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SOLTRAIN Newsletter #03

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Concrete steps towards implementation of the Solar Thermal Technology Roadmap for Namibia

Submitted by Zivayi Chiguvare

The Permanent Secretary in the Namibian Ministry of Mines and Energy, Mr. Simeon Negumbo, has expressed his appreciation and gratitude for initiatives such as the Solar Thermal Training and Demonstration Initiative (SOLTRAIN), which is viewed as one of the best strategies for the implementation of the Cabinet Directive of 2007 on solar water heaters, and is looking forward to the Roadmap Implementation Plan which is in line with national programmes. He said this while addressing the solar thermal technologies stakeholders in Windhoek, on 20 October, 2016.

Members of the Solar Thermal Technology Platform (STTP) Namibia Steering Committee were also introduced to stakeholders during a workshop on the Implementation Plan of Namibia's Solar Thermal Technology Roadmap under the SOLTRAIN project. The workshop was organised by the Namibia Energy Institute (NEI) at the Namibia University of Science and Technology (NUST), together with Ministry of Mines and Energy (MME).

During the stakeholders' workshop, concrete steps, which included the formation of five working groups to work on the Solar Thermal Technology Roadmap implementation plan for Namibia, were also taken.

The working groups deal with issues of capacity building and training, government subsidy and policy framework conditions to support the use of solar water heating systems, implementation steps in the mass housing programme of the National Housing Enterprise (NHE), different applications of solar thermal in housing, industry and commercial and demand side management. Roles and responsibilities for each stakeholder group for three years until November 2019 were also clarified.

Werner Weiss

Werner Weiss, the project leader from AEE-INTEC, spoke on the Implementation Plan of Solar Thermal Technology Roadmap and the global perspective. He highlighted different support schemes for road map implementation, giving examples of Tunisia, Lebanon, Poland and Bulgaria's funding mechanisms towards solar thermal technology. China, USA and Germany were presented among 10 leading countries in solar thermal technology and usage, who have policies in place that support Solar Thermal Technologies.

Ms Lydia Mulunga, from the Electricity Control Board (ECB), presented the final draft of the Namibian Renewable Energy Policy, where she highlighted that the Solar Thermal Road Map had been adopted by the Renewable Energy Policy, together with its goals and objectives.

Permanent Secretary of the Ministry of Mines & Energy in Namibia, Mr. Simeon Negumbo, addresses STTP Stakeholders

Group members under the leadership of Steering Committee Members met the next day to discuss the outline and to give more input to the implementation plan. The first draft of the Implementation Plan for the Solar Thermal Technology Roadmap will be presented at the SOLTRAIN Conference which will bring all SOLTRAIN partners to Windhoek, on 22-24 February 2017.

The members of the STTP Steering Committee include the following people: Mr Nico Snyders from MME (Chairperson), Dr Zivayi Chiguvare from NEI (Deputy Chairperson), Mr Vilyo Kuutondokwa (MME-Alternate Chairperson), Ms Helvi Ileka (NEI - Alternate Deputy Chair), Mr Canisius Matsungo (Ministry of Works and Transport), Dr Al-Mas Sendegeya (NUST), Mr Phellemon Kalume (Valombola Vocational Training Centre), Mr Alpheas Shindi (National Training Authority), Ms Niita - Iishuna Amakutsi (MME-Solar Revolving Fund), Ms Aina-Maria Iteta (Environmental Investment Fund), Mr David Jarret (RDJ Consulting) , Dr Detlof von Oertzen (VO Consulting), Mr. Levy Nakatana (National Youth Service) and Mr Gadney Gordon (NamPower) and Tonateni Amakutuwa (Electricity Control Board).

Serious engagements during group discussions at the STTP workshop

First Solar Thermal Technology Roadmap meeting held in Lesotho

Submitted by Puleng Mosothoane

Lesotho's first Solar Thermal Technology Roadmap meeting was held during the second week of October at the Avani Lesotho Hotel in Maseru. Although only 26 of expected 40 participants attended, the gathering consisted of a diverse set of stakeholders in the renewable energy and allied fields, including solar companies, the Department of Energy, Lesotho Electricity and Water Authority (LEWA), research and academic institutions, sponsors and others.

Rondavel with the rotating roof with solar water heater and PV system

Puleng Mosothoane from SOLTRAIN Lesotho's implementation partner organisation, the Bethal Business and Community Development Centre (BBCDC), conducted the welcoming address, followed by a presentation outlining the SOLTRAIN project by Werner Weiss from AEE INTEC. A presentation on solar thermal systems in the Lesotho market and solar thermal applications by Sehlooho Holomo from BBCDC and a presentation on the renewable energy policy and possibilities for co-operation with SOLTRAIN by Dr. Thabang Phuroe from the Department of Energy, were also part of the proceedings.

All participants became the proud owners of a SOLTRAIN t-shirt which we reported on in the previous SOLTRAIN newsletter as part of our awareness-raising activities.

A second meeting is planned for the 18th and 19th of January, preceded by a technical tour to Pitseng, where participants will have the opportunity to observe and learn more about the systems installed there through the SOLTRAIN programme. These include a 3000 litre solar thermal system with 15 collectors, a 2000 litre solar thermal system with 12 collectors and a 5 kilowatt solar photovoltaic system.

Other recent SOLTRAIN developments in Lesotho

A parent's meeting was held at the BBCDC in late October at which display stations were set up. Parents were able to familiarise themselves with the PV systems installed with the funding from SOLTRAIN and other solar products, including the box cooker, the parabolic solar cooker and the fruit dyers.

The BBCDC hosted students from National University of Lesotho (NUL) on an educational tour, where they were also able to see the various technologies mentioned above, as well as the new rondavel with the rotating, solar-tracking roof and the demonstration solar thermal system.

Work has begun on five solar water heater demonstration systems at Malealea Lodge by Stephen Lelimo.

SOLTRAIN's advertising run with the Lesotho Times is entering its fifth month with an advertisement placed in the third week of each month. This is in addition to the other awareness initiatives which we highlighted in the last newsletter, including weekly radio slots, SOLTRAIN t-shirts and brochures which are made available at each locally convened event.

Third South African Solar Thermal Technology Roadmap workshop held in Cape Town

Submitted by Karin Kritzinger

The third workshop in a series aimed at furthering the implementation of the South African Solar Thermal Technology Roadmap (SA-STTRM) was held in Cape Town at the end of October. This builds on outcomes of the second implementation workshop earlier in the year where a lack of focus on technology awareness, understanding and marketing solar thermal technologies were identified as shortcomings in the sector.

The South African Solar Thermal Technology Roadmap (SA STTRM) is a project within the South African Solar Thermal Technology Platform (SA-STTP) which brings together all interested parties from academia, government, financiers, end-users and industry to share information on technical, practical and financial aspects of solar thermal energy. In addition, the project seeks to identify knowledge gaps and opportunities, mobilise institutions and individuals to perform the required research, record-keeping and publication of data relating to the roll-out of solar thermal energy systems in the country, with an over-arching aim of having have 1⁄2 m^2 of solar thermal collector area for every South African citizen by 2030.

Workshop delegates were welcomed by prof. Wikus van Niekerk from Stellenbosch University, Centre for Renewable and Sustainable Energy Studies. Werner Weiss from AEE INTEC presented on *"Solar Roadmaps and implementation plans: the global perspective"* as well as the *"Aim and goals of the Solar Thermal Roadmap implementation plan"*.

Prof. Wikus van Niekerk presented an *"Overview of the STTRM SASTTP"* and Dr Karen Surridge-Talbot, from SANEDI presented on *"The way forward from the implementation plan*

workshop held in September: the tools and needs to be addressed".

The presentations from the workshop can be accessed on the SOLTRAIN website at this link.

Course on solar heat for industrial applications

Submitted by Stefan Hess

A specialised course for a restricted number of experts was held in Stellenbosch in early November, giving insight into state-of-the-art design, simulation, planning and installation of advanced high quality solar thermal (ST) systems for industrial applications in Southern Africa.

Despite the restriction of only admitting participants with previous experience in ST system design and installation, the number of applications far exceeded available capacity, and 40 participants were accepted, of which about half were planners from the solar thermal industry. The remaining participants comprised SOLTRAIN partners, researchers and members of public institutions.

The course was lectured by SOLTRAIN coordinator, Werner Weiss, from AEE -Institute for Sustainable Technologies in Austria, and by Dr Stefan Hess from CRSES and STERG, the Solar Thermal Energy Research Group of Stellenbosch University.

On the first day, delegates visited the TIA Helio100 demonstration site and the CBC brewery solar thermal installation in nearby Paarl (see the report on this in the next article).

The second day focused on the status of large-scale stationary systems in Southern Africa and provided extensive theoretical background on planning and installation of such systems.

The third day and final day was used for a simulation exercise, for which all participants had been provided with a free T*SOL license in advance. A realistic example of a laundry was used to determine the optimum collector area and storage volume for different framework conditions. Afterwards, all course material was made available for download.

The feedback of participants was unanimous in that they derived great benefit from attending the course, and expressed great interest in any future SOLTRAIN courses. It was suggested that future training also includes economic performance assessment in addition to the hydraulics of large-scale ST systems.

SOLTRAIN study visit to the Cape Brewing Company

Submitted by Ryan Dearlove

Forty delegates from the SOLTRAIN course on Solar Heat for Industrial Applications were treated to a tour of the solar thermal process heating system at Cape Brewing Company, Paarl in early November.

Having been in full production since 2015, the 120m^2 solar thermal array heats a 10 000 litre storage tank, providing hot water at a target temperature of 85°C. The 12 large scale flat plate solar collectors were imported from Austria specifically for the project, being the first time that such collectors have been used in South Africa.

Moving through the plant in two groups, delegates viewed the storage tank and heat exchange station which were fabricated locally predominantly from stainless steel and to the client's exacting standards.

Overall, the impression gained from questions and interactions, was that solar thermal process heating systems will be valuable and trusted part of the heating landscape of the future.

The afternoon concluded with a beer tasting, an appropriate way to end a solar day!

Renewable energy for industrial heat in the agri-processing

Submitted by Louise Scholtz

WWF-SA together with GreenCape and the Centre for Renewable and Sustainable Energy Studies (CRSES) at Stellenbosch University hosted a very successful workshop aimed at gaining a better understanding of the potential of solar energy in the agri-processing industry. The workshop was held at the STAIS Wallenberg Centre in Stellenbosch in mid-November.

Presenters covered a broad range of topics, including an overview of the potential of solar thermal in the sector, the demonstrated the benefits using findings extrapolated from existing installations, lessons from previous and current tender processes and training support for installers.

The subject matter provided a compelling case for the increased uptake of the technology and it was clear is that the technology holds enormous potential to address both energy needs, whilst also opening up local manufacturing opportunities.

The workshop was well attended by industry representatives, financial institutions, key government departments and system installers.

In the discussion session, facilitated by Prof Wikus van Niekerk, Director of CRSES, participants provided input on what they saw as critical success factors to ensure higher uptake of solar thermal technology. These included the need for pre-feasibility studies to demonstrate the business case to agri-processors, addressing the issue of outstanding system component certification and difficulties in getting loan finance from financial institutions.

Suggestions on how the organisers could possibly support the increased uptake included assisting role players to collaboratively develop a template for submission to financial institutions to ease present difficulties in obtaining loan finance, and secondly, the development of more specific in-depth analysis of the potential in specific agricultural sectors.

Note: Louise Scholtz is the Programme Manager of the Energy and Urban Futures: Policy & Futures Unit of WWF-SA. You can contact her at lscholtz@wwf.org.za.

Provisional SOLTRAIN Calendar until July 2017

Training course for Quality Inspectors, 20 – 21 February 2017, Windhoek, Namibia

SOLTRAIN Conference 2017, 23 and 24 February 2017, Windhoek, Namibia

3rd Solar Thermal Roadmap Workshop, 27 February 2017, Maseru, Lesotho

Training course for Quality Inspectors, 27 February and 1 March 2017, Maseru, Lesotho

3rd Solar Thermal Train the Trainer Course, 7 and 8 March 2017, Gaborone, Botswana

2nd Thermosyphon Systems Course, 22 and 23 June 2017, Windhoek; Namibia

Public Presentation of the Solar Thermal Roadmap and Implementation Plan, 26 June 2017, Harare, Zimbabwe

Public Presentation of the Solar Thermal Roadmap and Implementation Plan, 28 June 2017, Gaborone, Botswana

Public Presentation of the Solar Thermal Roadmap and Implementation Plan, 30 June 2017, Windhoek, Namibia

Public Presentation of the Solar Thermal Roadmap and Implementation Plan, 3 July 2017, Maputo, Mozambique

2nd Thermosyphon Systems Course, 3 and 4 July 2017, Bulawayo, Zimbabwe

Public Presentation of the Solar Thermal Roadmap and Implementation Plan, 5 July 2017, Maseru, Lesotho

Public Presentation of the Solar Thermal Roadmap and Implementation Plan, 7 July 2017, South Africa

SOLTRAIN

The Southern African Solar Thermal Training & Demonstration Initiative is a regional initiative on capacity building & demonstration of solar thermal systems in the SADC region. It is funded by the Austrian Development Agency & co-funded by the Opec Fund for International Development.

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