

Minimizing food waste with shared solar cold rooms

OVERVIEW

The project seeks to provide cooling and storage services to smallholders, suppliers and aggregators of fish by installing solar powered cold rooms in the Lake Victoria area. The project plans to store 20 ton of fish per day, serving up to 80 fish traders, mostly women and youth.

MARKET AND STRATEGY

It is estimated that 290 tons of fish are harvested every day in Lake Victoria around the Mwanza area. Over 60% of all fish loss occurs post-harvest, due to limited access to cooling services. Women and youth fish traders are often disadvantaged and cannot afford high upfront capital and operating expenses for cold storage facilities.

VALUE PROPOSITION

The project offers Cooling as a Service (CaaS), enabling greater market opportunities to sell fish in Mwanza and surrounding regions, overcoming challenges related to access, limited cold storage space and grid power interruptions. It offers fish preservation through a rental fee charged at a reasonable and competitive cost of USD 0.15 per kilogram per day, enabling better returns for fishers and traders.

BUSINESS MODEL

The project will store 20 tons of fish per day. At USD 0.15 storage charge per kilograms per day, working 312 days in a year, this translates to annual revenues of USD 950,000. Net Revenue is USD 703,600 giving a 74% margin. Break even period is 1.07 years and a recoup of the initial investment in 1.4 years.

TRACTION

In addition to developer's equity of USD 50,000, the project has received USD 367,065 from EEP Africa. The company has a "Certificate of Incentives" by the Tanzania Investment Centre. Environmental Social and Impact Assessment (ESIA) is underway. Site clearance for construction has started.

TEAM AND EXPERTISE

Management has a combined experience of over 26 years in energy and energy efficiency, business and financial management, strategic and operational planning, logistics and warehousing, and food processing.

IMPACT

Fish shelf life will be extended from six hours to three days. The project will facilitate market entry for at least 150 women and youth fish traders. At least 7,233 tons of CO₂ will be avoided in two years through mitigating use of firewood for fish frying and use of electricity for refrigeration.

GENDER FOCUS

The project will employ more than 60% women and give priority for cold storage rental to women and youth fish traders. A female project manager will be appointed to implement the project and oversee the daily activities.

TECHNOLOGY	Solar Powered Cold Room Storage
PROJECT / LOCATION	Tanzania
MATURITY OF PROJECT	Startup
ANNUAL GHG REDUCTION	7,233.42 tons/year
NUMBER OF EMPLOYEES	5

TOTAL INVESTMENT ASK: **682,000 USD \$**

EQUITY ASK: **315,000 USD \$**

EXIT OPTION: 3 years
PROJECT IRR: 71%
EQUITY IRR: 68%

DEBT ASK: **367,000 USD \$**

DEBT ASK CURRENCY: USD
LOAN TENURE: 3 years
INTEREST RATE: 7%
AVERAGE DSCR: 1.75
EBITDA MARGIN: 77%
PAT MARGIN: 49%

PFAN ADVISOR

Juvent Magoggo |
jmagoggo@gmail.com