



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Swiss Federal Office of Energy SFOE



**SWISS-U.S.  
ENERGY INNOVATION  
GENEVA LAUSANNE  
YVERDON-LES-BAINS  
NEUCHÂTEL FRIBOURG  
SION**

ROOTED IN THE FUTURE

THE FIFTH EDITION  
**DAYS**



**AUGUST 19-22, 2018**

**PROGRAM AND SPEAKERS**

**VERSION AS OF AUGUST 18, 2018**

## SUNDAY, AUGUST 19, 2018: GENEVA

**Location: The Warwick Hotel, 14 Rue de Lausanne, 1201 Geneva**

Time	Topic	Duration	Abstract
during the day	 Individual arrival of delegates and check-in		
18:00	 <b>Welcome Reception SUEID 2018</b>	90 min	The Welcome Reception provides an excellent opportunity to network, and get to know your fellow delegates. The Welcome Reception is open to all registered participants. Drinks and snacks will be served during the event.
19:30	End for the day		



## MONDAY, AUGUST 20, 2018: GENEVA & LAUSANNE

### 08h30 – 13h30: GENEVA



**Location: The Warwick Hotel, 14 Rue de Lausanne, 1201 Geneva**




### **A picture-perfect panorama: Green cities in Switzerland and in the U.S.**

**Moderation: Marianne Zünd (SFOE)**

Time	Topic	Duration	Abstract
before 09:00	 Check-Out Hotel		Please check-out in time. The bus to Lausanne will depart after the morning session and lunch. Check-in in hotels in Lausanne will be before the afternoon session at around 14:30.
08:30	 Door opening Coffee, Croissants	30 min	
09:00	<b>Official Opening of the SUEID 2018</b> Benoît Revaz, Director Swiss Federal Office of Energy	5 min	The SUEID is an initiative launched in 2014 by the Swiss Federal Office of Energy (SFOE) and swissnex Boston. The SUEID provide a collaborative networking forum where attendees can exchange ideas and explore energy innovations, strategies, market developments and policies

	benoit.revaz@bfe.admin.ch		from both sides of the Atlantic. This year's event is the fifth edition of the SUEID after Boston, Zurich, San Francisco and New York City.
09:05	<b>Canton of Geneva's Energy Strategy</b> Antonio Hodgers, State Councilor of the Republic and Canton of Geneva	10 min	In 1986 a popular vote decided to add a new article to the Constitution of the Republic and Canton of Geneva in order to promote the production and use of renewable energy sources and oppose the erection of nuclear plants on their territory or in neighboring ones. The canton's energy policy gives priority to the development of renewable energy sources and respect for the environment. These firm principles, defined in the Constitution, are repeated in the objectives of the Energy Act which came into effect in 1987. Today, the canton's strategy is to increase the development of renewable energy to cover ¾ of the needs and reach, therefore, the 2000 watts society.
09:15	<b>SIG at the service of a smart Geneva</b> Patricia Solioz, Head of Smart City, Services Industriels de Genève SIG patricia.solioz@sig-ge.ch	5 min	SIG is a Swiss supplier of local energy services. The company serves 228'000 clients in the canton of Geneva, providing water, gas, electricity and thermal energy. SIG manages wastewater, waste recycling and also offers energy and telecommunications services. All SIG activities contribute to promote the development of sustainable and connected SmartCities.
09:20	<b>The "Smart Canton" project</b> Gianfranco Moi, Deputy Director General at State of Geneva gianfranco.moi@etat.ge.ch	10 min	The "Smart canton" approach is one of the innovative objectives of the cantonal economic strategy unveiled in August 2015.
09:30	<b>Framing the resource and energy transition in Luxembourg</b> Tom Eischen, Government Commissioner for Energy, Ministry of the Economy Luxembourg tom.eischen@eco.etat.lu	10 min	Since late 2016, the government of Luxembourg has organized a series of events related to the topic of "qualitative growth". In addressing this issue, the government presented the results of the strategic study commissioned to Jeremy Rifkin and entitled "The Third Revolution in Luxembourg", which aims at preparing Luxembourg for a constantly mutating environment via a long-term vision. The government considers this strategic study as a general guideline for the future development of the country. The Study addresses concrete actions in the field of energy, mobility, industry, finance, smart economy, circular economy and touches also questions concerning the prosumer and social model.
09:40	<b>The Eco21 initiative</b> Gilles Garazi, Head of Energy Transition, Services Industriels de Genève SIG Gilles.garazi@sig-ge.ch	5 min	Since 2007, the SIG-éco21 programme has successfully supported the people of Geneva in reducing their energy consumption and CO <sub>2</sub> emissions. With the objectives of the Confederation (Energy Strategy 2050) and the Canton of Geneva (2000-Watt-Society), its ambition is to make Geneva the most efficient region in the world.

09:45	<b>How to empower innovation in utility companies?</b> Giorgio Pauletto, Services Industriels de Genève SIG giorgio.pauletto@sig-ge.ch	5 min	SIG puts its employees and customers at the center of innovation. Digital, environmental and societal transitions are powerful levers for change. We make use of their potential by encouraging experimentation to develop a culture of agility, continuous learning and openness. And above all to take advantage of the opportunities offered. We will show you how we use innovation as the engine of change in the face of the challenges ahead.
09:50	<b>The GeniLac project</b> Michel Monnard, Services Industriels de Genève SIG michel.monnard@sig-ge.ch	5 min	In April 2016, Geneva canton and city officials, in partnership with SIG, launched the GeniLac project, which uses lake water for cooling in summer and heating in winter homes and businesses buildings. This new hydro-thermal network will cover the city center and the airport area by 2023.
09:55	<b>Geothermal Heat Production and Storage</b> Michel Meyer, Services Industriels de Genève SIG michel.meyer@sig-ge.ch	5 min	In 2014, the State and Canton of Geneva and the local main energy supplier SIG (Services Industriels de Genève) launched the <i>GEothermie 2020</i> program aiming at developing in a short to medium time frame, a strategic roadmap to supply geothermal energy to the entire Canton (surface area of 282 km <sup>2</sup> and ca 482'500 inhabitants).
10:00	<b>TOSA flash-charging e-bus – Enabling emission-free public transport</b> Robert Itschner, Country Managing Director ABB Switzerland Ltd. robert.itschner@ch.abb.com	5 min	TOSA (Trolleybus Optimization System Alimentation) is a 100% electric bus that does not need overhead wires and can recharge its high-performance batteries with a new ABB “flash-charging” technology at selected stops within 20 seconds – a forward-looking innovation “made in Switzerland”. The batteries are fully charged within a few minutes at the final stops and in the depot. Emission-free, low-noise and ideally suited for mass transport, the TOSA bus is an economically viable solution for the city of the future – over a distance of 600,000 kilometers, the TOSA system saves up to 1,000 tons of CO <sub>2</sub> annually and around 30% of the costs of diesel buses.
10:05	<b>Drone Taxi Geneva</b> Laurent Horvath, Office of the Promotion of Industries Geneva. Open & Agile Smart City OASC Board Member Laurent.Horvath@opi.ch	5 min	Six European Smart Cities/Regions including the State of Geneva innovate and work together to explore the potential and the feasibility of this new urban mobility system.
10:10	 <b>Questions &amp; discussion with speakers</b> Moderator: Marianne Zünd	30 min	
10:40	 <b>Networking Coffee Break</b>	30 min	
11:10	<b>Decision-Making Laboratories (DML) for Energy Transitions</b> David Gautschi, Forum2100 and Tilt Global, co-founder cyberdag@gmail.com	10 min	The DML applies gaming, quasi-experimentation, and coaching in a safe, strangely familiar virtual environment to create and explore alternative futures. The initial applications are designed to help decision-makers to explore how to navigate energy-related enterprises as markets, technologies, State policies, and infrastructures change.




11:20	<b>Smart Cities: A View From the U.S.</b> Dale Pennington, Managing Director/Executive Consultant at UtiliWorks Consulting, LLC. DPennington@utiliworks.com	5 min	Dale will present the current state of smart cities in the United States. He will discuss the risks and benefits of implementing smart city technologies. Important points of consideration when building strategies and navigating complex environments will be also be addressed.
11:25	<b>Green Cities: Alternative Sources of Energy</b> Minoo Tehrani, Minoo Tehrani, Ph.D. Professor & Director of International Business Programs, Gabelli School of Business, Roger Williams University mtehrani@rwu.edu	5 min	This study concentrates on the states of Rhode Island and Massachusetts and the strategies that have been developed to create alternative sources of energy, solar and wind. In addition, the research discusses some of the issues and problems associated with such development. The study further concentrates on wave energy and its feasibility as an alternative source of energy for creation of a zero carbon emission and a sustainable green economy.
11:30	<b>Groupings for solar photovoltaic self-consumption on industrial zones - Opportunities and challenges</b> Nicolas Tetreault, Senior consultant, Renewable energies, SOFIES SA nicolas.tetreault@sokiesgroup.com	5 min	Groupings for solar photovoltaic self-consumption represent a significant opportunity to maintain the competitiveness of Swiss companies in industrial zones. In contrast to the residential environment, electricity consumption in an industrial environment is well correlated with photovoltaic production enabling high self-consumption rates and, in theory, positive returns on investment. For that to happen innovations in terms of financing, business models, network infrastructure and governance are necessary. We will summararily present our methodology to improve chances of success for these groupings.
11:35	<b>The Greater Geneva Bern area of Switzerland - Ideal location for your European business</b> Karolyn Chamberlin, Director-USA, Greater Geneva Bern area – Switzerland k.chamberlin@ggba-switzerland.ch	5 min	The Greater Geneva Bern area of Switzerland is the publicly-funded economic development agency for the western region of Switzerland. We represent six cantons (states): Geneva, Berne, Vaud, Valais, Neuchatel, and Fribourg. Our role is to provide support (free-of-charge) to companies from across the globe that are exploring the idea of establishing a presence in our region. Our services include: initial provision of information and business contact, organization of a fact-finding visit to the GGBa region, international expansion strategy and business plan development, establishing a legal entity, identifying real estate, tax ruling and financial incentives, work permits, private relocation (housing, schools, family visas, etc.).
11:40	 <b>Questions &amp; discussion with speakers</b> Moderator: Marianne Zünd	20 min	
12:00	 <b>Networking Lunch</b>	90 min	
13:30	 Bus transfer from Geneva to Lausanne	60 min	Please make sure that you have check-out and are ready for boarding the bus. Check-in in hotels in Lausanne will be before the afternoon session at around 14:30. The Conference program at EPFL Lausanne continues at 15h30.


## 15h00 – 20h00: LAUSANNE



**Location: EPFL, Room: Building Life Science, Room SV1717**

### Strong new energy roots in technology, economy and society

**Moderation: Philippe Labouchère (Swissnex Boston)**

Time	Topic	Duration	Abstract
14:30	 Arrival of bus in Lausanne		
14:30	 Check-in Hotels in Lausanne	30 min	Check-in in hotels in Lausanne will be before the afternoon session at around 14:30. The Conference program at EPFL Lausanne continues at 15h30. Please let us know in which Hotel you stay. We will organize a Shuttle to the Conference location.
15:00	 Door opening Refreshing drinks	30 min	
15:30	<b>The EPFL research in the broad area of energy</b> Prof. Mario Paolone, Chair of the EPFL Energy Centre Directorate mario.paolone@epfl.ch	15 min	The EPFL research in the broad area of energy spans from fundamental science to large-scale demonstrators. The presentation gives a mapping of the energy research led by EPFL laboratories and the collaborations with industrial and institutional partners that makes the EPFL a world-leading research and education institution contributing to the transition towards a sustainable energy future.
15:45	<b>Advancing Energy Analysis through High Performance Computing at NREL</b> Robert Leland, Associate Laboratory Director Scientific Computing and Energy Analysis, National Renewable Energy Laboratory Robert.Leland@nrel.gov; Judy.Will@nrel.gov	10 min	NREL has formed a new directorate designed to increase synergy between our High Performance Computing and Energy Analysis capabilities and thereby enable more comprehensive and detailed analyses than previously possible. I'll describe our approach and experience to date, review the underlying capabilities, and give a few examples of current applications.
15:55	<b>Data for energy: building interactive tools to inform consumer purchasing decisions</b> Marco Miotti, PhD Candidate, MIT mmiotti@mit.edu	5 min	Combining travel behavior, climate, fuel cost, and vehicle specification datasets, we built a model that estimates lifecycle emissions and costs of ownership of any car model in the U.S. market. We then developed carboncounter.com, a website that allows consumers to compare emissions and costs of gasoline cars to available hybrids and electric cars and obtain personalized results based on where they live and how they travel. Feedback suggests that there is high demand for such information, and that such tools have the potential to influence consumer's purchasing decisions.

16:00	<b>Visual Energy Analytics for Smart Cities: use case GRIDS energyCity in Switzerland</b> Gabriel Ruiz, Director Navitas Consilium SA gabriel.ruiz@ncsa.ch	5 min	GRIDS energyCity provides all energy-relevant information for cities, municipalities or regions in an easy to understand manner and quickly at one glance. The solution presents important KPIs in a geographic context and can be considered as a digital twin of a territory which is up to date at any time. It allows an easy monitoring of energy and CO2 efficiency measures over a longer time period as well as the simulation of different strategic options. Local or regional energy strategies can not only be followed up, but also planned digitally. Opportunities for energy projects can be assessed, implemented effectively and visualized in an appealing way. GRIDS energyCity is an innovative platform for internal and external communication providing transparency to all stakeholders (e.g. politicians, utilities, local companies, citizens).
16:05	<b>Rethinking the Grid: Micro Grids for Home Owners, Businesses and Communities</b> Anna Demeo, Director of Smart Grid R&D for Racepoint Energy anna.demeo@racepointenergy.com	5 min	Whether motivated by environmental stewardship, financial savings or concerns of safety and security in the face of increased power outages, individuals, business owners and communities are investing in their own personal electricity grids. This talk will discuss an assortment of the micro grid projects currently underway by Racepoint Energy.
16:10	<b>Blockchain Powered Smart Grid Evolution</b> Dale Montrone, VP of Operations, DomaniSystems, Inc. dale@domanisystems.com	5 min	This presentation explores the possible application of Blockchain Powered Smart Contract for controlling the operation and management of a Smart Grid. Additionally, this smart contract also can accommodate the energy trading between the stakeholders associated with the grid. The blockchain based implementation can identify where the energy is coming from at what price and at what time resulting in better transparency for all the stake holders.
16:15	<b>Solving the energy data puzzle</b> Devin Hampton, Vice President of Corporate Development at UtilityAPI devin@utilityapi.com	5 min	UtilityAPI is building the digital infrastructure of the new energy economy. Our certified green button platform provides utilities and energy service providers the tools they need to exchange standardized energy usage data in a quick and secure manner, lowering soft costs and accelerating the deployment of distributed energy resources.
16:20	<b>Hivepower</b> Roman Rudel, University of Applied Sciences and Arts of Southern Switzerland, Head of Institute for Applied Sustainability to the Built Environment roman.rudel@supsi.ch	5 min	Hive Power develops a turnkey solution for the creation and management of local energy communities on the blockchain, providing an economic optimization for their participants by lowering their bills and valorizing their assets. In collaboration with meter producers, Hive Power is building a blockchain ready energy meter, which allows to safely tokenize energy. Differently from its competitors, in addition to the blockchain platform, Hive Power also provides an efficient energy trading mechanism perfectly tailored to the use case of energy communities.
16:25	<b>Resilience in Energy Systems</b> Igor Linkov, Focus Area Lead, US Army Engineer Research and Development Center Igor.linkov@usace.army.mil	10 min	'Risk' and 'resilience' are fundamentally different concepts that are often conflated in assessing energy systems. Resilience assessment accepts the possibility of system failure and focuses on its recovery and adaptation. I will present our on-going work on resilience assessment and management as well as compare and contrast concepts of efficiency (or smartness) and resilience in smart grids and other energy applications.
16:35	 <b>Questions &amp; discussion with speakers</b> Moderator: Philippe Labouchère	25 min	

17:00	 <b>Networking Coffee Break</b>	30 min	
17:30	On site visit of three EPFL labs (3 groups alternating):  Distributed Electricity System Lab Mario Paolone  Swiss Plasma Center (Tokamak) Ambrogio Fasoli  Lab of Renewable Energy Science and Engineering (Solar Dish) Sophia Haussener	75 min	<p>The joint research activities of the Distributed Electrical Systems Laboratory (DESL) and the Power Systems group (PWRS) refer to the development of smart grid concept solutions in order to efficiently deliver sustainable, economic and secure electricity supply.</p> <p>The Swiss Plasma Center is one of the world's leading fusion research laboratories. Through a wide range of research programs, all connected to education and training at different levels, we work to advance our understanding of the physics of plasmas and develop fusion as an energy source.</p> <p>The Laboratory of Renewable Energy Science and Engineering (LRESE) investigates the conversion of renewable energies (solar, wind, biomass, hydro and geothermal) into storable fuels, materials and commodities. A special focus lies on novel, solar driven energy conversion processes based on solar thermal, thermochemical and electrochemical processes.</p>
18:45	 <b>Networking Dinner</b>	90 min	
20:15	End for the day		Walk or Shuttle Bus back to Hotels.





# TUESDAY, AUGUST 21, 2018: YVERDON-LES-BAINS, NEUCHÂTEL, FRIBOURG



## 8h15 – 10h30: YVERDON-LES-BAINS


**Location: Y-Parc, 6 Rue Galilée, 1400 Yverdon-les-Bains**

### Conquering new energy markets: View on the region and the U.S.

**Moderation: Philippe Labouchère (Swissnex Boston)**

Time	Topic	Duration	Abstract
07:30	 Bus transfer from Lausanne to Yverdon-les-Bains	30 min	Bus departs from the Starling Hotel in Lausanne. Please let us know if you stay in another Hotel. We will organize a Shuttle bus to pick you up.
08:15	 Door opening Coffee, Croissants	15 min	
08:30	<b>Welcome Address</b> Martha Liley, Director of the Ra&D Center of HEIG-VD and Juliana Pantet, Director of Y-Parc, martha.liley@heig-vd.ch juliana.pantet@y-parc.ch	10 min	Located in Yverdon-les-Bains, the School of Management and Engineering Vaud (HEIG-VD - Haute Ecole d'Ingénierie et de Gestion du Canton de Vaud) offers ten Bachelor programs in engineering and business management. With its 1,600 Bachelor students, it is the largest partner in the University of Applied Sciences of Western Switzerland (Haute École Spécialisée de Suisse Occidentale, or HES-SO).
08:40	<b>Biomass project MicroXyloCogen</b> Roger Röthlisberger, HEIG-VD roger.roethlisberger@heig-vd.ch	5 min	Wood results of a natural process of sun energy storage, which can be accessed when direct sun radiation is not available. The project MircroXyloCogen consists of the development of a small hot air externally fired gas turbine based on the Brayton cycle for delocalised cogeneration. It aims to generate electricity out of wood at small scale (1 kWe), in order to recover unconverted heat for hot water preparation and building heating.
08:45	<b>Smartgrid Demonstrator Relne</b> Massimiliano Capezzali, Head of Energy Competence Center HEIG-VD massimiliano.capezzali@heig-vd.ch	5 min	Power distribution networks will be play an increasingly important role in the overall stability of the electricity grid. Real-time monitoring and development of stability strategies at the level of LV distribution networks, taking into account both topology as well as the distribution of loads and productions, will become crucial. The new laboratory Relne at HEIG-VD represents a uniquely flexible, fully controllable and comprehensive infrastructure that allows physical and reproducible testing of local power distribution networks under any conditions.

08:50	<b>Grid scale energy storage</b> Fabrizio Marzolini, Head of Systems Development, Leclanché fabrizio.marzolini@leclanche.com	5 min	Energy storage using electrochemical technologies are more and more popular. The battery price erosion and the li-ion battery technology benefits are key factors to explain the market growth. Multiple MWh systems are yet deployed and in operation.
08:55	<b>Greentown Labs - The Largest Cleantech Incubator in the U.S.</b> Mark Vasu, Executive Vice President, overseeing sponsorships, partnerships, and member pipeline activity mvasu@greentownlabs.com	5 min	Greentown Labs mission is to foster a community of entrepreneurs committed to solving the world's biggest energy, environmental, and efficiency challenges by providing the resources and labs the startups need to succeed. Greentown Labs has supported over 140 startups and has just opened their new headquarters, the Global Center for Cleantech Innovation. With a 9,000 sqm campus, Greentown is the best place for any cleantech startup to grow and create impact in the world.
09:00	<b>The Los Angeles Cleantech Incubator - Creating an Inclusive Green Economy</b> Kelly Schmandt Ferguson Regional Director, Market Transformation, LACI kelly@laincubator.org	5 min	The Los Angeles Cleantech Incubator (LACI) is a private non-profit organization creating an inclusive green economy by unlocking innovation (working with startups to accelerate the commercialization of clean technologies), transforming markets (through partnerships in transportation, energy and sustainable cities) and enhancing communities (through workforce development, pilots and other programs). Founded as an economic development initiative by the City of Los Angeles and its Department of Water & Power (LADWP), LACI has helped 73 portfolio companies raise \$184M in funding, \$220M in revenue, create 1,700 jobs, and deliver more than \$379M in long-term economic value.
09:05	<b>Capacity Markets – The U.S. Experience and Swiss Opportunities</b> Seth Parker, VP & Principal, Levitan & Associates Inc., lecturer at ZHAW School of Engineering, Electric Power Systems and Smart Grid Lab sgp@levitan.com	10 min	Clean energy (solar and wind) resources, along with low gas costs, have driven down U.S. energy prices in the competitive power markets. Conventional generating resources are finding it increasingly difficult to compete without revenues that recognize their capacity (as opposed to energy) contributions. Mr. Parker will address recent developments and efforts in the U.S. to revise capacity pricing mechanisms to preserve long-term system reliability.
09:15	<b>Corporate Power Purchase Agreements - A Bottom-up Strategy to Advance the Clean Energy Transition</b> Michael Hegglin, Graduate Student, Yale School of Forestry and Environmental Studies michael.hegglin@yale.edu	5 min	The US government has announced its withdrawal from the Paris Agreement but corporations are stepping up and pledging to fill the void. A promising strategy are corporate Power Purchase Agreements (PPAs). Companies are using these PPAs to bypass utilities and to directly procure renewable energies (RE) from project developers. In 2017, 2.9 GW of RE were contracted through these PPAs in the US alone. This represents roughly 15 % of the total RE capacity added in the same year. By enhancing the local drivers of corporate PPAs, the transformation of the energy system can be accelerated in the absence of federal support.
09:20	 <b>Questions &amp; discussion with speakers</b> Moderator: Philippe Labouchère	40 min	
10:00	 <b>Networking Coffee Break</b>	30 min	




10:40	 Bus transfer from Yverdon-les-Bains to Neuchâtel	30 min	
-------	--	--------	--

## 11h15 – 14h30: NEUCHÂTEL

**Location: EPFL Microcity, 71 rue de la Maladière, 2000 Neuchâtel, Room: Auditorium**

### **The PV, buildings & grid integration and digitization riddle**

**Moderation: Philippe Labouchère (Swissnex Boston)**

Time	Topic	Duration	Abstract
11:15	 Arrival of bus in Neuchâtel	30 min	
11:15	 Door opening Refreshing drinks	15 min	
11:30	<b>CSEM, your partner for innovation</b> Mario El-Khoury, CEO CSEM mario.elkhoury@csem.ch	5 min	CSEM is a private, non-profit Swiss research and technology organization focused on technology transfer. CSEM helps you convert groundbreaking basic research into advanced processes, leading to innovative products and helping industry and society prepare for the future.
11:35	 <b>Networking Lunch</b>	55 min	
12:30	<b>Advanced R&amp;D and products for photovoltaics: The unique contribution of Switzerland</b> Christophe Ballif, Vice-President CSEM, Photovoltaics christophe.ballif@csem.ch	10 min	In this presentation, an overview of the rich and diversified photovoltaics research and industrialization in Switzerland will first be given. In the second part, we'll describe in more details various developments performed in Neuchâtel at CSEM and EPFL. This will include newer generation silicon photovoltaics solar cells and modules, prospective low-cost multi-junction solar cells combining perovskite and silicon with potential for over 30% efficiency, spectacular novel photovoltaics elements for architecture, as well as specialty application of solar cells in nautical and aeronautical projects.
12:40	<b>Meyer Burger: Driving innovations in photovoltaics for highest performance and lowest LCOE</b> André Richter, Meyer Burger Andre.Richter@meyerburger.com	10 min	Meyer Burger is a leading global technology company specializing on innovative systems and processes based on semiconductor technologies. The company's focus is on photovoltaics (solar industry) while its competencies and technologies also cover important areas of the semiconductor and the optoelectronic industries as well as other selected high-end markets based on semiconductor materials.

12:50	<b>A Brief Introduction to VOLTTRON: Transactive Energy for PV Variability Mitigation</b> Randy J. Ellingson, Professor of Physics and faculty member of the Wright Center for Photovoltaics Innovation and Commercialization Randy.Ellingson@utoledo.edu	5 min	We describe an experiment whereby independent agents, each acting in their own interest within a transactive market, minimize the impacts of a 1 MW photovoltaic array's power variability. This transactive market is designed to minimize the variability of the grid-to-campus energy flow for the University of Toledo's Scott Park Campus of Energy and Innovation. The VOLTTRON platform developed at Pacific Northwest National Laboratory is used to connect an agent representing this PV array with agents representing the building automation systems of eight buildings and a 130 kWh capacity battery energy storage system.
12:55	<b>Tools for high-efficiency crystalline silicon cell technology</b> Omid Shojaei, Indeotec omid.shojaei@indeotec.com	5 min	Founded in 2007, INDEOtec is a Swiss privately held company driven by innovation and technology in thin film deposition equipment sectors.
13:00	<b>Sol Lux Alpha / Carbon Neutral Living+Transportation systems and Community Microgrids</b> John Sarter, CEO Off The Grid Design, Managing Partner Sol Lux Alpha john.sarter@offthegriddesign.org	5 min	Sol Lux Alpha is a ZNE+ six-story for unit nanogrid condominium in San Francisco. Grid tied, yet fully powered when islanded from the grid, including EV energy. It is designed as a carbon neutral living plus transportation system and as an ancillary asset to the grid, including future planned V2B capabilities. The presentation will cover the building concept, systems integration, and how this building and many more like it should be integrated into carefully planned community microgrids.
13:05	<b>Net positive Agrihoods</b> R. Carter Scott, TransFARMations - Regenerative Communities, RCarterScott@msn.com	5 min	Carbon reduction through buildings and farming in Net Positive Agrihoods. Homes that can be a carbon sink and help reduce CO2 surrounded by diversified farms that sink carbon into the soil. Roof integrated solar that provides for the needs of the home and vehicles--- supplying truly Regenerative Communities!
13:10	<b>When active facades become invisible</b> Peter Roethlisberger, Sales Director Solaxess, p.roethlisberger@solaxess.ch	5 min	Thanks to Solaxess technology solar energy becomes a construction element. It integrates perfectly into the building envelope in an esthetical and sustainable way. Producing energy esthetically where it is consumed is now possible.
13:15	<b>Beyond 30% solar panel efficiency on rooftops</b> Laurent Coulot, CEO & co-founder Insolight laurent.coulot@insolight.ch	5 min	Insolight is a startup founded in 2015 based at the Swiss Institute of Technology Lausanne (EPFL). The company is building solar panels with more than 30% efficiency, to make solar energy even more affordable. The technology, called planar optical micro-tracking, allows to concentrate sunlight on highly efficient solar cells, in a standard flat panel frame. It therefore combines high efficiency with ease of mounting on rooftops. The goal is to license a blueprint solution to established manufacturers that will take care of the production and distribution.
13:20	<b>Clever control of self-produced power consumption</b> Martin Kauert, Head Energy Solutions, BKW Energie AG, martin.kauert@bkw.ch	5 min	With the acquisition of Solare Datensysteme (SDS) BKW became a market leader for monitoring and managing solar photovoltaic plants (Solar-Log). This responds to the growing need for intelligent energy management systems and opens new possibilities in the field of the digitization of the energy sector.
13:25	<b>Efficient Acquisition and Sales of Renewable Energy Systems</b> Roger Sutter, Head of Business Development, Eternity (Startup) roger.sutter@eternity.ch	5 min	Buildings are a stakeholder in our future energy system. Eternity's technology aims at improving sales and consulting processes for photovoltaic, heating systems and charging station for e-mobility. The web-based Eternity platform is designed to support consultations and sales and offer simple answers to complex energy questions, thanks to simulation and customer friendly evaluation. The result: large amount of customized quotes of excellent quality, in a shorter time.



13:30	 <b>Questions &amp; discussion with speakers</b> Moderator: Philippe Labouchère	30 min	
14:00	 <b>Networking Coffee Break</b>	30 min	
14:45	 Bus transfer to Fribourg	50 min	



## 16h00 – 20h10: FRIBOURG



**Location: blueFACTORY, 1 passage du Cardinal, 1700 Fribourg, Halle Bleue: Atrium and Atelier Pop-Up**

### Smart Living: The new energy neighborhood

**Moderation: Marianne Zünd (SFOE)**

Time	Topic	Duration	Abstract
15:35	 Arrival of bus in Fribourg		
15:30	 Door opening Refreshing drinks	30 min	
16:00	<b>Welcome to the SUIED delegation – From a brewery to a future innovation quarter</b> Philippe Jemmely, Director Bluefactory Fribourg-Freiburg philippe.jemmely@bluefactory.ch	5 min	Located in the heart of Fribourg, blueFACTORY is part of the Swiss Innovation Park (Switzerland Innovation). As such, it is recognized for its competence in the field of the habitat of the future.
16:05	<b>Clean energy technology deployment – partnerships, markets and ecosystems</b> Dub Taylor, Director, Texas State Energy Conservation Office Dub.Taylor@cpa.texas.gov	10 min	Texas, a US state built on oil and gas production, now leads in wind energy with 400% growth over the last decade, giving it the 5 <sup>th</sup> largest installed wind capacity worldwide. This the result of clear market signals, regulatory certainty and embracing an “all of the above” energy strategy. To continue this momentum and support commercialization of new clean energy technology, Texas partners with major research universities, business incubators and investors.
16:15	<b>Advancing Energy Efficiency: Cities vs. Regions</b>	10 min	In both Switzerland and the US, urban dwellers are generally more concerned about climate change and more open to change, and cities are also where most construction takes place.

	Duane Jonlin, FAIA City of Seattle, Energy Code and Energy Conservation Advisor Duane.Jonlin@seattle.gov		Politically and economically then, city initiatives are most effective for advancing building efficiency regulations, whereas regional or national standards are most appropriate for regulating materials and equipment. A balance of the two will move building performance forward most effectively.
16:25	<b>Climatic Energy</b> Tamara Prendergast, CEO of Climatic Energy LLC, tamara@climaticenergy.com	5 min	Climatic Energy (www.climaticenergy.com) is a California company that decarbonizes real estate by providing deep energy efficiency retrofits of commercial buildings and finances with green bonds backed by credit enhancements.
16:30	<b>Low Carbon Buildings – the Future of Energy Metrics</b> Eddy Santosa, CBCP, LEED AP BD+C, BEMP, Director of Sustainability at DBR Engineering Consultants esantosa@dbrinc.com	5 min	In buildings, energy cost or energy usage is used to measure energy efficiency. With the future energy codes targeting net zero, how do we measure the energy efficiency the building?
16:35	<b>smart living lab: a R&amp;D center for the built environment of the future</b> Marilyne Andersen, Professor of Sustainable Construction Technologies, Dean of the School of Architecture, Civil and Environmental Engineering at EPFL, Chair of the smart living lab scientific committee Jean-Philippe Bacher, Professor at the University of Applied Sciences and Arts Western Switzerland (HES-SO Fribourg) marilyne.andersen@epfl.ch jean-philippe.bacher@hefr.ch	20 min	The smart living lab is an inter-disciplinary, inter-institutional R&D center that combines several research areas related to the built environment: energy systems, construction techniques, design process, well-being and behaviors. It aims to be a center of international scope committed to climate and energy transition.
16:55	 <b>Questions &amp; discussion with speakers</b> Moderator: Marianne Zünd	25 min	
17:20	 <b>Networking Break</b>	30 min	
17:50	<b>Putting briefly unoccupied buildings to sleep</b> Alan Meier, Professor, Environmental Science and Policy, University of California and Senior Scientist, Lawrence Berkeley National Lab akmeier@ucdavis.edu	5 min	Many buildings use more energy during nights, weekends, and holidays than when people occupy them during working hours. We are developing new methods to infer when a building is vacant and then shut down unneeded services during those periods.

17:55	<b>Digital twins will revolutionize planning, construction and operation of building infrastructure</b> Roland Ullmann, Director Industry Affairs Smart Buildings & Energy Efficiency, Siemens Schweiz AG, Building Technologies Division roland.ullmann@siemens.com	5 min	The digital twin will become the epitome of the digital future of buildings. They are the virtual copy of a real buildings. In the future digital twins ensure optimal building design, efficient commissioning and efficient operation.
18:00	<b>Pronoó AG</b> Urs Grossenbacher, Co-founder and co-owner of Pronoó AG urs.grossenbacher@pronoo.ch	5 min	With its EcoBITs product, Pronoó offers an integral solution for energy management in buildings. With one product you save energy and create transparency in the operating data. The key innovation lies in the use of weather forecast data for predictive optimisation of HVAC controllers. But in addition to this, there are plenty of possibilities in data analysis by correlation of measured operating data with weather data. The EcoBITs Webservice is compatible with all known solutions for HVAC controllers.
18:05	<b>Off Grid Renewable Lighting for parking lots and Signs</b> Martin Brown - CEO of Colite Technologies mbrown@colite.com; timfeld@colite.com	5 min	Colite has developed a concept using wind and sun for creating Off Grid Renewable lighting for use globally. The design is engineered to be installed in a wide variety of applications for industrial, retail, automotive and municipal settings. The system can be easily shipped and installed anywhere in the world.
18:10	<b>Crowd Energy</b> Prof. Dr. Stephanie Teufel, Director & Ordinaria, iimt – University of Fribourg stephanie.teufel@unifr.ch	5 min	Crowd Energy is the collective effort of individuals or organizations, pooling their resources through online ICT-applications to help to implement the energy turnaround. This implies both, the concept of decentralization (production, storage and consumption of renewable electricity) and a substantial change in society, economy and politics. Our research priority "Crowd Energy" focuses not only on the technical part of the new energy market, but also its consequences on incumbent and new players in the market: new market design, prosumer behaviour and new business models are some examples, which reflects the new energy sector.
18:15	<b>Hydrogen Fuel Cell Systems as range extender of battery vehicles</b> Alexandre Closset, Business Line Director Fuel Cell Systems, Plastic Omnium New Energies, alexandre.closset@swisshydrogen.ch	5 min	Hydrogen Fuel Cells can efficiently extend the range of electric vehicles with reasonable added weight and zero emission. Hydrogen allows practical range and fast refueling which are key criteria's for logistic fleets. Swiss Hydrogen has developed fuel cell systems for delivery vans and trucks.
18:20	 <b>Questions &amp; discussion with speakers</b> Moderator: Marianne Zünd	20 min	
18:40	 <b>Networking Dinner</b>	90 min	Visits to NeighborHub during dinner





20:15	 Bus transfer back to Lausanne	60 min	
-------	---	--------	--

## WEDNESDAY, AUGUST 22, 2018: SION, 9h15 – 13h30



**Location: Campus Energypolis, 17 rue de l'Industrie, 1950 Sion, Room: Zeuzier, 4<sup>th</sup> floor**




### The future of the energy system

**Moderation: Eric Plan, General Secretary Cleantech Alps, [eric.plan@cimark.ch](mailto:eric.plan@cimark.ch)**

Time	Topic	Duration	Abstract
08:00	 Bus transfer from Lausanne to Sion	70 min	Bus departs from the Starling Hotel in Lausanne. Please let us know if you stay in another Hotel. We will organize a Shuttle bus to pick you up.
09:15	 Door opening Coffee and Croissants	30 min	
09:45	<b>Welcome address &amp; Introduction</b> Christophe Darbellay, State Councillor of the Canton of Valais <a href="mailto:christophe.darbellay@admin.vs.ch">christophe.darbellay@admin.vs.ch</a>	15 min	The Canton of Valais is situated in the southwestern part of the country, around the valley of the Rhône, separating the Pennine Alps from the Bernese Alps. The Canton of Valais is widely known for the Matterhorn and resort towns like Crans-Montana, Saas Fee or Zermatt. Its capital is Sion. The Canton generates almost 30% of the hydro-electric power produced in Switzerland and therefore has proven expertise in this field. It was therefore logical for the public authorities in the Valais to make energy one of the major aspects of their economic development policy.
10:00	<b>EnergyPolis - a platform for urban energy system research</b> Jessen Page, HES-SO Valais <a href="mailto:jessen.page@hevs.ch">jessen.page@hevs.ch</a>	5 min	The construction of the "EnergyPolis Campus" provides an opportunity unique in Switzerland for developing, testing and demonstrating future energy concepts and their related technologies at the scale of the urban neighbourhood.
10:05	<b>Hydrogen Technologies - From Lab to Market</b> Noris Gallandat, Co-founder of GRZ Technologies Ltd <a href="mailto:noris.gallandat@grz-technologies.com">noris.gallandat@grz-technologies.com</a>	5 min	This talk will summarize the effort undertaken to spin off successful academic results into a viable business venture in the field of renewable energy technologies. The focus of GRZ Technologies is on hydrogen applications, and the latest products brought to the market will be presented.
10:10	<b>Pumped storage, large or small, an efficient way to store energy</b> Alligné-Münch Cécile, Prof UAS in hydraulic energy <a href="mailto:cecile.muench@hevs.ch">cecile.muench@hevs.ch</a>	5 min	Pumped storage power plants are currently the only available solution for large scale energy storage with a worldwide installed capacity of more than 150 GW. At a smaller scale, such installations can also provide efficient and cost-effective solutions to store locally renewable energies and compete with less renewable options.



10:15	<b>Working towards energy efficient separations with the world's most porous materials</b> Wendy Queen, Tenure-Track Assistant Professor, Director of the Laboratory for Functional Inorganic Materials wendy.queen@epfl.ch	5 min	It is estimated that the chemical industry alone consumes approximately 10 to 15 % of global energy just in separations processes. In this presentation, you will be introduced to the world's most porous materials, known as metal-organic frameworks, and gain insight into their use for energy efficient separations.
10:20	<b>Integrating smart building into smart grids</b> Daniel Berchtold, HOOC daniel.berchtold@hooc.ch	5 min	Today a large portion of the overall energy consumption is being used by buildings. With the increasing advances of the information and communication technologies tomorrow smart buildings will be part of the smart grid and transform into prosumers. HOOC creates first in class, highly secure and easy to use plug&play connections between buildings and technology and delivers the base layer for next level of virtual power plants.
10:25	<b>Small Modular Reactors as a Clean Energy Solution</b> Doug Vine, Senior Energy Fellow, Center for Climate and Energy Solutions (C2ES) vined@c2es.org	5 min	Countries are looking at small modular reactors (SMR) as a safe, affordable, clean power option. SMRs have been used on naval vessels for decades, and small nuclear generators have even been used on spacecraft. With very high availability and flexible operation, SMRs could complement variable renewable generation sources on the grid. In periods of overgeneration, SMRs could create clean drinking water (desalination) or produce hydrogen (for energy storage or vehicle fuel) among other things. The heat that SMRs generate could provide district heating, heating for industrial processes, or thermal energy storage, creating very high efficiencies. SMR-driven microgrids could provide an emission-free alternative for remote communities that currently rely on diesel generators.
10:30	 <b>Questions &amp; discussion with speakers</b> Moderator: Eric Plan	20 min	
10:50	 <b>Networking coffee break</b>	30 min	
11:20	<b>Energy transition pathway, the example of Brig-Glis/Naters 2008-2050</b> Fabien Kuchler, Project manager in energy, IWISA fabien.kuchler@lauber-iwisa.ch	5 min	Energy transition of territories requires the knowledge of the considered area and objectives defined by the involved stakeholders. This presentation will explain the example of Brig-Glis/Naters communities, whose energy balance for 2050 was defined already in 2008. Major changes in the energy system have been realized until 2018, and a situation update is currently in progress. Lessons learned will be used to encourage entities that wish to go into energy transition.
11:25	<b>10 years as an energy region – energy as a key element of regional development</b> Patrizia Imhof, managing director of energy region of Goms patrizia@energieregiongoms.ch	5 min	energieregionGOMS was founded 2007 as one of the first energy regions in the Alps. Its goal is to use energy as efficiently as possible and to promote a sustainable, decentralised and local energy production. The ambition is to diversify and strengthen the local economy and to increase local added value in the region. As a result, the region becomes independent from conventional energy sources and ensures a sustainable use of nature as key resource of such rural areas.

11:30	<b>Blockchain to Balance Information Privacy and Transparency</b> Joe Babiec, Vice President, Strategic Initiatives, VIA jbabiec@viascience.com	10 min	Energy companies are flooded with requests for access to their data. Consultants, government agencies, equipment manufacturers, startups, academics, and others are all interested in analyzing the vast amounts of data regarding electricity generation, transmission, distribution, and consumption. Until now, privacy and security concerns have prevented open and easy access to this data. VIA is deploying an AI and blockchain software application called Trusted Analytics Chain (TAC) to allow multiple types of data to be analyzed securely and anonymously. Data from one company can even be aggregated with other companies' data while maintaining privacy. Regulatory compliance and predictive maintenance are two example applications currently being deployed.
11:40	<b>The California Clean Energy Fund</b> Christina Borsum, Finance Director, California Clean Energy Fund cborsum@calcef.org	10 min	The California Clean Energy Fund and its international arm, the New Energy Nexus, create, promote, and capitalize clean energy startups through its entrepreneur-centric programming. Our vision is to create a 100%+ clean energy economy for the 100% by driving entrepreneurial innovation and building equity into the clean energy economy. We run incubation programs for early stage clean energy entrepreneurs in partnership with the state of California, private sector corporations and research institutions; we operate a network of global clean energy incubators to drive and enable transitions to a clean energy economy everywhere; and we connect impact investors with clean energy investment opportunities.
11:50	<b>Energy discourses in Switzerland – Hints of change</b> Prof. Dr. Maureen Ehrensberger-Dow and Prof. Dr. Peter Stücheli-Herlach, ZHAW stue@zhaw.ch; ehre@zhaw.ch	5 min	How people understand and talk about energy is a key factor in the successful implementation of the Swiss energy strategy. Analysing the discourse about hot topics such as grids, storage, hydrogen, materials and data provides insights into the dynamics of these and future issues.
11:55	 <b>Questions &amp; discussion with speakers</b> Moderator: Eric Plan	20 min	
12:15	<b>Official Closing of the SUEID 2018</b> Edward McMullen, Ambassador of the USA to Switzerland and Liechtenstein	5 min	
12:20	 <b>Farewell Networking Lunch</b>	80 min	
13:45	 Bus transfer to Lausanne or to Geneva Airport	60 min	Please let us know if you want to go back to your Hotel in Lausanne, if you want to have a bus ride to Geneva Airport or if you do not need any transportation from Sion.
13:30	or Optional site visits to the Nant de Drance pumped-storage power station	6 hours	This exclusive optional site visit has limited seats. Please register as soon as possible. Bus will return to Lausanne (arrival at around 7 pm) and Geneva Airport (arrival at around 9 pm).