European Solar Prize

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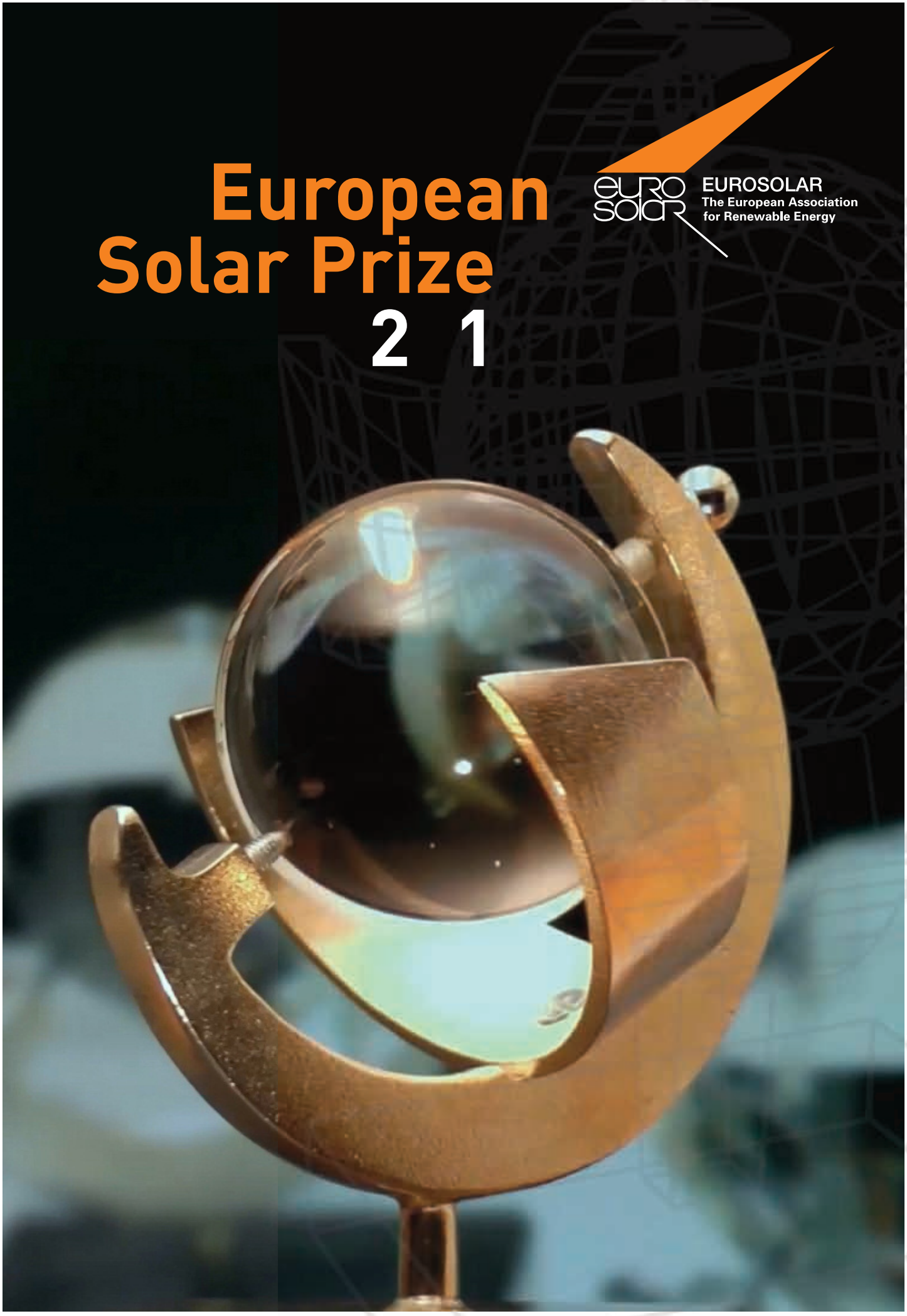
EUROSOLAR
The European Association for Renewable Energy



Award Ceremony of the European Solar Prize 2015
November 23rd in Prague

Programme

9.30 arrival, registration

10.00 **Introduction**

Miloš Vystrčil – Chairperson, Committee on Public Administration, Regional Development and the Environment, Senate of the Parliament of the Czech Republic

Jitka Seitlová – Vice-Chairperson, Committee on Public Administration, Regional Development and the Environment, Senate of the Parliament of the Czech Republic

10:15 **Welcoming participants on behalf of co-organizers:**
Peter Droege, EUROSOLAR president

10:30 **European Energy Future (lectures include Q&A)**

Peter Droege, EUROSOLAR President
Milan Smrž, EUROSOLAR Czech Republic
Josep Puig, EUROSOLAR Spain
Wolfgang Hein, EUROSOLAR Austria
Harry Lehmann, WCRE executive chairman
Eliana Cangelli, EUROSOLAR Italy

11:40 **Czech Solar Prize**

12:00 **break, refreshment**

13:00 **European Solar Prizes**

15:00 **discussion, final Communiqué**

15:30 **press conference**

EUROSOLAR
Europäische Vereinigung für Erneuerbare Energien e.V.

Award Winner Solar Prize 2015

This year's European Solar Prize goes to the following laureates:

Towns, municipalities, council districts, public utilities
Energy self-sufficient community Kněžice, Czech Republic
SUNSTORE 3, Dronninglund Fjernvarme, Denmark

Solar architecture and urban planning
Aktiv-Stadthaus, ABG Frankfurt Holding, Germany
238% Plus-Energy-Building, Cavigelli Engineers, Switzerland
Ghella Office, Alberto Raimondi, RicciSpaini Architetti Associati, Italy

Industrial and commercial companies or farmers
SOLARier - Gesellschaft für erneuerbare Energie, Austria

Local or regional associations/organizations
Pro Guben - Verein für Energie und Umwelt, Germany

Owners and operators of renewable energy installations
131% Plus-Energy-Buildung refurbishment, Hardegger Immobilien, Switzerland

Transport and Mobility
ElectriCity, City of Gothenburg, Sweden
Solar Excavator, Affentranger Bau, Switzerland

Education and vocational training
Geothermal system in the Egyptian Museum of Turin, PROECO e Onleco, Italy

Special prize for personal achievement
Kent Skaanning, Denmark

EUROSOLAR
Europäische Vereinigung für Erneuerbare Energien e.V.

Energy self-sufficient community Kněžice

Towns, municipalities, council districts, public utilities

Outstanding commitment and role model function for renewable development in the Czech Republic

The community of Kněžice is located in the Central Bohemian Region, about 20 kilometres northeast from the town of Nymburk and has about 400 inhabitants. In 2006 Kněžice was subsidized from European funds through the Czech Ministry of Environment to realize their project "Energy self-sufficient community of Kněžice". The project consists of the distribution of hot water from the biomass boiler and biogas plants with cogeneration to the central heating system for the whole community. The biogas plant is based on waste from agriculture, food and other sources. In terms of electricity and heating Kněžice is currently a self-sufficient community - the first in the Czech Republic. The useful heat consumption of connected houses is about 2.100 MWh. Local energy sources cover 100 % of the electric consumption and 96 % of heat consumption which leads to a CO2-reduction of more than 2.500 tons per year. All energy facilities are owned by the municipality. The construction of new low-energy residential buildings with integrated photovoltaic and a local community electrical grid is planned for the future.

Contact:
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289 02 Kněžice
www.obec-knezice.cz

SUNSTORE 3, Dronninglund Fjernwarme

Towns, municipalities, council districts, public utilities

First demonstration of a full scale renewable heating concept with solar and seasonal storage in Denmark

From 2006 it became feasible to combine natural gas fired combined heat and power plants in Denmark with solar heating. District heating utilities started to calculate plants with 10 to 20% solar fraction. But the consumer owned district heating utility in Dronninglund decided to go further and cover up to 50% of the consumption from solar. To reach this goal the board of Dronninglund district-heating decided to be the first to implement a full scale seasonal pit heat storage and a large scale solar thermal plant with up to 50% solar fraction. Feasibility studies showed that heat production prices would not be higher and the Danish state supported the project from the EUDP program. The planning process, which started in 2008, took 5 years and the implementation 1 year. In 2014 the project - including a plant with 60,000 m^3 of pit heat water storage, 37,500 m^2 of solar collectors and a 3 MW cooling absorption heat pump - was put into operation.

Contact:
Dronninglund Fjernvarme
Tidselbak Alle 18
9330 Dronninglund
Denmark
www.dronninglundfjernvarme.dk

Aktiv-Stadthaus, ABG Frankfurt Holding

Solar architecture and urban planning

Largest inner-city residential building to meet the energy-efficiency-plus housing standard

The "Aktiv-Stadthaus" by ABG Frankfurt Holding is the first and largest inner city multiple home residual building to receive the federal energy-efficiency-plus certificate. This means that the building, which contains 74 apartments, generates more energy than its residents consume. More than 1000 façade and rooftop mounted solar modules generate 300,000 kWh/a of green electricity, while a sewage heat pump generates hot water and powers the floor heating. Latest energy efficiency structures minimize energy losses. Excess energy is stored in a large 250 kWh battery and is used to charge a fleet of shared electric vehicles. Being developed in cooperation with the federal research initiative "Zukunft-Bau" (Construction Future), the building also serves as a proof of concept – for the first time, findings and practices from single-family energy-plus homes have been successfully applied to a large scale residential apartment complex. The design by HHS Planer+Architekten demonstrates that the future of housing can be ecofriendly, economical and aesthetic.

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www.abg-fh.com

238% Plus-Energy-Building, Cavigelli Engineers AG

Solar architecture and urban planning

Innovative technological concept with a self-sufficiency of 283%

In Ilanz, the first town at the river Rhine, the so-called "monolith" presents itself in a modern look and with perfect technology. The PV installation with its optimum East-West orientation has been carefully integrated and produces about 30,000 kWh/a. During winter time, larch blades allow for the use of passive solar energy while preventing the rooms from overheating in summer. Thanks to a good heat insulation, a geothermal heat pump, comfort ventilation, A++ household devices, 91% of LED lights and a pleasant solar architecture, the new PEB administration building of the engineering office Cavigelli with space for 24 employees has a total energy consumption of only 12,600 kWh/a and an energy self-supply of 238%.

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7130 Ilanz
Switzerland
www.cavigelli.ch

Ghella Office, RicciSpaini Architetti Associati, Arch. PhD Alberto Raimondi

Solar architecture and urban planning

Energetic transformation of a heritage-protected building with keeping the original design

The project aims to preserve the existing architectural character of the building, improve the quality of the working environment and comply with the principle of reducing CO_2 emissions.

The building is listed in the Quality Chart of the City of Rome, whose target is to address and control transformations of Roman architectural heritage. Therefore, the intervention maintains the building's original design, in particular the exposed concrete façade. The improvements in the glass facades are given by the use of high performance glazing with micro-perforated venetian blinds in the double-glazing. The active facade shields the sunrays only when necessary, freeing up the exterior view and maximizing the passage of natural light. The energy retrofitting of the building, involves passive and active devices, the use of PV and solar panels to produce heat, and solar tubes to increase natural light in the interior. The rooms are placed all along the facades, and relate to the central space through floor-to-ceiling glass walls.

Contact:
RicciSpaini Architetti Associati
Arch. PhD. Alberto Raimondi
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Via Sora 33
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Italy

SOLARier - Gesellschaft für erneuerbare Energie mbH

Industrial and commercial companies or farmers

Longstanding commitment for the use of ecofriendly energy systems on private buildings

The SOLARier Inc. for Renewable Energy with its headquarters in Austria, Engerwitzdorf, evolved from a purchasing cooperative (1987) into an innovative company. SOLARier are nationwide known as a pioneer in the solar plant production and installation. The European sales network is in expansion and currently covers Spain, France, Germany and Sweden. SOLARier stands as a full-service provider in consulting, planning, installation and service for solar thermal, photovoltaic, heating systems with biomass boilers and heat pumps as well as building services (plumbing, ventilation, electrical) for sustainability and longevity of its products. Private households as well as small and medium enterprises use this for the production of heat and electricity. The collectors produced by SOLARier placed in the European comparison among the best. The multiple award-winning environmental caring company employs 62 employees. The company is committed to the participatory leadership style. With further training in the company's own academy, the company underlines its strong commitment to renewable energy.

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SOLARier - Gesellschaft für erneuerbare Energie mbH
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www.solarier.at

Pro Guben - Verein für Energie und Umwelt e.V.

Local or regional associations/organizations

Outstanding effort for the use of renewable energy across borders and their fight against the Lausitz coal mine

The local association "Pro Guben" represents the interests of the city council of Guben and Gubin and the community of Gubin with their inhabitants and Agenda 21 partners. The association was founded in 1994 to start the common fight against the destruction of the landscape through the Lausitz brown coal mine. The common goal was - and still is - to care about the basis of existence and the contemporary development of the German-Polish borderland. The Agenda 21 was also decisive for the regional efforts to climate, economic and social stability and furthermore to political interest in 100% renewable energy supply across borders. With the construction of several solar plants, the use of water power and the focus on energy efficiency in buildings, Guben and its partners reached a reduction of CO_2-emissions of 42% in 2014 compared to 1990. The commitment of the twin cities of Guben-Gubin shows an exemplary cooperation and a role model for a common European Energy Future.

Contact:
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Germany
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PRO GUBEN e.V.

131% Plus-Energy-Building refurbishment, Hardegger Immobilien AG

Owners and operators of renewable energy installation

Plus-Energy-Building refurbishment which inserts structually into the historic townscape and its exemplary energy production fulfilling the requirements for an energy revolution

The four-family-house Hardegger was built in the 1950s. Before its refurbishment, it had an energy consumption of 66,800 kWh/a. Thanks to a good heat insulation, energy-efficient household devices and LED lights, its total consumption was reduced by 72% to 18,800 kWh/a. Its PV installation of 31.3 kWp produces 24,500 kWh/a, leading to an energy self-supply of 131%. The Plus-Energy-Building refurbishment in the old town of Oberengstringen accords with the Minergie-P-Eco standard and is exemplary. It blends in very well with the historic townscape and even adds additional value to it. With its reduction of energy losses and its exemplary energy production, the Hardegger building refurbishment meets the prerequisite for an energy revolution. With its annual solar energy excess of 5'750 kWh an electric car could drive around the world.

Contact:
Hardegger Immobilien AG
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Switzerland

ElectriCity, City of Gothenburg

Transport and mobility

Exemplary supply of public transport with renewable energy as part of a cooperation between city, industry and science

ElectriCity is a collaborative project between academia, industry and the public sector and is aimed at developing, demonstrating and evaluating new sustainable public transport systems for the future. Testing and evaluation of electric bus transport is a central part of ElectriCity. Silent, emission-free public transport can operate in places where traffic is currently banned. This opens up new possibilities for urban planning in towns and cities. The three electric buses on route 55 in Gothenburg run on renewable electricity and are energy-efficient, silent and completely emission-free. The buses' batteries are quickly recharged at the terminal bus stops. The bus stop on Lindholmen has an indoor terminal. Besides the three completely electric buses, the route has a number of electric hybrid buses. In addition to the actual buses, ElectriCity develops and tests new bus stop systems, transport management systems, safety concepts and energy supply systems.

Contact:
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402 78 Gothenburg
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www.goteborgelectricity.se

Solar excavator, Affentranger Bau AG

Transport and mobility

World's first 16-tons-solar excavator with electric motor and an energy supply from a PV-system on the operational building

In cooperation with the Swiss Federal Institute of Technology, the Buchs Interstate Technical University NTB and the construction machine manufacturer Huppenkothen, the innovative building contractor Markus Affentranger set the way for the world's first 16-t solar excavator with an electric motor. The SUNCAR electric excavator is low-noise, emission-free and very powerful. With a motor-power of 75-167 kW it does not need to avoid the comparison with its diesel-powered colleagues of barely 70 kW. Instead of 150,000 kWh/a, the modified Takeuchi excavator does only consume 30,000 kWh/a; this is hardly 1% of the total in-house solar production of 3.2 GWh/a of Markus Affentranger and Markus Bösiger. The battery has a capacity of 190 kWh, which is enough to use the excavator for nine hours a day. Compared to a diesel-powered excavator, the solar excavator's emissions are reduced by 40 t annually, which leads to a reduction of fuel costs of CHF 21,000 per year.

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Geothermal System of the Egyptian Museum of Turin, PROECO e Onleco

Education and vocational training

Conservation of the historic artwork through conditioning with the use of clean and renewable energy

In the Egyptian Museum of Turin, in addition to the new set designs, the innovative architectural solutions, and 3,300 exhibits which make the museum of Turin the most important in the world after Cairo, there is another hidden treasure in the depths of the seventeenth-century building of the Guarini. It is the geothermal system, a treasure unknown to visitors that allows year-round conditioning of the 10,000 square meters of exhibition space through the use of clean and renewable energies such as geothermal. The physical plant serving the museum, design by PROECO and Onleco, and in particular the energy production, was designed and built according to the most recent criteria of environmental sustainability. This geothermal system uses ground water at low temperature for maximum energy saving. The system was designed in accordance with the criteria for the preservation of the artwork, the comfort of visitors and the integrity of the building.

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Kent Skaanning

Special prize for personal achievement

Great commitment for renewable energy as a pioneer of biogas and spokesman in Denmark

Kent Skaannings commitment for renewable energy in Denmark has arisen in the crossfield between farming and politics. The idea of solving an environmental waste problem combined with the agricultural business' ability to make a reasonable economical profit has always made sense to him.

Therefore, his professional heart beats for local and private ownership of biogas plants – and for that matter other forms of renewable energy. Today, ComBigaS operates globally and builds biogas plants all over the world. But still, Kent Skaannings philosophy stands: 'We will achieve the maximum benefit of renewable energy, if local commitment is present in the ownership and operation of the plants.'

Biogas reduces the environmental impact of the handling and disposal of waste material and reduces the CO_2-emissions. At the same time, municipalities or businesses can become self-sufficient and make money with sustainable green energy. This is a win-win situation that global investors should not profit from.

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Heliograph

Heliograph is a current term for a device called sunshine autograph, a meteorological instrument that can be used to determine the duration of sunhine of a day. It works on the priciple of a burning glass when its glass ball is hit by direct sunlight. Through the changing angle of the sunshine in the course of a day the burning point moves on. With a special paper stripe you receive a burned line from which you can easily conclude the duration of sunshine.

The Solar Prizes sculpture was created by Emil Schult, who had been inspired by this instrument.