

## The Use of Water Hyacinth for Bioenergy Electric Generation: For the case of Tana Water Hyacinth

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**Abstract :** Due to its high biomass output and potential to produce renewable energy, water hyacinth, a rapidly expanding aquatic weed, has gained recognition as a prospective bioenergy feedstock. Through a variety of conversion processes, such as anaerobic digestion, combustion, and gasification, this study suggests using water hyacinth to generate energy. The suggested strategy helps to reduce the annoyance brought on by the excessive growth of water hyacinth in Tana water bodies in addition to offering an alternate source of energy. The study emphasizes the value of environmentally friendly methods for managing Tana water resources as well as the potential of water hyacinth as a source of bioenergy.

**Keywords :** anaerobic digestion, bioenergy, combustion, gasification, water hyacinth

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