



KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

Reg office: Vydyuthi Bhavanam, Pattom, Thiruvananthapuram – 695 004, Kerala

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ABSTRACT

Green Uninterrupted RE Power to all rural households at Pappanpara , with Battery Energy Storage System and MicroGrid. - Administrative Sanction-Orders issued.

Corporate Office (Renewable Energy & Energy Savings)

B.O (FTD)No. 911 /2022 CE(REES)/INNOV/AE 2 / Microgrid/2022-23/Tvpm Dated 21.11.2022

Read: 1. Note No. CE(REES)/INNOV/AE 2/MicroGrid/ 2022-23 /1353 Dated 08.11.2022 of the Chief Engineer (REES)submitted to the Full time Directors (Agenda No. 37/11/22)

ORDER

The proposal to install a Microgrid with RE Generation support and energy storage facility was submitted as per note read above to the Full Time Directors. The proposal for installing 80 KW Solar Generation and a Wind generator of 250KW together with BESS of 75KW and storage of 150 KWH capacity was proposed. The BESS will backup in case of Grid failure. Thereby supply to the distribution system will not get interrupted, also the generation from RE sources will also be continuous, thus tapping Renewable Energy to its maximum available potential. The rural hamlets will be provided with Uninterrupted Green energy. To ensure stability of the Microgrid all consumers shall be provided with Smart Energy meters with provision for monitoring the load. If the load drawn by consumers exceed the normal value , when the load is fed from BESS(Peak hours) , such consumers / load shall be cut off from the grid for a short period. Thus power supply to the area could be maintained without any interruption.

Project Cost :

- | | |
|--|--------------|
| 1) Cost of 40 No: 2 Kw Roof Top Solar Plants : 40 x 123391 | = 49.35 Lakh |
| 2) CFA @40% Rs.27,666 /- per 2KW RTS | = 11.06 Lakh |
| 3) Amount Incurred for 40 No: 2 KW RTS | = 38.29 Lakh |
| 4) Cost of 50 Kw Ground Mounted Solar Plant | = 60.00 Lakh |
| 5) Cost of Installing 250 kW Wind Generator | = 200 Lakh |
| 6) Cost of Upgrading the existing 100KVA transformer with 315 KVA Transformer and installing CTC RMU | = 15.00 Lakh |

- 7) Cost of BESS 75 KW / 150 kwh and Supply of
Micro Grid Controller, Protection Systems,
Design Erection & Commissioning of Microgrid. = 400 Lakh
- 8) Cost of replacing existing energy meters with smart meter = 6 Lakh
- Total : 7.3035 Cr.

The matter was placed before the Full Time Directors as per note read as 1st above. Having considered the matter in detail the Full Time Directors in its meeting held on 14.11.2022 resolved to accord sanction to submit the project proposal to the Principal Secretary (Power) to take up the matter with the Government of Kerala requesting to fund the innovative project.

Further resolved to approve the proposal for Microgrid at Pappanpara using RE sources and storage and to accord Administrative Sanction for a total project cost of Rs. 7.3035 Cr and entrust Chief Engineer(REES) to implement the Microgrid project along with storage at Pappanpara only after obtaining funding from Government.

Orders are issued accordingly.

By Order of the Full Time Directors.

Sd/-

Lekha G.
Company Secretary

To
The Chief Engineer (Renewable Energy & Energy Savings)

Copy to:

TA to Chairman & Managing Director /TA to Director(REES,N,S,S&W)/ TA to Director (T SO,Plg & Safety)/ TA to Director Dir(Dist, IT & SCM) / TA to Director (Gen Ele & HRM)/ TA to Director (Gen - Civil)/ PA to Director (Finance)/ Sr.CA to Secretary (Administration)/ The CA to CVO (Vigilance & Security), KSEBL/ Library.

Forwarded by order



Assistant Engineer