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| **Abstract:** |  |
| In this cutting-edge period, power is a basic  need for all things and it applies to the electrical framework.  Just as this circumstance the developing pace of the populace  is expanding step by step. This kind of case made protection  from offering total assistance in every single distant region  and area in Bangladesh, particularly on the Island of St.  Martin's. This paper shows a hybrid system to complete this  service. MATLAB Simulink is used to perform the simulation.  This system is divided into two loads and they are fixed load  and dump load. For as usual load, Diesel Generator is perfect  at the same time Battery Energy Storage System (BESS) can  provide this complete service when diesel generator or diesel  Genset is disabled. This problem has a permanent solution  which is a model Microgrid Equivalent model. This model is  also applicable to using a battery and it can remove a high  amount of fuel consumption. The final result shows that the  diesel little by little tasks the complete amount of load; the  maximum frequency deviation which is decreased from 5 Hz  to 2 Hz, the frequency restores from 2-2.5s. This microgrid  system is the most advantageous and unrestricted for the  proposed area | |