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ABSTRACT

Stable power supply is a luxury most Nigerians can't afford and this is generally believed to be the bane of economic and industrial development in the country. With that in view, a solution that cut across power and economic growth and development was devised.

BIOMASS BRIQUETTES

Biomass briquettes are the product of the low-pressure compaction of biomass like sawdust, agricultural waste, paper, etc and these can be burned much like charcoal to generate Electricity. This is a renewable source of energy and its emission do not constitute anthropogenic greenhouse gases and not sequestered deep in the earth during the carboniferous period as with coal.

History says people have been using Biomass briquettes in Nepal long before it was recorded but It truly begun in 1925, when Japan started developing technology to harness the energy from biomass briquettes also known as "Ogalite" .Biomass briquette technology has evolved over the centuries and is being used commercially and locally in a few countries.

In brief, briquettes are burned and the resulting heat is used to turn water into steam, the steam at very high pressure is then used to spin a turbine, connected to an electrical generator. The moving magnets cause electrons in the wires to move from one place to another,creating an electrical current and producing electricity.

With little-to-no mechanical preparation, biomass briquettes can also be used as cooking fuel catering mostly to the needs of people in rural regions.

This project has both engineering and economic goals. The engineering goals underscore the advantages of the biomass briquettes, including the provision of stable, clean and affordable power supply(SDG 7), provision of cooking gases for the rural regions at little or no cost, creation of job opportunities with the expansion of biomass briquettes industrialization (SDG 8),contribution to technological advancement through the creation of biomass briquette stove machinery, among other opportunities.

Economically, the project solves serious environmental problems like the reduction of the

emission of toxic greenhouse gases which in turn aids the climate(SDG 13), also, reduction of waste which ensures healthy living and promotes the well-being for people of all ages (SDG 3),economic and structure improvement by reducing the need to import and export fossil fuels across the globe.

Overall, it can be concluded that biomass briquette is a strong renewable energy solution ,especially in regions like nigeria where the raw materials are limitless.