

BEFORE THE HON'BLE KERALA STATE ELECTRICITY REGULATORY COMMISSION

In the matter of: Petition under Regulation 77(3)(f) of the KSERC (Terms and Conditions for Determination of Tariff) Regulations 2018 seeking approval for entering into short term power procurement arrangement through banking transactions during the period from February 2020 to September 2020 with PTC India Ltd. and BSES Yamuna Pvt. Ltd.

KSEBL MOST HUMBLY STATES THAT:

1. Kerala State Electricity Board Limited files the instant petition seeking approval for entering into short term power procurement arrangement through banking transactions during the period from February 2020 to September 2020 with PTC and BYPL for economically managing power shortage anticipated during the ensuing summer season.
2. KSEBL has reviewed the peak and energy demand for the months from February 2020 to May 2020, in order to take an early action for avoiding power crisis and to avoid scheduling of high cost internal thermal generation. On analysis of the peak and energy availability in the State for the period from February 2020 to May 2020, a peak demand shortage of around 336 to 570MW during evening peak is anticipated. The LGB for the period from November 2019 to May 2020 is submitted below.

Peak demand balance:

	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
Peak Demand	3800	3850	3900	4000	4400	4400	4400
Hydro	1448	1389	1489	1480	1743	1692	1661
Outages	-100	-100	-100	-100	-100	-100	-100
Wind, IPPs	60	60	60	50	30	30	35
CGS Net	1166	1186	1176	1184	1184	1184	1184
LTA net	1000	1000	1000	1000	1000	1000	1000
OA + UI	50	50	50	50	50	50	50
Total	3624	3585	3675	3664	3907	3856	3830
Surplus (+) /Deficit(-)	-176	-265	-225	-336	-493	-544	-570

Energy balance in MU:

	19-Nov	19-Dec	20-Jan	20-Feb	20-Mar	20-Apr	20-May
Hydro	521.56	539.78	515.83	515.83	801.06	696.14	669.16
CGS	966.01	930.42	1004.77	917.06	925.41	915.16	945.66
LTA	784.8	790.77	798.75	747.22	798.75	745.6	798.75
CGS+LTA - Credible outage	-172.8	-143.69	-179.61	-168.02	-179.61	-83.43	-143.69
Solar/Wind	20	20	20	20	20	20	20

SWAP Ret	0	0	0	0	0	0	0
Net Availability	2119.57	2137.28	2159.74	2032.09	2365.61	2293.47	2289.88
Demand Anticipated	2134.48	2138.09	2119.53	2154.7	2555.95	2502.44	2535.93
Surplus (+) /Deficit (-)	-14.91	-0.81	40.21	-122.61	-190.34	-208.97	-246.05

Following assumptions were taken for arriving the above LGB :

- Consumption and demand growth has been worked out based on last 10 years average growth, year on year basis.
- Hydro availability is considered with normal monsoon and maintenance schedule.
- 100MW credible outage in hydro availability is considered during peak hours, based on performance history.
- CGS and LTA availability is taken assuming no major additions and after accounting for 10% credible outage besides their normal maintenance schedule, based on performance history.

3. To overcome the anticipated power and energy shortage in the summer months, it was decided to tie up firm power through SWAP/DEEP portal for about 50% of the shortage and remaining 50% through Day ahead market in Power Exchange as required based on market trends.
4. Hon'ble Commission in the order dated 24-10-2019 in OP 47/2019 filed earlier by KSEBL seeking approval for the banking transactions made during the months of February 2019, March 2019 and April 2019 for meeting the power deficit during summer 2019, observed that if KSEB Ltd could invite bids / offers for banking / swap arrangements through their website with wide publicity, KSEB Ltd could even get more participation for banking / swap arrangements with better offers, during summer months. Accordingly, Hon'ble Commission directed that, henceforth, as and when KSEB Ltd intends to go for banking/ swap arrangements for meeting the power requirements of the State, it shall invite bids/offers through their website with wide publicity so that better offers can be got for banking/ swapping transactions.
5. Accordingly, KSEBL decided to invite EoI for banking power with supply period from Feb 2020 to May 2020 and return period from mid June 2020 to September 2020.
6. Accordingly, a draft EoI document was prepared to invite Expression of Interest from Traders/Utilities for banking power with KSEB Ltd, as per the terms and conditions specified in the EoI, was placed before the Core Committee held on 02-09-2019. The draft EOI was circulated to all the prospective participants, i.e. traders/utilities and a Pre EoI meeting was conducted with them, in order to obtain their inputs, before finalizing and proceeding with the EoI.

7. Based on the inputs received from the traders/utilities, the EoI document was finalized. A copy of the EoI is enclosed as **Annexure-1**. The general features and terms and conditions specified therein are summarized below.

- 1) Utilities or Traders to have valid license from CERC.
- 2) Preference will be given to those offers with supply during the month of March, April and May of 2020, with supply during 18-23 hrs.
- 3) Priority to those Utilities who are willing to absorb return power 01.00hrs -05.00 hrs during July, August and September of 2020.
- 4) For applicants requiring RTC return of banked power, a maximum of 25% of return power (in MW) as RTC and the balance quantum uniformly distributed during the period excluding 18.30 to 22.30 hrs.
- 5) The minimum period of return should not be less than 1 month and the maximum cumulative quantum that can be returned during non-peak hours may be limited to 300MW and that during 18.30 to 22.30 hrs to 50 MW in any month.
- 6) The delivery point shall be the regional periphery of the exporting utility in either case.
- 7) The minimum supply quantum shall be 25 MW for a minimum continuous period of 15 days.
- 8) The selected applicants must be capable of making timely arrangement for securing open access approval for transmission corridor and pay the SLDC/RLDC Charges, application fee and any other charges applicable (excluding transmission corridor e bidding) for securing open access approval as per CERC regulations. In case of transmission corridor constraints during the supply or return period when the application is submitted to RLDC on advance basis, then application shall be submitted on FCFS/Day-Ahead basis or as mutually agreed.
- 9) All Open Access charges, transmission charges i.e. PoC injection charges and transmission losses i.e. PoC injection losses up to the delivery point (Regional Periphery) shall be to the account of exporting utility and all Open Access charges, Transmission charges i.e. PoC withdrawal charges and transmission losses i.e. PoC withdrawal losses beyond the delivery point (Regional periphery) of the exporting utility shall be to the account of importing utility.
- 10) In case of revision/cancellation of approved open access corridor, the party seeking revision/cancellation of open access corridor will bear all the open access charges as applicable under Inter-State Open Access Regulations from the Injection point till the point of drawl applicable due to such surrender/ cancellation.
- 11) KSEB Ltd shall not be liable to pay any trading margin (in case of traders), while exporting power to Other Utility(during return period). KSEB Ltd shall pay trading margin (in case the applicant is a trader) limited to a maximum of 3 paise per unit at the time of importing of power during the supply period of the banking arrangement.
- 12) If KSEB Ltd fails to return the banked power during the normal returning period, the balance quantity shall be returned during the immediate succeeding month of return

period or as per mutual agreement between both the parties. However, settlement rate for the differential energy if any, will be at the rate of Rs. 4.00/KWh.

13) The evaluation criteria for selecting the traders/utilities is specifically designed for meeting the requirement of KSEBL and is mentioned in detail in clause 6 of EoI.

14) The offers shall remain valid for 30 days from the date of opening of EoI until extended on mutual agreement.

15) No payment security mechanism while absorbing power during the supply period, consent in Format II of EOI to be provided for the return period in respect of the power to be returned to the Counterpart Utility.

8. With the above conditions, Expression of Interest was invited from the Traders/Utilities on 01-10-2019, for banking power with KSEB Ltd, during the period from 01-02-2020 to 30-09-2020. Wide publicity was given for the “Invitation of EoI” by publishing the same through National dailies and official website of KSEBL. Major traders and Utilities were also informed directly in their email ids.

9. The details of offers received in response to the EoI are submitted below.

Trader	Utility	Supply Period	Quantum (MW)	Duration	Return Period	Return Duration	Return %	Trading Margin (paisa/kWh)
PTC	TPDDL	Feb-20	50	RTC	16-06-2020 to 30-09-2020	0-4 & 17-18.30 & 22.30-24.00 (uniformly distributed)	102%	2.98
			100	0-6				
			100	20-24				
		Mar-20	50	RTC				
			100	0-6				
			100	20-24				
		Apr-20	50	RTC				
			100	0-6				
			25	18-23				
Utility	BYPL	16-02-20 to 31-03-20	75	RTC	15-06-2020 to 30-09-2020	0-2 & 14-17 & 22-24 (uniformly distributed)	103%	NA
GMRETL	HARYANA	01-02-20 to 31-03-20	85	RTC	16-06-2020 to 30-09-2020	RTC	104%	2.94
Kreate	CESC	Feb-20	100	RTC	16-06-2020 to 30-09-2020	10-24	95%	3.00
		Mar-20	75	1-5				

10. All the above offers were accompanied with the acceptance of terms and conditions of Eol floated by KSEBL on 01-10-2019. Apart from the offers listed above, Manikaran Power Limited (trader) also submitted a conditional offer without a valid confirmed Lol from a Utility. This offer was not considered, since submission of an offer without a confirmed Lol and a conditional offer, was against the terms and conditions of Eol.

Evaluation of Offers:

11. The evaluation of offers was based on the evaluation criteria specified in the Eol document. The offers were shortlisted by assigning scores to each offers, based on the 2 (two years) Av.IEX price of S3 region prevailed from Feb 2018 to September 2019 for the respective month and duration offered during the supply period (Xs) and return period (Xr) and by applying a Multiplication factor(MF) for each month and duration during the supply period and return period, as specified in the Eol. Return percentage (R%) and factor of D/30 where D is the number of days in the return period also considered while evaluating an offer as per provisions in the Eol. The evaluation methodology prescribed in the Eol is detailed below.

Supply period			Return period		
Month/ duration		MF	Month/ duration		MF
March/ April / May	S1	2	June (starting from 16-06-2020)	R1	3
February		1	July, August & September		1
18–23 hrs (not being part of RTC)	S2	4	18.30 to 22.30 hrs (not being part of RTC)	R2	4
Uniform RTC	S3	1.5	Uniform RTC	R3	1.5
Any duration from or between 01.00-05.00 hrs (not being part of RTC)	S4	0.5	Any duration from or between 01.00-05.00 hrs (not being part of RTC)	R4	0.5

Monthly Score Supply period = $X_s \times S_1 \times (S_2 \text{ or } S_3 \text{ or } S_4 \text{ or } S_5)$

Total Score Supply period = \sum Monthly Score Supply period

Monthly Score Return period = $X_r \times R_1 \times (R_2 \text{ or } R_3 \text{ or } R_4 \text{ or } R_5)$

Total Score Return period = $\frac{[\sum \text{Monthly Score Return period}] \times R}{(D/30)} \times 100$

An offer will be evaluated based on the Net score, where

Net Score (S) = Total Score supply period (Minus) Total Score Return period. In case of tie in Net score obtained, offer with the lower trading margin will have higher priority.

Calculation of the Net score of the offers received:

12. The net score obtained against the eligible offers (4Nos), which satisfied all the conditions specified in the Eol are as follows: (The detailed net score calculation sheet is attached as **Annexure.**)

Sl.No.	Trader/Utility	Net score
1	PTC- TPDDL	22.52
2	BYPL	8.3
3	GMRETL- Haryana	6.77
4	Kreate- CESC	-3.62

- The supply offered by PTC-TPDDL is non-uniform RTC and the return required in the case of PTC-TPDDL and BYPL offers were non-RTC supply for 7 hrs. Hence the multiplication factor applicable for the supply and return duration of these offers were prorated.
- The Av. IEX price during the supply period of PTC- TPDDL was calculated by taking the weighted average with respect to the units offered during supply period.

13. From the offers received , it was noticed that a significant portion of the anticipated shortage of power during the months of February and March 2020 can be met from the supply offered by PTC–TPDDL and BYPL. The quantum of power to be returned by KSEBL against these two offers, are as shown below:

Trader	Return Period	Return Duration	Max. MW to be returned
TPDDL	16-06-2020 to 30-09-2020	0-4 & 17-18.30 & 22.30- 24.00 (uniformly distributed for 7 hrs)	258 MW
BYPL	-do-	0-2&14-17& 22- 24.00 (uniformly distributed for 7 hrs)	114

The total return quantum from KSEBL against these two offers,when put together would come to 372 MW during 0-2 & 22.30- 24 hrs.

14. Thereafter the following modifications were requested to PTC and BYPL for aligning the offers to the requirement of KSEBL and thereby to improve the net score;
- (i) Due to the limitation in absorbing 100 MW during the off peak hours i.e. from 0-6 hrs during Feb– 2020along with RTC power, PTC was requested to reduce their supply quantum to 50 MW, instead of 100 MW. It was also requested to increase in the duration of 100 MW supply during peak hours for the month of March from 18-24 hrs, instead of 20-24 hrs to meet the expected shortage during peak hours and thereby to make their offer more attractive.
 - (ii) This was accepted by PTC, except that the additional supply from 18-20 hrs was limited to 50 MW instead of 100 MW. It was also informed by PTC that TPDDL has agreed to these modifications based on the condition that there shall be no further change in their consolidated offer as mutually agreed, in case of issue of Lol/LoA. Thus the maximum quantum to be returned in this offer was reduced to 250.8MW from 258 MW and the net score was improved to 22.8 from 22.5.
 - (iii) Since BYPL is offering RTC supply from 16-02-2020 to 31-03-2020 no further revision in supply period was requested. However, due to the limitation in the maximum

quantum of power to be returned, BYPL was requested to increase the duration during return period, so as to bring down the quantum of the banked power to be returned. This modification was accepted by BYPL and the return duration was increased to 9hrs from 7hrs. Thus the maximum quantum to be returned in this offer was reduced to 88.5 MW from 114MW and the net score improved to 9.3 from 8.3.

15. Accordingly, the supply and return period based on the scenario of PTC-TPDDL and BYPL offers combined together are as shown below:

Supply to KSEBL			Return from KSEBL		
Month	Quantum (MW)	Duration	Month	Duration (hrs)	MW to be returned
01-02-2020	0-6	100	16-06-2020 to 30-09-2020		
to	6-20	50			
15-02-2020	20-24	150			
16-02-2020	0-6	175		0-3	339
to	6-20	125		3-4	251
29-02-2020	20-24	225		13-17	89
01-03-2020	0-6	225		22-22.30	89
to	6-18	125		22.30-24	339
31-03-2020	18-20	175			
	20-24	225			
01-04-2020	0-6	150			
to	6-18	50			
30-04-2020	18-23	75			
	23-24	50			

16. Regulation 77 of the KSERC (Terms and Conditions for Determination of Tariff) Regulations 2018 allows the distribution business/licensee may undertake additional short-term power procurement during the financial year, over and above the power procurement plan approved by the Commission. As per Regulation 77(3)(f) of the KSERC (Terms and Conditions for Determination of Tariff) Regulations 2018, prior approval of Hon'ble Commission is required for the short-term power procurement agreement or arrangement by way of exchange of energy under banking transactions made by the distribution licensee.
17. Considering the shortage in meeting the peak and energy demand for the months from February 2020 to May 2020, and in order to take an early action for avoiding power crisis and to avoid scheduling of high cost internal thermal generation, KSEBL humbly request Hon'ble Commission to grant approval :
- 1) To enter into banking arrangement with M/s. PTC India Ltd. as per Table- A shown below, with delivery point as Regional Periphery of Exporting Utility during supply as well as return period:

Table A:

Supply from PTC- TPDDL to KSEBL			Return from KSEBL to PTC-TPDDL			
Supply Period	Quantum (MW)	Duration (hrs)	Return Period	Duration (hrs)	Return %	Trading Margin (ps/kWh)
01-02-2020 to 29-02-2020	50	RTC	16-06-2020 to 30-09-2020	0-4 & 17-18.30 & 22.30- 24.00 (uniformly distributed)	102%	2.98
	50	0-6				
01-03-2020 to 31-03-2020	100	20-24				
	50	RTC				
	100	0-6				
01-04-2020 to 30-04-2020	50	18-20				
	100	20-24				
	25	18-23				

(2) to enter into banking arrangement with M/s. BSES Yamuna Power Ltd. as per Table- B shown below, with delivery point as Regional Periphery of Exporting Utility during supply as well as return period:

Table-B:

Supply from BYPL to KSEBL			Return from KSEBL to BYPL			
Supply Period	Quantum (MW)	Duration (hrs)	Return Period	Duration (hrs)	Return %	Trading Margin (ps/kWh)
16-02-2020 to 29-02-2020	75	RTC	16-06-2020 to 30-09-2020	0-3 & 13-17 & 22 - 24.00 (uniformly distributed)	103%	NIL
01-03-2020 to 31-03-2020		RTC				

Prayer

KSEBL humbly request Hon'ble Commission to grant approval for entering into banking transactions as detailed under Paragraph 17 above with M/s.PTC India Ltd. and M/s.BYPL for the period from 1-2-2020 to 30-9-2020.

Deputy Chief Engineer (Commercial & Planning)
With full powers of Chief Engineer

Acc: 1. Copy of EoI.
2. Copy of Advts.