



## KERALA STATE ELECTRICITY BOARD Ltd

(Incorporated under the Companies Act, 1956)

Registered Office: Vidyuthi Bhavanam, Pattom,

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### ABSTRACT

Sabarigiri HEP - Unit#2-Design,Supply, Dismantling, Supervision of Erection, Testing & commissioning of Stator rewinding and stator Core re-varnishing & restacking of 55MW Unit #2 at Sabarigiri HEP - Submitting Cost Benefit Analysis and sanction for Revised Project Report - Sanctioned - Orders issued.

### SBU-GE

BO (FTD)No.194/2023(DIRGE-AEE1/2023/197) / 21

Thiruvananthapuram, Dated: 12.04.2023

Read: 1. Minutes of meeting dated 04.01.2023 convened by the Director (Gen-Ele & HRM).

2. Revised DPR submitted by the Deputy Chief Engineer, Generation Circle, Moozhiyar.

3. Offer from M/s. Coral rewinding India Pvt. Ltd. vide letter No. REF: ENQ/00426/B/2022-23/ 003 dated 25.02.2023.

4. Letter No. CEG/AE-I/MZ R/SBG/Unit#2/Core & Winding/2022-23/ 1715 dated 02.03.2023 of the Chief Engineer (Generation).

5. Note No DIRGE - AEE1/2023/197(2) dated 30.03.2023 of the Director (GE & HRM) to the Full Time Directors (Agenda 94/3/23).

### ORDER

The 50MW Allis Chalmers make Unit #2 Generator of Sabarigiri HEP commissioned on 24.06.1966 was renovated and uprated to 55MW on 07.02.2009. During the RMU works in 2009, only Rotor field winding has been renewed and the stator windings of the machine were not altered as the same has been renewed during 1997-98 by M/s. BHEL and made the machine suitable for 20% up rating (60 MW) at rated parameters of 500 rpm, 11 kV, 0.9 pf lagging. The stator windings have undergone four major failures since 2011. One number of stator coil became faulty in recent failure of stator winding on 06.08.2022. Subsequent inspection and various tests (ELCID test, Flux loop test etc) conducted on the unit and the following defects were noticed in the Machine.

1. The fault that occurred on slot No. 46 made serious damages to adjacent slots.
2. Hot spots on various slots, that will lead to further failures of the unit in future.
3. The leakage current on some slots has increased drastically and are beyond permissible value of 100mA that may lead to further failure of stator windings.

In the meeting read as 1<sup>st</sup> above to discuss the revival works of the Unit#2 at Sabarigiri HEP. It has been decided to include the work of Stator core relamination and restacking, stator rewinding for 60MW at 0.9pf, shaft replacement, and to prepare estimate for stator rewinding and restacking of stator core of 11 MW.

The Deputy Chief Engineer, Generation Circle, Moozhiyar has submitted the Detailed Project Report read as 2<sup>nd</sup> above for the "Design, Supply, Dismantling, Erection, Supervision of Erection, Testing & Commissioning of Stator re-winding and Stator Core re-varnishing & restacking of 55MW Unit#2 at Sabarigiri HEP". The Chief Engineer (Generation) as per the letter read as 4<sup>th</sup> above has requested for obtaining approval of the Board for the proposal amounting to Rs.12.5 crore. In the meeting of the Full Time Directors held on 27.03.2023, it was decided to conduct Cost Benefit analysis for the revival work and to submit a comprehensive comparative study report on suggested options and accordingly the Chief Engineer (Generation) has submitted detailed Cost benefit analysis and comprehensive comparison study report.

The matter was placed before the Full Time Directors as note read as 5<sup>th</sup> above. Having considered the matter in detail the Full Time Directors in its meeting held on 30.03.2023 observed that the work related to shaft has already been contracted and present proposal is submitted in this status. It is also observed that the generator should work optimal (60MW) with this investment.

Hence resolved to approve the proposal of "Design, Supply, Dismantling, Erection, Supervision of Erection, Testing & Commissioning of Stator re-winding and Stator Core re-varnishing & restacking of 55MW Unit#2 at Sabarigiri HEP" amounting to Rs.12,50,00,000/- (Rupees Twelve Crore Fifty Lakh Only) for the revival of Unit #2 generator at Sabarigiri HEP and to sanction the DPR.

Further resolved to do a techno financial study as a case study in 2 months from this date so that in future appropriate decision can be taken.

Further resolved that an investment of around Rs.12 Crore is to be done and ensure of optimal output as stated in the proposal.

Further resolved to authorize the Chief Engineer (Generation) to carry out the work by inviting open tender complying all formalities.

Orders are issued accordingly.

**By Order of the  
Full Time Directors**



**LEKHA G  
Company Secretary**

To:

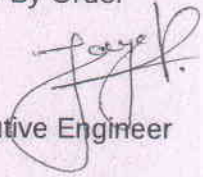
The Chief Engineer (Generation), Moolamattom.

The Deputy Chief Engineer, Generation Circle, Moozhiyar.

Copy to: The Financial Advisor/ Chief Internal Auditor/ Company Secretary/ Chief Engineer (IT)

Director (D,IT,SCM,REES & Soura)  
The PA to Director (Finance &HRM)  
The CA to Secretary (Administration)  
The RCAO/ RAO  
Stock File.

Forwarded / By Order



Assistant Executive Engineer