Implementing the SDG 2, 6 and 7 Nexus in Kenya

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Outline

• Strathmore Energy Research Centre
• Kenya Climate Innovation Centre
• Problem Statement
• The Solution: people-centred
• Benefits
• Partial Results
• Conclusion and Recommendations
SERC

- Founded in 2012 as a research centre within Strathmore University
- **Goal:** To be a centre of excellence in renewable energy and energy efficiency in the East Africa region.
- **Vision:** To be a leading centre in multi-disciplinary thinking, research and skills development for sustainable energy solutions in Africa
- **Focal areas:** Solar PV & thermal, bioenergy, energy efficiency
- **Service to society & positive influence to the 6000 students towards impact**
SERC Services

Consultancy

Training

Research & Testing
Solar Testing Lab

- Founded in 2014
- Increase adoption of solar through access to good quality products
- Test of Solar Panels, Charge Controllers, Batteries and Lighting appliances
- Working towards being ISO 17025 accreditation
The 600 kW grid-tied PV system

<table>
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<tr>
<th>Year</th>
<th>Income (KES)</th>
<th>Expenditure (KES)</th>
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<td>2013</td>
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Walking the Talk!
The Problem

Agriculture contributes 80% of Kenya’s GDP and is facing water supply challenges. Poor water supply methods.

Water Shortage

[Images of a person in a field with arms outstretched, a person kneeling in a rice field, and a child playing with water in a muddy area.]
The Solution: Triple Helix training

- Solar-powered water pumping.

- Most of the companies offering these solutions offer in house trainings tied to a brand with no general syllabus.

- SERC leveraged this and came up with the first solar water pumping training course in East Africa.

- The **target participants** for the course are government officials, development organisations officers, farmers, professionals - technical and nontechnical.
The Solution - Ground Mounted Pump
The Solution - Submersible Pump
The Training Hands-on Equipment
The Solution: Benefits

- Does not require storage.

- Zero running costs and no pollutants compared to the diesel and petrol pumping gen sets.

- The Energy Sector Management Assistance Program (ESMAP) of the World Bank, projects the return on investment of a solar powered system to be 1-3 years for solar panels with a lifespan of an estimation of 25 years, a reduction in cost over life of the systems of -40% to -90% in comparison to diesel generators. (World Bank, 2017; GSWI, 2018).
Partial Results

- Two groups were already trained by SERC.

- Preparation for the NITA approval and EPRA granting points for continuous professional development is already work in progress and it may come before the end of 2019.

- Market Survey regarding availability of work for the trained people has already started.

- A partnership with KEWI - Kenya Water Institute will help ensure that its students can apply for the training; in future, the current syllabus can be added to the standard training for water experts.
Conclusions and Recommendations

• Triple-helix based solutions towards wide and lasting impact.

• To avail training participants with a case study where practical situations beyond the hands-on aspect of the training will arise.

• Design the training with a more practical approach to local problems. Access to KCIC and its support.

• To attain a more collaborative interaction between the industry and the participants in order to ask thoughtful questions, identify bigger ideas, investigate and solve challenges in solar water pumping industry.
Asante Sana Kidogo!

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