

**HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION**  
Keonthal Commercial Complex, Khalini, Shimla – 171002, Himachal Pradesh

**In the matter of:** Fixing the rate of sale of Free Power of Government of Himachal Pradesh to HP State Electricity Board for FY11

**Coram:**

Sh. Yogesh Khanna, Chairman

**Order**

(Date of Order: 07.06.2010)

**Background**

1.1 Paragraph 2 of the Electricity [Removal of Difficulty] (Third) Order, 2005, which came into force on the 8<sup>th</sup> of June, 2005; empowers the State Commission to regulate the price at which the free power received by the State Government from hydro generating stations is sold by the State Govt. to the distribution licensee in the State, reads as under -

“2. Disposal of free electricity received by a State Government from hydro power generating stations:-

*The State Government receiving free electricity from hydro power generating stations shall have discretion to dispose off such electricity in the manner it deems fit according to the provisions of the Act:*

*Provided that if such electricity is sold by the State Government to a distribution licensee, the concerned State Commission shall have powers to regulate the price at which such electricity is procured by the distribution licensee.”*

1.2 The Government of Himachal Pradesh (hereinafter referred to as “State Government”) has free power entitlement in the generating stations of NHPC, SJVNL, PSEB, the Distribution Licensee’s i.e. HP State Electricity Board (hereinafter referred to as the “Board”) own generating stations and IPP stations as detailed in the Table 1 and Table 2 below, in lieu of State resources being used by these generating stations.

**Table 1: Free Power Entitlement of GoHP**

Generating Stations	Free Power Share
Baira Suil	12.00%
Chamera-I	12.00%
Chamera –II	12.00%
Shanan Share*	Fixed
Ranjeet Sagar Dam Share	4.60%
Malana	15.00%

Generating Stations	Free Power Share
Baspa – II	12.00%
Patikari	12.00%
Nathpa Jhakri	12.00%
Ghanvi	12.00%
Baner	12.00%
Gaj	12.00%
Larji	12.00%
Khauli	12.00%

**Table 2: Free power entitlement from new IPPs**

Generating Stations	Free Power Share
Allain Duhangan	12.00%
Budhil	12.00%
Malana II	12.00%

- 1.3 Prior to FY 2004-05, the entire free power share of State Government was available to the Board at the rate equal to the tariff rate of the lowest slab for domestic consumers i.e. 70 Paise/unit.
- 1.4 Subsequently, in FY 2005-06, the State Government through a notification withdrew this arrangement with the Board and the free power was now available to the Board only during the winter months (Nov to Mar) and at price equal to the average cost of power purchase of the Board from various sources. On the basis of this notification the State Commission in the Tariff Order of FY 2005-06 determined the average rate of power purchase of the Board at Rs. 1.93 per unit and the same was considered for fixing the rate of free power purchased by the Board in FY 2005-06.
- 1.5 In the Tariff Order of FY 2006-07, the State Commission switched over from the approach of fixing the price of free power equivalent to the average cost of power purchase of the Board to marginal cost of power from Central Sector generating stations and on the basis of the new approach the State Commission fixed the price of free power to be purchased by the Board in FY 2006-07 at Rs. 2.35 per unit.
- 1.6 In the Tariff Order of FY 2008, the State Commission had determined the price of free power equivalent to the marginal cost of power from Central Sector generating stations and fixed the price of free power to be purchased by the Board in FY 2007-08 at Rs. 3.04 per unit
- 1.7 The State Commission had continued with the same philosophy for FY 2008-09 in the MYT order and fixed the rate of free power to be purchased by the Board from State Government at Rs 3.04 per unit (including 4 Paise per unit trading margin as this power is routed through PTC).
- 1.8 The State Commission had determined the price of free power equivalent to the marginal cost of power from Central Sector generating stations and fixed the price of free power to be purchased by the Board in FY 2009-10 at Rs. 2.87 per unit

## Approaches for determining the price for free power for FY 2010-11

1.9 For fixing the price of free power to be purchased by Board in FY 2010-11, the State Commission has analyzed the following approaches:

- (a) Average Cost Basis
- (b) Marginal Cost Basis

### Average Cost Basis

1.10 Under this approach, the rate of free power has been considered equivalent to the average cost of power purchase by the Board (excluding the power purchased from the Board's own generating stations and liquid fired stations of NTPC). The average cost of power purchase for FY 2009-10 is Rs.2.10 per unit as detailed in the Table 3 below:

**Table 3: Average Cost of Power Purchase for FY10**

Station	Quantum (MU)	Cost (Rs Cr)	Avg. Cost (Rs/ unit)
Anta(G)	106.75	24.81	2.32
Auraiya(G)	147.30	29.98	2.04
Dadri(G)	167.76	34.35	2.05
Unchahar-I	66.01	15.44	2.34
Unchahar-II	108.69	26.68	2.45
Unchahar-III	68.16	19.62	2.88
Rihand-1 STPS	300.06	52.77	1.76
Rihand-2 STPS	306.72	61.64	2.01
Singrauli STPS	75.03	11.00	1.47
Kahalgaon – II	146.68	37.85	2.58
NAPP	35.96	7.33	2.04
RAPP (V & VI)	64.04	18.84	2.94
Salal	29.90	2.13	0.71
Tanakpur	17.02	2.20	1.29
Chamera I	47.12	7.06	1.50
Chamera II	62.79	18.11	2.88
Uri	68.45	9.04	1.32
Dhauliganga	42.26	8.25	1.95
BBMB Old	43.80	2.64	0.60
BBMB New	133.27	5.17	0.39
Dehar	78.84	4.28	0.54
Shanan (available to HPSEB)	5.26	0.21	0.40
Shanan Ext (available to HPSEB)	45.00	1.80	0.40

Station	Quantum (MU)	Cost (Rs Cr)	Avg. Cost (Rs/ unit)
Yammuna	385.82	13.41	0.35
Khara	57.34	2.12	0.37
Nathpa Jhakri (SOR)	178.20	44.97	2.52
Baspa – II	1050.06	277.26	2.64
Partikari	68.66	15.45	2.25
Pvt Micros (old PPA)	423.00	105.75	2.50
Pvt Micros (new PPA)	203.75	59.98	2.95
Nathpa Jhakri (Equity power)	324.04	102.07	3.15
<b>Total*</b>	<b>4857.71</b>	<b>1022.21</b>	<b>2.10</b>

\*Power Purchase cost from Uri II, Koteshwar & Tehri has not been considered as their final tariffs are yet to be determined by CERC

### **Marginal Cost Basis**

- 1.11 Under this approach, the rate of free power has been considered equivalent to the cost of top 5% of power purchase by the Board (excluding the power purchased from the Board's own generating stations, projects for which the final tariffs are yet to be determined by CERC and liquid fired stations). The marginal cost of power purchase for FY 2010-11 is Rs. 3.15 per unit as detailed in Table 4 and Table 5 below.

**Table 4: Merit Order for FY 2010-11**

Station	Quantum (MU)	Cost (Rs Cr)	Avg. Cost (Rs/ unit)
Yammuna	385.82	13.41	0.35
Khara	57.34	2.12	0.37
BBMB New	133.27	5.17	0.39
Shanan (available to HPSEB)	5.26	0.21	0.40
Shanan Ext (available to HPSEB)	45.00	1.80	0.40
Dehar	78.84	4.28	0.54
BBMB Old	43.80	2.64	0.60
Salal	29.90	2.13	0.71
Tanakpur	17.02	2.20	1.29
Uri	68.45	9.04	1.32
Singrauli STPS	75.03	11.00	1.47
Chamera I	47.12	7.06	1.50
Rihand-1 STPS	300.06	52.77	1.76
Dhauliganga	42.26	8.25	1.95
Rihand-2 STPS	306.72	61.64	2.01
Auraiya(G)	147.30	29.98	2.04
NAPP	35.96	7.33	2.04
Dadri(G)	167.76	34.35	2.05

Station	Quantum (MU)	Cost (Rs Cr)	Avg. Cost (Rs/ unit)
Partikari	68.66	15.45	2.25
Anta(G)	106.75	24.81	2.32
Unchahar-I	66.01	15.44	2.34
Unchahar-II	108.69	26.68	2.45
Pvt Micros (old PPA)	423.00	105.75	2.50
Nathpa Jhakri (SOR)	178.20	44.97	2.52
Kahalgaon – II	146.68	37.85	2.58
Baspa – II	1050.06	277.26	2.64
Unchahar-III	68.16	19.62	2.88
Chamera II	62.79	18.11	2.88
RAPP (V & VI)	64.04	18.84	2.94
Pvt Micros (new PPA)	203.75	59.98	2.95
Nathpa Jhakri (Equity power)	324.04	102.07	3.15
<b>Total</b>	<b>4857.71</b>	<b>1022.21</b>	<b>2.10</b>
<b>5% of Total</b>	<b>242.89</b>		

**Table 5: Marginal Cost of Power Purchase for FY 2010-11**

Station	Quantum (MU)	Cost (Rs Cr)	Avg. Cost (Rs/ unit)
Nathpa Jhakri (Equity power)	242.89	76.51	3.15
<b>Top 5% Purchase</b>	<b>242.89</b>	<b>76.51</b>	<b>3.15</b>

- 1.12 The State Commission, taking into account the fact that the free power is available to the Board during the winter months helps it meet its deficit requirement and offsets the high cost of marginal power purchased through open market, has adopted the marginal cost approach for fixing the price of free power.
- 1.13 The State Commission, therefore, fixes the price of free power on the marginal cost basis for FY 2010-11 at **Rs. 3.19 per unit** (inclusive of 4 Paise per unit trading margin) for sale to the Board.
- 1.14 This Order shall be effective from the date of issue till 31<sup>st</sup> March 2011, unless allowed to be continued for further period with such variations and modifications, as may be ordered by the State Commission.

(Yogesh Khanna)

Chairman