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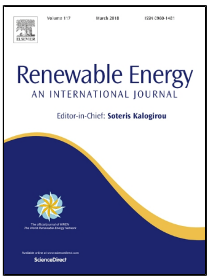

Modeling of hybrid energy system for futuristic energy demand of an Indian rural area and their optimal and sensitivity analysis

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Highlights

- A hybrid energy model is proposed for different combination of renewable energy.
- Optimality and sensitivity of the model is done in HOMER software.
- Hybrid energy model consists of solar-wind-hydro-biogas-biomass found best.
- Here wind turbine deals peak demand, biodiesel plant run throughout the year.
- Analyzed result is anticipated through optimal plot, surface plot and line plot.
- Renewable energy combinations are proposed for futuristic energy demand.