

**PEPCO**

PAKISTAN ELECTRIC POWER COMPANY (PVT.) LIMITED

**LAKHRA POWER GENERATION COMPANY LIMITED**

150 MW POWER STATION DADU ROAD, DISTRICT JAMSHORO

Phone No. 022-9210025 &amp; Fax No.022-9210024

PABX Nos. 022-9210021-23

E-mails: (1) ceolpgcl23@yahoo.com

(2) genco4@yahoo.com

**Chief Executive Officer**

No.CEO/LPGCL/RENTAL/UNSOLICITED/NEPRA/TARIFF/01 (Camp at Lahore) Dated 07-10-2009.


→ **Engr. Arshad Mahmood,**  
Registrar NEPRA,  
2<sup>nd</sup> Floor,  
OPF Building, G-5/2,  
Islamabad.

Subject: - **PETITION FOR DETERMINATION OF TARIFF FOR UNSOLICITED RENTAL POWER PROJECT PROPOSED BY M/S KARKEY KARADENIZ ELEKTRIK , TURKEY PHASE-II.**

Kindly find enclosed herewith the comprehensive Tariff Petition for Determination of Tariff by National Electric Power Regulatory Authority (NEPRA) under provisions of the NEPRA Standards and Procedure Rules 1998 with regard to Energy Block –IV (Proposed) for sale of power to the National Transmission and Dispatch Company Limited (NTDC) through the Rental Power Project of Karkey Karadeniz Elektrik Uretim A.S. Turkey Phase-II, Ship/Barge Mounted at Korangi, Karachi.

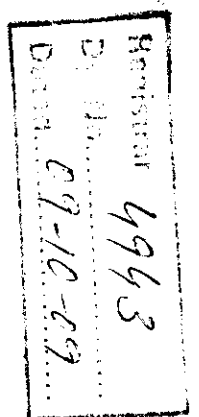
The subject Tariff Petition is being submitted under directives of the offices of General Manager, WPPo & PEPCO, Wapda House, Lahore and that the sponsor of the project would be obliged to associate himself with the tariff approval proceedings at NEPRA, Islamabad.

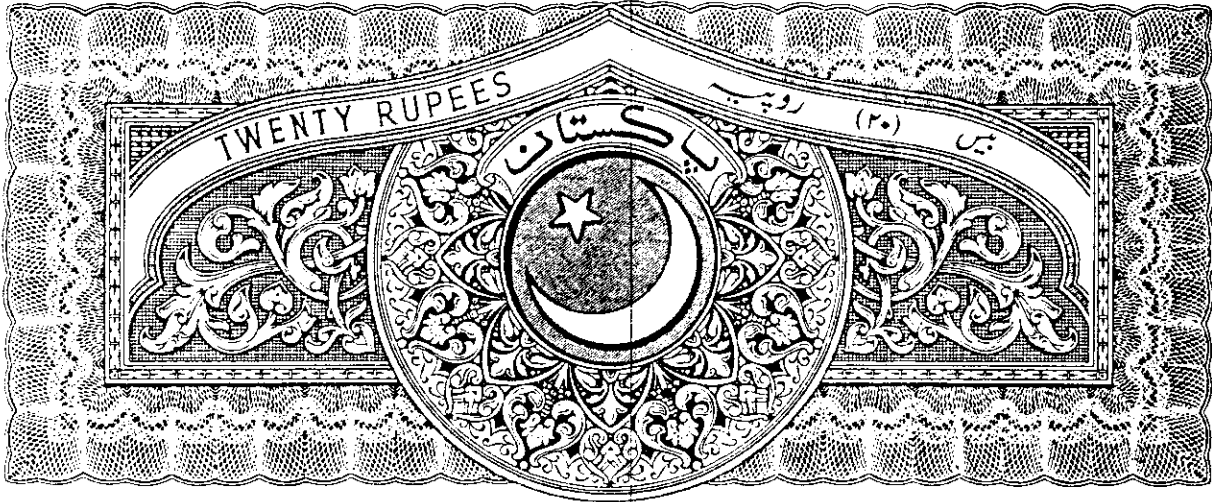
It is pertinent to mention that the enclosed case is of fast track nature and the Tariff is to be determined by NEPRA with regard to this 'Un-solicited Power Project' by Karkey Karadeniz Elektrik Uretim A.S. Turkey with-in the minimum period prescribed time.

  
[Hafeez-ur-Rehman Abbasi]  
Chief Executive Officer

Total Pages Enclosed: 55 nos. only

Cc. (1) MD PEPCO. 724-WAPDA HOUSE. Lahore;  
(2) GM (WPPo). 325-WAPDA HOUSE. Lahore;  
(3) Karkey Karadeniz Elektrik Uretim A.S. Turkey.






**BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY**

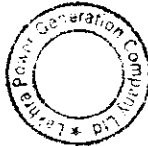
**AFFIDAVIT**

I, HAFEEZ-UR-REHMAN ABBASI, CHIEF EXECUTIVE OFFICER,  
Lakhra Power Generation Company Limited hereby solemnly affirm and  
declare that the contents of the accompanying petition / application No. CEO/  
LPGCL/RENTAL/UNSOLICITED/NEPRA/TARIFF/01(Camp at Lahore)  
Dated 07.10.2009 including all supporting documents are true and correct to  
the best of my knowledge and belief and that nothing has been concealed. I also  
affirm that all further documentation and information to be provided by me in  
connection with the accompanying petition shall be true to the best of my  
knowledge and belief.

Date: 07.10.2009


  
(HAFEEZ-UR-REHMAN ABBASI)  
Chief Executive Officer,  
Lakhra Power Generation Co. Ltd;

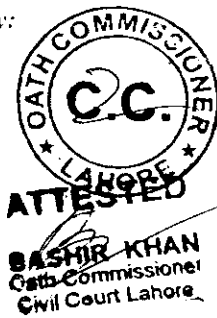
Stamp of the Company:



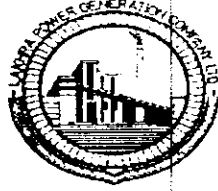
Recognized & Signatures Attested by:

Witness:

  
Mr. Aftab Ahmed Lashari  
Manager Finance (LPGCL.)



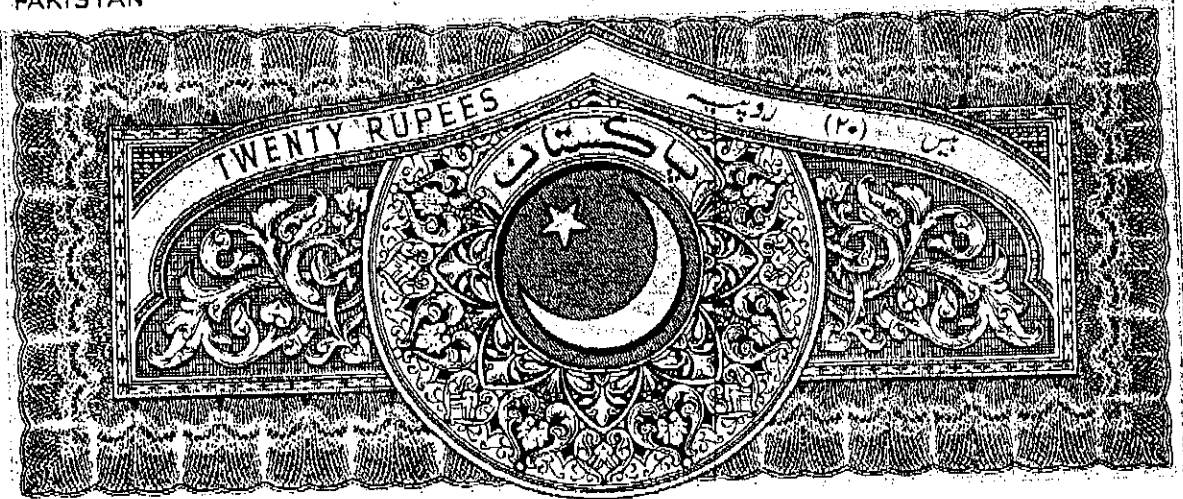
LAKHRA POWER GENERATION COMPANY  
LIMITED



**TARIFF PETITION**  
**FOR PROPOSED RENTAL POWER PLANT OF**  
**M/S KARKEY KARADENIZ ELEKTRIK URETIM**  
**A.S, TURKEY PHASE-II**  
**SHIP/BARGE MOUNTED RENTAL POWER PLANTS**

PAKISTAN

20 RS.



**BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY  
AFFIDAVIT**

I, Raja Babar Ali Zulqarnain, (NIC # 61101-7142854-9) Country Representative for the company KARKEY KARADENIZ ELEKTRIK URETIM A.S, TURKEY being duly authorized representative of M/S KARKEY KARADENIZ ELEKTRIK URETIM A.S, TURKEY, hereby solemnly affirm and declare that the contents of the accompanying petition/application No. CEO/19664/09 Dated: 7<sup>th</sup> October 2009 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed. I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.

*Raja Babar Ali Zulqarnain*

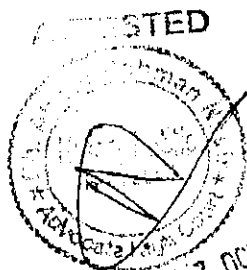
Raja Babar Ali Zulqarnain  
Country Representative  
M/S KARKEY Karadeniz Elektrik Uretim A.S, Turkey.  
Date: 7.10.09

Witness: (1) *Selwa Siddique*

Mr. Azhar Siddique (NIC # 8101-8661426-1 )

Witness: (2) *Sheikh Nazam Hussain*

Mr. Sheikh Nazam Hussain (NIC # 82101-8340881-1 )



*[Handwritten mark]*

# KARKEY

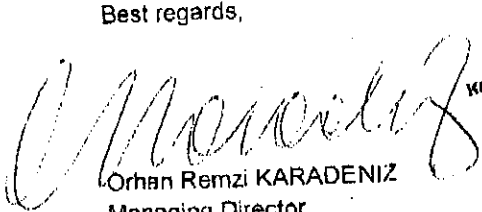
Date: 05.10.2009  
Ref : 0287

## CERTIFICATION OF AUTHORITY

To Whom It May Concern,

This letter is to certify that our country representative **Mr. Raja Babar Ali Zulqarnain** NIC# 61101-7142854-9 is fully authorized to sign the Affidavit related to tariff petition application to the National Electric Power Regulatory Authority (NEPRA) of the Islamic Republic of Pakistan related to our company **KARKEY Karadeniz Elektrik Uretim A.S.**

Best regards,



Orhan Remzi KARADENIZ  
Managing Director

**KARKEY**  
KARADENIZ ELEKTRIK  
URETİM A.Ş.



Osman Murat KARADENIZ  
Chairman of Board of Directors

 **KARADENIZ**

**KARKEY KARADENIZ ELEKTRİK ÜRETİM A.Ş.**  
Dışişleri Binası No 44 - 34400 - Zeytinburnu / İstanbul - TÜRKİYE  
Tel: +90 (212) 299 47 37 Fax: +90 (212) 299 47 33  
sfa.karkey@kva.ankon.halkinet.com.tr / www.karkey.com.tr



**LAKHRA POWER GENERATION COMPANY  
LIMITED**



**TARIFF PETITION  
FOR PROPOSED RENTAL POWER PLANT OF  
M/S KARKEY KARADENIZ ELEKTRIK URETIM  
A.S, TURKEY PHASE-II  
SHIP/BARGE MOUNTED RENTAL POWER PLANTS**

## **Tariff Petition Calculation with Regard to Unsolicited Rental Power Proposal of Karkey Karadeniz Elektrik Uretim A.S. Turkey Phase-II**

### **Background:**

PPIB invited through ICB Rental Power Proposals including Barge Mounted Plants of 500 MW Cumulative power generation capacity in KESC area for purchase of power by PEPSCO. PPIB notified M/s Karkey as "Qualified Bidder" on 12.09.2008 for installation, commissioning, operation & maintenance of 231.8 MW (net) Barge Mounted Rental Power Plant on RFO/HFO in Karachi area at Total Tariff of 16.2122 US cent per Kwh for Rental Term of 5 years. NEPRA DECISION REGARDING Tariff approval for the project intimated to the GoP through letter No.NEPRA/TRF-121/lpgcl-2008/565-67, DATED 21.10.2008. Subsequently, PPIB issued Letter of Award (LOA) to Karkey on 06.11.2008. Rental Services Contract was signed between Lakhra Power Generation Company Limited (LPGCL) and M/s Karkey on 05.12.2008 and subsequently amended on 23.04.2009 due to change in payment/security mechanism of GoP Guarantee in lieu of confirmed SBLC.

M/s Karkey vide its letter dated 18.07.2009 proposed up-gradation with additional capacity of 222 MW Net (at Mean Site Conditions) power-ship (Barge/Ship Mounted Power Plant) at Korangi Karachi. The power generated from ship/barge mounted power plant (i.e. Powership), was envisaged to be dispersed to the load centre of KESC through Korangi Thermal Power Station by construction of transmission lines from the deliver point on the board of Power Ship to Korangi Grid Station.

The office of General Manager WPPO through letter No. GM (WPPO)CE-IV/DC/13194-dated 11.09.2009 (Copy attached:K) requested LPGCL to file tariff determination case for Karkey Karadeniz with NEPRA immediately, it was advised that requisite information in this connection may be obtained from the sponsor of the project, who would also be obliged to associate himself with the tariff determination proceedings. In this connection following documents were forwarded through said letter:

1. Summary for ECC bearing number 15(25)/2009-P-II dated 17.08.2009
2. ECC in its decision case No ECC-121/15/2009 dated 21.08.2009
3. Summary for the Cabinet No.15(25)/2009-P-II dated 26.08.2009
4. Minutes of Cabinet meeting No. PI-6(54)/2009 dated 01.09.2009
5. MoW&P letter No. P-II.15(25)2009 dated 04.09.2009

From the study of attached documents it emerged that Ministry of Water & Power in its Summary for ECC bearing number 15(25)/2009-P-II (Annex-I) put forward the case for unsolicited rental power projects as under:-

"The MoW&P received a few unsolicited proposals which were offering a reasonable tariff compatible to the average rental tariffs received through ICB and are compliant to the ECC guidelines. The efficiency and available

standards for these power plants and the financial model are the same as ICB projects”.

In this connection the Summary listed unsolicited proposals for Naudero-I, Naudero-II, Sammundri Road Extension and Karkey up-gradation for a total installed capacity of 473 MW. It was proposed as noted below:

“That in view of the prevailing energy crises in the country the Ministry may be allowed to go ahead with the said unsolicited proposals. The tariff for unsolicited projects shall also be duly submitted to NEPRA for scrutiny and vetting”.

ECC in its decision case No ECC-121/15/2009 dated 21.08.2009 (Annex-II) decided at Sr. No iii as under:

“The approved, unsolicited projects shall be required to obtain approval of their proposed tariff from NEPRA within the minimum period prescribed”.

The Secretary, MoW&P moved a summary dated 26.08.2009 (Annex-III) to the Cabinet wherein approval of the Cabinet at Para-4 is solicited as under:-

“It is therefore requested that in view of the prevailing energy crises in the country, and Government’s public announcement to end load shedding, the Ministry of Water & Power may be allowed to go ahead with the balance of ICB Projects totaling up to 2216 MW from amongst the ICB/Unsolicited projects in Annexure V & VI. The ECC vide its decision on 21.08.2009 has already authorized the Ministry to undertake suitable adjustments/substitution and capping from the projects already in pipeline. The unsolicited projects shall however, be to obtain approval of their proposed tariff from NEPRA within the minimum period prescribed, as already decided by ECC as well”.

MoW&P vide letter No. P-II.15 (25)2009 dated 04.09.2009 (Annex-IV) addressed to Managing Director PEPCO and General Manager WPPO advised as noted below:

“1. Pursuant to the decisions taken in the ECC and Cabinet meetings on Rental Power Projects, you are advised to direct concerned authorities to file tariff determination cases to NEPRA in respect of the following Unsolicited Rental Power Projects immediately:

- (i) Naudero-I, 50 MW, gas fired.
- (ii) Naudero-II, 51 MW, gas fired.
- (iii) Abbas Steel, 100 MW, Dadu, RFO based.
- (iv) Karkey II, 222 MW, Korangi / Mauripur, Karachi.
- (v) Sammundri Road Extension Faisalabad, 150 MW.



2. Necessary coordination may also be done with NEPRA to complete the process within the prescribed time as decided by the ECC”.

M/s Karkey proposal for 222 MW Rental Power Project dated 16.09.2009 is submitted for determination of tariff by NEPRA for the project. It is added that as per terms of the Rental Services Contract and otherwise to be executed, certain charges will accrue that have to be borne by LPGCL due to provision of Down Payment, construction of interconnection facility and fulfillment of BUYER’s liabilities/responsibilities for the project.

**Project Details:**

M/s Karkey Karadeniz A.S. Turkey shall provide hereunder the performance warranties/guarantees for the Rental Equipment offered complying with the requirements prescribed by the BUYER (Lakhra Power Generation Company Limited) under provisions of Rental Service Contract to be signed, compatibility with NTDC’s system and the following minimum technical requirements:

- i. Guaranteed Electrical Output: 222.0 MWat Mean Site Conditions. This capacity will be provided from (Karadeniz Power Ship KPS-B (SULZER): 83.42 Mw and Karadeniz Power Ship KPS-C (MAN): 140.37 MW.
- ii. Guaranteed Availability of Equipment \*: 95%.
- iii. The Rental Power Plant shall be capable of operating within the range of  $\pm 10\%$  on the 132 Kv high voltage systems which range shall not be exceeded.

- *Availability of the Guaranteed Electrical Output level on annual basis.*

**KARKEY’S INFORMATION & POWER PROJECT EXPERIENCE DATA:**

S.No.	Item	Information
1.	Name of Company	KARKEY Karadeniz Elektrik Uretim A.S.,
2	Company role in the Project completed.	Company role is Lead Project Developer, Lead Construction Contractor. Lead Operation Manager and %100 share holder of the whole Power Plant Project.
3	Name of Project	KARKEY SILOPI POWER PLANT
4	Company share in the equity of the completed project	%100 Equity
5	Location of Plant	Silopi, Sirkak / TURKEY
6	Name of Owner Contract Person Address  Telephone	KARKEY Karadeniz Elektrik Uretim A.S. Mr. Ali Can TAKUNYACI Generation & Investment Director Develi Sok.No, 14 34406. Kagithane, Istanbul / TURKEY. +92 212 295 47 37

	Fax Email address	+90 212 295 47 43 alican.takunyaci@karadenizholding.com
7	Name of Power Purchase	1. KARTET (Electricity Wholesales Tran Company). 2. TEIAS (Turkish Electricity Transmission Co. Inc)
8	Capacity of Plant	181.25 MWm/171.94 MWe ISO Condition
9	Type of Plant	Diesel Power Plant with RFO Fuel
10	Fuel of Plant	RFO (Heavy Fuel Oil No.6)
11	Number and rated capacity of units	Totally 22 engines: 7 x 6.00 MWe + 3 x 10.50 MWe + 4 x 6.15 MWe + 3 x 14.78 MWe + 5 x 5.90 MWe
12	Status of plant	The Plant is in commercial operation since 1999.
13	Number of years of successful operation	Total number of successful operation is 10 years (from 1999 to 2009 up to day)
14	Principal manufacturers of major equipment	<ul style="list-style-type: none"> <li>▪ Wartsial Finland OY</li> <li>▪ Wartsila Netherland BV</li> <li>▪ Man Mirlees Blackstone</li> </ul>
15	List of specific major tasks/Services performed by Company	KARAKEY Karadeniz Elektrik Uretim A.S. is the Power Plant owner, operator, contractor and financier.
16	Date of award of projects	1999, 2000, 2004, 2007
17	Duration of construction period	7 Months for first phase / 7 engines 4 Months for second phase / 5 engines
18	Commercial operations date of each unit	04 Sep. 1999 for first phase / 7 engines 06 Sep. 2000 for second phase / 5 engines 12 Nov. 2004 for third phase / 7 engines 13 Dec. 2007 for fifty phase / 3 engines
19	Total capital cost of Project	122.892.724 USD
20	Companies and institutions who financed the project	KARAKEY Karadeniz Elektrik Uretim A.S.

#### Project Data:

1	Project Description (technology)	2 Powership (floating power plants installed on barges or ships) KARADENIZ Power Ship-B : 89.600 MWe KARADENIZ Power Ship-C : 154.02 MWe
2	Project Site	Korangi, Karachi

3	Fuel Primary Fuel	RFO/ HFO for Powership B and Powership C. Additionally Powership C can also operate with Natural Gas.
	Back-up fuel	LFO as Backup Fuel
4	No of Units and Configuration of Rental Power Plant KARADENIZ Power Ship-B : 8x11.200 KWe = 89.600 MWe KARADENIZ Power Ship-C: 6x18.124 KWe + 3x15.092 Kwe=154.02 MWe	
5	Equipment Description	Reciprocating Engines
	Manufacturer	SULZER / MAN
	Type/model	KPS-B/ SULZER 16ZAV40S KPS-C/ MAN 18V51/60DF KPS-C/ MAN 14V48/60
	Gross Capacity (ISO)	KPS-B/ SULZER: [8x10.92 Kwe] KPS-C/ MAN: [6x18.124 Kwe+3x15.092 Kwe]
	Gross Capacity (at Mean Site Conditions)	KPS-B/ SULZER: [8x10.92 Kwe] KPS-C/ MAN: [6x17.600 Kwe+7x14.655 Kwe]
	Net Capacity (ISO)	KPS-B/ SULZER: [8x10.696 Kwe] KPS-C/ MAN: [6x16.815 Kwe+7x14.360 Kwe]
	Net Capacity (at Mean Site Conditions)	KPS-B/ SULZER: [8x10.428 Kwe] KPS-C/ MAN: [6x16.395 Kwe+3x14.000 Kwe]

**Project Schedule:**

S.No.	Activity	Period
1.	Assumption: Issuance of LOA	0
2	Finalizing of Rental Services Contract	20 days
3	Construction Start	50 days
4	Testing	150 days
5	Commercial Operation	180 days

**Proposed Tariff for Determination of NEPRA:**

The Rental Power Plants have been assumed to be separate Energy Block for the purpose of tariff. The proposed tariff in respect of M/s Karkey Karadeniz of 222 MW (Net Capacity) is hereby submitted for approval of National Electric Power Regulatory Authority, under Rule 3 of NEPRA (Tariff standards and procedure) Rules, 1998.

The Reference Tariff has been proposed in two parts i.e. Capacity Purchase Price (CPP) in US \$ and its conversion in Pk Rs (Financial Cost Inclusive) and Energy Purchase Price (EPP) in Pk Rs. during the whole period for the offered Rental Term (i.e. five years) as given below:-

Year	Capacity Charge Rate		Energy Purchase Price (EPP)
	(US\$/KW/Month)	Pak.(Rs/KW/Month)	(Rs/Kwh)
2010	44.912	2784.544	6.344
2011	45.296	2808.352	6.344
2012	44.103	2734.386	6.344
2013	42.888	2659.056	6.344
2014	41.987	2603.194	6.344

Moreover, supplemental Charges/Pass-through items have also to be proposed later on actual basis to be charged through Central Power Purchase Agency (CPPA) to NTDC and would be applicable from Commercial Operation Date (COD).

The Seller's Proposed Tariff (inclusive of cost up to Rs.1.0 billion on interconnection facility) with Reference Exchange Rate of US \$ vis-à-vis Pk. Rs. taken to be Pk. Rs. 62.0 per \$ is as under:

Year	Rental Charges (US Cent/Kwh)	Energy Purchase Price (EPP)	
		(US Cent/Kwh)	(Rs/Kwh) @ 62.0/US\$ Exchange Rate
2010	5.790	10.2323	6.344
2011	5.790	10.2323	6.344
2012	5.790	10.2323	6.344
2013	5.790	10.2323	6.344
2014	5.790	10.2323	6.344

**Lump Sum Rental Charges for 60 Month Rental Term**

Description	Duration (Months)	Lump Sum Rental Charges (US \$)
Rental Services of the Equipment including but not limited to SELLER'S responsibilities shall be mentioned in the Rental Services Contract: Transport to/from Company Site Mobilization and de-mobilization Installation and commissioning Operation and maintenance	60 Months	\$ 534,846,618- (US Dollar Five Hundred Thirty Four Million Eight Hundred Forty Six thousand Six Hundred Eighteen only)

**Assumptions:**

(a) *The calculation of Energy Charge Price and Capacity Purchase Price:* indicated in terms of Rs/Kwh and US\$/Kw/Month, respectively, are intended to remain effective for five years, provided no major event or events occur, during the period, rendering submission of revised tariff necessary. The Fuel Cost Component of the Energy Purchase Price shall, however be adjusted according to the price changes with reference to Furnace Oil as benchmark of Rs.26,000/M.Ton.

(b) *The Financial Cost assumption:* is based on the cost expected to be incurred by LPGCL associated with the Down payment of 14.00% of the Project Lump Sum Contract price in addition to the Capacity Charge Price and it is variable over during the period of the offered Rental Term in line with the retirement of debt. It will be paid to the banks as given below:

Year	Financial Cost(US Cent/Kwh)
2010	0.6756
2011	0.7310
2012	0.5589
2013	0.3838
2014	0.2539

(c) *The Reference Tariff comprises of the following two parts:*

**I. Capacity Purchase Price (CPP)**

- a) Escalable Component
- b) Non-Escalable Component

• **Escalable Component**

Escalable Component of Capacity Purchase Price (CPP) would cover the following O&M Costs:

- Rental Payments (inclusive cost up to Rs.100 Crores) on interconnection facility. The rental payments are fixed over period of 10 years.
- Financial Cost of Advance Payment.
- Confirmation of counter Guarantee.
- Establishment Cost of Running Business.

• **Non-Escalable Component.**

- Non-Escalable Component of Capacity Purchase Price (CPP) would cover the following Costs:

Cost of working Capital financing, if any.

**II. Energy Purchase price (EPP)**

**Fuel Cost Component**

(d) *Supplemental Pass Through Items:* We have assumed that during the existing years, the company will remain exempt from all obligations to contribute towards Worker Profit Participation Fund and Workers Welfare Fund. Any actual payment on account of the following and like nature shall be pass-through to NIDC:

- Actual payment to workers Welfare and Profiter Participation Fund.
- Actual Income Tax/Turnover Tax.
- General Sales Tax.
- Any other Duties/Tax etc.
- Insurance Costs due to change in policy.
- Variation in Fuel Prices.
- Electricity Duty on In-house consumption of Energy.
- Expenditure on modification of expenditure of the plant & facilities required by the NIDC.
- Custom Duties for Consumable stores & spares Rental Services Contract.
- Financial Charges on funds involved in the payment of Custom Duties on the Plant & Equipment to be re-exported (per Rental Services Contract).
- Financial Charges on establishment of tender of 3.00 (Fuel Price L/C - FPLC).
- Generation License Modification Fee & all petition fee.
- Further capital expenditure or any other costs.
- Interconnection charges up to Rs.100 Crores are borne in the EPP and the amount exceeding Rs.100 billion will be pass through to them.

**(e) Adjustments**

- (1) *The Fuel Cost Component will be subject to adjustment to any change in Fuel Price with respect to the reference Fuel Price in accordance with the following formula:*

$$FCCe = FCCr \times \text{Fuel Price Factor}$$

Where:

FCC<sub>c</sub> = Fuel Cost Component on the relevant date C.  
FCC<sub>(Ref)</sub> = the value of FCC as given in the table at Reference Fuel Price.

Fuel Price Factor = Fuel Price<sub>p</sub> ÷ Fuel Price<sub>Ref</sub>

Fuel Price<sub>p</sub> = the per unit delivered price of fuel HFO at the plant as established by – GOP (Pakistan State Oil (PSO) Ex-Kemari (After correction for standard and expressed in Rupees), at date “p” and

Fuel Price<sub>REF</sub> = the per unit delivered price of fuel at the plant (after correction for standard and express in Rupees). at reference date which is Rs.26,000/- pr Metric Ton HFO in case of HFO fuel (including transportation charges). This price is without GST.

II) *Indexation of Capacity Purchase price:*  
Foreign Exchange Parity Adjustment:

The fixed Rental Charges shall be adjusted for foreign exchange variation according to the following formulae:\

$$FC - FX_{(Adj.)} = FC = FX_{(Org)} * DR_{(Rev)}/62.0$$

Where:

FC - FX<sub>(Adj.)</sub> = The applicable Fixed Charge inclusive O&M based on a Dollar to Rupee exchange Rate of 62.0


DR<sub>(Rev)</sub> = the revised TT and OD selling rate of US\$ as notified by The National Bank of Pakistan applicable on the first day of the month for which the payment to LPGCL is due.

DR<sub>(Rev)</sub> = Fuel Price<sub>p</sub> ÷ Fuel Price<sub>Ref</sub>

The Schedule and calculation of Rental is attached as Annexure-I, II, III & IV. The affidavit of the Proposed Seller Party is enclosed herewith to support the information provided in this petition.

Note: Waiver of tariff petition fees may kindly be allowed for this petition.

  
[Hafeez-ur-Rehman Abbasi]

  
M.F. LPGCL

## Annexure-I

Lakhra Power Generation Company Limited  
 Projected Generation Rental Power Projects

		2010	2011	2012	2013	2014
<b>Rental Block- KARAKKEY Phase-II</b>						
Gross Capacity	MW	243.6	243.6	243.6	243.6	243.6
Aux. Consumption	%	8.867%	8.867%	8.867%	8.867%	8.867%
Net Dependable Capacity	MW	222.0	222.0	222.0	222.0	222.0
Availability		95%	95%	95%	95%	95%
Operating Hours		8760	8760	8760	8760	8760
Net electrical Out Put (NEO)	Gwh	1,847.484	1,847.484	1,847.484	1,847.484	1,847.484



		2010	2011	2012	2013	2014
<b>Calculation of Energy Charge Price</b>						
<b>Rental Block- KARKAY RENTAL</b>						
Gross Capacity	MW	222	222	222	222	222
Net Dependable Capacity	MW	222	222	222	222	222
Avg. Consumption	%	95%	95%	95%	95%	95%
Availability	%	95%	95%	95%	95%	95%
Heat Rate	Btu/Kwh	9,818.5	9,818.5	9,818.5	9,818.5	9,818.5
Hours in a year		8,760	8,760	8,760	8,760	8,760
Fuel Price - Furnace Oil	\$/M.Ton	40.240	40.240	40.240	40.240	40.240
Net Electrical Out Put - NEO	Gwh	1,847,484	1,847,484	1,847,484	1,847,484	1,847,484
Fuel Quantity Consumed - F Oil	M Tons	450,367	450,367	450,367	450,367	450,367
Fuel Cost - F Oil	Million Rs	11,720,367	11,720,367	11,720,367	11,720,367	11,720,367
Fuel Cost Per Unit	Rs/Kwh	6.344	6.344	6.344	6.344	6.344
<b>Over all EPP</b>						
Total NEO	Gwh	1,847,484	1,847,484	1,847,484	1,847,484	1,847,484
Total Fuel Cost	Million Rs	11,720,367	11,720,367	11,720,367	11,720,367	11,720,367
Average Fuel Cost	Rs /Kwh	6.344	6.344	6.344	6.344	6.344
<b>Calculation of Capacity Charge Price</b>						
<b>Rental Block- KARKAY RENTAL</b>						
Net Dependable Capacity	MW	222	222	222	222	222
Non-Escalable Component	Mill. US \$	Nil	Nil	Nil	Nil	Nil
<b>Escalable Component</b>						
1. Rental Charges (inclusive cost up to Rs 1.0 billion on interconnection facility)	Mill. US \$	106,969	106,969	106,969	106,969	106,969
2. Financial Cost of Advance Payment payable to Banks	Mill. US \$	4,690	4,690	4,690	4,690	4,690
a. Arrangement Fee (0.25% of Loan amount)	Mill. US \$	-	-	-	-	-
b. FIDIC 1997 Advisory Fee	Mill. US \$	-	-	-	-	-
c. Legal Fee	Mill. US \$	-	-	-	-	-
d. Agency Fee	Mill. US \$	-	-	-	-	-
e. FIDIC 10% on Agency Fee	Mill. US \$	-	-	-	-	-
f. Out of Pocket Expenses	Mill. US \$	902	902	902	902	902
g. Counter Guarantee Charges (g) 0.27% on loan amount of Rs 6,214,917,701 (50% chargeable to LPGCL)	Mill. US \$	1,639	1,639	1,639	1,639	1,639
<b>h) Cost of Business</b>	Mill. US \$	-	-	-	-	-
i. Salaries of Staff	Mill. US \$	0.177	0.177	0.177	0.177	0.177
j. Other Office Expenses (10% of Salaries)	Mill. US \$	0.018	0.018	0.018	0.018	0.018
<b>Pass through (Items on Actual)</b>						
a. Actual payment to Workers Welfare and Project Participation funds	Mill. US \$	-	-	-	-	-
b. Actual Income Tax & Transfer Tax	Mill. US \$	-	-	-	-	-
c. Actual Sales Tax	Mill. US \$	-	-	-	-	-
d. Any other Duties/Tax etc	Mill. US \$	-	-	-	-	-
e. Insurance Cost due to change in policy	Mill. US \$	-	-	-	-	-
f. Variation in Fuel Prices	Mill. US \$	-	-	-	-	-
g. Electricity Duties on In-house consumption of Energy	Mill. US \$	-	-	-	-	-
h. Expenditure on modification & expansion of the protective Devices required by the NEDC	Mill. US \$	-	-	-	-	-
i. Custom Duties for Consumables stores as per Rental Service Contract(s)	Mill. US \$	-	-	-	-	-
j. Financial Charges on funds involved in the payment of Custom duties on the Plant & Equipment to be re-exported as per Rental Services Contract(s)	Mill. US \$	-	-	-	-	-
k. Financial Charges on establishment of letter of Credit - Fuel Price L/C- FPLO	Mill. US \$	-	-	-	-	-
l. Generation License Modification Fee & Tariff Petition Fee	Mill. US \$	-	-	-	-	-
m. Further capital expenditure or any other costs	Mill. US \$	-	-	-	-	-
n. Interconnection charges up to Rs 1.00 billion are built in the Tariff and the amount exceeding Rs 1.00 billion will be pass through items	Mill. US \$	-	-	-	-	-
o. Any other charges incidental to and arising out of Agreement	Mill. US \$	-	-	-	-	-
<b>Total</b>	Mill. US \$	119,646	120,670	117,489	114,254	111,854
	US\$/KW/Month	44.91	45.30	44.10	42.89	41.99
	Cent/Kwh	6.48	6.53	6.36	6.18	6.05
<b>Over all CPP</b>						
Total Net Dependable Capacity	MW	222	222	222	222	222
Total CPP Cost	Mill. US \$	111,854	111,854	111,854	111,854	111,854
Total CPP Cost (including financial cost)	US\$/KW/Month	41.99	41.99	41.99	41.99	41.99
Total CPP Cost	Mill. Rs	6,904.96	6,904.96	6,904.96	6,904.96	6,904.96
Total CPP Cost	Rs/kwh/Month	14.94	14.94	14.94	14.94	14.94
Total CPP Cost	Rs/Kwh	4.07	4.05	3.94	3.8	3.75
Exchange Rate reference is 62/- Rs/USD						

Lakhra Power Generation Company Limited  
Projected Generation Rental Power Projects

## Rental KARKEY Phase-II

Energy Purchase Price

## Fuel Cost Component

Ref: Units

- 1 Ref: Price of F.Oil Rs 26,000/-Per M.Tons  
2 Ref: US\$ Exchange Rate Rs.62/-

Reference Price Rs /kwh for the FY's				
2010	2011	2012	2013	2014
11.544	11.544	11.544	11.544	11.544

Capacity Purchase Price

Reference Price Rs /Kwh/Year for the FY's				
2010	2011	2012	2013	2014
Nil	Nil	Nil	Nil	Nil

A- Escalable Component

Nil Nil Nil Nil Nil

B- Non-Escalable Component

B-1	Rental Charges (exclusive cost up to Rs. 10 billion on interconnection facility)	11.544	11.544	11.544	11.544	11.544
B-2	Financial Cost	11.544	11.544	11.544	11.544	11.544
B-3	Other Cost					
	a) Arrangement Fee (3.75% of Loan amount)	11.544	11.544	11.544	11.544	11.544
	b) FED @ 1% Advisory Fee	11.544	11.544	11.544	11.544	11.544
	c) Legal Fee	11.544	11.544	11.544	11.544	11.544
	d) Agency Fee	11.544	11.544	11.544	11.544	11.544
	e) FED @ 10% on Agency Fee	11.544	11.544	11.544	11.544	11.544
	f) Out of Pocket Expenses	11.544	11.544	11.544	11.544	11.544
	g) Counter Guarantee Charges @ 3.25% on loan amount (Rs 6,214.317 / 10% 50% payable to FPLC)	11.544	11.544	11.544	11.544	11.544
	h) Cost of Business					
	i) Salaries of Staff	11.544	11.544	11.544	11.544	11.544
	j) Other Office Expenses (1% of Salary)	11.544	11.544	11.544	11.544	11.544
B-4	Supplementary Charges / Pass Through Items (To be reimbursed on actual basis)					
	a) Actual payment of Workers Welfare and Project Participation funds					
	b) Actual Income Tax / Turnover Tax					
	c) General Sales Tax					
	d) Any other Direct Taxes					
	e) Insurance Cost (not to be reimbursed)					
	f) Variation in Fuel Prices					
	g) Electricity Duties on in-house consumption of Energy					
	h) Expenditure on modification or expansion of the protection Devices required by the NEDC					
	i) Custom Duties on Consumable Stores as per Rental Services Contract(s)					
	j) Financial Charges on funds involved in the payment of Custom duties on the Plant's Equipment to be re-exported as per Rental Services Contract(s)					
	k) Financial Charges on establishment of Letter of Credit @ Price L/C - FPLC)					
	l) Generation License Mediation Fee & Tariff Petition Fee					
	m) Further capital expenditure or any other costs					
	n) Interconnection charges up to Rs 1.00 billion are built into Tariff and the amount exceeding Rs 1.00 billion will be paid through items					
	o) Any other charges incidental to and arising out of Agreement					
		111.85	120.67	117.49	114.25	111.85

## LAKHRA POWER GENERATION COMPANY LTD.

## REPAYMENT SCHEDULE OF LOAN

US \$ 74,878,526.52 equivalent to Pak Rs.6,211,917,701/- Converted @ Rs.83/- =1 US \$

Year	Month	O/S Principal	Mar-up Rate Kibor-40+20% (bps)			Principal Repayment	M. Intst	Total Pmt	US Principal	Annual Interest
			KIBOR	Prem ium	Total					
		6 214 917 701 160						6 214 917 701		
	November	6 214 917 701 160	14	2	16	8 151 732 049	8 151 732 049	6 214 917 701		
	December	6 214 917 701 160	14	2	16	8 151 732 049	8 151 732 049	6 214 917 701		
	January	6 214 917 701 160	14	2	16	8 151 732 049	8 151 732 049	6 214 917 701		
2010	February	6 214 917 701 160	14	2	16	8 281 729 597	8 281 729 597	6 214 917 701		
	March	6 214 917 701 160	14	2	16	8 416 727 049	8 416 727 049	6 111 335 739		
	April	6 111 335 739 474	14	2	16	8 551 724 501	8 551 724 501	5 007 753 778		
	May	6 007 753 777 788	14	2	16	8 686 722 049	8 686 722 049	5 904 171 816		
	June	5 904 171 816 102	14	2	16	8 821 719 501	8 821 719 501	5 800 589 854	653,752,585	
	July	5 800 589 854 416	14	2	16	8 956 717 049	8 956 717 049	5 697 007 893		
	August	5 697 007 892 730	14	2	16	9 091 714 501	9 091 714 501	5 593 425 931		
	September	5 593 425 931 044	14	2	16	9 226 712 049	9 226 712 049	5 489 843 969		
	October	5 489 843 969 358	14	2	16	9 361 709 501	9 361 709 501	5 386 262 008		
	November	5 386 262 007 672	14	2	16	9 496 707 049	9 496 707 049	5 282 680 046		
	December	5 282 680 046 986	14	2	16	9 631 704 501	9 631 704 501	5 179 098 084		
	January	5 179 098 084 300	14	2	16	9 766 702 049	9 766 702 049	5 075 516 123		
	February	5 075 516 122 614	14	2	16	9 901 699 501	9 901 699 501	4 971 934 161		
	March	4 971 934 160 928	14	2	16	10 036 697 049	10 036 697 049	4 868 352 199		
	April	4 868 352 199 242	14	2	16	10 171 694 501	10 171 694 501	4 764 770 238		
	May	4 764 770 237 556	14	2	16	10 306 692 049	10 306 692 049	4 661 188 276		
	June	4 661 188 275 870	14	2	16	10 441 689 501	10 441 689 501	4 557 606 314	837,328,200	
	July	4 557 606 314 184	14	2	16	10 576 687 049	10 576 687 049	4 454 024 352		
	August	4 454 024 352 498	14	2	16	10 711 684 501	10 711 684 501	4 350 442 391		
	September	4 350 442 388 812	14	2	16	10 846 682 049	10 846 682 049	4 246 860 429		
	October	4 246 860 429 126	14	2	16	10 981 679 501	10 981 679 501	4 143 278 467		
	November	4 143 278 467 440	14	2	16	11 116 677 049	11 116 677 049	4 039 696 506		
	December	4 039 696 505 754	14	2	16	11 251 674 501	11 251 674 501	3 936 114 544		
	January	3 936 114 544 068	14	2	16	11 386 672 049	11 386 672 049	3 832 532 582		
	February	3 832 532 582 382	14	2	16	11 521 669 501	11 521 669 501	3 728 950 621		
	March	3 728 950 620 696	14	2	16	11 656 667 049	11 656 667 049	3 625 368 659		
	April	3 625 368 659 010	14	2	16	11 791 664 501	11 791 664 501	3 521 786 697		
	May	3 521 786 697 324	14	2	16	11 926 662 049	11 926 662 049	3 418 204 736		
	June	3 418 204 735 638	14	2	16	12 061 659 501	12 061 659 501	3 314 622 774	640,130,847	
	July	3 314 622 773 952	14	2	16	12 196 657 049	12 196 657 049	3 211 040 812		
	August	3 211 040 812 266	14	2	16	12 331 654 501	12 331 654 501	3 107 458 851		
	September	3 107 458 850 580	14	2	16	12 466 652 049	12 466 652 049	3 003 876 889		
	October	3 003 876 888 894	14	2	16	12 601 649 501	12 601 649 501	2 900 294 927		
	November	2 900 294 927 208	14	2	16	12 736 647 049	12 736 647 049	2 796 712 966		
	December	2 796 712 965 522	14	2	16	12 871 644 501	12 871 644 501	2 693 131 004		
	January	2 693 131 003 836	14	2	16	13 006 642 049	13 006 642 049	2 589 549 042		
	February	2 589 549 042 150	14	2	16	13 141 639 501	13 141 639 501	2 485 967 080		
	March	2 485 967 080 464	14	2	16	13 276 637 049	13 276 637 049	2 382 385 119		
	April	2 382 385 118 778	14	2	16	13 411 634 501	13 411 634 501	2 278 803 157		
	May	2 278 803 157 092	14	2	16	13 546 632 049	13 546 632 049	2 175 221 195		
	June	2 175 221 195 406	14	2	16	13 681 629 501	13 681 629 501	2 071 639 234	439,573,467	
	July	2 071 639 233 720	14	2	16	13 816 627 049	13 816 627 049	1 968 057 272		
	August	1 968 057 272 034	14	2	16	13 951 624 501	13 951 624 501	1 864 475 310		
	September	1 864 475 310 348	14	2	16	14 086 622 049	14 086 622 049	1 760 893 349		
	October	1 760 893 348 662	14	2	16	14 221 619 501	14 221 619 501	1 657 311 387		
	November	1 657 311 386 976	14	2	16	14 356 617 049	14 356 617 049	1 553 729 425		
	December	1 553 729 425 290	14	2	16	14 491 614 501	14 491 614 501	1 450 147 464		
	January	1 450 147 463 604	14	2	16	14 626 612 049	14 626 612 049	1 346 565 502		
	February	1 346 565 501 918	14	2	16	14 761 609 501	14 761 609 501	1 242 983 540		
	March	1 242 983 540 232	14	2	16	14 896 607 049	14 896 607 049	1 139 401 579		
	April	1 139 401 578 546	14	2	16	15 031 604 501	15 031 604 501	1 035 819 617		

# LAKHRA POWER GENERATION COMPANY LTD.

## REPAYMENT SCHEDULE OF LOAN

US \$ 74,878,526.52 Equivalent to Pak Rs.6,21,17,701/- Converted @ Rs.83/- =1 US \$

Year	Month	O/S Principal	Markup Rate			Principal Repayment	Markup	Total Monthly Payment	O/S Principal	Annual Interest
			Kibo	14.0	200					
2014	May	1,035,819,616.860	14	2	5	103,581,962	1,075,795,341	11,957,757,027	932,237,655	
2014	June	932,237,655.174	14	2	5	103,581,962	1,125,953,684	11,844,525,370	828,655,693	240,696,100
2014	July	828,655,693.488	14	2	5	103,581,962	1,186,636,273	11,844,597,959	725,073,732	
2014	August	725,073,731.802	14	2	16	103,581,962	1,254,056,734	11,844,018,425	621,491,770	
2014	September	621,491,770.116	14	2	5	103,581,962	1,327,242,456	11,844,004,242	517,909,808	
2014	October	517,909,808.430	14	2	5	103,581,962	1,406,894,671	11,844,085,357	414,327,847	
2014	November	414,327,846.744	14	2	5	103,581,962	1,493,694,971	11,844,165,667	310,745,885	
2014	December	310,745,885.058	14	2	5	103,581,962	1,588,738,602	11,844,200,288	207,163,923	
2015	January	207,163,923.372	14	2	16	103,581,962	1,691,159,068	11,844,120,754	103,581,962	
2015	February	103,581,961.686	14	2	16	103,581,962	1,799,362,160	11,844,053,323,846	0	50,082,588
		0.000					2,861,563,787			2,861,563,787

### ABSTRACT OF FINANCIAL CHARGES

	Markup	PKR	US\$
2010	8,112,581	6,732,585	10,544,397
2011	3,228,201	2,673,282,200	13,505,294
2012	4,130,847	3,401,30,847	10,324,691
2013	12,573,467	10,439,573,467	7,089,895
2014	29,778,688	24,907,778,688	4,689,979
<b>Total</b>	<b>2,861,563,787</b>	<b>2,861,563,787</b>	<b>46,154,255</b>

## Lakhra Power Generation Company Limited

## Karkey Phase-II

## Detail of Bank/Financial and other charges

Sl. No.	Description	Pak Rupees			
		2010	2011	2012	2013
1	Arrangement Fee (0.25% of Loan amount of Rs 6,214,917,701/-)	15,537,294	-	-	-
2	FED @ 10% Advisory Fee	1,553,729	-	-	-
3	Legal Fee	500,000	-	-	-
4	Agency Fee	700,000	-	-	-
5	FED @ 10% on Agency Fee	70,000	-	-	-
6	Out of Pocket Expenses	100,000	-	-	-
7	Counter Guarantee Charges @ 3.27% on loan amount of Rs 6,214,917,701 (50% chargeable to LPGCL)	101,613,904	-	-	-
8	Financial Cost on the amount of Custom Duty Involved	-	-	-	-
9	Custom Duty on Consumable store as per contract	-	-	-	-
<b>10</b>	<b>Cost of Business</b>				
a.	Salaries of Staff	11,000,000	11,000,000	11,000,000	11,000,000
b.	Other Office Expenses (10% of Salaries)	1,100,000	1,100,000	1,100,000	1,100,000
	<b>Total</b>	<b>132,174,928</b>	<b>12,100,000</b>	<b>12,100,000</b>	<b>12,100,000</b>