

4th Swiss Energy & Climate Summit

16 – 17 September 2015, Bern



UNLOCK THE POTENTIAL

Innovations in energy efficiency and climate protection



The Swiss Energy and Climate Summit is the leading conference on energy and climate issues in Switzerland.

UNLOCK THE POTENTIAL

Dear attendees,

The number of extreme weather events such as storms and floods has tripled since the 1980s. Global warming due to human activity can no longer be disputed. How can we win the battle against climate change? The key word is efficiency. Resources are limited and must be used where they can achieve maximum reductions in CO₂ emissions. To achieve this transformation, we need innovative solutions, services and products.

These can only be developed and supplied if governments, organisations, project teams and pioneers work to their full potential and set a clear agenda. At SwissECS, we connect decision-makers with creative minds from business, academia, politics and society in order to unleash the capabilities of individuals, teams and companies. Unlock the potential!




UELI WINZENRIED

President of SwissECS

TOP KEYNOTE 2015



TONY BLAIR

PRIME MINISTER OF GREAT BRITAIN

AND NORTHERN IRELAND (1997–2007)



**“Breaking
the climate
deadlock”**

JONAS PROJER

HOST OF THE SRF POLITICS PROGRAMME

“ARENA” AND HOST OF SWISSECS 2015



PROGRAMME HIGHLIGHTS

SILICON VALLEY



BREAKTHROUGH IN BATTERY TECHNOLOGY



COMPRESSED AIR



ENERGY STORAGE OF THE FUTURE



CLIMATE POLICY



NATIONAL AND GLOBAL AGENDA



OFFSHORE WIND FARMS



WIND ENERGY BENCHMARK FROM DENMARK



GREEN INVESTMENTS



TRENDS IN THE US AND ASIA



FORMULA E



HIGH-TECH ELECTRIC CARS





CLIMATE CHANGE, ENERGY RESOURCES AND POLITICS

TONY BLAIR



PRIME MINISTER OF GREAT BRITAIN
AND NORTHERN IRELAND (1997–2007)

// BREAKING THE CLIMATE DEADLOCK //

- Assessment of international climate policy
- The battle for energy resources
- Current geopolitical developments

16 SEPTEMBER 2015	ENGLISH
WEDNESDAY	

TECHNOLOGY TRENDS & INVESTMENTS

LATEST TECH TRENDS IN SILICON VALLEY AND ASIA



ANDREW CHUNG

PARTNER, KHOSLA VENTURES

Andrew Chung is one of six partners at Khosla and focuses on building transformative companies in energy, food, agriculture, education & health. One of the most respected global voices in energy and environment, Chung serves on 10 corporate boards, including Lanzatech, Ecomotors & Ambri, and leads Khosla's activities in China, pioneering successful models for U.S.-China collaboration. Chung previously helped build the cleantech practice at Lightspeed Ventures, which invested in Solazyme, Nest Labs & Quantumscape. Chung has keynoted at the White House and recently was the sole VC investor invited to participate in April's historic Presidential Trade Mission to China.

- The latest global technology trends
- Market trends & demands for sustainable tech in Asia
- Impact of energy storage technologies

KHOSLA VENTURES

Khosla Ventures is a leading global venture capital firm in Silicon Valley that manages over \$5 billion of committed capital & over 200 investments, including the world's largest venture portfolio of sustainable technologies. The firm was founded in 2004 by Vinod Khosla, founding CEO of Sun Microsystems & long-time managing partner of Kleiner Perkins.

16 SEPTEMBER 2015
2.15 – 2.50 PM

ENGLISH
KEYNOTE

INNOVATION AND COOPERATION

DR. SUZANNE THOMA

CEO, BKW AG



Prior to being appointed as BKW CEO in 2013, Suzanne Thoma was Head of Networks from 2010. She was head of the WICOR Group's Automotive Division in Rapperswil until 2009. Prior to this, she was CEO of Rolic Technologies Ltd., a high-tech supplier in the electrical industry. She also worked for Ciba Spezialitätenchemie AG in various roles and countries for twelve years beforehand.



- **Opportunities for innovation centres**
- **Perfect match: start-ups & groups**
- **Cooperation as a key factor in success**

BKW AG

The BKW Group is an international energy and infrastructure company with 3,500 employees. It designs, builds and operates energy generation and supply infrastructures for businesses, residential customers and the public sector.

Its distribution grid, the largest in Switzerland, provides one million people with a reliable electricity supply around the clock.

16 SEPTEMBER 2015	GERMAN
3.40 – 4.05 PM	KEYNOTE

SOLUTIONS FOR EFFICIENT CLIMATE POLICY

THE ECONOMIC LAWS BEHIND CLIMATE POLICY



Professor Weimann sees climate policy in Europe, and especially in Germany, as being largely inefficient and counterproductive. Weimann is convinced that the turning point in the climate protection debate can still be reached, if the key players understand that climate policy is subject to the laws of economics. According to Weimann, we can only describe a particular climate policy as being a good policy if the limited resources available are applied so reducing emissions costs as little as possible.



JOACHIM WEIMANN

PROFESSOR OF ECONOMIC POLICY,
UNIVERSITY OF MAGDEBURG

16 SEPTEMBER 2015

GERMAN

4.05 – 4.30 PM

KEYNOTE

THE ENERGY STRATEGY PANEL DISCUSSION



PASCALE BRUDERER
Councillor (SP)



ALBERT RÖSTI
SVP National
Councillor

The Federal Government's energy strategy has reached the second stage. From 2021 onwards, the plan is to move from a support-based system to a management system: a slow transition to green tax reform. The withdrawal from nuclear power (40%) will be achieved through increased energy efficiency and large-scale expansion of wind and solar power facilities. With the strong Swiss franc, the Swiss economy is facing limited growth over the coming years and will continue to procure electricity from abroad at low cost. An additional tax on energy sources is unlikely to receive public support.



JACKY GILLMANN
Chairman,
Losinger Marazzi AG



REMO LÜTOLF
CEO of ABB
Switzerland Ltd

- How can Switzerland achieve its energy and climate goals with maximum efficiency given the limited resources available?
- Can Switzerland's businesses and medium-sized enterprises cope with an additional energy tax?
- Are there any flagship projects that have been successfully implemented in the private sector?

The interdisciplinary panel discussion led by Jonas Projer will consider these and other issues related to energy strategy.



UNLEASHING THE POTENTIAL

PROF. RAFFAELLO D'ANDREA

Raffaello D'Andrea has been a full professor at ETH Zurich since 2007. He was born in 1967 in Pordenone, Italy. In 1991 he was awarded a bachelor's degree in Engineering Science from the University of Toronto, followed by a master's degree in 1992 and a doctorate from the California Institute

of Technology in 1997. He was assistant and associate professor at Cornell University until 2007. Professor D'Andrea has also founded several start-ups, one of which he sold to Amazon.

He is world-renowned for his expertise in the field of robotics and dynamic systems. There is no-one else who combines cutting-edge theory with practice as successfully as Professor D'Andrea. We have the opportunity to learn from a world leader.

MAKING IDEAS HAPPEN



RAFFAELLO D'ANDREA

PROFESSOR OF DYNAMIC SYSTEMS &
CONTROL, ETH ZURICH



OFFSHORE BENCHMARK

THE ROLE OF OFFSHORE WIND POWER IN THE ENERGY MIX OF THE FUTURE: HOPES – EXPERIENCE – POTENTIAL



The wind power industry is taking off. Systems with a generating capacity of 51 gigawatts were installed around the world in 2014. Nonetheless, resistance to further ‘blighting’ of the landscape is also growing in many areas. Wind energy’s greatest potential is not onshore, however, but offshore, where the wind is much stronger and more constant, and where humans are unaffected by the structures.

In the North Sea alone, eleven offshore wind farms with a total generating capacity of over 3,500

megawatts are currently under construction. DONG Energy is the biggest energy provider in Denmark, operating large-scale offshore wind farms.



SAMUEL LEUPOLD
CEO, DONG WIND ENERGY



17 SEPTEMBER 2015	GERMAN
8.30 – 8.55 AM	KEYNOTE

COMPRESSED AIR STORAGE TECHNOLOGY

DANIELLE FONG

Danielle Fong was selected by Forbes magazine as one of the world's 30 most influential people under 30. The talented scientist began her PhD studies in physics as a 17-year-old at Princeton University and founded the LightSail company in 2009. LightSail has developed compressed air storage

technology to store excess energy from the wind and sun in large air tanks. The start-up company was able to attract Bill Gates as one of its investors. Compressed air technology is an alternative to battery storage and looks to have a promising future.

A WORLD FIRST FROM THE UNITED STATES

DANIELLE FONG

CO-FOUNDER & CHIEF SCIENCE OFFICER, LIGHTSAIL ENERGY



EUROPEAN PREMIERE



17 SEPTEMBER 2015
8.55 – 9.20 AM

ENGLISH
KEYNOTE

QUANTUM LEAP IN BATTERY TECHNOLOGY

JAGDEEP SINGH
CEO, QUANTUMSCAPE



Jagdeep Singh, serial entrepreneur and even Entrepreneur of the Year (US), has founded several start-ups that have since been listed on NASDAQ. In his most recent start-up in cooperation with the University of Stanford, he is developing the next generation of batteries for electric vehicles. His aim is to double capacity and reduce costs to a third. This would enable cost-effective, mid-size electric cars to become a reality.



- **Factors behind start-up success**
- **Next-generation batteries**
- **Roadmap to the market**

QUANTUMSCAPE

Very little is known about Jagdeep Singh's latest company. The start-up was founded in 2010 and involves researchers from the University of Stanford. Other large corporations such as the German car manufacturer Volkswagen have also invested in the company.

EUROPEAN PREMIERE

17 SEPTEMBER 2015	ENGLISH
9.20 – 9.45 AM	KEYNOTE

CLIMATE CHANGE CONFERENCE IN PARIS

IMPORTANT MILESTONE TOWARDS A NATIONAL CLIMATE CHANGE POLICY POST-2020

To keep global warming within 2 degrees of pre-industrial levels, global emissions will need to be reduced by 40 to 70 percent by 2050, according to the IPCC. Switzerland will be focusing on this at the international climate summit in Paris at the end of the year, where 194 countries are due to adopt a global agreement. At the same time, Switzerland is working to develop its national climate policy for the post-2020 period.



DR. BRUNO OBERLE
Director, FOEN

17 SEPTEMBER 2015	GERMAN
10.30 – 10.45 AM	KEYNOTE



KURT ROHRBACH
President,
Association of Swiss Electricity
Companies (VSE)



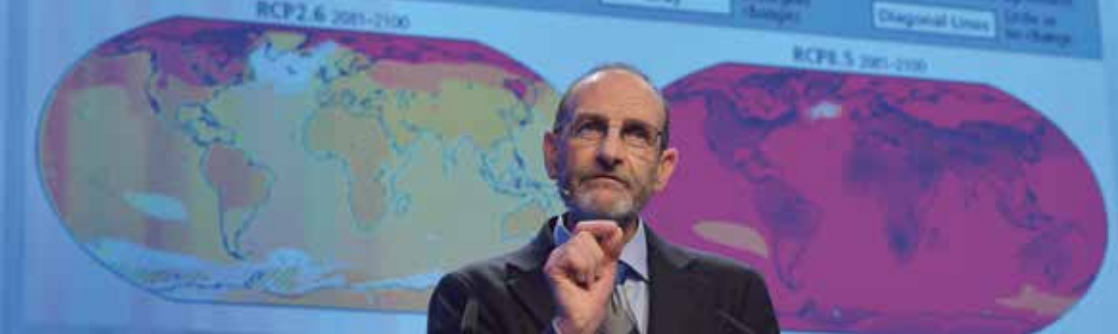
RENAT HEUBERGER
CEO,
South Pole Group



RETO KNUTTI
Professor of Climate Physics,
ETH Zurich

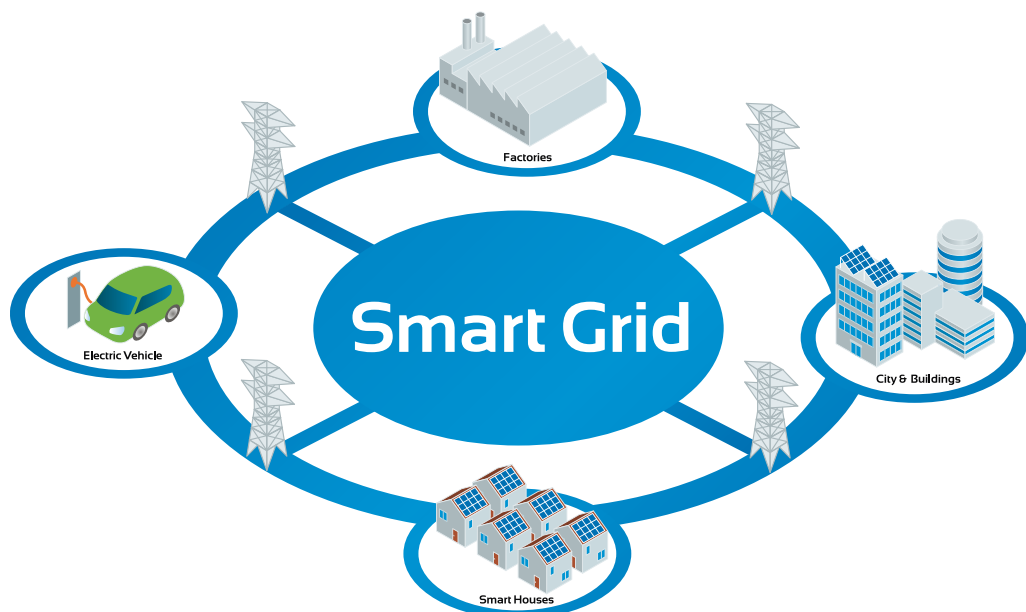
- Where does Swiss climate policy stand in comparison with other countries?
- What are the requirements for an international agreement in Paris?
- How can businesses, governments, academia and society help to achieve climate policy goals?

17 SEPTEMBER 2015	GERMAN
10.45 – 11.15 AM	DISCUSSION



SMART GRID LIVE

THE INTELLIGENT STORAGE NETWORK



FRÉDÉRIC GASTALDO

CEO, SWISSCOM
ENERGY SOLUTIONS AG



Fluctuations in power supply are among the biggest challenges faced by power companies. The tiko intelligent storage network by Swisscom Energy Solutions Ltd (a joint venture between Swisscom Ltd. and Repower AG) reacts in real time to these fluctuations, helping to optimise the power supply both locally and nationally. With over 5,000 residential customers taking part in its electronic heating network, tiko is one of the largest active smart grids in the world.

17 SEPTEMBER 2015

GERMAN

11.40 – 12.00 PM

KEYNOTE

TESLA'S SUPER BATTERY

ELON MUSK'S LATEST OFFERING – THE POWERWALL BATTERY



In the form of its new Powerwall, US electric car pioneer Tesla has created a battery for both residential and business use. Tesla's 100 kg Powerwall has a storage capacity of 10 kWh and is designed as the "missing link" in off-grid power supply. The modular design means the batteries can be connected to form larger units. The battery is priced at 3,500 US dollars. Will the new Tesla battery change the electricity market?

The latest offering from innovator and serial entrepreneur Elon Musk will be unveiled for the first time in Europe at SwissECS.

- Technology behind the Tesla battery
- Potential and impact on the electricity market
- Profitability

EUROPEAN PREMIERE



ALEX SCHOCH

DIRECTOR,
TESLA ENERGY EU



17 SEPTEMBER 2015	ENGLISH
3.10 – 3.30 PM	KEYNOTE

TECHNOLOGY PITCHES

SWARM INTELLIGENCE IN THE GRID



SIMON SUMMMERMATTER
CEO & Co-Founder,
Ampard AG

The AMPARD energy management system combines decentralised production facilities to form a virtual power plant. The resulting adjustable capacity serves to optimise the economics underlying power grids' transmission capacity.

The decentralised facility owners each gain from the revenues generated by the virtual plant.

SMART HOME 2.0



FABRIZIO LO CONTE
Co-Founder,
eSmart Technologies SA

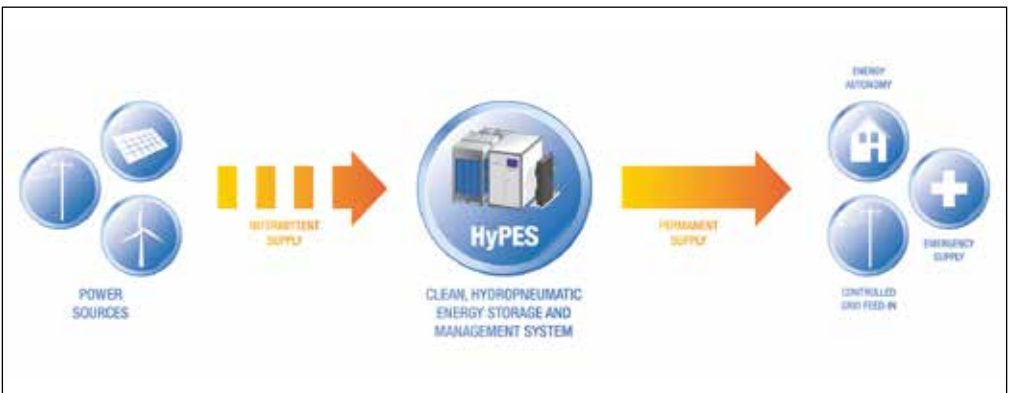
Fabrizio Lo Conte and Laurent Fabre developed eSMART Technologies, an EPFL start-up and leading provider of building automation. Together with Losinger Marazzi, the company has equipped more than 300 apartments in a large building complex with the latest generation of all-in-building automation. A lesson in greater energy efficiency.

ENERGY STORAGE



DR. SYLVAIN LEMOFOUET
Co-Founder & Chairman,
Enairys Powertech SA

Enairys provides an innovative and environmentally friendly energy storage and management solution. Using hydropneumatics and power electronics, Enairys products offer multiple benefits. They can be used to meet peak electricity demand and smooth feed-in from solar and wind plants.



BREAKOUT SESSION 1

THE ROAD TO THE 2000-WATT SOCIETY

TECHNICAL POTENTIAL AND ECONOMIC LIMITS

Property accounts for around half of Switzerland's total energy requirements and CO₂ emissions. According to the Swiss Energy Foundation, it will be possible to halve this consumption by 2050. The potential technical and economic savings are huge. In addition, building regulations are different in each canton, although this is about to change: at the beginning of the year, the directors

of the cantonal energy departments adopted the "MuKen" model rules to harmonise the energy regulations across all cantons. Will this pave the way for the 2000-watt society? What can we do to ensure that, despite a major reduction in energy consumption, a high standard of living can still be maintained?



MARK ZIMMERMANN
Innovation Manager,
Empa



**ANDREAS
RICKENBACHER**
Cantonal Councillor /
Minister of Economic
Affairs, Bern Canton



JACKY GILLMANN
Chairman,
Losinger Marazzi AG



UELI WINZENRIED
CEO,
Building Insurance Bern

- **Benchmarks in building technology**
- **Examples from the greater Zurich area**
- **Political environment**

Moderation: **Michel Geelhaar**

17 SEPTEMBER 2015	GERMAN
2.05 – 3.00 PM	BREAKOUT

BREAKOUT SESSION 2

HOW SMART DOES THE GRID NEED TO BE?

WHERE DO WE STAND IN TERMS OF SMART GRID IMPLEMENTATION?

The sun and wind are subject to significant fluctuation. As energy sources and decentralised energy production using such sources has led to new challenges throughout the power supply system. In future, production, consumption and storage of electricity will need to be linked and coordinated. To a large extent, the smart grid is still at the concept stage. Many questions relating to technical

standards, the security of consumer information and covering the costs of development throughout Switzerland still have to be answered. What do electricity suppliers, grid operators and governments need to do to establish a smart grid and increase the efficient use of electricity? Where does Switzerland stand in comparison with other countries?



MARIANNE ZÜND
Head of Media & Politics,
SFOE



ANDREA VEZZINI
Professor at the Bern
University of Applied
Sciences



MAURUS BACHMANN
CEO, Swiss Smart Grid
Association (SSGA)



CHRISTOPHE BOSSEL
Head of Networks,
BKW AG

- Latest developments in smart grids
- International and national benchmarks for smart grids
- Important considerations

Moderation: **Peter Stähli**

17 SEPTEMBER 2015	GERMAN
2.05 – 3.00 PM	BREAKOUT

WHO WILL FINANCE THE ENERGY TRANSITION?

AND WHAT IS THE ROLE OF THE ENERGY INDUSTRY?

There has been major investment in the shift to new energy sources, but private institutional infrastructure investors from Switzerland have not played much of a part to date. Utility companies are finding it increasingly hard to make the necessary investments from their own resources. However, demand is not slowing down, whether for expansion and upgrading of grids, selective expansion and relicensing

of hydropower or construction of infrastructure for renewable energy. When it comes to investment in energy infrastructure, the considerations and requirements of utility companies and institutional investors are almost identical.

So why has there barely been any overlap to date, even though they would actually seem to be a perfect match? Are the utilities not sufficiently quick on their feet? Are their ownership structures too rigid? Or are institutional investors simply too demanding? Are there other barriers preventing energy utility companies from joining forces with the private sector in investment projects, and, if so, how can these be overcome?



DR. SUZANNE THOMA
CEO, BKW AG



RUDOLF RECHSTEINER
Former National Councilor, Consultant, Board of Industrielle Werke Basel (IWB)



BEAT HUBER
Chief Investment Officer, FONTAVIS AG



MAX FRITZ
President, IG Energieintensiver Branchen (IGEB)



MICHAEL KELLER
Relationship Manager, Multinationals UBS Switzerland AG

- Investment in energy infrastructure
- Funding opportunities for institutional investors
- Practical examples

Moderation: **Jonas Projer**

17 SEPTEMBER 2015	GERMAN
2.05 – 3.00 PM	BREAKOUT

FORMULA E LIVE IN BERN

THE NEW FORMULA E CHAMPIONSHIP HAS BOOSTED
THE ELECTRIC CAR INDUSTRY



HARRY UNFLATH

LEITER MARKETING
ABT SPORTSLINE GMBH



SWISS PREMIERE

In September 2014, ten teams began the first season of the FIA Formula E World Championship. The standardised vehicles are all equipped with the same technology. The electric motor has an output of 200 kW and the 1000 V battery has a capacity of 28 kWh. The teams will use individual vehicles from the 2015/16 season. This will channel a lot of investment into the development of key technologies, which will be of major benefit to the electric car industry.

17 SEPTEMBER 2015	GERMAN
3.30 – 3.50 PM	INNOVATION

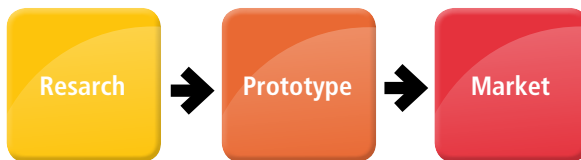


NETWORKING ZONE

INSPIRING NEW SOLUTION EXPO

INNOVATIONS IN ENERGY EFFICIENCY AND CLIMATE PROTECTION

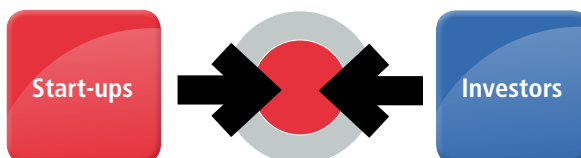
The New Solution Expo is an integral part of the SwissECS and is considered one of the highlights of the conference. The New Solution Expo is an exhibition zone for start-up and spin-off companies and for companies that are already established in the market to impress visitors with state-of-the-art and innovative technologies.



CONNECTING IDEAS AND PARTNERS

FOR START-UPS AND INVESTORS

The SwissECS brings together ideas and potential partners. The “Pitch and Match” platform provides a meeting place for start-ups to connect with potential partners and assess their joint potential in an effective and efficient way. Ten selected start-ups from the energy and climate sector will be given the chance to make their pitch on the SwissECS platform.





Wir versichern Ihr Gebäude.

Building Insurance Bern

From hurricanes and severe thunderstorms to record high tides – weather phenomena are becoming increasingly extreme all over the world. And as the intensity of such phenomena increases, so too does the number of claims in Switzerland. Building Insurance Bern (GVB) provides mandatory unlimited insurance cover against fire and weather-related damage for all buildings in the canton of Bern. To maintain this service in the face of climate change, new ways of thinking are needed. GVB is addressing this challenge by shoring up the risks on a broader base through additional insurance and consulting services in its subsidiaries. It also campaigns heavily

for prevention measures to minimise claims and is involved in climate policy at various levels.

With this in mind, GVB is proud to be the initiator and sponsor of SwissECS and to help shape the dialogue about our climate and energy future.

www.gvb.ch/klima

“For advice on prevention in times of climate change, we can support our customers with over 200 local building experts. ”

Ueli Winzenried
CEO, Building Insurance Bern



BKW AG

The BKW Group is an international energy and infrastructure business employing some 3,500 people. The diversity of the company's expertise allows it to offer a full range of tailored services to customers throughout Switzerland. It plans, builds and operates infrastructure to produce and supply energy for businesses, households and the public sector. The BKW Group's distribution grid, the largest in Switzerland, provides one million people with a reliable supply of power around the clock. The company has a strong sense of social responsibility. Alongside its investment in renewable energy, it seeks to make efficient

use of resources. The BKW Group is committed to developing innovative technologies to support a sustainable, secure future for the supply infrastructure.

www.bkw.ch

“We want to be much more consistent in considering our products and offerings from our customers' point of view, to ensure that we add value.”

Suzanne Thoma
CEO BKW AG



UBS AG

As the largest Swiss bank, we put our social responsibility into practice by being as environmentally friendly as we possibly can. Between 2004 and 2014, we reduced CO₂ emissions by 51%. We have thus exceeded our goal of halving our Group-wide carbon footprint by 2016.

We also reward our customers' energy efficiency by providing further financial incentives for SME clients who increase the energy efficiency of their operations by passing on the effects of the carbon tax. Residential customers constructing energy-efficient houses can benefit from our UBS "eco" mortgage. With UBS Clean Energy Infrastructure

Switzerland, we are seeking to build a bridge between institutional investors looking for sustainable returns and power companies, grid operators and other market participants in the Swiss energy sector.

www.ubs.com/energie

"Energy efficiency is the key
to improving
economic competitiveness."

Christine Novakovic
Head of Corporate & Institutional Clients
and Investment Bank Switzerland



Contact

Swiss Energy and Climate Summit
c/o Premium Incentives and Events AG
C.F.L. Lohnerstrasse 24
CH-3645 Gwatt (Thun)

Hotline: **+41 (0)33 223 70 20**

E-Mail: **info@swissecs.ch**

www.swissECS.ch

www.twitter.com/swissECS

www.facebook.com/swissECS

Simultaneous interpreting

There will be simultaneous interpreting into German, French and English at the SwissECS conference:

- German/English M
- German/French M

Hotel

You can book your hotel room together with your conference reservation via our registration platform. The event office will be happy to answer any questions you may have.

Travel

The SwissECS recommends that you travel to the conference by public transport. Plan your journey with the routeRANK route planner and find the most environmentally friendly way get to Bern at www.routerank.com



In cooperation with its partners, SwissECS tries to use climate-friendly and primarily regional products, especially in its catering plans.

Registration fees for individuals

Conference attendance (16 and 17 September 2015)

CHF 740

The price includes coffee breaks, lunch and a farewell aperitif.

The conference will start at 1.30 pm on 16 September 2015.

Conference attendance including networking dinner

CHF 890

The networking dinner will be held on 16 September at Allegro/Kursaal Bern.

VIP packages for companies

Company VIP package

4 conference tickets including networking dinner and reserved seats in the front rows of the conference room.

CHF 2850

(worth CHF 3560)

Attendance fees for start-ups

Special offer for start-up companies

If your company was set up after 1 January 2010, you can purchase your conference tickets including networking dinner at special rates.

CHF 390

Registration

The 4th Swiss Energy and Climate Summit is limited to 800 attendees. Reservations will be on a first come, first served basis. The conference has sold out in recent years.

The deadline for registration is 10 September 2015.

<http://registration.swissecs.ch>



