

# Electric buses in Trondheim

Nordic Zero Emission Buses 2019

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4 LINES





↔ 18.7 km    ↕ 71 m    🕒 00:49



↔ 15.5 km    ↕ 155 m    🕒 00:37



↔ 11.3 km    ↕ 131 m    🕒 00:39



↔ 4.4 km    ↕ 108 m    🕒 00:11





# 7 PANTOGRAPHHS





## ABB HVC-P

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- Automated charging
- Inverted pantographs
- 450 kW output
- 3 x 150 kW AC/DC converters



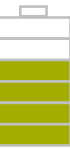
# 39 ELECTRIC BUSES





# Volvo 7900 Electric

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- 28 buses
- 200 kWh batteries
- 300 kW charging
- 12 m
- 60 passengers



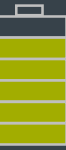
# Heuliez

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- 11 buses
- 105,6 kWh batteries
- 450 kW charging
- 18 m
- 100 passengers







99 PROBLEMS?





# No, but some initial hick-ups

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- Proven technology, but a lot of first times
  - Planning
  - Installation
  - Software
  - Communication
  - Operation

