

insight

FALL | WINTER 2010

IN THIS ISSUE

CLEANTECH IN THE GREATER ZURICH AREA

All clear for clean business

SUCCESS STORY

Suntech Power

KNOWLEDGE & INNOVATION

Gray matter for green ideas



Greater Zurich Area
Expanding business horizons

«All clear for clean business»

In the Greater Zurich Area, the future of cleantech is happening now.

The Greater Zurich Area lives and breathes cleantech. Innovation, research, entrepreneurship and financial resources are widely available and accessible. Several cleantech pioneers call the closely networked business community of Zurich their home already. Efficiency, competitiveness as well as Switzerland's public commitment to promoting clean technology ensure the best conditions for internationally oriented cleantech projects and companies to grow in and thrive.

October 15, 2010 was a milestone date for Switzerland. Many kilometers beneath the Gotthard massif in the Swiss Alps the longest railway tunnel in the world was joined up under the eyes of the international public. This «breakthrough» is not merely a masterpiece of Swiss engineering – the shift of freight to underground rail is a prime example of how this country's politicians and inhabitants are jointly realizing environmentally sound and sustainable clean technology solutions.

Swiss cleantech tradition

Switzerland has been a pioneer in cleantech since well before the tunnel breakthrough. As a country of hydropower, it has been using clean energy since the era of industrialization. Challenges such as climate change, price volatility and lack of resources, environmental

protection and more complex economic dependencies were identified early on and boldly tackled. And in political polls, the Swiss population has repeatedly indicated its commitment to cleantech.

Switzerland's cleantech leadership is evident in many ways. According to the IMD, it has the world's lowest CO₂ emission levels. It is also a leader in recycling, public transport and mobility, and the City of Zurich and its residents have committed themselves to a 2000-watt society. The Minergie standard, an internationally recognized guideline for sustainable building construction, was conceived here and exported to countries such as China, Japan and the U.S. Companies in the Greater Zurich Area such as the window specialist EgoKiefer, the sanitary engineering company Geberit, the construction materials manufacturer Sika and the indoor climate pioneer Zehnder very successfully export sustainable building solutions.

Cleantech as a location factor and philosophy

Cleantech has become an economic factor to be taken seriously. 160,000 people or 4.5 percent of the active population work in the Swiss cleantech sector. In 2008, the annual gross value already amounted to between 18 and 20 billion Swiss francs. The market volume is expected to reach 2.2 trillion Euros by 2020.



«Switzerland lives and breathes cleantech,» says Nick Beglinger, President of the Swiss cleantech industry association swisscleantech. «Cleantech is not just an industry, but a holistic economic philosophy for any forward-looking business location.» This is particularly true for Switzerland, because with its global leadership in competitiveness (WEF Competitiveness Report), innovation (European Innovation Scorecard) and environmental compatibility (Yale Environmental Performance Index) it boasts all the critical success factors for pioneering cleantech achievements now and in the future.

Corporations at the top of the global cleantech heap

Swiss multinationals are also heavily involved in global cleantech. For example, in the turbine and turbocharger sector ABB has been enhancing the energy efficiency of its products – and those of its customers – for decades. The group is now a leading manufacturer of power semiconductors for smart grids that will one day be fed by wind farms in the North Sea, or hydroelectric power plants at the Three Gorges Dam in China. Such solutions reduce energy loss in the transfer of large amounts of energy over long distances by 20 to 30 percent.

The Desertec international solar project, where ABB acts as a partner, is based on a similar idea. Solar power is produced in deserts, and transported to consumers via actual power superhighways. The sun provides the requisite raw energy in vast quantities: The incidence of sunlight energy on all the world's deserts in 6 hours would be sufficient to cover humankind's entire annual energy needs.

International cleantech companies expand to Switzerland to join the Swiss cleantech club. The electric car manufacturer Tesla has found a sales market in the Greater Zurich Area. And global companies such as Suntech, originally from China (see our interview on page 5), appreciate the Greater Zurich Area as a location for international headquarters because of its management expertise, infrastructure, efficiency and quality of life.

«Cleantech is not just an industry, but a holistic economic philosophy for any forward-looking business location.»

Nick Beglinger, swisscleantech

A haven for cleantech start-ups and SMEs

Not only do Switzerland and the Greater Zurich Area offer a solid foundation for innovative, export-oriented companies. In the slipstream of corporations like ABB, Oerlikon Solar and Von Roll, cleantech entrepreneurship is thriving as well. Bertrand Piccard's solar-powered plane, or the Swiss Village in Masdar, a Swiss cleantech district in the ecocity of Masdar in the Abu Dhabi desert whose energy consumption is 100 percent supplied from renewable sources, are emblematic of Swiss entrepreneurial success.

But there are many less visible cleantech SMEs in and around the Greater Zurich Area too: successful solar and photovoltaic companies such as Ernst Schweizer AG and Conergy, water treatment and recycling specialists like WABAG, Degremont and Roshard, and also storage media and battery manufacturers such as ReVolt and TEXX are just some of the exponents of the booming industry.

Long-established companies have been joined by start-ups such as Hexis AG, the successful Sulzer spin-off and manufacturer of fuel-cell-based heating systems. The ETH Zurich, the leading scientific university in continental Europe, has brought numerous spin-offs to the fore, among them the climate protection foundation myclimate, or Flisom, a manufacturer of flexible thin-film solar cells on polymer film. Projects such as CLEVER, a joint gas car development project by ETH, Empa, Bosch and Volkswagen, show that the boundary between academic and applied research rapidly evaporates on the way to market readiness.

Finance: Greater Zurich Area a boom region?

There is still untapped potential for start-ups and spin-offs of research institutes and universities. The «serial entrepreneurs» seen in ICT and life sciences are still few and (too) far between, says Beglinger. However, he expects the cleantech industry to show a similar development. Start-up funds provided by Zürcher Kantonalbank and Credit Suisse, as well as close cooperation with the technology transfer and economic development agencies already provide valuable support. Yet, there is room for improvement, for exam-

ple regarding access to seed money, or the volumes that Swiss pension funds invest in cleantech.

Gina Domanig of the venture capital firm Emerald Ventures, and a member of swisscleantech, agrees. With 20 employees, the firm manages 300 million Euros in one of the largest cleantech venture capital funds in Europe – and it does so from the Greater Zurich Area. Emerald is not the sole player in the area. The Zurich-based firm SAM for example, was one of the first in the world to elevate sustainability to a wealth management strategy. Good Energies and Mountain Cleantech / Cleantech Invest AG, two more VCs specializing in cleantech, are doing business in the Greater Zurich Area as well. Cleantech finance associations like SECA (Swiss Private Equity & Corporate Finance Association) complete the picture.

«All the components are there,» says Domanig, «what is lacking in some cases is the glue that holds them together.» Domanig clearly would like to see more future growth drivers in the Greater Zurich Area’s cleantech scene, such as cleantech incubators that can offer young entrepreneurs targeted coaching in management, human resources, patent law and IP as well as test facilities. Because the cleantech business is «incredibly international.» And the global competition never sleeps.

A wind turbine on the Uetliberg

For Nick Beglinger Switzerland in general and the Greater Zurich Area in particular are well equipped for global competition. «We are cleantech innovation leaders, particularly when it comes to integrated systems and solutions for water and waste management. Our top-notch universities produce the brightest brains to match the best business managers – and we can offer them the superb quality of life that they so greatly appreciate. The financial market is healthy and alive. And for some time now the state has also been actively promoting cleantech: This 4th of November, Federal Councillor Doris Leuthard has presented the Master Plan Cleantech Switzerland. We are very excited about the cleantech commitment in the highest ranks of government.»

Beglinger would love to emphasize this symbolically and transform the radio tower on Zurich’s own mountain, the Uetliberg, into a highly visible wind turbine. «That would be a powerful symbol of what is already a reality,» said Beglinger. «Cleantech in the Greater Zurich Area is fast growing, sustainable and profitable – we’re all clear for clean business.»

Author: Marc Neumann, Greater Zurich Area AG

inter-view

with Vedat Gürgeli
VP Sales & Marketing Europe,
Suntech Power International Ltd



«Everything just works!»

Suntech is the world’s largest manufacturer of crystalline-silicon-based photovoltaic modules. The Chinese company established its European headquarters in Schaffhausen in 2008.



SUNTECH POWER INTERNATIONAL

Headquarters: Wuxi, Jiangsu Province, China

Employees worldwide: 13,500

Staff at the European HQ in Schaffhausen: 30

Industry: Solar energy

Products: Silicon-based solar energy systems for residential, commercial and agricultural use and utility companies

Customers: All major distributors/EPC in the European solar industry

2009 turnover: \$1.7 billion

Average annual growth: 150%

www.suntech-power.com

Mr. Gürgeli, you have worked in many countries. What is special about Switzerland and the Greater Zurich Area?

If you work in a fast-growing industry such as the solar market, you need to focus on your core business. You can do that very well here. Everything just works. The local suppliers are extremely reliable. And when you set up a firm, for example, there are no unnecessary delays caused by cumbersome bureaucratic procedures.

What is the role of the European headquarters in Schaffhausen?

We manage all of our sales and marketing activities in Europe from here, including our network of branches and distributors. In addition, we pool central corporate functions here, such as HR, logistics, supply chain management, finance, legal and IT.

Can you find the specialized staff required for this?

So far, we have had absolutely no problems with recruitment. Switzerland is beautiful, safe and offers the best conditions for families. We recently hired a very experienced international supply chain manager, who had to move to the post in Switzerland. You don't need to convince such people about the location – they are happy to come here.

What is it like to work with people here?

People here have a remarkably professional attitude to work, which goes well with our company's philosophy. At Suntech we attach great importance to values such as reliability and work ethic. This helps us to achieve our goals, and makes working together on a daily basis extremely pleasant.

What advantages does the Greater Zurich Area offer compared with other European locations with regard to HQ functions?

Just look at a map of Europe and the flight connections from Zurich International Airport. You can be anywhere in next to no time. This proximity to customers and network partners is essential for us. Another advantage is the internationality of the location, which is reflected in people's attitudes, but also in the wide range of languages spoken by the staff. And you get good value for money here.

Suntech isn't the only cleantech company that has its European headquarters in the Greater Zurich Area. Is this an advantage or a disadvantage?

Certainly an advantage. Competition is good for the job market and makes the location more attractive for other investors. This benefits us in our recruiting and longer-term growth planning.

Your company now generates annual turnover of more than a billion euros in Europe – and the trend is rising. What does this mean for the HQ in Schaffhausen?

With a global market share of around 70 percent, Europe is by far the largest solar market. The market and the industry are currently growing very rapidly. In 2008, we started in Europe with three employees; now there are 30 in Schaffhausen, and about another 30 at various sales outlets. The headquarters in Schaffhausen will continue to grow. And we will add more business functions in Europe.



Gray matter for green ideas

Cleantech in research and science at the educational institutions of the Greater Zurich Area

«I find it so interesting, that this tiny European country can offer options for more effective ways of living green,» wrote Stefanie Michaels in the *Huffington Post* under her nom de plume Adventure Girl® last year after visiting the ThinkSwiss Climate Trail, an educational travelling ecotrail through Swiss environmental technologies and cleantech.

Indeed the sheer number of innovative ideas and projects in Switzerland and the Greater Zurich Area is difficult to grasp. Here an ecological vortex hydropower plant for small rivers, there a geothermal storage system for the winter on the Science City campus in the middle of Zurich, or a sensor-assisted garbage collection system that, through dynamically GPS-optimized routes, only empties full garbage containers and reduces transport costs by up to 30 percent.

The reason why so many geothermal, solar, storage technology, recycling, water conservation, and other cleantech projects are concentrated in the small confines of the Greater Zurich Area is simple: cleantech begins in the mind. The Greater Zurich Area boasts outstanding pioneering institutions, where the best brains are at work in basic and applied science, creating a solid, excellent foundation for cleantech.

Author: Marc Neumann, Greater Zurich Area AG

CLEANTECH RESEARCH IN THE KNOWLEDGE HUB GREATER ZURICH AREA

PAUL SCHERRER INSTITUTE (PSI)

Using its unique large scale research facilities, Switzerland's biggest scientific research institution dedicates a significant part of its efforts to developing technologies for sustainable energy consumption and for the safe use of nuclear energy.

www.psi.ch

ETH ZURICH

The most internationally renowned Swiss university in Zurich (ETH is regarded as the best university in continental Europe) has several interdisciplinary cleantech departments and research areas, including the

- Center for Energy Politics and Economics (CEPE, energy analysis)
- Energy Science Center (ESC, renewable primary energy, zero-emissions combustion, fuel cells, etc.)
- Institute for Environmental Decisions (efficient and sustainable mobility, waste management/processing systems, natural resources)
- Power Systems Laboratory (PSL, efficient electricity transmission, generation and systems)

In 2009, the ETH spun off four cleantech start-ups: Amphiro, Keoto, greenTEG and ClimeWorks.

www.ethz.ch

EMPA MATERIALS SCIENCE & TECHNOLOGY

The former Swiss Federal Laboratories for Materials Testing Institute is now one of the most important innovators in Switzerland. Its cleantech strengths lie especially in the area of materials for energy technologies such as conductors, solar/photovoltaic, storage, automotive propulsion and biomaterials. An innovation park with a focus on cleantech is in planning stage.

www.empa.ch

EAWAG

The Swiss Federal Institute of Aquatic Science and Technology is the hydropower authority in Switzerland. It specializes in sustainable urban water management, water recycling and sanitation in developing countries.

www.eawag.ch

in person

«The cleantech spark is about to ignite.»

Bigna Berchtold, Director Europe and Cleantech at Greater Zurich Area AG, talks about the Greater Zurich Area's bright future as a cleantech location.

«As the Greater Zurich Area's cleantech marketing representative, I have plenty of material to draw on, since cleantech has a longstanding tradition in Switzerland. The Greater Zurich Area is well positioned in terms of expertise. For example, it has the ETH Zurich, which launched four spin-offs in cleantech last year alone. Other world-class research facilities in the region, such as the Paul Scherrer Institute, the Eawag water research institute, and Empa are also conducting groundbreaking research and development for cleantech technologies. And with venture capital firms such as Emerald Technology Ventures and Good Energies, things are moving in the financial sector as well.

Leading cleantech companies from overseas value the Greater Zurich Area as a launch pad for further growth in Europe. Prominent foreign newcomers from the solar and photovoltaic field testify to this, such as the major Chinese companies **Trina Solar**, **Suntech** and **Eoply**, who have chosen the Greater Zurich Area as the location for their European headquarters.

These newcomers are likely to send a message for other companies in the industry. In the medium term I expect we will experience the same kind of development in the cleantech industry as we have already seen in medtech/biotech or ICT. The global start-up euphoria will give way to solid innovation, and the Greater Zurich Area will develop into an internationally sought-after holistic cleantech location, thanks to its existing expertise and excellent infrastructure, productivity and quality of life. The cleantech spark is about to ignite.»



bigna.berchtold@greaterzuricharea.ch
Phone +41 44 254 59 09

news

Cleantech highlights from the Greater Zurich Area

Tetra Pak (Schweiz) AG introduces FSC packing

This fall, packaging specialist Tetra Pak Schweiz became the first manufacturer to include FSC-certified beverage packaging in its range. The FSC (Forest Stewardship Council) label stands for the sustainable management of forest resources at all stages of the process chain. www.tetrapak.com

Peraves of Winterthur wins X Prize

The Tracer, an electric motorcycle made by Peraves, a company in the Greater Zurich Area, has won the X Prize awarded by the U.S. government for pioneering cleantech innovation in the automotive sector. www.progressiveautoxprize.org

SAM named Sustainable Investment Manager of the Year

The Zurich company SAM (Sustainable Asset Management) was named SRI/Sustainable Investment Manager of the Year by *Financial News/Dow Jones*. www.financialnewsevents.com

Migros opens eMobility Shop in Zurich

The Swiss retail chain Migros opened an e-mobility concept store in Zurich at the end of October. Their «m-way» shop is green through and through, offering its customers all kinds of electric vehicles along with professional advice. www.m-way.ch

Cleantech news from Switzerland

Swiss Cleantech Master Plan presented

Following the Climate Forum in Thun and Swiss Equity Cleantech Day in Zurich, Swiss cleantech marked another milestone this fall: On 4 November, Federal Councillor Doris Leuthard presented the Swiss Federation's «Cleantech Master Plan» to the public – a clear commitment by Switzerland to the emerging cleantech market. www.swisscleantech.ch

New chair of sustainable construction at ETH

ETH Zurich has established a new chair for materials science in sustainable construction. The professorship was made possible by a donation from the global construction materials and specialty chemicals company Sika AG. www.eth-foundation.ch

New Monte Rosa Alpine Hut wins Solar Prize

The SAC alpine hut on Monte Rosa received the Swiss Solar Prize in the category of «new construction and building renovation» this fall. The ETH research and demonstration project generates 90 percent of the energy it uses thanks to solar technology – quite a technical feat at 2,883 m above sea level. www.neuemonterosahuette.ch

GREATER ZÜRICH AREA AG

The Greater Zurich Area AG is the location promotion agency of the Greater Zurich Area economic region. The nonprofit organization provides professional, free support to foreign companies in evaluating their business location and settling in the Greater Zurich Area.

The Greater Zurich Area AG is funded by the Greater Zurich Area Standortmarketing foundation. Its members are the Cantons of Glarus, Grisons, Schaffhausen, Schwyz, Solothurn, Zug and Zürich, the cities Zürich and Winterthur, as well as around a dozen private businesses.



GREATER ZÜRICH AREA ON THE ROAD

March 13 – Orlando, FL / U.S.A.
CFO Rising Conference

March 14-18 – India
Swiss Trade and Investment Promotion Roadshow

March 18 – Vienna / Austria
Tax Congress Germany/Austria/Switzerland

March 24 – Munich / Germany
Osec Kamingsgespräch

April 13 – Shenzhen, Guangdong / China
Swiss Trade and Investment Promotion Seminar

May 25 – Suzhou, Jiangsu / China
Swiss Trade and Investment Promotion Seminar

If you would like to meet with one of our project managers at one of these events, or need more information about an event, please contact us at info@greaterzuricharea.ch or call +41 44 254 59 59.

GREATER ZÜRICH AREA IN THE SOCIAL MEDIA

Greater Zurich Area Inc. has set up a presence in the social media community. The pilot project, designed for the U.S. market, can be found at:

www.facebook.com/greaterzuricharea
www.linkedin.com/companies/greater-zurich-area
www.twitter.com/greaterzurich



Greater Zurich Area
Expanding business horizons

HEADQUARTERS

Greater Zurich Area AG
Limmatquai 122
8001 Zürich / Switzerland
Phone +41 44 254 59 59
Fax +41 44 254 59 54
info@greaterzuricharea.ch
www.greaterzuricharea.ch

USA

Greater Zurich Area Inc.
swissnex building
730 Montgomery Street
San Francisco, CA 94111 / USA
Phone +1 415 912 5909

Greater Zurich Area Inc.
575 Madison Avenue, 10th Floor
New York, NY 10022 / USA
Phone +1 212 937 8415

CHINA

Jianping Gao
Representative China
Phone +86 21 6149 8208

INDIA

Arvind Tilak
Representative India
Phone +91 9822043790

JAPAN

Itsuko Hori
Representative Japan
Phone +81 3 3824 3396

insight

ISSUE

FALL | WINTER 2010
PUBLISHED BIYEARLY

PUBLISHER AND COPYRIGHT
GREATER ZÜRICH AREA AG

EDITORS

CLAUDIA MAGRI
MARC NEUMANN

TRANSLATION

LARISSA WAGNER

LAYOUT

KATJA HOFMANN

IMAGES

GREATER ZÜRICH AREA AG

PRINT

MAYERTHALER AG, SWITZERLAND

NO. OF COPIES

11,000 IN GERMAN
6,500 IN ENGLISH

REPRINTS

ONLY WITH WRITTEN PERMISSION

SUBSCRIPTION

WWW.GREATERZURICHAREA.CH