

# Identifying Optimum Solar PV-Wind Hybrid Model in HOMER Pro Aiming Green Growth for Off-grid Village in Thanintharyi, Myanmar

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**1. Introduction** – Myanmar is promoting the Electricity Access of the whole country. Off-grid rural electrification is also the country's prioritized Mission due to 65.35% of the population is living in the rural areas. Then, the Pre-electrification, the medium term of NEP with SHS (Solar Home Systems) and Mini-grids, is the key player of this Mission. The feasibility studies of these grids are needed as the reference for the successful implementation [1]. This research work identifies the optimum Solar PV-Wind Hybrid Model to energize the Coastal Village situated in the Thanintharyi Region, the long narrow Southern part of the country. It is name as “Village Kan Maw Gyi” and located at the GPS coordinates: 13.25043011°N and 98.49167633 °E. The load profile of that village is evaluated for the combined demand of the 160 households, public utility loads and the productive energy loads. The main aim is to contribute in the country's priority and achieve the Green Growth. The objectives are to eliminate the current usages of the firewood and the Diesel fuel consumptions as well as to mitigate the impacts of the Climate Change and other negative impacts.



Image 1. Focused Coastal Village

**2. State-of-the-Art** –Image. 2 illustrates the State-of-the-Art [2]. It is the combination of comprehensive works consists of different portions and several steps. The site visit is the vital work and the crucial input parameters for HOMER Pro model are carefully evaluated.



Image 2. State-of-the-Art [2]

**3. Results and Discussion** – The simulation results in HOMER Pro are obviously reported the feasibilities of the proposed PV-Wind Hybrid System. After analysing these with the Sensitivity values, the Optimal Model is selected towards the Sustainable Rural Electrification.

**4. Conclusions** – Not only the villagers of the focused village but also the other coastal communities can gain the Sustainability benefits by implementing the proposed PV-Wind Hybrid Mini-grid System.

## 5. References

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