

National Electric Power Regulatory Authority

Registrar Office

No. NEPA/TRF-86/BSEPL-2007/7020

April 2, 2008

Subject: Determination of the Authority in the Matter of Tariff Petition filed by Blue Star Energy (Pvt.) Ltd. (Case No. NEPA/TRF-86/BSEPL-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)

Please find enclosed a copy of subject Determination sent to Cabinet Division along with copies to Secretary Ministry of Water & Power and Secretary Ministry of Finance for notification in the official Gazette vide letter No. 7014-16 dated 02.04.2008.

2. The above mentioned Determination has also been sent to BSEPL, PESCO & CPPA vide letters No. 7017-19 dated 02.04.2008. Copies of the same are also enclosed for information, please.

Enclosure: As above


(Amer Zia)
Registrar

Director (Tariff) - II

For information:

1. Chairman
2. Vice Chairman / Member (T)
3. Member (S)
4. Member (L)
5. Member (P)

Distribution:

6. Director General (Standards)
7. Director (IS & P)
8. Director (CAD & Coord)
9. Deputy Director (L) – I
10. Director (Admin, PR&P)

[Please co-ordinate with the concerned office for early issuance of Gazette notification] *Please forward Press Release.*

✓ 11. Deputy Director (I.T.)

[Please place it on the NEPA Website for the

12. Assistant Director (I.T.)

information of general public. Scanned copy has been sent through e-mail.]

13. Assistant Director (Library)

14. Assistant Director (Tariff-Record)



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No.NEPRA/R/TRF-86/BSEPL-2007/7014-16
April 2, 2008

Subject: **Determination of the Authority in the Matter of Tariff Petition filed by Blue Star Energy (Pvt.) Ltd. (Case No. NEPRA/TRF-86/BSEPL-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,

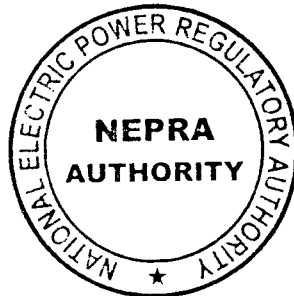
Please find enclosed the subject Determination of the Authority along with Annexure-I & II (17 pages) in Case No. NEPRA/TRF-86/BSEPL-2007.

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 39 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

The Secretary
Cabinet Division
Government of Pakistan
Cabinet Secretariat
Islamabad



(Amer Zia)

CC:

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

**ORDER OF THE AUTHORITY
IN CASE NO. NEPRA/TRF-86/BSEPL-2007
TO BE NOTIFIED IN THE OFFICIAL GAZETTE**

Pursuant to Rule-6 of the NEPRA Licensing (Generation) Rules 2000, Blue Star Energy (Pvt) Limited (hereinafter "BSEPL") is allowed to charge the following specified/approved tariff for delivery of electricity to the Power Purchaser.

Tariff Components	Year 1-10 Rs/kWh	Year 11-25 Rs/kWh	Indexation
Fixed Charges			
Fixed O&M Local	0.1219	0.1219	WPI
Water Use Charge	0.1743	0.1743	-
Insurance	0.2032	0.2032	US\$/PKR
Debt Service	1.9301	-	KIBOR
Return on Equity	1.2937	1.2937	US\$/PKR
ROE during Construction	0.1605	0.1605	US\$/PKR
Variable Charge			
Variable O&M	0.1829	0.1829	WPI
Total	4.0666	2.1365	

- i) The reference tariff has been calculated on the basis of benchmark annual energy production of 19.711 GWh.
- ii) Payment on account of hydrological risk shall be made by the Power Purchaser on the basis of benchmark monthly energy production based on the average historic hydrology for that particular month.
- iii) In the above tariff no adjustment for CERs has been accounted for. However, upon actual realization of CERs, the same shall be distributed between the Power Purchaser and BSEPL in accordance with the approved mechanism as given in the Federal Government's Policy for Renewables.
- iv) The above tariff is applicable for a period of twenty five (25) years commencing from the date of the COD.
- v) For procurement of power (1 MW) during interim period, the payable tariff shall not include the debt service component of tariff.
- vi) The component wise tariff is indicated at Annex-1. Debt Service Schedule is attached as Annex-II.

The following indexations shall be applicable to reference tariff;

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I. One Time Adjustment

(i) Cost of Debt

- a. The Principal repayment and the cost of debt shall be adjusted at Financial Closing as per actual borrowing composition i.e Foreign and/or Local.
- b. Interest During Construction (IDC) shall be adjusted at COD according to actual disbursement of loan and Interest.
- c. After COD, Interest part of the tariff component shall be adjusted on quarterly basis for variation in Karachi Inter Bank Offer Rate.
- d. No adjustment in the project cost on account of variation in custom duties or withholding tax paid by BSEPL during the project construction period will be made.

ii) Adjustment for variation during construction

Debt Service and ROE shall be adjusted on account of actual variation in interest on the basis of actual drawdown for the period during construction at the COD. BSEPL shall submit relevant documents to NEPRA within seven (7) days of COD for adjustment of relevant tariff components.

II. Pass-Through Items

No provision for income tax has been accounted for in the tariff. If BSEPL is obligated to pay any tax, the exact amount paid by the company shall be reimbursed by the Power Purchaser to BSEPL on production of original receipts. This payment should be considered as pass-through payment (as Rs./kWh) spread over a twelve (12) months period in addition to fixed charges proposed in the Reference Tariff. Furthermore, in such a scenario, BSEPL may also submit to the Power Purchaser details of any tax savings and Power Purchaser will deduct the amount of these savings from its payment to BSEPL on account of taxation.

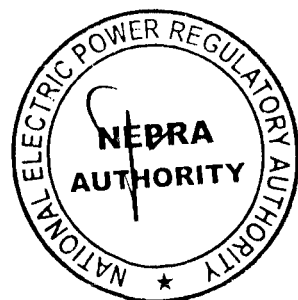
Withholding tax is also a pass through item just like other taxes as indicated in the government Guidelines. Withholding tax shall be paid @ 7.5% of the reference equity. The Power Purchaser shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 17% equity according to the following formula:

$$\text{Withholding Tax Payable} = \{ [17\% * (E_{(Ref)} - E_{(Red)})] + ROEDC_{(Ref)} \} \times 7.5\%$$

Where:

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

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

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

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 has been 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 as a pass through from the Power Purchaser in future on the basis of the total dividend pay out.

III. Hydrological Risk

Hydrological risk will be borne by the Power Purchaser and shall be paid on the following basis.

The investor/sponsor shall receive an assured minimum amount every month from the Power Purchaser to cover its fixed costs (Fixed O&M, water use charge, debt servicing, insurance charge and ROE etc) in case the plant is available but sufficient water is not available to generate electricity at least equal to the average historic hydrology for a particular month

IV. Indexations:

The following indexation shall be applicable to the reference tariff;

a) Indexation applicable to O&M

The local part of Fixed O&M and variable O&M cost will be adjusted on account of Inflation (WPI). Quarterly Adjustment for local inflation will be made on 1st July, 1st October, 1st January & 1st April respectively on the basis of average of the latest available information with respect to WPI (notified by the Federal Bureau of Statistics) in accordance with the standard practice adopted by the Power Purchaser. The mode of indexation will be as follows:

(i) Fixed O&M

$$F O\&M_{(Rev)} = 0.1219 * WPI_{(REV)} / 124.36$$

Where:

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

$WPI_{(REV)}$ = the Revised Wholesale Price Index (manufactures)

$WPI_{(REF)}$ = 124.36 wholesale price index (manufactures) of September 2007 notified by the Federal Bureau of Statistics

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(ii) Variable O&M

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

$$V O\&M_{(REV)} = 0.1829 * WPI_{(REV)}/124.36$$

Where:

$VO\&M_{(REV)}$ = The revised applicable Variable O&M component indexed with WPI.

$WPI_{(REF)}$ = 124.36 Whole Sale Price Index (manufacturers) for the month of September 2007 notified by the Federal Bureau of Statistics.

(b) Water Use Charge

Water Use Charge, Rs. 0.1743 per kWh will be indexed @ 25% after every 10 years from the date of COD.

(c) Insurance

Insurance cost component of tariff will be adjusted on account of US\$/PKR exchange rate variation at COD and thereafter on annual basis as per formula given hereunder.

$$I_{(REV)} = 0.2032 * ER_{(REV)}/61$$

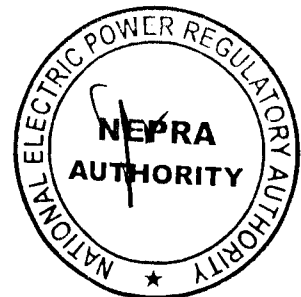
Where;

$I_{(REV)}$ = Revised Insurance cost component of tariff adjusted with exchange rate variation US\$/PKR

$ER_{(REV)}$ = The revised TT & OD selling rate of Us dollar as notified by the National bank of Pakistan.

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(d) Adjustment for KIBOR variation

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of quarterly variation in three (3) month KIBOR, while premium over KIBOR remaining the same i.e 1.4%, according to the following formula:

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 10.03\%) / 4$$

Where:

ΔI = the variation in interest charges applicable corresponding to variation in three month KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)} >$ or $<$ 10.03%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment applicable on quarterly basis.

$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-II) 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.

Note:-

- i) In case of Foreign borrowing LIBOR adjustment will be made on quarterly basis according to the above mentioned mechanism.
- ii). Adjustment on account of inflation, local inflation, foreign exchange variation and LIBOR/KIBOR variation will be approved and announced by the Authority within seven working days after receipt of BSEPL's request for adjustment in accordance with the requisite indexation mechanism stipulated hereinabove.

V. Terms and Conditions of Tariff:

Design & Manufacturing Standards:

Hydel Power Generation system shall be designed, manufactured and tested in accordance with the latest IEC standards or other equivalent standards. All plant and equipment shall be new and of standard quality.

Handwritten signature

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Power Curve of the hydel power complex:

The power curve of the Hydel Power plant shall be verified by the Power Purchaser, as part of the Commissioning tests according to the latest IEC standards and shall be used to measure the performance of the hydel generating units.

Delivery Point:

As per Article 11 of the Generation Licence, BSEPL shall deliver power at 11 kV at the door step of its generating facility. Up-gradation of generation voltage up to 11 kV will be the responsibility of the BSEPL.

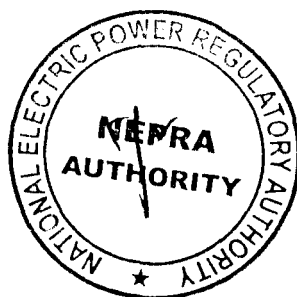
Emissions Trading/Carbon Credits:

BSEPL would process and obtain emissions/carbon credits expeditiously and credit the proceeds to the Power Purchaser as per the policy issued by the Federal Government and agreed terms between the generator and the purchaser.

The above tariff and terms and conditions will be incorporated as the specified tariff approved by the Authority pursuant to Rule-6 of NEPRA Licencing (Generation) Rules, in the Power Purchase Agreement of BSEPL. The tariff and terms and conditions along with reference tariff table and debt service schedule as attached thereto are recommended for notification by the Federal Government in the official gazette in accordance with the Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

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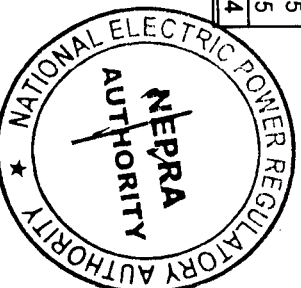
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**BLUE STAR ENERGY (Pvt) LIMITED
REFERENCE TARIFF**

Year	Variable O&M Local	Fixed O&M Local	Fixed Water Use Charge	Insurance	Return on Equity	ROE During Construction	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Tariff *	
	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh
1	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.6527	1.2774	4.1758	6.8456
2	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.7306	1.1996	4.1758	6.8456
3	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.8177	1.1124	4.1758	6.8456
4	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.9153	1.0149	4.1758	6.8456
5	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.0245	0.9057	4.1758	6.8456
6	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.1467	0.7835	4.1758	6.8456
7	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.2835	0.6467	4.1758	6.8456
8	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.4366	0.4936	4.1758	6.8456
9	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.6079	0.3222	4.1758	6.8456
10	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.7998	0.1304	4.1758	6.8456
11	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
12	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
13	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
14	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
15	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
16	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
17	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
18	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
19	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
20	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
21	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
22	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
23	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
24	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
25	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
Levelized Tariff	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.7078	0.5988	3.5523	5.8234

* The above rate is limited to an annual energy production up to 19.711 GWh. Any generated energy beyond 19.711 GWh in a year will be charged at 10% of the Reference Tariff for that year.



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BLUE STAR ENERGY (Pvt) LIMITED
Debt Servicing Schedule

Period	Local Debt					Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	Principal	Repayment	Mark-Up	Balance	Debt Service			
	Million \$	Million \$	Million \$	Million \$	Millin \$			
	3.69	0.05	0.11	3.64	0.1559			
	3.64	0.05	0.10	3.59	0.1559			
	3.59	0.05	0.10	3.53	0.1559			
	3.53	0.05	0.10	3.48	0.1559			
1	3.69	0.21	0.41	3.48	0.6237	0.6527	1.2774	1.9301
	3.48	0.06	0.10	3.42	0.1559			
	3.42	0.06	0.10	3.36	0.1559			
	3.36	0.06	0.10	3.30	0.1559			
2	3.30	0.06	0.09	3.24	0.1559	0.7306	1.1996	1.9301
	3.48	0.24	0.39	3.24	0.6237			
	3.24	0.06	0.09	3.18	0.1559			
	3.18	0.07	0.09	3.11	0.1559			
	3.11	0.07	0.09	3.05	0.1559			
3	3.05	0.07	0.09	2.98	0.1559	0.8177	1.1124	1.9301
	3.24	0.26	0.36	2.98	0.6237			
	2.98	0.07	0.09	2.91	0.1559			
	2.91	0.07	0.08	2.83	0.1559			
	2.83	0.07	0.08	2.76	0.1559			
4	2.76	0.08	0.08	2.68	0.1559	0.9153	1.0149	1.9301
	2.98	0.30	0.33	2.68	0.6237			
	2.68	0.08	0.08	2.60	0.1559			
	2.60	0.08	0.07	2.52	0.1559			
	2.52	0.08	0.07	2.44	0.1559			
5	2.44	0.09	0.07	2.35	0.1559	1.0245	0.9057	1.9301
	2.68	0.33	0.29	2.35	0.6237			
	2.35	0.09	0.07	2.26	0.1559			
	2.26	0.09	0.06	2.17	0.1559			
	2.17	0.09	0.06	2.08	0.1559			
6	2.08	0.10	0.06	1.98	0.1559	1.1467	0.7835	1.9301
	2.35	0.37	0.25	1.98	0.6237			
	1.98	0.10	0.06	1.88	0.1559			
	1.88	0.10	0.05	1.78	0.1559			
	1.78	0.11	0.05	1.67	0.1559			
7	1.67	0.11	0.05	1.57	0.1559	1.2835	0.6467	1.9301
	1.98	0.41	0.21	1.57	0.6237			
	1.57	0.11	0.04	1.45	0.1559			
	1.45	0.11	0.04	1.34	0.1559			
	1.34	0.12	0.04	1.22	0.1559			
8	1.22	0.12	0.03	1.10	0.1559	1.4366	0.4936	1.9301
	1.57	0.46	0.16	1.10	0.6237			
	1.10	0.12	0.03	0.98	0.1559			
	0.98	0.13	0.03	0.85	0.1559			
	0.85	0.13	0.02	0.72	0.1559			
	0.72	0.14	0.02	0.58	0.1559			
9	1.10	0.52	0.10	0.58	0.6237	1.6079	0.3222	1.9301
	0.58	0.14	0.02	0.44	0.1559			
	0.44	0.14	0.01	0.30	0.1559			
	0.30	0.15	0.01	0.15	0.1559			
	0.15	0.15	0.00	0.00	0.1559			
10	0.58	0.58	0.04	0.00	0.6237	1.7998	0.1304	1.9301

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**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)**

NO. NEPRA/TRF-86/BSEPL-2007

**DETERMINATION
OF
TARIFF PETITION**

Filed by

**BLUE STAR ENERGY (PVT.) LTD.
(BSEPL)**

April 02, 2008

**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)**

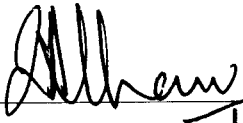
Dated April 02, 2008.
Case No. NEPRA/TRF-86/BSEPL-2007

Petitioner

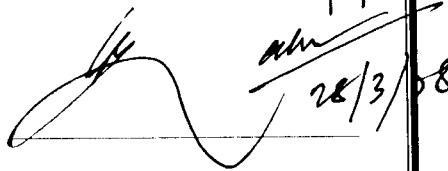
Blue Star Energy (Pvt.) Ltd. (BSEPL)

Authority

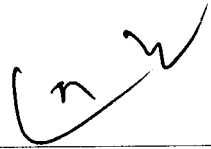
Zafar Ali Khan
Member/VC


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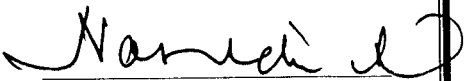
Abdul Rahim Khan
Member


28/3/08

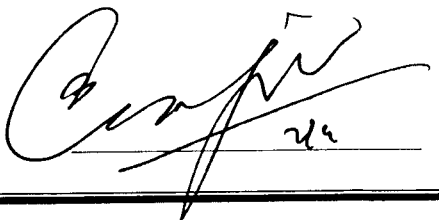
Maqbool Ahmad Khawaja
Member

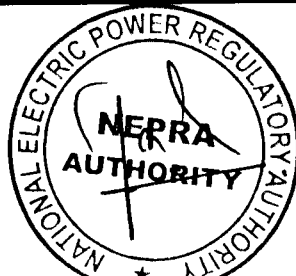


Nasiruddin Ahmed
Member



Khalid Saeed
Chairman


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Determination of the Authority in the matter of Tariff Petition filed by Blue Star Energy (Pvt) Ltd. Case No. NEPRA/TRF-86/BSEPL-2007

Blue Star Energy (Pvt) Ltd (hereinafter "BSEPL/Petitioner") filed a tariff petition (hereinafter the "Petition") for approval of generation tariff in respect of its three (3) MW run-of- the- river hydel power plant on Machai Branch canal at Tehsil Takht Bhai District Mardan.

2. The Authority admitted the petition for consideration on September 28, 2007.

3. Petition was heard, pursuant to notice, on 24th October 2007 at 1000 hours in NEPRA Office at Islamabad in the presence of stakeholders. Comments received from the Central Power Procurement Agency (hereinafter the "CPPA") and National Tariff Commission, the Ministry of Commerce were provided to BSEPL, prior to the aforesaid hearing, for response and comments.

4. BSEPL submitted that its plant, which is of Chinese origin, comprises of three (3) units of one (1) MW each to be installed by the manufacturer on turn key basis, with one (1) year warranty. Of the aforesaid three (3) MW, the first one (1) MW is in the final stages of completion. It is a run of the river plant and no peaking is possible on this canal. BSEPL intends to sell the electric power to Peshawar Electric Supply Company (hereinafter "PESCO/Power Purchaser") through 11 KV transmission line.

5. Summarized, the Petitioner submitted the following technical and financial information.

Capacity MW	1 MW	3 MW
Plant Factor	88%	75%
Net Generation (GWh)	7.709	19.711
Total Cost of the project		6.595 US\$ Million (Rs.400.43 million)
Cost per kW Installed		2198 US\$
Debt to Equity ratio		60:40
Loan Period		10 years (Grace Period 2 years)
Interest Rate of Loan		1.4% +6 Month KIBOR (10.03%)
Return on Equity		22.5%
Tariff Control Period		25 years
Levelized Tariff 1-2 years		11.00 US Cents/kWh
Levelized Tariff 1-25 years		7.96 US Cents/kWh

Tariff Components	1-2 Years Rs./kWh	1-25 Years Rs./kWh
Energy Charge (V O&M)	0.19	0.18
Water Use Charge	0.44	0.24
Fixed O&M	0.12	0.12
Insurance	0.21	0.20
ROE	4.68	2.37
ROEDC	1.05	0.53
Debt Retirement	-	1.43
Total Tariff Rs/kWh	6.68	4.84
Total Tariff US cents/kWh	11.0	7.96

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6. Based on the aforesaid, comments of the stakeholders and proceedings of the case, the following main issues were considered by the Authority which have been discussed separately;

ISSUES

- A) Annual Plant Capacity Factor
- B) Project Cost
- C) Capital Structure
- D) Return on Equity
- E) Hydrological Risk
- F) O&M Cost
- G) Water Use Charges
- H) Partial commissioning of the complex
- I) Levelized Tariff

A) Annual Plant Capacity Factor

7. Blue Star Energy (Pvt) Ltd (hereinafter "BSEPL") has proposed 75% as annual plant factor and net annual generation of 19.711 Gwh for its three (3) MW hydel power station. The proposed plant factor and net annual generation has been based on hydrological data for the period 1998 to 2006 as provided in the feasibility report of the power project. It is claimed that the first Unit of one (1) MW will be ready for commercial operation by the end of November 2007 to be sold to Power Purchaser, for which a Power Purchase Agreement (hereinafter the "PPA") shall be signed, once the subject tariff is determined by NEPRA. For its aforesaid first unit, however, BSEPL claims a net annual production to be 7.709 GWh at plant factor of eighty-eight percent (88%).

8. In the Feasibility Report, the power potential is based on historical averages of water flows in the Machai canal, where it has been indicated that about thirty-three percent (33%) of the time in a year all three (3) units will run at its full capacity. From thirty-three percent (33%) to about sixty-two percent (62%) two (2) units will run at full load while the third at partial load. From sixty-two percent (62%) to about eighty-three percent (83%) only one (1) unit will run at its full capacity while the second will be at partial load. From eighty-three percent (83%) to eighty-seven percent (87%) only one (1) unit will be running at partial load and about thirteen percent (13%) of time the power house will have to be shutdown completely. From this analysis it transpires, that plant factor of seventy-five percent (75%) for the whole complex and eighty-eight percent (88%) for the first unit is on higher side. Moreover, it has not been substantiated that how BSEPL has arrived at two separate plant factors (i.e. eighty-eight percent (88%) for its first unit and seventy-five percent (75%) for three units together). Nevertheless, the Authority accepts the proposed annual plant factor of seventy-five percent (75%) and net annual estimated energy production of 19.711 GWh for the whole complex of three (3) MW capacity as recommended by the consultant in the Feasibility Report.

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B) Project Cost

9. BSEPL claimed a total project cost of Rs. 400.620 million. At a Rupee to Dollar parity rate of 60.75, this becomes equivalent to US\$ 6.595 million. Petitioner states that he has spent from its equity a sum of Rs. 160 million which amount is equivalent to forty percent (40%) of the total project cost. For the remaining two (2) units i.e. sixty percent (60%) of the project cost, BSEPL intends to obtain commercial loans.

10. The total project cost sought by BSEPL is in accordance with the estimates of Feasibility Report. The detailed scrutiny of Feasibility Report indicates that Rs. 12.8 million was earmarked for land acquisition, Rs. 22.5 million for cost of transmission line and Rs. 10.8 million as contingency charges.

11. The Authority has decided not to allow land acquisition cost of Rs. 12.8 million as claimed. The documentary evidence provided by BSEPL reveals that effective from 29th January 2005, for a period of thirty three (33) years, the land has already been acquired on lease from Irrigation Department of Government of NWFP. Moreover, for estimating water use charges, annual rent for the leased land has also been included.

12. Further, the Authority has also decided not to allow Rs. 22.5 million claimed for the cost of construction of transmission line from the interconnection point to the grid station as it shall be the responsibility of the power purchaser. Contingency charges also can not be allowed as cost escalations have already been provided in the project cost estimates.

13. BSEPL claimed that no Engineering, Procurement and Construction (hereinafter the "EPC") contract was executed and the project works have been done under its supervision through various contractors.

14. BSEPL has not claimed costs of Interest During Construction (hereinafter "IDC") in the total project cost estimates provided along with its Petition nor has been provided in the Feasibility Report. BSEPL, however, verbally informed that such costs were taken in to account while calculating the debt service component of tariff and, therefore, is not, separately, available. The Authority is of the opinion that the cost of IDC should have been provided separately because IDC is capitalized and becomes a part of the total project cost. Further, it is subject to adjustment on actual basis at the time of commercial operation date (hereinafter the "COD). For this purpose IDC has been calculated based on eighteen (18) months construction period as provided in the Feasibility Report and included in the total project cost.

15. As the project cost is inclusive of all duties and taxes and no amount and breakup has been provided, therefore, the Authority has decided that no subsequent adjustment of duties and taxes on actual basis shall be allowed.

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16. As the whole project being constructed and completed in the local currency, therefore, no adjustments in the project cost on account of variation in Rupee to Dollar exchange rate shall be allowed to BSEPL.

17. In view of the aforesaid, the Authority has approved the following costs for the project, as per break-up given hereunder;

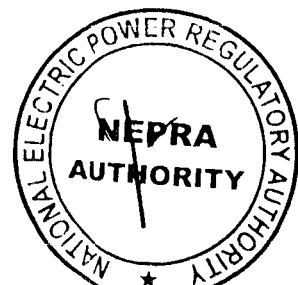
Project Cost	Approved (Rs Million)	Approved (US\$ Million)
Preliminary works, Installation, feasibility & designing	34.938	0.573
Civil Works	176.382	2.892
Hydro-Mechanical Equipment	87.000	1.426
Electrical Equipment	26.700	0.438
Other costs such as transportation, erection, engineering & supervision, administration, accounts & miscellaneous costs	29.490	0.483
CAPEX	354.510	5.812
Interest During Construction (IDC)	20.495	0.336
Total Project Cost	375.005	6.148

C) Capital Structure

18. BSEPL, has proposed a debt-equity ratio of sixty (60) and forty (40). According to the petitioner, it has consumed all the equity and about to complete its first unit of one (1) MW, which was necessary as the banks were not ready to extend financing at start of the project due to risks associated with the development of hydel power project.

19. The composition of debt and equity in all the previous determinations of the Authority for Independent Power Producers (IPPs) of various technologies range between 80:20 to 75:25. Apparently, there is no upper cap on the equity investment in the Policy for Power Generation Projects 2002 (hereinafter the "2002 Policy") and the Policy for Development of Renewable Energy for Power Generation 2006 (hereinafter the "Policy for Renewables") and the Federal Government, Guidelines for determination of Tariffs (hereinafter the "Guidelines"). As the debt comparatively is a cheaper source of financing and contributes in reducing overall cost of capital of the project, the Authority considers it prudent to prescribe a proper mix of equity and debt portion in the capital structure of a company. Further, for better management of the project during its constructional and operational phases, it also provides sharing of project risk between the sponsors and the lenders.

20. The Authority, however, considers that for promoting investment in the hydel technology especially small hydel power plants, particularly in view of prevailing energy crises, it is important that investors be provided with greater flexibility so that the maximum benefit of cheaper source of hydel energy could be obtained. In view of this, the Authority has decided to allow, BSEPL, to structure its capital in the ratio of 60:40 for debt and equity respectively.



21. BSEPL has requested that project will be financed through local debt at KIBOR (10.03%) plus premium of 1.4% payable on semi-annual basis. It was also reiterated by BSEPL in the public hearing of the case held on 24th October 2007 that it is in a better position to get financing for the project at a premium of 1.4% as its first unit is already completed and ready for operation. The Authority has therefore decided to approve petitioner's request in this regard. However, debt service payments will be on quarterly basis according to the schedule of debt service attached to this determination as Annex-II and adjustment mechanism for KIBOR variation given in the order of the Authority.

(D) Return on Equity

22. BSEPL, has proposed twenty-two and a half percent (22.5%) Return on Equity (hereinafter "ROE") based on Internal Rate of Return (hereinafter "IRR"). The proposed ROE, twenty-two and a half percent (22.5%) has been calculated on the basis of particular risks associated with this project, in addition to the fifteen percent (15%) determined by the Authority, for other technologies. The following risk factors have been included by the petitioner;

Kidnapping	3.00%
Car snatching, Looting	1.00%
Looting of Pedestrians	0.50%
Hostility of Locals	0.50%
Difficulty of transportation	0.50%
Business venture Risk	0.50%
Bureaucratic hurdles	0.50%
Weak GoP writ/insecurity	0.50%
Hostility towards foreigners	0.50%
Total Risk	7.50%
ROE as determined by the Authority for other technologies	15.00%
Total ROE	22.50%

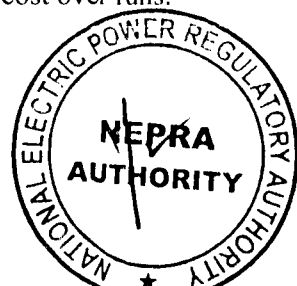
23. The aforesaid break-up is completely unsubstantiated and no basis has been provided in support of each element of risk, in addition to the 15% ROE determined by the Authority for other technologies. Further, some of the aforesaid risk factors are not business risks, rather attribute to increase in the costs. The business risk of loosing revenue due to hydrology is already covered under the 2002 Policy and the Policy for Renewables. The rate of return allowed by the Authority in case of wind IPPs, which is a renewable energy like hydro, is 15% (IRR)

24. Notwithstanding that, the Authority feels that compared to other renewable energy projects, hydel energy projects, are more vulnerable and riskier on account of the following factors;

- Comparatively long period is required for project construction and completion.
- Difficult location of hydel power projects – In Pakistan most of the hydel power potential is available in the northern areas (including tribal belt) and Azad Jammu and Kashmir where adequate infrastructure is missing, the terrain is hard, political/security conditions can delay the project and uncertainties of geological conditions/factors can result in cost over-runs.

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- Financing constraints – Banks and financial institutions are reluctant to finance a hydropower project.
- Reluctance of investors – Investors are shy to invest in hydropower projects.
- Uncertainties with respect to Resettlement issues/litigation costs etc.

25. The Authority further considers that in order to promote and attract capital investment in this particular technology and to harness the potential advantage of a relatively cheaper and indigenous resource as quickly as possible to overcome the current power shortage in the country and improvement of energy security, hydel power projects merit a higher rate of return to compensate for the additional risk perceived by the investors. The Authority has, therefore, decided that an additional risk premium of 2% (on IRR basis) be given to Hydel Power projects as compared to the risk premium already allowed to thermal power projects. Accordingly ROE (IRR based) is allowed to BSEPL. The ROE component will be indexed with US\$/PKR exchange rate variation as per GoP Policy 2002.

E) Hydrological Risk

26. For hydel power plants, water inflows to generate electricity do not remain the same throughout a year, rather depend on seasonal variations. The out put of power plant is accordingly dependent on water inflows. During a period of lean water inflows, the IPP will not be able to recover its full fixed cost (capacity charge) due to actual operation of the power plant at less than the average estimated plant factor. In hydel power projects almost whole of the operational cost is fixed (more than 90%). In the instant case about ninety six percent (96%) comprises of fixed costs and only four percent (4%) as energy charge (variable O&M). As per 2002, Policy and Policy for Renewables, the hydrological risk is to be borne by the power purchaser.

27. To ensure that the power producer gets full recovery of its fixed cost when the plant is available but there is not sufficient water to generate electricity, the Authority has decided as under

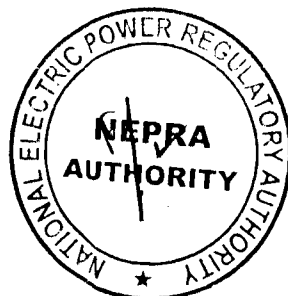
“The investors/sponsors shall receive an assured minimum amount every month from the Power Purchaser to cover its fixed costs (Fixed O&M, Fixed Water Use Charge, Debt Servicing, Insurance Charge and ROE etc) in case the plant is available but sufficient water is not available to generate electricity at least equal to the average historic hydrology for a particular month”.

F) O & M Cost

28. BSEPL estimated Rupees six million (Rs. 6.00 million) per annum towards its O&M expense, which is equivalent to 1.5% of the total project cost. Petitioner claims that forty percent (40%) of the aforesaid expense, is attributed to Fixed O&M and sixty percent (60%) towards Variable O&M costs. Accordingly, the O&M cost per unit works out to Rs. 0.3048/kWh (Fixed O&M Rs. 0.1219/kWh and Variable O&M Rs 0.1829/kWh).

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29. Comparison of the aforesaid O&M expense with WAPDA-Hydroelectric reflects that the per kWh cost requested by BSEPL is on the higher side. Leaving aside large hydel power plants such as Tarbela, Mangla and Warsak where per unit O&M cost is around Rs.0.10/kWh, for small hydel power stations such as Dargai, and Jabban, the O&M cost per unit is in the range of Rs. 0.20 – 0.25/kWh. In practice, it is evident that the per unit O&M costs for big hydel power plants is marginally less due to economy of scale compared to the fixed component of O&M costs for small hydel plants.

30. The Authority considers that the Fixed-O&M cost component Rs. 0.1219/kWh and Variable O&M Rs. 0.1829/kWh is reasonable and, therefore, allowed.

31. Annual cost of Insurance as one percent (1%) of project cost as proposed by BSEPL is considered reasonable and therefore, accepted. Consequently, Rs. 0.2032/kWh on account of insurance expense is allowed.

G) Water Use Charges

32. BSEPL informed that Government of NWFP offered small hydropower falls on Upper Swat Canal (District Mardan) to private sector on Built, Own, Operate and Transfer (BOOT) basis, through an open auction under NWFP Hydel policy 2003 (revised in 2006). BSEPL obtained on lease three (3) adjacent falls for developing three (3) MW hydropower plant after combining the head of three (3) sites. Accordingly, fixed monthly lease rental is to be paid to Government of NWFP. Petitioner has submitted a Lease Agreement signed with Government of NWFP whereby Rs. 62,930 per annum is reflected as cost of leased land measuring 3.94 Acres which is to be paid to Chief Engineer, Irrigation Department Government of NWFP and Rs. 3.373 million per annum as Water use Charges to the Managing Director, SHYDO Government of NWFP. According to the agreement, the per annum cost of lease is to be indexed at twenty-five percent (25%) after every ten (10) years. BSEPL has therefore, treated Water Use Charges as fixed cost, irrespective of plant operation and has requested Rs. 0.24/kWh on a levelized basis.

33. Water Use Charges are normally paid on the net energy production of the power plant. The Water Use Charge in case of Mangla hydel power station is fixed at Rs 0.15/kWh on units delivered basis. SHYDO in its Petition for Malakand-III hydropower plant of 81 MW has requested Rs. 0.15/kWh as Water Use Charge on units delivered basis with indexation based on WPI in the rate/kWh over its useful life.

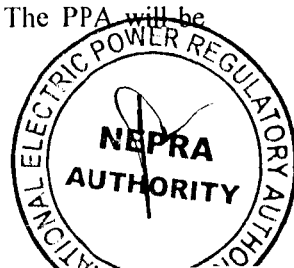
34. In view of the evidence provided by BSEPL, the Authority, as a special case, accepts the request of BSEPL. However, the project can not be treated on BOOT basis as requested by BSEPL, because the agreement on BOOT basis has been made with SHYDO and not the Power Purchaser who will purchase capacity of the plant including redemption of equity over term of the PPA.

H) Partial commissioning of the complex

35. BSEPL has completed all works for its first unit at a cost of Rs. 160 million which is about forty percent (40%) of the total project cost. It is claimed that unit will be commissioned in November 2007. The work on the remaining two (2) units of one (1) MW each will be completed in the next two years and the complex will come in to commercial operations in October 2009. The PPA will be

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signed with PESCO after approval of tariff by NEPRA. BSEPL in its Petition has requested for immediate application of tariff under Rule 4(7) of NEPRA Tariff Standards and procedure Rules 1998. The Authority, however, did not agree to BSEPL request.

36. BSEPL has indicated that its first unit of one (1) will be supplying power to the Power Purchaser till COD when plant would be operating at its full capacity i.e. three (3) MW. BSEPL has not indicated whether there are sufficient arrangements for off-taker to evacuate power from its 11 kV feeder. Regrettably, the Power Purchaser despite repeated invitations have neither commented nor participated in the tariff hearing. The Authority feels that the participation of the Power Purchaser would have been extremely beneficial.

37. BSEPL claimed that its first unit of one (1) MW is ready for commissioning and have requested separate tariffs for initial two (2) years in its proposed tariff table, which is based on the net output from its first unit of one (1) MW capacity. The early commissioning of first unit can not, however, be treated as COD of the power complex. The whole complex of three (3) MW capacity, for which BSEPL has filed this instant Petition shall achieve COD in 2009. The Authority decided that the COD for the complex shall be treated from the date when the whole complex of three (3) MW capacity is ready and available. For the interim period where one (1) MW power is available, BSEPL can sell its output to the Power Purchaser through a mutually acceptable arrangement agreed bilaterally among themselves. Such rate, however, should not include the debt servicing component of tariff.

I) Levelized Tariff

38. Based on the approved costs for BSEPL, the reference tariff for each cost component is given in a table attached to this Determination as Annex-I.

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39. Pursuant to Rule-6 of the NEPRA Licensing (Generation) Rules 2000, Blue Star Energy (Pvt) Limited (hereinafter "BSEPL") is allowed to charge the following specified/approved tariff for delivery of electricity to the Power Purchaser.

Tariff Components	Year 1-10 Rs/kWh	Year 11-25 Rs/kWh	Indexation
Fixed Charges			
Fixed O&M Local	0.1219	0.1219	WPI
Water Use Charge	0.1743	0.1743	-
Insurance	0.2032	0.2032	US\$/PKR
Debt Service	1.9301	-	KIBOR
Return on Equity	1.2937	1.2937	US\$/PKR
ROE during Construction	0.1605	0.1605	US\$/PKR
Variable Charge			
Variable O&M	0.1829	0.1829	WPI
Total	4.0666	2.1365	

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- i) The reference tariff has been calculated on the basis of benchmark annual energy production of 19.711 GWh.
- ii) Payment on account of hydrological risk shall be made by the Power Purchaser on the basis of benchmark monthly energy production based on the average historic hydrology for that particular month.
- iii) In the above tariff no adjustment for CERs has been accounted for. However, upon actual realization of CERs, the same shall be distributed between the Power Purchaser and BSEPL in accordance with the approved mechanism as given in the Federal Government's Policy for Renewables.
- iv) The above tariff is applicable for a period of twenty five (25) years commencing from the date of the COD.
- v) For procurement of power (1 MW) during interim period, the payable tariff shall not include the debt service component of tariff.
- vi) The component wise tariff is indicated at Annex-1. Debt Service Schedule is attached as Annex-II.

The following indexations shall be applicable to reference tariff;

I. One Time Adjustment

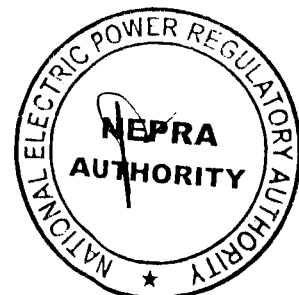
(i) Cost of Debt

- a. The Principal repayment and the cost of debt shall be adjusted at Financial Closing as per actual borrowing composition i.e Foreign and/or Local.
- b. Interest During Construction (IDC) shall be adjusted at COD according to actual disbursement of loan and Interest.
- c. After COD, Interest part of the tariff component shall be adjusted on quarterly basis for variation in Karachi Inter Bank Offer Rate.
- d. No adjustment in the project cost on account of variation in custom duties or withholding tax paid by BSEPL during the project construction period will be made.

ii) Adjustment for variation during construction

Debt Service and ROE shall be adjusted on account of actual variation in interest on the basis of actual drawdown for the period during construction at the COD. BSEPL shall submit relevant documents to NEPRA within seven (7) days of COD for adjustment of relevant tariff components.

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II. Pass-Through Items

No provision for income tax has been accounted for in the tariff. If BSEPL is obligated to pay any tax, the exact amount paid by the company shall be reimbursed by the Power Purchaser to BSEPL on production of original receipts. This payment should be considered as pass-through payment (as Rs./kWh) spread over a twelve (12) months period in addition to fixed charges proposed in the Reference Tariff. Furthermore, in such a scenario, BSEPL may also submit to the Power Purchaser details of any tax savings and Power Purchaser will deduct the amount of these savings from its payment to BSEPL on account of taxation.

Withholding tax is also a pass through item just like other taxes as indicated in the government Guidelines. Withholding tax shall be paid @ 7.5% of the reference equity. The Power Purchaser shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 17% equity according to the following formula:

$$\text{Withholding Tax Payable} = [\{17\% * (E_{(\text{Ref})} - E_{(\text{Red})})\} + \text{ROEDC}_{(\text{Ref})}] \times 7.5\%$$

Where:

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

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

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

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 has been 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 as a pass through from the Power Purchaser in future on the basis of the total dividend pay out.

III. Hydrological Risk

Hydrological risk will be borne by the Power Purchaser and shall be paid on the following basis.

The investor/sponsor shall receive an assured minimum amount every month from the Power Purchaser to cover its fixed costs (Fixed O&M, water use charge, debt servicing, insurance charge and ROE etc) in case the plant is available but sufficient water is not available to generate electricity at least equal to the average historic hydrology for a particular month

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IV. Indexations:

The following indexation shall be applicable to the reference tariff;

a) Indexation applicable to O&M

The local part of Fixed O&M and variable O&M cost will be adjusted on account of Inflation (WPI). Quarterly Adjustment for local inflation will be made on 1st July, 1st October, 1st January & 1st April respectively on the basis of average of the latest available information with respect to WPI (notified by the Federal Bureau of Statistics) in accordance with the standard practice adopted by the Power Purchaser. The mode of indexation will be as follows:

(i) Fixed O&M

$$F O\&M_{(REV)} = 0.1219 * WPI_{(REV)} / 124.36$$

Where:

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

$WPI_{(REV)}$ = the Revised Wholesale Price Index (manufactures)

$WPI_{(REF)}$ = 124.36 wholesale price index (manufactures) of September 2007 notified by the Federal Bureau of Statistics

(ii) Variable O&M

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

$$V O\&M_{(REV)} = 0.1829 * WPI_{(REV)} / 124.36$$

Where:

$VO\&M_{(REV)}$ = The revised applicable Variable O&M component indexed with WPI.

$WPI_{(REF)}$ = 124.36 Whole Sale Price Index (manufacturers) for the month of September 2007 notified by the Federal Bureau of Statistics.

(b) Water Use Charge

Water Use Charge, Rs. 0.1743 per kWh will be indexed @ 25% after every 10 years from the date of COD.

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(c) Insurance

Insurance cost component of tariff will be adjusted on account of US\$/PKR exchange rate variation at COD and thereafter on annual basis as per formula given hereunder.

$$I_{(Rev)} = 0.2032 * ER_{(Rev)}/61$$

Where;

$I_{(Rev)}$ = Revised Insurance cost component of tariff adjusted with exchange rate variation US\$/PKR

$ER_{(Rev)}$ = The revised TT & OD selling rate of Us dollar as notified by the National bank of Pakistan.

(d) Adjustment for KIBOR variation

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of quarterly variation in three (3) month KIBOR, while premium over KIBOR remaining the same i.e 1.4%, according to the following formula:

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 10.03\%) / 4$$

Where:

ΔI = the variation in interest charges applicable corresponding to variation in three month KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)} >$ or $<$ 10.03%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment applicable on quarterly basis.

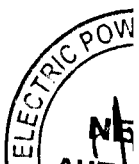
$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-II) on a quarterly basis on the relevant quarterly calculations date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.

Note:-

- i) In case of Foreign borrowing LIBOR adjustment will be made on quarterly basis according to the above mentioned mechanism.

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- ii). Adjustment on account of inflation, local inflation, foreign exchange variation and LIBOR/KIBOR variation will be approved and announced by the Authority within seven working days after receipt of BSEPL's request for adjustment in accordance with the requisite indexation mechanism stipulated hereinabove.

V. Terms and Conditions of Tariff:

Design & Manufacturing Standards:

Hydel Power Generation system shall be designed, manufactured and tested in accordance with the latest IEC standards or other equivalent standards. All plant and equipment shall be new and of standard quality.

Power Curve of the hydel power complex:

The power curve of the Hydel Power plant shall be verified by the Power Purchaser, as part of the Commissioning tests according to the latest IEC standards and shall be used to measure the performance of the hydel generating units.

Delivery Point:

As per Article 11 of the Generation Licence, BSEPL shall deliver power at 11 kV at the door step of its generating facility. Up-gradation of generation voltage up to 11 kV will be the responsibility of the BSEPL.

Emissions Trading/Carbon Credits:

BSEPL would process and obtain emissions/carbon credits expeditiously and credit the proceeds to the Power Purchaser as per the policy issued by the Federal Government and agreed terms between the generator and the purchaser.

The above tariff and terms and conditions will be incorporated as the specified tariff approved by the Authority pursuant to Rule-6 of NEPRA Licencing (Generation) Rules, in the Power Purchase Agreement of BSEPL. The tariff and terms and conditions along with reference tariff table and debt service schedule as attached thereto are recommended for notification by the Federal Government in the official gazette in accordance with the Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

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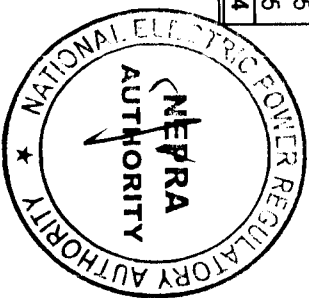
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Year	Variable O&M Local	Fixed O&M Local	Fixed Water Use Charge	Insurance	Return on Equity	ROE During Construction	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Tariff *	
	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	¢ / kWh
1	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.6527	1.2774	4.1758	6.8456
2	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.7306	1.1996	4.1758	6.8456
3	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.8177	1.1124	4.1758	6.8456
4	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.9153	1.0149	4.1758	6.8456
5	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.0245	0.9057	4.1758	6.8456
6	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.1467	0.7835	4.1758	6.8456
7	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.2835	0.6467	4.1758	6.8456
8	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.4366	0.4936	4.1758	6.8456
9	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.6079	0.3222	4.1758	6.8456
10	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	1.7998	0.1304	4.1758	6.8456
11	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
12	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
13	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
14	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
15	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
16	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
17	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
18	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
19	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
20	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
21	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
22	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
23	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
24	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
25	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	-	-	2.2457	3.6815
Levelized Tariff	0.1829	0.1219	0.1743	0.2032	1.2937	0.1605	0.1091	0.7078	0.5988	3.5523	5.8234

* The above rate is limited to an annual energy production up to 19.711 GWh. Any generated energy beyond 19.711 GWh in a year will be charged at 10% of the Reference Tariff for that year.

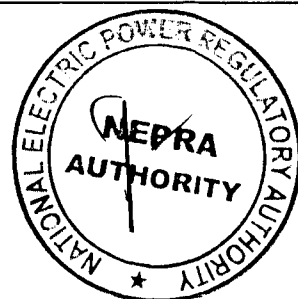
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BLUE STAR ENERGY (Pvt) LIMITED
Debt Servicing Schedule

Period	Local Debt					Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	Principal	Repayment	Mark-Up	Balance	Debt Service			
	Million \$	Million \$	Million \$	Million \$	Millin \$			
	3.69	0.05	0.11	3.64	0.1559			
	3.64	0.05	0.10	3.59	0.1559			
	3.59	0.05	0.10	3.53	0.1559			
	3.53	0.05	0.10	3.48	0.1559			
1	3.69	0.21	0.41	3.48	0.6237	0.6527	1.2774	1.9301
	3.48	0.06	0.10	3.42	0.1559			
	3.42	0.06	0.10	3.36	0.1559			
	3.36	0.06	0.10	3.30	0.1559			
	3.30	0.06	0.09	3.24	0.1559			
2	3.48	0.24	0.39	3.24	0.6237	0.7306	1.1996	1.9301
	3.24	0.06	0.09	3.18	0.1559			
	3.18	0.07	0.09	3.11	0.1559			
	3.11	0.07	0.09	3.05	0.1559			
	3.05	0.07	0.09	2.98	0.1559			
3	3.24	0.26	0.36	2.98	0.6237	0.8177	1.1124	1.9301
	2.98	0.07	0.09	2.91	0.1559			
	2.91	0.07	0.08	2.83	0.1559			
	2.83	0.07	0.08	2.76	0.1559			
	2.76	0.08	0.08	2.68	0.1559			
4	2.98	0.30	0.33	2.68	0.6237	0.9153	1.0149	1.9301
	2.68	0.08	0.08	2.60	0.1559			
	2.60	0.08	0.07	2.52	0.1559			
	2.52	0.08	0.07	2.44	0.1559			
	2.44	0.09	0.07	2.35	0.1559			
5	2.68	0.33	0.29	2.35	0.6237	1.0245	0.9057	1.9301
	2.35	0.09	0.07	2.26	0.1559			
	2.26	0.09	0.06	2.17	0.1559			
	2.17	0.09	0.06	2.08	0.1559			
	2.08	0.10	0.06	1.98	0.1559			
6	2.35	0.37	0.25	1.98	0.6237	1.1467	0.7835	1.9301
	1.98	0.10	0.06	1.88	0.1559			
	1.88	0.10	0.05	1.78	0.1559			
	1.78	0.11	0.05	1.67	0.1559			
	1.67	0.11	0.05	1.57	0.1559			
7	1.98	0.41	0.21	1.57	0.6237	1.2835	0.6467	1.9301
	1.57	0.11	0.04	1.45	0.1559			
	1.45	0.11	0.04	1.34	0.1559			
	1.34	0.12	0.04	1.22	0.1559			
	1.22	0.12	0.03	1.10	0.1559			
8	1.57	0.46	0.16	1.10	0.6237	1.4366	0.4936	1.9301
	1.10	0.12	0.03	0.98	0.1559			
	0.98	0.13	0.03	0.85	0.1559			
	0.85	0.13	0.02	0.72	0.1559			
	0.72	0.14	0.02	0.58	0.1559			
9	1.10	0.52	0.10	0.58	0.6237	1.6079	0.3222	1.9301
	0.58	0.14	0.02	0.44	0.1559			
	0.44	0.14	0.01	0.30	0.1559			
	0.30	0.15	0.01	0.15	0.1559			
	0.15	0.15	0.00	0.00	0.1559			
10	0.58	0.58	0.04	0.00	0.6237	1.7998	0.1304	1.9301

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National Electric Power Regulatory Authority

Islamic Republic of Pakistan

2nd Floor, OPF Building, G-5/2, Islamabad.
Ph: 9206500, 9207200 Fax : 9210215
E-mail: office@nepra.org.pk

Registrar

No. NEPRA/TRF-86/BSEPL-2007/7017

April 2, 2008

Chief Executive
Blue Star Energy (Pvt.) Ltd. (BSEPL)
House No. 86,
Street 3, Sector A,
Askari HO, near New Airport
Lahore Cantt.

Subject: **Determination of the Authority in the Matter of Tariff Petition filed by Blue Star Energy (Pvt.) Ltd. (Case No. NEPRA/TRF-86/BSEPL-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)

The Authority has made its Determination on the subject matter. The Determination has been sent to the Cabinet Division for notification in the official Gazette vide letter No. NEPRA/TRF-86/BSEPL-2007/7014-16 dated 02.04.2008. A copy of the Determination is served herewith.

Enclosure: As above


(Amer Zia)



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

2nd Floor, OPF Building, G-5/2, Islamabad.
Ph: 9206500, 9207200 Fax : 9210215
E-mail: office@nepra.org.pk

Registrar

No. NEPRA/TRF-86/BSEPL-2007/7018

April 2, 2008

Chief Executive Officer,
Peshawar Electric Supply Company (PESCO)
WAPDA House, Shami Road, Sakhi Chashma,
Peshawar

Subject: **Determination of the Authority in the Matter of Tariff Petition filed by Blue Star Energy (Pvt.) Ltd. (Case No. NEPRA/TRF-86/BSEPL-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)

Enclosed, please find a copy of the Authority Determination on the subject matter. The Determination has been sent to the Cabinet Division for notification in the official Gazette vide letter No. NEPRA/TRF-86/BSEPL-2007/7014-16 dated 02.04.2008.

Enclosure: As above


(Amer Zia)



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

2nd Floor, OPF Building, G-5/2, Islamabad.
Ph: 9206500, 9207200 Fax : 9210215
E-mail: office@nepra.org.pk

Registrar

No. NEPRA/TRF-86/BSEPL-2007/7019

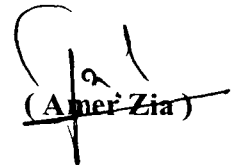
April 2, 2008

Chief Operating Officer
Central Power Purchasing Agency (CPPA)
325-WAPDA House
Shahrah-e-Quaid-e-Azam
Lahore

Subject: **Determination of the Authority in the Matter of Tariff Petition filed by Blue Star Energy (Pvt.) Ltd. (Case No. NEPRA/TRF-86/BSEPL-2007)**
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Enclosure: As above


(Amer Zia)