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SOLTRAIN Newsletter #04

Uniting against Poverty

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Namibia: The 2ND International SOLTRAIN Conference 2017 held in Windhoek

by Werner Weiss

The Namibia Energy Institute (NEI) successfully hosted the 2nd SOLTRAIN Conference in Windhoek in late February, 2017. The conference brought together 70 representatives from eight countries who presented and discussed the results of the SOLTRAIN project.

Participants included experts from SOLTRAIN partner organisations as well as senior officials from Namibia's Ministry of Mines and Energy. Mr Matthias Radosztics from the Austrian Embassy and Mr Kudakwashe Ndhlukula, the Executive Director of the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE) as well as other stakeholders in the renewable energy sector and the media also participated.

Dr Tjama Tjivikua, Vice-Chancellor of the Namibia University of Science and Technology (NUST) welcomed the participants and invited guests to the conference. Namibia's Ministry of Mines and Energy Permanent Secretary, Mr Simeon Negumbo, delivered an address on behalf of the Director of Energy, Mr John Titus, and expressed gratitude for the assistance provided by the Austrian Development Agency (ADA) and the OPEC Fund for International Development OFID towards the SOLTRAIN project. He emphasised that Namibia was committed to improving the energy sector and that there is a directive now in place to ensure that all new government buildings in the country are fitted with solar water heaters.

Participants at the 2nd SOLTRAIN Conference held in Namibia in February

The key topics of this year's conference were Solar Thermal Roadmaps and Implementation Plans for all six partner countries as well as experiences with the almost 200 solar thermal demonstration systems, including the monitoring of results from some of these systems.

The proceedings also included a panel discussion on strengthening the co-operation with other initiatives and institutions. These discussions included the possibility of future SOLTRAIN coordination by a SADC regional body in order to ensure the sustainability and the positive impact of the project.

On the second day of the conference participants enjoyed a technical tour to solar thermal demonstration systems in Windhoek. The monitoring results of the data collected at the demonstration systems of the National Housing Enterprise (NHE) houses in Windhoek shows solar yields of 130 to 150 kWh per month, with a solar fraction of 80 to 100%. This means that no electrical back up is needed to heat the water if the solar system is optimally sized and installed correctly.

The 3rd SOLTRAIN Conference will be held on 1 and 2 February 2018 in Gaborone, Botswana.

SOLTRAIN project partners from AEE INTEC and Namibia with the Namibian Director of Energy, Mr John Titus (fourth from right) at one of the monitored demonstration systems in Windhoek.

SOLTRAIN Conference Report

Windhoek, 23-24 February, 2017

AUSTRIAN DEVELOPMENT AGENCY

You can download the SOLTRAIN Conference Report
Click Here

SOLTRAIN Botswana SOLTRAIN hands over demonstration trailer to University of Botswana's Clean Energy Research Centre

by Dr. Edwin Matlotse

The handing-over ceremony of a solar trailer to the University of Botswana's Clean Energy Research Centre (CERC) took place in early March at the university's Conference Centre. The 25,000.00 EURO trailer was donated to the institution by SOLTRAIN. During the ceremony, the keys to the trailer were handed over by Mr Rudi Moschik from AEE-INTEC to Deputy Vice Chancellor Academic and Student Affairs, Professor Martin M. Mokgwathi.

"University of Botswana is the oldest and largest university in Botswana with a proud history of having served the nation diligently over the last 32 years of existence" said Mokgwathi, reminding the audience during his opening remarks that "the bulk of Botswana's public and private sector leaders, managers, professionals, and officials had gone through the gates of this institution".

He emphasized how "the trailer will serve to strengthen several areas of the University's strategy, particularly engagement and entrepreneurship, and enhancing capabilities and research" and outlined some of SOLTRAIN Botswana's key milestones to date, including the three solar thermal training courses conducted to date, the formation of the Botswana Solar Thermal Technology Platform and the preparation of the Botswana Solar Thermal Technology Roadmap for the period 2017-2030.

Director of the Clean Energy Research Centre (CERC), Dr. Edwin Matlotse, introduced details of the SOLTRAIN project to guests, emphasising the importance of information sharing among partner countries. He outlined SOLTRAIN's aim to provide target countries with support towards transforming from a largely fossil fuel based energy supply system, to a sustainable supply structure based on renewable energy through training in the design, installation and maintenance of solar thermal systems used in heating and cooling.

CERC director, Dr. E. Matlotse, introducing the SOLTRAIN project to invited guests

"With this trailer, we will be able to undertake public awareness campaigns and enhance training as it demonstrates all of the solar thermal technologies," he said, adding his assurance that CERC would make the demonstration project a great success. Dr. Matlotse concluded his remarks by thanking the SOLTRAIN project sponsors for preaching solar thermal comfort at the national and regional levels.

CERC director, Dr. E. Matlotse, inspected the donated solar trailer when it first arrived at UB from South Africa where it was manufactured.

Guest speaker, the Permanent Secretary to the Ministry of Infrastructure and Housing Development, Mr. Dikagiso Bogatsu Mokotedi, delivered a keynote address, noting how, despite being a relative latecomer to the programme, SOLTRAIN Botswana had already made great strides in a very short period of time, particularly that the programme had trained 50 people so far. He further thanked SOLTRAIN for their concerted effort in ensuring that the country embarks on the use of solar thermal energy in heating and cooling.

The formalities were concluded with a tour of the trailer itself.

Mr. R. Moschik presented the keys of the solar trailer to Deputy Vice Chancellor, Prof. M. M. Mokgwathi

Lesotho Updates
by Puleng Mosothoane

SOLTRAIN Lesotho: 3rd SOLTRAIN Roadmap meeting in Lesotho

The 3RD SOLTRAIN Roadmap Meeting was held at Avani Maseru in late February at which the results of the previous meeting were presented. Important guests who were present included Werner Weiss and Rudolf Moschik from AEE-INTEC. The welcoming remarks were made by Mr Liketso Ntho representing the Department of Energy.

There were at least twenty eight 28 participants from different stakeholders including, solar companies, research institutions, government, academia and other interested parties.

Participants at the 3rd SOLTRAIN Roadmap Meeting

SOLTRAIN Lesotho: Quality Inspector training

A quality inspector training session was carried out in late February at the Business and Community Development Centre (BBCDC). The course was led by Rudolf Moschik and Werner Weiss from AEE-INTEC and Martin Coetzee from the Institute of Plumbing SA (IOPSA).

There were ten participants from different organizations who had all attended previous SOLTRAIN courses.

Quality Inspector training

BBCDC solar parabolic bread baking technology technology making waves

In December 2016, Ivan Yaholnitsky and students continued with the development of their parabolic bread baking technology with the fabrication of a new parabola for export to a client in South Africa.

Solar power was used for all the cutting and welding needs of the parabola, thus minimising its embodied energy. The parabola is a robust, simple device, appropriate for supporting cottage food industries on a dispersed and decentralized basis. A full arc template was built from scratch for the shaping of the parabola.

BBCDC's parabola design

Parabola template

What it is all about: buns baked in 30 minutes

BBCDC in the news

The Global Solar Thermal Council has published an article on the BBCDC - entitled SOLTRAIN Lesotho: **Small Country, Big Accomplishments**

South Africa: Installation of Monitoring Equipment at South African Solar Demonstration Systems

by Angelo Buckley

Four SOLTRAIN demonstration solar thermal systems in South Africa are currently being monitored with equipment that was installed between July and August 2016 .These include the Huis Horison system, a residential and sheltered-employment centre located in Stellenbosch and the SACS Rosedale Hostel, located in Cape Town in the Western Cape.Two systems in the Gauteng region have also been fitted with monitoring equipment.These are the Zuid-Afrikaans Hospital system and the Monte Vista Housing Units system, located in Pretoria and Harteespoort, respectively.

The monitoring equipment for each of the solar thermal systems was made available through the SOLTRAIN 3 initiative, and the installation was done with the cooperation of Rudolf Moschik from AEE-INTEC, the solar companies responsible for each system installation and by representatives from the regional South African SOLTRAIN partners, SANEDI in Gauteng and CRSES in the Western Cape.

The monitoring equipment allows for detailed data measuring and recording of many of parameters of the solar thermal system's performance in fine resolution, using heat meters, temperature sensors, radiation sensors and other instrumentation. Performance parameters of the solar thermal systems which are monitored include energy usage, flow rate and cold and hot water temperatures within each part of the water heating system such the solar loop, rings main loop and secondary heat energy sources. Other parameters of the system which are also monitored include tank temperatures, solar irradiation, water consumption volumes and electrical energy usage of the equipment.
The systems are intended to be monitored for a period of at least one year, providing enough data to enable a good understanding of the solar thermal system's performance over this period. Monitoring equipment will be relocated to monitor the performance of other systems in each region.

Future objectives include the use of the data for academic purposes, in which the solar thermal systems' performance can be evaluated in detail and used for research in the optimisation of solar thermal systems of similar scale. The monitored data could also be used as reference for investigating and proving the feasibility of future solar thermal projects in South Africa with similar applications, as well as to stimulate interest in the technology in relevant sectors.

More information on the demonstration systems can be found at:
http://www.soltrain.co.za/demonstration-systems

South Africa: SOLTRAIN Presence at African Energy Indaba

by Khothatso Mpheqeke

The Africa Energy Indaba is an annual conference that engages in discussions and seeks solutions to enable adequate energy generation across the continent, and which covers the renewable and non-renewable sectors.The conference took place in February at the Sandton Convention Centre.

Each year SANEDI exhibits all their programmes and projects at this event.There were a number of delegates who approached the SANEDI stand with an interest in solar thermal and some had knowledge of the SOLTRAIN project. As always we informed visitors to the stand of what the SOLTRAIN projec entails, as well as its achievements and goals.

We hosted a media panel discussion which focused on renewable energy in South Africa and colleague Dr. Karen Surridge-Talbot raised skills development and SANEDI `s involvement in it. We were lucky enough that a gentleman from the Austrian Embassy visited the SANEDI stand and was very impressed with SOLTRAIN `s progress to date!

Dr. Karen Surridge-Talbot and Khothatso Mpheqeke at the African Energy Indaba

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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