

NORGESBUSS

Zero emission buses conference

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28th August 2019

34 Zero emissions buses at Norgesbuss

- Change order Oslo nordøst, 2 buses - 2018
- Change order Oslo nordøst, 10 buses - 2019
- Tender Nittedal og Lørenskog, 17 buses – 2019

- In addition 5 buses in Stavanger

34 zero emissions buses

- 5 Ebusco, 2015 and 2016 – Plug in AC and DC
- 2 Solaris, 2018 – Panto end of line
- 4 Solaris, 2019 – Panto end of line
- 6 Mercedes Benz, 2019 – Panto in depo
- 17 Volvo, 2019 – Plug in DC (and inverted panto)

- Standardization has not been a goal!

Case 1 – Oslo nordøst (change order)

- 2 Solaris Urbino 12 electric, Schunk pantograph
- First purchase – “all in on solution”
- Pantograph from Ekoenergetyka – 5 pin
- Height restriction
- Challenging to establish at others area
- High technical service level - charger

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Case 2 – Oslo nordøst (change order)

- 4 Solaris Urbino 12 electric, Schunk panto, 4 pin
- 6 Mercedes Benz eCitaro, plugin/ Schunk panto, 4 pin
- Challenges:
 - Panto on roof – Solaris: back and Mercedes Benz: front
 - Mercedes Benz mounts panto in Nov./ Des.
 - Pantograph from Ekoenergetyka – 5 pin -> 4 pin
- Charger infrastructure – Medcom 2 x 300kW
 - 2 x 300kW semi fast charging
 - 12 x 50kW slow charging
- Infrastructure in operation: October 2019

Case 3 – Nedre Romerike (tender by Ruter)

- Operating from June 30th – performance better than expected
- 17 Volvo 7900 EL, plugin charging
- 4 x 150kW charger from ABB, sequence charging
- Parking and charging logistic
- Weight restriction bridge
- High technical service level - buses and chargers

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Thanks!

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