

**Decision of the Authority w.r.t. Motion for Leave for Review filed by
Nishat Chunian Power Ltd. (NCPL) Under Rule 16(6) of Tariff
Standard and Procedure Rules - 1998**

1. Nishat Chunian Power Ltd. (NCPL) filed motion for leave for review on 15.3.2007 against the tariff determination dated 5.3.2007 in Case No. NEPRA/TRF-70/NCPL-2007. NCPL requested for reconsideration of the following issues;

- Net Output of the plant;
- Fuel Cost Component
- Variable O&M;
- ROE, ROEDC & Debt Equity Ratio;
- Working Capital Component
- Plant Availability;
- EPC Cost;
- Foreign Equity;

2. The Authority accepted the motion for leave for review on March 21, 2007 and held hearing on March 27, 2007 in NEPRA's main office in order to provide an opportunity to the petitioner to present its case before the Authority. All parties to the proceedings were informed accordingly. The issue wise discussion and decisions are given in the following paragraphs;

Net Output

3. NCPL submitted that Authority in its determination assessed net output of 196 MW as against net output of 189 MW requested by NCPL. NCPL has provided following break up of auxiliary consumption;

(a)	Gross Output at Generator Terminals	200.2 MW
(b)	Auxiliary Consumption – based on Wartsila's Internal Loads	4.1 MW
(c)	Switch yard and Transformer Losses (assessed at 1.0 %) (Bus bar + Isolator + Circuit Breaker + Transformers)	2.0 MW
(d)	Common Auxiliary Load (assessed at 2.0 %) {Itemized as: Tube Wells (400kW) + A/C Plants (500kW) + RFO Handling Station (600kW) + Workshops (300kW) + Street Lights (300kW) + Offices (300kW) + Rest house (300kW) + Bachelor Hostel (500kW) + Dispensary/Hospital (300kW) + Mosque (100kW) + Canteen (200kW) + Raw Water Treatment Plant (300kW)}	4.1 MW
(e)	Net Output of the Complex (a) – [(b) + (c) + (d)]	190.0 MW

4. CPPA, while agreeing with the Authority's original decision stated that auxiliary consumption of 4.1MW is based on information given by WARTSILA therefore in the absence of

any credible evidence to the contrary other estimates should not be relied upon. According to the documentary evidence provided by WARDA the auxiliary consumption is also 4.1 MW. The Authority has considered all the available information and observed that the figure of 4.1 MW does not cater for the transformation losses and decanting. On the basis of available information regarding the step up transformation losses (from generation voltage to 132 kV which is the delivery voltage), the Authority has assessed a margin of 0.3% to be allowed as additional auxiliary consumption along with 40 kW for decanting load (which is equivalent to 0.040MW). Thus the total auxiliary load would be $4.1 + 0.30 \times 200/100 + 0.040 = 4.74$ MW. The Authority has therefore decided to modify the threshold of net capacity 196 MW to be 195.26 MW. Adjustment shall not be made if IDC is established less than 195.26 MW net capacity measured at 132 kV bus bar, at reference site conditions. The Authority considers that any load other than aforementioned auxiliary load required for plant operation cannot be allowed and should not be taken into account at the time of Initial Dependable Capacity (IDC) test.

Fuel Cost Component

5. NCPL submitted that in paragraph 88 of the determination, NEPRA has assessed NCPL's fuel component as Rs. 4.7811 per kWh, which is based on a calorific value of 40,792 BTU/kg (HHV) and net plant efficiency of 45% while the fuel price mechanism is same as that of Attock Gen Limited. According to NCPL, NEPRA had allowed a lower calorific value of 40.60 MJ/kg (LHV) in the case of AGL, which is equivalent to 40,405 BTU/kg (HHV).

6. NCPL's contention for adopting the same calorific value as allowed in the case of AGL cannot become a justification for other cases. NEPRA has adopted the calorific value indicated in the Energy Year Book 2006 issued by Hydrocarbon Development Institute of the Ministry of Petroleum. The issue of calorific value is to be clarified in Fuel Supply Agreement (FSA) after finalization. In this regard it has to be ensured that the reference calorific value (for the source of which fuel prices are used as reference for determining prices of HSFO) are clearly indicated in the FSA.

Variable O&M

7. NCPL requested to allow the same cost of lubricants as allowed to AGL. NCPL also submitted that working of its variable O&M is based on 60% plant operation. In the case of plant operation higher than 60%, the variable O&M cost shall correspondingly increase; therefore it should be compensated accordingly. NCPL requested to use US\$/Euro parity of 1.28 instead of

US\$/Euro parity of 1.20 for determining variable O&M in Pak Rupees. NCPL has further submitted that the provision of adjustment of variable O&M in case the plant availability is less than 90% should be de-linked from plant availability as the variable O&M is part of energy charge and not the capacity charge component of tariff.

8. The Authority has considered the evidence provided by NCPL, wherein WARTSILA has stated that lubricating oil consumption at 100% engine load is guaranteed to be less or equal to 0.7 gm per kWh with the output measured at the generator terminals. In Authority's opinion the manufacturer did not clearly indicate the exact amount of lubricant consumption to substantiate the contention of NCPL. The Authority in its determination assessed the cost of lubricant on the basis of evidence provided by WARDA and considers it a reasonable assessment that requires no revision.

9. NCPL's contention regarding O&M cost calculation on the basis of 60% plant factor is not valid because the variable O&M cost has been assessed on the basis of plant running hours. Accordingly NPCL will be compensated on account of variable O&M cost in case plant operates more and vice versa.

10. The Authority has considered the NCPL's request for conversion of variable O&M costs of Euro 4.6909/MWh with US\$/Euro parity of 1.28 with reference to variable O&M allowed in the case of AGL. In the instant case the adjustment for US\$/Euro parity as requested by NCPL is not relevant. Even after application of same indexation to the Attock case, the allowed variable O&M is comparable; therefore the request for revision in this context is not accepted.

11. As regards de-linking of variable O&M cost from plant availability, the variable O&M cost is related to plant availability to be guaranteed by the O&M contractor. Less variable O&M cost will be required to be incurred if a lower plant availability is guaranteed therefore NCPL's request for de-linking variable O&M from plant availability is not justified.

ROE, ROEDC & Debt Equity Ratio

12. NCPL requested that it should be allowed ROEDC & ROE components on the basis of the same mechanism as has already been allowed to other projects being established on a BOO basis.

13. The methodology for calculating ROE in the instant case is in line with the GoP policy (Guidelines for determination of Tariff for Independent Power Producers) and NCPL's contention for adopting a mechanism otherwise is not accepted.

14. The Authority has considered NCPL's request for changing debt: equity ratio of 75:25 to 80:20. This will lead to lowering generation tariff therefore the Authority has decided to base the calculation of ROE and ROEDC on debt equity ratio of 80:20 being within the allowable limits. Accordingly the revised ROE and ROEDC are assessed as Rs.0.2183/kWh and Rs.0.0406/kWh respectively.

Working Capital Component

15. NCPL requested for indexation of working capital component with the RFO Price and KIBOR as both of these elements will effect NCPL's working capital requirement. NCPL has also requested for clarification of figure of Rs. 29,571 used in the mathematical formula set out under paragraph 81 of the Determination.

16. CPPA during hearing objected to the requested adjustment on the ground that CPPA would make 70% of capacity in advance. The Authority considers that adjustment in cost of working capital on account of fuel price variation can be addressed through better financial management. The Authority has therefore decided to maintain its original decision in the context. As regards the clarification w.r.t figure of Rs. 29,571 it is clarified that the figure of Rs. 29,571 includes 15% GST over RFO price plus inland freight.

Plant Availability

17. NCPL requested that the condition of 90% plant availability may be lowered to 88%. NCPL has attached copy of the letter No. 1(102)PPIB-IPP-Exp/06/FIN dated 23.8.2006 of PPIB wherein it was stated that annual availability requirement for reciprocating engines running on RFO will be 88%. NCPL has also requested for allowing 348 hours of unscheduled outage hours plus 720 hours of scheduled outages, which are the same as already allowed to AGL.

18. CPPA during the hearing of motion for leave for review did not support the IPPs request regarding 88% plant availability. According to CPPA the plant availability of such type of technology is above 90%. According to the documentary evidence submitted by WARDA, WARTSILA has guaranteed 90% plant availability. The Authority in its determination of generation tariff for used/refurbished plants has also determined the 90% plant availability which was indicated by the petitioner itself. The Authority has therefore decided to hold its earlier decision in this context.

EPC Cost

19. NCPL submitted that its entire EPC price is denominated in Euros and NCPL has to make payment to its EPC contractor in Euros or Euro equivalent in Pakistani Rupees on the date of payment, regardless of the fact whether cost is offshore or onshore therefore NCPL may be allowed the applicable currency adjustments. NCPL has further requested for clarification/explanation of the sentence in relation to Part I of paragraph 96 titled "Adjustment in EPC Cost (One Time)". "The adjustment would be allowed for a period of up to 3 months or up to financial close whichever is earlier".

20. NCPL's request regarding indexation of onshore project cost with Dollar/Euro parity could not be justified. The Authority used conversion rate of 1.20 Dollar/Euro because the petitioner had used this conversion factor to translate local currency in equivalent Euro. The Authority understands that there are two parts of EPC contract, one offshore; which will be for plant and equipment and the other onshore which will be for infrastructure development and civil works. The Authority considers that the costs to be incurred in local currency cannot be adjusted for variation in Euro/Dollar parity. The Authority therefore decides not to alter its earlier decision in this context.

21. The Authority has considered the NCPL's request for issuing clarification under the Part I of paragraph 96 titled "Adjustment in EPC Cost (One Time)" "The adjustment would be allowed for a period of up to 3 months or up to financial close whichever is earlier" and decided to clarify the matter through insertion of the following note;

"The adjustment on account of variation in Euro/US\$ parity in the relevant EPC cost would be allowed on the basis of EPC contract being finalized within 3 months of tariff determination. No adjustment in EPC cost shall be allowed beyond 15 months of financial close or 18 months of tariff determination whichever is earlier".

Foreign Equity

22. NCPL requested for insertion of note under Pass Through Item that in case of foreign equity, ROE, ROEDC and withholding tax shall be adjusted for variation in currency (Pakistani Rupee/US\$).

23. The Authority considers that NCPL's request is reasonable therefore decides to insert the note under Pass Through item that ROE, ROEDC and withholding tax pertaining to the foreign equity shall be adjusted for variation in currency (Pakistani Rupee/US\$).

FINAL ORDER

24. Pursuant to Rule 6 of the NEPRA Licensing (Generation) Rules 2000, Nishat Chunian Power Limited (NCPL) is allowed to charge, subject to adjustment of Capacity Purchase Price on account of net dependable capacity as determined by test jointly carried out by Central Power Purchasing Agency (CPPA) and the petitioner, the following is approved as specified tariff for NCPL for delivery of electricity to CPPA of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

Reference Tariff

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
Capacity Charge (PKR/kW/Hour)			
O&M Foreign	0.0675	0.0675	US\$ /PKR & US CPI
O&M Local	0.0675	0.0675	WPI
Cost of Working Capital	0.0900	0.0900	KIBOR
Insurance	0.0816	0.0816	US\$ /PKR
Debt Service – Local	1.0672	-	KIBOR
Return on Equity	0.2183	0.2183	NIL
ROE during Construction	0.0406	0.0406	NIL
Total Capacity Charge	1.6328	0.5657	
Energy Charge on Operation on Furnace Oil (Rs./kWh)			
Fuel Cost Component	4.7811	4.7811	Fuel Price
Variable O&M	0.4362	0.4362	US\$ /PKR & US CPI

- Note: i) Capacity Charge Rs./kW/hour applicable to dependable capacity at the delivery point.
ii) Dispatch criterion will be Energy Charge.
iii) The above tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.
iv) In case of foreign equity ROE and ROEDC component will be adjusted for Rs./\$ parity variation. The reference exchange rate will be Rs.61 per Dollar.
v) Component wise tariff for operation on RFO is indicated at Annex-I.

The following adjustments /indexations shall be applicable to reference tariff;

I. Adjustment in EPC Cost (One Time)

The Authority has assessed EPC cost as US\$ 169.566 million out of which US\$ 150.346 million would be in Euro and US\$ 19.220 million in US Dollar. Since the exact timing of

payment to EPC contractor is not known at this point of time therefore an adjustment for relevant foreign currency fluctuation for the portion of payment in the relevant foreign currency will be made. In this regard the sponsor will be required to provide all the necessary relevant details along with documentary evidence. Based upon such information the EPC cost components in Euro, Dollar or Pak Rupees shall be established and shall be applied to the corresponding EPC cost components. The adjustment shall be only for currency fluctuation against the reference Euro/Dollar parity values according to the following mechanism;

$$EPC_{(Adj.)} = \text{US\$ 150.346 Million} / 1.28 * E_{(PR)} + \text{US\$ 19.220 Million}$$

Where:

$$E_{(PR)} = \text{Weighted Average EURO to dollar parity based upon timing of the payment}$$

Note:- The adjustment on account of variation in Euro/US\$ parity in the relevant EPC cost would be allowed on the basis of EPC contract being finalized within 3 months of tariff determination. No adjustment in EPC cost shall be allowed beyond 15 months of financial close or 18 months of tariff determination whichever is earlier.

The tariff components i.e. Insurance, ROE, ROEDC, Principal Repayment and Interest Charges shall be adjusted according to the following formula at COD.

i) Insurance Adjustment Mechanism for EPC Cost Variation

$$Ins_{(Rev)} = Ins_{(Ref)} / EPC_{(Ref)} \times EPC_{(Adj.)} \times P_{(Rev)} / 61$$

Where:

$Ins_{(Rev)}$	=	Revised reference insurance component of tariff
$Ins_{(Ref)}$	=	Reference insurance component of tariff as per original schedule of tariff
$EPC_{(Ref.)}$	=	Reference EPC in US\$
$EPC_{(Adj.)}$	=	Adjusted EPC in US\$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD

ii) Return on Equity Adjustment Mechanism for EPC Cost Variation

$$ROE_{(Rev)} = 0.2183 / (20\% \times \text{US\$204.0287 million}) \times (20\% \times PC_{(Rev)}) \times P_{(Rev)} / 61$$

Where:

$$ROE_{(Rev)} = \text{Revised reference Return on Equity component of tariff}$$

PC(Rev.) = Revised project cost after incorporating the adjustment for currency fluctuation

P(Rev) = Rupee to Dollar parity at COD

iii) ROEDC Adjustment Mechanism for EPC Cost Variation

$$ROEDC_{(Rev)} = 0.0406 / (\text{US\$}7.33 \text{ million}) \times (EDC_{(Rev)}) \times P_{(Rev)} / 61$$

Where:

ROEDC_(Rev) = Revised reference Return on Equity during Construction component of tariff

EDC_(Rev) = Revised Equity During Construction in million USD.

P_(Rev) = Rupee to Dollar parity at COD

iv) Debt Servicing Adjustment Mechanism for EPC Cost Variation

$$DS_{(Rev)} = DS_{(Ref)} / \text{US\$} 163.223 \text{ million} \times (80\% \times PC_{(Rev)}) \times P_{(Rev)} / 61$$

Note: The adjustment factor established as per the above formula shall be applicable to the individual components of principal and interest during the entire repayment period.

DS_(Rev) = Revised Debt Servicing component of tariff

DS_(Ref) = Reference Debt Servicing component of tariff as per original schedule of tariff

PC_(Rev.) = Revised project cost after incorporating the adjustment for currency fluctuation

P_(Rev) = Rupee to Dollar parity at COD

II. Adjustment due to Variation in Net Capacity

All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) tests to be carried out for determination of contracted capacity. Adjustment shall not be made if IDC is established less than 195.26 MW net capacity, at reference site conditions. In case of higher net capacity the adjustments shall be made according to the following formula:

$$CC_{(Adj.)} = CC_{(Ref)} / NC_{(IDC)} \times 195.26MW$$

Note: Above formula shall be applicable to all the individual relevant components of Capacity Charges.

Where;

$CC_{(Adj)}$	= Adjusted relevant Capacity Charge components of tariff
$CC_{(Ref)}$	= Reference relevant Capacity Charge components of tariff
$NC_{(IDC)}$	= Net Capacity at reference site conditions established at the time of IDC test

Note:- Reference capacity charge components of Tariff i.e. Revised O&M Foreign, Revised O&M Local, Insurance, Debt Servicing, Return on Equity and ROEDC to be adjusted as per IDC test.

Reference Site Conditions:

Ambient Temperature	30 °C
Altitude	200 m
Relative humidity	60%
Water Temperature to Charge air cooler	45 °C

III. Adjustment in Insurance as per actual

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1.35% of the EPC cost will be treated as pass-through. Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by NCPL according to the following formula;

$$\text{Insurance}_{(Rev)} = \text{AIC} / (1.35 \% \times \text{US\$}169.566 \text{ Million}) * \text{AP}$$

Where;

AIC = Adjusted Insurance Component (Rs. kW/hr) as per IDC Test

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

IV. Adjustment Based on Actual Interest During Construction

Debt Service, Return on Equity and ROE & ROEDC during construction shall be adjusted on account of actual variation in drawdown and Interest During Construction with reference to the estimated figures.

NCPL shall submit the relevant documents to NEPRA within 7 days of COD for adjustment of relevant tariff components.

V. Adjustment due to Custom Duties & Taxes

Debt Service, Return on Equity and ROE & ROEDC during construction shall be adjusted on account of actual variation in customs duties & taxes with reference to the estimated figures of US \$ 7.517 million.

NCPL shall submit the relevant documents to NEPRA within 7 days of COD for adjustment of relevant tariff components.

VI. Adjustment for variation in Dollar/Rupee parity

Relevant reference tariff components shall be adjusted at COD on account of variation in Dollar/Rupee parity.

VII. Pass-Through Items

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

ii) Withholding tax is also a pass through item just like other taxes as indicated in the government guidelines for determination of tariff for new IPPs. In a reference tariff table withholding tax number is indicated as reference and CPPA (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% reference equity i.e. hourly payment (Rs./kW/hour) spread over a 12 month according to the following formula:

$$\text{Withholding Tax Payable} = [\{ 15\% * (E(\text{Ref}) - E(\text{Red})) \} + \text{ROEDC}(\text{Ref})] * 7.5\%$$

Where:

$E(\text{Ref})$ = Adjusted Reference Equity at COD

$E(\text{Red})$ = Equity Redeemed

$\text{ROEDC}(\text{Ref})$ = Reference Return on Equity During Construction

Note:- ROE, ROEDC and withholding tax pertaining to the foreign equity shall be adjusted for variation in currency (Pakistani Rupee/US\$).

iii) 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 pay out.

VIII. Indexations:

The following indexation shall be applicable to the reference tariff as follows;

a) Indexation applicable to O&M

The Fixed O&M local component of Capacity Charge will be adjusted on account of Inflation (WPI) and Fixed O&M foreign component on account of variation in US CPI and dollar/Rupee exchange rate. 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 (FBS), US CPI issued by relevant US Agency and revised TT & OD selling rate of US Dollar notified by the National Bank of Pakistan. The mode of indexation will be as under:

i) Fixed O&M

$$F O\&M_{(LREV)} = \text{Rs. } 0.0675 \text{ /kW/Hour} * WPI_{(REV)} / 118.96$$

$$F O\&M_{(FREV)} = \text{Rs. } 0.0675 \text{ /kW/Hour} * US CPI_{(REV)} / 202.41 * ER_{(REV)} / 61$$

Where:

$F O\&M_{(LREV)}$ = the revised applicable Fixed O&M Local Component of the Capacity Charge indexed with WPI

$F O\&M_{(FREV)}$ = 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 (manufactures)

$WPI_{(REF)}$ = 118.96 wholesale price index (manufactures) of January 2007 notified by Federal Bureau of Statistics

$US CPI_{(REV)}$ = the revised US CPI

$US CPI_{(REF)}$ = 202.41 US CPI for the month of January 2007

$ER_{(REV)}$ = the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference numbers indicated above shall be replaced by the revised numbers after incorporating the required adjustments at COD.

ii) Variable O&M

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

$$V O\&M_{(LREV)} = \text{Rs. } 0.0928/\text{kW}/\text{Hour} * WPI_{(REV)} / 118.96$$
$$V O\&M_{(FREVE)} = \text{Rs.} 0.3434/\text{kW}/\text{Hour} * \text{US CPI}_{(REV)} / 202.41 * ER_{(REV)} / 61$$

Where:

$V O\&M_{(LREV)}$ = the revised applicable Variable O&M Local Component of the Capacity Charge indexed with WPI

$V O\&M_{(FREVE)}$ = the revised applicable Variable O&M Foreign Component of the Capacity Charge indexed with US CPI and Exchange Rate variations

$WPI_{(REV)}$ = the revised wholesale Price Index (manufactures)

$WPI_{(REF)}$ = 118.96 wholesale price index (manufactures) of January 2007 notified by Federal Bureau of Statistics

$US CPI_{(REV)}$ = the revised US CPI

$US CPI_{(REF)}$ = 202.41 US CPI for the month of January 2007

$ER_{(REV)}$ = the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference Variable O&M indicated above shall be replaced with the revised number at COD after incorporating the required adjustment based upon the IDC Test.

iii) Adjustment for KIBOR variation

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variations in interest rate as a result of variation in quarterly KIBOR according to the following formula;

$$\Delta I_{(L)} = P_{(LREV)} * (KIBOR_{(REV)} - 10.45\%) / 4$$

Where:

$\Delta I_{(L)}$ = the variation in interest charges applicable on local loan corresponding to variation in quarterly KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)} >$ or $<$ 10.45%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment applicable on quarterly

$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.

iv) Fuel Price Variation

The Variable Charge Part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations according to the mechanism given below:

$$FC_{(REV)} = (\text{Rs.}4.3223 \text{ per kWh} * FP_{(REV)}) / \text{Rs.}23,247.07 \text{ per ton} + (\text{Rs.}0.4588 \text{ per kWh} * Ft_{(REV)}) / \text{Rs.}2,467.50 \text{ per ton}$$

Where:

- $FC_{(REV)}$ = Revised fuel cost component of Variable Charge on RFO.
 $Ft_{(REV)}$ = Revised Freight Charges adjusted for NHV-GHV factor
 $FP_{(REV)}$ = The new price of RFO per Metric Ton adjusted for NHV/GHV factor of 1.05 as per the following mechanism;

Description	US\$/Ton	Rs./Ton
HSFO Arab Gulf Average Price for applicable Fortnight (From Platts Oilgram Report) *		
Black Premium (From OGRA)		
C & F Price – A		
Crude Handling and Incidental charges (7.282% of C&F Price)**		
Sub-Total – B		
EX Refinery Price – (C=A+B)		
GST (15% of EX Refinery Price)		
Selling Price – D		
OMC Margin (3.5% of Selling Price)		
GST (15% on OMC Margin)		
Sub Total – E		
Market Price – (F=D+E)		
Cost of RFO excluding GST (GHV)		
Inland Freight		
Total Cost of RFO excluding GST (GHV)		

US\$ Pak Rupee Exchange Rate-NBP Selling TT/OD at the date of applicable fuel price

* The supplier shall clearly indicate average Gross and Net calorific values of Arabian Gulf or any other source of which average reference fuel prices are used. Fuel supplier

shall provide price adjustment mechanism due to variation in calorific value of the fuel being supplied to the IPP against the reference calorific values.

** Fuel supplier shall provide item wise actual incidental charges prevailing at the time of receiving payment for fuel supply. This charge shall vary with market supply/demand position but shall not exceed 8% of C&F price, to be uniformly charged to all customers including NCPL.

The fuel cost component will be adjusted after the commercial operation date, at the time of revision in RFO price.

Adjustment on account of local inflation, foreign inflation, foreign exchange rate variation, KIBOR variation and fuel price variation will be approved and announced by the Authority for immediate application within seven working days after receipt of NCPL's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

IX. Terms and Conditions of Tariff:

- i) The plant availability shall be 90%.
- ii) All new equipment will be installed and the plant will be of standard configuration.
- iii) Dispatch criterion will be based on the Energy Charge.
- iv) Internal consumption (including air-cooled condenser) has been assumed to be approximately 4.1 MW.
- v) Annual Unscheduled Outages (MWh) and Available Capacity (MW) without any liquidated damages shall be in accordance with the 2006 standardized PPA.
- vi) Scheduled Outage periods per annum shall be in accordance with the 2006 standardized PPA.
- vii) NTDC will be responsible for constructing the interconnection to the grid.
- viii) All invoicing and payment terms are assumed to be in accordance with the 2006 standardized PPA.
- ix) Tolerance in Dispatch shall be in accordance with 2006 standardized PPA.
- x) If there is any change in any assumption that may lead to change in the tariff shall be referred to NEPRA for approval.
- xi) If IPP is required by the power purchaser to deliver power above 132 kV, any additional cost to be incurred by the IPP will be submitted to NEPRA for

adjustment. The adjustment request by the IPP shall be duly verified by the power purchaser.

The above tariff and terms and conditions be incorporated in the Power Purchase Agreement between NCPL and CPPA.

(Zafar Ali Khan)
Member

(Nasiruddin Ahmed)
Member

(Abdul Rahim Khan)
Member

Lt. General (R) Saeed uz Zafar
Chairman

Nishat Chunian Power Limited
Reference Tariff Table

Year	Variable Charge (Rs./kWh)			Capacity Charge (Rs./kW/Hour)									Capacity Charge at 60% PF	Tariff	
	Fuel	Variable O&M	Total	Fixed O&M	Cost of Working Capital	Insurance	ROE	ROEDC	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Total	Rs. per kWh	Rs. per kWh	¢ per kWh
1	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.2989	0.7683	1.6523	2.7538	7.9710	13.0673
2	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.3412	0.7260	1.6523	2.7538	7.9710	13.0673
3	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.3895	0.6777	1.6523	2.7538	7.9710	13.0673
4	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.4445	0.6226	1.6523	2.7538	7.9710	13.0673
5	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.5074	0.5598	1.6523	2.7538	7.9710	13.0673
6	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.5792	0.4880	1.6523	2.7538	7.9710	13.0673
7	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.6611	0.4061	1.6523	2.7538	7.9710	13.0673
8	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.7546	0.3126	1.6523	2.7538	7.9710	13.0673
9	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.8613	0.2058	1.6523	2.7538	7.9710	13.0673
10	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.9832	0.0840	1.6523	2.7538	7.9710	13.0673
11	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
12	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
13	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
14	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
15	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
16	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
17	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
18	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
19	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
20	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
21	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
22	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
23	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
24	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
25	4.7811	0.4362	5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	-	-	0.5851	0.9751	6.1924	10.1515
Levelized Tariff (1-25Years)			5.2173	0.1351	0.0900	0.0816	0.2183	0.0406	0.0194	0.3556	0.3668	1.3075	2.1792	7.3964	12.1253

Nishat Chunian Power Limited
Debt Servicing Schedule

Period	Local Debt					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr.	Annual Debt Servicing Rs./kW/ hr.
	Principal Million \$	Repayment Million \$	Mark-Up Million \$	Balance Million \$	Debt Service Millin \$			
1	163.22	1.99	5.49	161.23	7.4811	0.2989	0.7683	1.0672
	161.23	2.06	5.42	159.17	7.4811			
	159.17	2.13	5.35	157.04	7.4811			
	157.04	2.20	5.28	154.84	7.4811			
	163.22	8.38	21.54	154.84	29.9243			
	154.84	2.27	5.21	152.57	7.4811			
	152.57	2.35	5.13	150.22	7.4811			
2	150.22	2.43	5.05	147.79	7.4811	0.3412	0.7260	1.0672
	147.79	2.51	4.97	145.27	7.4811			
	154.84	9.57	20.36	145.27	29.9243			
	145.27	2.60	4.88	142.68	7.4811			
	142.68	2.68	4.80	139.99	7.4811			
3	139.99	2.77	4.71	137.22	7.4811	0.3895	0.6777	1.0672
	137.22	2.87	4.61	134.35	7.4811			
	145.27	10.92	19.00	134.35	29.9243			
	134.35	2.96	4.52	131.39	7.4811			
4	131.39	3.06	4.42	128.33	7.4811	0.4445	0.6226	1.0672
	128.33	3.17	4.31	125.16	7.4811			
	125.16	3.27	4.21	121.89	7.4811			
	134.35	12.47	17.46	121.89	29.9243			
	121.89	3.38	4.10	118.50	7.4811			
5	118.50	3.50	3.98	115.01	7.4811	0.5074	0.5598	1.0672
	115.01	3.61	3.87	111.39	7.4811			
	111.39	3.74	3.75	107.66	7.4811			
	121.89	14.23	15.70	107.66	29.9243			
	107.66	3.86	3.62	103.80	7.4811			
6	103.80	3.99	3.49	99.81	7.4811	0.5792	0.4880	1.0672
	99.81	4.13	3.36	95.68	7.4811			
	95.68	4.26	3.22	91.42	7.4811			
	107.66	16.24	13.68	91.42	29.9243			
	91.42	4.41	3.07	87.01	7.4811			
7	87.01	4.56	2.93	82.46	7.4811	0.6611	0.4061	1.0672
	82.46	4.71	2.77	77.75	7.4811			
	77.75	4.87	2.61	72.88	7.4811			
	91.42	18.54	11.39	72.88	29.9243			
	72.88	5.03	2.45	67.85	7.4811			
8	67.85	5.20	2.28	62.65	7.4811	0.7546	0.3126	1.0672
	62.65	5.37	2.11	57.28	7.4811			
	57.28	5.56	1.93	51.72	7.4811			
	72.88	21.16	8.76	51.72	29.9243			
	51.72	5.74	1.74	45.98	7.4811			
9	45.98	5.94	1.55	40.04	7.4811	0.8613	0.2058	1.0672
	40.04	6.13	1.35	33.91	7.4811			
	33.91	6.34	1.14	27.57	7.4811			
	51.72	24.15	5.77	27.57	29.9243			
	27.57	6.55	0.93	21.01	7.4811			
10	21.01	6.77	0.71	14.24	7.4811	0.9832	0.0840	1.0672
	14.24	7.00	0.48	7.24	7.4811			
	7.24	7.24	0.24	0.00	7.4811			
	27.57	27.57	2.36	0.00	29.9243			