



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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Registrar

No.NEPA/R/TRF-84/BPL-2007/6432-34
February 28, 2008

Subject: **Determination of the Authority in the Matter of Generation Tariff of Bestway Power Ltd. (Case No. NEPRA/TRF-84/BPL-2007)**
Intimation of Determination of Tariff pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)


Dear Sir,

Please find enclosed the subject Determination of the Authority along with Annexure-I & II (26 pages) in Case No. NEPRA/TRF-84/BPL-2007.

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

3. Please note that only Order of the Authority at para 17.2 of the Determination relating to the reference tariff, adjustments & indexation along with Annexure-I & II needs to be notified in the official gazette. The Order is reproduced for the purpose of clarity and is attached herewith.

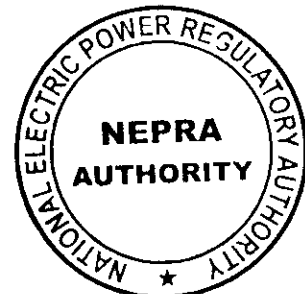
Enclosure: As above


(Mahjoob Ahmad Mirza)

The Secretary
Cabinet Division
Government of Pakistan
Cabinet Secretariat
Islamabad

CC:

1. Secretary, Ministry of Water & Power, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.





**ORDER OF THE AUTHORITY
IN CASE NO. NEPRA/TRF-84/BPL-2007
TO BE NOTIFIED IN THE OFFICIAL GAZETTE**

Pursuant to Rule 6 of the NEPRA Licensing (Generation) Rules 2000, Best way Power Limited (BPL) 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 BPL for delivery of electricity to CPPA of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

Reference Specified Tariff

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
Capacity Charge PKR/kW/Hour)			
O&M Local	0.0508	0.0508	WPI
O&M Foreign	0.0845	0.0845	US\$ /PKR & US CPI
Cost of Working Capital	0.0850	0.0850	KIBOR
Insurance	0.0987	0.0987	US\$ /PKR
Debt Service	1.1548		KIBOR
Return on Equity	0.3238	0.3238	US\$ /PKR
ROE during Construction	0.0326	0.0326	US\$ /PKR
Total Capacity Charge	1.8301	0.6753	
Energy Charge on Operation on Furnace Oil Rs./kWh			
Fuel Cost Component	4.7811	4.7811	Fuel Price
Variable O&M			
Foreign	0.4173	0.4173	US\$ /PKR & US CPI
Local	0.0474	0.0474	WPI

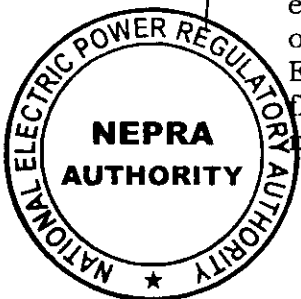
Note: i) Component wise tariff for operation on RFO is indicated at Annex-I. Debt Servicing Schedule is attached as Annex-II.

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

I. Adjustment in EPC Cost (One Time)

The Authority has assessed EPC cost as € 149.50 million out of which €129.50 million (offshore) and €20 million (onshore to be incurred in Pak Rupees). 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 or Dollar shall be established and shall be applied to the corresponding EPC cost components. The adjustment shall be only for currency fluctuation against the reference parity values according to the following mechanism;

$$EPC_{(Adj.)} = PKR 13,679.25 \text{ Million} / 91.5 * E_{(PR)}$$





Where:

$E_{(PR)}$ = Weighted Average PKR/EURO parity based upon timing of the payment

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

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

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 PKR which is Rs. 13,679.25 million.

$EPC_{(Adj.)}$ = Adjusted EPC in PKR

ii) Return on Equity Adjustment Mechanism for EPC Cost Variation

$$ROE_{(Rev)} = ROE_{(Ref)} / E_{(Ref)} * E_{(Rev)}$$

Where:

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

$ROE_{(Ref)}$ = Reference Return on Equity component of tariff as per original schedule of tariff in PKR

$E_{(Rev)}$ = Reference Equity in PKR (Rs. 4,038.85 million)

$E_{(Ref)}$ = Revised amount of Equity in PKR

iii) ROEDC Adjustment Mechanism for EPC Cost Variation

$$ROEDC_{(Rev)} = ROEDC_{(Ref)} / EDC_{(Ref)} * EDC_{(Rev)}$$

Where:

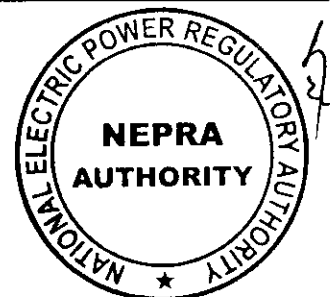
$ROEDC_{(Rev)}$ = Revised Return on Equity during Construction component of tariff in PKR

$EDC_{(Ref)}$ = Reference Equity During Construction in PKR

$EDC_{(Rev)}$ = Revised Equity During Construction in PKR

iv) Debt Servicing Adjustment Mechanism for EPC Cost Variation

$$DS_{(Rev)} = DS_{(Ref)} / Debt_{(Ref)} * Debt_{(Rev)}$$





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
- Debt_(Ref.) = Revised project cost after incorporating the adjustment for currency fluctuation
- Debt_(Rev.) = Reference Debt in PKR (Rs. 12,116.55)

II. Adjustment due to Variation in Net Capacity

The reference tariff has been determined on the basis of minimum net capacity of 213.60 MW at delivery point at mean site conditions. 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 213.60 MW net capacity at reference site conditions. The adjustments shall be made according to the following formula:

$$CC_{(Adj.)} = CC_{(Ref)} \times 213.60MW / NC_{(IDC)}$$

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

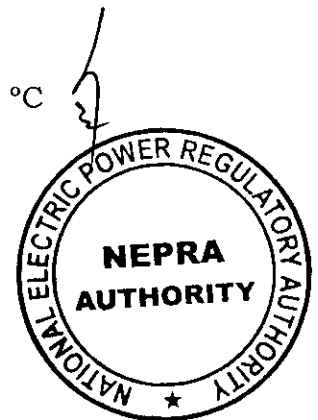
Where;

- 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 Conditions:

Ambient Temperature	Min 3 °C Max 50 °C
Altitude (maximum)	500 m
Air Inlet Temperature	30 °C
Air Inlet Pressure	989 mbar
Charge air temperature before cylinder	47 °C
Exhaust gas back pressure	≤ 30 mbar
Intake air pressure loss	≤ 20 mbar



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 BPL according to the following formula;

$$\text{Insurance (Rev)} = \text{AIC} / (1.35 \% \times \text{US\$ } 2.942 \text{ Million}) * \text{AP}$$

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 during construction shall be adjusted on account of actual variation in drawdown and Interest During Construction with reference to the estimated figures.

V. Adjustment due to Custom Duties & Taxes

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in custom duties & Taxes with reference to the estimated figures of US\$ 9.4416 million. The impact of withholding tax on local services is not known at this point of time. However, these will be adjusted along with other duties and taxes as per the actual on provision of documentary evidence at COD.

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.

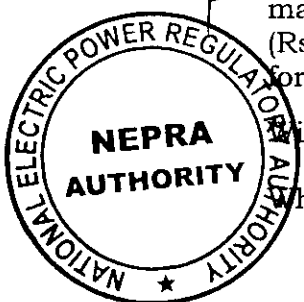
VII. Pass-Through Items

i) No provision for income tax has been accounted for in the tariff. If BPL is obligated to pay any tax on its ROE, the exact amount paid by the company may be reimbursed by CPPA to BPL 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, BPL may also submit to CPPA details of any tax shield savings and CPPA will deduct the amount of these savings from its payment to BPL on account of taxation.

ii) Withholding tax on dividend 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:





$E_{(Ref)}$ = Adjusted Reference Equity at COD

$E_{(Red)}$ = Equity Redeemed

$ROEDC_{(Ref)}$ = Reference Return on Equity During Construction

- 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 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:

i) Fixed O&M

$$F O\&M_{(LREV)} = \text{Rs. } 0.0508/\text{kW}/\text{Hour} * WPI_{(REV)} / 125.67$$

$$F O\&M_{(FREV)} = \text{Rs. } 0.0845/\text{kW}/\text{Hour} * US\text{CPI}_{(REV)} / 210.036 * ER_{(REV)} / 62.75$$

Where:

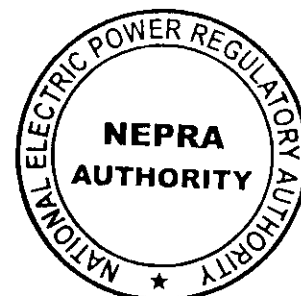
$F O\&M_{(LREV)}$ = the revised applicable Fixed O&M Local Component of the Capacity Charge indexed with WPI

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

$WPI_{(REF)}$ = 125.67 wholesale price index (manufactures) of December 2007 notified by Federal Bureau of Statistics

$US\text{CPI}_{(REV)}$ = the revised US CPI





- US CPI_(REF) = 210.036 US CPI for the month of December 2007 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

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:

$$V O\&M_{(LREV)} = \text{Rs. } 0.0474 / \text{kW/Hour} * WPI_{(REV)} / 125.67$$

$$V O\&M_{(FREV)} = \text{Rs. } 0.4173 / \text{kW/Hr} * US CPI_{(REV)} / 210.036 * ER_{(REV)} / 62.75$$

Where:

- V O&M_(LREV) = the revised applicable Variable O&M Local Component of the Capacity Charge indexed with WPI
- V O&M_(FREV) = 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) = 125.67 wholesale price index (manufactures) of December 2007 notified by Federal Bureau of Statistics
- US CPI_(REV) = the revised US CPI
- US CPI_(REF) = 210.036 US CPI for the month of December 2007 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

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.

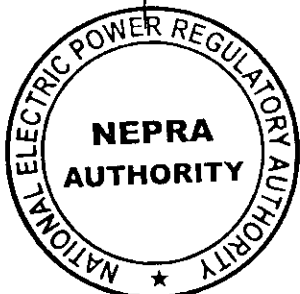
iii) Adjustment for KIBOR variation

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;

$$\Delta I_{(L)} = P_{(LREV)} * (KIBOR_{(REV)} - 9.75\%) / 4$$

Where:

- $\Delta I_{(L)}$ = the variation in interest charges on local loan applicable corresponding to variation in quarterly KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)} >$ or $<$ 9.75%. 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:

$$FC_{(Rev)} = (Rs.4.3223 \text{ per kWh} * FP_{(Rev)}) / Rs.23,247.07 \text{ per ton}/40,792 * CV_{(Rev)} + (Rs.0.4588 \text{ per kWh} * Ft_{(Rev)}) / Rs. 2,467.50 \text{ per ton}$$

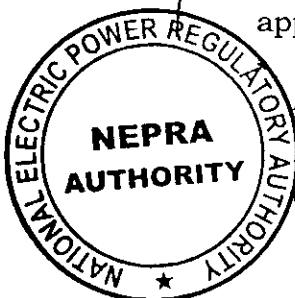
Where:

- $FC_{(Rev)}$ = Revised fuel cost component of Variable Charge on RFO.
- $CV_{(Rev)}$ = Revised Calorific Value
- $Ft_{(Rev)}$ = 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.

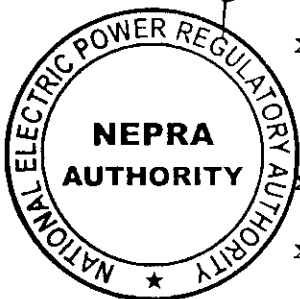
The fuel cost component will be adjusted after the commercial operation date, at the time of revision in RFO price.

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 BPL's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

For one time adjustment of relevant tariff components at COD according to the mechanism laid down in this order, BPL shall submit the relevant documents to NEPRA within 30 days of COD for adjustment.

IX. Terms and Conditions of Tariff:

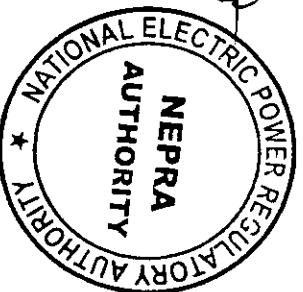
- i) Capacity Charge Rs./kW/hour applicable to dependable capacity at the delivery point.
- ii) The tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.
- iii) The plant availability shall be 88%.
- iv) All new equipment will be installed and the plant will be of standard configuration.
- v) Dispatch criterion will be based on the Energy Charge.
- vi) Internal consumption (including air-cooled condenser) has been assumed to be approximately 5.55 MW.
- vii) Scheduled Outage periods per annum shall be in accordance with the 2006 standardized PPA.
- viii) NTDC will be responsible for constructing the interconnection to the grid.
- ix) All invoicing and payment terms are assumed to be in accordance with the 2006 standardized PPA.
- x) Tolerance in Dispatch shall be in accordance with 2006 standardized PPA.
- xi) If there is any change in any assumption that may lead to change in the tariff shall be referred to NEPRA for approval.
- xii) If IPP is required by the power purchaser to deliver power above 132 kV, any additional cost to be incurred by the IPP submitted to NEPRA for adjustment. The adjustment request by the IPP shall be duly verified by the power purchaser.
- xiii) 100% of debt has been assumed to be local provided however that in the event BPL uses a mix of foreign and local loan, the future benefits of the lower interest rates shall be passed on to the Power Purchaser.
- xiv) No corporate income tax and no minimum turnover tax have been assumed.
- xv) Working capital has been financed by a separate Working Capital facility, and is not included in the project cost.



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

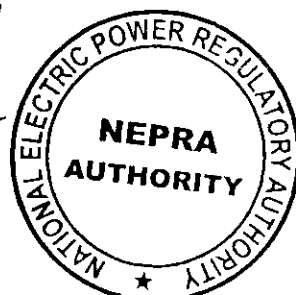
Bestway Power Limited (BPL)
Reference Tariff Table

Year	Variable Charge (Rs./kWh)				Capacity Charge (Rs./kW/Hour)										Tariff		
	Fuel	Variable O&M Foreign	Variable O&M Local	Total	Fixed O&M Local	Fixed O&M Foreign	Cost of Working Capital	Insurance	ROE	ROEDC	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Total	Capacity Charge at 60% PF	Rs. per kWh	¢ per kWh
1	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.3452	0.8096	1.8568	3.0947	8.3404	13.2915
2	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.3914	0.7634	1.8568	3.0947	8.3404	13.2915
3	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.4438	0.7110	1.8568	3.0947	8.3404	13.2915
4	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.5031	0.6517	1.8568	3.0947	8.3404	13.2915
5	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.5704	0.5844	1.8568	3.0947	8.3404	13.2915
6	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.6467	0.5081	1.8568	3.0947	8.3404	13.2915
7	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.7331	0.4217	1.8568	3.0947	8.3404	13.2915
8	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.8312	0.3236	1.8568	3.0947	8.3404	13.2915
9	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.9423	0.2125	1.8568	3.0947	8.3404	13.2915
10	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	1.0683	0.0865	1.8568	3.0947	8.3404	13.2915
11	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	1.8568	3.0947	8.3404	13.2915
12	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
13	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
14	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
15	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
16	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
17	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
18	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
19	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
20	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
21	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
22	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
23	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
24	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
25	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
Levelled Tariff	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.3976	0.3841	1.4837	2.4729	7.7186	12.3006	



Bestway Power Limited (BPL)
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 Rs.	Repayment Million Rs.	Mark-up Million Rs.	Balance Million Rs.	Debt Service Millin Rs.			
1	12,116.55	153.98	386.22	11,962.57	540.20	0.3452	0.8096	1.1548
	11,962.57	158.89	381.31	11,803.68	540.20			
	11,803.68	163.95	376.24	11,639.73	540.20			
	11,639.73	169.18	371.02	11,470.55	540.20			
	12,116.55	646.01	1,514.78	11,470.55	2,160.79			
	11,470.55	174.57	365.62	11,295.97	540.20			
	11,295.97	180.14	360.06	11,115.84	540.20			
2	11,115.84	185.88	354.32	10,929.96	540.20	0.3914	0.7634	1.1548
	10,929.96	191.80	348.39	10,738.15	540.20			
	11,470.55	732.39	1,428.39	10,738.15	2,160.79			
	10,738.15	197.92	342.28	10,540.24	540.20			
	10,540.24	204.23	335.97	10,336.01	540.20			
3	10,336.01	210.74	329.46	10,125.27	540.20	0.4438	0.7110	1.1548
	10,125.27	217.45	322.74	9,907.82	540.20			
	10,738.15	830.33	1,330.45	9,907.82	2,160.79			
	9,907.82	224.38	315.81	9,683.44	540.20			
	9,683.44	231.54	308.66	9,451.90	540.20			
4	9,451.90	238.92	301.28	9,212.98	540.20	0.5031	0.6517	1.1548
	9,212.98	246.53	293.66	8,966.45	540.20			
	9,907.82	941.37	1,219.41	8,966.45	2,160.79			
	8,966.45	254.39	285.81	8,712.06	540.20			
	8,712.06	262.50	277.70	8,449.56	540.20			
5	8,449.56	270.87	269.33	8,178.69	540.20	0.5704	0.5844	1.1548
	8,178.69	279.50	260.70	7,899.19	540.20			
	8,966.45	1,067.26	1,093.53	7,899.19	2,160.79			
	7,899.19	288.41	251.79	7,610.78	540.20			
	7,610.78	297.60	242.59	7,313.18	540.20			
6	7,313.18	307.09	233.11	7,006.09	540.20	0.6467	0.5081	1.1548
	7,006.09	316.88	223.32	6,689.21	540.20			
	7,899.19	1,209.98	950.81	6,689.21	2,160.79			
	6,689.21	326.98	213.22	6,362.23	540.20			
	6,362.23	337.40	202.80	6,024.83	540.20			
7	6,024.83	348.15	192.04	5,676.68	540.20	0.7331	0.4217	1.1548
	5,676.68	359.25	180.94	5,317.43	540.20			
	6,689.21	1,371.79	789.00	5,317.43	2,160.79			
	5,317.43	370.70	169.49	4,946.72	540.20			
	4,946.72	382.52	157.68	4,564.20	540.20			
8	4,564.20	394.71	145.48	4,169.49	540.20	0.8312	0.3236	1.1548
	4,169.49	407.29	132.90	3,762.20	540.20			
	5,317.43	1,555.23	605.56	3,762.20	2,160.79			
	3,762.20	420.28	119.92	3,341.92	540.20			
	3,341.92	433.67	106.52	2,908.25	540.20			
9	2,908.25	447.50	92.70	2,460.75	540.20	0.9423	0.2125	1.1548
	2,460.75	461.76	78.44	1,998.99	540.20			
	3,762.20	1,763.20	397.58	1,998.99	2,160.79			
	1,998.99	476.48	63.72	1,522.51	540.20			
	1,522.51	491.67	48.53	1,030.85	540.20			
10	1,030.85	507.34	32.86	523.51	540.20	1.0683	0.0865	1.1548
	523.51	523.51	16.69	0.00	540.20			
	1,998.99	1,998.99	161.79	0.00	2,160.79			



NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)

No. NEPRA/TRF-84/BPL-2007

February 26, 2008

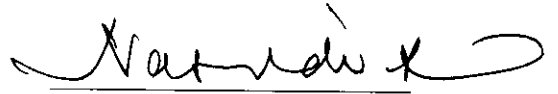
DETERMINATION OF THE AUTHORITY IN THE MATTER OF
GENERATION TARIFF OF BEST WAY POWER LIMITED (BPL)

Petitioner

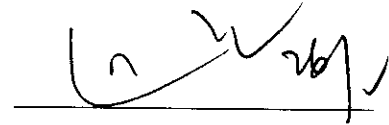
Best way Power Limited (BPL)
19-A, College Road, F-7, Markaz, Islamabad

Authority

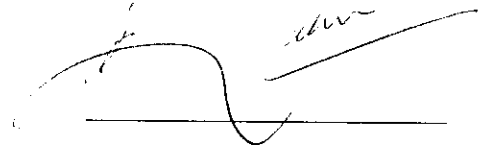
Nasiruddin Ahmed
Member



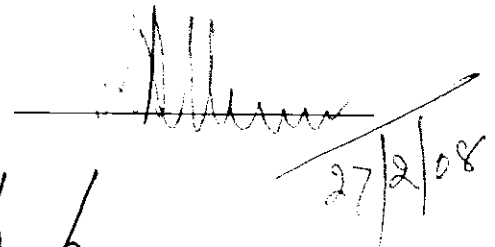
Maqbool Ahmed Khawaja
Member



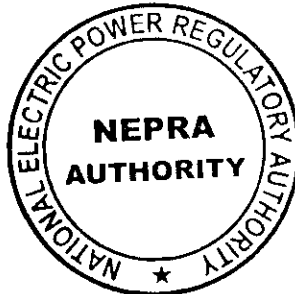
Abdul Rahim Khan
Member



Zafar Ali Khan
Vice Chairman



27/2/08





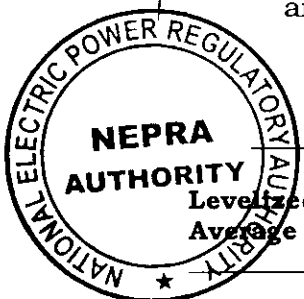
Background

- 1.1 Bestway Power Limited (BPL) is a public limited company incorporated and existing under the Companies Ordinance 1984, established for setting up power plant of approximately 225 MW capacity based on reciprocating engine single fuel RFO fired technology at Texila-Haripur Road, District Rawalpindi in the Punjab Province. According to BPL net generation of the proposed power plant will be 213.60 MW (net at site conditions) at 132 kV Bus Bar in terms of the Policy for Power Generation Projects 2002 (the "Policy"). The electricity generated will be sold to Central Power Purchasing Agency (CPPA) within NTDC.
- 1.2 BPL filed tariff application on 10th September, 2007 for approval of generation tariff. This tariff petition was admitted for consideration by the Authority on 18th September, 2007 and was assigned case number NEPRA/TRF-84/BPL-2007. Salient features of the petition were advertised in the newspapers on 24th September, 2007 to inform all the interested persons/stakeholders and to invite participation in the tariff-setting proceedings through their comments or by becoming a party to the proceedings as interveners. Invitations were also sent to the concerned Federal & Provincial Government ministries, Chambers of Commerce and Industries, Representatives of Professional bodies and Experts, soliciting their views on the petition.
- 1.3 A public hearing on the petition was held on 2nd October, 2007 at NEPRA Main Office, Islamabad. This hearing was participated by the applicant, stakeholders, commentators as well as general public.

2. Tariff Summary

- 2.1 BPL submitted that the assumptions elaborated in article 8 of its tariff petition were supposed to be mandatory part of the tariff determination order.
- 2.2 According to BPL its proposed tariff figures appended herein below were the result of a detailed financial analysis. Technical, economical, financial, legal and fiscal aspects were considered in the evaluation of BPL's financial performance. The financial analysis was based on a notional 60% load factor as per the PPIB's instructions, and a 25-year PPA.
- 2.3 Based on the RFO price of Pak Rs. 22,140 per M.Ton. (RFO Price excluding transportation), output of 213.60 MW (net at site conditions) and detailed financial analysis, BPL requested the following tariff;

	Capacity Charge US Cents/kWh	Energy Charge US Cents/kWh	Total tariff US Cents/kWh	Total tariff Pak Rs. /kWh
Levelized tariff	4.4577	8.1117	12.5693	7.5416
Average tariff	3.5446	8.1117	11.6563	6.9938





Average (1-10 years) :	US cents 13.6344 /kWh (or Pak Rs.8.1807 /kWh)
Average (11-25 years) :	US cents 10.3375 /kWh (or Pak Rs.6.2025 /kWh)
Average (1-25 years) :	US cents 11.6563 /kWh (or Pak Rs.6.9938 /kWh)
Levelized (1-25 years) :	US cents 12.5693 /kWh (or Pak Rs.7.5416 /kWh)

3. Determination Sought

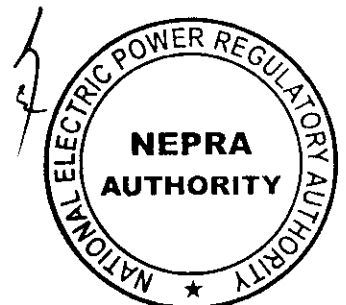
- 3.1 Based on the total investment cost of the project US\$ 235.385 million BPL sought Tariff Determination in respect of the following:
- Grant Tariff as requested in the Reference Tariff Tables to remain effective for a period of 25 years from the date of Commercial Operations; and
 - Approve the proposed escalations in Tariff.

4. Comments from Planning and Development Division

- 4.1 With the total investment cost of the project US\$ 235.385 million and the gross capacity of the project being 219.158 MW, the specific investment cost of the project worked out as US\$ 1.07 million/MW, which seemed rather on higher side for such combined cycle plant. The project sponsor should give rationale for this cost to NEPRA.
- 4.2 The investment cost of the project is based on proposal from M/s . MAN Diesel SE Company, Germany, which is valid for acceptance until July 27, 2007. The cost of the project might increase if the proposal was accepted after that date, in view of expected increases in steel prices worldwide after submission of the proposal (as mentioned on page 3 of Annexure – I of the petition) and tight market position (as mentioned in Para 3.6.22 of the petition).
- 4.3 The project is based on a single fuel i.e. RFO due to non – availability of gas for new projects in the power sector, at present. Option for gas firing should also be kept open, if gas is made available in future, either from increased domestic production or from imported gas.
- 4.4 Heat rate at full capacity (100 % load factor) used for tariff calculations instead of using heat rate corresponding to 60 % (as per instruction of PPIB) was not correct approach. Therefore actual heat rate at 60 % load factor should be used for tariff calculations after obtaining the Heat Rate Curves for the machines from the supplier. Similarly, the efficiency figure of 45 % (reported in Para 5.2 of the petition) was also not representative for these machines. Instead, the efficiency figure corresponding to 60 % load should also be provided.

5. ISSUES

- 5.1 Following issues have emerged out of the proceedings;
- Plant Capacity
 - Project Cost
 - EPC Cost





- ii). Emergency Spare Parts
- iii). Mobilization/Pre-Operation Cost
- iv). Development Cost
- v). Land Acquisition and Improvements
- vi). Non EPC Construction
- vii). Admin & Utilities
- C. Project Financing
- D. Financing Fees
- E. Interest During Construction
- F. Capacity Charge
 - i). Fixed O&M
 - ii). Insurance
 - iii). Cost of Working Capital
 - iv). Return on Equity
 - v). Return on Equity During Construction
 - vi). Debt Servicing
- G. Energy Charge
 - i). Fuel Cost
 - ii). Variable O&M Cost
- H. Timeline/Completion of Project

5.2. Issue wise discussion and decisions are given in following paragraphs:

6. Plant Capacity

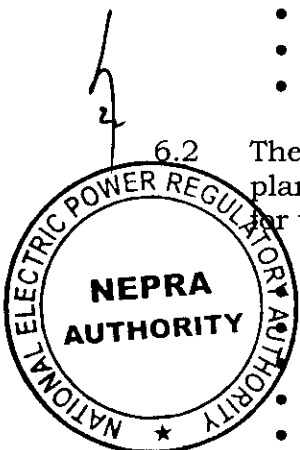
6.1 The petitioner's petition is based on plant configuration of 11 MAN four-stroke Diesel engines 18V48/60 and 1 Steam Turbine with a Gross Capacity of 225 MW. According to the documentary evidence (MAN literature) its auxiliary consumption (including air-cooled condenser) would be approximately 5.55 MW. The equipment is designed to operate within the following ambient conditions:

- *Altitude above sea level (maximum)* 500 m
- *Wet bulb temperature* 24 °C
- *Minimum ambient air temperature* 3 °C
- *Maximum ambient air temperature* 50 °C

6.2 The manufacturer has guaranteed 213,603 kW continuous power of the plant with 11 generating sets 18V48/60 in operation, which is calculated for the following reference conditions:

- *Air Inlet Temperature* 30 °C
- *Air Inlet Pressure* 989 mbar
- *Charge air temperature before cylinder* 47 °C
- *Exhaust gas back pressure* ≤ 30 mbar
- *Intake air pressure loss* ≤ 20 mbar

6.3 Having considered all the relevant information, the Authority has decided to accept the petitioner's indicated gross and net capacity at reference site conditions as per above detail. The tariff components except fuel cost component will be adjusted at the time of COD based upon the Initial Dependable Capacity (hereinafter "IDC") tests to be carried out for





determination of contracted capacity. No adjustment will be made if net capacity at reference site conditions is established less than 213.60 MW at IDC test. In case of higher net capacity the adjustments shall be made according to the following formula:

$$CC_{(Adj.)} = CC_{(Ref)} \times 213.60MW / NC_{(IDC)}$$

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 = Net Capacity at reference site conditions established at the time of IDC test

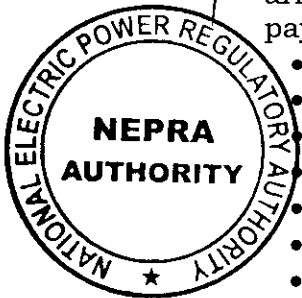
Note:- Reference capacity charge components of Tariff i.e. Revised O&M Foreign, Revised O&M Local, Insurance, Debt Servicing, Return on Equity and ROEDC to be adjusted as per IDC test.

7. PROJECT COST

7.1 EPC Cost

7.1.1 The petitioner stated that its firm EPC price was € 149.5 million (666 Euros per kW). The EPC price included the various insurances required for the construction/erection phase as per schedule 8 of the standard PPA. The petitioner in support thereof provided documentary evidence according to which all the quoted prices were fixed and firm for delivery of equipment not later than 27th November 2009 and for completion of commissioning latest by 27th September 2010. Subsequently MAN Diesel through its communication indicated COD of 31st March 2011. MAN Diesel indicated 30 months delivery time, which shall begin from commencement date of the contract i.e. with completion of financing arrangements, opening and confirmation of the L/C and receipt of down payment, whichever is later. The scope of supply and services includes;

- Diesel Engines,
- Generating set,
- Mechanical axillaries,
- Electrical equipment,
- Balance of Plant,
- Tools, Spares and wear parts, and
- Services



7.1.2. The petitioner provided following Off-shore and On-shore break-up of the EPC price;

Off Shore	Euro 129.500 million
On Shore	<u>Euro 20.000 million</u>
Total	Euro 149.500 million

7.1.3 The EPC price is reasonable as compared to earlier cases based on similar technology recently decided by the Authority. The Authority therefore decides to accept the EPC price of € 149.5 million (666 Euros per kW) indicated by the petitioner.



7.2 Emergency Spare Parts

7.2.1 BPL in its petition included emergency spare parts equivalent to US\$ 2.691 million which are 1.5% of EPC cost. The petitioner was asked to provide evidence along with detailed list of emergency spare parts in support of its request. The petitioner vide its letter dated January 17, 2008 provided list of emergency spare parts. The comparison of list of emergency spare parts with the Technical Specification of MAN Diesel SE indicated that these were already covered in the scope of EPC Contract. The Authority therefore finds no justification for allowing separate cost on this account.

7.3 Mobilization/Pre-Operating Cost

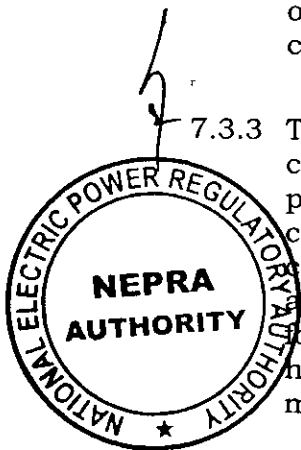
7.3.1 The petitioner requested US\$ 3.300 million as mobilization/pre-operation cost. Subsequently, vide letter BCL /HO/Projects/11/07/3055 dated 16th November, 2007, it revised it to US\$ 3.902 million. The petitioner was asked to provide detailed break up along with evidence in support of its claim of such a high cost. The petitioner in its response provided the following details of Mobilization/pre-operation Cost;

O & M contractor fee pre- operations	US\$ 876,000
To date cost incurred on the project appraisal	US\$ 142,185
Independent Consultant Share of post development	US\$ 2,322,000
Advance rent for office hiring	US\$ 112,000
Travel & Boarding costs for technical staff training	US\$ 150,000
Contingencies for additional commissioning services	<u>US\$ 300,000</u>
Total mobilization Cost	US\$3,902,185

7.3.2 The item wise evaluation of costs indicated that most of the above costs were not duly supported with necessary documentary evidence. It is also observed that there is duplication of some costs, which are claimed under different heads. All the costs which are not substantiated with proper documentary evidence by BPL are disallowed. Only the advance rent for office hiring and travel & boarding costs for technical staff training are considered legitimate and are being allowed.

7.3.3 The examination of the scope of EPC contract revealed that pre-commissioning fuel cost is sponsor's responsibility. In this regard the cost provided under contingencies for additional commissioning services is considered to cover such cost; therefore is being allowed. Having considered all the relevant information available, the Authority has assessed US\$ 1.5801 million on account of six (6) month pre-operating fee for O&M contractor, pre-commissioning fuel cost, advance rent for office hiring and travel & boarding costs for technical staff training under the mobilization cost head.

7.3.4 The petitioner also requested US\$ 3.46 million separately for Admin and Utilities, which were duly supported with sufficient details. After evaluating all the details and information provided by petitioner, the Authority considers that BPL's request is justified therefore has decided to



10



accept US\$ 3.46 million on account of Admin & Utilities. The Authority has assessed US\$ 5.040 million for BPL's overall pre-operation cost.

7.4 Development Cost

7.4.1 The petitioner requested development cost of US\$ 3.500 million in its original petition, which was revised to US\$ 3.604 million vide letter BCL/HO/Projects /11/07/3002 dated 8th November 26, 2007. Following breakdown of cost was provided by the petitioner:

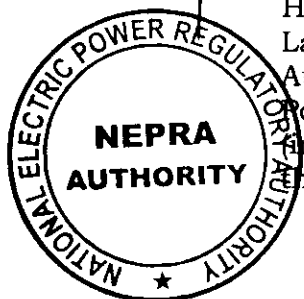
Feasibility study	US\$ 380,000
Independent Implementation Consultant	US\$ 2,331,000
PPA letter of credit	US\$ 60,000
Bank Guarantee	US\$ 33,750
NEPRA, PPIB & NTDC fees	US\$ 100,000
Lawyer fee (Local)	US\$ 200,000
Lawyer fee (Foreign)	US\$ 300,000
Company incorporation exp. Incl. stamp duty	US\$ 200,000
Total:	US\$ 3,604,750

7.4.2 From the above item wise break-up of the development cost the Authority observed that the cost of Independent Implementation Consultant was extraordinarily high, which was not duly substantiated with the documentary evidence. The petitioner took this cost @1.5% of EPC price, which in the absence of any concrete evidence could not be accepted as such. In the other similar cases the Authority allowed the cost of Independent Implementation Consultant in the range of US\$ 0.60 million to US\$ 1.1 million; therefore the Authority considers that US\$ 1.089 million would be a reasonable assessment in this context.

7.4.3 All other costs under development cost head are considered reasonable; therefore being accepted as such. Accordingly the Authority has assessed the overall development cost as US\$ 2.363 million.

7.5 Land Acquisition and Improvements

7.5.1 The petitioner requested US\$ 3.000 million for purchase of 25 acres of land, fees and infrastructure. The working was based on land price of Rs.8 million per acre, which is being purchased from petitioner's sister concern Mustahkum Cement. The Authority evaluated the petitioner's request on the basis of evidence provided, prevalent market and cost allowed in other comparable cases. The Authority observed that the land price taken was extraordinary high as compared to the other similar projects, which are located near Lahore where the Authority had assessed @ Rs.3.2 million per acre. The proposed BPL land is situated at Taxilla - Haripur Road and should be comparatively cheaper than land situated at Lahore - Shaikhupora road. On the principle of equity and justice the Authority has decided to allow same cost of land as was allowed to Atlas Power Limited (BPL). Accordingly BPL is being allowed US\$ 1.766 million. (including broker's fee, registration cost, leveling and embankment) on this account.





7.6 Non EPC Construction

7.6.1 The petitioner requested US\$3.200 million for non-EPC Construction the break-up of which is as follows;

Residential Colony with Electrical installations etc.	US\$ 2.200 million
Generator Rent, Diesel etc.	US\$ 0.300 million
Other Constructions permits, connections etc.	US\$ 0.300 million
Station vehicles, office & electrical equipments, computers, softwares, etc.	<u>US\$ 0.400 million</u>

Total Non EPC

US\$ 3.200 million

7.6.2 BPL submitted that its case was different in terms of its location, which is not close to any large urban area therefore it required residential colony within the premises of plant. The Authority considers that BPL has genuine grounds in this regard. The cost estimation made by the BPL however required detailed scrutiny for which additional information was required. BPL was accordingly advised to provide detailed working indicating construction area and rate thereof. BPL did provide the same.

7.6.3 On the basis of information provided by BPL the Authority observed that the different construction rate for different categories ranged between Rs.1200 per sq ft to Rs. 2800 per sq ft. The Authority considers that BPL's request in this regard cannot be considered as prudent.

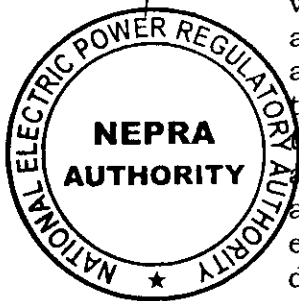
7.6.4 Office and electrical equipment and permits, connections costs have been allowed under mobilization/preoperational cost, therefore can not be allowed again. Based on the prevailing market construction rates and exchange rate of 62.75 Rs./US\$, the construction cost of residential colony has been assessed as US\$ 1.551 million. The Authority has also allowed the cost of generator rent and diesel for generator to the extent of US\$ 0.300 million.

8. Custom Duties & Taxes

8.1 The petitioner estimated US\$ 8.97 million as Custom Duties & Taxes, which is about 5% of the EPC cost. The Authority in other similar cases adopted 5% custom duties with the provision of adjustment as per actual at COD. The same has been allowed in the instant case. Accordingly for the purpose of tariff calculation US\$ 9.4416 million has been assessed in this context. The impact of withholding tax on local services is not known at this point of time; therefore these will be accounted for and adjusted along with duties and taxes as per the actual on provision of documentary evidence at COD. The petitioner shall be required to submit the relevant documents to NEPRA within 7 days of COD for adjustment of relevant tariff components.

9. Financing Fees

9.1 The petitioner requested financing fee and charges to the tune of US\$ 4.104 in their original petition, which were subsequently revised to US\$ 6.083 million vide letter No. 3191 dated November 28, 2007. The estimated financing fees were about 3.36% of the proposed borrowing and exceeded the maximum limit of 3% allowed in other similar projects. For the purpose of tariff calculation 3% of the borrowing is being used. Accordingly US\$ 5.006 million is being assessed on this account subject





to adjustment as per actual at COD up to 3% of the borrowing on the basis of documentary evidence.

10. Interest During Construction

10.1 The amount of interest during construction of US\$ 20.353 million requested by the petitioner was based on its estimated project cost of US\$238.068 million. The calculation was based on a construction period of 42 months. Since this is subject to adjustment according to the actual loan disbursement therefore assessment of IDC is being made on the basis of disbursement plan as proposed by BPL. Based upon the assessed project cost of US\$ 257.456 million, 3-months KIBOR + 300 basis points (i.e. 12.75%) and proposed disbursement plan the IDC has been assessed as US\$ 13.990 million to be adjusted at the time of COD as per actual loan disbursement. The COD will be the date mutually agreed between the power purchaser and the BPL in the PPA.

11. Project Financing

11.1 The petitioner's proposed capital structure of the project based on revised figures is indicated as follows:

Equity	US\$ 59.517
Total debt	US\$ 178.551
Total Capital Cost (Including IDC & Financing Fees)	US\$ 238.068
Debt Equity Ratio	75:25

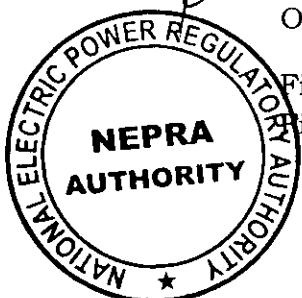
11.2 Based upon the assessment made by the Authority in the preceding paragraphs and using Euro/Dollar parity of 1.4582, the petitioner's project cost works out as US\$ 257.456 million. Accordingly maintaining the same debt-equity ratio of 75:25 the Authority has assessed debt-equity breakup as US\$ 193.092 million debt and US\$ 64.364 million equity.

12. CAPACITY CHARGE

12.1 Fixed O&M

12.1 The petitioner requested for fixed O&M of Rs. 0.1411 per kW per hour. The requested fixed O&M cost was higher than allowed in the other similar project with same EPC and O&M contractor. The petitioner was asked to provide the evidence in support of its request but it could not provide the reliable evidence in support thereof. In the absence of any reliable and authentic evidence the petitioner's request cannot be accepted as such. The Authority has earlier determined fixed O&M of Rs. 0.1305 per kW per hour in similar type of projects with the same O&M contractor. Based on the available information in the instant and comparison with other similar cases, the Authority has assessed fixed O&M in the instant case as;

Fixed O&M – Foreign	Rs.0.0845/kWh
Fixed O&M – Local	Rs.0.0508/kWh





12.2 Insurance

12.2.1 The petitioner has requested insurance @ 1.35% of EPC cost. The request being in line with the cases already determined by the Authority therefore is accepted. The Authority has assessed Rs. 0.0987 per kW per hour as insurance cost, which will be adjusted annually on the basis of actual premium subject to maximum of assessed at COD.

12.3 Cost of Working Capital

12.3.1 The petitioner requested financing cost of working capital to the tune of Rs. 203.45 million on the basis of following working capital requirement;

Fuel Inventory (30 days)	US\$ 11.18 million
Advance for fuel (15 days)	US\$ 5.59 million
Receivables – Fixed 30% for 60 days (load 60%)	US\$ 1.48 million
Receivables – Variable 100% for 30 days (load 60%)	US\$ 7.49 million
Sales Tax 15% of fuel inventory and advance	US\$ 2.52 million
Total capital cost needed	US\$ 28.26 million

Cost of the loan @ 12% (KIBOR 10% + 200 points spread)

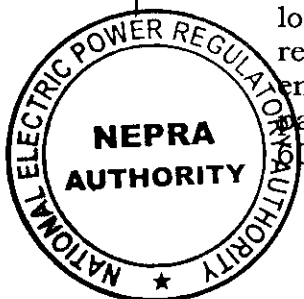
(This total corresponds to the tariff component of Rs. 0.1180 kWh or approximately US\$ 3.391 million)

12.3.2 As per the terms of PPA the IPP is required to maintain fuel inventory level equivalent to 30 days generation at 100% load factor. The working in the instant case for inventory is in line with the PPA requirement. Based upon the reference fuel price of Rs.22,140 + Freight Rs.2,350 per M/Ton the fuel stock requirement at 100% load factor including sales tax works out as US\$ 13.475 million.

12.3.3 The request of the petitioner for allowing advance for fuel (15 days) is not acceptable because 30 days fuel inventory will be worked out by taking closing stock of fuel inventory plus orders placed to the supplier for fuel delivery. Since the petitioner would not be required to raise working capital for advance payments to the fuel supplier and the other IPPs have also not been allowed this; therefore BPL is not allowed the proposed provision of 15 days advance for fuel in the working capital.

12.3.4 The Authority while considering the request of the petitioner for allowing receivables – fixed 30% for 60 days (60% load factor) observed that petitioner's request in this regard is not justified because the petitioner will be paid 70% of the capacity charge in advance and 30% after 30 days therefore the Authority decided that additional working capital cannot be allowed.

12.3.5 The petitioner requested receivables – Variable 100% for 30 days (60% load factor) is in accordance with the PPA terms. The petitioner will require additional working capital because it will raise its invoice for energy payment after each 30 days and the power purchaser will make payment after next 30 days. On the average 30 days energy charge at 100% dispatch will remain in the billing cycle. The petitioner's request





being legitimate is accepted as such. For this purpose only fuel cost will be considered relevant. On the basis of aforementioned, the assessed working capital requirement on this account, including sales tax, is US\$ 8.085 million.

12.3.6 The Authority also considered the petitioner's request regarding provision of 15% sales tax on inventory and receivables. Since the request is justified therefore is being allowed in the working capital requirement. Based upon the assessed working capital requirement of US\$ 21.560 million at Rupee/dollar parity of 62.75, the financing cost @ 11.75% (KIBOR 9.75% + 200 points spread) works out as US\$ 2.533 million or Rs.0.0850 per kW per hour. This cost shall be adjusted according to the actual prices prevalent at the time of first fill at COD according to the following formula;

$$CWC_{(Rev)} = CWC_{(Adj)} / 25,715 * FP_{(current)}$$

Where;

$CWC_{(Rev)}$	=	Revised cost of working capital
$CWC_{(Adj)}$	=	Adjusted cost of working capital at COD
$FP_{(current)}$	=	Actual fuel price at the time of first fill

12.4 Return on Equity (ROE)

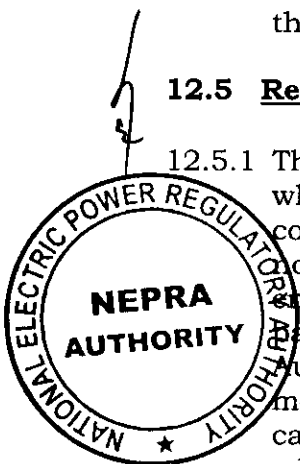
12.4.1 The petitioner requested Rs. 0.2952 per kW per hour as return on equity of US\$ 59.517 million to achieve net 15% IRR. The amount of equity has been revised due to change in project cost therefore the return of BPL will accordingly be revised. On the basis of revised equity of US\$ 64.364 million ROE works out as Rs. 0.3238 per kW per hour. The petitioner's request for allowing inflation/indexation is not consistent with the GoP policy therefore cannot be considered. Only rupee/dollar exchange variation is permissible on return on both local and foreign equity under the policy, which is being allowed.

12.5 Return on Equity During Construction (ROEDC)

12.5.1 The petitioner has requested ROEDC of Rs. 0.0965 per kW per hour, which is based on 42 months construction period. The Authority considers that the requested construction period is too long as against normal 15-months construction period and RFO based power plant were encouraged because of less construction period. It would be unjust to pass on the entire additional burden to the power purchaser. The Authority has therefore decided to allow ROEDC for a period of 24 months. On the basis of 2 year construction period ROEDC in the instant case has been worked out as Rs. 0.0326 per kW per hour subject to adjustment at the time of COD on account of exchange rate variation and variation in disbursement as compared to projected disbursement plan.

12.6 Debt Servicing

12.6.1 The petitioner requested the debt service of Rs. 1.1869 per kW per hour on the basis of debt of US\$ 178.551 and interest rate of KIBOR 13% (6 months 10% +300 basis). Since the project cost has been revised mainly





due to adjustment on account of exchange rate therefore the debt amount has also been revised as US\$ 193.092 million. On the basis of revised debt and assuming interest rate of 12.75% (3 - month KIBOR i.e. 9.75% +300 basis points) the Authority has assessed the debt service component as Rs. 1.1548 per kW per hour subject to adjustment for variation in KIBOR on quarterly basis.

13. ENERGY CHARGE

13.1 Fuel Cost

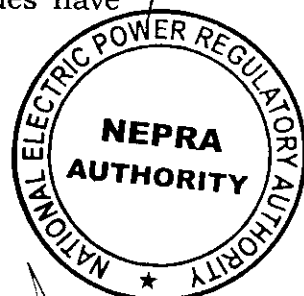
13.1.1 The petitioner requested fuel cost of Rs. 4.363 per kWh (excluding freight) on the basis of following reference numbers;

(a)	RFO Price:	Rs. 22,140 per ton excluding transport
(b)	Thermal efficiency, inclusive of ageing and cleaning:	45.0% (life-cycle net at site conditions)
(c)	Output:	213.60 MW (net at site conditions)
(d)	Heat Rate:	8002 KJ/kWh at 100% load.
(e)	LHV of RFO	38,483 BTU/kg subject to adjustment at the time of finalization of Fuel Supply Agreement (FSA)
(f)	Partial Loading:	Heat Rate Curves from generation sets manufacturers to be used for partial load heat rate calculation and payment in case the plant load falls below 100%.

13.1.2 The Authority observed that the petitioner's assumed calorific value is lower than the minimum level prescribed by the Ministry of Petroleum and Natural Resources i.e. 18,000 BTUs per lb for local and 18,200 BTUs for imported oil. For the purpose of providing a realistic and judicious adjustment mechanism with respect to calorific values the Authority has already initiated a consultative process with all the key stakeholders. Once such a mechanism acceptable to the all stakeholders is evolved it will be applied to the concerned IPPs.

13.1.3 The fuel price adjustment mechanism is also in the consultative phase. As soon as a consensus in this regard is arrived at it will be applied to the relevant IPPs. For the time being in order to maintain consistency, the same adjustment mechanism in the fuel cost component on account of fuel price variation is being adopted in the instant case, as has already been prescribed in the case of other similar projects. For the purpose of calculation of fuel cost component the following reference values have been used;

RFO Price	Rs. 22,140 per ton
Inland Freight	Rs. 2,350
Total Price RFO (HHV)	Rs. 24,490
Calorific Value (Gross)	40,792 BTU/Kg
LHV, HHV adjustment factor	1.05





13.1.4 Based upon the above reference values the fuel cost component in the instant case has been assessed as Rs. 4.7811 per kWh i.e. fuel cost Rs.4.3223 and freight Rs.0.4588. 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:

Fuel Price Variation

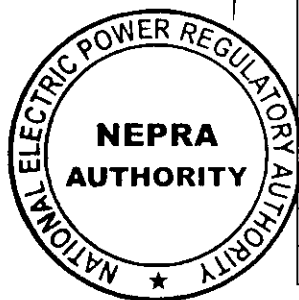
The Variable Charge Part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations according to the mechanism given below:

$$FC_{(Rev)} = (Rs.4.3223 \text{ per kWh} * FP_{(Rev)}) / Rs.23,247.07 \text{ per ton}/40,792 * CV_{(Rev)} + (Rs.0.4588 \text{ per kWh} * Ft_{(Rev)}) / Rs.2,467.50 \text{ per ton}$$

Where:

- FC (Rev) = Revised fuel cost component of Variable Charge on RFO.
- CV(Rev) = Revised Calorific Value
- 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 (% 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.

13.2 Variable O&M Cost

13.2.1 The petitioner requested for variable O&M of Rs. 0.5040 per kWh. The petitioner's demand appeared to be on the higher side; therefore, the petitioner was asked to provide breakdown of major cost components of variable O&M like lubricants, water treatment, consumables, spares for major overhauling and operators fee etc. In response the petitioner vide their letter No. 4037 dated December 14, 2007 provided detailed working according to which its variable O&M cost would be US\$13.51 million per annum or Rs. 0.4922 per kWh. According to the petitioner this included Operator's fee, Operator's Contingent costs (un-expected maintenance) Duties and insurance on spares import @11% of C&F value assuming spares 60% of the operators fee, Environmental Costs, Water treatment & other consumables and Owner's variable expenses during operations.

13.2.2 The Authority observed that the working of variable O&M was not supported with documentary evidence. Alternatively it had to rely on its decision with respect to other similar projects for assessment of reasonable level of variable O&M cost. Having considered all the relevant information available, the Authority has assessed foreign variable component of Rs. 0.4173 per kWh, which will be adjusted for variation in Rupee/Dollar parity and US CPI. The Authority has also assessed local variable component for lubricants and other consumables as Rs. 0.0474 per kWh subject to adjustment on account of variation in local WPI.

14. Indexation/Inflation Factor

14.1 The Authority has considered the request of the petitioner for allowing Rupee/Euro exchange rate variation and European inflation on foreign portion of Fixed and Variable O&M cost. The request being inconsistent with the existing GOP policy therefore is not maintainable. The policy only allows Rupee/Dollar variation adjustment and US CPI on foreign portion of O&M cost; the same is therefore being allowed.

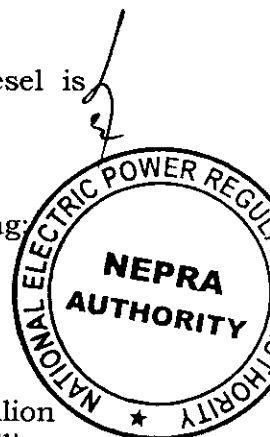
15. Timeline/Completion of Project

15.1 As per the documentary evidence timeline of COD by MAN Diesel is indicated as 31st March 2011 which is being accepted.

16. Summary of the Decisions

16.1 The Authority has determined the reference tariff on basis of following:

Plant Capacity (Gross ISO) MW	225.00
Plant Capacity (Net at reference site conditions) MW	213.60
Auxiliary consumption (including air-cooled condenser) MW	5.55
Plant Availability	88%
EPC Price Offshore	€129.5000 Million
EPC Price Onshore	€ 20.0000 Million
Non-EPC construction Cost	US\$ 1.851 Million
Mobilization/Pre-Operation Cost	US\$ 5.040 Million





Development Cost	US\$ 2.363 Million
Land Acquisition and Land Improvement	US\$ 1.766 Million
Custom Duties & Taxes	US\$ 9.441 Million
Financing Fees	US\$ 5.006 Million
Interest During Construction	US\$ 13.990 Million
Debt:Equity Ratio	75:25
Reference PKR/Euro exchange rate	91.50
Reference PKR/\$ exchange rate	62.75
Reference Calorific Value of HSFO	40,792 BTUs/Kg
HHV/LHV Adjustment Factor	1.05
Reference Fuel Price (LHV)	Rs.22,140.07/M.Ton
Reference Inland Freight	Rs. 2,350/M.Ton
Reference Thermal Efficiency (Net LHV)	45%
Reference KIBOR (3-monthly)	9.75%
IRR (Net of withholding tax of 7.5%)	15%

Reference Specified Tariff

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
Capacity Charge PKR/kW/Hour)			
O&M Local	0.0508	0.0508	WPI
O&M Foreign	0.0845	0.0845	US\$ /PKR & US CPI
Cost of Working Capital	0.0850	0.0850	KIBOR
Insurance	0.0987	0.0987	US\$ /PKR
Debt Service	1.1548		KIBOR
Return on Equity	0.3238	0.3238	US\$ /PKR
ROE during Construction	0.0326	0.0326	US\$ /PKR
Total Capacity Charge	1.8301	0.6753	
Energy Charge on Operation on Furnace Oil Rs./kWh			
Fuel Cost Component	4.7811	4.7811	Fuel Price
Variable O&M			
Foreign	0.4173	0.4173	US\$ /PKR & US CPI
Local	0.0474	0.0474	WPI

Note: Component wise tariff for operation on RFO is indicated at Annex-I.

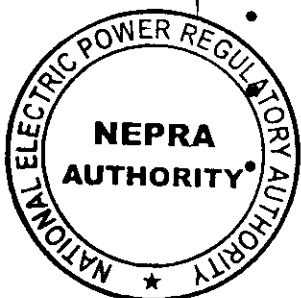
17. General Assumptions

17.1 Changes in any of the following assumptions would result in change in the reference generation tariff accordingly:

- 100% of debt has been assumed to be local provided however that in the event BPL uses a mix of foreign and local loan, the future benefits of the lower interest rates shall be passed on to the Power Purchaser.
- Debt tenure is assumed to be grace period + 10 years quarterly repayment.
- No corporate income tax and no minimum turnover tax have been assumed.

Working capital has been financed by a separate Working Capital facility, and is not included in the project cost.

Anticipated average site conditions that have been used in calculation of the net output and heat rate are an altitude 500 m (maximum)





above sea level, ambient temperature between 3°C and 50°C and 60% average relative humidity. If there is any change in the foregoing assumptions, the same shall have an impact on the de-rating curve.

- Heat Rate curve/temperature curve for each percentage of dispatched loads will be taken into account for fuel consumption.
- If Power Purchaser required the dispatched delivery in excess of 132 kV, any additional cost will be paid by the Power Purchaser to BPL and NEPRA will adjust the additional cost in tariff.

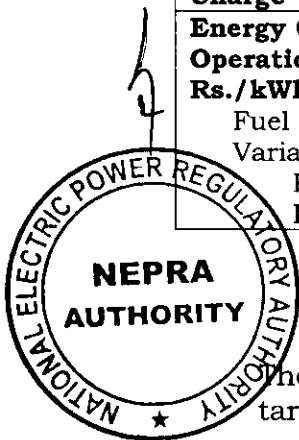
17.2 In view of the above the Authority hereby approves the tariff of Best way Power Limited (BPL) as set out in the following order;

ORDER

BPL is allowed the tariff Pursuant to Rule 6 of the NEPRA Licensing (Generation) Rules 2000, Best way Power Limited (BPL) 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 BPL for delivery of electricity to CPPA of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

Reference Specified Tariff

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
Capacity Charge PKR/kW/Hour)			
O&M Local	0.0508	0.0508	WPI
O&M Foreign	0.0845	0.0845	US\$ /PKR & US CPI
Cost of Working Capital	0.0850	0.0850	KIBOR
Insurance	0.0987	0.0987	US\$ /PKR
Debt Service	1.1548		KIBOR
Return on Equity	0.3238	0.3238	US\$ /PKR
ROE during Construction	0.0326	0.0326	US\$ /PKR
Total Capacity Charge	1.8301	0.6753	
Energy Charge on Operation on Furnace Oil Rs./kWh			
Fuel Cost Component	4.7811	4.7811	Fuel Price
Variable O&M			
Foreign	0.4173	0.4173	US\$ /PKR & US CPI
Local	0.0474	0.0474	WPI



Note: i) Component wise tariff for operation on RFO is indicated at Annex-I. Debt Servicing Schedule is attached as Annex-II.

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

I. Adjustment in EPC Cost (One Time)

The Authority has assessed EPC cost as € 149.50 million out of which €129.50 million (offshore) and €20 million (onshore to be incurred in Pak Rupees). 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 or Dollar shall be established and shall be applied to the corresponding EPC cost components. The adjustment shall be only for currency fluctuation against the reference parity values according to the following mechanism;

$$EPC_{(Adj.)} = PKR 13,679.25 \text{ Million} / 91.5 * E_{(PR)}$$

Where:

$E_{(PR)}$ = Weighted Average PKR/EURO parity based upon timing of the payment

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

$$Ins_{(Rev)} = Ins_{(Ref)} / EPC_{(Ref)} * EPC_{(Adj.)}$$

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 PKR which is Rs. 13,679.25 million.

$EPC_{(Adj.)}$ = Adjusted EPC in PKR

ii) Return on Equity Adjustment Mechanism for EPC Cost Variation

$$ROE_{(Rev)} = ROE_{(Ref)} / E_{(Ref)} * E_{(Rev)}$$

Where:

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

$ROE_{(Ref)}$ = Reference Return on Equity component of tariff as per original schedule of tariff in PKR

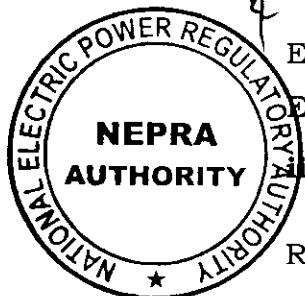
$E_{(Rev)}$ = Reference Equity in PKR (Rs. 4038.85 million)

$E_{(Ref)}$ = Revised amount of Equity in PKR

iii) ROEDC Adjustment Mechanism for EPC Cost Variation

$$ROEDC_{(Rev)} = ROEDC_{(Ref)} / EDC_{(Ref)} * EDC_{(Rev)}$$

Where:





- ROEDC_(Rev) = Revised Return on Equity during Construction component of tariff in PKR
- EDC_(Ref) = Reference Equity During Construction in PKR
- EDC_(Rev) = Revised Equity During Construction in PKR

iv) Debt Servicing Adjustment Mechanism for EPC Cost Variation

$$DS_{(Rev)} = DS_{(Ref)} / Debt_{(Ref)} * Debt_{(Rev)}$$

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
- Debt_(Ref.) = Revised project cost after incorporating the adjustment for currency fluctuation
- Debt_(Rev.) = Reference Debt in PKR (Rs. 12,116.55)

II. Adjustment due to Variation in Net Capacity

The reference tariff has been determined on the basis of minimum net capacity of 213.60 MW at delivery point at mean site conditions. 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 213.60 MW net capacity at reference site conditions. The adjustments shall be made according to the following formula:

$$CC_{(Adj.)} = CC_{(Ref)} \times 213.60MW / NC_{(IDC)}$$

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

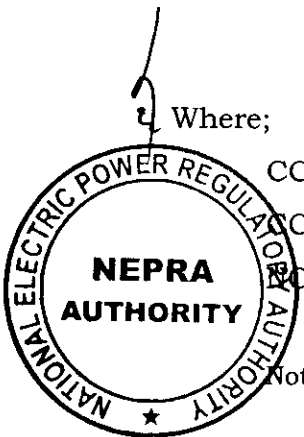
Where;

- 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 Conditions:

Ambient Temperature	Min 3 °C Max 50 °C
Altitude (maximum)	500 m





Air Inlet Temperature	30 °C
Air Inlet Pressure	989 mbar
Charge air temperature before cylinder	47 °C
Exhaust gas back pressure	≤ 30 mbar
Intake air pressure loss	≤ 20 mbar

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 BPL according to the following formula;

$$\text{Insurance (Rev)} = \text{AIC} / (1.35 \% \times \text{US\$ } 2.942 \text{ Million}) * \text{AP}$$

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 during construction shall be adjusted on account of actual variation in drawdown and Interest During Construction with reference to the estimated figures.

V. Adjustment due to Custom Duties & Taxes

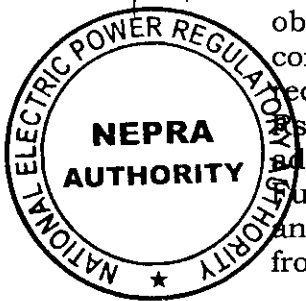
Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in custom duties & Taxes with reference to the estimated figures of US\$ 9.4416 million. The impact of withholding tax on local services is not known at this point of time. However, these will be adjusted along with other duties and taxes as per the actual on provision of documentary evidence at COD.

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 BPL is obligated to pay any tax on its ROE, the exact amount paid by the company may be reimbursed by CPPA to BPL 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, BPL may also submit to CPPA details of any tax shield savings and CPPA will deduct the amount of these savings from its payment to BPL on account of taxation.
- ii) Withholding tax on dividend 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

- 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 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:

i) Fixed O&M

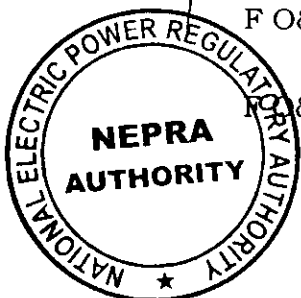
$$F O\&M_{(\text{LREV})} = \text{Rs. } 0.0508/\text{kW}/\text{Hour} * \text{WPI}_{(\text{REV})} / 125.67$$

$$F O\&M_{(\text{FREV})} = \text{Rs. } 0.0845/\text{kW}/\text{Hour} * \text{US CPI}_{(\text{REV})} / 210.036 * \text{ER}_{(\text{REV})} / 62.75$$

Where:

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

$F O\&M_{(\text{FREV})}$ = 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)
- $WPI_{(REF)}$ = 125.67 wholesale price index (manufactures) of December 2007 notified by Federal Bureau of Statistics
- $US\ CPI_{(REV)}$ = the revised US CPI
- $US\ CPI_{(REF)}$ = 210.036 US CPI for the month of December 2007 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

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:

$$V\ O\&M_{(LREV)} = Rs. 0.0474 /kW/Hour * WPI_{(REV)} / 125.67$$

$$V\ O\&M_{(FREV)} = Rs. 0.4173/kW/Hr * US\ CPI_{(REV)} / 210.036 * ER_{(REV)} / 62.75$$

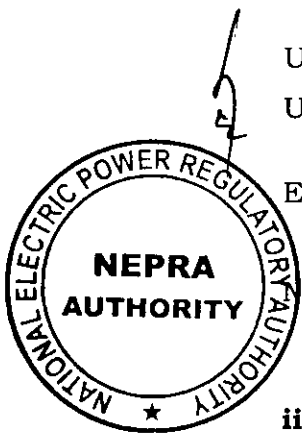
Where:

- $V\ O\&M_{(LREV)}$ = the revised applicable Variable O&M Local Component of the Capacity Charge indexed with WPI
- $V\ O\&M_{(FREV)}$ = 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)
- $WPI_{(REF)}$ = 125.67 wholesale price index (manufactures) of December 2007 notified by Federal Bureau of Statistics
- $US\ CPI_{(REV)}$ = the revised US CPI
- $US\ CPI_{(REF)}$ = 210.036 US CPI for the month of December 2007 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

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;





$$\Delta I_{(L)} = P_{(LREV)} * (KIBOR_{(REV)} - 9.75\%) / 4$$

Where:

$\Delta I_{(L)}$ = the variation in interest charges on local loan applicable corresponding to variation in quarterly KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)} >$ or $< 9.75\%$. 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:

$$FC_{(Rev)} = (Rs.4.3223 \text{ per kWh} * FP_{(Rev)}) / Rs.23,247.07 \text{ per ton}/40,792 * CV_{(Rev)} + (Rs.0.4588 \text{ per kWh} * Ft_{(Rev)}) / Rs. 2,467.50 \text{ per ton}$$

Where:

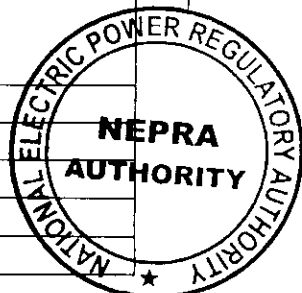
$FC_{(Rev)}$ = Revised fuel cost component of Variable Charge on RFO.

$CV_{(Rev)}$ = Revised Calorific Value

$Ft_{(Rev)}$ = 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.

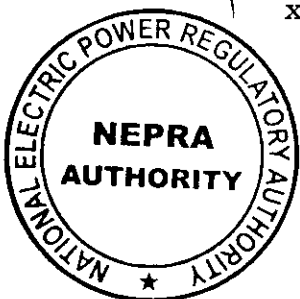
The fuel cost component will be adjusted after the commercial operation date, at the time of revision in RFO price.

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 BPL's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

For one time adjustment of relevant tariff components at COD according to the mechanism laid down in this order, BPL shall submit the relevant documents to NEPRA within 30 days of COD for adjustment.

IX. Terms and Conditions of Tariff:

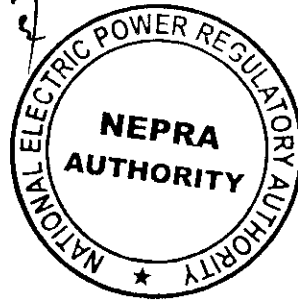
- i) Capacity Charge Rs./kW/hour applicable to dependable capacity at the delivery point.
- ii) The tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.
- iii) The plant availability shall be 88%.
- iv) All new equipment will be installed and the plant will be of standard configuration.
- v) Dispatch criterion will be based on the Energy Charge.
- vi) Internal consumption (including air-cooled condenser) has been assumed to be approximately 5.55 MW.
- vii) Scheduled Outage periods per annum shall be in accordance with the 2006 standardized PPA.
- viii) NTDC will be responsible for constructing the interconnection to the grid.
- ix) All invoicing and payment terms are assumed to be in accordance with the 2006 standardized PPA.
- x) Tolerance in Dispatch shall be in accordance with 2006 standardized PPA.
- xi) If there is any change in any assumption that may lead to change in the tariff shall be referred to NEPRA for approval.
- xii) If IPP is required by the power purchaser to deliver power above 132 kV, any additional cost to be incurred by the IPP submitted to NEPRA for adjustment. The adjustment request by the IPP shall be duly verified by the power purchaser.
- xiii) 100% of debt has been assumed to be local provided however that in the event BPL uses a mix of foreign and local loan, the future benefits of the lower interest rates shall be passed on to the Power Purchaser.





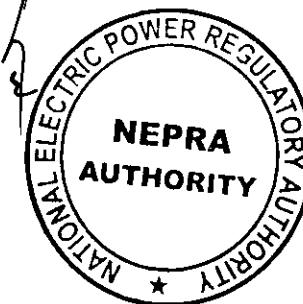
- xiv) No corporate income tax and no minimum turnover tax have been assumed.
- xv) Working capital has been financed by a separate Working Capital facility, and is not included in the project cost.

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



Bestway Power Limited (BPL)
Reference Tariff Table

Year	Variable Charge (Rs./kWh)				Capacity Charge (Rs./kW/Hour)										Capacity Charge at 60% PF	Tariff	
	Fuel	Variable O&M Foreign	Variable O&M Local	Total	Fixed O&M Local	Fixed O&M Foreign	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	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.3452	0.8096	1.8568	3.0947	8.3404	13.2915
2	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.3914	0.7634	1.8568	3.0947	8.3404	13.2915
3	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.4438	0.7110	1.8568	3.0947	8.3404	13.2915
4	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.5031	0.6517	1.8568	3.0947	8.3404	13.2915
5	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.5704	0.5844	1.8568	3.0947	8.3404	13.2915
6	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.6467	0.5081	1.8568	3.0947	8.3404	13.2915
7	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.7331	0.4217	1.8568	3.0947	8.3404	13.2915
8	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.8312	0.3236	1.8568	3.0947	8.3404	13.2915
9	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.9423	0.2125	1.8568	3.0947	8.3404	13.2915
10	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	1.0683	0.0865	1.8568	3.0947	8.3404	13.2915
11	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
12	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
13	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
14	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
15	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
16	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
17	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
18	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
19	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
20	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
21	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
22	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
23	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
24	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
25	4.7811	0.4173	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	-	-	0.7020	1.1700	6.4157	10.2243
Levelized Tariff	0.4173	0.0474	0.0474	5.2457	0.0508	0.0845	0.0850	0.0987	0.3238	0.0326	0.0267	0.3976	0.3841	1.4837	2.4729	7.7186	12.3006



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Bestway Power Limited (BPL)
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 Rs.	Repayment Million Rs.	Mark-up Million Rs.	Balance Million Rs.	Debt Service Millin Rs.			
1	12,116.55	153.98	386.22	11,962.57	540.20	0.3452	0.8096	1.1548
	11,962.57	158.89	381.31	11,803.68	540.20			
	11,803.68	163.95	376.24	11,639.73	540.20			
	11,639.73	169.18	371.02	11,470.55	540.20			
	12,116.55	646.01	1,514.78	11,470.55	2,160.79			
	11,470.55	174.57	365.62	11,295.97	540.20			
	11,295.97	180.14	360.06	11,115.84	540.20			
	11,115.84	185.88	354.32	10,929.96	540.20			
	10,929.96	191.80	348.39	10,738.15	540.20			
	11,470.55	732.39	1,428.39	10,738.15	2,160.79			
2	10,738.15	197.92	342.28	10,540.24	540.20	0.3914	0.7634	1.1548
	10,540.24	204.23	335.97	10,336.01	540.20			
	10,336.01	210.74	329.46	10,125.27	540.20			
	10,125.27	217.45	322.74	9,907.82	540.20			
3	10,738.15	830.33	1,330.45	9,907.82	2,160.79	0.4438	0.7110	1.1548
	9,907.82	224.38	315.81	9,683.44	540.20			
	9,683.44	231.54	308.66	9,451.90	540.20			
	9,451.90	238.92	301.28	9,212.98	540.20			
4	9,212.98	246.53	293.66	8,966.45	540.20	0.5031	0.6517	1.1548
	9,907.82	941.37	1,219.41	8,966.45	2,160.79			
	8,966.45	254.39	285.81	8,712.06	540.20			
	8,712.06	262.50	277.70	8,449.56	540.20			
5	8,449.56	270.87	269.33	8,178.69	540.20	0.5704	0.5844	1.1548
	8,178.69	279.50	260.70	7,899.19	540.20			
	8,966.45	1,067.26	1,093.53	7,899.19	2,160.79			
	7,899.19	288.41	251.79	7,610.78	540.20			
6	7,610.78	297.60	242.59	7,313.18	540.20	0.6467	0.5081	1.1548
	7,313.18	307.09	233.11	7,006.09	540.20			
	7,006.09	316.88	223.32	6,689.21	540.20			
	7,899.19	1,209.98	950.81	6,689.21	2,160.79			
7	6,689.21	326.98	213.22	6,362.23	540.20	0.7331	0.4217	1.1548
	6,362.23	337.40	202.80	6,024.83	540.20			
	6,024.83	348.15	192.04	5,676.68	540.20			
	5,676.68	359.25	180.94	5,317.43	540.20			
8	6,689.21	1,371.79	789.00	5,317.43	2,160.79	0.8312	0.3236	1.1548
	5,317.43	370.70	169.49	4,946.72	540.20			
	4,946.72	382.52	157.68	4,564.20	540.20			
	4,564.20	394.71	145.48	4,169.49	540.20			
9	4,169.49	407.29	132.90	3,762.20	540.20	0.9423	0.2125	1.1548
	5,317.43	1,555.23	605.56	3,762.20	2,160.79			
	3,762.20	420.28	119.92	3,341.92	540.20			
	3,341.92	433.67	106.52	2,908.25	540.20			
10	2,908.25	447.50	92.70	2,460.75	540.20	1.0683	0.0865	1.1548
	2,460.75	461.76	78.44	1,998.99	540.20			
	3,762.20	1,763.20	397.58	1,998.99	2,160.79			
	1,998.99	476.48	63.72	1,522.51	540.20			
10	1,522.51	491.67	48.53	1,030.85	540.20	1.0683	0.0865	1.1548
	1,030.85	507.34	32.86	523.51	540.20			
	523.51	523.51	16.69	0.00	540.20			
	1,998.99	1,998.99	161.79	0.00	2,160.79			

