Abstract—Green energy is becoming a consequential aspect for developed countries in the world toward energy security by reducing dependence on fuel import and enhancing better life quality by living in a sustainable salubrious environment. Issues regarding of renewable energy engenderment in context of supply chain management is the source supply reliability to ascertain sustainable volume for optimal energy engenderment. Supplier risk may involve material delay, operational conduct, storage system, raw material quality and distribution. Different range of physical and chemical of biomass properties request different particular operation strategies to optimize the engenderment. The aim of this paper is to provide a constructive conceptual framework for integrating oil palm fibre waste inventory management into a portfolio of biogas supply chain for optimal electricity engenderment. Observation on industrial practise and deeper study on cognate literature review had been conducted. This study represent two findings that are “Bio briquette Usage in Value Chain of Oil Palm Fibre Waste - Electricity Grid Supply” and “Closed Loop Supply Chains (CLCS) of Oil Palm Fibre Waste for Electricity Production by Producing Bio Methane Fuel”.

Keyword – Inventory management, biomass briquette, oil palm fibre waste, biogas, value chain