

Biogas Energy: Unexplored Source of a Renewable Energy in Jordan

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Abstract

Jordan is a non-oil producing country. Its basic energy requirements are obtained from imported oil and natural gas from different sources. Domestic natural gas covers only 4% of the Kingdom's energy needs. Energy import costs create a financial burden on the national economy. Jordan spends more than 25% of its GDP on the purchase of energy. Considerable efforts have been made and great progress has been achieved in the application of solar, wind, biogas and hydro energy utilization. This paper explores the potential of biogas as renewable energy in developing countries including Jordan, where access to basic clean energy services is essential for sustainable development. A techno-economic feasibility study for electric power generation from municipal solid waste was carried out in cooperation with the UNDP and the UN Global Environmental Facility has approved the award to finance a pilot biogas plant at Amman municipal waste disposal site. The project rated capacity is 1MW and due to the successful operation, the project was expanded to 3.5MW.

Key words

Biogas, digester reactor, fermentation, greenhouse gases, internal combustion, landfill, methane.

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