



# busworld.

## EUROPE 2025

# CONGRESS

BRUSSELS, BELGIUM 6-9 OCT 2025

in collaboration with:



## EUROPEAN ZERO EMISSION BUS CONFERENCE

7<sup>th</sup> - 9<sup>th</sup> Oct 2025  
@ **Busworld** Europe Brussels

Organised by



**BUSWORLD**  
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*the global bus alliance*

SESSION #9

09:00 – 10:30

# Charging Ahead: Exploring Opportunity vs Fixed Charging Infrastructure for Electric Buses

BREAKOUT SESSION



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# Smart Charging Infrastructure for Efficient Fleet Operations

Will Massey

Siemens eMobility



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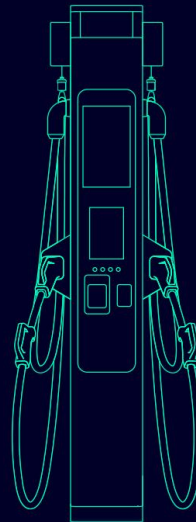
# Charging Ahead: Charging Infrastructure not only for Electric Buses

Will Massey, Siemens eMobility

A word cloud of EV charging features on a dark blue background. The words are arranged in a circular pattern, with some larger and more prominent than others. The features include:

- Dynamic power allocation
- Detailed insights
- Certified metering
- Megawatt
- Reliability
- Small footprint
- Cable management
- High uptime
- Payment options
- Energy management
- High Power
- Predictive maintenance
- Plug & Charge
- Preconditioning
- Low TCO
- Easy maintenance
- Overhead charging
- Flexibility
- More outlets
- Redundancy

# The New **SICHARGE FLEX**



**SICHARGE Flex**  
Designed for depot and public charging applications



**Flexible**



**Reliable**



**Economical**



Efficient use  
of installed power



Future-proof and  
expandable in outlets  
and power capacity



Compact design  
to optimize  
space utilization



Easy installation  
with pre-assembly  
in the factory



Optimized charging  
with fully dynamic  
power allocation



Modular design for seamless  
integration in depot and  
retrofit environments



Sturdy and durable  
housing with IK10  
anti-vandalism protection



Exceptional  
user experience

## Increase configurability



Customizable connectivity  
Firmware management  
Charger customization

## Maximize availability



Real-time insights  
Status notifications  
Remote interventions

## Enhance serviceability



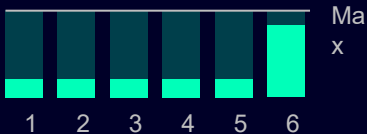
Remote diagnostics  
Event tracking & export  
Remote monitoring

## Enable energy optimization



Load management  
Smart scheduling  
Energy management

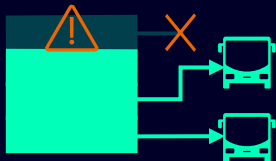
## All power to any and all charge points



## Optimized utilization of installed power



## In-system redundancy ensures availability



## Ultimate flexibility in use-cases



## SICHARGE Flex– Power Cabinets

Dynamic, compact and powerful

Industry leading power density  
for maximum capacity **656 kW/m<sup>2</sup>**

Wide range of power levels  
**480, 560, 960, 1120, 1680 kW**

Supports up to **300-meter** dispenser  
distance, ideal for challenging depot  
layouts



**Fully dynamic** power sharing  
in **80/120 kW** increments

**Pre-assembled** in factory  
for installation efficiency and ease

Provides dynamic power for  
up to **6 outlets** (outlook: 18)

**Very limited space claim**,  
cooling concept minimizes  
installation area





# Experience beyond hardware

SIEMENS

# Trøndelag's Experience with Inductive Charging

Pål Preede Revheim

Project Manager, AtB AS



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# Inductive charging in harsh winter conditions

## Experiences from a Norwegian pilot project

Pål Preede Revheim, AtB





Trondheim

Norge

Sverige

Finland

Danmark

Estland

Latvia

Litauen

Polen

Belarus

Færøene

Island

Storbritannia

Irland

Nederland

Norskehavet

Nordsjøen

Bottenika

Østersjøen

Alesund

Bergen

Oslo

Stavanger

Göteborg

København

Hamburg

Berlin

Gdansk

Warszawa

Åbo

Helsingfors

Tallinn

Riga

Vilnius

Minsk

Мінск

St. Petersburg

Санкт-Петербург

Moskva

Москва

Kazan

Казан

Murmansk

Мурманск

Enare

Uleåborg

Luleå kommun

Kiruna kommun

Bodø

Narvik

Harstad

Hammerfest

Alta

Kirkenes

JAN MAYEN

Uttogqortoornit

Reykjavik

Vík í Myrdal

Akureyn

Glasgow

Edinburgh

Isle of Man

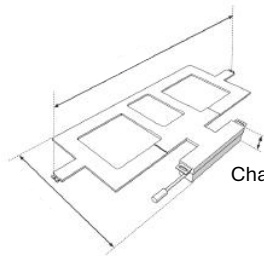
Dublin

Manchester

Birmingham

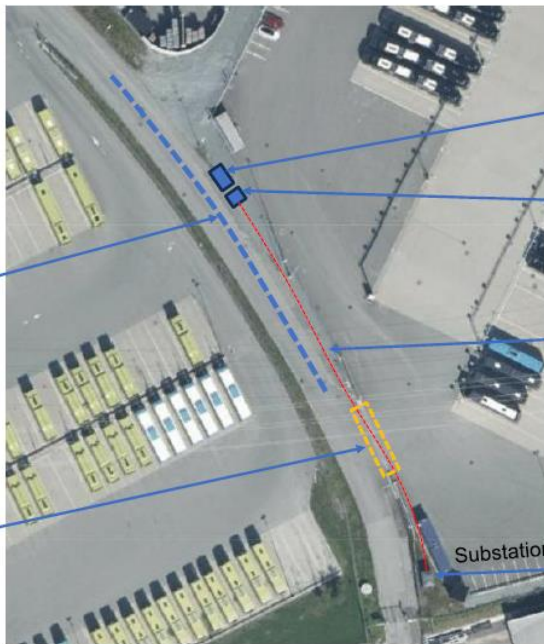
London





Charging coils

Depot entry



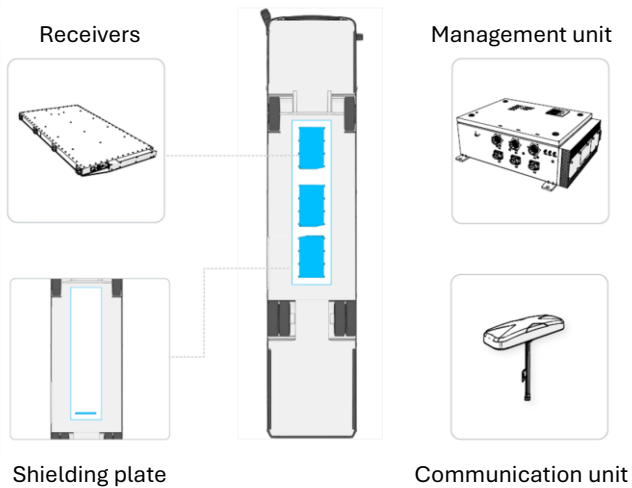
DMU

Converter (AC/DC)

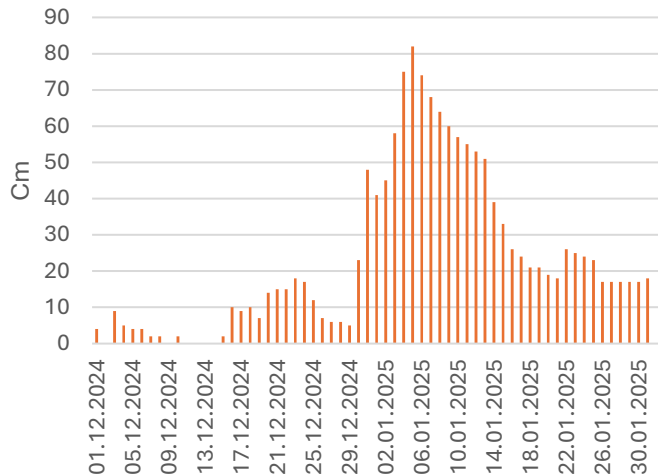
AC cable

Substation

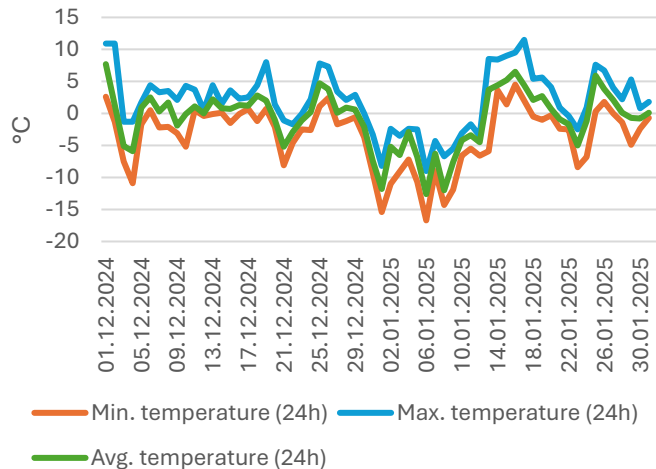




### Snow depth

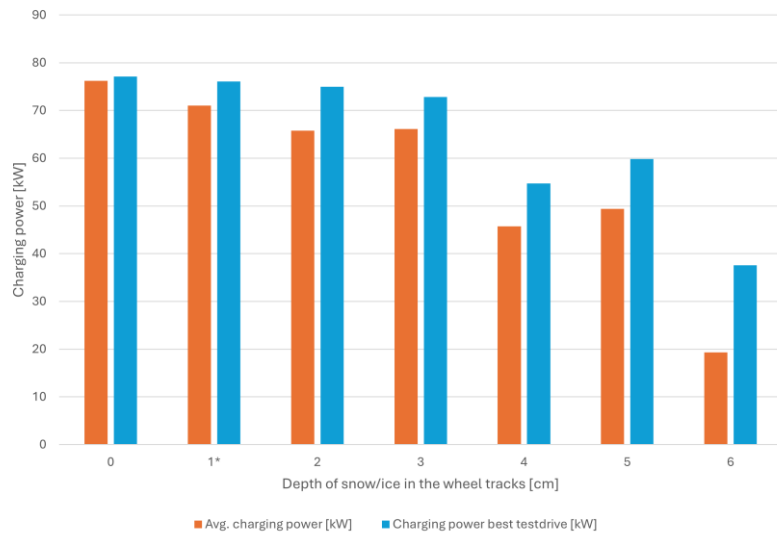


### Temperature

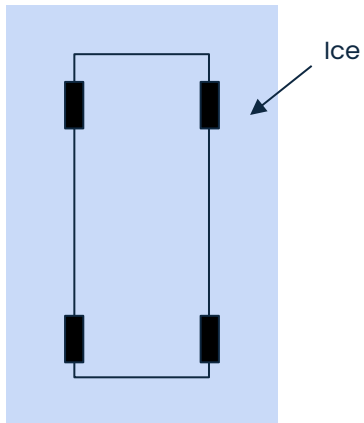


|                                               | Avg. charging power [kW] | 95 % KI [kW]  |
|-----------------------------------------------|--------------------------|---------------|
| Bare asphalt                                  | 62,70                    | 58,02 – 67,37 |
| Snow covered road                             | 64,91                    | 60,87 – 68,94 |
| Temperatur above 0°C                          | 63,98                    | 59,59 – 68,36 |
| Temperatur below 0°C                          | 62,67                    | 57,37 – 67,97 |
| Dry conditions (less than 1 mm precipitation) | 66,67                    | 62,33 – 71,00 |
| Moderate precipitation (1-5 mm)               | 62,05                    | 57,07 – 67,03 |
| Heavy precipitation(5 mm+)                    | 64,08                    | 57,39 – 70,76 |

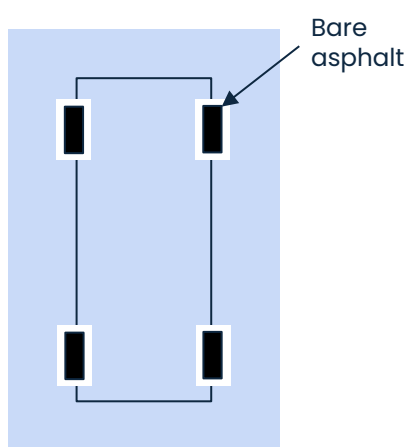
Dynamic charging power in situations with a base of ice/snow



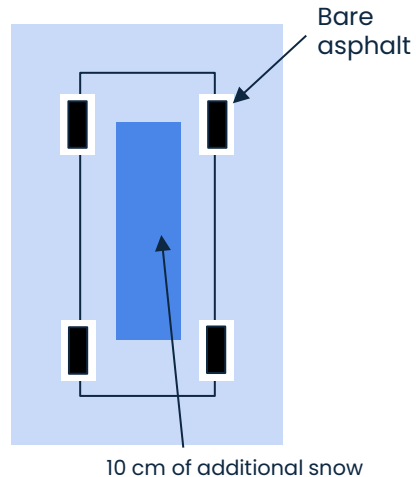
3 cm of ice on the road  
101 kW charging power  
84,3 % efficiency

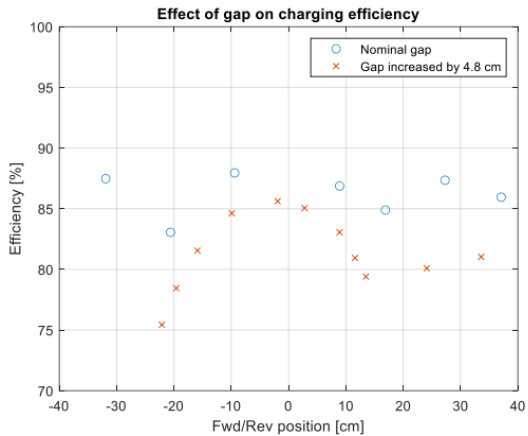
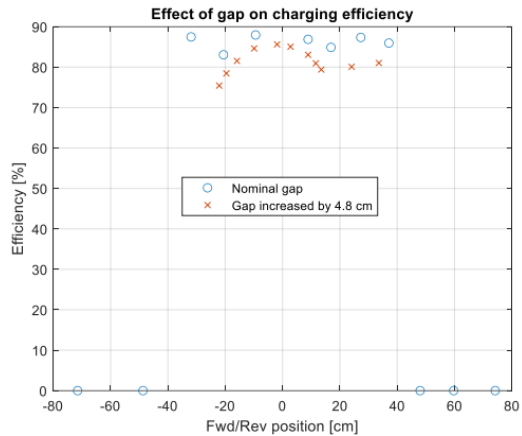


3 cm of ice on the road  
Bare asphalt in the wheel tracks  
104,7 kW charging power  
87,3 % efficiency



3 cm of ice + 10 cm of snow on the road  
Bare asphalt in the wheel tracks  
104,7 kW charging power  
87,3 % efficiency







# Thank you



Pål Preede Revheim, [pal.preede.revheim@atb.no](mailto:pal.preede.revheim@atb.no)

## PANEL DISCUSSION

Questions for the panel?  
Ask them on [mentimeter.com](https://www.mentimeter.com):



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Lethier**

Moderator

**Avere France**



**Gerard  
Hellburg**

Panellist

**Vervoerregio  
Amsterdam**



**Eduardo  
Segura**

Panellist

**JEMA ENERGY**



**Benjamin Blat  
Belmonte**

Panellist

**Fenexity**



**Yancho  
Todorov**

Panellist

**VTT Research  
Center of Finland**

## Clean & Sustainable Mobility





FENDEXITY

where fleet operation meets the energy market

# Coffee Break



Learn more at our sponsors' booths:  
Air Products - Hall 6, Booth 618  
Resato - Hall 11, Booth 1216

**Next plenary session starts at 11:00 in Room 1123:**

**“Navigating Battery Degradation, Safety, and End-of-Life Management”**



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