



# SOLtrain West Africa

## Launch and technical Kick-Off Meeting

In the Frame of the ECOWAS Solar Thermal Training and Demonstration Program

**Implementing Organization:**  
ECREEE: ECOWAS Centre for Renewable Energy and Energy Efficiency

**Technical Partner:**  
AEE INTEC, INES

**Agenda: 20<sup>th</sup> of April 2015**  
**Venue: CERMI, Centre for Renewable Energy and Industrial Maintenance**  
**Praia, Cabo Verde**



Austrian  
Development Cooperation



## **ECOWAS Solar Thermal Training and Demonstration Program**

As part of the efforts of ECREEE to promote the use of sustainable and renewable energy resources and technologies in West Africa, ECREEE launched the ECOWAS Solar Thermal Training and Demonstration Program (in short: SOLtrain West Africa). The strong political will of ECOWAS countries to use established solar thermal energy for water heating in schools, hospitals, buildings, hotels and even for industrial processes was formulated within the ECOWAS Renewable Energy policy and approved by Head of States Authorities in 2013.

The objective of the program SOLtrain West Africa is to make a significant contribution to the switch from a fossil fuel based energy supply to a sustainable energy supply system based on renewable energies, especially on solar thermal.

The Kick off Meeting and Regional Technical training is funded by the Austrian Development Agency (ADA) and Spanish Development Cooperation (AECID) to officially launch the program and kick start the building of capacities of the participants and 6 partner institutions working on solar thermal energy in West Africa.

### **A. Background**

Direct solar heat is much more efficient and cheaper than electricity or energy from biomass, even more in countries with a big lack of electricity or wood. The solar fuel costs are for free. Solar thermal energy is highly needed for schools, clinics, hospitals, hotels, buildings, laundries, industrial and agricultural processes as e.g. as process heat in food and beverage industry and drying of crops, herbs or fruits. As the potential and solar radiation in most ECOWAS countries is high or very high, ECREEE created a solar thermal capacity building program in the ECOWAS region.

The meeting is a follow up activity to the program defining and consultation workshop organized by ECREEE in June 2014. This workshop informed the participants on the potential and the availability of different solar thermal technologies – not only for solar water heating in buildings, but also for use as process heat in the industry. Lessons and experiences from the equivalent solar thermal program SOLtrain in Southern African countries were shared as SOLtrain has been running successfully in 5 SADC countries since 2009 funded by the Austrian Development Cooperation (ADC).

As one result of the consultation phase in June 2014, West African solar thermal experts were identified including key training needs for planning, installing and maintaining three solar thermal technologies, in this average ranking:

- Thermo-syphon systems up to 10 m<sup>2</sup> collector field
- Solar thermal high quality drying of fruits, crops, herbs, meat or fish medium
- Pumped systems for water heating from larger than 10 m<sup>2</sup> collector field.

Responding to the needs and expectations ECREEE in collaboration with AEE INTEC elaborated the program document SOLtrain West Africa as a 4-year program (2015 - 2018) with a strong focus on capacity building and training of existing selected partner universities and polytechnic schools in 5 West African countries Capo Verde, Burkina Faso, Ghana, Nigeria and Senegal. These partner institutions will be trained on planning and installation of new systems and how to practically monitor, analyze and improve existing solar thermal systems. The partner institutions will be involved in getting two high quality demonstration systems at their institutions and planning and installation of 25 solar thermal energy systems at social institutions such as hospitals, schools etc.

This program was designed considering the lessons learned of the program SOLtrain in 5 Southern African countries running since 2009 and will capitalize on the experience and expertise of the same technical experts.

## **B. Objectives of the Kick Off Meeting and Technical Training**

- Kick Off Event:
  - Officially Launch the SOLtrain West Africa program.
  - Acquaint selected project partner institutions and relevant stakeholders about the content and the organizational structure of the project.
  - The meeting will also seek to structure the work programme in detail including addressing financial issues.
- Technical Training:
  - Build the technical capacities of participants on solar thermal systems and applications.
  - Create opportunities for networking between solar thermal professionals and experts from within and outside the ECOWAS region.

## **C. Participants**

The event will feature the participation of representatives from the selected project partner institutions, which are

- Professionals from CERMI, Cabo Verde
- University of Cabo Verde - Uni-CV, Cabo Verde
- International Institute for Water and Environmental Engineering (2ie) in Burkina Faso,
- Université Cheikh Anta DIOP in Senegal
- Koforidua Polytechnic in Ghana,
- National Centre for Energy Research and Development, University of Nigeria, South Nigeria
- Usmanu Danfodiyo University, Sokoto, North-East Nigeria

Also representatives of the Center for Renewable Energy and Industrial Maintenance - CERMI in Cabo Verde (Praia), Ministry of Energy in Cabo Verde, GIZ, the Luxemburg Development Cooperation - LuxDev, and other technical partners shall be invited.

## **D. Key outcomes being sought**

- Participants are adequately informed the content, processes, responsibilities, reporting and organizational structure of the program
- Capacities of partner institutions are enhanced and improved on solar thermal systems and applications.
- The key points and considerations for the ECOWAS program SOLtrain West Africa and its capacity building measures are discussed and further defined to structure the program for successful implementation.

## **E. Contact to Implementing Organization ECREEE**

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**Agenda Launch and Kick Off Meeting**  
**20 April 2015, Location: CERMI, Praia, Cabo Verde**

<b>09:00 – 11:00 h LAUNCH of the ECOWAS Program SOLtrain West Africa</b>	
09:00 h	<p>Official launch of the ECOWAS Program SOLtrain West Africa</p> <p>Introduction of SOLTRAIN West Africa (overall project and work to be done 2015)            Overview on Work packages, involved partners and timetable</p>
10:30 h	<b>Coffee break</b>
<b>11:00 – 13:00 h INTRODUCTION</b>	
11:00 h	<p><b>Introduction and background of the technical and administrative project team</b></p> <ul style="list-style-type: none"> <li>• ECREEE</li> <li>• AEE INTEC</li> <li>• INES</li> </ul>
12:00 h	<p><b>Introduction of the participants and update concerning recent developments in Solar Thermal in all partner countries</b></p> <p>All core partners (please prepare a 5-10 minute presentation for each partner)</p>
13:00 h	<b>Lunch</b>

<b>14:00 – 18:00 POROJECT CONTENT and WORK PACKAGE SCHEDULING</b>	
14:00 h	<b>Detailed presentation and discussion of the work packages of the project</b>
14:00 h	<p><b>Work package 2: Market and Monitoring</b></p> <p>The first objective of this work package is to gain knowledge on the current solar thermal applications, the work previously done in this field and the market development in all partner countries.</p> <p>The second objective is to gain knowledge on the performance of typical solar thermal systems installed so far in the core group of the participating ECOWAS countries.</p> <p>Detailed scheduling of the work package for 2015</p>
14:20 h	<p><b>Work package 3: Awareness Campaign</b></p> <p>The objective of this work package is to inform the relevant stakeholders and the interested population about the different applications of solar thermal energy and the related impact on security of energy supply, poverty, employment and on the environment.</p>
14:30 h	<p><b>Work package 4: Technical Training and Certification</b></p> <p>Comprehensive training of the key groups for production, installation and implementing of solar thermal systems in the participating countries.</p> <p>Another objective of this work package is to support political decision makers and administration with information on successful support mechanisms in order to accelerate the dissemination of solar thermal technologies.</p>

14:50 h	<p><b>Work package 5: Workshops for Policy, Administration as well as banks and Financial Institutions in Core Countries</b></p> <p>Comprehensive training of the key groups for production, installation and implementing of solar thermal systems in the participating countries.</p> <p>Another objective of this work package is to support political decision makers and administration with information on successful support mechanisms in order to accelerate the dissemination of solar thermal technologies.</p>
15:10 h	<p><b>Work package 6: Assistance to local Producers</b></p> <p>Improvement of the quality of solar thermal systems produced or assembled in ECOWAS countries.</p> <p>Improvement of the cooperation of the companies working in the field of solar thermal systems in order to develop a regional market.</p>
<b>15:30 h</b>	<b>Coffee break</b>
16:00 h	<p><b>Work package 7: Installation and monitoring of improved demonstration systems for social institutions</b></p> <p>Installation of about 125 solar thermal demonstration systems mainly for hot water preparation at social institutions like hospitals, orphanages, schools, homes for elderly people and at residential buildings. As a result the running cost (energy cost) of these institutions will be reduced and/or the hygienic standard will be improved.</p> <p>The option of including solar thermal drying systems for drying agricultural crops as fruits, herbs, cereal, wood, or also fish may also be integrated.</p>
16:20 h	<p><b>Work package 8: IEA SHC Know-how Transfer</b></p> <p>ECREEE joint 2013 the Solar Heating and Cooling Programme of the International Energy Agency (IEA). The aim of this was to get access to results of international developments in the field of solar heating and cooling and to participate in projects (Tasks) that are of relevance for the ECOWAS region.</p> <p>The objective of this work package is to transfer results and knowledge of completed and running Tasks of the IEA Solar Heating and Cooling Programme to the experts of key research institutions from the ECOWAS countries. Another objective is to build up an international network between R&amp;D institutions from the ECOWAS region and international experts and institutions in order to foster the activities on solar thermal energy in West Africa</p>
<b>16:40 h</b>	<b>CONTRACTS, FINANCIAL- and MANAGEMENT ISSUES</b>
16:40 h	<p>Legal and financial issues, responsibilities Reporting – number and type of reports Reporting structure Financial issues and financial reports Communication structure Steering committee meetings (one per institution) Project review and evaluation</p> <p>Feedback from Participants and Evaluation</p> <p>Hannes Bauer, ECREEE</p>
18:00 h	<b>End of the kick-off Meeting</b>



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