

TICOS & SunFire Solutions

PROJECT SUMMARY: Solar & Fuel Efficient Cookers, South Africa

Renewable household energy provision for the peri-urban and rural poor, South Africa

Summary

This project seeks to stimulate Southern Africa's largely ignored solar potential by recruiting community-based entrepreneurs to promote solar and fuel efficient cookers in three areas: Soweto, Polokwane and Acornhoek.

Through the entrepreneurs, the project will support the distribution of 1,500 solar & fuel efficient cookers in each area (i.e. 4,500 households), to reduce 37,000 tonnes CO₂e over 6 years from implementation. Funding will enable a subsidy to be given for each stove making it financially accessible for the poor whilst still ensuring its value is retained. Additionally the project supports the education of environmental, social and economic issues around fossil and unsustainable wood fuel use to promote the benefits of solar and fuel-efficient stoves in the three areas.

These solar and fuel efficient stoves allow families to move away from open cooking fires which require enormous amounts of wood fuel, or coal, thus reducing the amount of fuel used and costs to the household.



Solar Stove

Project Objectives

• Environmental

- reduce 37,800 tonnes CO₂e
- reduce deforestation
- increase biodiversity
- reduce air pollution & acid rain

• Social

- Reduce respiratory illnesses
- Reduce local unemployment
- Increase local educational level
- Improve equality

• Economic

- Reduce poverty
- Create local jobs
- Alleviate energy service shortages
- Stimulate local & regional economy
- Reduce fuel cost for the poor



Delivering carbon reduction and sustainable development benefits



Fuel efficient Stove

TICOS and SunFire have been working together since 2007. TICOS provides the CO₂e reduction verification and SunFire is the project developer. TICOS works around the world, primarily with the tourism industry, to link the offsetter directly to a relevant project.

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Sustainability Results: *All three Pillars*

Environmental

The project will benefit the local, regional, national and international natural environment. Locally, the project will **reduce deforestation and habitat degradation** by reducing fuel wood demand. This will help **safeguard regional biodiversity** as the pressure on the natural environments is reduced. Reducing deforestation helps address the environmental challenge of **soil erosion and associated silting of rivers and water courses**. The switch from coal and inefficient wood burning **reduces particulate, NOx and SOx air pollution**; locally, regionally and even national depending on scale.

Social

The project will provide **health, community and educational** benefits to the local area, and in the long run will aid improvements in equality. Health benefits include: **reducing smoke-related health problems** in recipient households, and **reducing incidence of cooking-related burn injuries**. Job creation **reduces unemployment** and increases available **income and time for education and learning**. This time and money can be used by women to **reduce the inequality gap**. Workshops & demonstrations will directly **raise awareness and understanding of efficient and safe cooking practices**.

Economic

The project will directly benefit the locality by **providing employment**, and indirectly through offering **supplementary livelihoods**. Currently up to 30% of a household's income is spent on fuel for cooking, and a stove can reduce fuel use by up to 60%. The project can bring an **economic boost** to the area and wider region, by facilitating **investment in other areas** such as education, nutrition and home improvements. Reducing reliance on fossil fuels increases the amount of capital available **improving the outlook for South African GDP**.



Technical Information

Number of stoves / Households: 4500

Tonnes CO₂e per stove/yr offset: 1.4

Lifetime of stove: 6 yrs

Total tonnes CO₂e offset: 38,700

Previous fuel use: Coal or wood fuel

Verification Standard: TICOS

TICOS and SunFire Solutions' Fuel efficient and Solar Stove project in South Africa offsets carbon emissions by reducing potential future emissions. To make these calculations projections are made of the carbon dioxide emissions resulting from cooking without these efficient stoves and compared to the emissions with the stoves. The stoves are maintained and ensured for 6 years; however they may be used for longer. The assumptions are then monitored over time to ensure that those claimed are realised

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