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| **Abstract:** |  |
| Now a day electricity is essential for each and every individual. The Population is growing rapidly, and this growth validates an expanding need for energy also in remote areas and islands of Bangladesh. St. Martin's island is also in need of electricity. This system has two loads, one is fixed loads and another is a dump load. Diesel generator load is available all-time in this system. Besides this, the alternate source Battery Energy Storage System (BESS) is used when the diesel generator is not full fill the demand. To meet the demand, a microgrid equivalent model with a battery will an effective solution. It is also using the battery throughput heavily can reduce fuel consumption. In contrast, this microgrid system will be the most feasible and accessible. | |