Eco village concept for green economic development: Iskandar Malaysia as a case study

ABSTRACT

Renewable Energy (RE) based on town concept in Iskandar Malaysia (IM) that can serve as a global model for a smart eco - village in tropical countries is proposed. In this research, renewable energy (RE) based distributed energy generation (DEG) system for Kulai eco-village (KEV) driven by integrating of biomass, biogas and solar energy. Thus, this paper discusses RE supply and demand side estimation ahead of implementation of RE DEG. The preliminary study has shown that energy supply from local RE included from oil palm biomass, landfill and solar was greater than energy demand for basic amenities at KEV such as lights, air-conditioner, and water heater by 221 times. The results of this study support the idea that it is possible to utilize local renewable energy as green energy resource and will become a first green eco town (GET) showcase from design, construction and operations.

Keyword: Eco-village; Renewable energy; Green economic development