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

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

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The 600 kW grid-tied PV system

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Walking the Talk!

The Problem

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Agriculture contributes 80% of Kenya's GDP and is facing water supply challenges

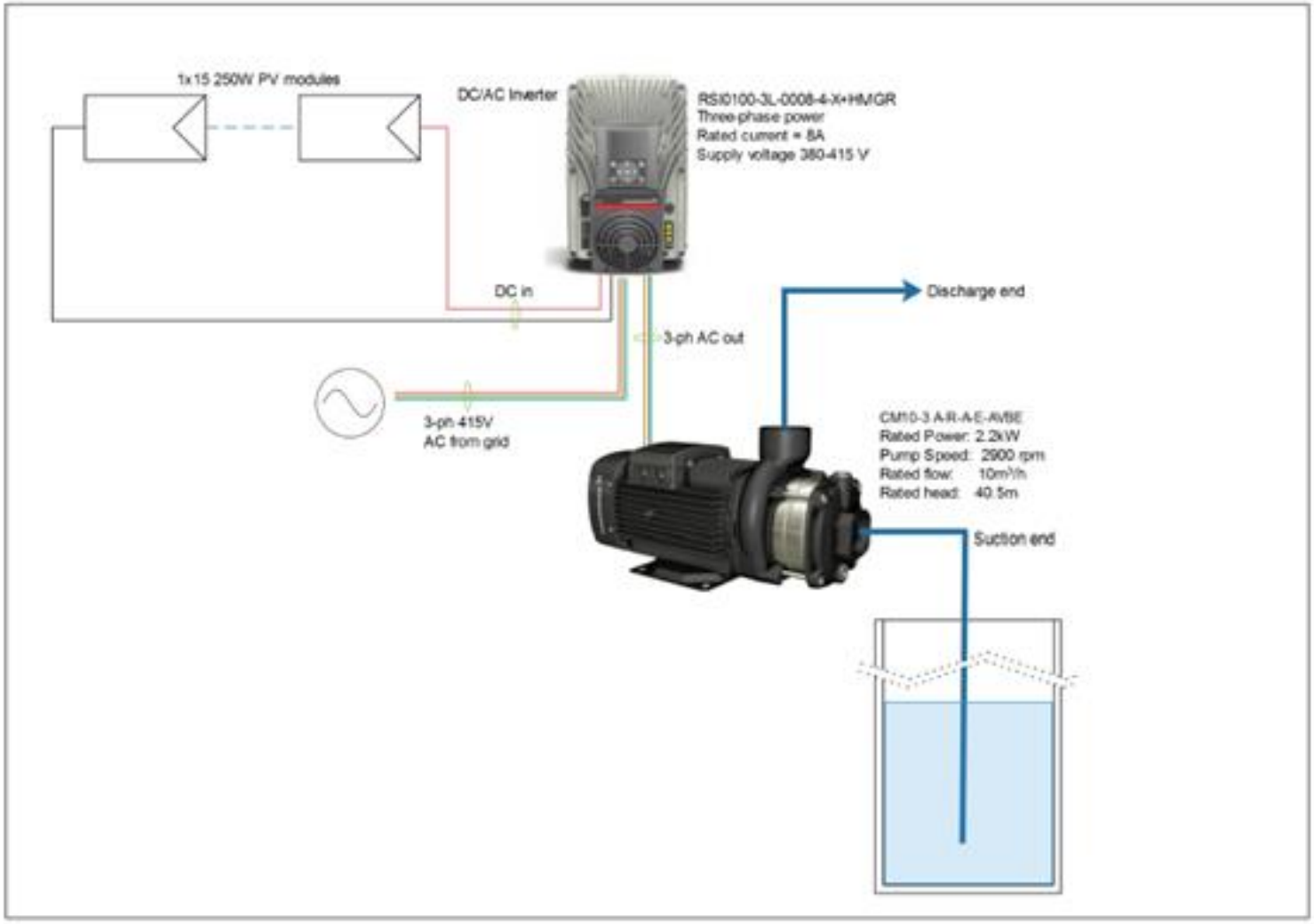
Poor water supply methods

Water Shortage

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

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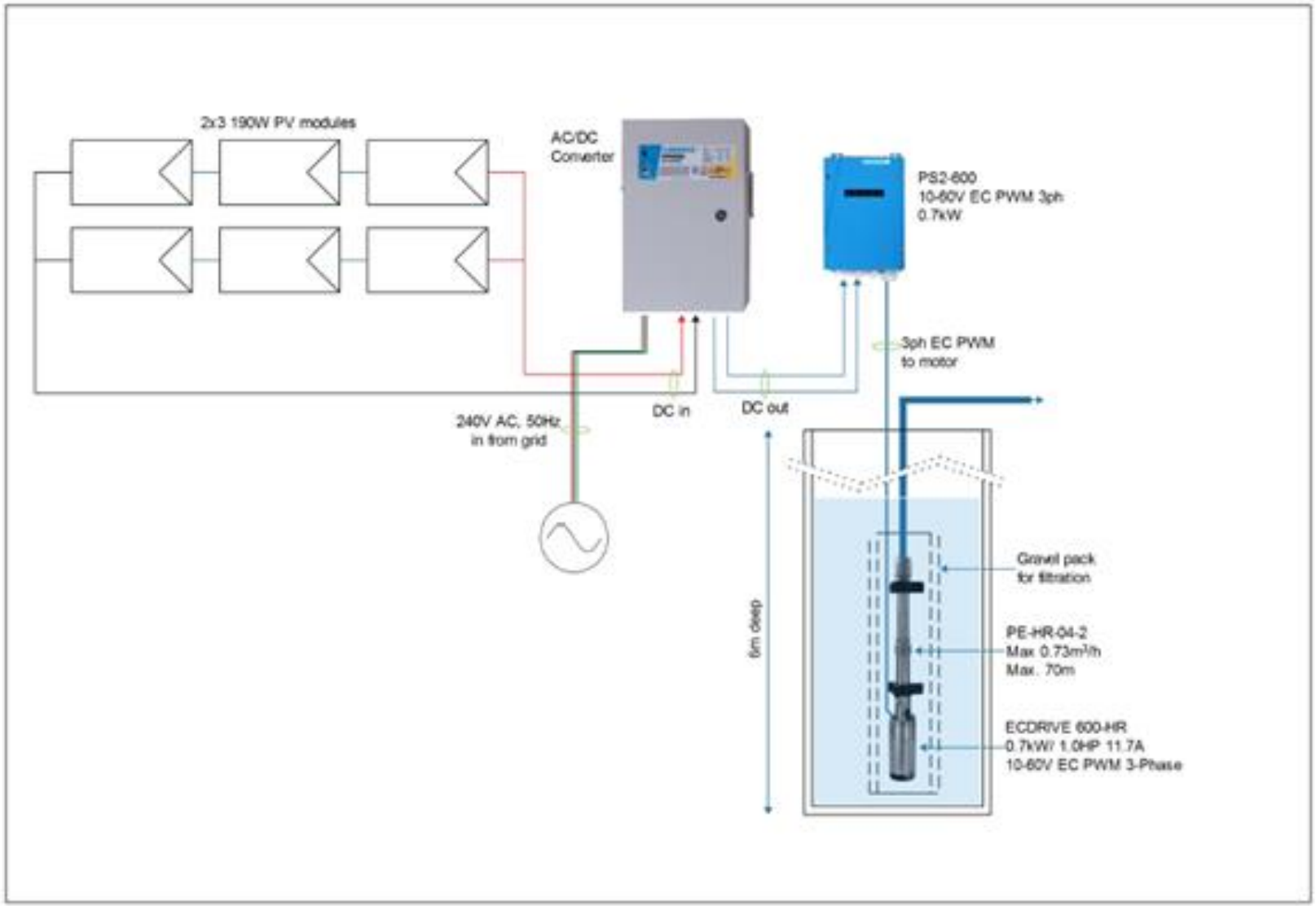

The Training Hands-on Equipment

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The Solution: Benefits

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- 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

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- 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 a 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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