

# SCCER Mobility

## Academia-Industry Dialogues



## Energy Storage on Locomotives and the Railway System

Thursday, 1<sup>st</sup> October 2015, ETH Zurich, 14:15, LEE E 101

Public transport operators are facing — as the whole society — the challenge of reducing energy demand. Depending on the traction system, motivations and aims are different: While for combustion engine based systems the main argument is the reduction of fuel consumption in order to lower the emission of greenhouse gases, in electrical transportation systems the power grid load — peak, stochastic or continuous — is the critical parameter.

One possible approach to both of the challenges is the usage of onboard energy storage devices: While braking energy can be stored and reused in combustion engine systems, electrical systems can profit as the same technology allows to reuse the energy without employing the power grid, thus lowering peak and stochastic loads. Additionally, sections without catenaries can be covered with vehicles that are usually operating under catenary, which is an increase in operational flexibility.

The aim of the event is to provide an exchange platform for the different innovation stakeholders: manufacturers, researchers, relevant government authorities and public transport operators. We think this exchange could help the researchers to better understand the industry research needs, the critical parameters and the decisive criteria for an optimal use of energy storage technologies in the railway system.

Additionally to the exchange of knowledge and research issues being currently addressed, or that need to be addressed in the future, we would like to briefly assess the possibility of organizing a research platform focused on particular common issues.

### Program

14:15 Introduction

14:25 Current open issues, different perspectives:

- Prof. Ulrich Weidmann, IVT, ETH Zurich, "Rail operation and energy consumptions"
- Prof. A. Vezzini, BFH-CSEM ESReC, "Replacing the battery technology for passenger coaches of SBB"
- Dr. Steffen Schranil, SBB Energy Management
- Dr. Andrea Mazzone, Bombardier Transportation Locomotives
- Dr. Urs Bikle, Stadler Rail
- Markus Häusermann, Director of Project Hause, Siemens

15:25 Discussion, moderation: Prof. Andrea Vezzini

16:10 Conclusions and closure

16:15 Networking Apéro

The event is organized by the Swiss Competence Center for Energy Research (SCCER) for Efficient Technologies and Systems for Mobility.

Participation to this event is free. Registration is requested and open until **24 September 2015**. Please register using the [doodle link](#) or contact [fiorella.meyer@sccer.ethz.ch](mailto:fiorella.meyer@sccer.ethz.ch)