

**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION  
SCO 220-221, SECTOR-34 A CHANDIGARH**

**Petition No. 28 of 2017  
Date of Order: 06.06.2017**

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

In the matter of: Petition for approval under Section 86(1)(b) of the Electricity Act, 2003 for the Power Procurement plan on Short Term basis for the year 2017-18 read with the Public notice issued by the Hon'ble Punjab State Electricity Regulatory Commission dated 23.10.2012.

AND

In the matter of: Punjab State Power Corporation Limited,  
The Mall, Patiala.  
.....Petitioner

**ORDER**

1. PSPCL has filed the present petition under section 86(1)(b) of the Electricity Act, 2003 read with Notification dated 23.10.2012 issued by the Commission for Power Procurement Plan on Short Term basis for FY 2017-18.
2. The details of submissions of PSPCL are contained here under:
  - a) **Power Scenario:** PSPCL has submitted that at the time of submitting ARR, it was envisaged that all the three units of TSPL will be available during paddy season 2017 at 100% of its capacity. But as per previous experience since last winter season 2016-17, it has been observed that due to technical snags this plant is not available at its full capacity consistently and has been considered at 80% of its full capacity during the forthcoming paddy season.

Two units of GVK were also expected to be available for the FY 2017-18, but due to non availability of coal, both these units are not anticipated to be available during this paddy season 2017.

- b) **Assessment of unrestricted demand:** The prospective month-wise unrestricted peak demand of Punjab for the period from June, 2017 to September, 2017 has been worked out by considering 5% rise over the peak demand of corresponding period of previous year.

**Demand Pattern for Previous year i.e 2016 (MW)**

(MW)	1 to 14 June	15 to 30 June	1 to 15 July	16 to 31 July	1 to 15 Aug	16 to 31 Aug	1 to 15 Sep	16 to 30 Sep
Max. Demand registered during the year 2016	9885	10997	11408	11153	11204	10431*	10543	10065
With 5% Rise on above	10379	11546	11978	11711	11764	10953	11070	10568

\*Registered comparatively less due to weather conditions

**Unrestricted Peak Demand**

Month	in MW		in MU	
	FY 2016-17	Projection for 2017-18 with 5% rise over 2016-17	FY2016-17	Projection for 2017-18 with 5% rise over 2016-17
June	10997	11547	6030	6332
July	11408	11978	6616	6947
August	11204	11764	6349	6666
September	10543	11070	6208	6518

- c) **Banking of power:** PSPCL submitted that it has direct as well as indirect (through traders) banking arrangements with many States (within and outside the northern region). The power banked in advance by PSPCL during winter is received back during next summer (Paddy) and the power received in advance from other states during summer (Paddy) is returned back during following winter. As per commitments already made, it is expected that

around 350 MW (1131 MU) will be given in advance up to 31.03.2017, which is expected to be received back during Paddy-2017. In addition to this as per past years practices, approximately 100 MW (72 MU) of Power is likely to be received in advance from other States/Utilities under advance banking arrangements, which will be returned back to other States during winter 2017-18. PSPCL has anticipated that 1203 MU of power will be available during the period from June, 2017 to September, 2017 under banking arrangements. The month-wise details of banking power to be available, are as under:

<b>Provisional Banking Scenario for the period from June, 2017 to September, 2017</b>				
Energy (MU)	188	414	305	296
Average Expected (MW)	261	556	410	411

- d) PSPCL has submitted that keeping all the facts, as discussed above, the availability of power from all of the sources has been worked out on the basis of following assumptions:
- (i) Two Units of NPL Rajpura with 100% availability and all the three Units of TSPL Talwandi Sabo with 80% availability have been considered operational during the period.
  - (ii) No Unit of GVK has been considered operational during the period due to uncertainty about availability of coal with it. However, it is pertinent to mention that both the units have been considered available in the ARR for the FY 2017-18.
  - (iii) Own generation including all three own thermal stations i.e. GNDTP, GGSSTP, GHTP has been considered with a possibility of one 250 MW outage against Installed Capacity of 2640 MW.

- (iv) Banking of power considered during this period is tentative which includes likely tie-ups under advance banking up to 100 MW.
- (v) Demand has been considered with 5% rise over previous year's peak demand. However, the demand is highly weather sensitive and there is always a high level of unpredictability in the demand analysis.
- (vi) Energy requirement has been prepared considering the average energy availability from all the sources as in ARR.
- (vii) Gap in demand has been worked out considering the peak demand likely to be met during this period, considering anticipated peak availability from all sources.
- (viii) PEDANA/NRSE power comprising Non Solar and Solar power sources of total 980 MW has been considered. However this expected total installed capacity of total 980 MW has been considered with an availability factor of 70%.

**Availability Demand Gap on Energy Basis**

<b>To meet Demand on Energy Basis</b>	<b>Unit</b>	<b>Jun-17</b>	<b>Jul-17</b>	<b>Aug-17</b>	<b>Sep-17</b>	<b>Total</b>
Availability	MU	6768	7214	7149	6698	27829
Demand*	MU	6332	6947	6666	6518	26526
Gap {deficit (-ve) & surplus (+ve)}*	MU	436	267	483	117	1303

\*Figures wrongly mentioned in the petition

**Requirement of Power on the basis of Peak Demand**

Requirement of Power on the basis of Peak Demand	Unit	1 to 14 <sup>th</sup> June	15 <sup>th</sup> to 30 <sup>th</sup> June	1 to 15 <sup>th</sup> July	16 <sup>th</sup> to 31 <sup>st</sup> July	1 to 15 <sup>th</sup> Aug	16 <sup>th</sup> to 31 <sup>st</sup> Aug	1 to 15 <sup>th</sup> Sep	16 <sup>th</sup> to 30 <sup>th</sup> Sep	Total
Availability	MW	10208	10497	10989	10989	10892	10892	10745	10695	-
Demand	MW	10379	11546	11978	11711	11764	10953*	11070	10568	-
Gap {deficit (-ve) & surplus (+ve)}	MW	-171	-1050	-989	-722	-872	-61*	-325	126	-
Net Corridor available	MW	1539	1539	1144	1144	1240	1240*	1339	1339	-
Power that can be purchased up to corridor limit	MW	171	1050	989	722	872	61*	325	0	-
	MU	62	378	356	260	314	22*	117	0	1509
Short Term Power Purchase to be Procured (90% of above gap through tender)	MU	55	340	321	234	283	20*	105	0	1358

\*Figures wrongly mentioned in the petition

- e) PSPCL has further submitted that the figures in ARR petition are annual cumulative energy figures, whereas in the short term Power Procurement plan figures are on monthly MW basis. Though in terms of energy PSPCL may have sufficient capacity to meet demand, but for peak demand PSPCL needs to procure power from other sources.
- f) Further, both the units of GVK have already been commissioned but coal supply is quite uncertain and availability of coal for all the IPPs (NPL, TSPL & GVK) and our own generating plants may vary, thus availability demand scenario may undergo a change. The weather conditions prevailing at that time may also impact the demand scenario significantly. It is pertinent to mention here that during the previous year while importing power from WR/ER regions, transmission constraints were observed, further against

the previous tender enquiry, orders were placed upon different firms for the period Dec-16 to Feb-17 for duration 07:00 to 17:00 hrs. 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. This corridor constraint is expected to exist during summer months as well. Due to which power to be received under banking arrangements from other regions may also get affected.

- g) **Power Procurement Process:** PSPCL has submitted that to meet the above discussed demand and as per the previous practice, Short Term Power will be procured through competitive bidding process. PSPCL has no other option, but to go ahead for Short Term Power procurement in view of the expected shortage which is likely to occur despite the best efforts made by PSPCL to tie up the requisite quantum of power from long term sources. The reasons for short supply / availability of power are also beyond the control of PSPCL and are mostly related to non-availability of fuel, reduced availability of power from various sources etc.

The maximum demand recorded during the year 2016 as on 01.07.2016 is 11408 MW, which was a challenge to meet, but was successfully met by arranging power from all the available sources that include purchase of power under short term open access, as well as through exchange. This year's peak demand, considering 5% rise over the previous year, is anticipated, to be around 12,000 MW, whereas, the total availability of power with PSPCL is around 11,000 MW in which the generation from GVK, Goindwal Sahib has not been considered in view of non-availability of coal with it.

The variable cost of generation from our own thermal generating stations is around ₹3.70/unit, which is substantially higher than the rate at which the power under short term power purchase is available during the forthcoming summer season. It is pertinent to mention here that the power under short term purchase during the year 2016-17 was available to PSPCL at ₹3.33/unit on an average. Hence, power can be purchased on short term basis not only for a quantum of deficit but also for an additional quantum, since the variable cost of our own thermal plants is much more than the rate discovered under the instant tender enquiry which is ranging from ₹2.62 to ₹2.80 from the sources located in Western Region and ₹3.16 to ₹5.11 from the sources located within Northern Region this additional quantum can be utilized to replace expensive generation from our own thermal generating stations.

- h) PSPCL submitted that it has been also observed that the rates of power during night hours are comparatively less than that of day time. Therefore, Tender Enquiry also contains a quantum of 200 MW from 00:00 to 06:00 Hrs and 22:00 to 24:00 Hrs (Night Hours).
- i) PSPCL has further submitted that as detailed in above paras 90% of the gap 1509 MU i.e. 1358 MU, is planned to procure under instant tender enquiry, and balance of 151 MU will be procured through energy exchanges depending on requirement assessed on day ahead basis to adjust with real time variations on demand due to weather disturbance etc. and availability variations due to outages or technical snags etc.
- j) Under Section 43 of the Electricity Act, 2003, PSPCL as a distribution licensee, has a universal service obligation and needs to make alternative arrangements so that the inconvenience to its

consumers can be minimized to the extent possible.

- k) In view of all the above facts, PSPCL has floated a tender enquiry for purchase of power on short term basis. PSPCL has further submitted that the IPO of eligible firms against instant tender enquiry was opened on 07.03.2017 and the L-1 rates discovered after e-RA (Reverse auction) are as under:

Period	Duration	Location of Source	L-1 Rate (₹/Unit)
1 <sup>st</sup> June, 2017 to 30 <sup>th</sup> Sep., 2017	On RTC basis (00:00 Hrs to 24:00 Hrs )	Western Region	2.62
	00:00 Hrs to 06:00 Hrs & 22:00 Hrs to 24:00 Hrs	Western Region	2.67
	On RTC basis ( 00:00 Hrs to 24:00 Hrs )	Northern Region	3.16

- l) **Prayer:** PSPCL has submitted that in the facts and circumstances explained in previous paras 90% of the gap of 1509 MU i.e. 1358 MU has been planned to procure under instant tender enquiry and balance of 151 MU through energy exchange depending on requirement assessed on day ahead basis. PSPCL has prayed to the Commission as under:
- Approve the proposal for purchase of 1358 MU power on short term basis for the period 1<sup>st</sup> June, 2017 to 30<sup>th</sup> September, 2017 through competitive bidding process by open tender to meet with the demand of power/ Day ahead on real time basis up to transmission corridor limit.
  - Further, in case of outage of any project, the requisite additional procurement of power on actual basis may also be allowed.
  - Pass any such further order(s) as deemed fit in the facts of the case.



3. The petition was taken up by the Commission on dated 25.04.2017 and the Commission vide its order dated 25.04.2017, ordered as under:

*“After hearing the Officers of PSPCL, the petition is admitted and order is reserved. However, if any information is required from the petitioner, the same will be called for by the Commission.”*

4. **Commission’s observations and findings:**

- i) 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 31<sup>st</sup> October and the Commission shall approve the same by 31<sup>st</sup> 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 has filed the present petition, for obtaining the approval to purchase of 1358 MU (90% of total deficit assumed during the period) power on short term basis for the period from June, 2017 to September, 2017 through a competitive bidding process. PSPCL in the petition has submitted that availability of power from all sources i.e. own hydro stations, own thermal stations, availability from

BBMB, IPPs within the State, availability from Banking and from co-generation/biomass/NRSE power. PSPCL has projected the demand from June to September on the basis of adhoc 5% rise over the actual demand during the same period for FY 2016-17.

- iii) The Commission observed that PSPCL in the ARR petition (No. 90 of 2016) for MYT Control Period from FY 2017-18 to FY 2019-20 has submitted that it shall have surplus energy available from tied up sources from Central Generating Stations and other sources, during FY 2017-18, FY 2018-19 and FY 2019-20. Further, PSPCL in petition (No. 01 of 2017) in the matter of petition for regulatory measures to be taken for the Tariff year 2017-18, submitted that it had over the years taken measures to improve the power availability situation and presently expected to be surplus in electricity availability throughout the year 2017-18. Now, PSPCL has filed the present petition for procurement of power on short term basis for the period from June, 2017 to September, 2017 through a competitive bidding process.
- 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”.
- v) The Commission is of the view, that minimum rate (of ₹3.70 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 ₹3.40/kWh, ₹3.26/kWh and ₹3.28/kWh for GNDTP, GGSSTP and GHTP respectively in the Tariff Order for FY 2016-17 and prices of coal have dipped further. Further, the assumption taken by PSPCL for assessing the availability of power also seems to be non realistic as PSPCL has assumed outage of 250 MW of own thermal generation throughout the period and assumed PLF of remaining units as 85% against 95%(+) achieved in the past.

- v) The Commission, thus, provisionally approves the short term power purchase of 1358 MU as per prayer of PSPCL for the period from June, 2017 to September, 2017 subject to the condition that no cheaper power is surrendered during the period. The approval of the Commission is further subject to the condition that PSPCL follows the procedure as laid down in the Punjab State Electricity Regulatory Commission (Power Purchase and Procurement Process of Licensee) Regulations, 2012.
- (vi) PSPCL shall also submit to the Commission the information as mentioned in Regulation 11(iv) and 11(v) of Punjab State Electricity Regulatory Commission (Power Purchase and Procurement Process of Licensee) Regulations, 2012 and also to submit the cost benefit analysis of procuring short term power to the Commission at the time of review/true-up for FY 2017-18, 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: 06.06.2017**