



# **KERALA STATE ELECTRICITY BOARD Ltd**

(Incorporated under the Companies Act, 1956)

Registered Office: Vidyuthi Bhavanam, Pattom, Thiruvananthapuram – 695 004

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## **ABSTRACT**

Renovation & Modernization (R&M) Work of Sholayar Hydro Electric Project (3x18 MW): Issues with M/s. FEPL (FLOVEL) - Sanctioned - Orders issued.

## **Corporate Office (SBU-GE)**

B.O. (DB) No.144/2024 (DGE/G2/AEE3/SHOLAYAR-RMU/2023)  
Thiruvananthapuram.

Dated:09-04-2024

- Read :
1. Work Order No: 01/2015-16 and Agreement No: CEPED/02/2015-16 dated 06.07.2015.
  2. BO (FTD) No. 702/2020 (21/AE4/2013/CE (PED) dated 20.11.2020.
  3. Letter No. DB.75/2022-23/R&M (E)/ 891 dated 25.08.2022 of Executive Engineer, Generation Division, Poringalkuthu.
  4. Letter No. P1516-03-PM-GM-OG-CWC-1047 dated 27.08.2022 of M/s FEPL.
  5. Minutes of meeting dated 05.01.2023 and 14.03.2023 of Director (Generation-Electrical).
  6. Letter No. DB.75/R&M-SLR/2023-24/529 dated 20.07.2023 of Executive Engineer, Generation Division, Poringalkuthu.
  7. Letter No. CESO/EELD1/AEELD/Sholayar/2023-24/776 dated 24.07.2023 of the Chief Engineer (Transmission System operation).
  8. Letter No. CESO/EELD1/AEELD/Sholayar/2023-24/1740 dated 02.12.2023 of the Chief Engineer (Transmission System operation).
  9. Note No.FA-AT-ST1/2023/96 dated 12.12.2023 remarks of the Financial Advisor.
  10. Note No. LA&DEO/R/143/2023/10 dated 08.01.2024 remarks of the Senior Law officer.
  11. Letter no. CEG/AEE VIII/Sholayar HEP/2023-24 dated 04.03.2024 of Chief Engineer (Generation)
  12. Note No. DGE (G2)/AEE3/Sholayar/2024 dated 07.03.2024 of the Chairman and Managing Director to the Board of Directors.
  13. Proceedings of the 76<sup>th</sup> meeting of the Board of Directors held on 13.03.2024 vide (Agenda 18-03/2024).

## **ORDER**

KSEBL as per the Work Order and Agreement read as 1<sup>st</sup> above had entrusted the contract for the R&M work of old Francis Turbine driven 3x18MW machines at Sholayar Power House with M/s FEPL Yibin - Fuyuan consortium for a Contract Amount of Rs. 61,51,18,238/- (Rupees Sixty-One Crore Fifty-One Lakh Eighteen Thousand Two Hundred and Thirty-Eight only). Accordingly, R&M works at Sholayar Power House commenced in 2017. The date of completion of the work as per contract was 15.04.2018. KSEBL as per the B.O read as 2<sup>nd</sup> above had sanctioned the timeline for completion of the



project till 31.10.2020 without imposing liquidated damages on the contractor and without any additional financial commitment to the Board (other than that due to implementation of GST), considering the factors contributed to the delay owing to the outbreak of the Covid -19 pandemic.

Further to completion of the R&M works, breakdown failures occurred for Unit No.3 and Unit No.1 machines within the Defect Liability Period (DLP) of the R&M Work. For Unit No.3 Runner breakage and Insulation failure occurred on 06.06.2022 and 13.07.2022 respectively. On 28.12.2022 Unit No.3 tripped due to stator E/F along with Generator winding fire incident. This incident occurred after putting back the machine in to service on 23.12.2022 after the repair work by the contractor. Unit No.1 tripped on 09.02.2023 due to stator E/F along with Generator winding fire incident. The analysis of the breakdown incidents (repetitive nature of fault on Unit No.3 & unit No.1) and the observations during inspection of the machines were pointing to the design failure of the Generator part and were informed to the contractor through various correspondences.

The design failure leading to breakdown of serious nature of Unit No.3 (Stator winding fault) and subsequent long duration of the maintenance period within the DLP period of the machines raised concerns regarding the performance of the newly installed machines & its auxiliary systems. The trouble-free performance of these two machines further to the design correction carried on them has proved satisfactory as far as the corrective actions are taken. Thus, the same modification needs to be carried out on the remaining Unit No.1 & No.2 was insisted with the contractor as per the letter read as 3<sup>rd</sup> above. The Contractor, as per the letter read as 4<sup>th</sup> above had informed that the problem encountered in Unit No.3 should not be generalized and if it will be felt to inspect the other units, the same will be carried out. M/s. FEPL was informed to do the necessary repair works/corrective actions during the online meeting between KSEBL and M/s. FEPL as per the MoM read as 5<sup>th</sup> above.

Unit No.2 was taken for annual maintenance on 03.07.2023. Upon inspection, the same nature of defects as noted for unit No.3 & No.1 were noticed in this unit also. Hence, the contractor was again informed as per the letter read as 6<sup>th</sup> above to attend the defect. Though M/s. FEPL, as per the letter dated 21.01.2023 had assured KSEBL that they will attend all punch points/ issues reported so far during the DLP free of cost as a part of warranty obligation, M/s. FLOVEL had backtracked from their earlier stand and informed vide letter dated 29.08.2023 that their obligation as per the contract awarded to them have been met and the remaining works shall be carried out by them on chargeable basis. This is against the agreement conditions of this contract as the contractor is liable to attend the defects as per the Article X of agreement. The faults reported to the contractor were within the DLP for the machines and they were contractually obliged to attend the same.

There were many open punch points during the commissioning work as pending and those due to failures while in service within DLP which had to be mandatorily attended by the contractor as per the agreement. Many of these open punch points are still not attended by M/s. FEPL. It is the responsibility of the contractor to attend the defects/pending punch points reported to them within the DLP period and resolve the same. These backlogs were carried forward and still not attended by the contractor, which is a clear violation of the agreement conditions of the work awarded to them. The official date of Defect Liability Period for the last machine renovated (ie, Unit No.1) was completed as on 05.10.2023. Things stand as such, M/s FEPL as per the letter dated 11.10.2023 had informed that they shall attend these open punch points on chargeable basis. The above mentioned open punch points had to be attended to by KSEBL with appropriate agencies, as necessitated, at the risk and cost of the contractor, as per the provisions of the contract. The repair works were initiated as per the decision of the meeting convened by the Director (Generation-Electrical) (MoM dated 26.07.2023).

KSEBL had suffered Generation loss on account of the non-availability of the Machines of this station. Accordingly, data had been collected from the field regarding the Outages, Generation plan for the FY 2022-23 & 2023-24 along with the actual generation of the station for the same period for arriving at the difference in monthly generation. The Generation loss based on opportunity cost was



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received as per the letter read as 7<sup>th</sup> above and the revised calculation based on Block wise Maximum rate in Day-ahead market, DSM and real time market of the corresponding block was received as per the letter read as 8<sup>th</sup> above. Based on the inputs as mentioned above and in line with the clauses applicable to the contract with regard to allotting reasonable time for rectification of the fault occurred within DLP of the machines, the timeline along with the Generation details for the period in which the machines were not available for generation due to the slippage from the allotted timeline by the contractor in completing the work has been summarized.

The overall loss of Generation due to the slippage from the reasonable days allotted for repair subsequent to each failure is 13.29 MU. The Average per day rate per unit thus available is (a) considering all the days of the period of delay and all-time blocks is Rs.5.77/unit and (b) considering spill days of the period of delay and all-time blocks is Rs.5.66/unit. From the above data, the rate per unit of Rs.5.77/- is considered for arriving at the Generation loss calculation for the period from 10.02.2023 to 15.05.2023 in line with the contract conditions. The amount corresponding to 13.29MU of Generation loss @ Rs.5.77/unit amounts to Rs.7,66,80,000/- (Rupees Seven Crore Sixty-Six Lakh Eighty Thousand only).

The opportunity cost due to the loss of Generation on account of release of 18 MCM of water from the Sholayar reservoir for irrigation requirements (without Generation of Electricity) due to non-availability of machines during that time as reported by the LD is 12MU of electricity (based on the Power house constant available). The loss computed as 13.29MU is justifiable when compared to the report from LD in this regard where 12 MU equivalent to 18 MCM of water which was released from the Sholayar dam for irrigation purpose alone without generation of electricity, during the water year ending June 2023.

The liability of the contractor due to the noncompliance of the Agreement conditions of this R&M work was estimated based on the BoQ/ rates of similar works /quotations by the field/PED and amounts to Rs.3,84,99,782/-. The total financial liability is estimated as Rs.11,51,79,782/- (Rs.7, 66, 80, 000/- + Rs. 3, 84, 99, 782/-)

The details of amount available with KSEBL of the contractor M/s. FEPL for this project are (1) Retention Amount from the invoices for Rs.5,69,05,000/- and (2) Performance Bank Guarantee of Rs.3,07,56,000/-. Total Rs.8,76,61,000/-. The validity of the PBG for this project submitted by M/s. FEPL has been extended till 31.12.2024. The remark of the Financial Advisor (FA) has received as per the Note read as 9<sup>th</sup> above. Remark of LA & DEO has received as per the Note read as 10<sup>th</sup> above.

The Chief Engineer (Generation) as per the letter read as 11<sup>th</sup> above has reported the circumstances/ grounds that have culminated in claiming generation loss from the contractor. All the units encountered major and minor failures during the Defect liability period causing huge financial loss to KSEBL. Due to the failure/ rectification works of winding of Unit No.3, Unit No.2 and Unit No.1 was out from service for more than 13 months, 4 months and 3 months respectively.

Considering the points mentioned as above and in line with the remarks of the Financial Advisor and LA&DEO, the Director (Generation-Electrical, REES, SOURA, Sports and Welfare) has recommended that the amount arrived at for the Generation loss occurred is estimated as 13.29 MU @ Rs.5.77/unit amounting to Rs.7,66,80,000/- to KSEBL due to the delay occurred (from the time allotted by KSEBL to the contractor for the completion of the work) in restoring the service of the Generators failed within Defect Liability Period of this R&M project by the contractor and also the expenses estimated for completing the open punch points of Rs.3, 84,99,782/-, shall be recovered from the contractor as per the provisions of the agreement conditions entered with the contractor - M/s. FEPL (FLOVEL) for this project.

The matter was placed before the Board of Directors as per the Note read as 12<sup>th</sup> above for a decision.



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After detailed discussion, the Board of Directors

RESOLVED to authorize Director in charge of Generation (Electrical) to arrive at the settlement amount in case of Renovation & Modernization (R&M) Work of Sholayar Hydro Electric Project (3x18 MW) based on the agreement conditions and detailed examination of various meeting minutes, contentions raised by the Contractor and issue notice to the contractor specifying the amount to be recovered to take further legally correct actions.

Orders are issued accordingly.

By Order of the Director Board

Signed by

Lekha G

Date: 09-04-2024 16:32:54

LEKHA G

COMPANY SECRETARY

To:

The Deputy Chief Engineer (PED) with full powers of Chief Engineer

Copy to:

The Company Secretary / Chief Engineer (IT,CR&CAPS) / Financial Advisor / LA&DEO / Chief Internal Auditor / Chief Vigilance Officer

The TA to the Chairman & Managing Director / Director (Generation-Civil) / Director (Distribution, Safety, SCM & IT) / Director (Transmission, SO & Planning) / Director (Generation - Electrical, REES, SOURA, Sports & Welfare)

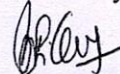
The PA to the Director (Finance & HRM)

The Sr.CA to the Secretary (Administration)

The RCAO/ RAO

Stock File.

Forwarded / By Order



Assistant Executive Engineer