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Challenges of Energy Access and Supply to the Ghanaian Food Processing Industry — A Review

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Abstract

Currently, 82.5 % of the population has access to electricity from the national grid. However, the supply of electricity currently is below the projected demand. This challenge has been coupled with the projected increase in demand by 10 % per anum. The total supply of energy in August 2017 was 140.84 GWh lower than the 1,259 GWh projected under the electricity supply plan developed for the year 2017. This has led to the prioritisation of energy as one of the key areas in the Individually Nationally Determined Contributions

Agriculture forms 25 % of Ghana's GDP. However, the projected growth of the sector has been limited due to the challenge of post-harvest losses. With population growth, food demand naturally increases but a third of all food produced for human consumption is lost or goes to waste. The causes span from poor road networks, limited storage facilities and unstable/ no access to energy supply for most farming communities. The food processing presents a viable solution to the challenge of post-harvest losses. However, the energy situation in the country has stifled the growth of the sector. The main sources of thermal energy for the food processing industry are wood fuel (Biomass) and imported petroleum products (mainly diesel and petrol). Petroleum is imported hence the price is determined by the international market. Biomass increases deforestation.

This study focuses on reviewing how access to energy and the reliability of the energy supply is a key factor in affecting the food processing industry in Ghana. Extensive literature and field studies have proven that energy access for off-grid communities and the unstable nature of the communities connected to the grid is the key challenge of the food processing industry. Integration of renewable energy as an alternative energy source for the food processing industry presents a viable solution. Ghana has the requisite policies and regulatory bodies to make renewable energy integration in the food processing industry a success.

Keywords: Agriculture, challenges, energy, food processing, post-harvest losses

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