

**KERALA STATE ELECTRICITY REGULATORY COMMISSION**  
**THIRUVANANTHAPURAM**

**Present : Shri. Preman Dinaraj, Chairman**  
**Shri. S. Venugopal, Member**

**Petition No. OP No. 06/2020**

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 for meeting the power deficit during April-May 2020.

Petitioner : Kerala State Electricity Board Limited

Petitioner represented by : Shri. K.G.P. Nampoothiri, EE, TRAC,  
Smt. Sangeetha S, EE, Commercial  
Smt. Latha S.V., AEE. TRAC  
Smt. Meena C, AEE, Commercial

**Order dated 13.03.2020**

1. Kerala State Electricity Board Limited (hereinafter referred as KSEB Ltd), on 20.01.2020, filed a petition before the Commission for seeking approval for entering into short-term power procurement arrangement for meeting the power deficit during April-2020 and May-2020.
2. The summary of the petition filed by KSEB Ltd is given below:
  - (i) The anticipated peak power shortages and energy shortages from November-2019 to May 2020, estimated by KSEB Ltd is given below.

Month	Peak shortage (-)/ surplus (+)	Energy shortage (-)/ surplus (+)
	(MW)	(MU)
Nov-19	-176	-15
Dec-19	-265	-1
Jan-20	-225	40
Feb-20	-336	-123
Mar-20	-493	-190
Apr-20	-544	-209
May-20	-570	-246

KSEB Ltd further submitted that,

- 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.

(ii) In order to overcome the anticipated power and energy shortages in the summer months, KSEB Ltd decided to tie-up 50% of the shortage through SWAP/ DEEP portal and the balance 50% through Day ahead market in Power Exchanges as required based on market trends.

3. The Commission vide the order dated 14.01.2020 in OP No. 62/2019 has approved the following banking transactions arranged by KSEB Ltd for meeting the power requirements of the summer months.

(1) With M/s PTC India Ltd as per the table below.

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 &, 17:00 to 18:30 & 22:30 to 24:00 (uniformly distributed)	102%	2.98
	50	0-6				
	100	20-24				
01-03-2020 to 31-03-2020	50	RTC				
	100	0-6				
	50	18-20				
01-04-2020 to 30-04-2020	100	20-24				
	50	RTC				
	100	0-6				
	25	18-23				

(2) With M/s BSES Yamuna Power Ltd (BYPL) was per the table below.

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	0:00 to 03:00 & 13:00 to 17:00 & 22:00 to 24:00 hrs (uniformly distributed)	103%	NIL
01-03-2020 to 31-03-2020	75	RTC				

4. KSEB Ltd further submitted that the above banking transactions enable to meet 50% of the expected power deficit during February and March 2020, and

part of the power deficit in the month of April-2020. However, no arrangement for banking transactions was made for meeting the expected power shortage in the month of May-2020.

5. In order to meet the balance power deficit expected during the months of April-2020 and May-2020, KSEB Ltd., floated short-term tender in DEEP portal on 09.12.2019 as per the requirement below, by giving wide publicity.

Requisition	Period		Duration (hrs)	Quantum (MW)
	From	To		
1	01-04-2020	30-04-2020	RTC	100
2	01-04-2020	30-04-2020	19-23	50
3	01-05-2020	31-05-2020	RTC	150
4	01-05-2020	31-05-2020	19-23	100

6. Against the four requisitions floated by KSEB Ltd, 21 offers received from various bidders. The technical bid was opened on 20.12.2019 at 11 AM. The initial price offers submitted by the bidders was opened on 21.12.2019 at 11 AM followed by e-Reverse Auction(e-RA) at 1.00PM. The results of the e-RA for the requisite quantum is given below.

Re q. No	From	To	Quantum (MW)	Duration (hrs)	Offered Quantum (MW)	Price discovered (Rs/kWh)	Trader/ Generator
1	01-04-2020	30-04-2020	100	RTC	100	3.72	Adani Enterprises Ltd, Raipur Energen Ltd, Chhattisgarh
2	01-04-2020	30-04-2020	50	19:00 to 23:00	50	4.24	DB Power, Chhattisgarh
3	01-05-2020	31-05-2020	150	RTC	150	3.76	Adani Enterprises Ltd, Raipur Energen Ltd, Chhattisgarh
4	01-05-2020	31-05-2020	100	19:00 to 23:00	50	4.24	DB Power, Chhattisgarh
					50	4.25	Adani Enterprises Ltd, Raipur Energen Ltd, Chhattisgarh

7. Regarding the price discovered through DEEP portal, KSEB Ltd submitted that, the rates discovered are very competitive considering the average price discovered in the Power Exchange in S3 region during the previous years as detailed below.

Month	IEX S3 rates at Kerala periphery (Rs/ kWh)			
	RTC power		Peak (19-23 hrs) power	
	2018	2019	2018	2019
April	4.220	3.686	5.323	4.895
May	4.803	3.581	5.838	4.593

KSEB Ltd further submitted that, in the recent bids invited by APPCC (Andhra Pradesh) and TANGENCO (Tamil Nadu), in DEEP portal the price discovered for RTC power were ranging from Rs.4.05/kwh to Rs.4.15/kWh during April-20

and May-20. Also in the bid of NPCL, rates for 19-24hrs during April & May 2020 were Rs 4.89/kWh.

8. Considering the above, KSEB Ltd prayed before the Commission to grant approval to enter into short term power procurement arrangement with the successful bidders namely Adani Enterprises Ltd and DB Power Ltd as per the price discovered as shown below.

**Table 1 : Adani Enterprises Ltd (AEL)**

Period	Duration (Hrs)	Quantum (MW) on firm basis	Rate at Delivery Point i.e. Kerala Periphery	Source of Power
01.04.2020 to 30.04.2020	00:00:00 to 24:00	100	Rs. 3.72/-(Rupees Three and Seventy Two paise Only) per kWh	Raipur Energen Ltd, Chhattisgarh in the Western Region.
01.05.2020 to 31.05.2020	00:00:00 to 24:00	150	Rs. 3.76/-(Rupees Three and Seventy Six paise Only) per kWh	
01.05.2020 to 31.05.2020	19:00 to 23:00	50	Rs. 4.25/- (Rupees Four and twenty five paise Only) per kWh	

**Table 2 : DB Power Ltd (DBPL)**

Period	Duration (Hrs)	Quantum (MW) on firm basis	Rate at Delivery Point i.e. Kerala Periphery	Source of Power
01.04.2020 to 30.04.2020	19:00 to 23:00	50	Rs. 4.24/-(Rupees Four and Twenty Four paise Only) per kWh	DB Power Ltd, Chhattisgarh in the Western Region.
01.05.2020 to 31.05.2020	19:00 to 23:00	50	Rs. 4.24/-(Rupees Four and Twenty Four paise Only) per kWh	

9. The Commission admitted the petition as OP No. 06/2020, and conducted hearing on 28.02.2020. Smt Latha S.V, presented the petition on behalf of KSEB Ltd. The summary of the deliberations during the hearing is given below.

- (1) In order to meet the anticipated energy and peak shortages in the months of April and May, KSEB proposed the following power purchase through DEEP portal developed by Ministry of Power, Gol.
  - (a) 100MW RTC power and 50 MW peak power during the month of April-2020, and,
  - (b) 150 MW RTC and 100 MW peak power during the month of May, 2020.
- (2) 21 bidders have participated in the bid through DEEP portal. The bids submitted by the bidders was evaluated as per the 'Guidelines for

short-term (i.e., for a period of more than one day to one year) by Distribution Licensees through Tariff based bidding process' notified by Ministry of Power, GoI dated 30.03.2016.

- (3) The bidders were selected through e-bidding followed by e-Reverse Auction as per the MoP Guidelines.
- (4) The final price derived are,
  - April-2020, Rs 3.72/unit for 100MW RTC power by the trader M/s Adani Enterprises Ltd and Rs 4.24/unit for 50MW peak power by the trader M/s DB Power Ltd, and,
  - May-2020, Rs 3.76/unit for 100MW RTC power by the trader M/s Adani Enterprises Ltd and Rs 4.24/unit for 50MW peak power by the trader M/s DB Power Ltd, and Rs 4.25/unit for 50MW peak power by M/s DB Power Ltd.
- (5) KSEB Ltd further submitted that, the rate derived through DEEP portal for short-term power purchase as above is very competitive when compared to the power exchanges rates of April and May during the years 2018 and 2019. Further, the rate derived as above is less than the recent bids invited by Andhra Pradesh and Tamilnadu through DEEP portal.

## **Analysis and Decisions**

10. The Commission has examined in detail the petition filed by KSEB Ltd for seeking approval for entering into short term power procurement arrangement for meeting the power deficit during April-May 2020, as per the provisions of the Electricity Act, 2003 and Tariff Regulations, 2018.
11. As per the Section 86(1)(b) of the Electricity At, 2003 (Central Act 36 of 2003), regulating power purchase and procurement process of distribution licensees including the price at which electricity shall be procured through agreements and supply within the State, is one of the statutory functions of the State Electricity Regulatory Commissions. The relevant Section of the Electricity Act, 2003 is extracted below.

**“86 Functions of the State Commission.- (1) The State Commission shall discharge the following functions, namely:-**

.....  
**(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;”.**

12. The Commission, in exercise of the powers conferred on it under Section 61 read with Section 181 of the Electricity Act, 2003 notified the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2018 (hereinafter referred as Tariff Regulations 2018). The Regulation 77 of the Tariff Regulations 2018, with 'Additional short-term power procurement' including 'banking transactions'. The relevant Regulation is extracted below.

***“77. Additional short-term power procurement.–(1) 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, in accordance with this Regulation.***

***(2) (a) Where there has been a shortfall or failure in the supply of electricity from any approved source of supply during the financial year, the distribution business/licensee may enter into an agreement for additional short-term procurement of power.***

***(b) If the total power purchase cost for any quarter including such short-term power procurement exceeds by five percent of the power purchase cost approved by the Commission for the respective quarter, the distribution business/licensee shall have to obtain approval of the Commission.***

***(3) The distribution business/licensee may enter into a short-term power procurement agreement or arrangement under the following circumstances subject to the ceiling tariff approved by the Commission:***

***(a) where the distribution business/licensee is able to source new short term source of supply from which power can be procured at a tariff that reduces its approved total power procurement cost;***

***(b) when faced with emergency conditions that threaten the stability of the distribution system or when directed to do so by the State Load Despatch Centre to prevent grid failure.***

***(c) where the tariff for power procured under such agreement or arrangement is in accordance with guidelines for short-term procurement of power by distribution licensees through tariff based bidding process issued by the Central Government:***

***(d) when there is any contingency situation and power purchase price is within such ceiling price;***

***(e) procurement of short-term power through power-exchange; and***

***(f) procurement by way of exchange of energy under 'banking' transactions.***

***Provided that prior approval of the Commission and the ceiling rate shall not be applicable to the short term purchases under sub regulation (b) and (e) above.***

**(4)The Commission may stipulate the ceiling quantum and ceiling rate for purchase of power from short-term sources.**

**(5)Within fifteen days from the date of entering into an agreement or arrangement for short-term power procurement for which prior approval has not been obtained, the distribution business/licensee shall obtain the approval of the Commission by submitting full details of such agreement or arrangement, including quantum, tariff calculations, duration, supplier details, method for supplier selection and such other details as the Commission may require to assess that the conditions specified in this Regulation have been complied with:”**

13. The Ministry of Power, Government of India, under the provisions of Section 63 of the Electricity Act, 2003, notified the ‘Guidelines for short-term (i.e. for a period of more than one day to one year) Procurement of Power by Distribution Licensees through Tariff based bidding process’ vide the notification dated 30.03.2016.
14. The Commission has appraised the petition filed by KSEB Ltd in detail as per the provisions of the Electricity Act, 2003, Tariff Regulations, 2018 and also as per the provisions of the guidelines notified by the Ministry of Power, Gol, and noted the following.
- (i) The summary of the anticipated energy shortage and peak power shortage in the State, for the remaining summer months from March 2020 to May-2020 is given below.

Month	Peak shortage (-) )/ surplus (+)	Energy shortage (-) )/ surplus (+)
	(MW)	(MU)
Mar-20	-493	-190
Apr-20	-544	-209
May-20	-570	-246

- (ii) KSEB Ltd proposed to meet 50% of the anticipated energy shortage from firm sources such as banking transactions and/or short term power purchase through DEEP portal. The Commission vide the order dated 14.01.2020 in OP No. 62/2019, approved the banking transactions as proposed by KSEB Ltd.

For the month of April 2020, the banking transactions approved are;

- 50MW – round the clock basis (RTC- 0:00 hrs to 24:00 hrs)
- 100 MW from 0:00 hrs to 6:00 hrs
- 25 MW peak power from 18:00 hrs to 23:00 hrs.

As above, as against the anticipated peak power shortage of 544 MW, 75 MW is tied up through banking transactions in the month of April-

2020. Further, as against the anticipated energy shortage of 209 MU, about 49 MU only tied up through banking transactions.

For the month of May 2020, no banking transactions were approved.

- (iii) Hence in order to meet the balance anticipated energy and power shortages in the month of April- May-2020, KSEB Ltd was floated short-term tender in DEEP portal on 09.12.2020 with following requisitions, by giving wide publicity.

Requisition	Period		Duration (hrs)	Quantum (MW)
	From	To		
1	01-04-2020	30-04-2020	RTC	100
2	01-04-2020	30-04-2020	19-23	50
3	01-05-2020	31-05-2020	RTC	150
4	01-05-2020	31-05-2020	19-23	100

- (iv) Against the four requisitions floated by KSEB Ltd, 21 offers received from various bidders. The technical bid was opened on 20.12.2019 at 11 AM. The initial price offers submitted by the bidders was opened on 21.12.2019 at 11 AM followed by e- RA auction at 1.00PM. The results of the e-RA for the requisite quantum is given below.

Req. No	From	To	Quantum (MW)	Duration (hrs)	Offered Quantum (MW)	Price discovered (Rs/kWh)	Trader/Generator
1	01. 04. 2020	30.04. 2020	100	RTC	100	3.72	Adani Enterprises Ltd, Raipur Energen Ltd, Chhattisgarh
2	01. 04. 2020	30.04. 2020	50	19:00 to 23:00	50	4.24	DB Power, Chhattisgarh
3	01. 05. 2020	31.05. 2020	150	RTC	150	3.76	Adani Enterprises Ltd, Raipur Energen Ltd, Chhattisgarh
4	01. 05. 2020	31.05. 2020	100	19:00 to 23:00	50	4.24	DB Power, Chhattisgarh
	01. 05. 2020	31.05. 2020			50	4.25	Adani Enterprises Ltd, Raipur Energen Ltd, Chhattisgarh

As detailed above, the price discovered through e-bidding followed by e-reverse auction, for RTC power is Rs 3.72/unit for the month of April-2020 and Rs 3.76/unit for the month of May-2020. Similarly, the price discovered for peak power is Rs 4.24/unit for the month of April-2020 and Rs 4.24/unit to Rs 4.25/unit for the month of May-2020.

- (v) With the banking transactions approved by the Commission vide the order dated 14.01.2020, and also with the proposed short-term power purchase as above, KSEB Ltd could meet 50% of the anticipated power shortages in the month of April-2020 and May-2020. The



balance is proposed to be met by procuring power from Power Exchanges.

15. The Commission has also examined the procedure followed by KSEB Ltd for selecting the bidders through DEEP portal for the procurement of power on short-term basis for the month of April-2020 and May-2020. The Ministry of Power, Government of India vide the notification dated 30.03.2016, notified the guidelines for short-term Procurement of Power by Distribution Licensees through Tariff based bidding process. The paragraph-5 of the bidding guidelines specifies the tariff structure to be quoted by the bidders, which is extracted below for ready reference.

*“5. Tariff Structure*

*5.1. The Procurer based on its requirement may invite the bids on round the clock (RTC) basis or for different time slots. Procurer may also provide flexibility to the Bidder(s) to bid for a part of the tendered quantity, subject to a given minimum quantity. Bid capacity offered by the Bidder shall have to be constant for the entire contract period.*

*5.2. The Bidder shall quote the single tariff at the Delivery Point upto three (3) decimals which shall include capacity charge, energy charge, trading margin (in case of Bidder being a Trader), applicable Point of Connection (POC) charges upto Delivery Point and all taxes, duties, cess etc. imposed by Central Govt. / State Govt. / Local bodies. Tariffs shall be designated in Indian Rupees only.*

*5.3. For inter-State transmission of power, state/regional periphery of the Procurer to be taken as Delivery Point. For intra-state transmission of power, inter-connection point of seller with STU/ CTU to be taken as Delivery Point.*

*5.4. For avoidance of doubt, Intra-state open access charges, transmission charges and losses along with POC injection charges and loss up to the POC interface are on Seller's account and POC drawl charges and losses along with intra-state open access, transmission charges and losses are on Procurer's account.*

*5.5. The tariff should be constant and there shall be no escalation during the contractual period. If Bids are invited for different time slots then tariff may be different for each time slot.*

*5.6. If the power is being supplied through alternate source, additional charges and losses if any, due to cancellation of existing corridor and booking of new corridor etc., shall be to the account of Bidders.”*

The Commission noted that, KSEB Ltd has followed the guidelines notified by the Ministry of Power, Government of India vide the notification dated 30.03.2016 for the selection of bidders.

16. The Commission has also examined the price discovered for the RTC power and peak power, with the rate of power in the short-term market during the same months in the last year and also noted that the price discovered is competitive and reasonable when comparing with the recently concluded long term contracts.

17. The Commission also noted that, the arrangements for short-term power purchase as above is for meeting the anticipated power shortages in the months of April 2020 and May 2020, and to avoid power crisis in the State.
18. Considering the entire aspects in detail as above, the Commission approves the short term power procurement made by KSEB Ltd for meeting the power deficit during April-2020 and May-2020, as detailed under paragraph 14(iv) above.

### **Order of the Commission**

19. The Commission, after examining the petition filed by KSEB Ltd dated 20.01.2020, with provisions of the Electricity Act, 2003, Tariff Regulations, 2018 and other relevant guidelines and procedures, hereby orders the following;

- (1) Grant approval to enter into short-term power procurement agreement with the following traders, selected through DEEP portal for meeting the power deficit of the State during the months of April-2020 and May-2020, subject to the terms and conditions stipulated below.

- (i) With the trader M/s Adani Enterprises Ltd (AEL)

Period	Duration (Hrs)	Quantum (MW) on firm basis	Rate at Delivery Point i.e. Kerala Periphery	Source of Power
01.04.2020 to 30.04.2020	00:00:00 to 24:00	100	Rs. 3.72/-(Rupees Three and Seventy Two paise Only) per kWh	Raipur Energen Ltd, Chhattisgarh in the Western Region.
01.05.2020 to 31.05.2020	00:00:00 to 24:00	150	Rs. 3.76/-(Rupees Three and Seventy Six paise Only) per kWh	
01.05.2020 to 31.05.2020	19:00 to 23:00	50	Rs. 4.25/- (Rupees Four and twenty five paise Only) per kWh	

- (ii) With the trader M/s DB Power Ltd (DBPL)

Period	Duration (Hrs)	Quantum (MW) on firm basis	Rate at Delivery Point i.e. Kerala Periphery	Source of Power
01.04.2020 to 30.04.2020	19:00 to 23:00	50	Rs. 4.24/-(Rupees Four and Twenty Four paise Only) per kWh	DB Power Ltd, Chhattisgarh in the Western Region.
01.05.2020 to 31.05.2020	19:00 to 23:00	50	Rs. 4.24/-(Rupees Four and Twenty Four paise Only) per kWh	

- (2) The tariff approved shall be single part at the delivery point and includes all charges such as capacity charge, energy charge, trading margin(if applicable),and all taxes, duties, cess etc. imposed by the Central Government, State Government, Local bodies etc.

- (3) The delivery point is at the interconnection point with CTU at Kerala periphery.
- (4) No separate POC and/or transmission charges upto the delivery point are payable by KSEB Ltd to the traders.
- (5) Since the delivery point is at the Kerala periphery, all the transmission losses upto the delivery point shall be to the seller's account.
- (6) KSEB Ltd shall submit a copy of the signed PPA before the Commission for information and record.

Sd/-  
**S.Venugopal**  
**Member**

Sd/-  
**Preman Dinaraj**  
**Chairman**

Approved for issue

C.R Satheesh Chandran  
Administrative Officer  
(In Charge of Secretary)