SOLTRAIN

Southern African Solar Thermal Training & Demonstration Initiative

SOLAR HEAT FOR **ACCOMMODATION, TOURISM & HEALTHCARE** SECTORS

www.soltrain.co.za

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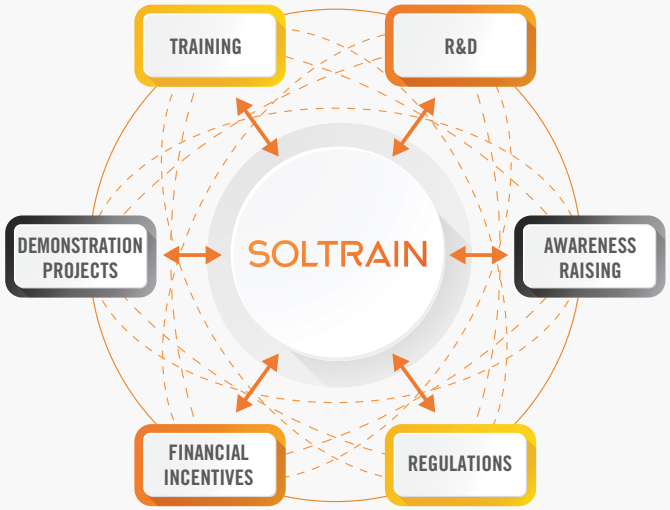
THE PROJECT

SOLTRAIN – the Southern African Solar Thermal Training and Demonstration Initiative - is a regional initiative on capacity building and the demonstration of solar thermal systems in the SADC region. The initiative started in 2009 and is currently in its 4th phase. The initiative is implemented in cooperation with partnering countries - South Africa, Namibia, Lesotho, Botswana, Zimbabwe and Mozambique.

*SOLTRAIN supports the partnering countries by offsetting their **fossil fuel-based heat demand** with **sustainable solar thermal alternatives** across different sectors.*

The **focus areas** of SOLTRAIN include; awareness raising on the potential of solar thermal technologies across the different sectors; building competence of solar thermal technologies within the countries; creating solar thermal technology platforms; and the demonstration of the solar thermal technologies.

This is achieved through the strategies below:



APPLICATIONS

The use of solar energy for heat applications is a sustainable and cost effective solution for the accommodation, tourism and healthcare sectors. Businesses in these sectors typically require hot water of between 50 and 60 °C. Most businesses operating in these sectors still rely on fossil fuels or electricity for producing hot water for occupants. Solar thermal technologies have proven to be a **technically and financially viable alternative** for reducing their dependence on fossils fuels, generate financial savings and reducing their carbon footprint.

Facilities in this sector include the following:

- Hotels
- Apartment complexes
- Student hostels
- Lodges & guest houses
- Clinics
- Hospitals

Solar thermal systems can be sized to **provide up to 100% of the hot water needs** of these facilities, or installed as hybrid systems in conjunction with energy efficient technologies, such as heat pumps in buildings operating within these sectors. Furthermore, the accommodation, healthcare and tourism sectors provide many opportunities for the use of solar thermal technologies for heating and cooling needs.

APPLICATIONS
(continued)

HOTEL, ACCOMMODATION & TOURISM SECTORS

Solar thermal systems are a sensible alternative for providing the hot water needs for buildings operating within the accommodation and tourism sectors. This includes hotels, hostels, guest houses, etc.

Large-scale, centralised solar thermal solutions offer means of producing hot water for a number of buildings in close proximity, such as hostels and apartment complexes.

HEALTHCARE SECTOR

Solar thermal systems can significantly reduce the dependence on fossil fuels or electricity for heating purposes. In recent years, many hospitals have implemented solar heat to provide their hot water needs for patient and staff ablutions in hospitals.

Solar thermal systems for hospitals are designed based on the number of beds. Hybrid systems that include heat pumps are typically used in these applications. There is great potential for the use of solar thermal systems for heating and cooling in large hospital buildings in Southern Africa.

DEMONSTRATION SYSTEMS

SOLTRAIN has co-funded the installation of solar thermal systems in the accommodation, tourism and healthcare sectors across the six partnering countries. The largest of these is a **600 m² solar thermal district water heating plant** for Witwaterstrand University in Gauteng, South Africa. The system supplies hot water to 14 student hostels in the area.

SOLTRAIN also co-funded the **100 m² solar thermal system at a Melomed private hospital** in Cape Town, South Africa. The hospital has approximately 200 beds. The system produces approximately 75 MWh^{th}/year, providing just over 30% of the hospital's annual hot water demand.

*The application of solar thermal technologies within these sectors has been demonstrated through SOLTRAIN in the **six partnering countries**, with an **expected growth** in the coming years.*

For more information on the project, events, demonstration systems visit the SOLTRAIN website at: **www.soltrain.org.za**

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