

2016 SA Climate Solver Awards winners announced

The WWF-SA 2016 South African Climate Solver Awards winners have been announced. The awards recognise innovations that reduce carbon emissions or boost access to clean energy.



L-R Andries Louw of Mlotek, Andre Reyneke of Ducere Holdings, and Paul Gauché of Stellenergy © WWF-SA / Substance Films

They are Heliolab, a revolutionary heliostat concentrated solar power collector system; Futran, an autonomous haulage test system; and Miser, a hydraulic hybrid transition.

Heliolab's heliostat system

Heliolab's 'plonkable', low-cost, small-scale, flexible, scalable heliostat system enhances the benefits of concentrated solar power (CSP). It does this by removing the hurdles typically faced by this power source such as inflexibility and large scale requirements along with requiring significant site preparation and civil works, and having a definite limit to cost reduction potential. In addition, it has a smart control system that dynamically compensates for reduced precision.

Said Paul Gauche, CEO of Stellenergy: "Our technology concentrates the sun's power using six small mirrors which are

connected to a steel frame. You just install and assemble them and turn them on. The system stores energy for when you need it and can eliminate the need for communities to be on the grid. It can produce hot water, it can clean water, it can power refrigeration and, in fact, it can be maintained and owned by a community.”

The Futran system

As a fractional rapid transit (FRT) system, the Futran system is designed to transport a range of pod types to take loads as light as a few hundred kilograms and as heavy as 20 tonnes using the same track type and the same motorised units. The flexibility and scalability of the system is unique and enables it to address a range of needs in a variety of conditions. The system uses a light-weight, super strong, elevated track network, and can be deployed on road and railway reserves, over obstacles and sensitive areas such as wetlands and rivers. It is high enough to enable animal and people migrations, and small enough not to be visually disturbing.

Commented Andries Louw, CEO of Milatek, and inventor of the Futran system: “This is an incredibly cost effective and efficient form of transport, releasing less carbon emissions than rail. Because it’s locally developed in Africa, for African conditions, it is locally maintained. It is one system that can be used for almost any form of transportation on the same type of track.”

Miser

Miser technology is a hydraulic hybrid transmission system designed for all vehicles to recover and store the kinetic energy typically lost while braking. The energy is then sent back to the wheels at the optimum time so that you can drive from the hydraulic system, rather than the engine. With an estimated 300 million freight vehicles on the road worldwide causing

significant carbon emissions, retrofitting this technology offers significant future carbon emission reductions.

“Any owner who installs Miser into their vehicle will have a significant financial benefit. It is applicable to all vehicles, no matter how large or small, and the technology can be used in other systems as well – solar, wind, electric and so on,” explained Andre Reyneke, MD of Ducere Holdings.

Value of innovation

Said WWF International senior adviser in climate innovation Stefan Henningsson: “Climate Solvers was developed to raise awareness for essential technologies like those designed and already commercialised by our winners and to communicate the value of innovation and rapid commercialisation as an immediate and practical solution to climate change.

“Part of the goal of Climate Solvers is to give the awarded cleantech companies the best chance of success by giving them the credit they deserve and increasing their national and international profile. They also serve as beacons for inspiration of others, spurring entrepreneurship as well widespread adoption of clean technologies.”

Speaking at the awards ceremony in Cape Town, Evan Rice, business development manager of TESLA SA, encouraged would-be innovators to understand the problem they are trying to solve, to figure at the scale at which they need to have impact, and to partner with the right people.

“WWF is proud to honour three winners that demonstrate the depth of technical ability and innovation in South Africa. The technologies offer cutting edge solutions to addressing the pressing issue of carbon emission reductions in South Africa, and Heliostat, in addition, also addresses access to clean energy that emits zero carbon,” said Louise Scholtz, WWF South Africa manager of the Climate Solver programme.

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