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EVALUATION OF STAND ALONE REMOTE AREA HYBRID POWER SYSTEM

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ABSTRACT

The aim of this paper is to find the best hybrid combination from the available resources in a given village location that can meet the electricity demand in a sustainable manner and to see whether this is a cost effective solution or not. A model of electricity generation was structured based on multiple combinations of hybrid system with the application of HOMER energy software at an identified off-grid village location in Iraq. This model analyzes the techno-economic factors with respect to the cost of energy COE generation and then compares these performance indicators to grid extension related costs.

KEYWORDS: Micro Grid, Hybrid Power System, off-Grid, Homer, Grid Extension