated in the Memorandum of Association.

5. The business of the company shall be carried out at such place or places in the whole of Pakistan or elsewhere as the Directors may deem proper or advisable from time to time.

GPU/F Powergen

GPU/F Powergen

CAPITAL

6. The Authorised Capital of the Company is Rs. 500,000,000/- (Rupees Five Hundred Million only) divided into 50,000,000 ordinary shares of Rs. 10/- (Rupees Ten only) each with powers to increase, reduce, consolidate, sub-divide or otherwise re-organize the share capital of the Company.

7. The shares shall be under the control of the Board of Directors who may allot or otherwise dispose of the same to such persons, firm, corporation or corporations on such terms and conditions and at any such time as may be thought fit.

8. The shares in the capital of the Company may be allotted or issued in payment of any property, land, machinery or goods supplied or any services rendered to the Company or promotion or formation of the Company or conduct of its business and any shares so allotted may be issued as fully paid shares.

SHARES, TRANSFER AND TRANSMISSION

9. Every person whose name is entered as a member in the Register of Members shall without payment, be entitled to a certificate under the Common Seal of the Company specifying the shares held by several persons. The Company shall not be bound to issue more than one certificate and delivery of a share certificate to any one of several joint holders shall be sufficient delivery to all.

10. The Directors may decline to register any transfer of share to transferee of whom they do not approve and shall not be bound to show any reasons for exercising their discretion subject to the provisions of Section 77 and 78 of the Companies Ordinance, 1984.

11. No share can be mortgaged, pledged, sold, hypothecated, transferred or disposed off by any member to non-member without the previous sanction of the Board of Directors.

12. The legal heirs, executors or administrators of a deceased holder shall be the only persons to be recognised by the Directors as having title to the share. In case of shares registered in the name of two or more holders the survivors and the executors of the deceased shall be the only persons to be recognised by the Company as having any title to the shares.

GENERAL MEETING

13. The First Annual General Meeting shall be held within 18 months from the date of incorporation of the Company in accordance wills the provisions of Section 158 and thereafter once at least in every year and within a period of three months following the close of its financial year and not more than fifteen months after the holding of its last preceding Annual General Meeting as may be determined by Directors. The Directors may, whenever they think fit, call an Extraordinary General Meeting of the shareholders in terms of Section 159 of the Companies Ordinance, 1984.

PROCEEDINGS AT GENERAL MEETING

14. Twenty one days' notice at least specifying the place, day and hour of the General Meeting and in case of special business the general nature of such business, shall be given to the member in the manner provided in Table "A" but accidental omission to give such notice to or non-receipt of such notice by the member shall not invalidate the proceedings of use General Meeting.

15. The Chairman, with the consent of a meeting at which quorum is present and shall if so directed by the meeting 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.

QUORUM,

16. No business shall be transacted at any General Meeting unless a Quorum of member is present at the time when use meeting proceeds to business. Two members, present in person, representing not less than 51% of the total voting power either on their own account or as proxies, shall from a Quorum for a General Meeting.

VOTES OF MEMBERS

17. At any General Meeting a resolution put to the vote of the General Meeting shall be decided on a show of hands, unless a poll is demanded its accordance with the provisions of Section 167 of Site Companies Ordinance, 1984.

18. On a show of hands every member present shall have one vote and on a poll, every member present in person or by proxy shall have one vote in respect of each share held by him.

19. The instrument appointing a proxy and the power of attorney or other authority under which it is signed or notarially certified copy of that power of attorney or authority shall be deposited at the Registered Office of the Company 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 will not be treated as valid.

CHAIRMAN

20. The Directors may from time to time appoint one of their members to be the Chairman of the Company for a period not exceeding three years on such terms and conditions as they deem fit. The Chairman shall preside over the meetings of such Board of Directors and members of the Company. In his absence, the Directors may elect one of them to preside over Board's General Meetings. The questions arising at the meeting of such Directors shall be decided by a majority of votes. In the case of equality of votes, the Chairman or the Director presiding over the meeting, as the case may be, shall have a casting vote.

NOMINEE DIRECTOR

31 In addition to the elected Directors, the financial institutions shall be entitled, during the period of their respective loan(s) to the Company to appoint one person on the Board of Directors of the Company to be called Nominee Director and to recall and/or replace such a person from time to time. Such Nominee Director on the Board of Directors of the Company may not be holders of share(s) in the Capital of the Company and regulations and/or rules pertaining to the election, retirement, qualification and/or disqualification of Directors shall not apply to him.

NOTICES

32. Notices for every meeting of the Board of Directors will be given in writing and there must be given a reasonable time in advance the nature of the business to be transacted at an intended Board meeting will be specified in the notice.

MANAGEMENT

33. The whole business and affairs of the Company shall, subject to the control and supervision of the Board of Directors, be managed and controlled by the Chief Executive.

34. A resolution in writing circulated to all the Directors and signed by a majority of the total number of Directors or affirmed by them through secured email, facsimile, telex or telegram shall be as valid and effectual as if it had been passed at a meeting of the Directors duly convened and held.

35. Subject to the limit fixed by the Directors, the Chief Executive may from time to time raise or borrow any sums of money for and on behalf of the Company from other companies, person, banks or financial institutions on such terms as may be approved by the Board of Directors from time to lime.

36. Without prejudice to the powers conferred by these Articles, the Board of Directors shall have the following powers:-

(a) To take on lease, purchase, erect or otherwise acquire for the Company any assets, stocks, land, buildings, property, rights or privileges which the Company is authorised to acquire at such price and generally on such terms and conditions as they think fit.

(b) To let, mortgage, sell, exchange or otherwise dispose of absolutely or conditionally all or any part of the assets, stocks, raw material, properties, privileges and undertaking of the Company upon such terms and conditions for such consideration as they think fit.

(c) To appoint any person or persons to be attorney or attorneys of the Company for such purposes and with such powers, authorities and discretion's and for such period and subject to such conditions as they may, from time to time, think fit.

(d)To enter into, carry out, rescind or vary all financial arrangements with any bank, person, company, firm or corporation or in connection with such arrangements to deposit, pledge or hypothecate property of the Company or the documents representing or relating to the same.

(e) To make and give receipts, release and discharge all moneys payable to the Company and for the claims and demands of the Company.

(f)To compound or allow time to the payment or satisfaction of any debt due to or by the Company and any claim and demands by or against the Company and to refer claims or demands by or against Site Company to arbitration and observe and perform the awards.

(g)To institute, prosecute, compromise, withdraw or abandon any legal proceedings by or against the Company or its affairs or otherwise concerning the affairs of the Company.

(h)To raise and borrow money from time to time for the purposes of the Company, on the mortgage of its property or any part thereof and/or on any bond or debenture payable to bearer otherwise on interest and repayable in such a manner and generally upon such terms as they think fit.

(i) To open, operate and maintain bank/banks account(s) individually or jointly as the Board may authorise or to any other person on its behalf.

BORROWING POWERS

37. The Directors may from time to time raise, borrow or secure the payment of any sum for the purposes of the Company in such manner and upon such terms and conditions as they think fit and in particular by the issue of debentures, debenture-stock or other securities charged upon all or any part of the property of the Company present or future.

38 Debentures, debenture-stock, bonds or other securities may be issued with any special privileges as to redemption, surrender, allotment of shares, attending and appointment of Directors or other privileges subject to any permission required by law.

THE SEAL

39. The Company shall have a Common Seal and the Directors shall provide for the safe custody of the same The Seal shall not be applied on any instrument except by the authority of the Board of Directors and in the presence of at-least two Directors who shall sign every instrument to which site Seal shall be affixed in their presence. Such signature shall be conclusive evidence of the fact that the Seal has been properly affixed.

ACCOUNTS

40. The Directors shall cause to be kept proper books of account as required under Section 230 of the Companies Ordinance, 1984.

41. The books of account shall be kept at the registered office of the Company or at such other place at the Directors shall think fit subject to the provisions of Section 230 of the Companies Ordinance, 1984.

AUDIT

42. Once at least in every year the accounts of the Company shall be audited and correctness of the Balance Sheet shall be ascertained by one or more Auditors. The Auditors shall be appointed and their duties regulated in accordance with the provisions of Section 252 So 255 of the Companies Ordinance, 1984

INDEMNITY

43. In connection with carrying on the business of the Company, the Chief Executive, every Director, or other officers of the Company shall be indemnified by the Company for all losses and expenses occasioned by error of judgement or oversight on his part, unless the same happens through his own dishonesty or willful act and defaults.

SECRECY

44. No member shall be entitled to visit and inspect the Books of the Company without the permission of the Chief Executive or one of the Directors or to require discovery of any information regarding any detail of the Company's business or any matter which is or may be in the nature of trade secret, or secret process which may relate to the conduct of the Company's business and which in the opinion of the Directors, will not be in the interest of the members of the Company to communicate to the public.

ARBITRATION

45. Whenever any difference arises between Site Company on the one hand and the members, their executors, administrators or assignee on the other hand, touching the true intent or construction or the incident or consequence of these present or of the statutes or touching any thing thereafter done, executed, omitted or suffered its pursuance of these presents or otherwise relating to these presents or to any statutes affecting the Company, every such difference shall be referred for the decision of the arbitrator or umpire under the Arbitration Act, 1940 as amended from time to time.

46. The cost incidental to any such reference and award shall be at the discretion of the arbitrator or umpire respectively who may determine the amount thereof and direct-the same to be shared between the attorney and client or otherwise and may award by whom and in what manner the same shall be borne and paid.

WINDING UP

47. If the company is wound up whether voluntarily or otherwise the liquidator may, with the sanction of a special resolution, divide among the contributories in specie any part of the assets and liabilities of the Company, subject to Section 421 and other provisions of the Companies Ordinance, 1984 as may be applicable.

We, the several persons whose names 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 as set opposite to our respective names.

Name and Surname (Present & Former) in Full (in Block Letter)	Father's / Husband's Name in Full	Nationality	Occupation	Residential Address (in Full)	Number Of shares taken by Each subscriber	Signature
1 White Crystal Limited		Cayman Island	Company	Citco Trustees (Cayman) Limited, Leeward One building, Corporate Centre, West Bay Road, Grand Cayman, Cayman Island	349	
Represented by						
Shan-E-Abbas Ashary, BA 508353	Ali Abbas Ashary	Canadian	Businessman	H.No. 15/1, Khayaban-i-Muhafiz, Phase-VI, DHA, Karachi		
2 Shan-E-Abbas Ashary, BA 508353	Ali Abbas Ashary	Canadian	Businessman	H.No. 15/1, Khayaban-i-Muhafiz, Phase-VI, DHA, Karachi	1	
3 Liaqat Ali 16202-4940437-1	Haji Munir Khan	Pakistani	Businessman	H.N 1015-C, Canal View, Lahore	400	
4 Haseeb Khan 3520[illegible]-251577-3	Sardar Abdul Muqeet Khan	Pakistani	Chartered Accountant	H.No 254, St.9, Cavalry Ground Ext. Lahore (Cant)	100	
5 Asian Energy Ventures Ltd		British Virgin Island	Company	3rd floor, Geneva Place, Waterfront Drive, P.O Box 3175, Road Town, Tortola, British Virgin Island	148	
Represented by						
Muhammad Tanvir Masroor Makhdomi 42301-2124786-9	Muhammad Sarwar Makhdomi	Pakistani	Businessman	H.No.12-B, 6th Central Lane, Phase-II, DHA, Karachi		
6 Muhammad Waqas Mohsin 42301-8916034-1	Muhammad Yousaf Mohsin	Pakistani	Businessman	H.No. 41/2, St.25, Khayaban-i-Mujahid, Phase-5, DHA, Karachi	1	
7 Muhammad Tanvir Masroor Makhdomi 42301-2124786-9	Muhammad Sarwar Makhdomi	Pakistani	Businessman	H.No.12-B, 6th Central Lane, Phase-II, DHA, Karachi	1	
				TOTAL	1000	

Date this ....31st.... day of ...December.....2008

Witness to the above Signature:

Full Name: .....Abdur Rehman Babar.....

Father's Name: .....Ghazanfar Hussain Khan ....

Signature .....

Nationality: .....Pakistani.....

occupation: .....Private Service.....

Full Address: ...15-Peshawar block, Fortress.....

.....Stadium, Lahore (Cant).....

14/4/2009

6/5/86
06/2/13

FORM 29

"THE COMPANIES ORDINANCE, 1984

(Section 205)

PARTICULARS OF DIRECTORS AND OFFICERS, INCLUDING THE CHIEF EXECUTIVE, MANAGING AGENT, SECRETARY, CHIEF ACCOUNTANT, AUDITORS AND LEGAL ADVISER, OR OF ANY CHANGE THEREIN

1. Incorporation Number: **0068410**

2. Name of the Company: **GULF POWERGEN (PRIVATE) LIMITED**
(Formerly Gulf Rental Power (Private) Limited)

Gulf Powergen

3. Fee Paid (Rs.) | Name & Branch of The Bank

4. Receipt No. | Date: Day Month Year

5. Mode of payment (Indicate)

6. **Particulars*:**

Present Name in Full	NIC No or passport No. in case of Foreign National	Father's/ Husband's Name	Usual residential address	Designation	Nationality**	Business Occupation*** (if any)	Date of present appointment or change	Mode of appointment / change / any other Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
6.1 New appointment/election:								
HASEEB KHAN	35201-1261577-3	SARDAR ABDUL MUQEET KHAN	H.No.254, STREET. 9, CAVALRY GROUND EXT, LAHORE (CANTT)	Chief Executive	PAKISTANI	-	30-10-2012	Continue
SHAN-E-ABBAS ASHARY	423011-994845-9	ALI ABBAS ASHARY	H.NO. 15/1, KHAYABAN-I-MUHAFIZ, PHASE-VI, DHA, KARACHI	DIRECTOR	PAKISTANI	-	30-10-2012	Continue
LIAQAT KHAN	16202-4940437-1	HAJI MUNIR KHAN	H.NO. 11, ST.32, F-7/1, ISLAMABAD	DIRECTOR	PAKISTANI	-	30-10-2012	Continue
HASEEB KHAN	35201-1261577-3	SARDAR ABDUL MUQEET KHAN	H.No. 254, STREET. 9, CAVALRY GROUND EXT, LAHORE (CANTT)	DIRECTOR	PAKISTANI	-	30-10-2012	Continue
MUHAMMAD TANVIR MASROOR MAKHDOMI	42301-2124786-9	MUHAMMAD SARWAR MAKHDOMI	H.No.12-B, 6th CENTRAL LANE, PHASE-II, DHA, KARACHI	DIRECTOR	PAKISTANI	-	30-10-2012	Continue

ABDUR REHMAN BABAR	35201-1389376-3	GHAZANFAR HUSSAIN KHAN	H.NO.47, EDEN AVENUE, GHAZI ROAD, LAHORE (CANT)	COMPANY SECRETARY	PAKISTANI	-	28-02-2009	Cont[illegible]e
FAISAL & PARTNERS Partners 1. Faisla Islam 2. Abid Chatta	-	-	129-SHAMI ROAD, LAHORE (CANT)	LEGAL ADVISOR	PAKISTANI	ADVOCATE	30-10-2011	Contin[illegible]e
HYDER BHIMJEE & COMPANY	-	-	AMIN BUILDING, 65- THE MALL, LAHORE	AUDITOR	PAKISTANI	CHARTERED ACCOUNTANT	30-10-2013	Retired & Re-Appointed

6.2 Ceasing of office/Retirement/Resignation:

MUHAMMAD WAQAS MOHSIN	42301-8916034-1	MUHAMMAD YOUSAF MOHSIN	41/2 STREET 25, KHAIBAN MUJAHID PHASE 5, DHA, KARACHI,	DIRECTOR	PAKISTANI	-	28-11-2013	Resigned

6.3 Any other change in particulars relating to columns (a) to (g) above:

7. Name of Signatory	Abdur Rehman Babar	**8. Designation**	Company Secretary
9. Signatures of Director	A Rehman B	**10. Date**	Day: 0 6 / Month: 1 2 / Year: 2 0 1 3

14/1/2014

Attachment - XXI

Prospectus

PROSPECTUS

i. Brief details of the Applicant and Introduction of the Company

a) Details of the Applicant

Name and Registered Office:

Gulf Powergen (Private) Limited,
(Formerly Gulf Rental Power (Private) Limited)
15 – Peshawar Block, Fortress Stadium, Lahore Cantt.

Phone: +92-42-36675595, +92-42-36660085 & +92-42-36673818
Fax: +92-42-36664349 & +92-42-36673960Email: haseeb@khan.net

b) Location of the Project

Eminabad, District Gujranwala, Punjab.

c) Project Sponsors

Major sponsors/shareholders are as under:

- Mr. Shan A. Ashray,
  White Crystal Limited,

a wholly owned subsidiary of Al Jomaih Group of Saudi Arabia ..... Main Sponsor

- Mr. LiaqatKhan
- Mr. Haseeb Khan
- Mr. TanveerMakhdoomi

d) Representative of Gulf Powergen (Private) Limited

Mr. Haseeb KhanChief Executive & Director
Mr. Abdul Rashid — Executive Director/CFO & Company Secretary
Mr. Tahir AnwarProject Director
Mr. Muhammad YounasMaintenance Engineer

e) Introduction

Pursuant to PPIB's 'Invitation to Bid' for Fast Track Rental Power Projects through ICB (Package I – Rental) issued in September, 2008, the project sponsors as listed above having the requisite technical and financial strength constituted a consortium and submitted a proposal for an RFO-Fired Used Reciprocating Engines-Based Thermal Power Plant, having a net capacity of 62 MW, to be set up at Eminabad, Gujranwala, for supply of power/energy to Northern Power Generation Company Limited ("**NPGCL**"). The Site for the proposed project was selected in consultation with PEPCO in accordance with the requirement of

PPIB's Request for Proposal **("RFP")** documents. In response to the tender, three bids were received which were evaluated in accordance with the tender provisions. The Sponsor's bid was found to be the first lowest responsive bid. Two bids including that of the sponsors were selected for tariff determination by NEPRA and then award of the contract. The Consortium members established a new company namely 'Gulf Rental Power (Private) Limited' (**"GRPPL"**) for execution of the Project. This project was thus awarded to GRPPL on merit through a transparent International Competitive Bidding process. NPGCL applied to NEPRA for approval of the tariff on 25th February 2009. NEPRA, after due consideration, approved the tariff for the Project through its determination dated 13th April 2009. Accordingly PPIB issued LOA (Attachment - V) to the Company on 27th April 2009. After completing necessary formalities, the Rental Service Contract ("RSC") was signed between NPGCL and GRRPL on 6th September, 2009. Being a rental plant and the Equipment vested in its name, NPGCL obtained Generation Licence from NEPRA. The construction of the Plant was completed and GRPPL successfully completed all the specified operational tests. These tests were witnessed by the Independent Engineer, M/s KEMA International BV, Holland. M/s KEMA had issued Certificate of Acceptance of Equipment, Certificate of Guaranteed Electrical Output, Certificate of Successful Reliability Run Test to GRPPL, NPGCL, PPIB & Ministry of Water & Power. Accordingly, the Commercial Operations Date (**"COD"**) was successfully achieved on 28th April, 2010. The Plant had been in commercial operations from COD till 30th March, 2012, when the contract was rescinded on the orders of the Honourable Supreme Court of Pakistan. Generation Licence was also cancelled. Details are given in the application. The Company is in the process to sell output of this Plant to a prospective Buyer as discussed in the application. In the meantime, the Company intends to obtain Generation Licence so as operate the Plant immediately after completion of the formalities. As regards sponsors and renaming of the Company, details are given above.

ii. Salient Features of the Facility

It is an existing power generation facility constructed and commissioned in 2010. It has a name-plate rating of 83.835 MW, is de-rated to 65 MW and is a Reciprocating Engine-based, RFO-Fired, Simple Cycle operation plant. The salient features of the Power Generation Facility are as under:

a. Engines

- Make/Model**Man Diesel/9L 58/64**
- Capacity2 x 12.51 MW + 3 x 11.925 MW
- Make/Model**Sulzer/16V 40ZS**
- Capacity2 x 11.52 MW
- Total Gross ISO Output83.835 MW
- De-rated Capacity at Site Conditions65 MW
- Auxiliary Consumption and Electrical Losses3.0 MW (Approx.)
- Guaranteed Net Output at Reference Conditions62.0 MW

b. Generators

	Siemens	ABB
• Make		
• Output (MVA)	2x14.2 + 3x14.5	2x14.7
• Rated Voltage (kV)	11	10.5
• Frequency (Hz)	50	50
• Power Factor	0.80	0.76

c. Lube Oil System

d. Radiator based Cooling System for High Temperature Circuit and Cooling Tower for Low Temperature Circuit

e. Firefighting System

f. 132 kV Switchyard complete with 2x40/50 MVA Step-up Transformers, Auxiliary Transformers, Two Line Bays with Control Equipment for two Outgoing Feeders, etc.

g. MV and LV Switchgear, Control and Protection Equipment

h. Metering System, Accuracy Class: ± 0.5%

i. Mechanical Auxiliary Systems

j. Weather Station for measuring wind speed/direction, ambient temperature, humidity, etc.

k. Civil Works – Building Structure including Engine Hall Building, Control Room, Equipment Foundations, Laboratory/Workshop

l. Fuel Supply System including Decanting Facilities and 5500 M. Tons Oil Storage Tank

m. Water Supply System

n. Waste Water Disposal System within and beyond the Plant boundary

The used Reciprocating Diesel Engines of world renowned manufactures, MAN and Sulzer,fitted with Generators of Siemens and ABB,were selected for the project. All other equipment such as 132 kV substation including step-up transformers, cooling towers, auxiliary boilers, exhaust heat boilers, pumps, piping, cables, etc.was procured brand newand in accordance with the international standards. The Engines, when procured from China, were in excellent condition and had completed 23000 to 47000 operating hours as per detail given below:

(a) Three (3) Man-Diesel Engines, Model 9L58/64, 11.9 MW each, with Siemens Alternators. Each Engine had completed 47000 operating hours only;
(b) Two (2) Man-Diesel Engines, Model 9L58/64, 12.5 MW each with Siemens Alternators. Each Engine had completed 27000 operating hours only; and
(c) Two (2) Wartsila Diesel Engines, Model 16ZAV40S, 11.52 MW each with ABB Alternator. Each Engine had completed 23000 operating hours only.

Subsequently, major maintenance and overhauling of all the seven Engines has been carried out.

Reference Conditions at which net plant output is guaranteed are as under:

- Ambient temperature25°C

- Humidity 60%

Plant operates on Residual Fuel Oil (RFO). High Speed Diesel Oil (HSD) is used for start-up of Engines. It is interconnected with GEPCO 132kV Power System through two 132 kV Circuits; one each interconnects with 132 kV Grid stations at Eminabad and Kamoke. Interconnection point is 132 bus-bar of the Plant Switchyard. Metering System is installed at the Plant.

Average annual plant availability is guaranteed as 88%.

All the pertinent information about the project i.e. technical description, the environmental approval, financial data, sponsors' information, etc. is also included in Schedule I attached with this application.

iii. Investment

N/A Project is already complete in all respects.

iv. Environmental and Social Impact of the Facility

An Environmental Monitoring/Audit report was prepared by the Consultants, M/S ECTECH. The objective was to demonstrate compliance of the facility with the National Environmental Quality Standards (NEQS) during construction and operation of the project.

The Environmental Monitoring/Audit study (Attachment - XVIII) has been done in accordance with Pakistani legislative standards. Gaseous emissions, emissions of Particular Matter (PM), Noise level, waste water characterization reveal that all parameters are in compliance of the NEQS limiting specified levels.

The project has brought significant positive social impacts in the area. Employment opportunity and training has been provided to a number of unemployed youth. They will receive life-time benefit through skill training, capacity building and poverty alleviation. Semi-skilled and unskilled workers in the Project area were hired during construction. Greater awareness about healthcare amongst the labour folk and the local community shall be created.

In conclusion, many positive economic and social impacts have appeared in the quality of the lives of the people of the area due to implementation of the 84 MW Thermal Power Project at Eminabad. These include generation of direct and indirect employment, business opportunities, infrastructure development, and improvement of living standards. Through adequate environmental management and mitigation measures, the project has least adverse impact on the environment and the surrounding community. The implementation of the project has not thus resulted in any unacceptable impact on the environment either during construction or during subsequent operation of the project.

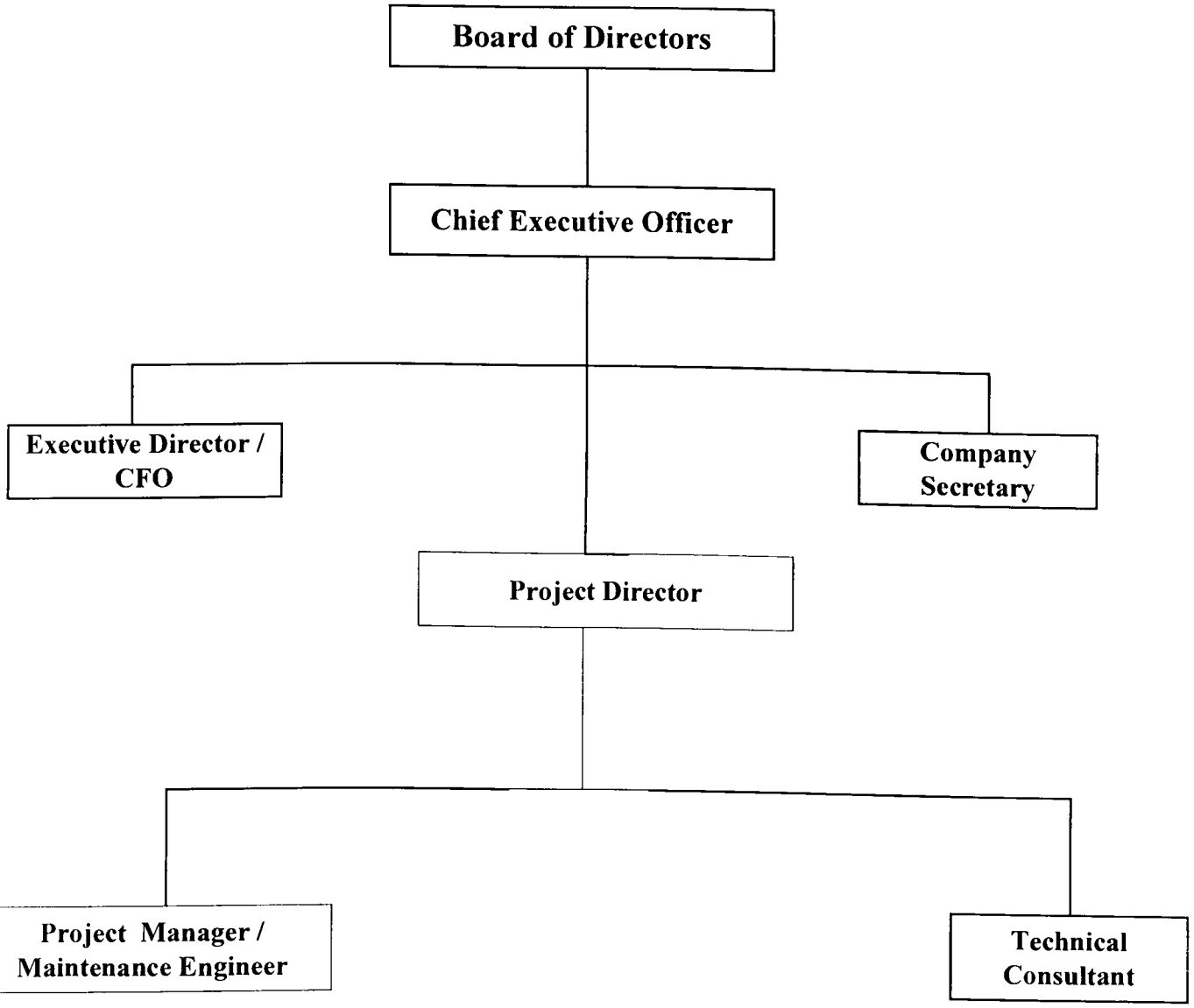
v. Profile of Senior Management/ Technical and Professional Staff

a. Organization Chart

Organization chart is attached. List of existing staff is provided separately. Additional professionals, support staff and Consultants will be employed on as and when needed basis.

Gulf Powergen (Private) Limited

Organization Chart



SCHEDULE - I

Plant Details

1. General Information

i.	Name of Applicant	Gulf Powergen (Private) Limited (Formerly Gulf Rental Power (Private) Limited)
ii.	Registered/Business Office	15, Peshawar Block, Fortress Stadium, Lahore, Punjab, Pakistan
iii.	Plant Location	Eminabad, District Gujranwala, Punjab
iv.	Type of Generation Facility	Reciprocating Engines-based Simple Cycle Thermal Power Plant

2. Plant Configuration

i.	Plant Size/Installed Capacity (Gross)	83.835 MW
ii.	Plant type	Reciprocating Engines-based Simple Cycle Thermal Power Plant
iii.	Number of Units/Size	MAN Diesel: 2 x 12.51 MW + 3 x 11.925 MW Sulzer: 2 x 11.925 MW
iv.	Unit Make & Model	MAN Diesel: 9L58/64 Sulzer: 16ZAV40S
v.	De-rated Capacity at Reference Conditions	65 MW
vi.	Auxiliary Consumption	3 MW
vii.	Net Capacity at Site Conditions	62 MW
viii.	Commissioning and Commercial Operations Date	28th April, 2010
ix.	Expected Life of the Facility from the Commercial Operations Date	More than15 Years

3. Fuel Details

i.	Primary Fuel	Residual Fuel Oil (RFO)
ii.	Alternative Fuel	Nil
iii.	Back-up Fuel	Nil
iv.	Fuel Source (Imported /Indigenous)	Indigenous
v.	Fuel Supplier	Attock Petroleum Limited
vi.	Supply Arrangement	Through Road Tankers
vii.	No. of Storage Tanks	One Main Storage Tank
viii.	Storage Capacity of each Tank	5500 Ton
ix.	Gross Storage	5500 Ton

4. Emission Values

i.	Sox	705.3 mg/Nm^3
ii.	Nox	370.9 mg/Nm^3
iii.	PM_{10}	2.0 mg/Nm^3

5. Cooling System

i.	Main Cooling Water Source/Cycle	Radiator/Cooling Tower; Closed Loop

6. Plant Characteristics

i.	Generation Voltage	11 kV
ii.	Frequency	50 Hz
iii.	Power Factor	0.80 Lagging to 0.90 Leading
iv.	Automatic Generation Control	No
v.	Ramping Rate	0.9 MW/Minute
vi.	Time required to Synchronize to Grid and loading the Complex to full load.	Time required to synchronize to Grid: Hot Start: 60 Minutes Cold Start: 120 Minutes Dead Start: 480 Minutes

SCHEDULE – II

The capacity (ies) of Gulf Powergen (Private) Limited Power Plant to be incorporated in the Licensee's Generation Facilities

SCHEDULE – II

1.	Installed Capacity, Gross ISO	83.835 MW
2.	De-rated Capacity at Site Conditions	65 MW
3.	Auxiliary Consumption	3 MW
4.	Net Capacity at Site Conditions	62 MW

INTERCONNECTION SCHEME FOR THE POWER DISPERSAL OF 84 MW GULF POWERGEN THERMAL POWER PLANT

Power Plant at Eminabad is already interconnected with GEPCO 132kV Power System through two 132 kV Circuits; one each interconnects with 132 kV Grid stations at Eminabad and Kamoke. Interconnection point is 132 bus-bar of the Plant Switchyard. Metering System is installed at the Plant. The power generated from the power plant shall be dispersed to the Power Purchaser under one of the options discussed in the main application.

Attachment - VI

KEMA's Inspection Report, Certificate of Successful Reliability Run Test and Certificate of Acceptance of Equipment

KEMA

Report.

Report concerning DEPP Gulf Rental Power (GRP)

Colombo, July 20th, 2010

55106142 KEMA/KCSAP 10-9068 Confidential

Report Operational Test(s) as per RSC concerning DEPP Gulf Rental Power (GRP).

Colombo, July 20th, 2010

Author M. A. Khan
KEMA Consultancy Services Asia Pacific

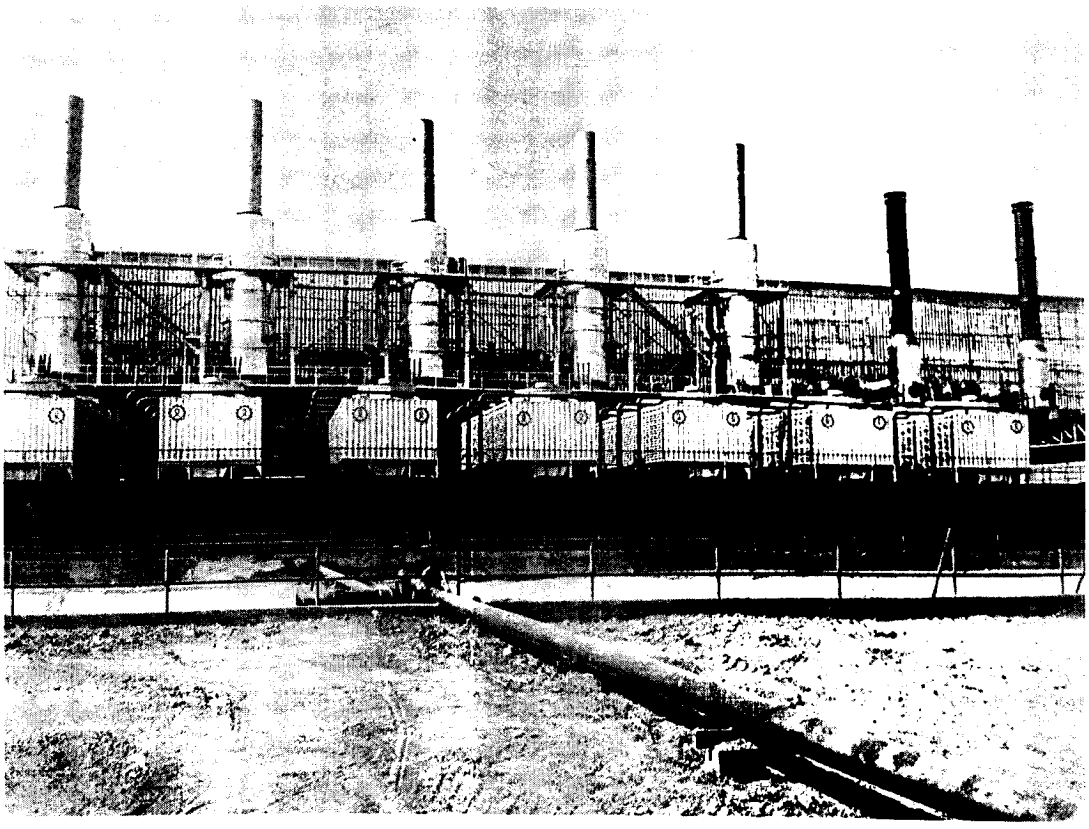
By order of Gulf Rental Power, GRP

Approved: J.D.A. van der Linden

B 37 pages 2 annexes

Execution/Author : M.A. Khan

Review : M. Bergman



CONTENTS

PROJECT MANAGEMENT INFORMATION

Project

By order of Gulf Rental Power, KEMA International B.V. is appointed as Independent Engineer for witnessing, reviewing and certifying the results of the Operational Test(s).

Purpose

The purpose of the above-mentioned test(s) is to determine and to confirm whether the Facility has achieved all the requirements for declaration of Commercial Operations Date (COD), as stipulated in the RSC.

Certification

This report contains the results of the specific test(s), all relevant certificates, detailed report for acceptance of equipment including comments, recommendations and conclusion.

ABBREVIATIONS

COD = shall mean the Day following the date upon which the Equipment actually achieves Commercial Operation.

GRP = Gulf Rental Power ("SELLER").

MCR = Maximum Continuous Rating.

NOC = Normal Operating Conditions; where operation is not exceeding any of the facilities technical limits as provided by the OEM and following internationally acknowledged rules of prudent engineering and operation of power plant facilities.

NPGCL = Northern Power Generation Company Limited ("BUYER").

OEM = Original Equipment Manufacturer.

RSC = Rental Services Contract; between NPGCL and GRP, dated 6th Sept. 2009.

WPPO = Wapda Power Privatization Organization.

CERTIFICATES

CERTIFICATE OF ACCEPTANCE OF EQUIPMENT

CERTIFICATE OF ACCEPTANCE OF EQUIPMENT

FOR 62 MW (NET) FACILITY OF GULF RENTAL POWER

Issued April 28th, 2010
Certificate Number Pak/IPP/RSC/201004003

With respect to the Rental Services Contract (RSC) between the Northern Power Generation Company Limited (NPGCL) and Gulf Rental Power (GRP) and the Independent Engineer Agreement, KEMA International BV, with registered offices in Arnhem, Netherlands,

taking into account the Terms of Reference of the Independent Engineer Agreement and the subsequent review of the;

- Inspection reports of the Equipment concerning equipment at location of origin.
- Erection and commissioning reports of the Equipment at the actual site in Pakistan, Environmental Audit report of the Equipment at the actual site in Pakistan, and Inspection of the Equipment at the actual site in Pakistan

KEMA International are pleased to issue the Certificate of Acceptance of Equipment

This acceptance certificate only certifies that the Equipment is suitable to meet the requirements of the RSC but neither guarantees the performance of the Equipment with respect to the RSC nor the successful completion of the Reliability Run test.

KEMA International BV

Dik van der Linden
Manager AP Projects

CERTIFICATE OF GUARANTEED ELECTRICAL OUTPUT

CERTIFICATE OF GUARANTEED ELECTRICAL OUTPUT

FOR 62 MW (NET) FACILITY OF GULF RENTAL POWER

Issued April 30th, 2010
Certificate Number Pak/IPP/RSC/201004004

With respect to the Rental Services Contract (RSC) between the Northern Power Generation Company Limited (NPGCL) and Gulf Rental Power (GRP) and the Independent Engineer Agreement, KEMA International BV, with registered offices in Arnhem, Netherlands,

and in accordance with the following terms from the Rental Services Contract

Definitions:	Operational Test(s).
Definitions:	Guaranteed Electrical Output.
Section 4.4.	Completion Schedule and Commencement of Rental Term.
Section 7.	Commercial Operation

and following the demonstration during the 2-hour Reliability Run test carried out on 28 April 2010, from 1936 hrs to 2136 hrs, in which the Net Electrical Output exceeded the Guaranteed Electrical Output of 62 MW and whereas the lowest one hour value of the two hour measurement, reading from the Main Meters, was 63.776 MW.

KEMA International are pleased to issue the Certificate of Guaranteed Electrical Output as per requirements of the Independent Engineer Agreement

KEMA International BV

Dik van der Linden
Manager AP Projects

CERTIFICATE OF SUCCESSFUL RELIABILITY RUN TEST

CERTIFICATE OF SUCCESSFUL RELIABILITY RUN TEST

FOR 62 MW (NET) FACILITY OF GULF RENTAL POWER

Issued April 30th, 2010
Certificate Number Pak/IPP/RSC/201004005

With respect to the Rental Services Contract (RSC) between the Northern Power Generation Company Limited (NPGCL) and Gulf Rental Power (GRP) and the Independent Engineer Agreement, KEMA International BV, with registered offices in Arnhem, Netherlands,

in accordance with the following from the RSC:

Definitions: Operational Test(s)
Section 4.4: Completion Schedule and Commencement of Rental Term

and taking into account uninterrupted operation of the Equipment, without overloading the individual equipment beyond its safe operating limits, during the two-hour Reliability Run test

KEMA International are pleased to issue the Certificate of Successful Reliability Run Test as per requirements of the Independent Engineer Agreement

KEMA International BV

Dik van der Linden
Manager AP Projects

1 INTRODUCTION

Gulf Rental Power is part of a group, led by a consortium of Saudi and Pakistani business houses, and are making long term investments in Pakistan. The group is enthusiastically developing other power projects which include a mega run-of-the river hydro project and a medium size plant on canal.

After responding to the Governments advertisement of Rental Power Projects in September 2008, GRP competed in an International Competitive Bidding process. GRP were declared the lowest qualified bidder in January 2009.

GRP selected used Diesel Engines from world renowned manufacturers MAN and Sulzer. All other equipment such as 132 kV substation, cooling towers, auxiliary boilers, exhaust heat boilers, pumps, piping, cables etc were brand new. Construction at the project started in September 2009.

The generating units' brief details are as under:

3 x 9L58/64 MAN, 428 rpm, 11.9 MW each, 47000 hours each, commissioned in 1993 having Siemens alternators. ESNs: 1110072, 1110073 and 1110074. These are originally from Foshan power plant (China).

2 x 9L58/64 MAN, 428 rpm, 12.5 MW each, 27000 hours each, commissioned in 1993 having Siemens alternators. ESNs: 1110140 and 1110141. These originally are from Gao Yao power plant (China).

2 x 16ZAV40S Wärtsilä, 500 rpm, 11.52 MW each, 23000 hours each, commissioned in 1995 having ABB alternators. ESNs: 740400 and 740376. These are originally from Wu Jiang power plant (China).

By order of Gulf Rental Power, KEMA International B.V. was appointed as Independent Engineer (with the consent of WPPO and NPGCL GENCO-III), for the witnessing, reviewing and certifying of the results of the Operational Test(s).

Sections 4.4 and 7 of the RSC provide the requirements for commissioning and testing. Based on the requirements and results of the Operational Test(s), the Engineer shall provide the Certificate of Successful Reliability Run Test to Gulf Rental Power.

The Equipment is deemed commissioned and the Rental Term shall commence following the terms of the RSC, Section 4.4, Completion Schedule and Commencement of Rental Term:

- The Rental Term shall commence at 00:01 AM on the day following the completion of the SELLER's: (a) commissioning of all Equipment, (b) Operational Test(s) of 2 hours plant reliability run at 62 MW net capacity converted to Mean Site Conditions measured at the outgoing transmission lines from the Complex to the grid system of the Buyer (the "Commercial Operation Date").

2 PREPARATIONS

Test Procedure was prepared for the Operational Test(s) to be conducted for commencement of the Rental Term.

For assessment of the Equipment for the Acceptance Certificate, the facility was visited on the 19th and 27th of April, 2010.

3 ASSESMENT EQUIPMENT FOR ACCEPTANCE CERTIFICATION

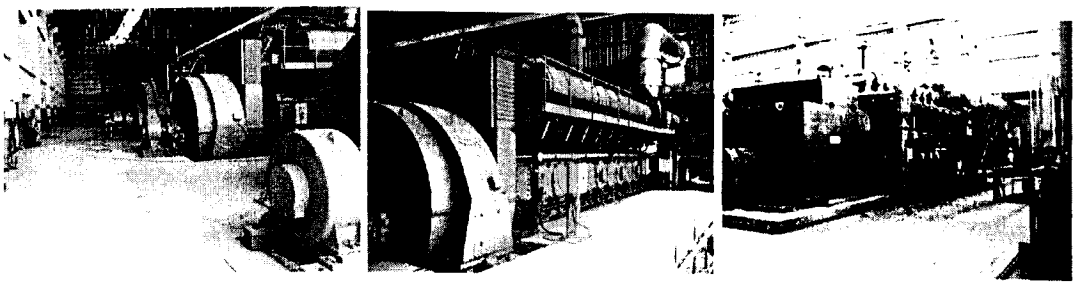
The facility was visited by the independent engineer on the 19th and 27th of April 2010 to ascertain the acceptability, or otherwise, of the equipment with regards to its suitability to meet the requirements of the RSC. Before the inspection at site, the Independent Engineer normally visits the country of origin where the equipment is installed and carries out due diligence in order to ascertain the condition of the equipment with respect to acceptability by the BUYER (Northern Power Generation Company Limited).

However, at the time of signing the Independent Engineer Agreement, the equipment had already been relocated to Eminabad site in Pakistan, and hence the inspection at country of origin could not be made.

During the inspection of the Equipment, on 19th and 27th April 2010, the following was noted:

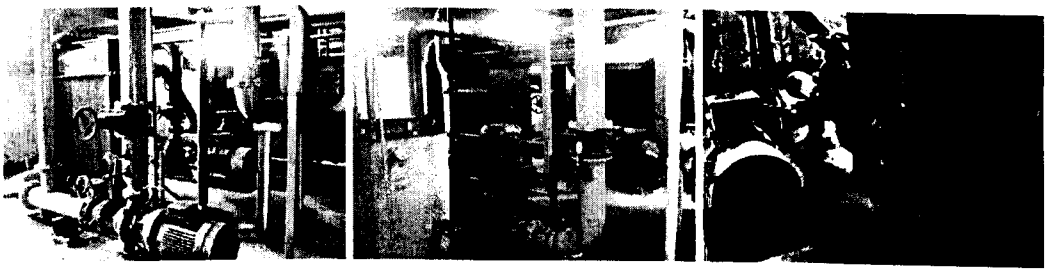
Engine Hall, ground level:
All seven gensets are installed in a configuration of 2-3-2 i.e. from the right hand side, facing South; Gao Yao engines, Foshan engines and Wu Jiang engines. The connections to all auxiliary modules/equipment are in place. All gensets were installed by GRP and the alignment was done by MAN specialist who also recorded the crankshaft deflections after the alignment.

The commissioning of MAN gensets was done by MAN and commissioning of Sulzer gensets was done by Wärtsilä (Sulzer engines came under Wärtsilä umbrella in 1997). All seven gensets are operational. The fuel booster units and LO separator units (and LO filters of Gao Yao engines) are also installed in this hall. All gensets have oil bath charge air filters which are installed inside this hall. The 10T overhead crane is in good working condition. The generator exciter panels are installed on the Northern wall. Mobile fire extinguishers are placed inside the engine hall to cater for any exigency. Hot air egress is at the top of the engine hall roof. There is space in the hall for expansion at the Eastern end; planned for one genset.



Engine Hall, lower level:

This hall houses LO drain tanks, LO and JW heat exchangers, charge air coolant heat exchangers, LO and JW pumps and temperature control valves, LO filters for Sulzer engines, LO drain tanks, fuel injection valve coolers, starting and service air bottles, starting air compressors and drier units for control air, inlet ventilation fans.

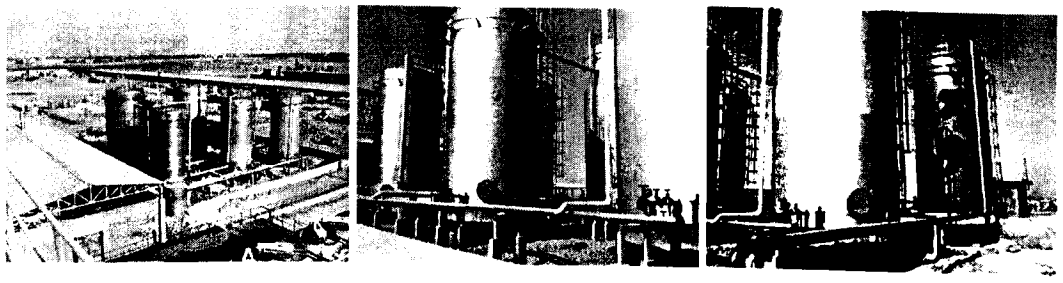


Main Tank yard:

There is only one 5500T HFO storage tank in the tank yard. The transfer piping to the HFO buffer/settling tanks in the day tank area is in place and is tested. The commissioning of HFO transfer pumps in under progress. The surface around the storage tank inside the tank yard is being prepared. The tank has a foam based fire fighting system which is being commissioned. The storage tank (and the HFO inside) is in the custody of fuel supplier (Attock Petroleum Limited) and GRP will be charged for HFO as and when they consume it, in accordance with the Fuel Supply Agreement.

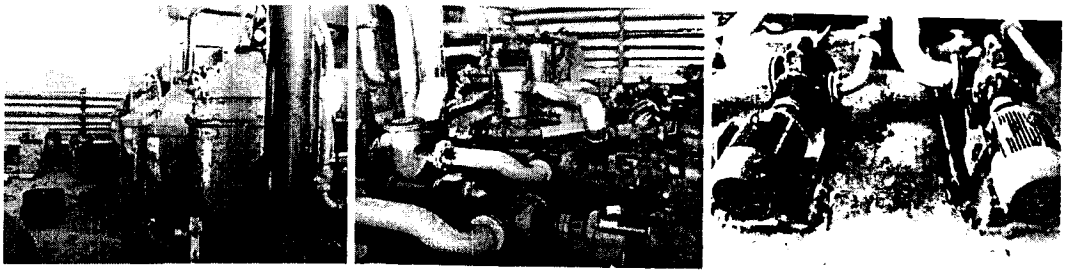
Day Tank Area:

All tanks are ready, tested and operational. Piping is complete with respect to operational phase. One 100T LFO storage/day tank is inside the day tank area. Other tanks include two 200T HFO settling/buffer tanks, two 100T HFO day tanks and one 100T sludge tank. The piping from buffer/settling tanks to fuel treatment plant is operational. HFO day and buffer/settling tanks are in use. Fire protection system around the tanks is in place.



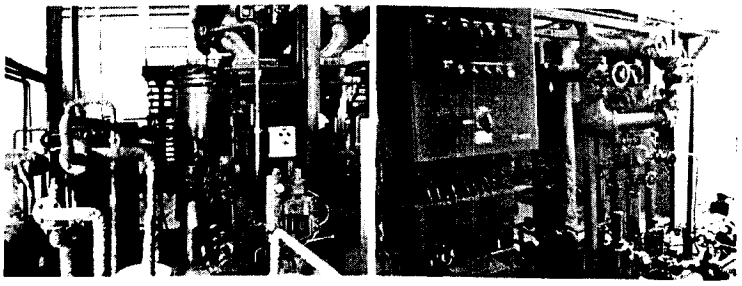
Fuel Treatment Room:

All equipment inside i.e. LFO/HFO feeder units and seven HFO centrifuges (5 Alfa Laval and 2 Westfalia) are in place and four HFO centrifuges are currently operational and the remaining three are being commissioned. For full operation of the facility, only four centrifuges are required. The tariff for the facility is based on the use of HFO.



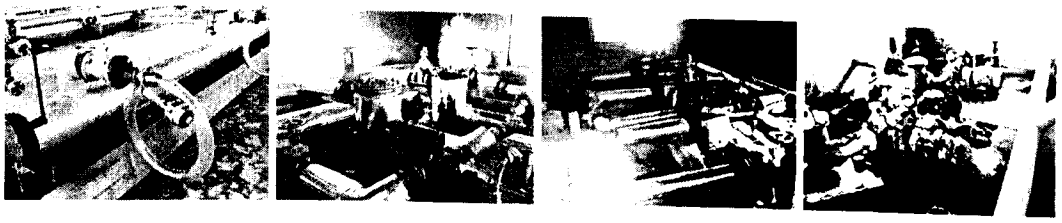
Fuel Booster Units:

Fuel booster units inside the engine hall are fed by LFO/HFO feeder units and are operational for all engines.



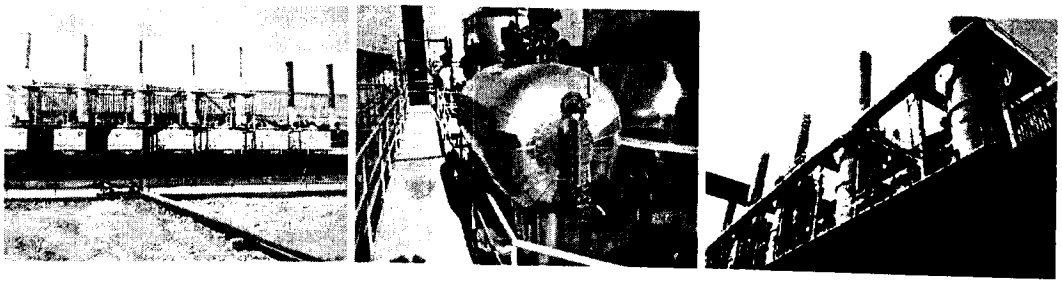
HFO/LFO Decanting Stations and Pumps:

LFO decanting station is functional and HFO decanting station is under commissioning. The first decanting of HFO was done through a temporary arrangement directly into the buffer/settling tanks.



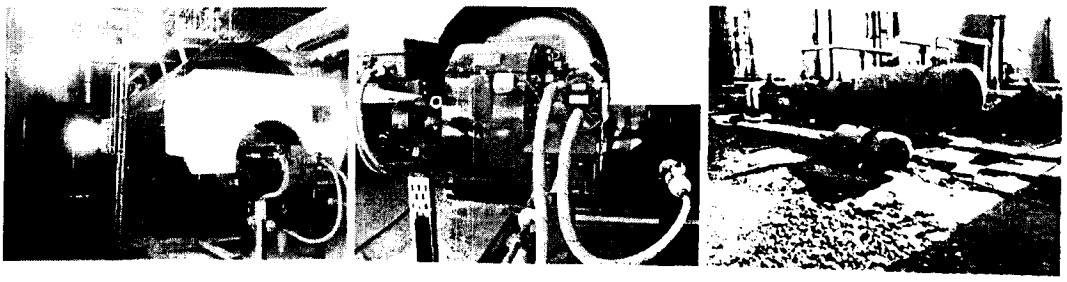
Exhaust Piping & HRSGs:

All piping is complete. All five MAN engines have HRSGs with by-pass dampers. The commissioning of the HRSGs is in progress. Sulzer engines are without HRSGs. All heating requirements are currently being met through the auxiliary boiler.



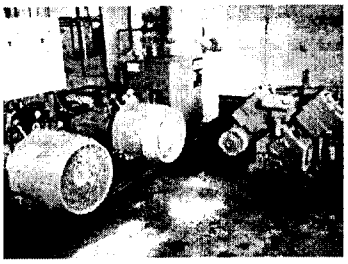
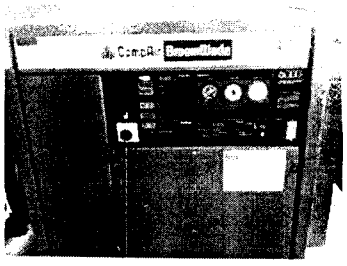
Aux Boiler:

The 4T (8 bar) auxiliary boiler is new and made in Pakistan (by DDFC). The boiler is in use and is currently serving the entire steam requirement of the facility.



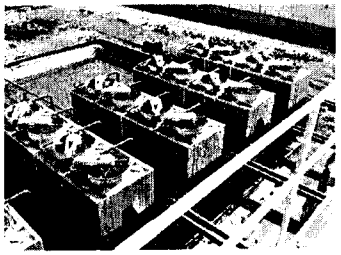
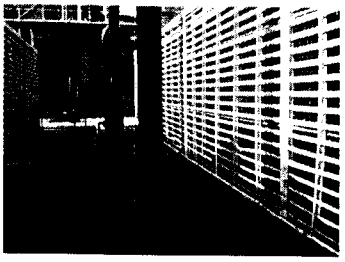
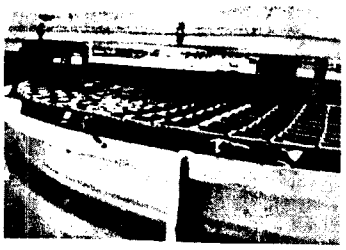
Air Compressors and Air Bottles:

There are five starting air compressors and two control air units. The compressors are in working order. There are provisions for supplying control air in case control air compressors fail. The air bottles are commensurate with the facility starting/service requirements and are in working order.


Cooling Towers:

There are seven new cooling towers and these are fully operational. Chemical dosing system for raw water is in place.

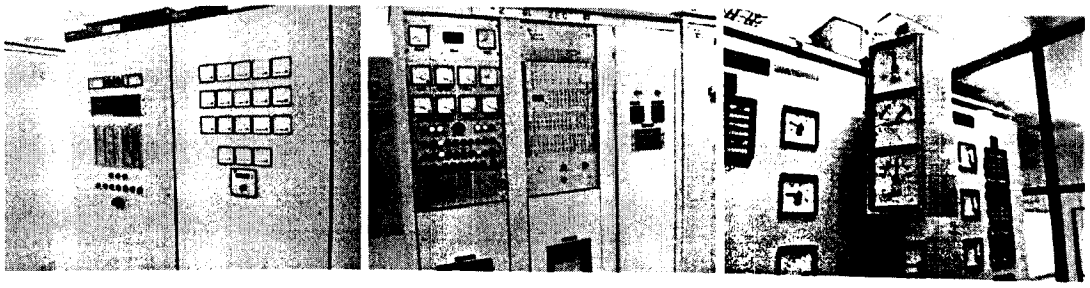




Control Room:

There is no designated control room as such since there is no centralized DCS. In fact, the electrical panel room serves as a "control room".

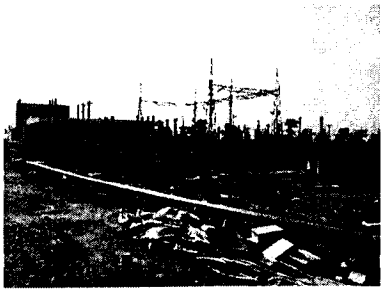
Electrical Panel Room:

All HV (132 kV), MV (11 kV) and LV (380 V) electrical panels have been placed in one room. All cabling is complete and I/O tested.



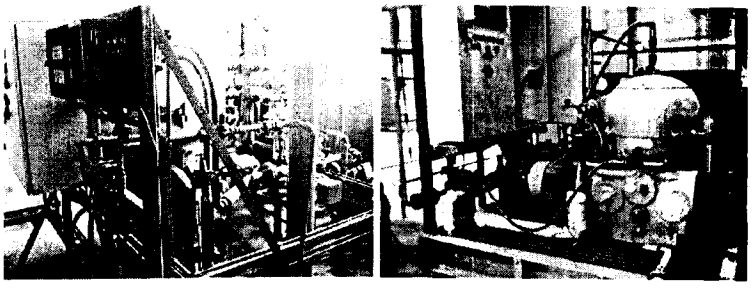
Switchyard:

There are two 132-kV line bays. All equipment in the switchyard is new and fully tested and functional.



Centrifuges:

Each genset has its dedicated LO separator. MAN engines have Alfa Laval separators and Sulzer engines have Westfalia. The status of HFO separators has been described in this report under Fuel Treatment Room.

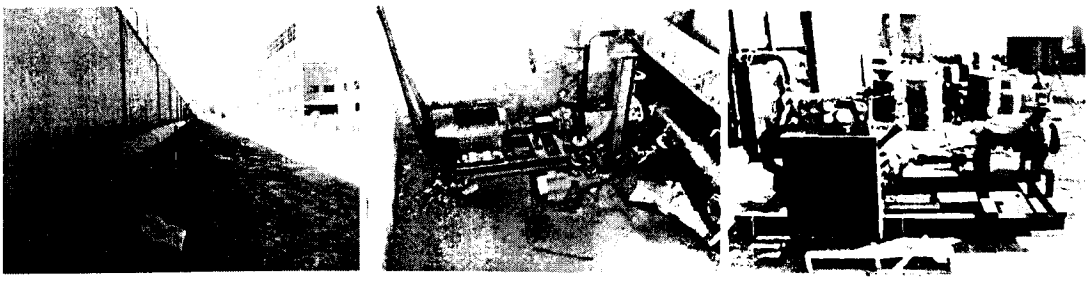


Revenue Meters:

Main and back-up revenue meters are located inside the dedicated metering room inside the Switchyard.

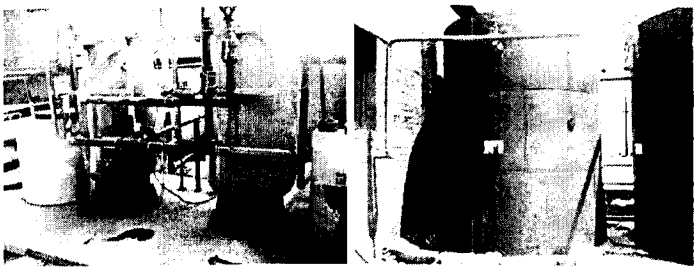
Fire Fighting System:

Fire main is laid and the piping is almost complete. However, the engine driven (emergency) fire pump is yet to be installed. The complete fire fighting system is yet to be commissioned.



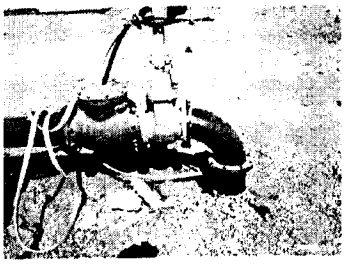
Demineralized Water Plant:

Demineralized water plant is new, installed and commissioned.



Water Wells:

There are two wells serving the facility.



Weather Station:

Solar powered weather station is installed at the top of the power house building.

Landscaping:

So far, not a blade of grass is visible and hence the site has a very dusty environment.

COMMISSIONING:

Test reports of all major equipment, whether new or used, prior to commissioning are available at the facility. This includes, *inter alia*, gensets, generators, CBs, CTs, PTs, protection relays and HV switchyard including HV transformers. FAT reports of CBs, CTs, PTs and power cables are also available at the facility.

ENVIRONMENTAL AUDIT:

The environmental audit of the facility was carried out by Apex Environmental Laboratory of Lahore in March and April 2010. The facility was tested for gas emissions, noise and waste water. According to the report, the facility is in compliance with the prevailing environmental laws and regulations.

IMPORTANT INFORMATION

MAN specialist has recommended that all engines be overhauled in order to bring those in perfect working condition for reliable operation. MAN specialist has also recommended that all turbochargers be overhauled since the engines were lying idle for two years at the plants of origin (in China). The expected remaining life of the used equipment and auxiliaries imported from China has been estimated by the specialist as 10 years; provided, OEM instructions are followed.

The engines/turbochargers haven't been overhauled at site because of very short duration of the construction phase. The equipment at origin plants at China was well maintained as mentioned by MAN specialist in his report. In depth or complete operating parameters, accident, maintenance etc reports of the equipment at origin plants are not available. GRP are confident the engines will deliver promised output and the overhauls will be carried out after COD in accordance with the allowances provided in the RSC. The facility, according to

GRP, has performed full deliverable output runs as part of preparations for the Operational Test(s).

The Independent Engineer made an assessment of the equipment based on inspections of the Equipment at site and by studying the specific technical details of the inspection reports of the Equipment prepared by or on behalf of GRP before the dismantling of the equipment at the origin as well as the installation and commissioning procedures employed at site and the subsequent corresponding reports in addition to the compliance with national environmental standards. The Independent Engineer found the equipment suitable for acceptance to meet the requirements of the RSC and the Certificate of Acceptance of Equipment was issued on 28 April 2010.

RECOMMENDATION

- **There is no functional back-up power supply for the facility in case there is a NPGCL grid power failure. It is recommended that a black start generator, of sufficient capacity to cater for all "dead grid" conditions, be available & functional for the facility.**

- **In accordance with the recommendations of the MAN specialist who carried out the inspection of the Equipment at the origin plants in China, it is prudent to have all gensets completely overhauled as early as possible.**

4 OPERATIONAL TESTS

The Commissioning / Demonstration tests are described in Section 4.4, Section 7 and Section 8 of the RSC.

The Operational Test(s) shall include the following tests in order to demonstrate compliance with the required functional capabilities in accordance with the RSC.

i. Demonstration of Guaranteed Electrical Output.

ii. Reliability Run Test.

4.1 Demonstration of Guarantee Electrical Output

During Reliability Run Test of the Complex, the Guaranteed Electrical Output of the Equipment will be determined by measuring the Net Electrical Output at the delivery point recorded by the Metering System with all generating units operating such that during the test period the design parameters/rating of the units/machines and ancillary plant will not be exceeded and all protections shall remain in-tact. The test shall be based on the relevant ASME/ISO/IEC standards for the plant using plant instrumentation and the Metering System and corrected to the Reference Conditions.

The objective is to demonstrate the 62 MW Guaranteed Electrical Output of the Equipment at Mean Site Conditions i.e. 35°C ambient temperature, 60% RH, 240m altitude and 990 mbar atmospheric pressure. The Equipment shall undergo a test to demonstrate that it will operate at rated load i.e. Guaranteed Electrical Output and under NOC. The 62 MW load shall be demonstrated at the Interconnection Point (132-kV), corrected to Mean Site Conditions.

The capacity demonstration of the Complex was performed, in accordance with the Technical Requirements of the RSC, during the Reliability Test, i.e. during "2 hours test" of the Equipment on 28th April 2010.

The readings recorded during test have been tabulated in table 1 below.

Table 1 Meter Readings Capacity Demonstration, Gulf Rental Power.

Time of Reading	Main Meter	Backup Meter	Main Meter	Backup Meter
	Cumulative		KWh/h	
19:36	00421765	00417744		
20:36	00485542	00481293	63777	63549
21:36	00550468	00545950	64926	64657

After the test was finished, all relevant documents are copied and signed by all parties involved. The test results and the certificate are attached to this report.

Since the Net Electrical Output was (approx 4%) in excess of the Guaranteed Electrical Output, corrections related to derating due to ambient conditions were not required.

Based on the requirement as per RSC, the results of the Guaranteed Electrical Output of the Equipment were determined successfully.

4.2 Reliability Run Test

PPA 4.4; Completion Schedule and Commencement of Rental Term

The objective of the test is to demonstrate uninterrupted reliable operation of the Equipment at the Guaranteed Electrical Output for two (2) hours without overloading the individual equipment beyond its safe operating limits.

The test is performed according to the technical requirements of the RSC dated 6th September 2009. Following statements are provided:

Section 4.4	**Completion Schedule and Commencement of Rental Term**
Section 7	**Commercial Operation**
Section 8	**Performance Warranties**

- OEM correction factors/curves for ambient conditions affecting the output.
- ISO 3046-1 (2002).

The reliability run test was carried out on 28th April 2010 in accordance with the technical requirements of the RSC for commencement of the Rental Term. The run, for a period of two consecutive (2) hours, was established to be in accordance with the RSC and without any interruption whatsoever and without overloading the individual equipment beyond its safe operating limits with all the protections in-tact and under NOC.

After the test was finished, all relevant documents are copied and signed by all parties involved. The test results are attached to this report.

Based on the requirement as per RSC, the results of the Reliability Run Test of the Complex were determined successfully.

APPENDIX I TEST PROCEDURES

SECTION 4.4 OF THE RSC

Operational Test(s)

Test procedure in order to demonstrate compliance with the RSC between

Northern Power Generation Company Limited

And

Gulf Rental Power

Operational Test(s)

This Test Procedure is prepared and released by KEMA International for the use of RSC related tests to be carried out at:

→ 62 MW DEPP Gulf Rental Power

Accepted for use by client
Date : 28/4/2010
Authorized signature : Mashkur

KEMA Authorized Signature :

I. CONCERNING

Complex	:	62 MW DEPP GRP, Eminabad, Gujranwala, Punjab
Contractor	:	Prodiesel (Pvt.) Limited
Owner	:	Gulf Rental Power

II. OBJECTIVE

The objective of the test is to demonstrate uninterrupted reliable operation of the Equipment at the Guaranteed Electrical Output for two (2) hours without overloading the individual equipment beyond its safe operating limits.

Stage

The test is part of commissioning tests after synchronization of GRP power station with the national grid.

NPGCL reference(s)

Technical requirements for the test in the RSC. Following statements are provided.

Section 4.4	Completion Schedule and Commencement of Rental Term
Section 7	Commercial Operation
Section 8	Performance Warranties

OEM correction factors/curves for ambient conditions affecting the output
ISO 3046-1 (2002)

III. CRITERIA FOR COMPLIANCE

The test is successful when the Equipment operates satisfactorily and meets the Guaranteed Electrical Output of 62 MW at the outgoing 132-kV transmission lines, corrected to Mean Site Conditions, without any interruption whatsoever for not less than two (2) hours.

IV. TEST EXPLANATION

- **Start Test**
  - Start and synchronize each generating unit to the national grid
  - Set units' outputs for operation at the Guaranteed Electrical Output.
  - The test will start after operating parameters of all generating units have stabilized at optimum levels and the initial readings from the Metering System have been recorded.

KEMA

- Monitor and take printouts of important operational parameters of the Equipment.
- Take, as a minimum, hourly readings of Main and Back-up meters using adequate chronometers (stopwatches).
- Ambient Temperature, Atmospheric Pressure as well as Relative Humidity to be measured at power plant weather station. Readings every 15 minutes.
- The Operational Test will comprise of two (2) hours of continuous operation and demonstration of the Guaranteed Electrical Output.

V. MEASUREMENT REQUIREMENTS

- The plants Data Acquisition System shall be deployed for data logging of the Output Power and Operational Data;
- Metering System shall be used to measure the Net Electrical Output of the Equipment (Back-up meters will be used as check meters);
- Power plant weather station shall be used to record ambient temperature, relative humidity and atmospheric pressure

VI. METHOD OF TESTING

Test Coordination

- The co-ordination of the test will be done by Prodiesel (Pvt.) Limited. The Independent Engineer to be informed on a continuous basis in order to get his consent to proceed.

During Test

- Equipment will be at the Guaranteed Electrical Output.
- The test will commence when the Equipment operates at the Guaranteed Electrical Output and after operating parameters of all equipment have stabilized at optimum levels.
- The Equipment will be tested for two (2) hours of continuous operation at the Guaranteed Electrical Output
- For each generating unit, a list of significant operational parameters will be taken on a half-hourly basis. This can either be a manual logsheet, but preferably a computerized data file' (CSV or Excel file).
- Ambient conditions to be measured with the plant's weather station every 15 minutes

End of Test

- The end of the test will be the point when all last readings have been taken

' Contents of the list to be discussed in advance of the test

Results

- After the test is finished, all relevant documents will be copied and signed by all parties involved. This means that only these documents may be used for determination of the results. In case of electronic recording, it is required to create printouts as far as possible or copies of the files will be handed over

VII. PROTOCOL / LOG SHEET

The protocol contains the starting date and time as well as end date and time. It shall be clear if the test is in compliance with the requirements of the RSC.

Any interruption of the operation is to be assessed and decided upon by the Independent Engineer. Any interruption, not initiated by an event outside of the Parties' powers, shall deem the test failed and the timer will be reset to 'zero'. First and for all it shall be clear that basically ANY interruption, based on Equipment failure or National Grid failure, literally means a failure of the test as it does not answer the two (2) synchronized hours requirement.

Calculations for the Guaranteed Electrical Output shall be done separately using the correction curves.

Signed for acceptance of the Test Procedure

Gulf Rental Power	KEMA	NPGCL
Sign:	Sign:	Sign:
Name:	Name: M. Abdulrahman	Name:
Date:	Date: 25/4/2010	Date:

KEMA

Log Sheet

The logsheet below shall be used for the purpose of recording of the readings during the two hours of the Operational Test.

Day Time for Start of the Operational Test:
Day Time for End of the Operational Test:

Readings MW Output: Reliability Run

Time[1]	Date	Ambient Temperature (°C)	Actual load in MW

Readings Metering System: Guaranteed Electrical Output

Time of reading[2]	Main Meter in kWh	Backup Meter in kWh
Start		
After 60 min		
After 120 min		

Ambient Condition Readings

Time of reading	T Ambient Air (°C)	P Ambient Air (mbar)	RH Ambient Air (%)

Signed for acceptance of appropriate readings

Gulf Rental Power	KEMA	NPGCL
Sign:	Sign:	Sign:
Name: ABDUL RASHID	Name:	Name:
Date: 28-09-2010	Date:	Date:

[1] The first time notation shall be at the start of the test and readings shall be noted every 30 minutes.
[2] The first time notation shall be at the start of the test. Each 60 minutes, one reading shall be taken of Main as well as Backup (check) meter. In case both meters are not located at the same position, two logsheets to be taken into account while two readers shall take readings based on a synchronized stopwatch.

APPENDIX II LOGSHEET & SUMMARY

Logsheet Operational Test(s)

Log Sheet

The logsheet below shall be used for the purpose of recording of the readings during the two hours of the Operational Test.

Day / Time for Start of the Operational Test	28.4.2010, 1936 hrs
Day / Time for End of the Operational Test	28.4.2010, 2136 hrs

Readings MW Output: Reliability Run

Time[1]	Date	Ambient Temperature (°C)	Actual load in MW
19 36	28.4.2010	34	
20 36	28.4.2010	33	63.7
21 36	28.4.2010	33	64.9
/	/	/	/

Readings Metering System: Guaranteed Electrical Output

Time of reading[2]		Main Meter in kWh	Backup Meter in kWh
Start	19:36	00262373 (T1)	00 26 49 41 (T1)
	19:36	00139392 (T2)	00137250 (T2)
After 60 min	20:36	00318826	00316748
	20:36	00166716	00164545
After 120 min	21:36	00355612	00353331
	21:36*	00196300 (21.39)	00192569

* Main meter reading at 21.39 hrs.

Ambient Condition Readings

Time of reading	T Ambient Air (°C)	P Ambient Air (mbar)	RH Ambient Air (%)
1936	34		
1945	35		
2000	35		
2015	36		
2030	36		
2045	35		
2100	35		
2115	35		
2130	36		

Air inlet vent fans; combined load = 192.5 kW, not operational during test.

Signed for acceptance of appropriate readings

Gulf Rental Power	KEMA	NPGCL
Sign:	Sign:	Sign:
Name:	Name: M. Ashkean	Name:
Date: 28-04-2010	Date: 28/4/2010	Date: 28/4/10

[1] The first time notation shall be at the start of the test and readings shall be noted every 30 minutes

[2] The first time notation shall be at the start of the test. Each 60 minutes, one reading shall be taken of Main as well as Backup (check) meter. In case both meters are not located at the same position, two logsheets to be taken into account while two readers shall take readings based on a synchronized stopwatch

Executive Summary Environmental Report

EXECUTIVE SUMMARY

This report deals with the Third Party (First) Environmental Audit (EA) of Gulf Rental Power Private Limited, 80.5 MW Rental Power Plant and 132 KV Emanabad-Gujranwala Grid Station. The environmental audit was carried out on March 25, 27 and 29, 2010 and April 3, 4, 15 and 17, 2010. These dates coincided with the operational states of the seven generators as also indicated in the Section-A=ANNEXURE-III.

Summarily, this Environmental Audit Report (EAR) comprises the following sections.

SECTION-A	Stack Monitoring for Carbon Monoxide (CO), Sulphur Dioxide (SO_2) and Nitrogen Oxides (NO_x) from the stacks of seven (7) generators.
SECTION-B	Monitoring of Particulate Matter (PM) from stacks of (7) generators.
SECTION-C	Particulate Matter - Ambient from (5) points within the plant battery limits and (4) points out side the factory.
SECTION-D	Ambient gaseous monitoring from (5) points within the factory and at (4) point out side the factory.
SECTION-E	Noise Levels Monitoring at (10) points within the plant boundary limits and (4) points at boundary walls.
SECTION-F	Drinking and Waste Water samples (one each)

Stack gaseous emissions of Carbon Monoxide (CO), Sulphur Dioxide (SO_2) and Nitrogen Oxides (NO_x) from stacks of seven generators are in compliance with National Environment Quality Standards (NEQS)-Pakistan.

Emissions of Particulate Matter (PM) measured from stacks of seven generators are also in compliance with the NEQS limiting values.

Particulate Matter in Ambient Air was monitored at total nine points within and on the four boundary walls of the power plant. The NEQS-Pakistan do not specify any limiting value for the concentration of the ambient particulate matter.

Like the PM, ambient gaseous monitoring was also carried out within and on the four boundary walls of the plant on the same points. NEQS-Pakistan do not specify any limiting value for the concentration of the ambient gasses.

The noise levels monitoring was carried out at all four boundary walls of the power plant site and Noise Levels measured are in compliance with the prescribed limit of 85 dB(A) set by the NEQS.

On site noise levels monitoring was also carried out within the four walls of the factory at ten points.
At some points, within the factory the noise levels exceed the maximum limiting value of 85 dB (A) prescribed by the NEQS. All the people exposed directly to these high noise level areas are required to use earplugs or muffs as the case may is.

One drinking water sample was collected and tested in the laboratory and all relevant parameters were found in compliance with the WHO guidelines for the drinking water.

One wastewater sample was also collected and tested in the laboratory and all the relevant parameters are in compliance with the NEQS Pakistan.

KEMA

CERTIFICATE OF SUCCESSFUL RELIABILITY RUN TEST

FOR 62 MW (NET) FACILITY OF GULF RENTAL POWER

Issued April 30th, 2010
Certificate Number Pak/IPP/RSC/201004005

With respect to the Rental Services Contract (RSC) between the Northern Power Generation Company Limited (NPGCL) and Gulf Rental Power (GRP) and the Independent Engineer Agreement, KEMA International BV, with registered offices in Arnhem, Netherlands,

in accordance with the following from the RSC;

— Definitions: Operational Test(s)
— Section 4.4; Completion Schedule and Commencement of Rental Term

and taking into account uninterrupted operation of the Equipment, without overloading the individual equipment beyond its safe operating limits, during the two-hour Reliability Run test,

KEMA International are pleased to issue the Certificate of Successful Reliability Run Test as per requirements of the Independent Engineer Agreement.

KEMA International BV

Dik van der Linden
Manager AP Projects

KEMA

CERTIFICATE OF GUARANTEED ELECTRICAL OUTPUT

FOR 62 MW (NET) FACILITY OF GULF RENTAL POWER

Issued April 30th, 2010
Certificate Number Pak/IPP/RSC/201004004

With respect to the Rental Services Contract (RSC) between the Northern Power Generation Company Limited (NPGCL) and Gulf Rental Power (GRP) and the Independent Engineer Agreement, KEMA International BV, with registered offices in Arnhem, Netherlands,

and in accordance with the following terms from the Rental Services Contract,

— Definitions, Operational Test(s);
— Definitions, Guaranteed Electrical Output;
— Section 4.4, Completion Schedule and Commencement of Rental Term;
— Section 7, Commercial Operation.

and following the demonstration during the 2-hour Reliability Run test carried out on 28 April 2010; from 1936 hrs to 2136 hrs, in which the Net Electrical Output exceeded the Guaranteed Electrical Output of 62 MW and whereas the lowest one hour value of the two hour measurement, reading from the Main Meters, was 63.776 MW,

KEMA International are pleased to issue the Certificate of Guaranteed Electrical Output as per requirements of the Independent Engineer Agreement.

KEMA International BV

Dik van der Linden
Manager AP Projects

CERTIFICATE OF ACCEPTANCE OF EQUIPMENT

FOR 62 MW (NET) FACILITY OF GULF RENTAL POWER

Issued April 28th, 2010

Certificate Number Pak/IPP/RSC/201004003

With respect to the Rental Services Contract (RSC) between the Northern Power Generation Company Limited (NPGCL) and Gulf Rental Power (GRP) and the Independent Engineer Agreement, KEMA International BV, with registered offices in Arnhem, Netherlands,

taking into account the Terms of Reference of the Independent Engineer Agreement and the subsequent review of the;

- Inspection reports of the Equipment concerning equipment at location of origin,
- Erection and commissioning reports of the Equipment at the actual site in Pakistan,
- Environmental Audit report of the Equipment at the actual site in Pakistan, and
- Inspection of the Equipment at the actual site in Pakistan

KEMA International are pleased to issue the Certificate of Acceptance of Equipment.

This acceptance certificate only certifies that the Equipment is suitable to meet the requirements of the RSC but neither guarantees the performance of the Equipment with respect to the RSC nor the successful completion of the Reliability Run test.

KEMA International BV

Dik van der Linden
Manager AP Projects

KEMA

Log Sheet

The logsheet below shall be used for the purpose of recording of the readings during the two hours of the Operational Test.

Day / Time for Start of the Operational Test	28.4.2010, 1936 hrs
Day / Time for End of the Operational Test	28.4.2010, 2136 hrs

Readings MW Output: Reliability Run

Time[2]	Date	Ambient Temperature (°C)	Actual load in MW
19:36	28.4.2010	34	—
20:36	28.4.2010	35	63.7
21:36	28.4.2010	35	64.9
/	/	/	/

Readings Metering System: Guaranteed Electrical Output

Time of reading[3]		Main Meter in kWh	Backup Meter in kWh
Start	19:36	00282373 (T1)	00280494 (T1)
	19:36	00139393 (T2)	00137250 (T2)
After 60 min	20:36	00318826	00316748
	20:36	00166716	00164545
After 120 min	21:36	00355672	00353381
	21:36*	00196200 (21:39)	00192569

* Main meter reading at 21:39 hrs.

Ambient Condition Readings

Time of reading	T Ambient Air (°C)	P Ambient Air (mbar)	RH Ambient Air (%)
1930	34		
1945	35		
2000	35		
2015	36		
2030	36		
2045	35		
2100	35		
2115	35		
2130	36		

Air inlet vent fans; combined load = 192.5 kW, not operated during test

Signed for acceptance of appropriate readings

Gulf Rental Power	KEMA	NPGCL
Sign: A Rashid	Sign:	Sign:
Name: ABDUL RASHID	Name: M. Asad Khan	Name: Sultan Mehmood
Date: 28-04-2010	Date: 28/4/2010	Date: 28/4/10

[2] The first time notation shall be at the start of the test and readings shall be noted every 30 minutes.
[3] The first time notation shall be at the start of the test. Each 60 minutes, one reading shall be taken of Main as well as Backup (check) meter. In case both meters are not located at the same position, two logsheets to be taken into account while two readers shall take readings based on a synchronized stopwatch.

Profile of Experience of Senior Management and Details of Applicant

Chief Executive

Mr. Haseeb Khan is the Chief Executive (**CEO**) of Gulf Powergen (Private) Limited. He is the overall incharge of the Project and is answerable to the Board of the Directors as well as represents Company shareholders. He managed development, financing, construction and the successful commissioning of the Project and thereafter its smooth and efficient operation and maintenance. He also handles general administration and financial discipline of the Company.

In 1990, Mr. Haseeb Khan established 'Haseeb Khan & Co.' ("**HKC**"), as a Chartered Accountancy firm, which has progressively grown into a project development & investment company. It has been managing various energy sector projects in Pakistan for the last about twenty (20) years. Global Technical Giants like Siemens, GE, China Three Gorges Project Corporation, Dong Feng, etc. are always readily willing to work with HKC on any project. HKC has recently participated in the international tenders for power sector projects floated by the Ministry of Electricity, Iraq and, in collaboration with GE, has completed/commissioned a 100 MW Gas-Fired Power Generation Project in Iraq. HKC's present activities include but are not limited to the following:

- Project development particularly of the power sector projects.
- Technical, Financial, Commercial and Regulatory studies of the Projects including identification of the suitable technology for the project. The studies managed by HKC are of international standards and are easily bankable by the international financing agencies.
- Preparation/review of various project agreements proposing value additions for all the stakeholders and conducting negotiations with the other parties;
- Preparation/review of EPC documents for the projects in accordance with the industry practice followed in Pakistan. Floating EPC tenders, identification of suitable suppliers/contractors to facilitate wide competition, evaluation of bids, preparation of recommendations for award of contract to the lowest responsive bidder, assist in contract negotiations for a best deal for the project;
- Dealing/coordination with the Government agencies, legal & financial consultants, lenders and all other related counterparties.
- Identify suitable investment avenues and facilitate investors to invest in the projects developed & structured by HKC.
- Manage equity investment in the selective projects.

Mr. Haseeb Khan is one of the well-known and respected personalities in the power sector of Pakistan. He has worked with leading international groups i.e. equipment manufacturers/suppliers, EPC contractors, and operators of power plants. Mr. Khan has also been closely associated with various investors & financiers of power projects in the country. Due to his extraordinary vision and persistent hard work, HKC has developed to the present level

whereby it is capable of undertaking projects of any magnitude particularly in the power sectors in Pakistan and Middle East.

Mr. Khan is presently working on various new IPP projects. He is also the Chief Executive Officer of **870 MW Suki Kinari Hydropower Project.** He is also on the Board of Directors of **44 MW CJ Hydropower Project**.

Besides Gulf Powergen Thermal Power project, some of the prominent projects in which HKC is associated are narrated below:

870 MW SUKI KINARI HYDRO POWER PROJECT

Suki Kinari Hydro Power Project, a run of the river hydropower project in Mansehra District of Khyber Pakhtunkhwa, is the largest hydropower project ever taken up in the private sector in Asia. Its feasibility study was conducted by Mott MacDonald Ltd. (UK) in 2006-08. The feasibility study was progressively reviewed by a panel of experts constituted by the Private Power & Infrastructure Board (PPIB) of the Government of Pakistan and was approved in April, 2008. The sponsors of the project are vigorously pursuing it. NEPRA, through its regulatory procedures, determined its Feasibility Stage Reference Tariff on 26th November, 2008 and subsequently, on a review motion by the Company, revised it on 27th December, 2010. Generation Licence for the Project was issued by NEPRA on 27th May, 2009. PPIB, on behalf of the GOP, issued Letter of Support (**LOS**) on 16th July, 2011 authorizing the Project Company to implement the project. EPC bidding process has been completed and preliminary agreement for the EPC of the Project has been signed on 21st June, 2013. Tariff petition for determination of EPC Stage Reference Tariff has been filed with NEPRA on 28th June, 2013, which is under process. Financial closing of the Project is expected by July, 2014. The Project will be completed and commissioned within about six years thereafter. Indicative cost of the project is approximately USD 1.8 billion.

CJ LINK CANAL PROJECT (CJL)

CJ Link Canal Project is a canal based-hydro project envisaging installation of bulb turbines. The capacity for the project is 44 MW having total project cost around $ 87 million at the price level as of 2008. HKC is the main sponsor and lead developer for this project. Central China Power Group (CCPG) is proposed to be the project's technical partner. Feasibility study of the project, conducted by a consortium headed by NESPAK, has been approved by the Punjab Power Development Board (PPDB). Application for grant of Generation Licence and Petition for determination of Tariff have been submitted to NEPRA. The processing of these has been held up due to objections raised by the Government of Sindh.

Executive Director/CFO

Mr. Abdul Rashid has been handling multifarious assignments of GRPPL since July 2006. He is a Chartered Accountant, Cost and Management Accountant, and holds degrees of Bachelor of Law (LLB) & Master of Business Administration (MBA) from the University of Punjab. He is member of Lahore High Court Bar as well as member of the Institute of Professional Accountants, London, UK. He has more than forty (40) years of experience on financial,

accounting, procurement and management matters. He worked as Chief Financial Officer with Japan Power Generation Limited for about six years from September, 2000 until June, 2006. He has been working as Group Director Finance and Company Secretary of SK Hydro (Pvt) Ltd, CJ Hydro (Pvt) Ltd and GRPPL, the projects being developed and implemented by the current Group he is working with.

Project Director

Mr. Tahir Anwar has been working as the Project Director of GRPPL since April, 2009. He is a Mechanical Engineer and has vast experiences in the Engineering Industry. He has worked for about thirty two (32) years in various disciplines of engineering. He and other members of team managed development of the Project, construction on EPC basis till Commercial Operations of the Plant.

Project Manager & Maintenance Engineer

Mr. Muhammad Younas is a graduate with Honour in Electrical Engineering. He has adequate computer skills. He has about eighteen (18) years of professional experiences in various disciplines of electrical engineering. He has managed various projects as a team leader. He has been working on GRPPL project since October, 2009; first as a Project Manager and then as Maintenance Engineer. He is well conversant with his job.

Gulf Powergen

Gulf Powergen (Pvt) Limited
15-Peshawar Block, Fortress Stadium
Lahore 54810, Pakistan
Tel : 92 (42) 36675595, 36660085
Fax: 92 (42) 36673960, 36664349

Our Ref: GPPL/Gen-NEC/02-179
Dated: February 28, 2014

TO WHOM IT MAY CONCERN

CERTIFIED that no encumbrance / lien is marked against the assets of the Company as on February 28, 2014, however the company signed charge documents in favour of Habib Metropolitan Bank Limited, Karachi for a bank guarantee of Rs. 375(M).

GULF POWERGEN (PVT) LIMITED LAHORE

Chief Financial Officer
Gulf Powergen (Pvt) Ltd

ProDiesel
(Private) Limited
19-Peshawar Block, Fortress Stadium
Lahore 54810, Pakistan
Tel: +92 42 36675753 Fax: +92 42 36676034
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Due Diligence Report – Gulf Powergen Project

(Formally Gulf Rental Power (Pvt) Ltd)

INTRODUCTION

Eminabad Power (Pvt) Limited (EPL) is part of a group, led by a consortium of Saudi and Pakistani business houses, and are making long term investments in Pakistan. The group is enthusiastically developing other power projects which include a mega run-of-the river hydro project, Biogas Power Projects and a medium size plant on canals.

EPL has selected used Diesel Engines from world renowned manufacturers MAN and Sulzer. All other equipment such as 132 kV substation, cooling towers, auxiliary boilers, exhaust heat boilers, pumps, piping, cables etc are brand new. Construction at the project started in September 2009.

The generating units' brief details are as under:

3 x 9L58/64 MAN, 428 rpm, 11.9 MW each, 45000 hours each, having Siemens alternators.

ESNs: 1110072, 1110073 and 1110074..

2 x 9L58/64 MAN, 428 rpm, 12.5 MW each, 50000 hours each, having Siemens alternators.

ESNs: 1110140 and 1110141.

2 x 16ZAV40S Wärtsilä, 500 rpm, 11.52 MW each, 30000 hours each, having ABB alternators.

ESNs: 740400 and 740376.

ASSESMENT OF EQUIPMENT:

The facility was visited by the independent engineer of M/s Prodiesel (Pvt) Limited to ascertain the acceptability, or otherwise, of the equipment with regards to its suitability to meet the requirements of a Short Term Independent Power Plant (SIPP). Before the inspection at site, the Independent Engineer studied the Plant Operational and maintenance record of the plant. Following were noted

The plant was relocated from China in 2009 by Gulf Rental Power (Pvt) Limited.

The Plant successfully qualified all Operational tests on 28th April, 2010- Commercial Operation Date (COD). As per guidelines laid down in Asian Development Bank (ADB) Report all these tests were witnessed by Independent Engineer of M/s KEMA International BV, Holand & a team of technical experts of GENCO III. Accordingly M/s KEMA has issued detailed report along with following certificates to GRPL for WAPDA, GENCO III, PPIB & Ministry of Water & Power.

- Certificate of Acceptance of Equipment
- Certificate of Guaranteed Electrical Output
- Certificate of Successful Reliability Run Test
- Log Sheet for recording of Energy Meter readings during Operational Tests

Plant has been in operation since its COD (28th April, 2010) till 30th March, 2012 ,

During the inspection of the Equipment, the following was noted:

Engine Hall, ground level:

All seven gensets are installed in a configuration of 2-3-2 i.e. from the right hand side, facing South. The connections to all auxiliary modules/equipment are in place. All gensets were installed by GRP and the alignment was done by MAN specialist who also recorded the crankshaft deflections after the alignment.
The commissioning of MAN gensets was done by MAN and commissioning of Sulzer gensets was done by Wärtsilä (Sulzer engines came under Wärtsilä umbrella in 1997). All seven gensets are operational. The fuel booster units and LO separator units are also installed in this hall. All gensets have oil bath charge air filters which are installed inside this hall. The 10T overhead crane is in good working condition. The generator exciter panels are installed on the Northern wall. Mobile fire extinguishers are placed inside the engine hall to cater for any exigency. Hot air egress is at the top of the engine hall roof.

Engine Hall, lower level:

This hall houses LO drain tanks, LO and JW heat exchangers, charge air coolant heat exchangers, LO and JW pumps and temperature control valves, LO filters for Sulzer engines, LO drain tanks, fuel injection valve coolers, starting and service air bottles, starting air compressors and drier units for control air, inlet ventilation fans.

Control Room:

The control room has all the monitoring, control and alarm system however there is no centralized DCS.

Electrical Panel Room:

All HV (132 kV), MV (11 kV) and LV (380 V) electrical panels have been placed at the back of control room.
All cabling is complete and I/O tested.

Switchyard:

There are two 132-kV line bays. All equipment in the switchyard is new and fully tested and functional.

Centrifuges:

Each genset has its dedicated LO separator. MAN engines have Alfa Laval separators and Sulzer engines have Westfalia. The status of HFO separators has been described in this report under Fuel Treatment Room.

Revenue Meters:

Main and back-up revenue meters are located inside the dedicated metering room inside the Switchyard.

Fire Fighting System:

Fire main is laid and the piping is complete. It consists of main Electrical and Engine driven emergency pumps along with Jockey pump to maintain the pressure in fire fighting piping. The complete fire fighting system is commissioned. Fire monitoring and alarm system is also installed which covers complete engine hall building, cable room and control.

Demineralized Water Plant:

Demineralized water plant is new, installed and commissioned.

Water Wells:

There are two wells serving the facility

Weather Station:

Solar powered weather station is installed at the top of the power house building.

Landscaping:

The plant has beautiful landscaping.

COMMISSIONING:

Test reports of all major equipment, whether new or used, prior to commissioning are available at the facility. This includes, *inter alia*, gensets, generators, CBs, CTs, PTs, protection relays and HV switchyard including HV transformers. FAT reports of CBs, CTs, PTs and power cables are also available at the facility.

ENVIRONMENTAL AUDIT:

The environmental monitoring / audit of the facility was carried out by Apex Environmental Laboratory of Lahore in March and April 2010 and also in March, 2011. The facility was tested for gas emissions, noise and waste water. According to the report, the facility is in compliance with the prevailing environmental laws and regulations.

REHABILITATION PLAN

All seven engines have been major over hauled. The maintenance record was studied. All required parts have been renewed and calibrations of all other major parts suggest that all engines are in very good condition.

IMPORTANT INFORMATION:

MAN specialist has recommended that the expected remaining life of the used equipment and auxiliaries imported from China has been estimated more than15 years; provided, OEM instructions are followed.

The engines and turbochargers have been overhauled at site. EPL are confident the engines will deliver promised output. The facility, according to EPL, has performed full deliverable output runs as part of preparations for the Operational
Test(s).

The Independent Engineer made an assessment of the equipment based on inspections of the Equipment at site and by studying the specific technical details of the inspection reports of the Equipment prepared by or on behalf of EPL before the dismantling of the equipment at the origin as well as the installation and commissioning procedures employed at site and the subsequent corresponding reports in addition to the compliance with national environmental standards.

The Independent Engineer found the equipment suitable for acceptance to meet the requirements of the SIPP.

11 FEB 2014

Attachment – XVII

Operational Record for the Years 2010, 2011 and 2012 (up to March, 2012)

EMINABAD POWER (PVT) LIMITED

(Formally GULF RENTAL POWER (PVT) LIMITED)

1st Commercial Operation Year

Month	Meter Reading		Total Units Delivered (KWH)
	T-1	T-2	
April 28, 2010	355,672	196,200	
May 31, 2010	15,059,282	14,955,048	29,462,458
June 30, 2010	23,098,485	23,063,076	16,147,231
July 31, 2010	38,909,088	38,963,556	31,711,083
August 31, 2010	55,387,515	55,530,864	33,045,735
September 30, 2010	71,837,121	72,097,092	33,015,834
October 31, 2010	89,952,303	90,305,640	36,323,730
1st Round Completed	99999999	99999999	
November 30, 2010	5,024,438	5,449,472	30,215,965
December 31, 2010	23,034,107	23,527,952	36,088,149
January 31, 2010	42,830,486	43,433,360	39,701,787
February 28, 2010	59,955,498	60,656,840	34,348,492
March 31, 2010	78,838,751	79,657,820	37,884,233
April 28, 2010	93,609,357	94,516,676	29,629,462

EMINABAD POWER (PVT) LIMITED

(Formally GULF RENTAL POWER (PVT) LIMITED)

2nd Commercial Operation Year

Month	Meter Reading		Total Units Delivered (KWH)
	T-1	T-2	
April 28, 2011	93,609,357	94,516,676	
2nd Round Completed	99,999,999	99,999,999	
May 31, 2011	14,450,603	15,467,344	41,791,912
June 30, 2011	34,381,358	35,506,528	39,969,939
July 31, 2011	54,576,365	55,820,788	40,509,267
August 31, 2011	75,864,065	77,221,024	42,687,936
September 30, 2011	95,351,250	96,820,900	39,087,061
3rd Round Completed	99,999,999	99,999,999	
October 31, 2011	15,157,971	16,727,568	39,713,387
November 30, 2011	29,792,666	31,467,984	29,375,111
December 31, 2011	44,509,290	46,260,816	29,509,456
January 31, 2012	57,782,817	59,592,660	26,605,371
February 29, 2012	66,710,637	68,556,372	17,891,532
March 30, 2012	76,072,056	77,956,044	18,761,091

Technical and Financial Proposal for Plant Operation & Maintenance

a. Plant Construction, Operation and Maintenance - Experience

The Plant was constructed and commissioned under an EPC contractual arrangement. Operational tests were successfully performed and witnessed by KEMA. COD was achieved on 28th April, 2010. An Operation and Maintenance Contractor by the name of ProDiesel (Private) Limited was engaged for operation and maintenance of the Plant as per international standards and utility practices. ProDiesel (Private) Limited have been successfully operating the plant pursuant to dispatch instruction of the NPCC from COD till 30th March, 2012, when the contract was rescinded on the orders of the Honourable Supreme Court of Pakistan as explained in the application. The same contractual arrangement with the O&M Contractor will be followed in future. The spare parts are excluded from the scope of services of the O&M contractor and shall be procured and supplied by the Company to ensure proper quality of maintenance. Guaranteed plant output and availability shall also be ensured in accordance with the contractual requirements agreed with the power purchaser and the technical risks of the Project shall be minimized.

b. Evidence of Adequate Financial and Technical Resources

The project has been completed and commissioned. The Commercial Operations Date was achieved on 28th April, 2010. Thereafter, the Power Plant has been in commercial operations for twenty three (23) months until it was closed on 30th March, 2012 on the orders of the Honourable Supreme Court of Pakistan as explained in the main application. The Power Plant is on ground and has been in operation for twenty three (23) consecutive months delivering the required output. This coupled with experience of the sponsors on the other projects provides sufficient evidence that the Sponsors fully comply with the qualifications/experience requirements and have adequate technical and financial strength to undertake operation and maintenance of the Power Plant effectively and efficiently. The plant will generate adequate revenue to ensure proper operation and maintenance of the plant. The plant is insured annually. Short-term funds required in connection with operation and maintenance of the plant will be arranged by the project sponsors.

Technical Details and Design of the Plant

The power plant at Eminabad is an RFO-Fired Reciprocating Engines Simple Cycle Power Generation facility and comprises the following:

a. Engines

- Make/Model & Capacity
  (i) **Man Diesel/9L 58/64**
  2 x 12.51 MW + 3 x 11.925 MW
  (ii) **Sulzer/16V 40ZS**
  2 x 11.52 MW
- Total Gross ISO Output83.835 MW
- De-rated Capacity at Site Conditions65 MW
- Auxiliary Consumption and Electrical Losses3.0 MW (Approx.)
- Guaranteed Net Output at
  Reference Conditions62.0 MW

b. Generators

	Siemens	**ABB**
• Make		
• Output (MVA)	2x15.2 + 3x14.5	2x14.7
• Rated Voltage (kV)	11	10.5
• Frequency (Hz)	50	50
• Power Factor	0.80	0.76

c. Lube Oil System

d. Radiator based Cooling System for High Temperature Circuit and Cooling Tower for Low Temperature Circuit

e. Firefighting System

f. 132 kV Switchyard complete with 2x40/50 MVA Step-up Transformers, Auxiliary Transformers, Two Line Bays with Control Equipment for two Outgoing Feeders, etc.

g. MV and LV Switchgear, Control and Protection Equipment

h. Metering System, Accuracy Class: ± 0.5%

i. Mechanical Auxiliary Systems

j. Weather Station for measuring wind speed/direction, ambient temperature, humidity, etc.

k. Civil Works – Building Structure including Engine Hall Building, Control Room, Equipment Foundations, Laboratory/Workshop

l. Fuel Supply System including Decanting Facilities and 5500 M. Ton Oil Storage Tank

m. Water Supply System

n. Waste Water Disposal System within and beyond the Plant boundary

The used Reciprocating Diesel Engines of world renowned manufactures, MAN and Sulzer,fitted with Generators of Siemens and ABB,were selected for the project. All other equipment such as 132 kV substation including step-up transformers, cooling towers, auxiliary boilers, exhaust heat boilers, pumps, piping, cables, etc.was procured brand newand in accordance with the international standards. The Engines, when procured from China, were in excellent condition and had completed 23000 to 47000 operating hours as per detail given below:

(a) Three (3) Man-Diesel Engines, Model 9L58/64, 11.9 MW each, with Siemens Alternators. Each Engine had completed 47000 operating hours only;
(b) Two (2) Man-Diesel Engines, Model 9L58/64, 12.5 MW each with Siemens Alternators. Each Engine had completed 27000 operating hours only; and
(c) Two (2) Wartsila Diesel Engines, Model 16ZAV40S, 11.52 MW each with ABB Alternator. Each Engine had completed 23000 operating hours only.

Subsequently, major maintenance and overhauling of all the seven Engines has been carried out.

Design of the plant and equipment has been carried out with all proper skill and care and in all material respects in accordance with international standards, the Grid Code, Pakistan's Environmental Protection Standards, the Laws of Pakistan, and Prudent Electrical Practices so that the Plant shall provide a net output of 62 MW, average annual plant availability of 88% and a useful life of not less than 15 years. Where applicable, WAPDA specifications have been followed.

The civil engineering and building works have been designed and constructed in accordance with the best current engineering practice and with the requirements of the appropriate National Codes to ensure that the high standards of quality and function are fully achieved. The design takes into account the spatial and functional requirements for the safe and efficient operations and maintenance of the Plant. The buildings and structures are designed to cater for dead, live, wind and seismic loads and for temperature loading and effects. All new and the best quality material has been used in construction of civil works.

The Plant is designed for base load as well as peaking duty operation. Also extended short time operation and longer periods of part load down to synchronized minimum load is possible without restrictions. The Plant is capable of operation within a voltage range of ± 10% on 132kV system, frequency range of ± 3% (and up to ± 5% for a very short-time operation) and power factor range of 0.80 lagging to 0.90 leading and can withstand Grid System fault levels.

Reference Conditions at which net plant output is guaranteed are as under:

- Ambient temperature 25°C
- Humidity 60%

Plant operates on Residual Fuel Oil (RFO). High Speed Diesel Oil (HSD) is used for start-up of Engines.

Power Plant is interconnected with GEPCO 132kV Power System through two 132 kV Circuits; one each interconnects with 132 kV Grid stations at Eminabad and Kamoke. Interconnection point is 132 bus-bar of the Plant Switchyard. Metering System is installed at the Plant.