DISSEMINATION OF LARGE SCALE BIOGAS PLANTS FOR COOKING AND HEATING IN DISTRICT HARIPUR, KHYBER PAKHTUNKHWA

By

KINZA AFSAR

(MS-ES)

Department of Earth and Environmental Sciences

Bahria University, Islamabad

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ABSTRACT

Rural people Pakistan of Pakistan are dependent on forests for extraction of fuel wood, it is because of lack of accessibility to other fuel sources. Selected villages of District Haripur are few among them. These have no accessibility to natural gas and energy sources, however electricity is provided to the residents through Tarbela hydro power plant. The study was carried out to find out the feasibility of biogas use in the study area B by evaluating its benefits in study area A. difference between the two was study area A has been facilitated with biogas through installation of family sized biogas plants, whereas no such facility has been provided in study area B. Thus, dissemination of large scale biogas plant named as Multi-fermenter, single-digester (MFSD) biogas plant by PCRET was carried out in study area B. MFSD is based on multi feed setup as it can ferment three type of biomass (agricultural waste, kitchen waste and animal waste) at a time and produce enormous volume of biogas. The results revealed that facilitation of MFSD can reduce dependency on fuel wood by 50%, which will result in various social, economic and environmental benefits. Capacity of MFSD is directly proportional to feed available, thus calculated values were 74 cubic meter for village Soha, 106 cubic meter for village Tandehla and 60 cubic meter for village Lower Tandehala. This capacity varies with the feed inculcated. Residents showed deep interest in the technology as an alternate for traditional biomass use. This will help them cope with various issues associated with wood usage as fuel. Biogas facilitation will ensure women protection, health improvement, reduced indoor air pollution, low dependency on forests, waste management and community interaction and participation.

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