

**BEFORE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION**

Petition No.35/2016

&

MA No. 89/2016

**In the matter of:**

Determination of the Average Pooled Power Purchase Cost (APPC) for the financial year 2016-17 under REC mechanism.

**ORDER**

1. This order pertains to determination of Average Pooled Power Purchase Cost (APPC) for the financial year 2016-17.
2. The distribution licensee (hereinafter referred as "HPSEB Ltd.") has filed petition No.35/2016 for approval of Average Pooled Purchase Cost (APPC) as under:-

<b>Power Purchase Cost for FY 2015-16</b>		
<b>Details</b>	<b>MUs</b>	<b>Rs. Crore</b>
HPSEBL Stations	1080.39	185.17
BBMB Stations	651.28	44.48
NTPC Stations	1685.74	571.81
NHPC Stations	311.15	81.52
From other Stations	4272.74	1115.16
Free Power and Equity Power	566.65	158.85
From Private Micros	340.84	78.73
Banking	00.00	0.00
Bilateral Purchase	00.00	00.00
PXI/IEX	170.21	45.61
<b>Total Power Purchase Cost</b>	<b>9079</b>	<b>2281.33</b>

The APPC rate proposed by the HPSEB Ltd. is 251.28 paise per unit of energy.

3. The HPSEBL's calculations of the APPC rates for FY 2016-17 are based on the following:-
  - (i) The provisional purchase (quantum and costs) for FY 2015-16 has been considered as details of bills from some of the ISTS sources are yet to be received;
  - (ii) The arrears pertaining to past periods (paid in FY 2015-16) have been excluded as these are not recurring in nature;
  - (iii) Unscheduled Interchange(UI) Purchase has also not been included in line with the philosophy approved by the Commission in APPC order of 2012-13;
  - (iv) The PGCIL/Transmission Charges/ULDC/Other Charges in line with the philosophy approved by the Commission in APPC Order of 2012-13;
  - (v) The rates of own generating stations have been taken from the Tariff Order for FY 16 under the First APR Order for 3<sup>rd</sup> MYT control period dated 10<sup>th</sup> April, 2015;

(vi) The Forward (inward) Banking at zero cost has been considered as approved by the Commission in the previous order.

4. On scrutiny of the above petition, the following points have been observed and HPSEB Ltd communicated to attend the same vide letter dated 16.07.2016;

(a) The power purchase rates of Own Generating Station(s) of HPSEB Ltd. like Bassi, Giri & Larji have been taken from the Tariff Order FY 2015-16, under the first APR order 3<sup>rd</sup> MYT control period, dated 10<sup>th</sup> April, 2015, as per the submission made in the petition. The total cost worked out with these rates, needs further correction.

(b) The sources from where the purchase cost, for NTPC, NHPC & other projects has been considered, are required further references.

5. In response to letter dated 16.07.2016, the HPSEBL vide MA No. 89/2016 in petition No. 35/2016, amended their petition with following submissions:-

(i) That in earlier submission, HPSEB Ltd has wrongly taken the Energy rates of FY15 for calculating power purchase cost from own generation sources i.e. for Bassi, Giri & Larji. The same has been corrected now as depicted in table below:

<b>Stations</b>	<b>MUs</b>	<b>P/U</b>	<b>Rs. Cr</b>
Bassi	314.46	73	22.96
Giri	188.34	71	13.37
Larji	577.59	242	139.78
Total	1080.39	163.00	176.10

HPSEB Ltd. requested the HPERC to consider the above rates for finalizing the APPC rates for FY 2016-17.

(ii) Further, HPSEB Ltd would like to apprise the Hon'ble Comisison that in case of Baspa II HEP, total amount paid by HPSEB Ltd has been reduced by Rs. 11.36 crores as same has been recovered on account of annual adjustment of secondary energy towards primary energy.

(iii) In case of Uri-II HEP, the amount of Rs. 0.53 cr. was paid by HPSEB Ltd against the fixed cost charges payable as per regulations.

(iv) For Ranjeet Sagar Dam, the charges paid by HPSEB Ltd in respect of GoHP free power were levied on quantum of energy on the pro rata basis, therefore GoHP free power rate has come out to be Rs. 2.82/

unit. The same is now being corrected as free power rate for FY 2016 as Rs. 2.80/unit. Therefore, instead of amount Rs. 24.61 cr. @ 2.82/unit, amount of Rs. 24.42 cr. @ 2.80/ unit may be considered against the quantum of 87.21 MUs of GoHP free power procured from Ranjeet Sagar Dam.

- (v) The main reasons for increase in APPC rates in proposal is due to non-availability of power from Bhabha HEP as the plant met with an accident in January, 2015 due to which no power was generated by it in FY 2016. On an average, Bhabha contributes approximately 500 MUs in a year to the total power purchase of HPSEB Ltd at a very cheap rate of approximately 62 paise per unit. This non-availability of cheaper power to the tune of 500 MUs has resultant in sudden increase in APPC rate computed for FY 2017 based on power purchase in FY-2016.
  - (vi) Earlier, HPSEBL used to forward bank power for meeting its demand in the state in winter months. In FY-2015, a quantum of 512.40 MUs of energy was forward banked by HPSEB Ltd for meeting its winter demands. As per HPERC methodology, same was taken for computation of APPC rate for FY-2016 at zero cost. However, in FY-2016, HPSEB Ltd didn't forward bank any power as per growing trend of decrease in demands in winter months in the state therefore this has resultant in overall increase in APPC rate for FY-2017.
6. The Commission issued a public notice on dated 12.08.2016 in the newspapers, namely "The Tribune" and "Amar Ujala", inviting objections/suggestions on the aforesaid petition from the stakeholders. The complete text of the petition filed for approval of the APPC by the HPSEB Ltd was also made available to the stakeholders on the website of the Commission as well as on the HPSEB Ltd's website.
  7. The Commission vide letter dated 17.08.2016, requested the major stakeholders, including the Small Hydro Power Associations of the State, State Government, Directorate of Energy, HIMURJA to send their objections/suggestions as per the aforesaid public notice.

8. The gist of objections/suggestions received from the Directorate of Energy (DoE), Government of Himachal Pradesh and the Bonafide Himachalies Hydro Power Developers Association, Sai Bhawan, Sector-IV, Phase-II, New Shimla-171009(HP), alongwith the itemwise replies by the HPSEBL are given as under:-

Sr. No.	Objections/Suggestions	HPSEBL's Reply
<b>A.</b>	<b>BONAFIDE HIMACHALIES HYDRO POWER DEVELOPERS ASSOCIATION</b>	
1.	<p>Explanation below Regulation 5(1) (c) of the CERC (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2010 provides as under:-</p> <p>Explanation.- for the purpose of these regulations 'Pooled Cost of Purchase' means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers, long term and short-term, but excluding those based on renewable energy sources as the case may be.</p> <p>Thus APPC means:</p> <ul style="list-style-type: none"> <li>(a) the weighted average pooled price;</li> <li>(b) of power purchased by distribution licensee from all sources, Long and Short term;</li> <li>(c) including cost of self generation;</li> <li>(d) but excluding those based on renewable energy sources</li> <li>(e) in the previous year.</li> </ul>	<p>HPSEB Ltd. submits that the Petition has been filed as per Regulation 5(1) (c) of Central Electricity Regulatory Commission (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2010.</p> <p>"Explanation.- for the purpose of these regulations 'Pooled Cost of Purchase' means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers, long-term and short-term, but excluding those based on renewable energy sources, as the case may be."</p>
2.	<p>It is seen from the Petition No. 35/2016 that the data given by HPSEBL is provisional for the year 2015-16.</p> <p>It is submitted that HPSEBL submitted the APR Petition No. 130 of 2015 dated 28.11.2015 in which power purchase for FY-2015-16.</p> <p>The APR was processed by the HPERC and its order titled "Second Annual Performance Review Order for 3<sup>rd</sup> MYT Control Period (FY-2015-FY 2019) &amp; Determination of Tariff for FY-2017 &amp; True-up of FY-2013 -14 of 2<sup>nd</sup> MYT Control Period for Himachal Pradesh State Electricity Board Limited (HPSEBL)" was issued on 25.05.2016. In the Order, the Hon'ble HPERC has reiterated the submissions of HPSEBL in paras 4.3.1 to 4.3.12 that Power Purchase estimates of HPSEBL for FY-2015-16 are based on actual supply/generation for H1 and projections for H2 for own generation etc and estimated on the basis of average for last 3 years for other sources (Paras 4.3 to 4.9 of APR).</p> <p>In response to the objection regarding Power Purchase, the HPERC has observed in Para 5.3.3 of the order as under:-</p> <p>5.3.3 The Commission has taken into consideration the actual power purchase cost of FY 2014-15 and ten months of FY-2015-16 while examining the power purchase projections of the Petitioner for FY 2016-17.</p> <p>Thus HPSEBL had complied the data regarding actuals of power purchase for the first 10 months of 2015-16 by May 2016 when the order was issued.</p> <p>Though the months of June, July and August have already passed now but petition for APPC still says that data is provisional as some bills are yet to be received (Para4.3 (1) of Petition for APPC). The actuals for the last 2 months of 2015-16 must have been available with HPSEBL at the time of filing the Petition and therefore the APPC should</p>	<p>HPSEBL submits that the data of 12 months of FY 2015-16 has been supplied to Hon'ble Commission in response to letter No.HPERC-h(1)5/2013/Vol-II-813 dated 16.7.2016 and further clarified that the Petition has been filed, based on complete power purchase data for FY-2015-16.</p>

	have been worked out on the basis of final estimates for 2015-16 instead of provisional data. The HPERC is requested to consider the actuals of 2015-16 for determining the APPC.	
3.	<p>On perusal of the data of the Petition, it is observed that power sold to HPSEBL by the small SHP generators under APPC in FY 2015-16 has also been considered for calculating APPC for FY 2016-17. It is apparent that APPC determined for FY 2015-16 was based on Average Pooled Cost of Purchase for FY 2014-15 which is lower than the power purchase cost of FY 2015-16 and thus drags the APPC for FY 2016-17 to a lower value.</p> <p>Further, the CERC Regulation extracted in para-1 above clearly States that power purchase from "Renewable Energy Sources" is to be excluded while calculating APPC. SHPs of less than 25.00 MW are essentially Renewable Energy Sources and whether these projects sell power under REC Mechanism (As approved by the Hon'ble Commission) or preferential tariff, does not alter the nature of source of generation which remains Renewable Energy Source.</p> <p>Therefore the Hon'ble HPERC is requested to exclude power purchase from small hydro projects of less than 25.00 MW capacity under APPC while working out the APPC for FY-2016-17.</p>	<p>HPSEB Ltd. submits that reasons for including projects under REC tariff while determining APPC have already been clarified by the Commission against Point No. 8.3 of APPC Order for FY 2013-14 dated 22<sup>nd</sup> June, 2013. The same is reproduced below:</p> <p>"The Commission accepts the correction made by the HPSEB Ltd. under the category of "Free Power &amp; Equity Power" and deleted the quantum and cost of power generation from the renewable energy sources including Private Micros (upto 5.00 MW); Private Micros (above 5.00 MW); Ghanvi; Baner; Gaj and Khaul, but does not agree to the contention given in the objections raised by the stakeholders to exclude the power purchase cost of 112.61 MUs under the category "PP cost from Private Micros supplying power to the HPSEB Ltd. at the APPC rates." <u>The IPPs of renewable energy sources get REC certificates on the quantum of renewable energy power sold to the distribution licensee at the APPC rates as such the quantum and cost of power purchase under this category has to be included in the total power purchase cost for the year.</u>"</p>
4.	<p>The CERC Regulations further clearly lay down that while calculating the APPC, power purchase cost of Distribution Licensee is to be considered. This clearly implies that the power purchase cost from all sources except renewable resource to be considered at the boundary of the distribution licensee.</p> <p>It is therefore required that various charges paid and Transmission losses deducted for bringing the power from the source upto the boundary of the HPSEBL also need to be included in the power purchase cost on proportional basis.</p> <p>Thus proportionate Transmission and other charges including SLDC charges as per para 4.6.14 of the Second APR Review Order dated 25.05.2016 also need to be included in the power purchase cost and Transmission losses of CTU (Power Grid) for interstate/inter regional (Kahalgaon) power and of STU (HPPTCL) be also deducted from the power purchase quantum to arrive at the quantum of power received by HPSEBL at its periphery.</p>	<p>HPSEB Ltd. submits that regarding inclusion of various charges paid and transmission losses deducted for bringing the power from source upto the boundary of HPSEB Ltd., the Commission has already clarified in its earlier order dated 16<sup>th</sup> July, 2012 for the APPC rate for FY-2012-13. Further, HPSEB Ltd. has been filing petitions as per methodology, approved by the Commission in its order for determination APPC in Petition No. 122/2014 dated 28.08.2014. The present petition is also as per the same methodology.</p>
<b>B.</b>	<b>Directorate of Energy</b>	
1.	As per CERC Regulations on REC Mechanism, the weighted average pool price is to be determined by excluding contribution from the Renewable Energy Sources. However, methodology adopted by the HPSEBL has not followed the same.	APPC petition filed by HPSEB Ltd. for determination of APPC for FY-2016-17 is by considering power purchased including cost of self generation from all the energy suppliers, long-term and short-term in previous year, but excluding those based on renewable energy sources. Therefore, methodology adopted by HPSEB Ltd. is correct and in line with CERC Regulations.
2.	As per Central Electricity Regulatory Commission Order dated 01.06.2010, the pooled cost of power purchase is the weighted average pool price at distribution level. Hence, the calculation for the APPC should have been done accordingly by the petitioner.	HPSEB Ltd. has been filing petitions as per methodology, approved by the Commission in its order for determination APPC in Petition No. 122/2014 dated 28.08.2014. The present petition is also as per the same methodology.

9. In order to promote generation from renewable sources, the Central Electricity Regulatory Commission framed regulations and issued orders for giving effect to the Renewable Energy Certificates (REC) framework. The Himachal Pradesh Electricity Regulatory Commission (hereinafter referred as the Commission) has also framed the Himachal Pradesh Electricity Regulatory Commission (Renewable Power Purchase Obligations and its Compliance) Regulations, 2010 in line with the Central Electricity Regulatory Commission (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2010, which specify that generation from renewal sources will be eligible for REC if it, inter alia:

“sells the electricity generated either (i) to the distribution licensee of the area in which the eligible entity is located, at the pooled cost of power purchase of such distribution licensee as determined by the Appropriate Commission, (ii) to any other licensee or to an open access consumer at a mutually agreed price, or through power exchange at market determined price.

**Explanation:-** “For the purpose of these regulations, ‘Pooled Cost of Purchase’ means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers, long-term and short-term, but excluding those based on renewable energy sources, as the case may be.”

10. The issue of APPC has been discussed elaborately by the Commission in its previous Orders while determining APPC i.e. in the Order dated 16.07.2012 for the year 2012-13 in petition No. 137/2011 and Order dated 22.06.2013 for the year 2013-14 in the petition No. 63/2013. In these Orders, the Commission adopted the following principles:-

- (a) The average pooled cost of purchase of power has three components relevant to the present context i.e. it has to be weighted average pooled price of power purchased; it has to be for the previous year and further that it has to be from the energy suppliers, both long term and short term;

- (b) The quantum and rate of power, purchased from the State Govt., out of its free power share shall be taken into account for pooled cost of purchase;
- (c) The unscheduled interchanges (U.I.) are not included in the power purchase cost. U.I. as a system mechanism is not a platform for power purchase or sale but is transaction/system of over-drawl or under-drawl against the power scheduled from the source. The under-drawl is a situation where the purchaser has paid price of power scheduled to him to the suppliers but he has not drawn from the system and if someone-else over-draws, charges will be reimbursed as per the pricing mechanism under U.I. Similarly, the over-drawl is from the system and is beyond the power purchased from the supplier and so scheduled and therefore, it does not amount to purchase of power on long term or short term basis from energy supplier. It can be argued that quantum of under-drawl should be reduced from the total power purchase which can further lead to issues of pricing of under-drawls as to whether such price should be on the principles of costly power at the margin in the merit order purchase. Therefore, U.I. over-drawls cannot be treated as power purchase for the purpose of pooled cost of purchase. Similarly PGCIL/Transmission/ULDC charges etc. are not applicable when power is being supplied to local Discom at APPC;
- (d) Total power, purchased is disposed off/utilized by way of sale, within and outside State and by way of banking. Power purchase only is relevant for APPC and disposal/ utilization of power is not relevant to the context of determination of APPC;
- (e) Where the outward banking (banking sale) is from out of power purchased during the year from energy suppliers (long term and short term), its cost is already paid. Therefore, if the same quantum, or part of such quantum, is received as inward banking (contra banking purchase), such quantum and price should not be included over and above the quantum or price already taken into account, out of which such power has been banked. The

Commission had taken cost of banking power, whether purchase or sale, as zero, because, in the absence of firm cost of such power, any notional cost leads to distorted results in profit/loss in the balance sheet. Banking arrangement, as a practice in the State, is rolling arrangement involving contra, forward and return banking with various Discoms in the region. There is no criteria for determination of rate and as a prudent practice, the Commission had taken such banking sale and purchase at zero cost. Therefore, any quantum of energy received during the year in excess of purchased energy banked in the same year, under banking arrangement, shall be treated as additional quantum of power purchase, but at zero cost. Hence, only the quantum of inward/forward banking (banking purchase) in excess of quantum of contra-banking, in the previous year will be taken as additional power purchase at zero cost;

- (f) The arrears pertaining to past periods will be excluded as these are not recurring in nature;
- (g) The PGCIL/Transmission charges/ULDC/other charges will not be included;
- (h) Purchases under REC framework on APPC will be included.

The APPC rates have worked out for the previous financial years as per the above principles. In the proposal, the HPSEB Ltd. submitted that licensee didn't forward bank any power as per the growing trend of decrease in demands in winter months in the state.

11. The principles and methodologies applied in calculating APPC for years 2012-13 and 2013-14 have attained finality, and therefore, the Commission finds it appropriate to apply the same for computation of APCC under this order as well as for future years.
12. Accordingly, the Commission, after duly considering the submissions made by the stakeholders and the replies given by the distribution licensee i.e. HPSEB Ltd and relevant power purchase expenses of the FY-2015-16, eligible for calculation of weighted average pooled price for FY-2016-17, submitted in the Petition No. 35/2016 and MA No.

89/2016 by the HPSEB Limited, determines the rate of the APPC for FY-2016-17 as under:-

<b>Eligible Power Purchase Expenses of FY 2015-16 for determination of the APPC for FY 2016-17</b>		
<b>Details</b>	<b>MUs</b>	<b>Rs. Crore</b>
HPSEBL Stations	1080.39	176.10
BBMB Stations	651.28	44.48
NTPC Stations	1685.74	571.81
NHPC Stations	311.15	81.52
From other Stations	4272.74	1115.16
Free Power and Equity Power	566.65	158.85
From Private Micros	340.84	78.73
PXI/IEX	170.21	45.61
<b>Total Power Purchase Cost</b>	<b>9079</b>	<b>2272.26</b>

The computed APPC rate is 250 paise per unit of energy.

Based on the above, the APPC for FY-2016-17 works out to 250 paise per unit of energy and is so approved by the Commission. These prices are firm and final and will not be tried up.

13. This Order shall be applicable for the FY-2016-17 and shall continue for further period with such variation or modification as may be ordered by the Commission for the next financial year.

The Commission orders accordingly.

Place: Shimla  
Dated: 28.10.2016

Sd/  
(S.K.B.S. Negi)  
Chairman