

Technology Category: Energy Efficiency

AM AHLATHIECO

Sandiswa Qayi

Project Name: Hot Spot for household geyser

Technology Summary: The hot spot enables household to control the geyser and heat the water that is needed instead of heating the full geyser at high price.

BOOST MECHANICS

Ipeleng Mathebula

Project Name: Energy- Efficient turbocharging

Technology Summary: An Efficient turbocharging solution that enhance the efficiency of existing engine platforms and for minimising the CO2 emission of large industrial vehicle.

COCO'S SOLUTIONS

Corinne Greyling

Project Name: Superhydrophobic HV coatings

Technology Summary: Superhydrophobic self-cleaning coatings providing protection to the High Voltage grid specifically in areas of high pollution on an ageing and stressed grid.

DUCERE HOLDINGS

Andre Reyneke

Project Name: MISER Hydraulic Hybrid Transmissions

Technology Summary: MISER Hydraulic Hybrid Transmissions delivers the best of breed application for fuel saving and emission reduction while lowering the cost of ownership of the vehicle owner.

ENERGY BANK SOLUTIONS

Leon Dippenaar

Project Name: Energy Bank Solution

Technology Summary: Energy Banking platform that converts energy units as financial units to solve end-user grid feed-in problems for grid & micro grid operators.

MASHESHA STOVE

Louise Williamson

Project Name: Mashsha Syngas stoves

Technology Summary: A double-barrelled metal chamber with strategically placed air vents to allow for natural convection airflow which promotes high heated combustion and a secondary ignition of syngas.

TEAM ARCBAN

Jan Jooste

Project Name: ARCBAN switches

Technology Summary: ARCBAN technology enabling switchgear to be opened under full electrical load without creating electric arcs. Cheaper, safer and tenfold more effective than current switchgear.

THE GREENERS

Pakiso Mofokeng

Project Name: Heat repellent for Solar Panels

Technology Summary: Liquid based solution to shield Solar Panel from heat while ensuring light is absorbed for the Solar Panel to effectively generate electricity.

VANZYL GAS TURBINE TEAM

Nic van Zyl

Project Name: *Gas/Fuel Turbine Generator*

Technology Summary: Energy efficient and stand-alone gas/fuel turbine that generates electricity and provides hot water aimed at rural communities.

Technology Category: Green Building

GREEN FENCE

Peter Small

Project Name: *Solar powered Polymer fence for Agriculture*

Technology Summary: Polymer, lower cost fence used for protecting crops and animals made of some recycled plastics, which includes clip hook and Aluminium thread and powered by a photovoltaic cell resulting in a zero maintenance “electric” fence.

THEVIA

Martin Ackermann

Project Name: *Thevia Roof tiles made of recycled & discard materials*

Technology Summary: Utilising discarded slimes (quarry dust, mining dust or even fly-ash), and recycled plastic in a compression moulding process to make roof tiles double as strong and 25% the weight of normal cement tiles at a similar manufacturing cost to normal tiles.

Technology Category: Renewable Energy

AET FUELS

Andries van der Linde

Project Name: Hybrid Fuel Technology

Technology Summary: A three phase on-board hydrogen/oxygen generator to improve internal combustion engine for fuel savings.

NZABELA TECHNOLOGIES

Landile Xandekana

Project Name: Solar Cover Charger

Technology Summary: Portable Solar Cover Charger technology that aims to provide a clean, silent, and sustainable energy to ensure that cellphone batteries are fully charged.

POWER 4 ALL

Peter Jordaan

Project Name: Hydro-cascaded Power Generation System

Technology Summary: A cascaded Hydro electricity generation system compatible with variable water flow, which requires no dam and has a capacity to generate approximately 5MW power in any location on flowing water.

ROSSOUWTECH

Christo Rossouw

Project Name: Window-sol

Technology Summary: Window-sol is a complete off-grid electrification solution for underdeveloped areas and electricity savings tool for electrified homes. Window-sol is a solar powered device that is fitted on the inside of a window casting or onto a window sill.

THOBELA INDUSTRIES

Mxolisi Thobela

Project Name: Multi-stage Energy Storage Array

Technology Summary: A Multi Stage Energy Storage Array that makes it possible to convert electricity to different storable energy forms.

Technology Category: Waste to Beneficiation

PEGASUS

Lovell Emslie

Project Name: High substitution Diesel Dual Fuel

Technology Summary: A multi-fuel combustion technology that allows for higher combustion rates that result in higher efficiency in a diesel engine.

TOGETHER CARE COMMUNITY

Vusumzi Mahlatshana

Project Name: Prickly Pear brick

Technology Summary: A Process for recycling prickly pear plants to make low cost, environmentally sustainable bricks for building houses.

TYCYCLER

Joshua Palfreman

Project Name: Non-Motorised Tyre Recycling Technology

Technology Summary: The Tycycler is a clean, non-motorised tyre recycling device that can extract steel bead wire from up to 150 waste tyres per day, producing between 180 and 200 kilograms of high quality steel bead wire daily.

ZUKA

Sizwe Mnamatha

Project Name: Zuka organic pesticides and ferertilizers

Technology Summary: A liquid organic pesticides and fertilizers produced using biotechnology Vermi-composting and indigenous knowledge utilising vegetable, fruit and garden waste.

Technology Category: Water Efficiency

BAOBERRY

Yolandi Schoeman

Project Name: aWetBox

Technology Summary: A cost effective, low maintenance solution that assists municipalities and low-high income home owners to improve water quality. It can also be connected to grey and rainwater harvesting systems for a water reuse and recycling solution.

TOBE

Blessing Mncube

Project Name: Renewable wastewater treatment System

Technology Summary: Water treatment system designed to purify wastewater using membrane, reactor, bacteria and solar panel to clean water.

CLEAN DRINKING WATER

Bryan Mayhew

Project Name: Bulk water purifiers

Technology Summary: Bulk Water Purifier consisting of polymer nano-fibers and a micro-biocide as part of the molecular structure of the fiber scaffold.

GREY WATER GEL

Dave Pons

Project Name: Converting grey waste water into a slow release fertilizer.

Technology Summary: Converting grey waste water into a plant food which is able to solve the waste water problem and to grow food at the same time.

ISIDIMA DESIGN

Jonny Harris

Project Name: Arumloo
microflush toilet

Technology Summary: Efficient designed Arumloo that enables toilet to flush on less than 2 litres of water, significantly reducing household water demand and giving access to flush toilets where there is limited water availability.

SANAQUA HCA

Pamela Alborough

Project Name: *Advanced science
for superior water treatment*

Technology Summary: The HAT System treats water of varying quality and enhances other water treatment systems cheaply and efficiently using a combination of scientific and physical principles to improve treatment capability.