



Dear Swiss electrical infrastructure actors,



The energy consumers have an increasing role in the Swiss energy market and therefore in the activities of SCCER-FURIES. This 2nd newsletter of 2018 is dedicated to this below-the-meter aspect of the grid by hosting recent activities on this field at the [featured article](#), advertising the SCCER-FURIES event on Prosumer at the SCCER-FURIES Events section and including a recently SFOE

approved project on Multi-Level demand response at the Highlights section.

Beyond these activities, in this newsletter you can find 4 more upcoming [SCCER-FURIES partner' workshops](#) covering various research areas; [new projects](#) recently approved by SFOE and SNSF; other national and international [events](#); [open positions](#) and [funding opportunities](#) related to power grids.

Enjoy the reading and stay up-to-date by following us on [social media](#) and visiting our [website](#).

Your SCCER-FURIES Management team

1. Featured article: Considering consumers' side

The revised Swiss Federal Electricity Supply Act (ESA) will enable the “flexibility market” toward the implementation of the Swiss Energy Strategy 2050. The final customers will become active participants to the energy market by consuming their own electricity. The new reality requires a new set of activities that should consider socio-economic in addition to technical aspects in

Knowledge Hub

[Click on the map to search for project, partners and outcomes](#)

a holistic approach.

SCCER-FURIES copes with this reality by integrating into its projects new elements such as:

- a) new research domains such as sociology and psychology in order for instance incentivize the general public to participate to the demand side management (DSM) activities;
- b) new dimensions such as legal aspects related to the data privacy;
- c) new stakeholders such as the local authorities for the increase of the efficiency of the DSM programs.

From the numerous on-going activities on the field, the two with recent public events are summarised below.

Rolle and Mont-sur-Rolle (VD)

On April 25th, Romande Energie and FURIES' academic partners in collaboration with the Directorate-General for the Energy of the State of Vaud and the Municipalities of Rolle and Mont-sur-Rolle, organised an information session for house owners of the REeL demonstration area. The aim was to engage the local population to the activities of REeL project related to both demand side management and energy transition. The event was successful attracting 80 habitants that were enrolled to the project. Local businesses owners and associations of electric heating expressed interest in participating too. 25 of them will be ambassadors of the project on the recruitment of more participants. A "Energy community" is under development for the awareness raising of the general public of their important role in the energy transition. For further information, please visit the related [website](#).

Wangen an der Aare (BE); Sursee (LU) and Schmitten (FR)

On May 14-16th, the FURIES' academic partner Photovoltaic Laboratory (PV LAB) at BFH in collaboration with Elektrobedarf Troller organised 3 public events on the role of the PVs to the achievement of the Swiss energy strategy 2050 and the potential financial opportunities. 450 habitants of these 3 regions attended the event. Prof. Muntwyler, head of the BFH PV LAB, presented FURIES' scientific results and the research infrastructure at the BFH PV LAB. This includes the accredited PV inverter test laboratory and a planned new test site, which can support the grid with a bi-directional charging device. For further information, please visit the related [website](#).



2. SCCER-FURIES Events

2.1 SCCER-FURIES Annual Conference: The future of the Swiss electrical infrastructure

October 22nd, 2018 - SwissTech Center, EPFL, Lausanne

This event will bring together 180 experts working on power grids from the academic, private and public sector in Switzerland. Participants will have the opportunity to get insights on the research on smart grids in Switzerland; meet the experts behind innovation products/solutions and explore potentials for new collaborations. Register [here](#), book the date and further information will come in due time.



4. Events

June

[Electrify Europe](#)

19-21.06.18

Vienna, Austria

[Interregional Cooperation for Energy Transition](#)

[27.06.18](#) - Florence, Italy

[Global Energy and Infrastructure Conference](#)

[27-29.06.18](#) - Berlin, Germany

August

[Swiss-US Energy Innovation Days 2018](#)

[19-22.08.2018](#) - Romandie

[2nd International Conference on Renewable Energy and Resources](#)

[27-28.08.2018](#) - Boston, Massachusetts, USA

September

Biosweet: [5th Biomass for Swiss Energy Future Conference](#)

[04.09.2018](#) - WSL, Birmensdorf

[The 5th European Conference on Behaviour and Energy Efficiency](#)

[05-07.09.2018](#) - Zurich

[5th SCCER Mobility Annual Conference](#)

[11.09.2018](#) - Zurich

[5th SCCER CREST Annual Conference](#) [12.09.2018](#)

University of Basel

2.2 Thematic Workshop: Special transformers for SSTs and pulsed power applications (WP3 and WP4)

September 11th, 2018 - HSR (Rapperswil)

Prof. Dr. Smajic (HSR - WP4 leader) and Prof. Dr. Favre-Perrod (HES-SO - WP3 leader) co-organize the national workshop on the power grid components and enabling technologies. The aim of this workshop is to present recent evolution on the component level of the power grid in Switzerland while establishing new collaborations between WP3 and WP4 of SCCER-FUIRES. For further information please contact [Dr. Matthias Bucher](#).

2.3 Thematic Workshop: 2nd International Workshop about dynamic stability challenges of the future power grids. (WP2)

September 17th, 2018 - ZHAW (Winterthur)

Following the successful event in 2017, the Power Systems and Smart Grid Lab of ZHAW is organizing a consecutive workshop. The event gathers international experts from industry and academia to discuss and present different topics related to dynamic stability issues on transmission systems. For further information please contact [Dr. Rafael Segundo](#).

2.4 New VSE/BFH course: Prosumer Lab – Between production and consumption (WP1 and WP4)

October 23rd/24th and November 14th/15th, 2018 - BFH Energy Storage Research Centre (Nidau)

The behavior of future prosumers must already be considered today in the design and operation of distribution grids. All relevant aspects will be fully addressed in the new Prosumer Lab course organized by VSE/AES and BFH Power Grids Lab. The course covers the technical aspects of decentralized production and storage, the basics for the optimization of power profiles and the development of modern target grid planning. Details will be available soon [here](#).

2.5 Workshop on “Hybrid- and Electric Vehicles Technologies” (WP1 and WP4)

October 9th, 2018 - Burgdorf

The International Energy Agency's (IEA) “Technical Collaboration Group” (TCG) on “Hybrid and Electrical Vehicles” (HEV), chaired by Prof. Urs Muntwyler, organises a Workshop on the status of research and market introduction of electric vehicles. The event will provide a country of Priority will be given to the on EV technology (batteries, drive trains, charging methods, etc.) of the ca. 20 Member countries contributing to the IEA TCP HEV. 10 seats will be offered to SCCER-FUIRES partners. For further information please contact [Prof. Urs Muntwyler](#). [Early registration](#) is advised .



3. Highlights

3.1 New Project: Stability Assessment of Forthcoming Power Networks with Massive Integration of Renewable Energy Sources (WP2).

The Power Systems and Smart Grid Lab of ZHAW started since January 2018 a new project financed by the SNSF under the Ambizione Energy program. The project, investigates the stability effects at the transmission level after integration of massive amounts of renewable technologies such as photovoltaic and wind.

[Smart City Day 2018](#)
13.09.2018 - Forum Friburg

[SCCER-SoE Annual Conference 2018](#)
13-14.09.2018 - Lucerne University

October

[7th DACH+Conference on Energy Informatics](#)
11-12.10.2018
Oldenburg, Germany



5. Open Positions

[Senior scientist / Post Doc position](#) in the field of SiC-based power electronics and its reliability.
FHNW

[Postdoc](#) for Design Methodologies in Energy Conversion
Microcity, Neuchâtel

[Engineer](#) for commissioning a modular power electronic converter system including control

6. Funding Opportunities

6.1 European

[Era-Net ReGSys](#)
(deadline: 11.09.2018)

6.2 Swiss National Science Foundation (SNSF)

[Doc.Mobility](#)

For further information please contact [Dr. Rafael Segundo](#).

3.2 New projects: 7 new SCCER-FURIES projects funded by the SFOE Grids R&D Programme (1/2 part)

On May 2018, SFOE announced the projects due to be funded by its Grids R&D Programme. From the 44 competing projects, the 7 out of 9 selected ones are of the SCCER-FURIES community. 3 of these projects, related to 3 different FURIES work packages, are introduced below and the other 4 will be presented at the next SCCER-FURIES newsletter.

MuLDeR – Multi-Level Demand Response (WP1)

MuLDeR project aims to develop grid-aware mechanisms for the activation of demand response (DR). Two methods will be investigated: a multi-level hierarchical distributed control scheme based on trusted aggregators at different grid levels and a gossip-based coordination mechanism based on a peer-to-peer network. Mechanisms will be designed that allow offering DR services to all actors involved and at all grid levels while making sure that grid constraints are not violated and that power quality is guaranteed. The applicability of the proposed solutions will be evaluated in simulation and tested in a lab-scale testbed. For further information, please contact [Dr. Vasco Medici](#) (SUPSI-ISAAC; HIVE Power).

ACSICON – Novel Analysis and Control Solutions for Dynamic Security Issues in the future ENTSO-E network with high Converter-Based Generation (WP2)

This project addresses dynamic power system security issues related to reduced inertia and damping capabilities of the future ENTSO-E grid. The use of new distributed converter control approaches are investigated, aggregated from distribution grids and complemented by damping control of conventional generators, FACTS or HVDC. Combining a high-performance simulation tool with a dynamic analysis tool for components, the project assesses and optimizes a detailed ENTSO-E grid model under scenarios with reduced conventional generation and allows a continuous re-evaluation of the situation under alternative technical, strategic or political assumptions. For further information, please contact [Dr. Turhan Demiray](#) (ETHZ-FEN).

EMTR – Novel and efficient algorithms for locating faults in electrical power grids based on an extension of the electromagnetic time reversal theory (WP3)

The objective of the research project is to develop an enhanced fault location algorithm based on the electromagnetic time reversal theory. The classical time reversal method requires numerous simulations varying the positions of the fault along the network. In this project, the applicants propose to develop a novel fault location algorithm that makes use of the concept of time reversal in mismatched media for the location of the fault with only one simulation run. The performance characteristics of the developed method will be tested versus numerical simulations and experimental measurements obtained on real distribution networks. For further information, please contact [Prof. Dr. Farhad Rachidi](#) (EPFL-EMC).



(Deadline: 01.09.2018)

[Early Postdoc.Mobility](#)
(Deadline: 01.09.2018)

[Project funding](#)
(Deadline: 01.10.2018)

[Postdoc.Mobility](#)
(Deadline: 01.08.2018)

6.3 Swiss Federal Office of Energy (SFOE)

[Electricity technology R&D Programme](#)
Deadline: Open deadline

[Energy-Economy-Society \(EES\) R&D Programme](#)
Deadline: 03/08/2018

6.4 Innosuisse R&D projects

[With implementation partners](#)
1st deadline: 18.06.18
2nd deadline: 27.08.18

[Without implementation partners](#)
1st deadline: 18.06.18
2nd deadline: 27.08.18

If you need any support in preparing the proposal such as finding the appropriate partner for the implementation of your idea, filling the form and pointing out links with ongoing activities in FURIES, please do not hesitate to contact the [Management office](#)

7. Social Media

Stay tuned. Follow FURIES' progress via our social media pages.



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