EFFICIENCY FOR ACCESS

Solar-powered irrigation in Malawi

Renewables Forum: The Water-Food-Energy Nexus, Edinburgh

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INTRODUCTION

Energy Saving Trust is an independent organisation dedicated to promoting energy efficiency, low carbon transport and sustainable energy use. We aim to address the climate emergency and deliver the wider benefits of clean energy in the just transition to net zero.

Efficiency for Access Coalition is a global coalition working to promote high-performing appliances that enable access to clean energy for the world's poorest people. It is co-managed by CLASP and Energy Saving Trust and consists of 20 Donor Roundtable members, 19 Programme Partners and 34 Investor Network Members.

LEIA: The Low Energy Inclusive Appliances (LEIA) programme is Efficiency for Access' flagship programme, focused on research and innovation. It is funded by UK aid, from the UK government via the Transforming Energy Access platform and the IKEA Foundation.

KEY CHALLENGES

AFFORDABILITY

Affordability remains the biggest challenge hindering a wide deployment of solar irrigation in off-grid areas. Technology and business model innovation need to work hand in hand to close the affordability gap.

INSTALLATION + O&M

Site-specific requirements and adequate after-sales services are key to achieve high uptime and user satisfaction. Supporting certified technical installers and repair technicians can address this challenge.

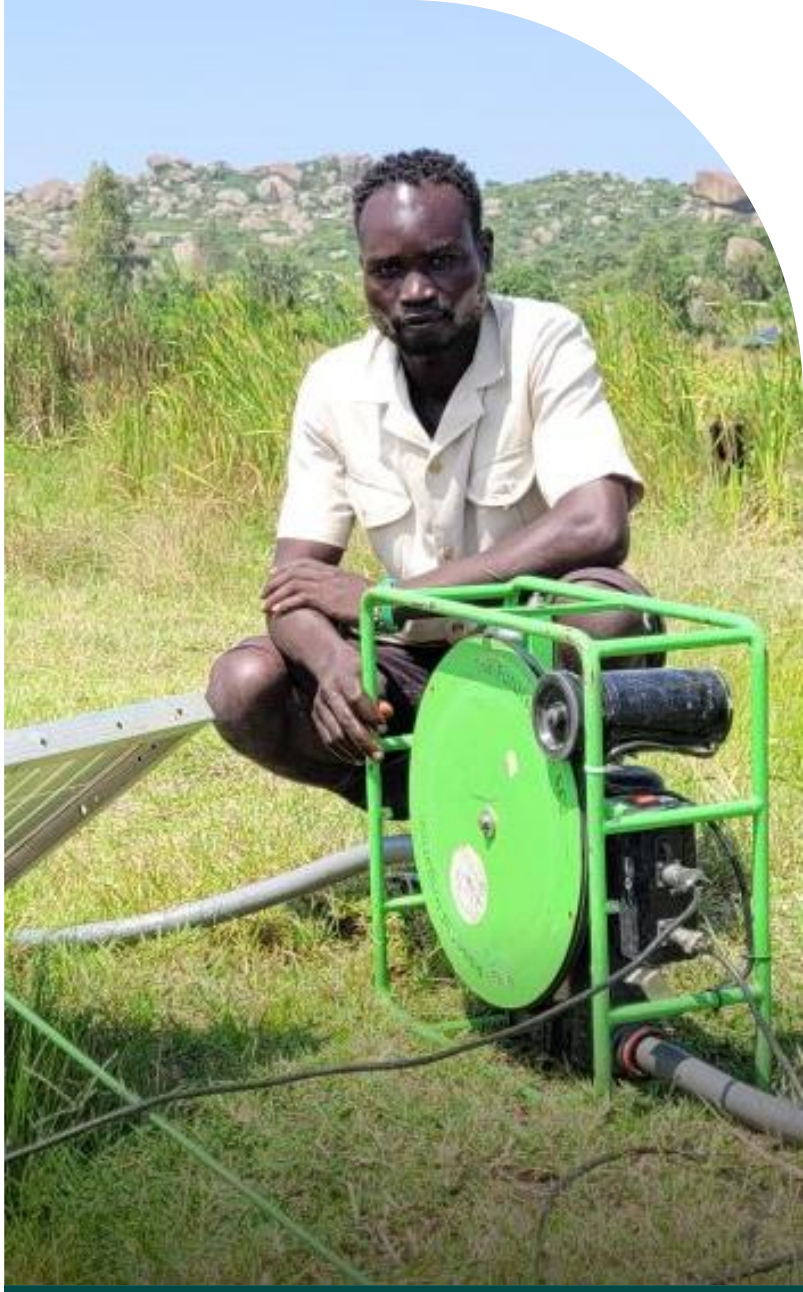
EXTENSION SERVICES

Sound agricultural advice on crop selection and farming practices need to be tailored towards individual farmers. Establishing market linkages is key to achieve long-term sustainability.

High cost of customer acquisition

AFFORDABILITY

- High upfront cost is required
- Pay-as-you-go is often not sufficient
- Most smallholder farmers in Malawi cannot afford an entry-level solar water pump
- Innovative financing models on the horizon:
  - Concessional consumer financing:
    - 5-year, zero-interest loan increases affordability by 35%
  - Irrigation-as-a-service
    - Service-based model



Farmer using a solar water pump from Futurepump

CASE STUDY FROM MALAWI - WALA

- Wala is a women-led Malawian social enterprise offering a full package of services including:
  - Pay-as-you-Grow
  - Market linkages with off-takers
  - Farmer training related to technology, farming practices and business skills
- Achievements:
  - 150 solar water pumps sold to farmer groups (3,000 low-income smallholders)
  - 56% were women and 19% were youth
  - Income increase of 450,000 Malawian Kwacha

Farmers using Wala's solar water pump system

Local farmers using Wala's solar water pumps to irrigate crops

CASE STUDY FROM MALAWI - WALA

- Lessons learned:
  - Global crises can cause supply chain disruptions and delivery delays
  - Securing contracts with off-takers before the growing season leads to stable and predictable revenues
  - Procuring high performing products helps to mitigate potential issues in the field
  - Technical support and after-sales services need to accompany equipment sales
  - Access to long-term capital is required to offer long-term repayments

CONTACT DETAILS AND NEXT STEPS

- Next steps:
  - Energy-as-a-Service Demonstrator: Testing an Innovative Affordability Solution in Malawi
- Relevant reports:
  - The Road to Zero Interest
  - Innovator Series: Wala
- Website: https://efficiencyforaccess.org/
- You can contact us at: Jakub.Vrba@est.org.uk, Ellie.Grebenik@est.org.uk

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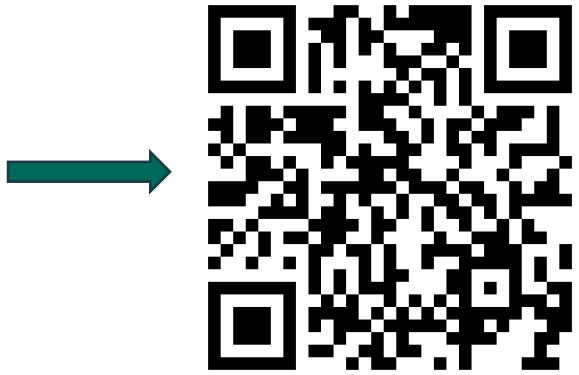

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