

Newsletter of the  
International Energy  
Agency Solar Heating  
and Cooling Programme



INTERNATIONAL ENERGY AGENCY  
Solar Heating & Cooling Programme



#SolarHeat  
#SolarThermal  
#SolarProcessHeat  
#SolarCooling  
#SolarDistrictHeating

## In This Issue

<b>IEA SHC Solar Award Winner</b>	<b>1</b>
<b>Country Highlight   France</b>	<b>3</b>
<b>Member News   South Africa</b>	<b>5</b>
<b>New Work 2023</b>	<b>6</b>
<b>EuroSun 2022</b>	<b>7</b>
<b>SHIP Design Tips &amp; Tricks   Task 64</b>	<b>8</b>
<b>Solar Thermal Partners</b>	<b>10</b>
<b>Solar Cooling Potential   Task 65</b>	<b>12</b>
<b>SHC Publications</b>	<b>14</b>
<b>Fault-Detective   Task 68</b>	<b>15</b>
<b>Solar Thermal Trends 2023</b>	<b>17</b>
<b>SHC Members</b>	<b>19</b>

## ORVI Social Housing project wins IEA SHC 2022 Solar Award

ORVI's housing project provides a simple, affordable, sustainable solar water heating option for 58 locally built homes. Ms. Helvi Ileka, Centre Head, Renewable Energy and Energy Efficiency of the Namibia Energy Institute, Namibia University of Science and Technology (NUST), and Mr. Leonhard Eins, Managing Director of Solsquare Energy (Pty) Ltd, received the award on behalf of the ORVI Social Housing project during EuroSun 2022, the International Conference on Solar Heating and Cooling for Buildings and Industry of IEA SHC and ISES held this year in Kassel, Germany.

"The 2022 SHC Solar Award celebrates the substantial achievement and measurable impact of a social housing project using solar thermal to reduce energy consumption and costs. The recipient, the ORVI Social Housing project, is a perfect example of affordable housing that improved residents' standard of living, supported a national solar company, and annually saves energy and cuts greenhouse gas emissions – in this case, 120,000 kWh of electricity otherwise produced by old-coal-fired plants thus avoiding the release of 36 tons of CO<sub>2</sub> annually."

TOMAS OLEJNICZAK, IEA SHC Chairman



The SHC Solar Award recognizes an individual, company, or private/public institution that has shown outstanding leadership or achievements in solar heating and cooling. With this year's award, the IEA SHC recognizes a social housing project that reduces energy consumption and costs.

► **SHC Solar Award recipients - Helvi Ileka, Namibia Energy Institute, Namibia University of Science and Technology (onscreen), and Leonhard Eins, Solsquare, Namibia, are responsible for the installation of solar water heaters on 58 homes.**



▲ ORVI Social Housing project.

## SHC Members

AUSTRALIA
AUSTRIA
BELGIUM
CANADA
CCREEE
CHINA
DENMARK
EACREEE
ECI
ECREEE
EUROPEAN COMMISSION
FRANCE
GERMANY
ISES
ITALY
NETHERLANDS
NORWAY
PORTUGAL
RCREEE
SACREEE
SICREEE
SLOVAKIA
SOUTH AFRICA
SPAIN
SWEDEN
SWITZERLAND
TURKEY
UNITED KINGDOM



▲ From left to right: Ken Guthrie, Solar Award Committee Chair & Australian SHC member; Tomas Olejniczak, SHC Chair and Dutch SHC member; Bulent Yesilata, Turkish SHC member; Leonhard Eins, Solsquare, Namibia; Werner Weiss, Austrian SHC member.

*"This project is not only a success on the ground but demonstrates how a long-standing, comprehensive training program such as SOLTRAIN can bring together local and international solar industries, research institutions from Europe and Southern Africa, and policymakers to create a framework for the widespread application of thermal solar systems."*

HELVI ILEKA, Namibia Energy Institute

## Project Impact

Aussenkehr, a settlement in southern Namibia on the north bank of the Orange River, is one of the hottest and driest places in the country. Up to 15,000 permanent and seasonal workers live near the settlement. And most work at grape farms and live in traditional reed huts with no water, sanitary facilities, or electricity. Understanding the need for affordable, energy-efficient homes, ORVI developed a housing project to accommodate its employees. The 58 houses are made of precast concrete bricks and have potable water and electricity. With 40-50% of electricity consumption in low-cost housing projects used for water heating, solar thermosyphon systems for hot water preparation (2.1 m<sup>2</sup> flat plate collector and 160-liter hot water tank) were supplied and installed on every home by Solsquare Energy (Pty) Ltd., a Namibian solar company with support from the Austrian Development Agency-funded SOLTRAIN project. The hot water is used for showers, washing clothes, and cooking.

This project has significantly improved farm workers' standard of living. And it demonstrates how simple and affordable houses can be built locally and equipped with sustainable solar technologies. A project that should and can easily be replicated!



Namibia Energy Institute, Namibia Energy Institute, a national research institute at the Namibia University of Science and Technology, established with funding from the Ministry of Mines and Energy, supports the development and dissemination of knowledge, skills and good practices toward a safer, more secure and sustainable energy system in Namibia.

Solsquare had its humble beginnings in 2008 focusing on thermosyphon systems and slowly evolving into on- and off-grid solar PV technology. Today Solsquare is an Engineer Procure & Construct (EPC) company focusing on energy supply concepts, including heat, electric energy and fully off-grid systems.

SOLTRAIN is a regional initiative in six southern African countries on capacity building and demonstration of solar thermal systems. The project is managed by AEE INTEC.