



The REC Conference Center

aiming for zero emissions



REGIONAL ENVIRONMENTAL CENTER



eea financial mechanism



REC Conference Center



About the REC Conference Center

The use of renewable energy and the promotion of energy efficiency are the best methods of tackling the global problem of climate change. The REC is involved in a wide variety of projects supporting these solutions in the Central and Eastern European region and beyond. Now, financial help from the Italian Ministry for the Environment, Land and Sea and grants from Iceland, Liechtenstein and Norway through the EEA Financial Mechanism, as well as support from several leading building technology companies, have made it possible for the REC to open a new, state-of-the-art training, demonstration and conference centre that aims for zero emissions.



Advanced techniques and technologies have been employed by the design teams — Architetture Sostenibili and Kima Studio — in order to fulfil the most demanding aesthetic, functional and comfort requirements while relying on solar energy. The aim is to reduce fossil fuel consumption to zero, eliminating emissions of carbon dioxide.

This brochure provides an introduction to the most important features of this pioneering building, which has been made possible by the generosity of our donors. Enjoy your visit round our new conference centre, but please bear in mind: Technology can only be effective if accompanied by changes in our attitudes and behaviour.



About the center

The REC expresses
its gratitude for the
financial donations,
in-kind contributions and
other support that made
the REC Conference
Center possible.



*Ministero dell'Ambiente
e della Tutela del Territorio e del Mare*



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Acknowledgements

Donors

- The project was implemented with the financial support of the **Italian Ministry for the Environment, Land and Sea**
- The project was supported by a grant from Iceland, Lichtenstein and Norway through the **EEA Financial Mechanism**

In-kind contributions

- **Krüll-Ung Kft.** (shades and blinds)
- **Oktoklima Kft.** (heat pumps and ventilation units)
- **Philips Lighting** (lighting system)
- **Rheinzink** (building envelope)
- **Sanyo Hungary Kft.** (solar panels)
- **Sauter Automatika Kft.** (building automation system)

Project leader

Professor Federico M. Butera, Politecnico di Milano

Design Teams

- **Architetture Sostenibili**

Design Implementation

- **Kima Studio**

Construction partners

- **Épber Zrt.**
- **SDR Közbeszerzési Iroda**
- **Unikulcs Kft.**
- **Szinker Kft.**

Acknowledgements





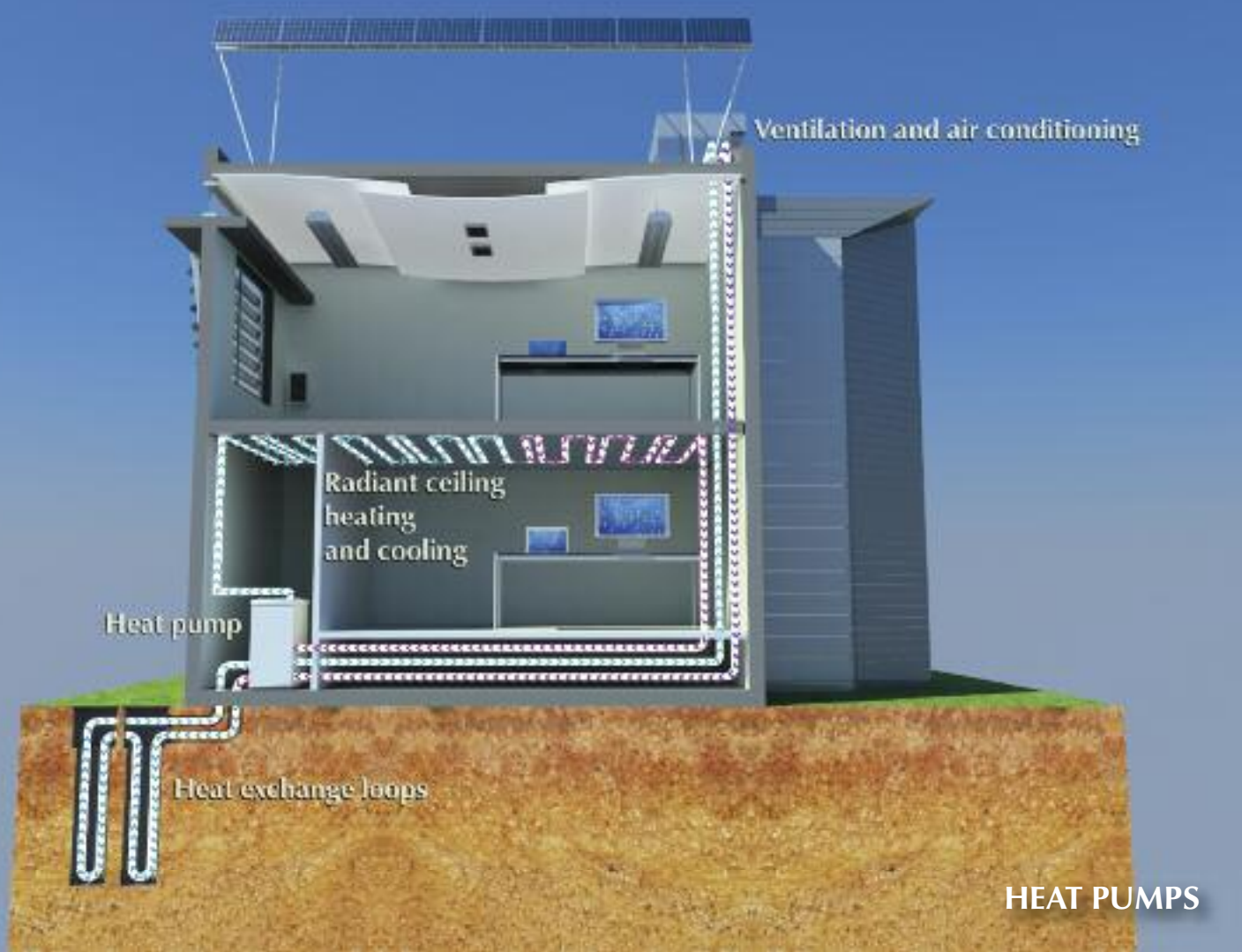
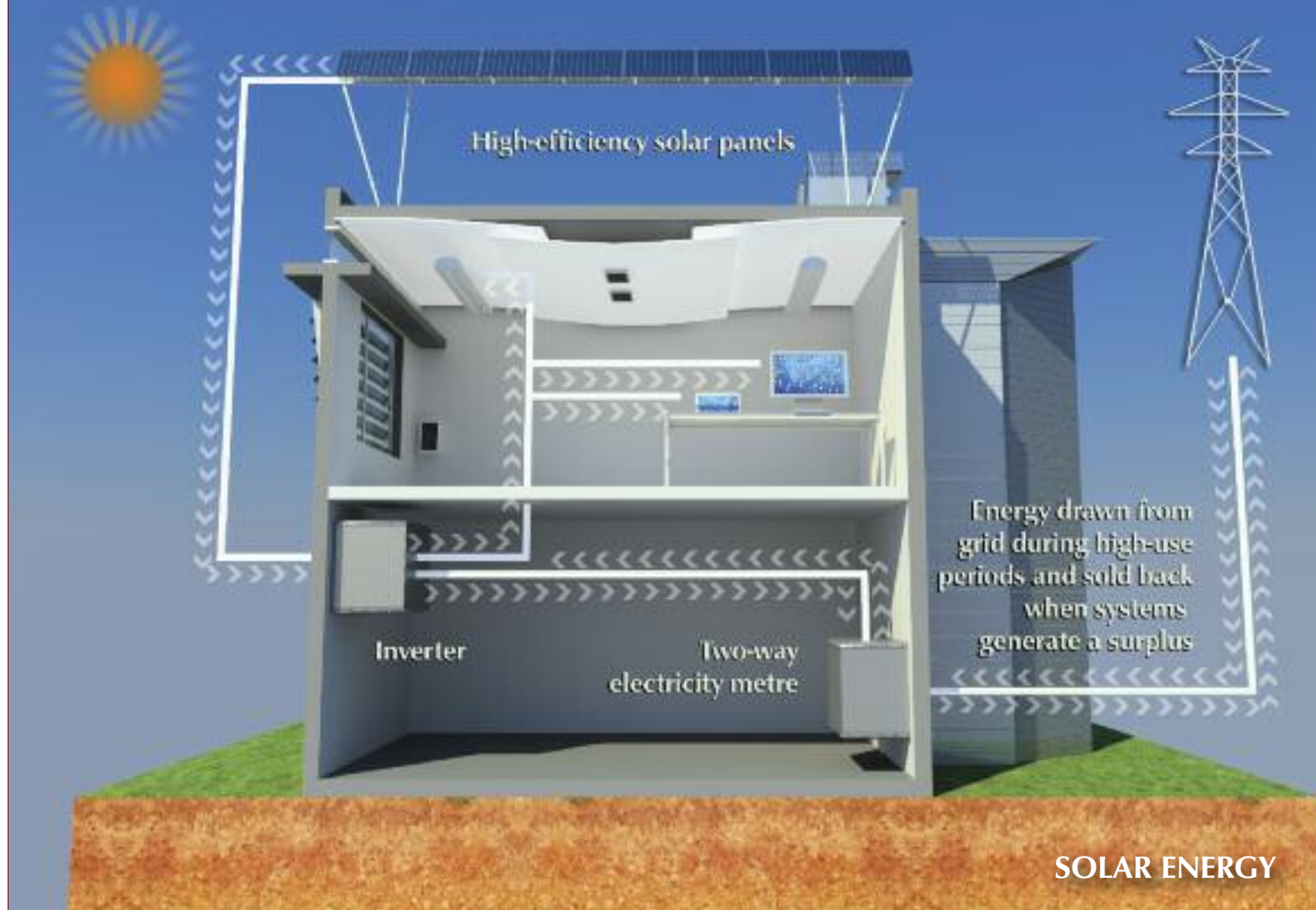
Functions

The REC, as an international organisation with a mission to assist in solving environmental problems and support sustainable development, and its partners will use the new conference centre for a variety of functions.

- **Conference centre** — supporting the REC's mission to promote co-operation among non-governmental organisations, governments, businesses and other environmental stakeholders, and promoting the free exchange of information and public participation in environmental decision making.
- **Information centre** — housing a library that will be a clearinghouse of solutions to the problems of global climate change.
- **Demonstration centre** — offering an ideal location for exhibitions and demonstrations, both in the conference centre and in the REC arboretum, for new sustainability solutions.
- **Climate change resource** — providing the opportunity to gather knowledge and experience through REC's climate change experts, who have been working on this issue since 1999. The unique venue can also be opened up to other partnerships.



Functions



Technologies

The primary energy source used in the new building is solar, supplemented by traditional electricity in peak hours and during the night. The aim is to achieve the ambitious goal of annual zero CO₂ emissions by means of renewable resources, design techniques and computerised systems.

Carbon emissions from the supplementary energy resources will be offset through the generation of surplus electricity produced by the photovoltaic solar panels.

Solar energy

Solar energy technologies harness the sun's heat and light for practical ends. All the electricity needed by the REC Conference Center for heating, cooling, lighting and appliances is provided by 140 photovoltaic solar panels. The system can generate up to 29 kilowatts of power. Extra energy is drawn from the grid when the power generated proves insufficient, for example when the sky is overcast or at night. In exchange, energy is delivered back to the grid during times of excess production, such as on sunny days or on the weekends.

Heat pumps

Ground source heat pumps are used in the building to make use of the constant temperature of the earth. This can be obtained by drilling holes into the earth, extracting the heat and turning it into useable energy with heat-pumps. This solution offers a highly energy-efficient way to provide heating and cooling according to seasonal needs. In the new building there are two main heating and cooling systems at work: one operates with air ventilation, while the other one relies on radiant ceiling heating/cooling, thus creating an extremely pleasant indoor climate for visitors. The renewal of the internal airflow is adjusted to the number of people inside the meeting rooms. These solutions are more efficient than any traditional ones.



Architecture and insulation

An innovative design was adopted in which the formal and functional architectural requirements were tested against their impact on energy consumption and aesthetics by means of the most advanced simulation models. The result is an attractive and functional internal and external structure, in which state-of-the-art energy conversion technologies are combined in modern architectural language.

The building envelope — that is, everything that separates the interior of the building from the external environment — was designed to minimise heat loss in winter, prevent heat absorption in summer and maximise the exploitation of natural light.

The lighting system

The use of natural light has been greatly enhanced by the installation of a continuous glass ribbon situated on the upper part of the walls. The ribbon sits on a horizontal overhang extended towards the interior, creating a “light shelf” that diffuses natural light throughout the interior. This shelf also provides shading in the summer, with movable and fixed screens and venetian blinds to protect against the well-known glare effect when the sun is low in the sky. High-efficiency lighting controlled by illumination sensors connected to a control system assures appropriate dimming according to the natural light available. The system aims at a minimal use of artificial lighting.



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LIGHTING WITH BLINDS CLOSED





About the REC

The Regional Environmental Center for Central and Eastern Europe (REC) is a non-partisan, non-advocacy, not-for-profit international organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). The REC fulfils this mission by promoting cooperation among non-governmental organisations, governments, businesses and other environmental stakeholders, and by supporting the free exchange of information and public participation in environmental decision making.

The REC was established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a charter signed by the governments of 29 countries and the European Commission, and on an international agreement with the government of Hungary. The REC has its head office in Szentendre, Hungary, and country offices and field offices in 17 beneficiary countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia and Turkey.

Recent donors are the European Commission and the governments of Albania, Austria, Bosnia and Herzegovina, Canada, Croatia, the Czech Republic, Estonia, Finland, Germany, Hungary, Italy, Japan, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Montenegro, the Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States, as well as other inter-governmental and private institutions.

REC Conference Center booking information

The REC Conference Center is situated in an attractive arboretum near the river Danube in Szentendre, Hungary, close to Budapest. The new conference facilities are ideal for conferences and meetings, in particular those related to environmental protection, sustainable development or corporate social responsibility. The conference center has a capacity of up to 120 participants and offers up-to date technical equipment and a range of optional services. If you are interested in holding an event here, please contact us at:

THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE

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