



# EUROPEAN SOLARPRIZE 2017

## AWARD CEREMONY AND SYMPOSIUM

Saturday 18th November 2017  
TU the Sky, Vienna

Host partner



TECHNISCHE  
UNIVERSITÄT  
WIEN  
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# EUROPEAN SOLAR PRIZE 2017



**Saturday 18th November 2017**  
**TU the Sky, Vienna**

**9:00 - 10:00 Visit of the buildings of  
Technical University Vienna (TU the Sky)**

**Symposium „The Energy Transition in Europe“**  
Moderated by Wolfgang Hein, EUROSOLAR Austria

**10:00 Arrival, Registration, Coffee & Piano Music**

**10.15 Welcome**

- Prof. Peter Droege, EUROSOLAR
- Councilor Karl Wilfing in representation of Governor Johanna Mikl-Leitner

**10:30 Speakers**

- Prof. Karin Stieldorf, TU Vienna
- Prof. Stefan Schleicher, University of Graz
- Astrid Schneider, Austrian Institute of Technology
- Prof. Peter Droege, EUROSOLAR
- Stephan Grüger, Member of State Parliament of Hesse, EUROSOLAR

Discussion

**12:30 - 13:30 Lunch Break & Piano Music**

**Award Ceremony of the European Solar Prize 2017**

**13:30 Arrival, Registration, Coffee & Piano Music**

**14:00 Welcome**

Moderated by Wolfgang Hein, EUROSOLAR Austria

- Prof. Sabine Seidler, TU Vienna (tbc)
- Dr. Hans Otto Schmidt, EUROSOLAR Austria
- Mag. Thomas Reindl, City of Vienna
- Anton Kasser, Member of State Parliament of Lower Austria
- Dr. Hedda Sützl-Klein, Austrian Ministry for Transport, Innovation and Technology

**Keynote**

Stefan Schennach, Member of Federal Council Austria, EUROSOLAR Austria

**Presentation of this year's Award Winners**

Moderated by Prof. Peter Droege, EUROSOLAR

**17.00 – 18.00 Get Together & Piano Music**



# EUROPEAN SOLAR PRIZE 2017

## This Year's European Solar Prize goes to:

Towns, municipalities, council districts, public utilities

**City of Kaposvár, Hungary**

Solar architecture and urban planning

**Stavros Niarchos Foundation Cultural Center (SNFCC), Greece**

Industrial and commercial companies or farmers

**Green City Energy, Germany**

Local or regional associations/organizations

**Region of Thaya, Austria**

Owners and operators of renewable energy installations

**Utility Company of the Canton of Schaffhausen (EKS), Switzerland**

Transport and Mobility

**City of Oslo, Norway**

Media and communication

**Antonio Cerrillo, Spain**

Education and vocational training

**LEGO Group, Denmark**

One World Cooperation

**EcoPeace Middle East, Jordan/Palestine/Israel**

Special prize for personal achievement

**Arnold Schwarzenegger, United States of America/Austria**

### Members of the jury:

Prof. Peter Droege, President of EUROSOLAR

Dr Axel Berg, Chairman of EUROSOLAR Germany

Gallus Cadonau, Solar Agency Switzerland

Stephan Gröger, MdL, Vice president of EUROSOLAR

Wolfgang Hein, Vice president of EUROSOLAR

Rosa Hemmers, Treasurer EUROSOLAR

Andre Langwost, EUROSOLAR France

Morten V. Petersen, EUROSOLAR Denmark

Prof Livio Sacchi, Faculty of Architecture of Pescara

Prof Jürgen Sachau, University of Luxembourg

### Scientific advisors:

Prof. Elia Cingolani, Vice president of EUROSOLAR

Dr. Torsten Maseck, UPC-Barcelona

Judith Ronai, EUROSOLAR Hungary

Milan Smrz, Vice president of EUROSOLAR

Prof. Tanay Sidki Uyar, Vice president of EUROSOLAR





# EUROPEAN SOLAR PRIZE 2017

## City of Kaposvár *Hungary*

**Towns, municipalities, council districts, public utilities**

### **Outstanding commitment to become the first Hungarian city with a 100% renewable energy supply**

The city of Kaposvár is located in the south-west of Hungary and has a population of 65,000. In 2014 the Kaposvár Smart City 2050 program was developed with the main focus on solar energy and energy efficiency. The ambitious target, which is manifested in various fields of urban development and urban policy, is to create an energy supply based on 100% renewable energy.

To achieve this goal, the Kaposvár model is characterized by a complexity of using all possible locally available renewable energy resources: PV plants have been installed on 19 public buildings with a total capacity of 900 KW, reducing 2000 tons of CO<sub>2</sub> per year. All local busses have been replaced by CNG powered ones. The basis of their fuel is produced by the

local sugar factory, which produces biogas since 2012. The biogas is also used to heat the public swimming pool and spa.

New fully electric buses and 170 electric bicycles will be integrated to the local transport system by the end of this year. Local citizens have been involved in the processes, underlining the sociocultural dimension of a successful energy transition. And even more activities in the fields of renewables and energy efficiency have been taken.

The installation of solar power plants in areas surrounding the city and a biomass heating plant as well as the development of a Smart Grid System are additionally planned for the future. With its wide ranging strategy, the city of Kaposvár takes responsibility and moves forward with courage and conviction. It is a pioneer and role model for a renewable and sustainable development in Hungary.



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# EUROPEAN SOLAR PRIZE 2017



## Stavros Niarchos Foundation Cultural Center (SNFCC) *Greece*

### **Solar Architecture and urban planning**

**Strong symbol for ecological sustainability and the potential of renewable energy, integrated in a building of cultural life, setting new standards in architectural requirements**

The Stavros Niarchos Foundation Cultural Center (SNFCC) is a sustainable world-class cultural, learning and recreational urban complex in Athens which includes new homes of the National Library of Greece, the Greek National Opera, as well as the Stavros Niarchos Park, a hillside park over a total area of 21 hectares. The Center was designed by Renzo Piano Building Workshop, built by Salini Impregilo as head of a joint-venture with Greek partner Terna and financed by the Stavros Niarchos Foundation. After its completion, the project has been donated to the Greek state in February 2017.

The Center attracts high public awareness and has a symbolic character for the whole country. It is not only an example of a building complex filled with culture, knowledge and arts. It is also

a trendsetting model, combining environmental and renewable engineering with aesthetical architecture. The whole structure of the building is the embodiment of sustainability.

On top of the roof of the Greek national Opera, there is a canopy which, besides providing essential shade, is topped with 9.000 m<sup>2</sup> of photovoltaic cells, enough to generate 1.5 megawatt of power for the library and opera house. The solar cells allow the building to be self-sufficient in energy terms during normal opening hours. Fulfilling these high standards, the Center received a "Platinum" certification, the highest rating earned from LEED (Leadership in Energy and Environmental Design).

The SNFCC is one of the biggest projects in recent Greek history and a reference point also at a global level. It illustrates how integrated modern technology and high quality architecture can look like. The strong symbolic character motivates the Greek to take a leap in the field of renewables – in a country that has an enormous potential but yet no leading role in the world of renewable energy.



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# EUROPEAN SOLAR PRIZE 2017

## Green City Energy *Germany*

### **Industrial and commercial companies or farmers**

#### **Long-time and far-reaching contribution for the expansion of renewable energy in citizen's hand**

Established in 2005 as the subsidiary of the non-profit environmental organization Green City e.V., the German company stands for the conversion of the energy supply to 100 % renewable energy. Through the far-reaching involvement of ordinary citizens, the company achieves a fair distribution of benefits and obligations and boosts acceptance within local communities.

Project development and construction of photovoltaic, wind and biogas plants as well as hydroelectric power plants are the core business of Green City Energy. In the last 12 years the company has built around 320 renewable power plants with a total capacity of 213 MW in Germany, France and Italy. The decentralized ownership and financing concepts enable mu-

nicipal authorities, cooperatives and citizens to become directly involved in projects.

Sustainable capital products such as closed-end funds, participation rights and bonds are used to finance the expansion of renewable energy power plants. Over 5,000 private investors, several notable foundations and other professional investors benefit from statutory feed-in tariffs. Green City Energy also offers consulting services for municipalities. Dozens of municipal and district authorities have been advised in climate protection and energy concepts to suit their particular needs.

Through energy projects and services as well as through investment opportunities, the company makes an important contribution to the expansion of renewable energy and ensures a resource-independent, price- and climate-friendly energy supply in citizen's hand.



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# EUROPEAN SOLAR PRIZE 2017

## Region of Thayaland *Austria*

### Local or regional associations / organizations

#### Regional implementation of renewable energy and sustainable mobility, financially driven by public participation

In February 2016 the north western region of Lower Austria "Zukunftsraum Thayaland" together with the association of citizens and firms "Zukunftsklub Thayaland" founded the common company TRE Thayaland GmbH in order to strengthen the regional and sustainable development. The young Austrian company implements local green energy projects in cooperation with enterprises, private households, communities and is financially driven by local and regional residents.

The projects of TRE Thayaland focus on the use of photovoltaic and e-carsharing. Several photovoltaic-power-plants, partly in combination with e-loading stations, on community centers, schools and building yards have already been installed. e-carsharing is offered in eight cities and villages already. The annually fee for shar-

ing an e-car are 240 Euros – charging, vignette, maintenance and insurance included.

The projects are financed through public crowdfunding opportunities. With an interest rate from 2% to 6% and runtimes from 7 to 12 years, citizens are attracted to invest in the sustainable development of the region. And this with success: The region of Thayaland already saves about 2.200 litres of fossil fuel and has installed about 700 squaremetres photovoltaic, which generates about 100 MWh of renewable energy per year.

A lot more projects are already planned and are up to be financed and implemented. The participatory concept of the region creates economic advantages for its citizens and more knowledge and a greater acceptance for renewable energy at the same time. Furthermore, the money drain for energy import can be reduced and revenue for local energy production can be generated, which both boosts the regional value creation.



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# EUROPEAN SOLAR PRIZE 2017



## Utility Company of the Canton of Schaffhausen (EKS) *Switzerland*

### **Owners and operators of renewable energy installations**

#### **Practical and efficient management of a soccer arena's roof surface by using solar energy and raising public awareness for renewables**

The soccer arena LIPO Park in the Herblinger Valley of the Canton of Schaffhausen opened its doors on February 25th, 2017, after a record construction time of only 18 months. Roof and facade of the arena are equipped with a unique PV plant with a performance of 1.41 MWp. The frameless glass-glass solar modules are perfectly integrated into the roof and facade surfaces. The plant produces 1,290,000 kWh per year and covers 150 % of the arena's total energy need of 860,500 kWh/a – including the energy need of the shopping and commercial center with an energy reference area of 13,157 m<sup>2</sup>.

The solar electricity surplus of 429,500 kWh/a is enough to operate 300 electric cars and to drive 12,000 km without any CO<sub>2</sub> emissions

with each of them. The monocrystalline solar modules are free of heavy metals and have a possible durability of over 50 years. Thanks to an up-to-date spectral optimization, these solar modules have an outstanding energy output also when it is cloudy or during twilight. From the inside of the arena, the multifunctional PV installation convinces with an elegant, translucent PV surface, letting the daylight in and protecting the soccer fans from weather conditions.

Solar-operated heat pumps are supplying the heat for hot water and heating. Additionally, a natural gas heating is used for the heating of the soccer field stipulated by Swiss Football during a short period in winter. The PV plant is operated by the utility company of the Canton of Schaffhausen (EKS). With this elegant PlusEnergy soccer arena, EKS is providing a sustainable and energy-efficient energy supply, which is convincing from the ecological but also economic aspect.



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# EUROPEAN SOLAR PRIZE 2017

## City of Oslo *Norway*

### Transport and Mobility

#### **Trendsetting sustainable mobility concept with special consideration of electric vehicles and role model for European cities**

Oslo, the capital of Norway and the country's largest city with approximately 660,000 inhabitants is one of the fastest growing cities in Europe. This fact leads to great opportunities but great challenges, too. The City has to plan and build for growth in terms of infrastructure, while implementing an ambitious environmental and climate policy.

Having high standards on sustainability and being awarded as "Green Capital 2019" by the European Commission, Oslo is presenting a lighthouse project for an inner-city sustainable transport system. In 2016, the City Council passed the Climate and Energy Strategy with the target to cut emissions by 50 percent by 2020 and 95 percent by 2030. To achieve these goals, the City is promoting electric vehicles in the private and public transportation sector.

Today, Oslo is the Electric Vehicle Capital of Europe with more than 35,000 electric vehicles in the Oslo-region. Financial benefits such as no tax purchase, free parking, free passing through the toll ring, access to the bus lane, free charging and free transport on ferries attract citizens to change to eco-friendly vehicles. To kick-start the mobility turn, the City has contributed to the deployment of a robust charging infrastructure with currently about 2,000 charging points.

In addition, all public transport in the Oslo and Akershus region is to be powered only by renewable energy in 2020. Revenues from the toll ring are used to facilitate more trips by public transport, bicycle and walking through investing in better infrastructure. The integrated and wide ranging mobility concept is the first of its kind in Europe and illustrates impressively how the future urban mobility can look like.



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# EUROPEAN SOLAR PRIZE 2017

Antonio Cerrillo  
*Spain*

**Media and communication**

**Long-time responsible journalism and reporting for a sustainable and eco-friendly development in Spain and Europe**

Antonio Cerrillo Jódar is a renowned publicist specialized in environmental journalism and an experienced colleague at the Catalan Newspaper "La Vanguardia", where he works since 1983. After his degree in Hispanic Philology from the University of Barcelona, he has been a reporter in various sections such as events, courts and local. In the late 1980s, he fully turned to environmental information on a continuous basis.

In his articles, he investigates the development of biodiversity and nature conservation, examines the problematic of climate change and the destruction of the ozone layer. Global, but also national and regional problems are on his lookout, such as the issues of water or waste in his home country.

Moreover, he follows up questions of energy supply, consumption and its environmental impacts, renewable sources and issues of urban ecology. Smart and courageous articles like 'Freedom for-eco-electricity' or 'I don't understand why they block solar energy' illustrate that Antonio Cerrillo is not afraid to speak his mind, no matter if he will make friends or foes.

In times of political change and trouble within the renewable energy sector in Spain and Europe, Cerrillo has always been aware of his journalistic and social responsibility and has proven himself as a convinced advocate for renewable energy and a passionate campaigner for the environment. His influence has been crossing Spanish borders for a long time. And his work sets an example of how independent and yet dedicated journalism can work.



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# EUROPEAN SOLAR PRIZE 2017

## LEGO Group *Denmark*

### Education and vocational training

#### Outstanding and inspiring concept of introducing children into renewable energy and environmental protection

For most of the people, play with LEGO bricks is part of the childhood memories. With LEGO bricks, children start to discover the world and even their future lives. Being aware of its responsibility for future generations, in 2012, the Danish company pledged to offset 100 percent of their global energy consumption through renewable investments by 2020. The enterprise reached the ambitious goal three years ahead schedule and is running entirely on renewable energy in 2017 by investing in offshore wind farms in the UK and Germany.

With drawing attention to the importance of renewable energy, LEGO built the world's largest wind turbine out of bricks and even made its way in the Guinness Book of World Records. But the company wanted to do more and devel-

oped a project in its main field of expertise: Helping children to set free their creativity and imagination. The company invited girls and boys from all over the world to a construction competition where they were able to develop solutions transforming wind into energy – a big success.

As part of LEGO Education, they also produce construction kits on the topic of renewable energy. For this purpose, LEGO Education offers a Curriculum Pack including tasks for classes. Thus, children can encounter the topic of renewable energy at a young age and learn about it in a playful and practical manner.

LEGO has always been aware of their responsibility for children and takes its influence on kids seriously. The company uses its resources efficiently to make a step and give the future generations a fundamental understanding of a sustainably lifestyle and the careful exploitation with natural goods.



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# EUROPEAN SOLAR PRIZE 2017



## EcoPeace Middle East *Jordan, Palestine, Israel* **One World Cooperation**

**Innovative strategy for a sustainable development with the help of renewable energy in one of the most water stressed and conflict filled regions of the world**

In the Middle East, the consequences of climate change are already a reality of life. The region is one of the most water-stressed areas in the world. In addition conflicts and quarrels – ranging from the Israeli–Palestinian conflict to Syria and Iraq as well as to rivalry between Iran and the Gulf states – amplify the explosive situation in the region. Most of these conflicts causes in the dependency and access to oil.

EcoPeace Middle East has set its goal to support the cooperation between conflicting parties and to improve the living conditions of the population in the region. It was founded in 1994 as a common NGO that brings together Jordanian, Palestinian and Israeli environmentalists.

The NGO's philosophy is that 'sustainable peace' goes hand in hand with 'sustainable ecology'.

Besides many other projects, the organisation is running a Water and Energy Nexus approach since 2014. The strategy provides solutions to water scarcity in the region with help of renewable energy. On the one hand the project includes the research of technical, economic and geo-political prefeasibility of the implementation and expansion of renewable energy in Jordan. On the other hand it suggests how the production of desalinated water in coastal region of Israel and Gaza can be run by renewables.

With its' approach EcoPeace Middle East shows impressively how the use of renewable energy can help to increase water security and simultaneously decrease the potential of conflicts. The creation of social benefits and the weakness of dependence of oil can lead to a stable and more peaceful region.



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# EUROPEAN SOLAR PRIZE 2017

## Arnold Schwarzenegger *United States of America, Austria*

### **Special prize for personal achievement**

**Long-term contribution for renewable energy and sustainability, using his prominence to raise public awareness on climate change**

Arnold Schwarzenegger has devoted his influence as a Hollywood celebrity and the power of his political office to working for the environment and the global future in his unwavering and bold personal commitment. As a result, he has made most significant contributions to slowing down climate change through renewable energy and efficiency measures for many years.

As Governor of California he signed the Global Warming Solutions Act in 2006, which minimized the amount of emissions, refineries and manufacturing plants in California. In conjunction with this agreement he signed a second contract prohibiting Californian utilities signing long-term contracts with international suppliers who do not meet the local standards.

Additionally he was the catalyst of the collaboration between the North's East Regional Greenhouse Initiative and California, with the aim to reduce emissions by issuing a limited amount of carbon credits to each power plant in participating states, which actually took effect in 2009. In 2011 Schwarzenegger founded the R20 Regions of Climate Action to develop a low carbon economy.

As Governor of California he supported alternative energy projects such as the Alta Wind Project between Lancaster and Tehachapi Pass where today some 20.000 3 to 4 MW turbines harness the kinetic energy of the wind and solar power projects in MW and even GW dimensions. Promoting E-mobility with fuel-cell cars and fully-battery driven cars has always been an issue of special importance to him in his attempt to reduce the emissions of traffic.

Today, he is still politically active and committed to promoting renewable energy and educating people about ways of counteracting climate change, while living up to his mission for a sustainable lifestyle and standing for an eco-friendly development all over the world.

[www.schwarzenegger.com/issues](http://www.schwarzenegger.com/issues)



# EUROPEAN SOLAR PRIZE 2017

## Heliograph

Heliograph is a current term for a device called sunshine autograph, a meteorological instrument that can be used to determine the duration of sunshine of a day. It works on the principle 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.

