



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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Registrar

No. NEPRA/TRF-124/OPCL-2009/2663-2665

April 13, 2011

Subject: Decision of the Authority in the Matter of Adjustments in Generation Tariff of Orient Power Company Ltd. at Commercial Operation Date (COD) [Case # NEPRA/TRF-124/OPCL -2009(2)]

Intimation of Decision of Tariff Adjustment pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997)

Dear Sir,

Please find enclosed herewith the subject decision of the Authority along with Annex-I, IA & II (18 pages) in Case No. NEPRA/TRF-124/OPCL-2009(2).

2. The decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997) and Rule 16(11) of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998.

3. Please note that Order of the Authority at para 13 of the Decision relating to the reference tariff, adjustments, indexation and terms & conditions along with Annex-I, IA & II needs to be notified in the official Gazette.

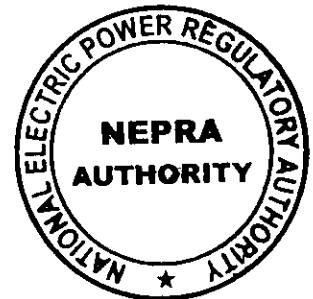
Enclosure: As above

(Syed Safeer Hussain)

Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.





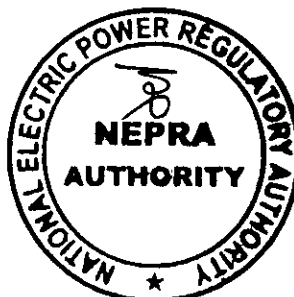
**DECISION OF THE AUTHORITY IN THE MATTER OF ADJUSTMENTS IN
GENERATION TARIFF OF ORIENT POWER COMPANY LIMITED
AT COMMERCIAL OPERATIONS DATE
CASE NO. NEPRA/TRF 124/OPCL-2009(2)**

1. Introduction

- 1.1 Pursuant to the Authority's determination dated June 13, 2005 and subsequent determinations/reviews decisions dated July 20, 2005, August 31, 2005, December 16, 2005, September 18, 2007 and September 17, 2009, "true up" of the reference tariff components of Orient Power Company Limited (hereinafter "OPCL") were required to be adjusted at Commercial Operations Date (hereinafter "COD").
- 1.2 OPCL through a letter dated August 19, 2010 received on August 20, 2010 submitted that it achieved Commercial Operations on May 24, 2010; the day as per the certification by Independent Engineer. OPCL along with its request also submitted copies of original invoices and relevant documents in support thereof.
- 1.3 In order to adjust the reference tariff components on the basis of actual expenditure, revised KIBOR, US CPI, WPI, exchange rate and initial dependable capacity at COD the following methodology was adopted:
- i) Verification of the information provided by OPCL with the original determination;
 - ii) Verification of the source documents i.e. invoices, general ledgers, copies of the pay orders, taxes & custom duty, challans etc;
 - iii) Sought clarification and additional information for processing of the case;
 - iv) Verification through independent sources i.e. financial statements, bank statements etc.; and
 - v) Physical verification through visit of the generating facility.

2. Adjustment on account of Net Capacity at COD

- 2.1 OPCL's calculations were based on net capacity of 209 MW which was assessed in the original determination. OPCL contended that in the original determination no adjustment was provided in the unit rate of tariff on the basis of actual tested net capacity established at COD. OPCL pointed out that in the Power Purchase Agreement OPCL is required to pay liquidated damages if the tested capacity comes out less than the contract capacity whereas there was no adjustment in the unit rate in case of higher output. It was further stated that OPCL was not allowed to sell anything higher than the contract capacity. In this regard clause 5.3(e) of the PPA was referred, which according to OPCL put an upper limit of the company's declaration of daily capacity to the contract capacity. OPCL was of the view that effectively, what was achieved in later projects through tariff determination has been controlled through the PPA in the case of Orient. According to OPCL unlike later PPAs, which provided for time based degradation of output, it did not enjoy such benefit. OPCL stated that although its output start out at 212.74 MW but it would degrade over time resulting in an expected



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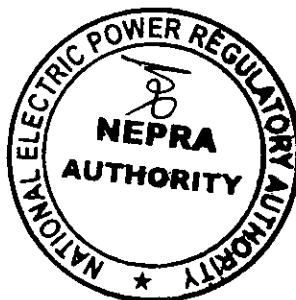
lifetime average of 209 MW, approximately 2% less than the contract capacity and its tariff should, therefore, be based on life time numbers.

- 2.2 In order to verify the OPCL's contention the PPAs of other comparable projects were examined. The said examination has revealed that some differences in provisions of PPAs did exist. The Authority, however, in order to maintain consistency among the tariff determination procedure, has decided to treat OPCL at par with other similar new projects in this context. Consequently, the net tested capacity of 212.74 MW established at COD is being considered appropriate for adjustment in the relevant tariff components. In order to make OPCL's PPA consistent with the PPAs of other similar projects, the Power Purchaser needs to amend the PPA accordingly. In view thereof NTDC and OPCL are hereby directed to amend the PPA thus making it consistent and comparable with the PPAs of other IPPs

3. **One Time Adjustments for Project Cost**


Engineering Procurement and Construction (EPC) Cost

- 3.1 OPCL claimed US\$ 168.456 million (Rs. 11,786 million) on account of EPC Cost as against the determined US\$ 147.79 million at para 19 of the determination dated September 17, 2007. According to OPCL the cost overrun of US\$ 20.67 million occurred mainly due to the bankruptcy of EPC contractor M/s. SKODA. OPCL's petition vide Case No. NEPRA/TRF-124/OPCL-2009 in this regard was considered and decided by the Authority on 11th September 2009. In the said petition an increase of US\$ 20.67 million in EPC Cost was sought on the following ground;
- i) Exchange rate variation on account of Euro and CZK Crown;
 - ii) Security situation in Pakistan;
 - iii) Increase in the cost of raw material (primary metals) in the International Market;
 - iv) Increase in Equipment Cost (due to market tightness);
 - v) Increase in transportation, sea freight etc.; and
 - vi) Additional cost of equipment required by WAPDA/NTDC. (Ref Para 5.1.2 of the above determination)
- 3.2 After detailed scrutiny of the information and documentary evidence provided by OPCL in the said petition the Authority held that *"....increase in the EPC Cost based on the grounds as sought by the Petitioner is not justified and hence not allowed."*
- 3.3 OPCL while justifying its request for increase in EPC cost argued that subsequent to contractor's bankruptcy most of the equipment suppliers/vendors had been demobilized from Site due to non-payments and overdue receivables. As a result thereof, OPCL had no choice but to terminate the contract and complete the work with alternate means. In order to complete the project OPCL directly dealt with the equipment manufacturers and suppliers. It was stated that approximately US\$42.29 million were either paid or were payable to the vendors/suppliers, in addition to the US\$125.44 million paid to the EPC contractor prior to termination of EPC Contract. According to OPCL the increase of US\$20.66 million in EPC cost



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was less than US\$28 million asked by the EPC in early 2009. OPCL stated that the saving was because of the reason that it took on some risks itself. OPCL in support of its claim submitted various relevant documentary evidences such as EPC contract with the main EPC Contractor and assignments of contracts to subcontractors after bankruptcy of SKODA, Novation of existing agreements with some sub-contractors, Variation orders, IPCs, EPC invoices, bank statements evidencing the payments of invoices to contractors/sub-contractors etc.

- 3.4 After having considered OPCL's arguments the Authority is of the view that certain business risks invariably exist and it is the sponsor's responsibility to adopt measures to mitigate such risks through mutually agreed contracts. The Authority has carefully examined the information provided and evidence produced and noted that OPCL did cover its risks in the signed EPC Contract. In addition, it has been able to recover reasonable compensation from the EPC Contractor for not fulfilling contractual obligations which ultimately caused delay in achieving the RCOD as per the terms of Power Purchase Agreement. In view thereof the Authority considers that OPCL's request for accepting revised EPC cost of US\$ 168.456 million is not justified; therefore is not accepted to the extent of cost overruns.
- 3.5 The Authority while considering OPCL's request for adjustment in EPC Cost due to exchange rate variation noted that the allowed EPC cost was based on a firm EPC Contract and there was no mechanism of adjustment of EPC cost, (neither for Actual Cost nor due to variation in exchange rates,) in the original determination or any subsequent determinations. The following adjustment formula for the revision of project cost was prescribed as per the Original determination dated 20.7.2005:

$$\text{Revised Project cost} = (161.69 \text{ million} + 8.310 \text{ million}) * \text{Rs. } 60 + \Delta \text{ IDC}$$

- 3.6 In the subsequent determinations the abovementioned adjustment mechanism was not revised or amended. However, Government of Pakistan (GoP) vide its ECC decision no. ECC-65/5/2007 dated 23.05.2007 provided a guidelines for adjustment of EPC cost for exchange rate variation. Para 2 of the said ECC decision is reproduced as under:

- "(i) To enable maximum competition from suppliers and contractors, the IPPs should not be exposed to the impact of exchange rate variation between US dollar, Euros, Pound Sterling and Japanese Yen up to Commercial Operation Date (COD). Consequences of this variation, whether resulting in Increase or decrease in tariff, should be reflected in final tariff to be fixed at COD, EPC contracts denominated in these currencies besides rupee should thus be accepted by NEPRA*
- (ii) At the COD, the capital cost be fixed in US dollars based on actual currencies of EPC Contract accepted by NEPRA at the time of tariff determination, sources of financing, payments and actual exchange rates against rupee for the four currencies (US Dollar, Euro, Pound Sterling and Japanese Yen) on the relevant dates. Towards this end IPP should establish the relevant cost details to NEPRA with actual documents and proofs regarding EPC contract, sourcing of equipment and financing."*



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3.7 The Authority considers that on the basis of formula in Para 3.5, the exchange rate parity adjustment in EPC between US\$ to PKR cannot be given because EPC Cost as well as Non-EPC cost is to be converted in Pak Rupees at exchange rate of PKR 60/US\$. The allowed EPC cost in the above mentioned formula in Para 6.1.2 of the determination was US\$ 147.79 million whereas US\$ 13.90 million was on account of Non-EPC Cost. In the Authority's opinion OPCL was the first IPP under 2002 Power Policy and there were no clear guidelines for such an adjustment at that time; therefore any different treatment if followed would be discriminatory when compared to other IPPs determination and subsequent COD adjustments. In view thereof the Authority, based on the principle of fairness, equity and justice and the above-mentioned ECC's decision, has decided to adjust the allowed EPC cost of US\$ 147.79 on account of PKR/US\$ exchange rate variation at weighted average exchange rate of Rs. 69.98 on the basis of documentary evidence, resulting in EPC cost of Rs. 10,342.001 million.

4. Non-EPC

4.1 OPCL claimed US\$ 21.701 million or Rs. 1,509.550 million on account of project development, construction management, withholding taxes, insurance during construction, pre-operating O&M and un-recovered fuel, spare parts and financial financing fee and charges. OPCL, however, in support of its claim provided the details of Non-EPC cost incurred US\$ 33.88 million thus claiming cost overruns of US\$ 11.18 million.

4.2 On the same principle as has been discussed under the head of EPC Cost, the Authority has decided to disregard the cost overruns in the Non-EPC Cost.

4.3 The Authority in its determination dated September 17, 2007 allowed US\$22.70 million as Non-EPC Cost to cover the following:

- Project Development cost/ Land / Overheads etc.;
- Construction management/ Independent Engineer / Admin. etc.;
- Insurance during construction;
- Withholding Taxes;
- Pre operations O&M and unrecovered fuel cost;
- Spare Parts; and
- Financing fee.

4.4 The Authority in its determination dated July 20th, 2005 did not allow any adjustment for exchange rate variation in Non-EPC cost. The relevant extract of the Authority's decision in this regard as reproduced below indicates the reference exchange rate as Rs. 60 / US\$:

"The Authority has considered both the requests and is allowing the originally requested cost of US\$ 170 million with the provision that IDC component of the cost will be updated for actual KIBOR at the time of the completion of the project at the following formula and the tariff table will be updated accordingly.



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$$\text{Revised Project cost} = (161.69 \text{ million} + 8.310 \text{ million}) * \text{Rs. } 60 + \Delta \text{ IDC}$$

- 4.5 Although the above formula does not provide any adjustment for exchange rate variation but the Authority while taking realistic view in other similar cases based on the verifiable documentary evidence allowed adjustment for exchange rate variation in those cost items of Non-EPC Cost, which were incurred in foreign currency and were verifiable from documentary evidence. In view thereof on the basis of available information and Authority's decisions in the cases of other comparable projects the item-wise adjustment is discussed as under:

4.5.1 **Project Development cost/ Land / Overheads etc.**

OPCL was allowed US\$ 4.7 million on account of project development cost/land/overhead etc. Since the said cost was incurred in Pak Rupees therefore, no adjustment on account of exchange variation is required. In the cases of all the new IPPs the same principle has been adopted. Accordingly the project development cost/land/overhead etc in the instant case is converted in Pak Rupees 282.60 million using the reference exchange rate of Rs. 60 per US\$.

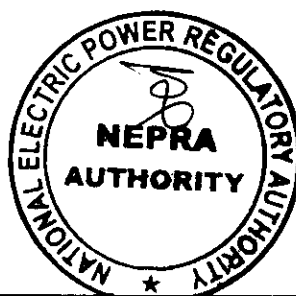
4.5.2 **Construction management/ Independent Engineer / Admin. etc.**

OPCL was allowed cost of US\$ 2.967 million on account of Construction management/ Independent Engineer / Admin. etc., except cost of independent engineer remaining costs were incurred in Pak Rupees. In order to convert this cost in Pak Rupees the same principle has been adopted in the instant case as was adopted in the cases of other new IPPs whereby foreign currency payments were converted on the exchange rates prevailing on the dates of payments, whereas, local payments were converted at reference exchange rate of Rs. 60 per US\$. Accordingly the cost of Construction Management/Independent Engineer/Admin. etc. at COD has been converted in Pak Rupees 191.407 million on the basis of weighted average exchange rate of Rs. 64.51 per US\$ in the instant case.

4.5.3 **Insurance During Construction**

- 4.5.3.1 OPCL did not claim or request any adjustment on this account. OPCL was allowed US\$ 2.085 million on account of Insurance during Construction ***without any mechanism for adjustment***. The examination of the documentary evidence provided by OPCL indicated that the actual amount paid was Rs. 240.386 million or US\$ 3.579 million.

- 4.5.3.2 Although no adjustment mechanism with respect to Insurance During Construction was provided in the OPCL's tariff determination but the Authority in its decisions with respect to other new IPPs established a maximum ceiling of 1.35% of EPC cost on account of insurance during construction. Since the Authority while allowing adjustment in EPC Cost in the instant case adopted consistent approach in line with other comparable IPPs; therefore similar approach is being adopted for adjusting Insurance during Construction. Accordingly based on actual expenditure up to RCOD, the Insurance Cost during Construction @ 1.35% of the EPC cost of US\$ 147.79 million works out as Rs 139.621 million or US\$ 1.995 million and the same has been adopted for the purpose of calculation of tariff.



4.5.3.3 Withholding Tax

The Authority has considered the withholding tax as pass through item in all the similar cases. The Authority in its determination allowed US\$ 1.650 million on account of withholding tax. OPCL was requested to provide a complete detail of withholding tax related to EPC payments and it has provided the copies of statements of withholding tax filed with FBR. In view thereof, the Authority has decided to allow US\$ 1.650 million (Rs.99.00 million) on account of withholding tax at reference exchange rate of Rs.60/US\$.

4.5.4 Spare Parts:

OPCL was allowed US\$ 5.5 million on account of spare parts in the determination without any adjustment mechanism. From the information and documentary evidence submitted by OPCL i.e. O&M contract and proof of payments under LC, it was noted that the cost of spare parts was US\$ 3.1 million instead of allowed US\$ 5.5 million. Since the amount of spare parts was allowed as part of Non-EPC Cost component and the Authority has not allowed any cost overruns or adjusted any amount saved in Non-EPC cost while deciding other similar cases of new IPPs. The major consideration for not allowing such adjustment was that the exact assessment of each cost item could not be done at the time determination and there might be saving in some items and overruns in others. In Authority's opinion this provides an incentive for efficient use of the resources. In view of aforementioned reasons the Authority has decided to maintain the same amount of US\$ 5.5 million as per the original determination; the amount in Pak Rupees thus works out as Rs. 330 million.

4.5.5 CUSTOM DUTIES

4.4.6.1 OPCL was the first IPP under the Power policy 2002, and at the time of determination it was not clear whether IPPs under 2002 policy were exempt or not from the custom duties, therefore the custom duties were not considered as part of project cost. Subsequently the IPPs under 2002 Power Policy were also subjected to custom duties @ 5%, which were accordingly treated as part of project cost in all the subsequent determinations. Since this was not considered in the determination therefore OPCL and NTDC agreed to treat this amount as a pass through item in the PPA. In this regard the relevant Para 11.3 of PPA pertaining to the custom duties is reproduced below:

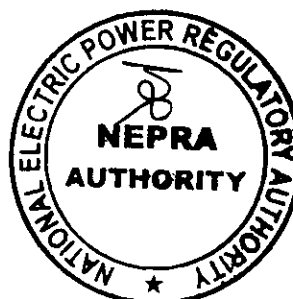
"The following items shall be pass-through:

(a)

(b)

(c)

(d) *Custom or import duty, if any levied on the company for import of equipment and material prior to the COD, for construction of plant, since the tariff approved by*



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NEPRA, as attached as Annex-I herein does not assume any custom duty as a part of the capital cost of the plant....."

- 4.4.6.2 NTDC in terms of its PPA has paid the custom duties to OPCL. Since this amount was not accounted for in the determined project cost and has already been paid to OPCL therefore is not made part of the project cost.

4.4.7 **Financing Fee and Charges:**

OPCL has claimed US\$ 5.883 million against US\$ 3.813 million as determined by the Authority in its determination on account of financing fee and charges. However, no adjustment on this account was provided in the determination. OPCL has not provided any evidence to substantiate its claim on this account. The allowed amount of US\$3.813 million is about 3.43% of the borrowing. The Authority has fixed a maximum ceiling of 3% on account of financing fees and charges of borrowing less IDC and Financing fee. Since the Authority while adjusting the EPC Cost component and all those cost items where no adjustment was provided, has treated OPCL equally with other similar projects; therefore the similar treatment is being followed in this regard. Accordingly the financing fees and charges in the instant case are assessed as Rs.258.00 million applying maximum ceiling of 3% to the borrowing of Rs. 8600.00 million (at the time of R-COD).

5. **Interest during construction (IDC)**

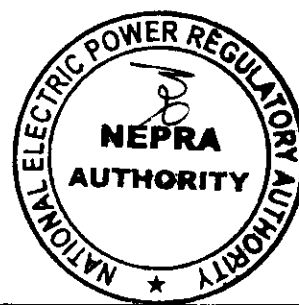
- 5.1 OPCL claimed Rs. 3,286.835 or US\$ 42.829 million at exchange rate of Rs. 76.74 per US\$ (total debt availed was Rs. 11,644.631 million) on account of Interest During Construction based on construction period of about 40 months up to May 24, 2010 (actual date of COD). In order to substantiate its claim, OPCL submitted the copies of common term agreements with lenders, copies of bank statements to substantiate actual draw downs of debt along with bank advices evidencing the amount of interest charged by the lenders, data of KIBOR rates, etc.
- 5.2 OPCL's claim has been considered in the light of the Authority's determination dated 20.7.2005, wherein the following adjustment of IDC has been provided:

"The Authority has considered both the requests and is allowing the originally requested cost of US\$ 170 million with the provision that IDC component of the cost will be updated for actual KIBOR at the time of the completion of the project at the following formula and the tariff table will be updated accordingly.

$$\text{Revised Project cost} = (161.69 \text{ million} + 8.310 \text{ million}) * \text{Rs. } 60 + \Delta \text{ IDC}$$

$$\Delta \text{ IDC} = \text{Actual IDC} - \$ 8.310 \text{ million } (\Delta \text{ IDC can be positive or negative)... "$$

- 5.3 The determination is silent on the construction period to be used for calculation of IDC. The above adjustment mechanism only provides adjustment to the extent of KIBOR variation and



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does not mention about the adjustment on the basis of actual draw downs or variation in project cost. In the absence of such adjustment mechanism the Authority has decided to rely on the already decided cases. The Authority in all other similar cases has established a principle to take the required COD as agreed in the Power Purchase Agreement (PPA) while calculating IDC. In the instant case the Required COD date as defined in the PPA is as follows:

"The date that is twenty-eight (28) months following the date on which financial closing occurs, as such date may be extended pursuant to section 6.5 or section 8.1 (b) or by reason of Force Majeure Event" (Annex-V)

- 5.4 According to the above definition given in the PPA, construction period in the instant case starts from December 16, 2006 and accordingly Required Commercial Operation Date (RCOD) is April 17, 2009.
- 5.5 The Authority considers that OPCL's request for allowing IDC beyond RCOD, i.e. April 17, 2009 is not within the scope of current adjustments at COD. The RCOD is fixed, in accordance with the terms and conditions of Power Purchase Agreement executed between the parties. The definition of RCOD clearly provides that it can be extended by the parties in terms of the Agreement. The Authority is not a party to the contract. It has no powers to change, amend, vary or alter the terms and condition of the agreement. Since no change or amendment in the PPA is made by the parties, the Authority shall restrain itself to the RCOD as given in the PPA. In view thereof the Authority has decided to accept OPCL's claim of IDC only upto RCOD i.e. April 17, 2009.
- 5.6 In addition, the rational^e for not considering the financial impact after RCOD is that the liquidated damages recovered from the EPC contractor by OPCL are not considered by the Authority in its calculation. In Authority's opinion it is neither justified nor fair to pass on cost of such risks to the consumers. The Authority considers that any gain or loss resulting from recovery of liquidated damages from the EPC Contractor and cost overruns due to delay in achieving RCOD should be on OPCL's account.
- 5.7 In the light of above and keeping in view the Authority's decisions in the earlier COD adjustments of the IPPs, IDC in the instant case based on actual draw down and up to RCOD of April 17, 2009, has been assessed as Rs 1,798.628 million (total debt verified till RCOD was Rs. 8,599.999 million). Furthermore, OPCL's audited financial statement indicated an interest income of Rs. 48.935 million which is required to be proportioned till R-COD. Accordingly the net IDC has been worked out as Rs. 1,752.771 million after adjusting the proportionate interest income amounting to Rs.45.856 million.

6. Overall Project Cost

- 6.1 OPCL claimed a total project cost of US\$ 217.221 million (PKR 15,565.458 million) against the determined project cost of US\$ 178.791 million (PKR 10,727.400 million).

Based on the adjustments made in the preceding paragraphs in accordance with the Authority's determinations and in the light of ECC's decision, OPCL's overall project cost has been assessed as PKR 13,513.901 million (US\$ 198.548 million) as against the claim of Rs



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15,565.458 million (US\$ 217.221 million). The Authority considers that its assessment of project cost being close to the audited figure of project cost Rs. 14,543.818 million is more realistic because OPCL has been reasonably compensated by EPC Contractor for cost overruns in EPC.

7. Debt Equity Ratio / Financing Structure

- 7.1 Subsequent to filing adjustment request, OPCL through its letter dated 5.11.2010 requested to allow equity up to Rs. 4,201.888 million (US\$61.165 million). The Authority while considering OPCL's request observed that on the basis of adjusted project cost of US\$195.766 million, debt/equity ratio works out as 69:31 against 75:25 as determined by the Authority. OPCL's request being legitimate and consistent with other similar cases is accepted.

8. Adjustment on account of Return on Equity (ROE)

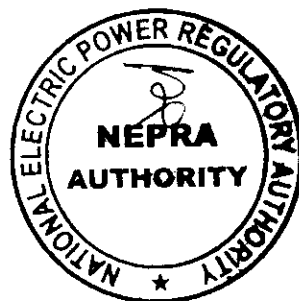
- 8.1 Based on equity amount of Rs. 4,201.888 (US\$ 61.165 million) as requested by OPCL and annual ROE of 15%, the return in the instant case has been assessed as US\$9.17 million (Rs. 738.57 million at exchange rate of Rs.80.50/US\$). Accordingly the ROE component based on net capacity of 212.74 MW has been revised as Rs 0.3963/kW/h against the determined ROE component of Rs. 0.2197 /kW/h.

9. Adjustment on account of Return on Equity During Construction (ROEDC)

- 9.1 At the time of determination the Authority assessed ROEDC (0.0168/kW/h) on assumed equity injections which were subject to adjustment as per the actual equity injections at COD.
- 9.2 Based on the total construction period of 28 months as per PPA (commencing from December 16, 2006 to RCOD in April 17, 2009) and keeping in view the relevant dates of equity injections and the Authority decision for calculating ROEDC, the annual ROEDC in the instant case works out as US\$ 1.839 million or Rs.155.700 million at exchange rate of Rs.80.50/US\$. Accordingly the ROEDC component on the basis of net capacity of 212.74 MW has been revised as Rs 0.0794/kW/h against the determined ROEDC component of Rs. 0.0168 /kW/h.

10. Insurance Component (Insurance subsequent to COD)

- 10.1 OPCL claimed Rs. 0.0776/kW/h against the determined component of insurance during the operations amounting to Rs.0.0484/kW/h. OPCL in support thereof provided the documentary evidence, such as Insurance Policies, Insurance Invoices and acknowledgements of payment of insurance premiums amounting to Rs.74,544,969. Accordingly the reference tariff component determined by the Authority has been revised as Rs. 0.0400/kW/h at COD.



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11. Working Capital Component

11.1 OPCL based on KIBOR + 3% requested working capital component of Rs. 0.0874/kW/h for gas based operation and Rs. 0.3734/kW/h for HSD based operation. In the original determination Cost of working capital component was not allowed; OPCL was however allowed this cost in its determination dated September 17, 2009. The reference tariff component of cost of working capital was determined as Rs. 0.0348/kW/h and Rs. 0.0745/kW/h for 9 months gas operations and 3-months HSD operations at para 9 – 10 of the determination dated September 17, 2009. The aforesaid reference tariff component was calculated on the basis of KIBOR + 2%.

11.2 Although no adjustment mechanism was provided in the determination on account of HSD price adjustment at the time of first fill but the Authority in all similar cases has allowed fuel price adjustment (one time) at the time of first fill. The Authority in all fairness considers that nondiscriminatory treatment in the instant case needs to be given. Based on the information provided by OPCL the reference tariff component as determined in the determination September 17, 2009 is being revised as Rs. 0.0465/kW/h for 9 months (for summer season on the basis of 7 days inventory) and 0.0995/kW/h for 3-months (for winter season on the basis of 15 days inventory) on the basis of following parameters:

- HSD Price (LHV) 77.36 / Liter
- Net Capacity 212.74 MW
- KIBOR 13.39% + 2% Margin
- Sales Tax 17%

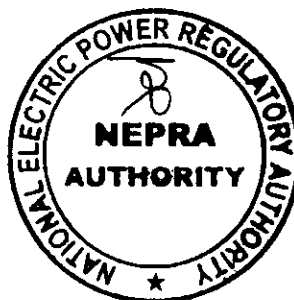
12. Debt Servicing Component

12.1 OPCL requested Rs 1.3200/ kW/h as debt service component, which was calculated on the basis of Rs. 11,644.632 million debt and 3-months KIBOR 13.73%+3% spread.

12.2 In the determination debt service component was assessed as Rs. 0.9120/kW/h based on the following reference values:

- Total debt Rs. 8,045.55 million @ 75% of the total project cost
- KIBOR 3-Month @ 13.72% + 3% Margin
- Term of loan 10 years to be payable on 40 equal quarters.

12.3 Subsequent to the adjustments the overall project cost has been assessed as Rs 13,513.901 million (US\$ 198.548 million) out of which Rs. 4,201.888 million is financed through equity while the remaining amount of Rs.9,312.013 million through debt. Based on the debt of Rs. 9,312.013 million, net capacity of 212.74 MW and 3 months KIBOR of 13.39 % + 3 % p.a. margin, debt service component in the instant case works out as Rs. 1.0245/kW/h as against the claim of Rs.1.32/kW/h.



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13. ORDER

Pursuant to Rule 16 (11) of the NEPRA Tariff Standards & Procedures Rules, 1998 OPCL is allowed to charge, on the basis of revised net dependable capacity established on the basis of test jointly carried out by the Central Power Purchasing Agency (CPPA) of the National Transmission and Despatch Company Limited (NTDC) and OPCL at the time of Commercial Operations Date (COD), the following tariff for delivery of electricity:

REFERENCE TARIFF

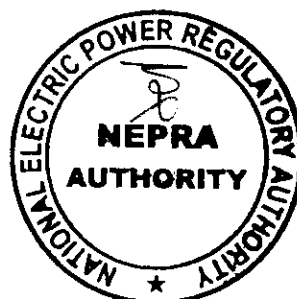
Tariff Components	Year 1 to 10	Year 11 to 30	Indexation
Capacity Charge (PKR/kW/Hour)			
Fixed O&M - Foreign	0.1064	0.1064	US\$/PKR & US CPI
- Local	0.0885	0.0885	WPI
Insurance	0.0400	0.0400	US\$/PKR
Cost of working capital - Gas	0.0465	0.0465	KIBOR
- HSD	0.0995	0.0995	KIBOR
Debt service	1.0245	-	KIBOR
Return on equity	0.3963	0.3963	US\$/PKR
Return on equity during Construction	0.0794	0.0794	US\$/PKR
Total Capacity Charge - Gas	1.7816	0.7571	
- HSD	1.8346	0.8101	
Energy Charge Rs./kWh			
For Operation on Gas			
Fuel cost component	2.4538	2.4538	Fuel price
Variable O&M - Foreign	0.1459	0.1459	US\$/PKR & US CPI
For Operation on HSD			
Fuel cost component	14.699	14.699	Fuel price
Variable O&M - Foreign	0.1459	0.1459	US\$/PKR & US CPI

Note:

- Capacity Charge Rs./kW/hour is applicable to dependable capacity at the delivery point.
- Dispatch criterion will be the Energy Charge.
- The above tariff is applicable for a period of 30 years commencing from the date of the Commercial Operations.
- Component wise tariff is indicated at Annex-I and Debt Service Schedule at Annex-II.

I) Adjustment in Insurance Component

Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by OPCL according to the following formula:



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Insurance Component (Revised) = Rs. 0.0400 per kW per hour/ (1.35% x US\$ 147.790 million) x AP

Where;

AP = Actual Premium subject to maximum of 1.35% of the adjusted EPC

II) Pass-Through Items

No provision for income tax has been accounted for in the tariff. If OPCL is obligated to pay any tax on its income, the exact amount paid by the company shall be reimbursed by NTDC to OPCL on production of original receipts. This payment will be considered as a pass-through (as Rs./kW/hour) hourly payment spread over a 12 months period in addition to the capacity purchase price given in the tariff. Furthermore, in such a scenario, OPCL shall also submit to NTDC details of any tax shield savings and NTDC shall deduct the amount of these savings from its payment to OPCL on account of taxation.

Withholding tax is also a pass-through item just like other taxes as indicated in the government guidelines for the determination of tariff for new IPPs. In revised tariff table withholding tax number is indicated as reference and NTDC shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 15% of reference equity i.e. hourly payment (Rs./kW/hour) spread over 12 months.

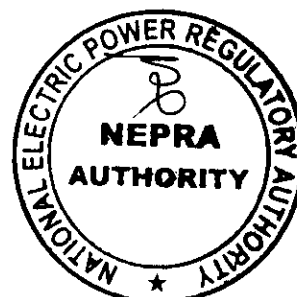
In case company does not declare a dividend in a particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what is paid in that year and the total entitlement as per the net return on equity) would be carried forward and accumulated so that the company is able to recover the same in hourly payments spread over 12 months period as a pass-through from the power purchaser in future on the basis of the total dividend payout.

III) Indexations

The following indexations shall be applicable to reference tariff.

a) Indexation applicable to O&M

In future fixed O&M part of capacity charge will be adjusted on account of local inflation (WPI) and variation in US CPI and dollar/rupee exchange rate parity. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics, US CPI notified by the US Bureau of Labor Statistics and revised TT & OD selling rate of US dollar notified by the National Bank of Pakistan. The mode of indexation will be as under:



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i) **Fixed O&M**

$$F O\&M_{(LREV)} = \text{Rs. } 0.0885 \text{ per kW per hour} * WPI_{(REV)} / 138.81$$

$$F O\&M_{(FREY)} = \text{Rs. } 0.1064 \text{ per kW per hour} * US CPI_{(REV)} / 212.709 * ER_{(REV)} / \text{Rs. } 80.50$$

Where;

- $F O\&M_{(LREV)}$ = The revised applicable fixed O&M local component of the capacity charge indexed with WPI
 $F O\&M_{(FREY)}$ = The revised applicable fixed O&M foreign component of the capacity charge indexed with US CPI and exchange rate variations
 $WPI_{(REV)}$ = The revised wholesale price index (manufacturers)
 $WPI_{(REF)}$ = 138.81 wholesale price index (manufacturers) of March 2009 notified by the Federal Bureau of Statistics
 $US CPI_{(REV)}$ = The revised US CPI (all urban consumers)
 $US CPI_{(REF)}$ = 212.709 US CPI (all urban consumers) for the month of March 2009 as notified by the US Bureau of Labor Statistics
 $ER_{(REV)}$ = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

ii) **Variable O&M**

The formula of indexation for variable O & M component will be as under:

$$V O\&M_{(REV)} = \text{Rs. } 0.1459 \text{ per kWh} * US CPI_{(REV)} / 212.709 * ER_{(REV)} / \text{Rs. } 80.50$$

Where;

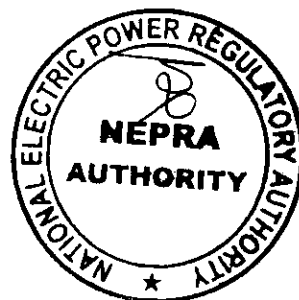
- $V O\&M_{(REV)}$ = The revised applicable variable O&M component of the energy charge indexed with US CPI and exchange rate variation.
 $US CPI_{(REV)}$ = The revised US CPI (all urban consumers)
 $US CPI_{(REF)}$ = 212.709 US CPI (all urban consumers) for the month of March 2009 as notified by the US Bureau of Labor Statistics
 $ER_{(REV)}$ = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

b) **Adjustment for KIBOR variation**

The interest part of debt service component will remain unchanged throughout the term except for the quarterly adjustment due to variations in interest rate as a result of variation in 3-months KIBOR according to the following formula:

$$\Delta I_{(L)} = P_{(LREV)} * (KIBOR_{(REV)} - 13.39\%) / 4$$

Where;



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- $\Delta I_{(t)}$ = The variation in interest charges applicable corresponding to variation in KIBOR. $\Delta I_{(t)}$ can be positive or negative depending upon whether $KIBOR_{(REV)}$ is $>$ or $<$ 13.39%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta I_{(t)}$ for each quarter under adjustment on quarterly basis.
- $P_{(I,REV)}$ = The outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date.

c) **Fuel Price Variation**

The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations. In this regard, the variation in OPCL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FC_{(REV)} = (Rs. 2.4538 \text{ per kWh} * FP_{(REV)}) / Rs.368.11 \text{ per MMBTU}$$

Where;

$$\begin{aligned} FC_{(REV)} &= \text{Revised fuel cost component of variable charge on Gas} \\ FP_{(REV)} &= \text{Revised fuel price} \end{aligned}$$

d) **Adjustment in Return on Equity (ROE)**

ROE component of tariff will be adjusted on account of exchange rate variation according to the following formula;

$$ROE_{(REV)} = Rs. 0.3963 \text{ per kW per hour} * ER_{(REV)} / ER_{(REF)}$$

Where;

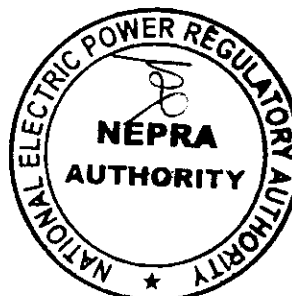
$$\begin{aligned} ROE_{(REV)} &= \text{The revised ROE component of the capacity purchase price} \\ ER_{(REV)} &= \text{The revised TT \& OD selling rate of US\$ as notified by the National Bank of Pakistan} \\ ER_{(REF)} &= \text{The reference exchange rate of PKR 80.50 = 1 US\$} \end{aligned}$$

c) **Adjustment on Return on Equity during Construction (ROEDC)**

ROEDC component of tariff will be adjusted on account of exchange rate variation according to the following formula;

$$ROEDC_{(REV)} = Rs.0.0794 \text{ per kW per hour} * ER_{(REV)} / ER_{(REF)}$$

Where;



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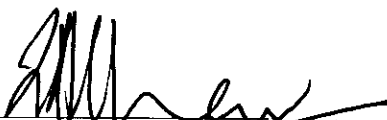
- ROEDC_(Rev) = The revised ROEDC component of the capacity purchase price
- ER_(Rev) = The revised TT & OD selling rate of US\$ as notified by the National Bank of Pakistan
- ER_(Ref) = The reference exchanges rate of PKR 80.50= 1 US\$.


Adjustments on account of variation in WPI, US CPI, exchange rate, KIBOR and fuel price will be approved and announced by the Authority for immediate application in accordance with the requisite indexation mechanism stipulated herein.


IV) Terms and Conditions of Tariff:


- i) Use of Gas will be considered as primary fuel.
- ii) Dispatch criterion will be based on the energy charge.
- iii) General assumptions of OPCL, which are not covered in this and earlier determinations, may be dealt with in the PPA according to its standard terms.

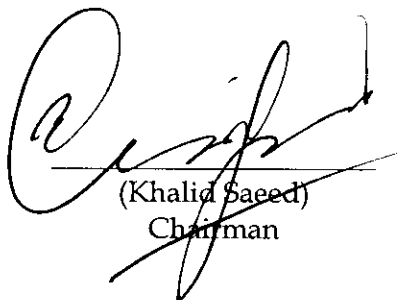
AUTHORITY


(Zafar Ali Khan)
Member
4/4/11


(Maqbool Ahmad Khawaja)
Member

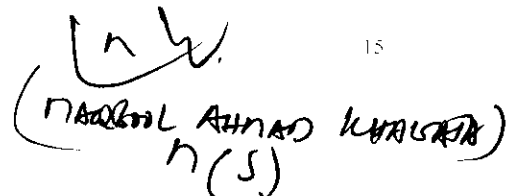

(Ghiasuddin Ahmed)
Member
12/4


(Shaukat Ali Kundi)
Vice Chairman / Member


(Khalid Saeed)
Chairman

- ⊛ Amendments / Change in testing procedures at time of COD, were required to be approved by BOD of NEDC & per directions. Some is necessary to avoid any complication at later stage in light of letter of GO CPPA on matter of COD of Orient.

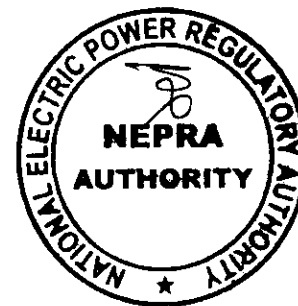



(Maqbool Ahmad Khawaja)
h(S)

Orient Power Company Ltd.
Modified Tariff (GAS)

Year	Variable Charge (PKR/kWh)			Capacity Charge (PKR/kW/Hour)									Total Capacity Charge
	Fuel	Variable O&M	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Insurance	Working Capital Component	Return on Equity (ROE)	Return on Equity during Construction (ROEDC)	Withholding Tax	Loan Repayment	Interest Charges	
1	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.2185	0.8060	1.8173
2	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.2566	0.7679	1.8173
3	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.3013	0.7232	1.8173
4	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.3538	0.6707	1.8173
5	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.4155	0.6090	1.8173
6	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.4879	0.5366	1.8173
7	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.5729	0.4516	1.8173
8	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.6727	0.3518	1.8173
9	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.7899	0.2346	1.8173
10	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.9276	0.0969	1.8173
11	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
12	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
13	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
14	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
15	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
16	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
17	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
18	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
19	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
20	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
21	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
22	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
23	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
24	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
25	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
26	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
27	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
28	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
29	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
30	2.4538	0.1459	2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	-	-	0.7928
Levelized Tariff (1-30 Years)			2.5997	0.1064	0.0885	0.0400	0.0465	0.3963	0.0794	0.0357	0.2878	0.3800	1.4606

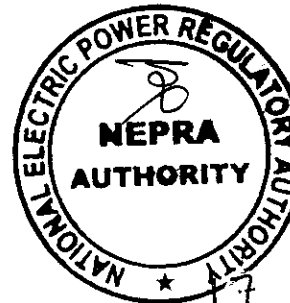
Net Capacity 212.74 MW
 Reference Exchange Rate (PKR/ISS) 80.5000
 Reference Fuel Price (Gas) LHV PKR 368.11 per MMCFT
 Reference US CPI 212.7090 March 2009
 Reference WPI (manufacturers) 138.8100 March 2009
 KIBOR 13.39%
 Net Efficiency 51.20%
 Levelized Tariff (at 60% plant factor) Rs. per kWh 5.0340 (US cents/kWh) 6.2534



Orient Power Company Ltd.
Modified Tariff (HSD)

Year	Variable Charge PKR/kWh			Capacity Charge (PKR/kW/Hour)									
	Fuel	Variable O&M	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Insurance	Working Capital Component	Return on Equity (ROE)	Return on Equity during Construction (ROEDC)	Withholding Tax	Loan Repayment	Interest Charges	Total Tariff
1	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.2185	0.8060	1.8704
2	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.2566	0.7679	1.8704
3	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.3013	0.7232	1.8704
4	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.3538	0.6707	1.8704
5	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.4155	0.6090	1.8704
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7	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.5729	0.4516	1.8704
8	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.6727	0.3518	1.8704
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13	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
14	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
15	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
16	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
17	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
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19	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
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29	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
30	14.6999	0.1459	14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	-	-	0.8459
Levelized Tariff (1-30 Years)			14.8458	0.1064	0.0885	0.0400	0.0995	0.3963	0.0794	0.0357	0.2878	0.3800	1.5137

Net Capacity 212.74 MW
 Reference Exchange Rate (PKR/ISS) 80.5000
 Reference Fuel Price (HSD) per litre 70.9900
 Reference US CPI 212.7090 March 2009
 Reference WPI (manufacturers) 138.8100 March 2009
 KIBOR 13.39%
 Net Efficiency 51.20%
 Levelized Tariff (at 60% plant factor) Rs. per kWh 17.3686 (US cents/kWh) 21.5759




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Orinent Power Company Limited
Debt Repayment Schedule

Year	Quarter	Principal Amount Million Rs.	Repayment Million Rs.	Mark Up Million Rs.	Debt Service Million Rs.	Principal Amount Million Rs.	Annual Principal Repayment Rs/Kw/hr	Annual Interest Rs/kW/hr	Annual Debt Serving Rs/kW/hr
1	1	9,312	96	382	477	9,216	0.2185	0.8060	1.0245
	2	9,216	100	378	477	9,117			
	3	9,117	104	374	477	9,013			
	4	9,013	108	369	477	8,905			
2	5	8,905	112	365	477	8,792	0.2566	0.7679	1.0245
	6	8,792	117	360	477	8,675			
	7	8,675	122	355	477	8,553			
	8	8,553	127	350	477	8,427			
3	9	8,427	132	345	477	8,295	0.3013	0.7232	1.0245
	10	8,295	137	340	477	8,157			
	11	8,157	143	334	477	8,014			
	12	8,014	149	328	477	7,865			
4	13	7,865	155	322	477	7,710	0.3538	0.6707	1.0245
	14	7,710	161	316	477	7,549			
	15	7,549	168	309	477	7,381			
	16	7,381	175	302	477	7,206			
5	17	7,206	182	295	477	7,024	0.4155	0.6090	1.0245
	18	7,024	190	288	477	6,834			
	19	6,834	197	280	477	6,637			
	20	6,637	205	272	477	6,431			
6	21	6,431	214	264	477	6,218	0.4879	0.5366	1.0245
	22	6,218	223	255	477	5,995			
	23	5,995	232	246	477	5,763			
	24	5,763	241	236	477	5,522			
7	25	5,522	251	226	477	5,271	0.5729	0.4516	1.0245
	26	5,271	261	216	477	5,010			
	27	5,010	272	205	477	4,738			
	28	4,738	283	194	477	4,454			
8	29	4,454	295	183	477	4,160	0.6727	0.3518	1.0245
	30	4,160	307	170	477	3,853			
	31	3,853	319	158	477	3,533			
	32	3,533	333	145	477	3,201			
9	33	3,201	346	131	477	2,855	0.7899	0.2346	1.0245
	34	2,855	360	117	477	2,494			
	35	2,494	375	102	477	2,119			
	36	2,119	390	87	477	1,729			
10	37	1,729	406	71	477	1,322	0.9276	0.0969	1.0245
	38	1,322	423	54	477	899			
	39	899	440	37	477	459			
	40	459	459	19	477	(0)			

