

# Productive Use of Electricity: Case Studies from Lake Victoria

# OUR APPROACH TO PUE!

*What? PUE part of our goals not an after-thought*

## Objectives:

- Facilitate 10,000 new clean energy connections and at least pumped 100 million liters of clean water in East Africa
- To have delivered sustainable livelihoods alongside clean sustainable energy through the creation of 600 new enterprises,
- To have provided measurable social benefits to women and youth through livelihood diversification and job creation in agriculture and the fish value chain

## How?

- *Methods/ tools*
- *Technologies*
- *Partners*

## Why? Impact beyond connections

- *gender/youth*
- *jobs*
- *demand*
- *Sustainability*

*(KPIs)*

## METHODS AND TOOLS

*a. Participatory rural appraisal methods e.g. Transect walks, group discussions , key informant interviews*



## METHODS AND TOOLS

*a. Market assessment and baseline survey b. technical compatibility assessment tools  
b. Business modelling and planning tools d. additional business development services  
Africa (capacity development – financial literacy, governance and entrepreneurship skills)*



## **SOME OF THE TECHNOLOGIES PRODUCTIVE USES OF POWER WE HAVE PILOTED**

Four irrigation systems have been installed with electricity for water pumping coming from the micro-grids benefitting 40 and 6 men.



## SOME OF THE PRODUCTIVE USES OF POWER WE HAVE PILOTED



Total of 12 chest freezers were distributed with 2 units going to each Beach Management Unit(BMU) in 6 sites.



- Slightly over half (52.2%) compared to 92.0% of the beneficiaries at baseline, reported food shortage in their household during evaluation
- Income increase and income diversification: 74% increase in income for the women with over KES 300,000 made per season
- -We have learnt that chest freezers are not the most appropriate technology for fish preservation since the villagers ended up making ice with them(which does not work and they do not meet the demand)

## COMMERCIAL ICE MAKERS

- Employing 12 orphans and widows and generating about KES 3000/day in revenue
- Increasing revenue 5 fold for the energy system hence building financial and social sustainability

1. We are installing our pilot ice making and cold room solution on Kiwa Island. The technical solution and business model have been developed in partnership with Dublin Institute of Technology through a volunteering agreement that sends resources to Renewable East Africa. **The ice plant will have the capacity to operate continuously 24/7; the minimum requirement is 400kg per 24hr period . The proposed modular ice making solution can be stacked to increase capacity as demand grows.**



1. *PARTNERS*

1. *Renewable World East Africa*

2. *Kiva Zip loans*

3. *Powerpay*

***THANK YOU!***