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SINGLE- AND HYBRID RENEWABLE ENERGY SYSTEMS: REVIE AND ECONOMICAL EVALUATION

Mohamed R. Shaalan, Attia A El-Mallah, Ossama M. Messelhi, Tarek A. Abdul-Fattah, Ali E. M. El-Sayed

Abstract

Energy (conventional as well as non-conventional) is the fuel for a growing world in addition to being the c standards, since it is an essential requirement for socio-economic development. Renewable energies entail potential that contributes to the strengthening and development of sustainable energy infrastructure in ma around the world. A hybrid renewable energy system is one of the most promising applications of renewab technologies, especially in remote areas where grid extension cost would be prohibitive and the cost of fos would be enormously high.

To determine inherent problems in combining different renewable energy sources in a hybrid system, four applied technologies (wind energy, solar energy, biomass energy and hydropower) were briefly introduced present paper. Special issues are common to the use of the above-mentioned technologies in hybrid syster example, air conditioners, generators and energy storage units). The overall objective here is to identify th availability of commercial hybrid renewable energy systems. In this respect, the paper presents a detailed review on the subject. Also, as a preliminary step in a detailed feasibility study, single and hybrid systems evaluated economically.