

The UIC Energy Efficiency and CO2 Emissions Experts Network is happy to invite you to take part in the workshop "The role of Infrastructure Managers (IMs) in Traction Energy Transition" that will be held on 11 February 2019 in Rotterdam.

# BACKGROUND

Following the previous Workshop on Infrastructure's energy efficiency;

This workshop will focus on the projects developed by IMs to improve energy efficiency and decarbonisation of the traction energy and to accompany railway undertakings to reduce the use of diesel traction. Thus, this workshop will also focus on the energy storage innovations and their best combination with the railway network.

Finally, actors from the energy market have also been invited to talk about their point of view in the frame of optimising the electricity network with Railways for renewable energy.

# WORKSHOP HIGHLIGHTS

### 11h – 17h, Lunch 12h35, Coffee break 15h15.

### Improving traction system

- Higher voltages for Overhead Contact Line (OCL)
- Norwegian experience
- New Direct Current Medium Voltage railway electrification system
- Supra-conductor cable for reduced energy losses during transport

#### Energy storage

- Battery development and super-capacitors
- Reversible Substations
- SNCF experience

#### Replacing diesel traction by less emitting traction systems

- Defining best line configuration
- SBB experience
- Hydrogen refuelling facilities (to be confirmed)

External point of view from DSO or TSO: Balancing changing market with more renewable and more need of storage; possible roles for railway (to be confirmed)

### VENUE

Delftseplein 27j, 9th floor. 3013 AA Rotterdam. Netherlands

# REGISTRATION

To register for the workshop, please follow the link below: <a href="https://events.uic.org/uic-workshop-on-energy-efficiency">https://events.uic.org/uic-workshop-on-energy-efficiency</a>

# Agenda

Moderation: Chloé Lima-Vanzeler (SNCF) and Bart Van der Spiegel (Infrabel)

Time	Session/Topic	Speaker	Iter
10:30	Sign in reception at 9th floor. Delftseplein 27j, 3013 AA, Rotterdam. (You will be given directions to the room)		
11:00	Welcome	Gerald Olde Monnikhof - ProRail	00
11:05	Introduction	Bart Van der Spiegel - Infrabel	01
11:15	Improving Traction System:		
10' 10'	<ul> <li>Higher voltages for OCL</li> <li>Transition from 1.5 kV to 3 kV</li> <li>Transition from 3 kV to 2x25 kV: lessons from the past years</li> </ul>	Fedor ten Harve - ProRail Koen De Gussemé - Infrabel	02 03
15'	<ul> <li>Norwegian experience - Energy efficiency and cost reducing measures in the railway electricity network</li> </ul>	Dyre Martin Gulbrandsen - Bane NOR	04
15'	- New Direct Current Medium Voltage railway electrification system	Hervé Caron - SNCF Réseau	05
15'	- Supra-conductor cable for reduced energy losses during transport	Guillaume Escamez - Nexans	06
12:20	Q&A session		
12:35	Lunch		
13:45	Energy Storage:		
15'	- Different energy storage options (also for regenerative braking)	Akos Labady - Eaton	0
15'	- Development of batteries for substations	Marc Borgers - Super-B	0
15'	<ul> <li>SNCF experience with on ground energy storage and reversible substation</li> </ul>	Bogdan Vulturescu - SNCF	0
15'	<ul> <li>Integrating renewables and energy storage in the traction energy infrastructure</li> </ul>	Koen De Gussemé - Infrabel	10
14:45	Q&A session		
15:00	Coffee break		
15:15	Replacing diesel traction by less emitting traction systems:		
15'	<ul> <li>How to define the best configuration for a new/renewed line (energy in TCO)?</li> <li>A cross-company collaborative work</li> </ul>	Jean-François Tremong - SNCF	1
15′	- SBB experience about hybrid, hydrogen and battery systems	Matthias Rücker - SBB	1
15′	- Hydrogen refuelling facilities	Patrick Lafontaine - Advanced Energy Technologies	1
16:00	Q&A session		
16:15	External point of view:		
15'	<ul> <li>Point of view from DSO or TSO: Balancing changing market with more renewable and more need of storage; possible roles for railway</li> </ul>	Theo Voskuilen - Alliander	1
16:30	Q&A session – Conclusion		
	End of the day		