



KERALA STATE ELECTRICITY BOARD Ltd

(Incorporated under the Companies Act, 1956)

Registered Office: Vidyuthi Bhavanam, Pattom,

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ABSTRACT

Innovative Green Energy Harvesting - Pilot Project - Combination of Micro Hydro Electric Power System in canals of Chittur Puzha Projects - DPR submitted by Sri. Sharfudeen A., SE(C) - Execution of the Pilot Project - Sanctioned - Orders issued.

CORPORATE OFFICE (SBU - G/C)

BO (FTD)No.313/2023(DGC/AEE I/Chittur Puzha Micro HEP Thiruvananthapuram, Dated: 20.06.2023 /2023)

Read: 1. Letter No. Nil dated 03.05.2023 of Sri. Sharfudeen A., Sub Engineer(C), Generation Sub Division, Malampuzha.
2. Note No. CE(C-I&CC)/AEE-IX/Micro RT/2023/469 dated 12.05.2023 of the Chief Engineer (Civil- Investigation & Construction Central).
3. Note No. DGC/AEE I/Chittur Puzha Micro HEP/2023 dated 12.06.2023 of the Director (Generation- Civil) to the Full Time Directors (Agenda Item No. 45/06/23).

ORDER

Sri. Sharfudeen A., Sub Engineer(C) vide letter read as 1st above has submitted a Detailed Project Report for installing and operating a Breastshot water wheel permanent generator of 2x5 kW/0.0432 Mu in Kambalathara LBC under Chittur Puzha Project in Palakkad District and proposed in stage II to install 6x10 KW water turbines in Moolathara high-level canal under his responsibility.

In the DPR, it is explained that a canal drop having a Water head of 1.35 m at chainage 11/600 of Kambalathara LBC is selected as a pilot project (Stage 1) for installing the above water wheels. A PMG (Permanent Magnet Generator) is used to generate electricity at a variable voltage of three phase AC output. The location for installations is selected as canal drops/falls, lined streamline flow regions etc. without hindrance to the canal supply. Moreover, the LT supply/OH line is also available closer to these areas for power evacuation, without additional expenditure. The useful life of the project is shown as 25 years without O& M cost.

The Chief Engineer(Civil- Investigation & Construction Central) reported as per the note read as 2nd above that the financial evaluation was modified for the total estimated cost of the project i.e Rs.23.60 Lakh including GST and construction period is 3 months. The payback period of the project will be 11 years and the levelized tariff is Rs. 5.04 per kWh. The IRR and NPV values are 10.77% & Rs. 2.29 lakh respectively.

The CE(C-I&CC) has suggested that funding for this pilot project may be accounted from budget allocated for Investigation works under Investigation Circle, Thrissur and the possibility of getting innovative funds of Government of Kerala for this Pilot Project may also be explored. The Stage II may be considered only after successful completion of the Stage I and evaluation of the performance of the machine.

The matter was placed before the Full Time Directors as per the note read as 3rd above.

Having considered the matter in detail, the Full Time Directors in the meeting held on 15.06.2023, resolved to accord sanction to the Pilot Project for installing and operating a 2X5 kW/0.0432Mu Grid Tied Kinetic water wheel generator in Kambalathara LBC under Chitturpuzha Project in Palakkad District, at an estimated cost of Rs. 23.60 lakh including GST, as innovative project using KSEBL's own fund.

Further resolved to explore the possibility of getting innovative funds of Government of Kerala for this Pilot Project.

Further resolved to entrust the implementation of the Pilot Project with the Executive Engineer, Generation Division, Thrissur.

Orders are issued accordingly.

**By Order of the
Full Time Directors**

sd/-

**LEKHA G
Company Secretary**

To:

1. The Chief Engineer (Civil - Investigation & Construction Central).
2. The Chief Engineer (Generation).
3. The Executive Engineer, Generation Division, Thrissur.

Copy to: The Chief Engineer (IT,CR&CAPS)/ Financial Advisor/ LA&DEO/ Chief Internal Auditor/
Company Secretary
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

[Signature]

Assistant Executive Engineer