

SANEDI assists the SANDF with Greening their Energy



Major General Joseph Ledwaba, General Officer Commanding of the Defence Works Formation (DWF), and his son with Dr Karen Surridge as guests of SANEDI at the SANEA awards banquet, Military Museum, Johannesburg.



Col Bennedict Manzini, Officer Commanding of Regional Works Unit (RWU) Limpopo, with Ms Denise Lundall and Dr Karen Surridge at Heritage Day on RWU Limpopo, Polokwane.

During 2014 and in subsequent years 2015 and 2016 SANEDI, as a government partner, was invited to speak about renewable energy and energy efficiency at national level at the Department of Defence (DoD) Annual Environmental Seminar. Through this relationship SANEDI was subsequently invited to speak at a provincial environmental forum, to contribute towards improving energy usage and assist in advising towards compliance with the DODs environmental and energy strategy at military installations in Limpopo region.

SANEDI representatives have to date attended several exploratory trips to military installations at different scale throughout Limpopo Province in order to assess energy needs and be able to provide preliminary informed advice on plausible, sustainable renewable energy and energy efficiency interventions. SANEDI now has a formal agreement to act as an implementing arm for DoD on identified collaborative projects that will address energy needs.

An initial project will entail the construction and operationalization of two (2) 1500L Solar Water Heating (SWH) systems at a pre-selected military base in Limpopo province. Since DoD is already constantly undertaking installation, maintenance and repair of water heating infrastructure at its units, this project aims to support and build capacity in this space for the DoD and its Members. This can be achieved by implementing an energy efficient, renewable energy hardware system that

supports human capacity development (HCD) as well as contributing towards reduced energy costs and reliable water heating energy security.

But wait that's not all... The Austrian funded government bi-lateral project called the Solar Thermal Training & Demonstration Initiative (SOLTRAIN) programme aims to tackle such needs and create opportunities through addressing the SWH sector across six partner countries in the Southern African Development Community (SADC) viz. Botswana, Lesotho, Mozambique, Namibia, South Africa, and Zimbabwe. All these partner countries are pursuing policies that enhance security of supply, energy conservation and increase energy access. Furthermore, in all partner countries there are national plans and policies on the support to increase the use of solar thermal systems in place.

SOLTRAIN aims to support the national solar thermal plans and started during its activities in 2009, it is currently in its third phase of three-year duration. This in context of this agreement, the parties are able to apply (through the appointed contractor) to the SOLTRAIN programme for financial support towards SWH systems and artisan training (elaborated in subsequent project agreement). SANEDI, supported by the Centre for Renewable and Sustainable Energy Studies (CRSES) at University of Stellenbosch, is the national implementing partner for the SOLTRAIN programme in South Africa.

RECORD (Renewable Energy Centre Of Research and Development) at SANEDI, has been hard at work procuring a SWH system for the DoD, this is the first of several collaborative projects taking place between SANEDI and the DoD after the signing of a 5-year Memorandum of Agreement on 16 July 2018. This project is expected to be partially supported through SOLTRAIN funding and will be implemented by SANEDI, thus cementing the interaction of SANEDI, the DoD and SOLTRAIN in the upcoming phase (commencing July 2019). This SWHS installation will provide hot water to two accommodation bungalows that are used to accommodate military members, approximately half of which are female, performing medical tasks. Furthermore, four DoD members will be trained to maintain this system and will shadow the contractor during installation and maintenance of the SWHS. Along this vein, RECORD has been delivering a number of trainings on renewable energy, energy efficiency and SWH system understanding and awareness at several military units, in order to prepare members for the upcoming projects.

But wait there's even more... SANEDI and RECORD under the banner of SOLTRAIN are creating awareness about Renewable Energy (RE), Energy Efficiency (EE) and, more specifically, SWH at military units across Limpopo (for now). Half day awareness training sessions include basic RE and EE understanding and then focus on how SWH works and can make a difference across varying scales. This includes an experiment conducted from a worksheet designed originally for School Science clubs, known as the Science Spazas. In the experiment members of the SANDF (South African National Defence Force) get to test the hypothesis behind why heating water with the sun really works... at the most recent session after only three and a half hours in the sun the test water had reached a whopping 66C! Nothing like a touch and feel exercise to prove science.



Ms Denise Lundall and Dr Karen Surridge conducting awareness training (25 September 2018)



Dr Karen Surridge addressing a monthly briefing meeting for the military base (26 September 2018)