



Status

Zero emission buses at Movia

Joachim Danchell, Special Advisor, MOVIA



About Movia

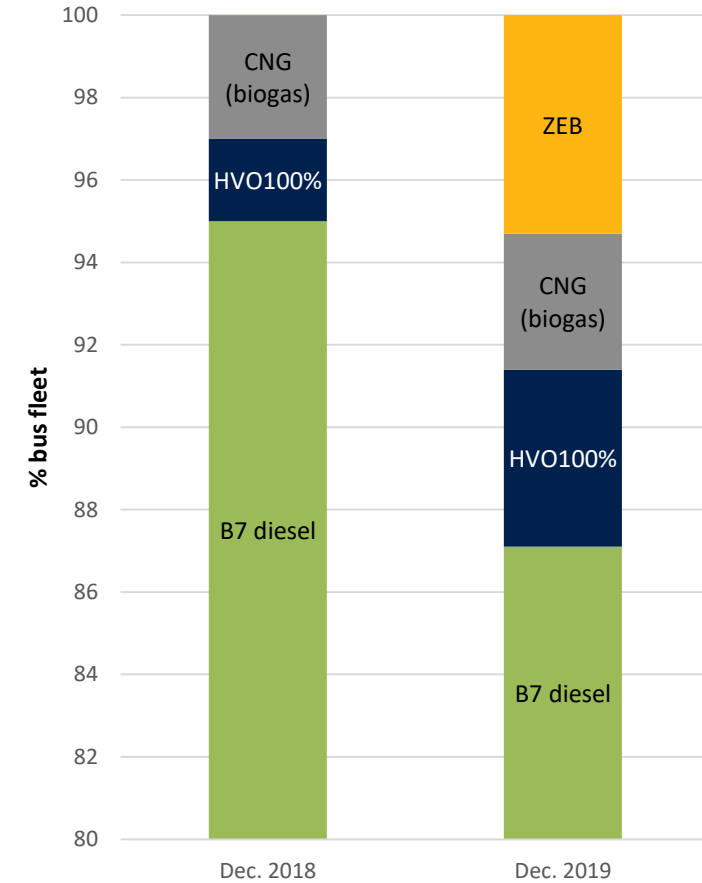
- Public Transport Authority for Zealand, Denmark
- Owned by two regions and 45 municipalities
- 1,430 buses, 60 local trains, 2,500 car and minibuses
- All bus operation is tendered out to private PTOs
- Gross cost contracts
- Normal contract length up
 - ZEB: up 12 years
 - Fossil/Fossil free: up 7 years
- **2030 target:** All bus operation is fossil free – target is currently being revised



ZEB Bus fleet today

Projects deployed deployed 2019

- 20 Depot charge, Roskilde, 12 meter
- 7 Opportunity charge harbour buses, Copenhagen, 3 chargers (3x600kW)
- 8 Depot charge, Ballerup/Egedal, 12 meter
- 19 Opportunity charge, Copenhagen 18 meter, 4 chargers (450kW)
- 27 Depot charge, Copenhagen, 12 meter



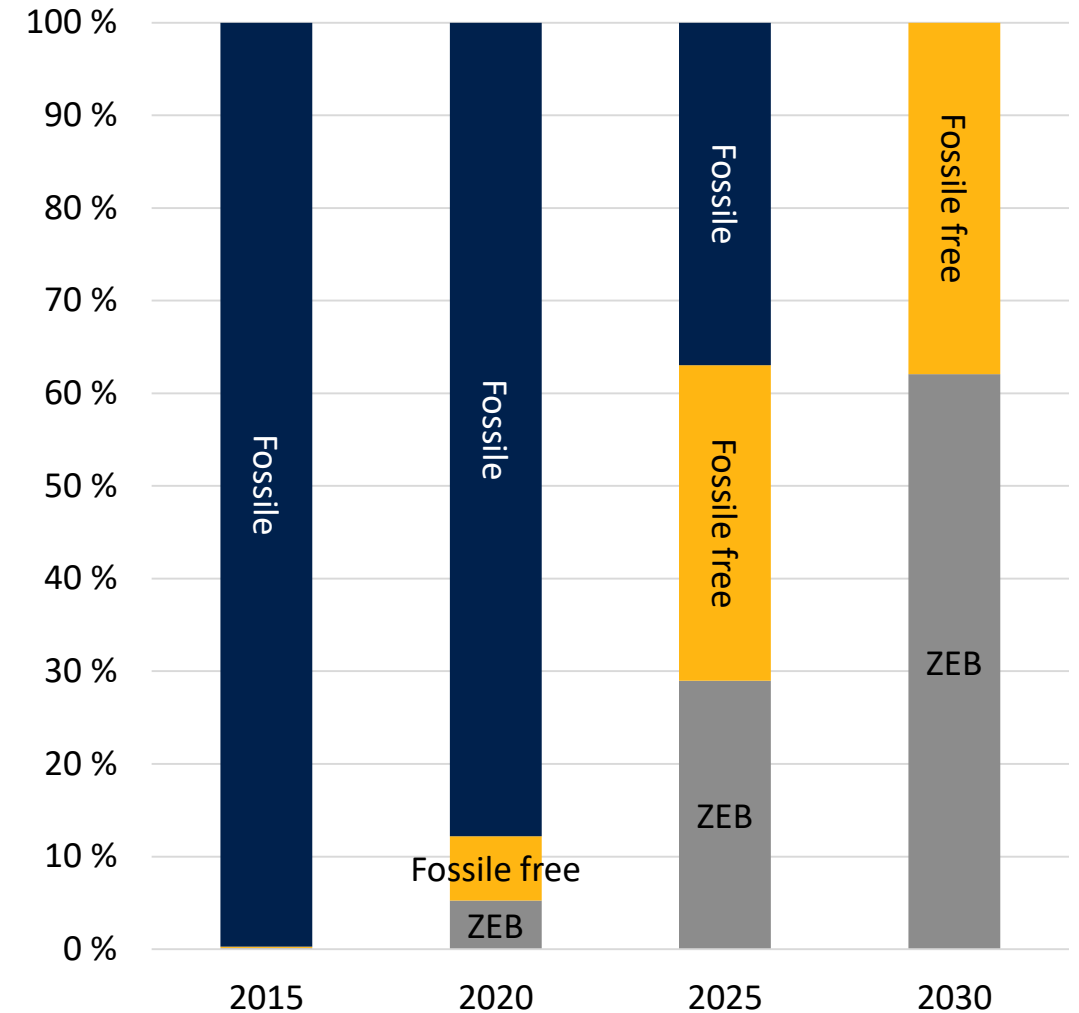
ZEB Bus fleet upcoming

Political statements

- Strong political desire for cleaner public transit and cleaner cities
- Stop for non-ZEB buses – only ZEB allowed
 - City of Copenhagen by 2025
 - City of Frederiksberg by 2030
- Several municipalities only accept ZEB on new contracts from 2019
 - Copenhagen, Frederiksberg, Albertslund, Rødovre, Ballerup (city lines) and Tårnby
- The government has announced a 70 % CO2 reduction in 2030 (from 1990)
- EU, Clean Vehicle Directive

Current tenders (not settled)

- A18 (start 2021), 64 ZEB (Movia makes app. 15 locations for opportunity charge available)
- A19 (start 2022), 50+ ZEB (Movia makes app. 30 locations for opportunity charge available)



Prices – Expectations and actual cost

<i>Operator cost</i>	Fossile free	ZEB
Expectation in 2016	3,5 - 4 %	
Tender A14 (start 2016)	4 %	
Tender A16 (start 2019)	8 %	2,4 %
Tender A17 (start 2019)	4 %	2A: (2,3 %) 18: 9 % 147/156/157: 13 %
Current expectation 12 year contract	3,5 – 8 %	3-11 %
Current expectation 7 year contract	3,5 – 14 %	



**Thank you for
your attention!**

Joachim Danchell
Special Advisor, MOVIA

jkd@moviatrafik.dk, +45 36131685

