

Decentralized Energy solutions for East Africa and the Role of Research

Energy Efficiency Opportunities in the Tea Sector

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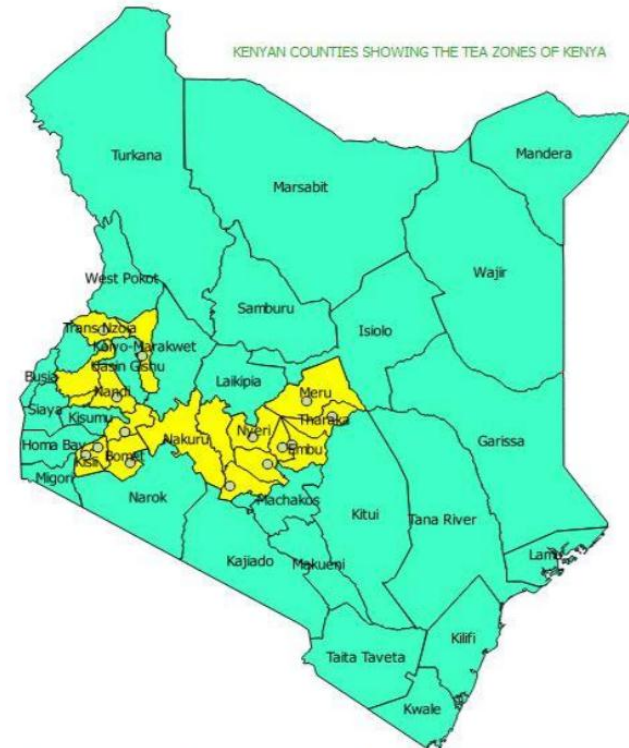
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Introduction

- Third largest tea producer in the world
- 20% of Kenya's export revenue
- KTDA accounts for 60% of National production
- 600,000 small-scale farmers
- 130,000 hectares of plantation
- 40 million kg of tea produced in 2017

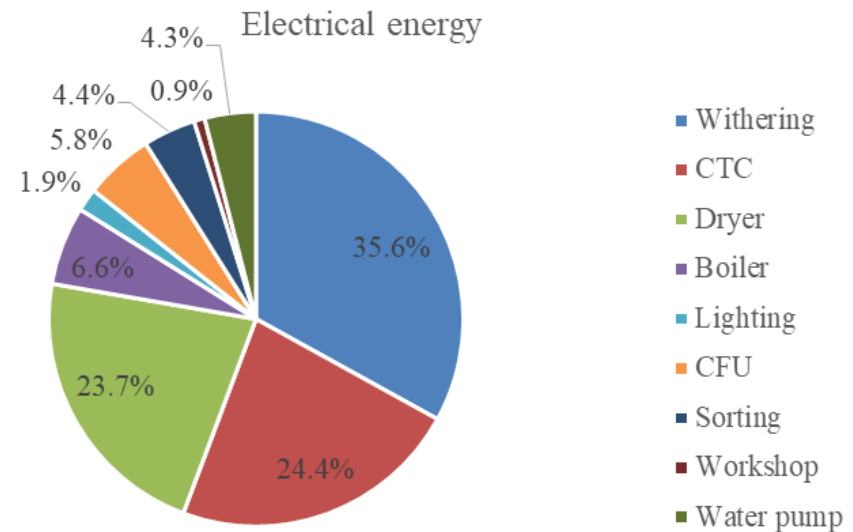
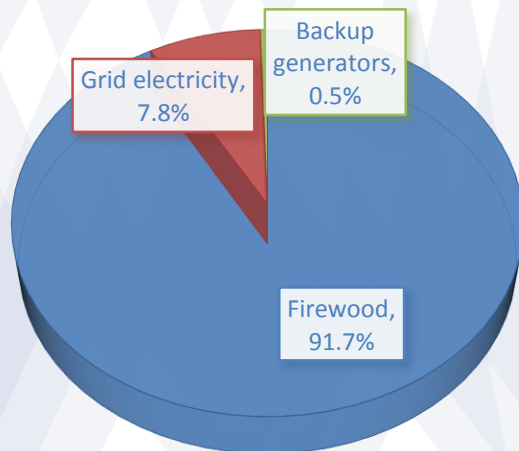




Energy Efficiency Potential in Kenyan Tea Sector

KTDA factories (30) have a baseline energy consumption of 767.4 GWh/year

Energy Sources Share



Energy accounts for 30% of production costs



Energy Conservation Measures

Operational ECMs



Electrical ECMs



HEM



VFDs





Energy Conservation Measures

Thermal ECMs



Pipe lagging



Steam traps



Air Preheaters

Exploration of Hot water system to
replace steam heating system



Gaps and Opportunities



Modern conversion Technology

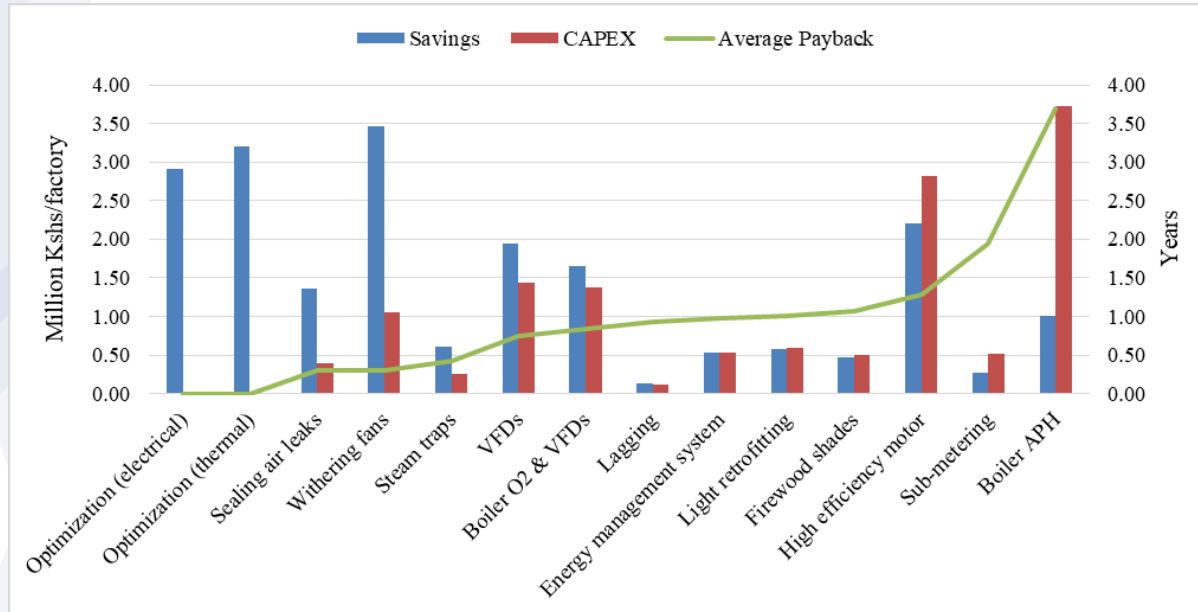


Alternative biomass form





Conclusion



- Implementation challenges



Thank you

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