Recognizing the best energy projects from Switzerland

watt d'or

Contents

Presenting the Watt d'Or

The Watt d'Or award recognizes the very best energy projects from Switzerland. The prize is awarded annually at the beginning of January by the Swiss Federal Office of Energy. The winners are selected by a jury composed of energy experts in academia and NGOs, as well as from the public and private sector. This broad expertise gives the award a high level of legitimacy, making the Watt d'Or the most prestigious award in the energy sector in Switzerland. The Watt d'Or is divided into four different categories: Energy Technologies, Renewable Energy, Energy Efficient Mobility, and Buildings and Space. These categories are good indicators of where Switzerland's priorities lie in the energy sector.

The Watt d'Or pursues many goals: to provide award recipients with a label of quality in line with the principle of best practices and best achievements; to encourage and motivate the development of new projects within the energy industry; and to point to future trends and draw attention to the objectives of Switzerland's energy policy. As a result of the award's prestige, the Watt d'Or is also a great opportunity for the winners to gain visibility, demonstrating the significance and value of their technology to project stakeholders.

In recent years, the winning Watt d'Or projects have been repeatedly shown abroad in a traveling exhibition, now also in China. The purpose of the exhibition is to showcase the individual Watt d'Or award winning projects, as a means by which to create a dialogue and establish collaborations with key players in academia, the public and the private sector. The hope is that the projects will spark future interactions and forge new bonds.

Foreword

All over the world - including in Switzerland - there are people who prefer to debate for years instead of taking action. These endless debates are about whether, why, who, what, how, when and where something should be done. And at what cost, of course.

Fortunately, however, there are people all over the world - including in Switzerland - who get down to work now and with determination. They are implementing innovative projects, they are looking for and finding partners to work with, and they are making the energy transition visible with their installations, products and services.

Although it has been going on for more than 20 years, the debate about the national energy and climate policy in Switzerland is still emotional. Just like everywhere else in the world. Opinions differ on how fast the transition to a fully renewable and net-zero energy system should proceed, with which technologies, with how much government support and with which legal regulations.

The innovative, courageous, and smart winners of the Watt d'Or are playing a critical role in moving these debates onto a constructive path. By demonstrating out in the field what is possible in practice, they lay the foundation for solutions that everyone can agree on, that everyone can embrace. When we present the Watt d'Or Award abroad, as we are doing now in China, our aim is to share this valuable experience and to spread the network of people who are determined to get down to work now across the whole globe.

Benoît Revaz

Director, Swiss Federal Office of Energy

HORIZON

Suspended solar power plants

DHP Technology | dhp-technology.ch
IBC Energie Wasser Chur | ibc-chur.ch

Watt d'Or Winner 2019

Infrastructure of various types is important for modern living but takes up a lot of space. In order to facilitate the use of these areas for multiple functions, dhp technology AG from Zizers in the Canton of Grisons therefore developed the "HORIZON" foldable, lightweight construction solar plant.

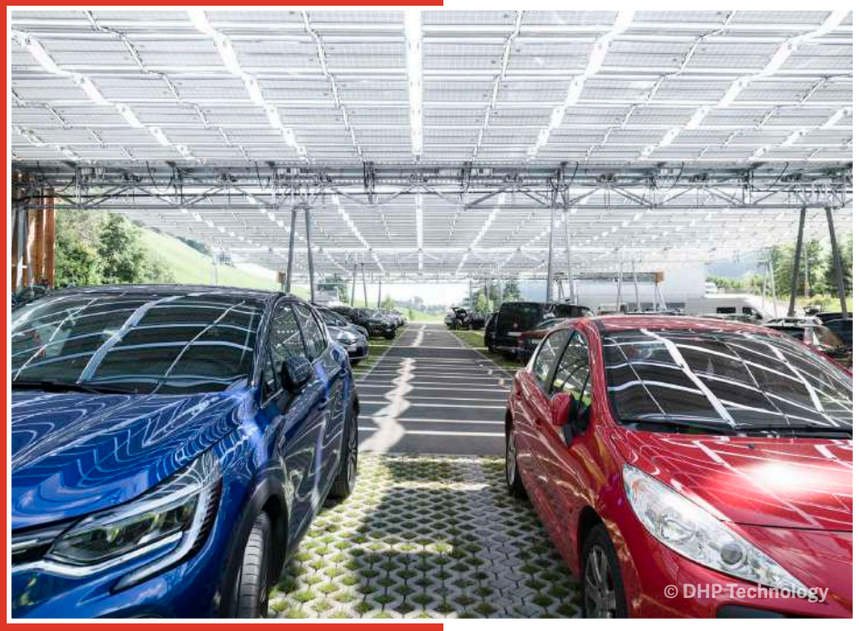
The double use of an industrial area for solar power production without any restriction of this area is unique worldwide and establishes infrastructure-integrated photovoltaics.

Using cable car technology HORIZON is suspended up to six meters above the infrastructure area in question and folds up like a concertina.

A meteorological algorithm subsequently deploys the array when the sun shines and folds it up again during storm, hail and snowfall.

This means that no sunny hours are lost in winter because solar modules are covered in snow and servicing and cleaning of the modules can be done easily and simply from the edge of the roof, thanks to the foldability of the construction.

The first major HORIZON plant was realised for IBC Energie Wasser Chur and installed over the Chur sewage treatment plant where it went into operation in 2018. The plant produces 550,000 kilowatt-hours of electricity per year, which covers around 20% of the electricity requirement of the facility.



On the visitor parking lot of the Jakobsbad-Kronberg cable car, the first solar folding roof over a parking area was realized in 2020 for SAK St. Gallisch-Appenzellische Kraftwerke AG. 420kWp power is installed on an area of approx.4,000 m2 with 152 parking spaces.

In combination with charging stations for electric vehicles, the solar folding roof represents the perfect link between ecological mobility and local CO_2-free electricity production.

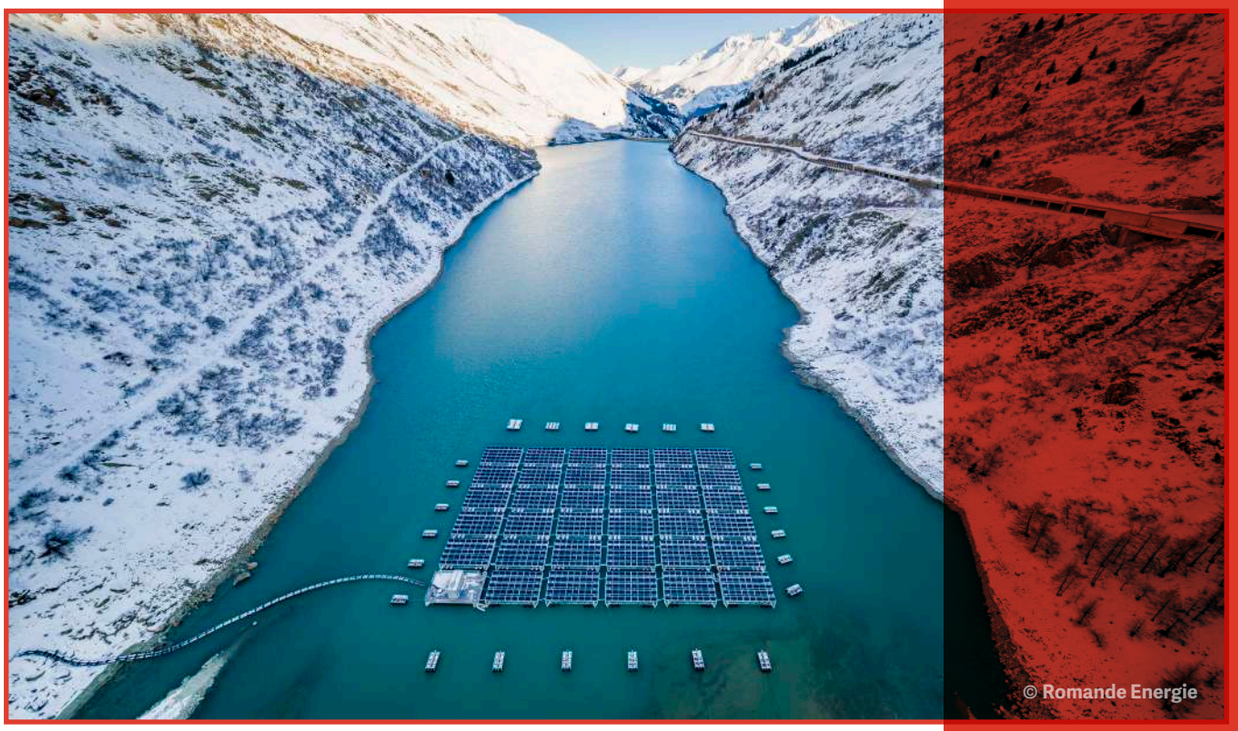
Eight folding solar roof systems are currently in operation, with three more to follow this year.

A Power Spot in the Alps

A floating solar power plant on a reservoir in the Swiss Alps

Romande Energie | romande-energie.ch
ABB Schweiz | new.abb.com/ch

Watt d'Or Winner 2021



High up in the Swiss Alps the atmosphere is rarer, solar radiation is stronger, and in winter the snow reflects the sunlight – ideal conditions for the production of solar energy.

With this in mind, Romande Energie, with the help of ABB Schweiz, created a power spot on the Lac des Toules reservoir in Valais, at an altitude of 1,800 meters above sea level. Today, this unique facility is operational and produces electricity for about 220 households.

The float-mounted, bifacial solar modules cover an area of about 2,200 square meters and produce about 800,000 kilowatt-hours of electricity every year.

To achieve this, solar radiation is collected by both sides of the module, thereby enabling the solar modules to also use the sunlight that is reflected off snow. Furthermore, the heat generated in the panels makes the snow slide off the slightly angled surfaces.

Finally, the higher UV radiation and lower temperatures at 1,800 meters above sea level contribute to a better yield, thereby enabling the bifacial panels deliver the same level of yield as if they were located in Africa – 40 percent of which is generated in winter.

One of the main challenges in realizing this ambitious project was the construction of the 36 aluminium and polyethylene floats that have to rise and fall with the reservoir's surface – from 0 to 50 meters.

The harsh weather was another major challenge, as wind speeds can reach up to 120 km/h, temperatures range from -25˚C in winter to +30 ˚C in summer, there can be up to 60 cm of ice on the reservoir surface, and modules can get layered with up to 50 cm of snow.

Switzerland's Most Modern Data Center

A cooler way of data processing

In October 2014, Swisscom opened its new data center in Bern-Wankdorf, which is one the most secure, modern, and above all, energy-efficient facilities of its kind in Europe.

This state-of-the-art data center can accommodate over 5,000 servers and in particular features an innovative cooling system that exclusively utilizes outside air and rainwater, thereby completely dispensing the need for cooling compressors or environmentally harmful refrigerants.

The waste heat is fed into the new district heating system of the city of Bern, and is thus used for heating buildings in the immediate vicinity.

Energy efficiency therefore achieves peak ratings with a PUE (Power Usage Effectiveness) score of 1.2, which means that 84% of the energy consumed is actually used for computing; all other electricity consumers and waste heat account for only 16%. In comparison: the average rating for data centers in Europe is 1.95. The facility also possesses an emergency power supply system, which eliminates the need for batteries.

Swisscom sources all the power for the new data center from domestic renewable energy. The Wankdorf Data Center is also Switzerland's first data center to receive Tier IV certification from the Uptime Institute, which means that it complies with the highest standards in availability, security and efficiency.

Swisscom AG | swisscom.ch
RZintegral AG | rzintegral.ch

Watt d'Or Winner 2015

Renewable energy

Gas Production from Waste

Direct methanisation

A relevant potential of energy source slumbers in biological waste, with roughly 1.3 million tons of biowaste accumulating in municipal refuse in Switzerland each year, as well as 270,000 tons of collected green waste and 200,000 tons of sewage sludge from wastewater treatment.

There are already several methods how from these feedstock biogases can be produced, a mixture of methane (CH_4) and carbon dioxide (CO_2). This raw biogas contains up to 40% CO_2, which has had to be separated by scrubber technologies or membranes for gas grid injection.

An alternative route was developed, by researchers led by Dr. Serge Biollaz at the Paul Scherrer Institute the so-called "direct methanisation of biogas", which works by adding hydrogen (H_2) and stimulating it to react with the CO_2, thereby producing additional CH_4.

The resulting methane of this innovative process is of such high quality that it can be fed into the natural gas network without additional processing, but also significantly raises the methane yield compared to conventional methods.

To test this conversion process under realistic conditions, PSI subsequently teamed up with the Zurich-based energy provider Energie 360° to conduct a 1,000-hour test run at the biogas plant of Biogas Zurich AG at the Werdhölzli wastewater treatment site.

The test successfully delivered a quantity of gas sufficient to provide heating and hot water for a single-family home and as a result, illustrated that their method is ready for industrial implementation.

Paul Scherrer Institute | psi.ch
Energie 360° | energie360.ch

Watt d'Or Winner 2018

Renewable energy

Emission-free transport made in Switzerland

Hitachi ABB Power Grids | hitachiabb-powergrids.com
Carosserie Hess AG | hess-ag.ch
Transports Publics Genevois | tpg.ch
Office de Promotion des Industries et des Technologies | opi.ch
Canton of Geneva & Services Industriels de Genève | sig-ge.ch

Watt d'Or Winner 2018

© Carosserie Hess AG

With urban transport planners increasingly seeking to replace diesel buses with more sustainable alternatives, the Grid-eMotion™ Flash charging system – previously known as "TOSA" – has emerged as a particularly attractive solution for modern mass transit.

Specifically, this high-power flash-charging technology enables electric buses on high-frequency and high-capacity routes to top up their on-board batteries at selected stops while their passengers are embarking and disembarking.

To achieve this, the e-buses simply connect to an overhead high-power charging contact when they pull into a stop that has been equipped with a flash-charging station, which will provide them with a short high-power boost at 600 kilowatt (kW) for 15 to 20 seconds.

Thanks to this solution, no overhead wires are needed, which eliminates a recurrent visual barrier to trolleybus acceptance.
In addition, the system is inherently safe, as the overhead connectors are only energized when they are engaged, and the direct-contact technology prevents electromagnetic field emissions associated with inductive charging concepts.

Finally, the e-buses reduce energy costs by approximately 30%, while still being able to maintain the same timetable, frequency and quantity of passengers as a diesel fleet.

Emission-free, very quiet and ideally suited for mass transport, this system is therefore an economically viable solution for the city of the future.

In fact, it was already implemented on line 23 of TPG in Geneva in December 2017, with thirteen flash-charging stations having been built along the twelve-kilometer route, three charging stations at the terminal stops and four stations at the bus depot.


TOSA
© Carosserie Hess AG


23 AEROPORT-P47
1276
© Carosserie Hess AG


© Carosserie Hess AG

Futuricum Collect 26E Electric Truck

Designwerk Products AG | futuricum.com

Watt d'Or Winner 2020

Garbage trucks must be strong and durable, as they stop and go through the streets to pick up everything we want to get rid of.

However, conventional garbage trucks consume about 90 liters of diesel per 100 kilometers, emit approximately 80 tons of CO_2 per year, along with other pollutants, and make a lot of noise. As a result, the Designwerk company from Winterthur recognized that garbage trucks are an ideal application for electric propulsion.

In 2017, with the support of the Swiss Federal Office of Energy, Designwerk therefore developed four prototypes and tested them on the road. The results of this lighthouse project not only demonstrated that there is great potential in the electrification of commercial vehicles, but also in other applications, such as construction and distribution logistics.

Each e-truck has four electric motors with a total rating of 680 PS, a range of 150 kilometers per charge when collecting waste, and a battery lifecycle of up to 800,000 kilometers.

Furthermore, during the aforementioned project, the four prototypes had an average consumption value of 190 kW·h per 100 km in collective operation, which corresponds to a diesel equivalent of 19.6 L/100km.

Although it is still about twice as expensive to buy as diesel models, its operating costs are about 80% lower because of the fuel saved and exemption from the heavy vehicle fee (HVF). In addition, Designwerk is also working to reduce the amortization period from 8 years at present to 5 years.

The Futuricum Collect 26E is now being used successfully every day in Thun, Murten, Lausanne and Neuchâtel.

Designwerk also recently started series production at its Winterthur site and intends to develop further applications for heavy electric commercial vehicles in the future. The company has already put around 70 vehicles on the road, which are being used in various areas of application.

Hydrospider AG | hydrospider.ch Hyundai Hydrogen Mobility AG | hyundai-hm.com
H2 Energy AG | h2energy.ch Association pro H2 Mobilität Schweiz |h2mobilitaet.ch

Watt d'Or Winner 2021

A Cycle for Renewable Hydrogen for Heavy Duty Transportation


© Hyundai Hydrogen Mobility AG


© Hyundai Hydrogen Mobility AG

With hydrogen projected to play an important role in worldwide efforts toward a climate-neutral energy supply, Hydrospider AG, Hyundai Hydrogen Mobility AG, H2 Energy AG, and Assocation pro H2 Mobilität Schweiz recently launched a worldwide unique initiative to construct the world's first commercial ecosystem for renewable hydrogen.

Inspired by a vision of converting heavy duty transports in Switzerland to run on renewable hydrogen, Rolf Huber, chairman of H2 Energy AG, together with various partners, first realized a heavy duty truck (HD truck), as well as the first hydrogen filing station in Hunzenschwil, before subsequently cooperating with Hyundai to produce at least 1,600 hydrogen powered trucks by 2025.

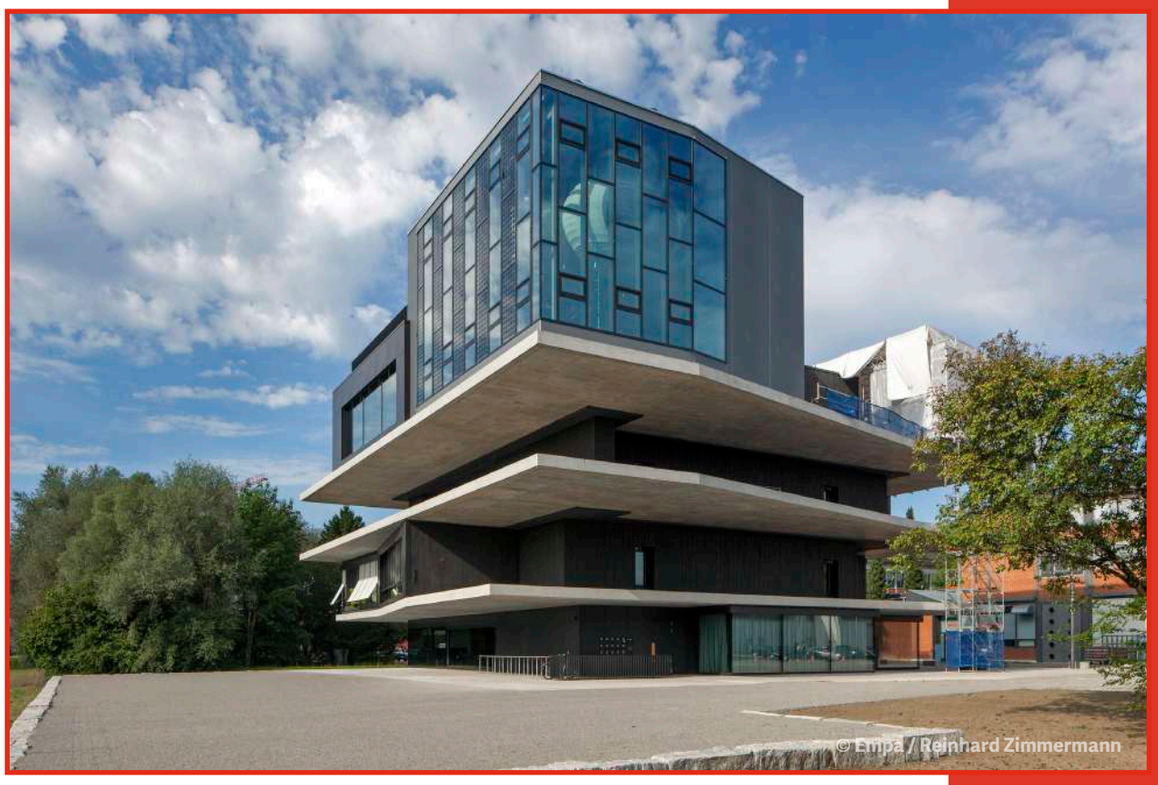
Besides this significant collaboration, the "Association H2 Mobilität Schweiz" was formed, which is comprised of more than 10 transport companies, who drive the hydrogen powered trucks, as well as the H_2 filling station operators, which, by the end of 2023, will cover the entire country.

Furthermore, to make it easier to get started, the trucks from Hyundai Hydrogen Mobility AG, a joint venture between H2 Energy and the Hyundai Motor Company, are offered in a pay-per-use model. This means operating costs are similar to those for conventional HD trucks. Furthermore, hydrogen powered trucks are exempt from the petroleum tax and the performance-related heavy vehicle tax (LSVA).

Finally, Hydrospider AG – a company in which Alpiq, H2 Energy and Linde are shareholders – completes the cycle by ensuring the procurement, production and logistics of green hydrogen from CO_2-free production.

NEST

Modular research and innovation building



Empa | empa.ch
Eawag | eawag.ch

Watt d'Or Winner 2019

In 2016, Empa and Eawag opened a modular research and innovation building called "NEST" (Next Evolution in Sustainable Building Technologies), which aims to close the gap between the research laboratory and the market, as well as to allow new sustainable solutions to quickly gain a foothold in the construction industry.

Today, more than 150 partners from industry, research and the public sector work closely together at NEST in order to test and refine new materials, technologies and products, as well as energy and utilization concepts from the construction sector without risk.

The building consists of a central backbone and three open platforms on which individual research and innovation modules are installed for a limited period of time, according to a plug-and-play principle. This allows these so-called "units" to be dismantled once the research and development work has been completed, thus making room for new modules.

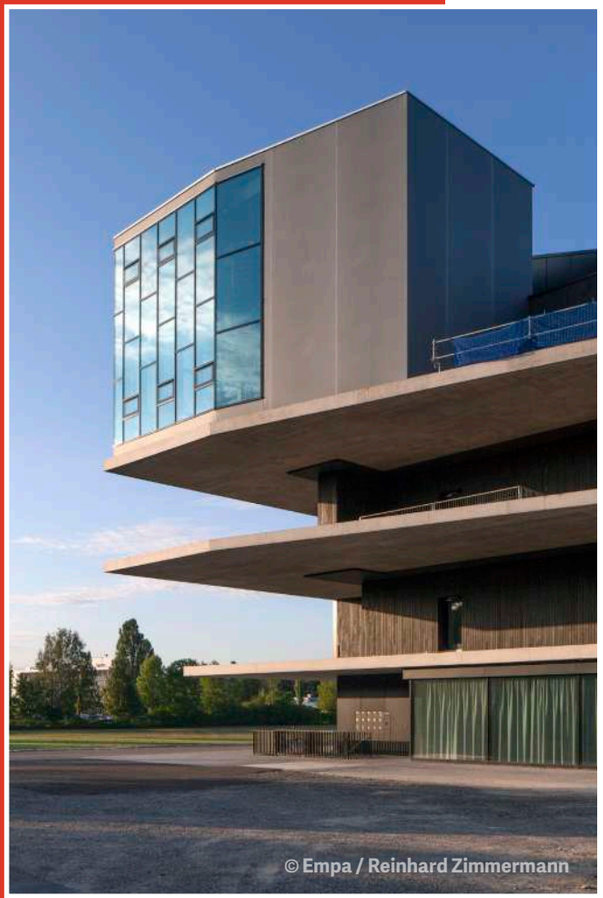
In the sense of a "living lab", the installed units are not isolated laboratory environments, but real living and working environments. Feed-back from users provides valuable insights for further development. NEST thus accelerates the market entry of sustainable innovations in the building sector.

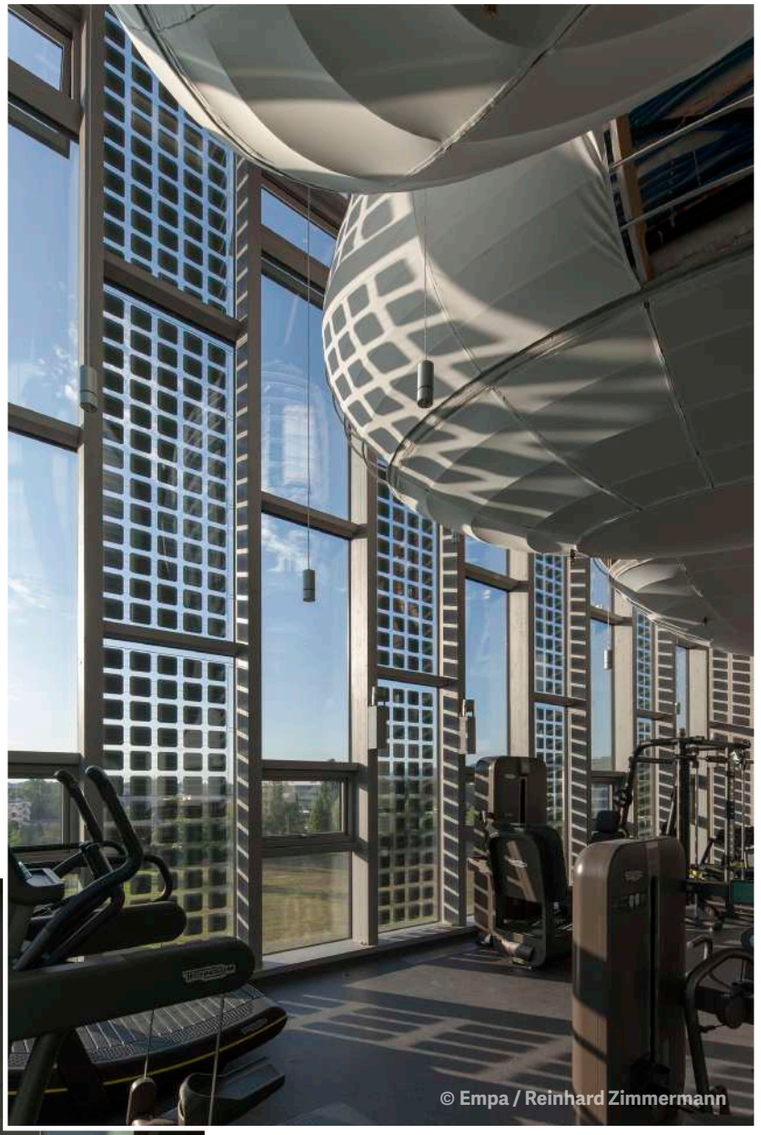
One particularly attractive NEST unit is the fitness and wellness facility (pictured on the right), which was designed by dransfeldar-chitekten AG and realized in 2017 with the help of numerous partners from research and the economy.

The aim of the project was to lower the energy requirement by a factor of 6 in comparison to a conventional fitness and wellness facility. To cover the remaining electricity requirement, three photovoltaic arrays were installed on the façade and roof, and a high-temperature CO_2 heat pump was used to generate temperatures of over 100 °C.

This heat was subsequently re-used a number of times by the Finnish sauna, the Turkish bath, the bio-sauna, the hot showers, and finally, for spacial heating.

The architecture also left nothing to be desired.


© Empa / Reinhard Zimmermann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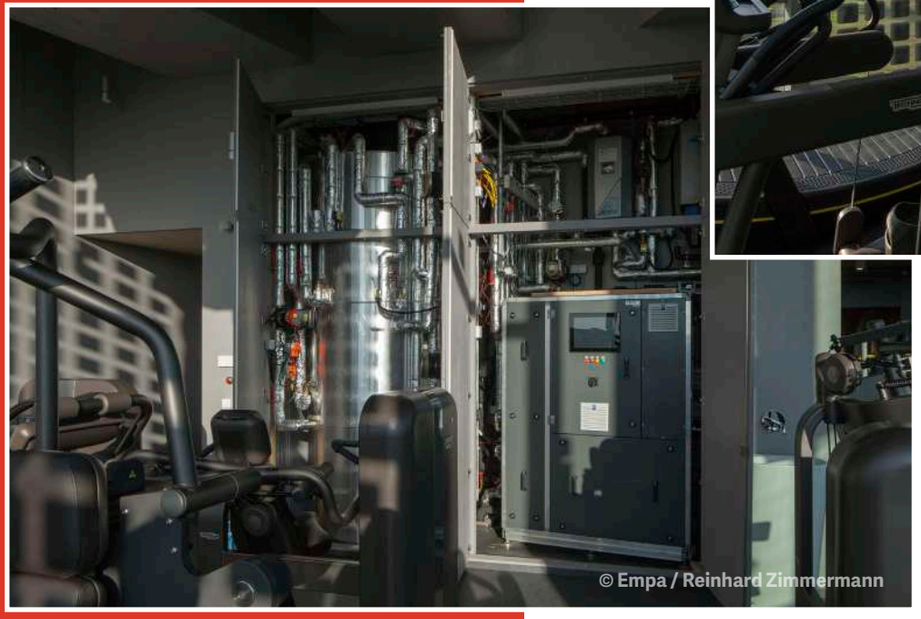

© Empa / Reinhard Zimmermann

In another NEST unit, a team of Empa researchers developed an AI control system that can improve energy management in a house with a solar system.

Specifically, the team designed the AI control system based on the principle of reinforcement learning so that it could not only "learn" the daily rhythm of a house and its inhabitants, but also be able to react flexibly during its operation, such as when a sudden weather change upsets all calculations.

Following a successful computer simulation, the researchers used the NEST research building to control the temperature of a student bedroom for a week in February 2020, and found that the AI control system saved 27% of heating energy compared to the neighboring bedroom, whose heating was operated with a fixed-program control system.

Anergy Grid

ETH Zurich Campus Hönggerberg

ETH Zurich | ethz.ch
Watt d'Or Winner 2020

© ETH Zurich / Alessandro Della Bella

More than 12,000 students and staff populate the Hönggerberg campus of ETH Zurich every day, consuming as much energy as a small town. A good enough reason for the university to pursue a consistent energy strategy: By 2040 it wants to reduce its CO_2 emissions by 80% despite the planned expansion of the campus.

Part of this strategy is the renewable heating supply of the Hönggerberg campus, which in particular features a dynamic underground system where several 200-meter-deep geothermal probe fields store waste heat in summer and release it again for heating in winter.

To achieve this, a so-called "Anergy Grid" – a low-temperature distribution system – transports the energy between the field of geothermal probes and the energy distribution centers, of which there are now five.

The Anergy Grid went into operation in 2012 and consists of a heat conduit and a cold conduit – each of which is a sealed, 1,700-meter-long ring containing pipes with a diameter of approximately 50 centimeters. The pipes are filled with normal water that is never colder than 4°C and never warmer than 22°C.

There is no fixed direction of flow in the pipes; this is determined above all by the five energy centers. These extract or pump water into the Anergy Grid according to the needs of the buildings connected to it: the buildings are either cooled or the internal temperature is raised to the desired level by means of heat pumps.

However, in order for this system to work, the buildings connected to the Anergy Grid can be heated with a supply temperature of 32°C at most, meaning they have to meet the highest energy efficiency standards.

A central element of the Anergy Grid is the continuous monitoring system. This system gathers and analyzes energy flows, temperatures and performance coefficients.

The target of this monitoring process is to continuously optimize the Anergy Grid's operation, as well as to gather information for the planned extension of the Campus: In the coming 25 years the building volume on the Hönggerberg will be extended by half its current capacity to offer room for more than 20,000 people.

Development at Männedorf

Towards energy self-sufficiency with interconnection

Umwelt Arena Schweiz | umweltarena.ch
René Schmid Architekten AG | reneschmid.ch

Watt d'Or Winner 2021

In their new development in Männedorf, Walter Schmid, energy pioneer and president of Stiftung Umwelt Arena Schweiz, and his son, architect René Schmid, are relying on energy self-sufficiency with interconnection to prove that although being self-sufficient in energy is an attractive prospect, it always works better in a network.

Specifically, the development is not only able to produce its entire annual energy requirement on site, thanks to a photovoltaic plant in the façades and on the roof, as well as with the additional help of a wind energy plant, but the buildings are also connected to the electricity and gas grids.

In this way, half of the electricity produced on site is used directly by the tenants, while the rest is conducted to a power-to-gas facility at the Rapperswil-Jona campus of the Eastern Switzerland University of Applied Sciences, converted to renewable gas, and stored to produce electricity and heat in winter.

The residents therefore profit from a clean and cheap energy supply and grid operators benefit from the stable operation system without peak loads.

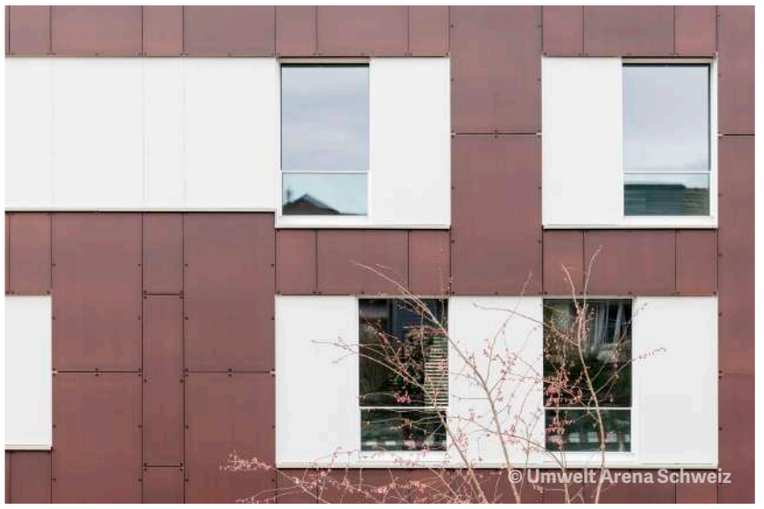
The development's power plant consists of the reddish- brown and white solar panels on the façades, which were developed by Solaxess, as well as the solar modules on the roofs, which together produce more than 90,000 kW·h of electricity per year. There are also two small wind turbines on the roofs that generate about 2000 kW·h of energy annually.

The "heart and brain" of the energy cycle is the hybrid box, which is made up of a heat pump, a gas-powered CHP plant and a smart control system for electricity production and storage. If there is sufficient solar electricity, the thermal heat storage plant and the ice storage unit are charged. Surplus solar electricity also flows into batteries, which supply electricity at night or when the weather is bad.

© Umwelt Arena Schweiz


© Umwelt Arena Schweiz


© Umwelt Arena Schweiz


© Umwelt Arena Schweiz

GridEye

Autopilot in the smart grid

depsys SA | depsys.com
IBB Energie AG | ibbrugg.ch

Watt d'Or Winner 2019

In order to help grid managers to successfully operate, optimize and evolve their power grids during the energy transition, depsys SA developed a range of unique digital, smart grid intelligence, services and technology, which are all centered around their flagship digital grid management platform, GridEye.

The plug and play GridEye box can be simply attached to the existing infrastructure and helps grid operators cope with the demanding task of integrating renewable, decentrally produced and fluctuating amounts of energy into the grid and, more largely, to digitalize their operations.

To achieve this, the intelligent software first derives information on the current situation in the grid, based on exact measures that are made in real time, providing insights for optimally and efficiently controlling the power flows to maximise production without compromising grid security.

GridEye is now used by more than 40 DSOs around the world, mainly to support operation teams in monitoring the LV grid, estimating the MV grid state or controlling PV installations, like the Watt d'Or 2019 awarded project performed with IBB Energie AG at Birrfeld airfield, which enabled the large 200 kW photovoltaic array on the hangar of the Aargau Aero Club to feed in the maximum output without jeopardizing the safety of the grid.

In addition to GridEye, depsys also developed a grid emissions method (GEM) – a Swiss Federal Office of Energy approved tool to quantify the impact of digitalization on the reduction of CO_2 emissions. This enabled depsys to demonstrate that, as a ballpark figure, grid digitalization technology like GridEye can achieve a 34% higher CO_2 reduction than reinforcement, while costing 734 times less.

Energy Technologies

A Thermochemical Energy Network in a Greenhouse

Zurich University of Applied Sciences | zhaw.ch
Schmid Hutter AG Winterthur | schmid-hutter.swiss
Meyer Orchideen AG | swissorchid.ch

Watt d'Or Winner 2020

In the climate-neutral orchid greenhouse of Meyer Orchideen AG, researchers from the University of Applied Sciences Zurich (ZHAW), in collaboration with the air conditioning and ventilation specialist Schmid Hutter AG Winterthur, set up an application of a so-called "thermochemical network".

These networks can store energy in the form of chemical potential in a saline solution for any length of time without any energy loss, which enabled the project team to increase the use of renewable energy and reduce the energy consumption for air conditioning by up to 50%.

In the future, the focus will be on the application of the technology in smart local and regional energy networks as a storage solution. So how does all this work? A thermochemical network does not transport energy, but rather chemical potential in the form of a concentrated saline solution. This solution can in turn be transported through pipes or in a storage tank to the place where there is a need for energy.

Once there, the desired heat or cold can be produced, which is achieved by having the saline solution extract (absorb) moisture from the air, thereby diluting the solution. Furthermore, after the chemical potential has been used, the saline solution can be regenerated, thereby enabling the cycle to begin again. To achieve this, the water that was absorbed has to be vaporized, which can be done with low temperature waste heat.

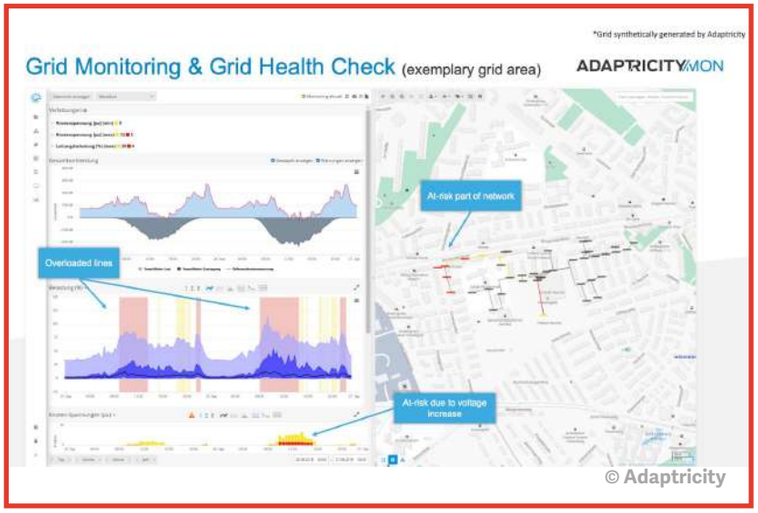
And here is the best news: the waste heat, or renewable energy, can be used for the regeneration, that means it can be stored as chemical potential for any length of time without any energy loss.

Adaptricity

Smart software solutions for distribution grids

Adaptricity AG | adaptricity.com

Watt d'Or Winner 2021



In order to help prepare distribution grids for a climate-neutral and renewable energy future, ETH Zurich spin-off Adaptricity AG has been developing smart answers for the planning and transparent monitoring of the grids.

One of these solutions is the so-called "Adaptricity.Mon" grid monitoring tool, which won the Watt d'Or 2021 award and allows distribution grid operators to automate electricity networks and to monitor them in close to real time.

Adaptricity.Mon is an effective use case to extract value from the data collected by the utilities and maximize the economical savings on both processes and grid investments.

Adaptricity.Mon enables operators to visualize, simulate and analyze systems, as well as to work with scenarios, by offering comprehensive grid monitoring with the help of smart meters and measuring devices in transformer stations.

Furthermore, by merging the data with the grid model, a load flow calculation can be carried out at every time step, thereby providing customers with precise information on nodes voltage bands and the utilization of operating resources at least every quarter of an hour - fully automatically and up to date on a daily basis.

Energy Technologies

Smart-Grid-Ready Building

Elektroplan Buchs & Grossen AG | elektro-plan.ch
ElektroLink AG | elektro-link.ch
ITLiNK

Watt d'Or Winner 2016

The Smart-Grid-ready office and residential building in the Bernese Oberland is ready for a networked energy future. Thanks to intelligent building control and optimum load management, this energy-efficient building demonstrates how power consumption and self-generated solar electricity production can be kept in perfect harmony without having to sacrifice comfort or convenience.

The integrated building control system displays all the processes at work: electricity generation from the photovoltaic installation, recharging cycles on the electric cars and the second-life-battery storage, weather forecast data, control commands for heating and electrical sockets, and the lighting controlled by presence and day-light sensors, or shading with sun-guided blinds and anti-glare devices

As a result, the Smart-Grid-ready building uses 25% less electricity than the average for comparable buildings in Switzerland, and its heat consumption is 50% less.

In addition, the self-consumption optimization system with load shifting, which also includes the intelligent charge management system of the electric cars, further contributes to reducing the maximal load on the power grid by around 30%, thereby leading to lower monthly electricity costs as well.

Moreover, a higher self-consumption also results in a better profitability of the photovoltaic system, since less of the more expensive grid electricity must be bought.

The Smart-Grid-ready's developers have therefore set a new standard for a smart future: an attractive combination of comfort, lifestyle, safety and energy efficiency.

Closing Remarks

Energy is one of the unique fields that requires a close collaboration between the public and private sectors, researchers and entrepreneurs, engineers and policy makers. Moreover, it is a topic that is global in nature, where all these entities must work collectively and collaboratively to find solutions, even more, when meeting the net-zero targets of 2050 for Switzerland and 2060 for China respectively. As a Science Consulate, Swissnex in China is a knowledge hub that connects these players together especially in terms of higher education, research, innovation, and policy making. It's natural to see Swissnex work on energy topics and take on exciting projects, such as floating solar power plant on a reservoir in the Swiss Alps and now the Watt d'Or exhibition, a retrospective designed in close collaboration with the Swiss Federal Office of Energy. Fifteen years ago, when the first Watt d'Or were awarded to excellent energy projects in Switzerland, the topic of energy was at the bottom of the political agenda. Today, energy is one of the hottest issues, and justifiably so.

Thus the retrospective on fifteen years of Watt d'Or tells many stories: about the ever more rapid development and market penetration of innovative energy technologies, about the success strategies of the pioneering companies and users and about the rising interest in energy related policy topics. The Watt d'Or exhibition not only displays the recent history of a sector on the move, it also gives us a notion of the next chapters that we can write together. Every year, since its creation, the Watt d'Or has increased its importance in the energy landscape, and has raised interest from multiple countries. To this end, the exhibition serves as an ambassador to stimulate cooperation between Switzerland and China: sharing expertise, developing new technologies, improving energy efficiency and finding new market opportunities.

Marianne Zünd

Head of Media & Politics Department
Swiss Federal Office of Energy

Felix Moesner

Science Consul & CEO
Swissnex in China

Acknowledgement

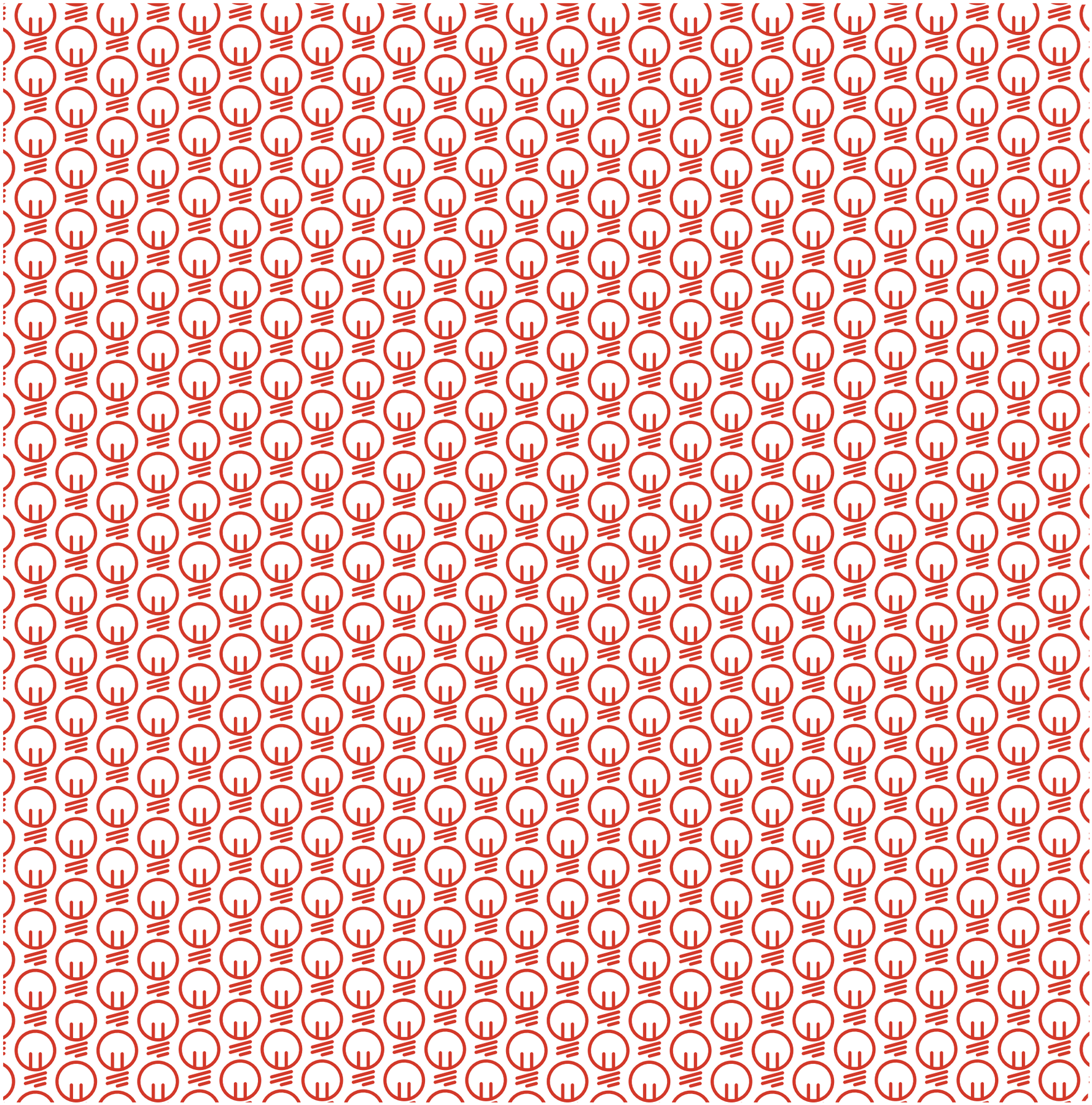
Marianne Zünd, Head of Media & Politics Department at Swiss Federal Office of Energy (SFOE), and Felix Moesner, Science Consul & CEO of Swissnex, the Science Consulate of Switzerland in China (and previously Boston) jointly led the discussions for the realization of the world premiere of the Watt d'Or exhibition during the Swiss-US Energy Innovation Day in Boston in 2014. They both repeated their joint-efforts now in 2021 for the revised Watt d'Or catalogue and exhibition shown at the reception on Shanghai Tower, marking the conclusion of the inaugural Sino-Swiss Energy Innovation Forum.

Both, SFOE and Swissnex in China would like to thank the following parties for their contributions that led to the Watt d'Or catalogue and exhibition.

We thank the recipients of the Watt d'Or award for their great vision, hard work and achievements in bringing to fruition such innovative and unique energy projects. We thank them as well for their cooperation with the SFOE and Swissnex in China in the creation of this catalogue and exhibition.

Thank you to our partners Swiss Engineering, Shanghai Energy Research Society, ETH Zurich and Presence Switzerland as well as the Swiss Federal Office of Energy and the State Secretariat for Education, Research and Innovation for their generous support of the Sino-Swiss Energy Innovation Forum, which led to the Watt d'Or catalogue and exhibition as a highlight.

And, finally, thank you to the Swissnex in China team, in particular to Danli Zhou, Suyao Ao, Nils Feldmann, Cissy Sun, Sherry Hu, Langyuan Ma and Tiantian Xiao for their excellent work in realizing this catalogue and exhibition.



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