

AIUB DSpace Publication Details

Title: An Affordable Solution for the Rural Farmers for Irrigation Purpose Including Hybrid Power Source using Solar and Biogas

Author(s) Name: Jahid Hasan, Asif Iqbal Anik, Suborna Sharmin Mishu, Iebho Mohajan, Chowdhury Akram Hossain, Md Rifat Hazari, Kawshik Shikdar

Contact Email(s): chowdhury.akram@aiub.edu

Published Journal Name: 2023 3rd International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST)

Type of Publication: Conference

Volume: _____ **Issue:** _____

Publisher: IEEE

Publication Date: 21 March 2023

ISSN: 979-8-3503-4644-2

DOI: 10.1109/ICREST57604.2023.10070085

URL: <https://ieeexplore.ieee.org/abstract/document/10070085>

Other Related Info.: Pages 244-248

AIUB DSpace Publication Details

Abstract:

The use of fossil fuels to generate the ever-increasing demand for energy is proving to be a very strong reason behind the global warming issue. The hybrid power system is a combination of different technologies to produce Electricity. In Bangladesh, farmers experience several irrigation-related problems due to a shortage of energy. This paper deals with an economical hybrid power system that uses the grid, solar, and biogas generator that offers a fresh approach to solve this problem. Since it is impossible to always have sunlight, a biogas generator would be used to generate electricity and charge a battery to satisfy the requirements and a grid connection will be a backup for both biogas and sunlight absence. Based on the priority, the user will be able to switch among the three sources for efficient use of power. This hybrid system will contribute to our country's increasing demand for power management by serving the less resourceful farmers from rural areas. In this research, hardware and simulation findings have been examined from Bangladesh's perspective. Since it is based on renewable energy sources, this initiative presents a novel solution to Bangladesh's emerging power crisis issue.