

PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SCO NO. 220-221, SECTOR 34-A, CHANDIGARH
email address: registrarpsercchd@gmail.com

Petition No. 7 of 2017
Date of Order: 18.05.2017

Present: Shri D.S. Bains, Chairman
Shri S.S. Sarna, Member

In the matter of: Petition under Section 86 (1) (b) of the Electricity Act, 2003 for the approval of Power Procurement plan on Short Term basis for the year 2016-17 read with the Public notice issued by the Punjab State Electricity Regulatory Commission dated 23.10.2012.

AND

In the matter of: Punjab State Power Corporation Limited (PSPCL), The Mall, Patiala-147001.

.....Petitioner

ORDER

The present petition has been filed by the Punjab State Power Corporation Limited, (PSPCL) under Section 86 (1) (b) of the Electricity Act, 2003 for approval of power procurement plan on short-term basis for the year 2016-17, read with the notification issued by the Punjab State Electricity Regulatory Commission dated 23.10.2012.

2. The submissions made by PSPCL in the Petition are summarized as under:

i) The present petition is being filed under Section 86 (1) (b) of the Electricity Act, 2003 read with Clause 9 of "Approval of Power Procurement plan by Commission" of the Notification dated 23.10.2012 issued by the Commission which states as under:

"The Distribution Licensee(s) shall submit the short term power procurement plan including the assessment of availability and

requirement of electricity for the ensuing year to the Commission on or before 31st October each year. The Distribution Licensee(s) shall submit ensuing year plan on monthly basis and also the rolling long-term plan for next ten years along with ARR each year, duly updating the long-term power procurement plan submitted in the previous year as approved by the Commission, to take the latest developments into account.”

- ii) In accordance with the above notification, petition no. 13/2016 was filed for the procurement of power on short term basis for the period from 16th June 2016 to 30th Sep 2016 against which the Commission passed the following order:-

“.....However, in case of any exigency, PSPCL may go for purchase of short-term power in a judicious and economical manner and also resort to Demand Side Management Practices to maintain its commercial viability.”

In the above said order, the commission has emphasized on the economical aspect of the power purchase.

- iii) The Winter season of the state in respect of demand is such that there is huge gap in the demand during day & night hours. The peak demand during the day hovers around 5500 MW, whereas the demand during night hours falls below 3000 MW. Moreover it has been observed that the maximum demand remains during a period from 07:00 hrs to 17:00 hrs. To meet with this demand, generation has to be kept available accordingly, which results into surrender of cheaper powers during the night hours, because the thermal generating stations have limit up to which they can be backed down. This surrender of cheaper power during night hours hurts PSPCL financially. In order to minimize the losses, it is very

essential to optimize the available power. This can be done if some quantum of power is made available from alternate sources only for the period from 07:00 hrs to 17:00 hrs during which the requirement of power is maximum.

- iv) In the light of above, PSPCL decided to float a Tender Enquiry for the purchase of 500 MW power on short term basis for the period from 07:00 hrs to 17:00 hrs for each month of Dec 2016, Jan 17 & Feb 17 and 200 MW of power on RTC basis. Since the average price of power through exchange had been observed to be quite reasonable and hence this short term purchase of power was expected to be available at approximately the same reasonable rates. Against the instant tender enquiry the L-1 rate received for the period from 07:00 to 17:00 Hrs is Rs. 2.72/Unit, which is significantly lower than the variable rate of our own generating plants and is comparable even with the variable cost of TSPL. Accordingly PSPCL has placed orders for purchase of power for duration 07:00 to 17:00 Hrs with following details:-

Month	Dec-16	Jan-17	Feb-17	Total	Price/kWh
Quantum (MW)	500	500	500	1080 MUs	Rs. 2.72
Quantum (MUs)	372	372	336		

- v) In the facts and circumstances narrated above under which orders for the purchase of power on short term basis have been placed keeping in view the availability of power at cheaper rates, it is prayed that Commission may :-
- a) Give the post-facto approval to purchase of 1080 MUs power on short term basis for the period from 1.12.2016 to

28.02.2017 through competitive bidding process.

b) Pass any such further order(s) as deemed fit in the facts of the case.

3. The Petition came up for admission on 09.03.2017. The Commission made the following observations in its Order dated 09.03.2017:

“The Commission regretted to note that the permission of the Commission was not taken before issuing this present tender for short term purchase of power. In view of the pleadings made by PSPCL officers, the Commission agreed to consider the present case but PSPCL is cautioned that in future the Commission’s permission must be taken before issuing of tenders for short term purchase of power. Further, the Commission desired that PSPCL should submit the following details by 24.03.2017:

- i) Actual quantum of power purchased by PSPCL last year;*
- ii) Specific period/time of the power purchased by PSPCL;*
- iii) All the details of the financial benefits accrued to them last year;*
- iv) Details of the tender floated by them for the purchase of power for this year;*
- v) Actual figures regarding purchase order”.*

4. PSPCL submitted vide their letter dated 29.03.2017, the reply to the above observations made by the Commission, which are

summarized as under:

- (i) PSPCL has taken note of the observation of the Commission in respect of not obtaining the prior permission to float Tender Enquiry for the purchase of power under short term. However it is humbly requested that due cognizance of the same will be taken in future. In this regard it is also requested that PSPCL has already floated a tender enquiry for the purchase of power on short term basis for the period from June, 2017 to Sep., 2017 so as to make advance arrangements of power at reasonable rates for the forthcoming paddy season. Petition for this procurement of power shall be filed before PSERC shortly.
- (ii) **Actual Quantum of power** procured by PSPCL on short term basis through Tender Enquiry No. PPR 03/16 and PPR 06/16 during the year 2016 is 1439.58 MUs. *Month wise detail of quantum is as under.*

	Apr-16	May-16	June-16	July-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Total (Mus)
Purchase of Power on short term basis	0.00	0.00	1193.09	468.94	543.04	242.64	0.00	0.00	3.81	0.00	1439.58*

**Actual figure works out to be 2451.52*

- (iii) **Specific period/time of the power purchased by PSPCL**

During the previous year PSPCL purchased power for the period from 16th June to 30th Sep 2017 on RTC basis (i.e from 00:00 to 24:00 Hrs) against Tender Enquiry (TE) No. PPR 03/16 and for the period from Dec., 16 to Feb., 17 for duration 07:00 to 17:00 hrs against TE No. PPR 06/16. However against the later TE, power flowed for only one day on actual basis due to WR-NR corridor constraints.

(iv) **All the details of the financial benefits accrued to them last year**

a) Against Tender Enquiry No. PPR 03/16:

For the year 2016 PSPCL has managed to purchase power on short term basis at an average rate of Rs. 3.33 per unit (Total 1435.77 MUs for Rs. 478 crore) even during the peak demand season from 16th June to 30th Sep 2017 against Tender Enquiry No. PPR 03/16 which is much cheaper than variable cost of PSPCL's own thermal plants. Average variable cost of PSPCL's own thermal plants during this period has been as follows:-

Plant	Variable Cost Rs./Unit
GHTP	3.62
GGSTP	3.80
GNDTP	3.60

By purchasing power on short term basis during the above referred period, PSPCL substituted 1435.77 MUs of costly energy at an average rate of Rs. 3.67 per unit of its own thermal plants with the cheaper power under short term procurement at an average rate of Rs. 3.33 per unit. In this way in addition to ensuring reliable supply to all its consumers while meeting an all time high un-restricted demand of 11408 MW, while utilizing all other available cheaper powers to its optimum use PSPCL also benefitted financially by Rs. 48.82 crore as under:

Detail	Energy (MU)	Rs/Unit	Amount (Crore)
Cost of same quantum of energy by operating own thermal plant	1435.77	3.67	526.93
Cost of same quantum of energy by purchasing power	1435.77	3.33	478.11
Saving by purchasing power			48.82

b) Against Tender Enquiry No. PPR 06/16

Against this TE power flowed on actual basis only on 01.12.2016 when no Unit of IPPs i.e NPL & TSPL was on reserve shutdown. These plants are having variable cost lower than Rs. 2.72 per unit at which short term power was purchased. In the absence of this power procured on short term basis, PSPCL would have to run its own thermal plants for equivalent energy of 3.811 MUs. Variable cost of our own thermal plants for the month of Dec.,16 is listed as below :-

Plant	Variable Cost Rs. /Unit
GHTP	3.61
GGSSSTP	3.78
GNDTP	3.61

It is quite evident from above that PSPCL has gained financially by procuring power at the Rs. 2.72 per unit instead of operating its own thermal plant having lowest variable cost of Rs. 3.61 per unit. It is also brought out that PSPCL faces its peak demand in winter season during day hours i.e. 07:00-17:00 Hrs. During rest of the day PSPCL has to back down/surrender cheaper powers due to less demand. So by not operating own thermal plants, which would have lead to excess surrender of cheaper energy at night during this period, PSPCL has gained financially. The financial gains achieved by PSPCL by substituting own thermal power with short term power purchase on actual basis is as under:-

	Detail	Energy (MU)	Rs./Unit	Amount (Crore)
A	Cost of operating own thermal plant	3.811	3.61	1.38
	Cost of purchasing power	3.811	2.72	1.04
	Saving by purchasing power			0.34
B	Financial gain by not surrendering cheap powers due to non operation of own thermal plants			
	a) Cost of Energy generated from 2 nos. own generation during night hours where it was not needed due to low demand (Even after backing down them at 170 MW from 210 MW during 00.00 to 06.00 & 17:00 to 24:00 Hrs)	4.42	3.61	1.59
	b) Cost of above quantum of energy Rs. 2.61/Unit or even lower substituted from other cheaper sources in absence of own thermal plants	4.42	2.61	1.15
	Financial gain by not surrendering cheap power due to non operation of Own thermal plants			0.44
	Total Saving (A+B)			0.78

As is clear from above, on purchase of 3.811 MUs PSPCL was able to save Rs. 0.78 crore, PSPCL would have saved an amount of Rs. 221 crore approx. In case no transmission constraints would have been there, the financial gain PSPCL achieved by PSPCL would have been much more had the energy actually flowed, which has otherwise been curtailed due to transmission constraints, is as under:-

	Energy Procured on actual basis	Amount
Total Saving	1080 MUs	221 Crore

v) **Details of the tender floated by PSPCL for the purchase of power for the year 2016-17**

Details of tenders floated by PSPCL are as under:-

a) **Tender enquiry no. PPR 03/2016 for the period May 2016 to Sep 2016:**

Period	Duration (Hrs)	Quantum at NR Periphery(MW)
1 st to 31 st May 2016	00:00-24:00	100
1 st to 15 th June 2016	00:00-24:00	1200
16 th to 30 th June 2016	00:00-24:00	1400
1 st to 31 st July 2016	00:00-24:00	1100
1 st to 31 st Aug 2016	00:00-24:00	1200
1 st to 15 th Sep 2016	00:00-24:00	1050
16 th to 30 th Sept.,2016	00:00-24:00	850

b) Tender enquiry no. PPR 06/2016 for the period 1st Nov 2016 to 31st March 2017

Period	Duration (Hrs)	Quantum in MW at NR Periphery
1 st Nov 2016 to 31 st March 2017	07:00 to 17:00	500
1 st Nov 2016 to 31 st March 2017	00:00 to 24:00	200

vi) Actual figures regarding purchase order

PSPCL placed orders upon different firms for procurement of 1080 MUs of power at Rs. 2.72 per unit for the period Dec.,16 to Feb.,17 for duration 07:00 to 17:00 hrs. The rate offered by these firms was significantly lower than the variable rate of our own generating plants. However all of these firms were having their sources based in WR region. Due to transmission corridor constraints on WR –NR corridor NRLDC refused the applications on account of no margin on transmission network and PSPCL has not been able to draw this power. Due to this reason PSPCL has been able to receive only 3.811 MUs of power on actual basis during Dec-16 against tender enquiry no. PPR 06/2016. Month wise details of purchase order placed are as under:-

Firm	Source	1.12.16 to 31.12.16	01.01.17 to 31.01.17	01.02.17 to 28.02.17	FIRM Rate at Punjab periphery (Rs./kWh)
		Quantum (MW)			
PTC	Jaypee Nigrie Super Thermal Power Plant Unit-2 (JNSSTP2)	385	385	275	2.72
	Jindal Power LTD. (Unit 2&4) (JPL2) (Raigarh Chhattisgarh)	115	115	120	2.72
DB Power Limited	DB Power Limited, Chhattisgarh	0	0	105	2.72
Total		500	500	500	

- vii) In the facts and circumstances narrated above under which orders for the procurement of power on short term basis had been placed, it is prayed that the Commission may –
- Give the post-facto approval to purchase of 3.811 MUs power on short term basis for the period from 1.12.2016 to 28.02.2017 through competitive bidding process.
 - Pass any such further order(s) as deemed fit in the facts of the case.

5. Commission's observations and findings:

- The Commission has notified the Regulations called Punjab State Electricity Regulatory Commission (Power Purchase and Procurement Process of Licensee) Regulations, 2012, vide notification dated 23.10.2012, which apply to all inter-State/intra-State purchase and procurement of power by the Licensee(s) in the State of Punjab. Further Regulation 7 (2) (iii) of the said Regulations specifies that the plan for the next year shall be submitted by 31st October and the Commission**

shall approve the same by 31st December of the same year. The approved plan shall become a part of the subsequent tariff order. Also, Regulation 10 (i) under the heading “Criterion for Power Purchases” provides that, the Distribution Licensee(s) shall effect power purchase or enter into long term or short-term power purchase agreements or arrangements in accordance with the Power Procurement Plan approved by the Commission.

- ii) PSPCL through the Petition no 13/2016, had submitted a proposal for approval of purchase of 3723 MUs power on short term basis for the period from 1st May, 2016 to 30th Sept., 2016, to meet with the demand of power. But, on being informed by the Commission that the proposal of PSPCL is not realistic, PSPCL revised the proposal for purchase of 1141 MUs. It was also submitted that as per offers received against its tender enquiry, the above quantum is most likely to be met from sources with prices in range of Rs. 3.03 to 3.13/kWh. However, in view of the submissions of PSPCL that with the revised working of availability, there is no gap between demand and supply, the prayer of PSPCL did not survive and it rendered the petition infructuous. The petition was disposed of accordingly with remarks that, *“However, in case of any exigency, PSPCL may go for purchase of short-term power in a judicious and economical manner and also resort to Demand Side Management Practices to maintain its commercial viability.”*

Now on the query raised by the Commission in this petition, PSPCL have informed that it had procured 1435.77 MUs of

power worth Rs. 478 Crore, on short term basis at the rate of Rs. 3.33 per unit, during the period of June,16 to Sept.,16. PSPCL has submitted that, by purchasing power on short term basis during the above referred period, it has substituted 1435.77 MUs of costly energy at an average rate of Rs. 3.67 per unit of its own thermal plants. Commission observes that, as per the month wise detail of power purchased contained in “Annexure-1” annexed with PSPCL’s reply dated 29.3.2017, the figure of short term power purchase from June, 2016 to September, 2016 works out to be 2447.71 MUs. Also, as per the fuel cost determined in the Tariff Order for FY 2016-17, average variable cost of power from PSPCL’s own thermal plants works out to be Rs. 3.28 per unit.

- iii) PSPCL has filed the present petition, for obtaining post-facto approval to purchase of 1080 MUs power on short term basis for the period from 1.12.2016 to 28.02.2017 through a competitive bidding process. However, on query by the Commission, PSPCL has submitted that, even though it has placed orders upon different firms for procurement of 1080 MUs of power at Rs. 2.72 per unit for the period for duration 07:00 to 17:00 hrs as the rate offered by these firms was significantly lower than the variable rate of our own generating plants. However, since all of these firms were having their sources based in WR region due to transmission corridor constraints on WR–NR corridor the NRLDC refused the applications since there was no margin on transmission network. PSPCL has not been able to draw this power. Thus PSPCL was able to receive only 3.811 MUs of power on actual

basis during Dec.,16 against tender enquiry no. PPR 06/2016. It was also submitted that, PSPCL has gained financially by procuring power at the rate of Rs. 2.72 per unit instead of operating its own thermal plant having lowest variable cost of Rs. 3.61 per unit. PSPCL has amended its prayer as to give the post-facto approval to purchase of 3.811 MUs on short term basis for the period from 1.12.2016 to 28.02.2017 through competitive bidding process and to pass any such further order(s) as deemed fit in the facts of the case.

- iv) The Commission would like to draw attention to Regulation 7 (2) (i) of the Punjab State Electricity Regulatory Commission (Power Purchase and Procurement Process of Licensee) Regulations, 2012, which mandates that, “the short-term Power Procurement Plan for purchase of power shall be the least cost plan [least financial cost to the Distribution Licensee(s)], the ultimate objective being to make available secure and reliable power supply at economically viable tariffs to all consumers while satisfying power supply planning and security standards”. The Commission is of the view, that minimum rate (of Rs. 3.61 per unit) of its own thermal plants quoted by PSPCL is not realistic as the Commission had determined the variable cost per unit of power of PSPCL’s own Thermal Plants as Rs.3.40/kWh, Rs. 3.26/kWh and Rs. 3.28/kWh for GNDTP, GGSSTP and GHTP respectively in the Tariff Order for FY 2016-17. Also, minimum rate of surrender of substituted power from all sources including of the central sector in addition to its own plants is to be taken into account. Moreover as the FY 2016-17 has

already elapsed, it would be proper if the issue is taken-up during the True-up of the FY 2016-17.

PSPCL is directed to submit the cost benefit analysis of procuring short term power during the submission of ARR for the True up of FY 2016-17, indicating the detail of scheduled short term power during the year viz-a-viz source wise surrendered power from all sources including of the central sector units in addition to PSPCL's own thermal plants, along with the variable cost(s) at the State's periphery. Also, while working out the variable cost in case of own plants, due consideration be given to compensation payable to CCL for less lifting of allotted quantity of coal.

The Petition is disposed of accordingly.

Sd/-
S .S. Sarna
(Member)

Sd/-
D.S. Bains
(Chairman)

Chandigarh

Dated: 18.05.2017