



## KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

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## **ABSTRACT**

Setting up of floating Solar plant on 8 reservoirs owned by KSEBL and 2 reservoirs in Kerala Water Authority based on tariff-based bids for 25 years – cancel the ongoing RfP and sanction for inviting fresh offer from the three bidders-sanction accorded-Orders issued.

## Corporate Office (REES,S,N,S&W)

B.O.(FTD)No. 709/2022/CE(REES)INNV/AE3/FS/2022-23 dated, Tvm. 12.08.2022

Read: 1. B.O (FTD)No. 378/2022/CE(REES) Floating Solar/2022-23 dated 04.05.2022

 RfP No. KSEBL/CE(REES/ Floating solar/ 05/22-23 having Tender ID : 2022\_KSEB\_488380\_1.

3. Letter No. CE(C-DS)/102/Dam General/2021-22 dated.29.06.2022 of the Chief Engineer(Civil- Dam Safety & DRIP)

 Letter No. CE(REES)/INNV/AE3/FS/2022-23/664 dated 16.07.2022 of the Chairman and Managing Director, KSEBL addressed to the Principal Secretary, Power Department, Government of Kerala.

 Note No CE(REES)/ INNV/AE3/FS/2022-23/732 dated 25.07.2022 of the Chief Engineer (REES) to the Full time Directors through the Director (REES, S, N, S &W) (Agenda-11/8/22).

## ORDER

The Request for Proposal (RfP) read as 2<sup>nd</sup> above was invited as limited tender in e-Tender portal from the three bidders who participated in the Request for Qualification (RfQ) for setting up minimum 100MW floating Solar Plant from atleast 3 reservoirs as per the B.O read as 1<sup>st</sup> above. The bidders were M/s TATA Power Renewable Energy Ltd., M/s Phelan Energy India Pvt Ltd and M/s Sherisha Technology Pvt Ltd. All these bidders submitted their bids and opened on 22.06.2022. On request from these developers, KSEBL had agreed to undertake the power evacuation of these floating Solar plants as deposit work since the evacuation distance was considerable and involved forest land too. M/s TATA Power Renewable Energy Ltd is L1 at Banasurasagar, Sengulam and Ponmudi. M/s Phelan India Pvt Ltd is L1 bidder at Madupetty, Aruvikkara and Peppara. The quoted tariff along with installed capacity and respective transmission cost furnished by KSEBL for deposit work are tabulated as follows

| SI No | Name of<br>reservoir | TATA Power<br>Renewable Energy<br>Ltd |        | Phelan Energy India<br>Pvt Ltd |         | Sherisha Technology<br>Pvt Ltd |        | Trans estimate for power evacuation |
|-------|----------------------|---------------------------------------|--------|--------------------------------|---------|--------------------------------|--------|-------------------------------------|
|       |                      | Installed capacity in MW              | Tariff | Installed capacity             | Tariff  | Installed capacity             | Tariff | in Cr.                              |
| 1     | Ponmudi              | 15                                    | 5.36   |                                |         | 16.8                           | 6.5    | 14.5                                |
| 2     | Kallarkutty          |                                       |        |                                |         |                                |        |                                     |
| 3     | Sengulam             | 8                                     | 5.4    |                                |         | 11.8                           | 6.29   | 8.1                                 |
| 4     | Kallar               |                                       |        |                                | T. Fall |                                |        |                                     |
| 5     | Kundala              |                                       |        |                                | *       |                                |        |                                     |
| 6     | Madupetty            |                                       |        | 17.1                           | 4.99    | 29                             | 6.58   | 34                                  |
| 7     | Anayirankal          |                                       |        |                                |         |                                |        |                                     |
| 8     | Banasurasagar        | 77                                    | 4.34   | 81                             | 4.7     | 44.5                           | 6.33   | 33.6                                |
| 9     | Aruvikkara<br>(KWA)  |                                       |        | 8.1                            | 5.18    |                                |        | 5.45                                |
| 10    | Peppara (KWA)        |                                       |        | 25.2                           | 8.99    |                                |        | 174                                 |

During the tariff negotiation meeting held on 29.06.2022, M/s TATA Power Renewable Energy Ltd enumerated the following impediments for reducing the tariff and increasing the capacity namely (i)The available single beam bathymetric survey details and geotechnical aspects are not sufficient for assessing anchoring accurately (ii) ascertaining cost of site development charges for pooling station, fabrication area and launching area, with limited information provided by KSEBL. Therefore, they requested to demarcate the point from where the power evacuation is feasible and provide multi beam bathymetry details.

Later, the Chief Engineer(Dam Safety & DRIP) has informed as per the letter read as 3<sup>rd</sup> above that, 270Ha of free reservoir area is available at Banasurasagar and the maximum depth of reservoir is 35.6m too.

In the above circumstances, the Chief Engineer (REES) has recommended, as per the note read as 5<sup>th</sup> above, to provide the additional data pertaining to Banasuasagar reservoir project to the selected three bidders and their quotes requested again. The tariff offers received are high for the other five reservoirs and not be considered for the time being Banasurasagar reservoir floating Solar plant has to be considered as a pilot Floating Solar park project & the 77MW capacity offer of M/s.TATA has to be enhanced to 100MW or above. Moreover, it is reported that, in the case of Banasurasagar reservoir project, the following favourable features help in downward revision of the discovered tariff of Rs.4.34/unit.

- (i) 270Ha of free water spread area is available at Minimum Draw Down Level and hence more than 100MW can be harnessed from the reservoir.
- (ii) Power evacuation cost as deposit work was initially estimated as Rs.33.6Cr and is now reassessed as Rs.24.8Cr. Thus Rs.8.8Cr savings in transmission cost.
- (iii) Possibility of MNRE Solar park category allocation and availing Central Financial Assistance (CFA) of 30% of project cost *OR* Rs.2OLakh/MW (whichever is lower) is there and this has been taken up with MNRE and Power Secretary, GoK.
- (iv) Anchoring depth will at any place be less than 35.6m which is the maximum depth from FRL of reservoir. Earlier it was furnished as 50m. Thus scope for decrease in anchoring cost exists.
- (v) Pooling station location is tentatively identified as 6 Acres at Manjoora near Banasurasagar reservoir with access.
- (vi) Launching pad can be proposed at 2 Acres downstream of spillway.

The matter was placed before the Full Time Directors as per note read as 5<sup>th</sup> above for decision for cancelling RfP. Having considered the matter in detail, the Full Time Directors in its meeting held on 01.08.2022, resolved to cancel the ongoing Request for Proposal (RfP) and to proceed for re-tender for optimum capacity in other reservoir also.

Orders are issued accordingly.

By Order of the Full Time Directors,

Sd/-Lekha G. Company Secretary

To :The Chief Engineer, Renewable Energy and Energy Savings.

Copy to:

The Financial Adviser/ The Chief Internal Auditor.
The Dy. Chief Engineer (IT)/ The RCAO/ RAO.
The TA to Chairman & MD/D(T,SO,P &S)/D(D, SCM&IT)/D(G-E)/D(G-C)/D(F& HRM)/D(REES,S,N, S&W)
The PA to Director (Finance & HRM)/Company Secretary,
The Legal Liaison Officer, Kochi
Fair Copy Superintendent/Library/Stock File.

Forwarded / By Order

Assistant Engineer