



Press Release

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Immediate Release

SANEDI receives \$100 000 from 1 Million Cool Roofs Challenge

The South African National Energy Development Institute (SANEDI) is one of ten global teams awarded a \$100 000 grant by the Million Cool Roofs Challenge to deploy solar reflective coating and/or materials between August 2019 and December 2020.

The 1 Million Cool Roofs Challenge is a \$2 million global competition to rapidly scale up the deployment of highly solar-reflective 'cool' roofs in developing countries suffering heat stress and lacking widespread access to cooling services.

Following the grant awards, \$1 million will be awarded in 2021 to the team that has demonstrated the best sustainable and transferable model for rapid deployment of cool roofs and best meets the judging criteria. Materials must also meet minimum performance standards and be applied to roofs of buildings regularly occupied by people.

"Reflective roof surfaces not only have an impact on individual buildings, but deploying them across a whole community can have a net effect on reducing local ambient temperatures. Furthermore, the deployment of reflective materials creates sustainable job and skills opportunities for low skilled workers in both rural and urban contexts," quotes Denise Lundall, Project Officer Energy Efficiency Cool Surfaces and Communications at SANEDI.

"The uptake and promotion of cool surfaces has been much more vigorous in developed countries than in developing ones," she continues. "The extraordinarily large cash prizes for the challenge is a strong indication of the conviction the organisers have in cool surfaces to address environmental concerns. The South African government's championing of cool surfaces technology is competing with other national concerns, limiting the budget investment. This cash prize will allow for substantial progress."

Cooling 5000+ people

"Cool Roofs is an inexpensive, effective, passive energy, low tech cooling intervention, which allows less heat into the building, making non-air conditioned homes, warehouses and other

buildings much cooler. Cooler surface temperatures help the roof and the equipment on it last longer.

“Based on the previous project’s census, the completed project should benefit a conservative estimated of 500 total dwellings and 385 extensions and backyard additions. Each dwelling has approximately six occupants per two bed-roomed structure.

“We estimate that 2 310 people have previously benefited from residential coated dwellings, which excludes the schools, day care centre and municipal offices also coated. Occupancy there is not fixed (irregular) but the estimate is that $\pm 1\,400$ people per month have benefitted, including staff, pupils and public visitors to offices. When one adds in the irregular beneficiaries of 1 913, one comes to 5 223 estimated beneficiaries.

Reducing CO₂ emissions

“The cooling effects will vary city by city but studies indicate a cooling potential from 2-4 degrees Celsius. The whitening of 100 m² of grey roofing cancels the warming effect of 10 tons of CO₂ emissions (or 0.6 tons per year for the life of the roof). Globally, this cancels 500 medium sized coal power stations’ worth of greenhouse gas emissions.”

Local employment

“The project will work with local municipality authorities to coat no less than 25 000 m² of roof area. SANEDI will provide energy efficiency awareness training to the communities for their buy-in. A group of unemployed local residents will be selected, professionally trained and certified, and then employed by the project to apply the specialised coating.

“A professional labour management company shall oversee the application and include a 10-year warranty against labour or product failures through annual inspections. A post-implementation measurement and verification to assess beneficiary satisfaction, technology efficacy and longevity will be conducted. Analysed data will be made available to the public.

“We are immensely proud about being chosen from so many other projects and we will devote our energy to achieving the \$1 million award in 2021,” concludes Lundall.

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About Million Cool Roofs

The Million Cool Roofs Challenge is a project of the Kigali Cooling Efficiency Program (K-CEP), in collaboration with the Global Cool Cities Alliance, Sustainable Energy for All and Nesta’s Challenge Prize Centre.

About SANEDI

The South African government established SANEDI to direct, monitor and conduct applied energy R&D, demonstration and deployment, as well as to undertake specific measures to promote the uptake of green energy and energy efficiency in South Africa. Its mission is to use applied and energy research and resource efficiency to develop innovative, integrated solutions that will catalyse growth and prosperity to meet its vision of sustainable living for growth and prosperity in Africa. For more information, go to www.sanedi.org.za.