

Press release

First milestone reached in Biel/Bienne: research into faster development of solar energy storage

Biel/Bienne–Neuchâtel, October 17 2014 — Bern University of Applied Sciences (BFH) and CSEM are combining their expertise in storage and conversion technologies at the BFH–CSEM Energy Storage Research Center (ESReC) in Biel/Bienne. The center's purpose is to speed up the development of energy storage technologies.

Bern University of Applied Sciences (BFH) is well known for its expertise in energy storage technologies and their application in mobile systems. With the creation of ESReC, it combines the expertise of a range of research groups at a single location with the goal of promoting interdisciplinary collaboration, knowledge transfer, and competence building in the fields of energy storage and conversion technologies.

Researchers at ESReC will principally focus their activities in the following fields of the Swiss Competence Centers for Energy Research (SCCER)* framework: in *Efficient Concepts, Processes, and Components in Mobility* they will provide know-how in the characterization, technology assessment, and development of state-of-the-art electrochemical energy storage systems for mobile applications; in *Grids* they will concentrate on the integration of decentralized energy storage into public electric grids; and in *Storage* they will research and develop new, suitable, and cost-efficient manufacturing technologies for large-power battery cells.

Since its foundation in early 2013, CSEM's PV-center has been developing technologies to increase the competitiveness of the photovoltaic industry in the energy market. The PV-center develops new generation photovoltaic cells, modules, and systems, and assists in the transition toward a Swiss energy system in which solar power will play a major role. Its competence is based on CSEM's many years of experience in autonomous sensors, optimization, and control algorithms. At ESReC, CSEM will research the potential and energy efficient operation of stationary storage technologies to develop innovative energy supply solutions that combine photovoltaics and storage. It will also be tasked with supporting companies in the power sector and electric grid operators, thereby guaranteeing the stability of the power distribution network through a fundamental change in production capacity at an affordable cost.

"The development of storage solutions is an important building block for promoting large-scale use of solar energy. If research can come up with solutions that lower the cost of (daily or even seasonal) storage technologies, as it has with photovoltaics over the past 10 years, we will witness a change in the worldwide energy system. Such solutions will provide a positive outlook for the deployment of renewable energy technologies and the reduction of carbon emissions in our society," says Christophe Ballif, director of CSEM's PV-center. "Our collaboration with Bern University of Applied Sciences will help us position ourselves at the summit of national energy research and establish a strong international presence. Swiss power companies, battery manufacturers, and companies that integrate and install photovoltaic systems are showing interest in launching their first projects in collaboration with ESReC", Ballif confirms.

This range of activities and expertise makes BFH and CSEM ideal collaboration partners. Based on their mutual interest in solar energy storage, the two institutions decided to create this competence centre at a location easily accessible to both partners — the INNOCAMPUS AG is situated next to Biel/Bienne's railway station and the future BFH campus. Around 20 employees will work at ESReC, occupying around

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100m² of offices and 220m² of laboratories. The infrastructure will be used for internal joint projects. The first employees started work in autumn of this year, and on October 23 the center will be officially opened.



The day the contract was signed (Pierre-Jean Alet/CSEM, Andrea Vezzini/BFH, Lukas Rohr/BFH, Christophe Ballif/CSEM, and Georges Kotrotsios/CSEM)

* *The Swiss Competence Centers for Energy Research (SCCER) are inter-university research networks established as part of the federal strategy for promoting coordinated energy research.*

More information:

On the competence centre — www.iem.bfh.ch/esrec

On the opening event — www.ti.bfh.ch/f2f

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