

Development of Alternative Energy on Small Islands in Indonesia

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Indonesia is the world largest archipelagic state with the number of islands 17,480, most of them are small islands (<2000 km²) and uninhabited. Mostly, the existing conditions of those small islands are less economic development and limited infrastructures such as electricity and gas for household. Since the State Electricity Company (PLN) and State Oil Company (Pertamina) could not fulfill the requirement of electricity and gas of those small islands due to remote, high cost transportation and limited population, so that will be costly and unprofitable. Therefore, it is necessary to utilize alternative energies such as solar energy and biogas energy. The Ministry of Marine Affairs and Fisheries (MMAF), Republic of Indonesia is the institution responsible for the coastal and small islands management in Indonesia. Since 2003, MMAF have developed Solar Home System (SHS) 50WP, Hybrid System Photo Voltage Diesel (HPVD), and Centralized System (HPV) ranged from 20 – 88 KWP in 70 small islands. Besides that, the MMAF through District Marine Affairs and Fisheries Services, have also been settled SHS and HPVD in more than 60 small islands. Meanwhile, biogas has been installed at 1,100 houses in 2 small islands.



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The beneficiaries of the development of electricity and biogas have been felt by small island communities, socially and economically. For example, the existence of electric lighting make school children can learn till late night and the adult communities are able to access entertainment and information via radio and television, as well as saving their money expenditure for buying kerosene. With the assisting of an environmental friendly biogas, the small island communities are also saving their costs for cooking and helping the community economic growth through small business and other processed foods.