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## A HYBRID POWER SYSTEM USING WIND AND DIESEL GENERATOR: A CASE STUDY AT MASIRAH ISLAND IN OMAN



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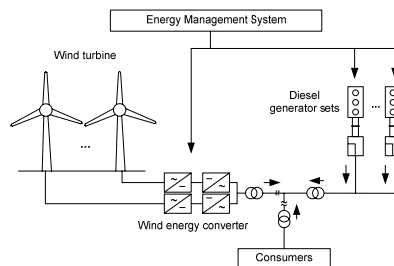
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### OBJECTIVES

- To propose a wind-diesel hybrid power system on Masirah Island in Oman.
- To analyse the benefits of the wind-diesel hybrid system at Masirah Island in terms of the reduction in overall cost and carbon emission.

### APPROACH

**Proposed wind-Diesel Hybrid Energy System**



Benefits of the proposed hybrid power system is analysed based on the wind power output and load demand at Masiran Island. Overall cost of the hybrid system is calculated and compared to the cost of existing diesel generation system.

### RESULTS

- A wind-diesel hybrid system is an economically viable alternative to the traditional diesel generation system on Masirah Island.
- Cost of energy production from wind energy is proved to be very competitive compared to that of the existing generation system.