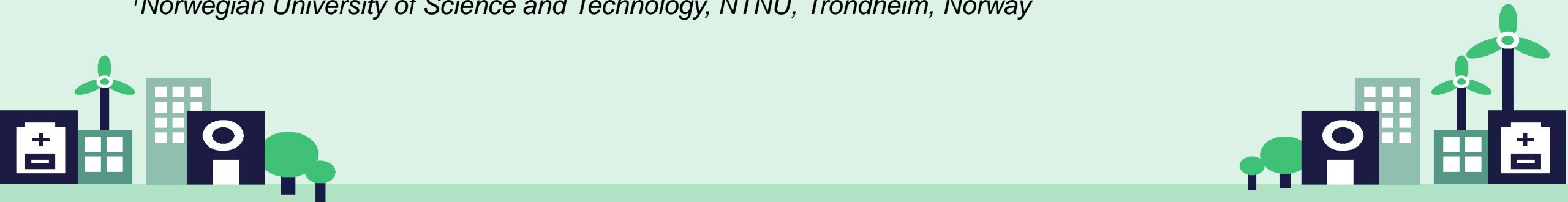


Scenario Analysis in LCA on the Zero Emission Neighbourhood Ydalir

A Norwegian case study

K M Lund¹, C Lausset¹, H Brattebø¹

¹Norwegian University of Science and Technology, NTNU, Trondheim, Norway



Ydalir

- Elverum
- 1000 residential units
- 2,5 residents/unit
- School and kindergarten
- Passive house standard



Credits to Elverum Vekst and Hornkvern Film & Foto

Illustrated by Asplan Viak

Ydalir



Illustrated by Tegn_3

- District heating
- CHP machines
- PV panels
- Vehicle restrictions

LCA Model

- Dimensions
- Emission intensity



Illustrated by Tegn_3

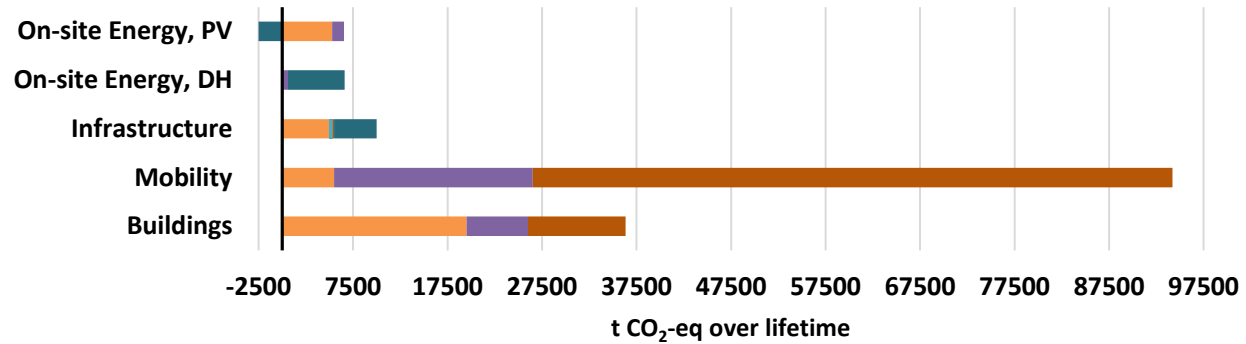
$$E_{tot} = E_{b,mat} + E_{b,oper} + E_{m,mat} + E_{m,oper} + E_{o,mat} + E_{o,oper}$$

Method - Scenarios

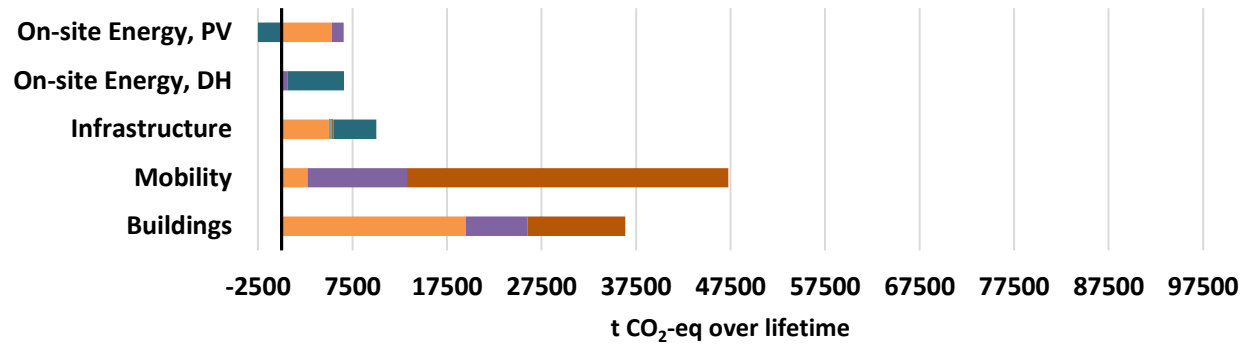
	Ydalir	Ydalir + car-sharing
Trend path	Scenario A	Scenario C
Ultra low emission path	Scenario B	Scenario D

Overall Results

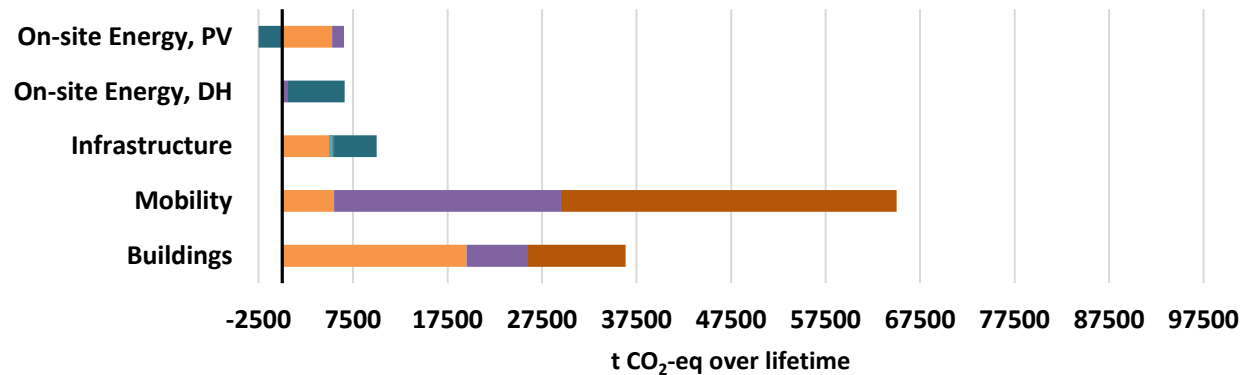
Scenario A



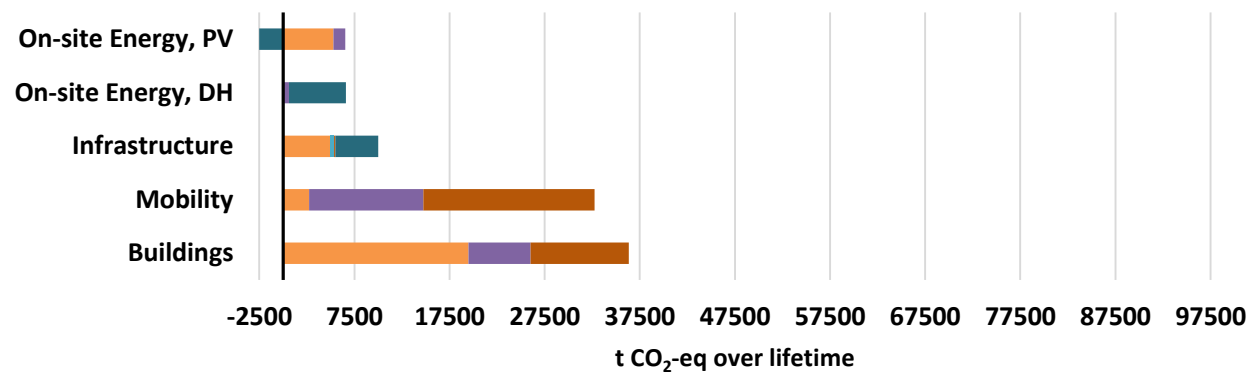
Scenario C



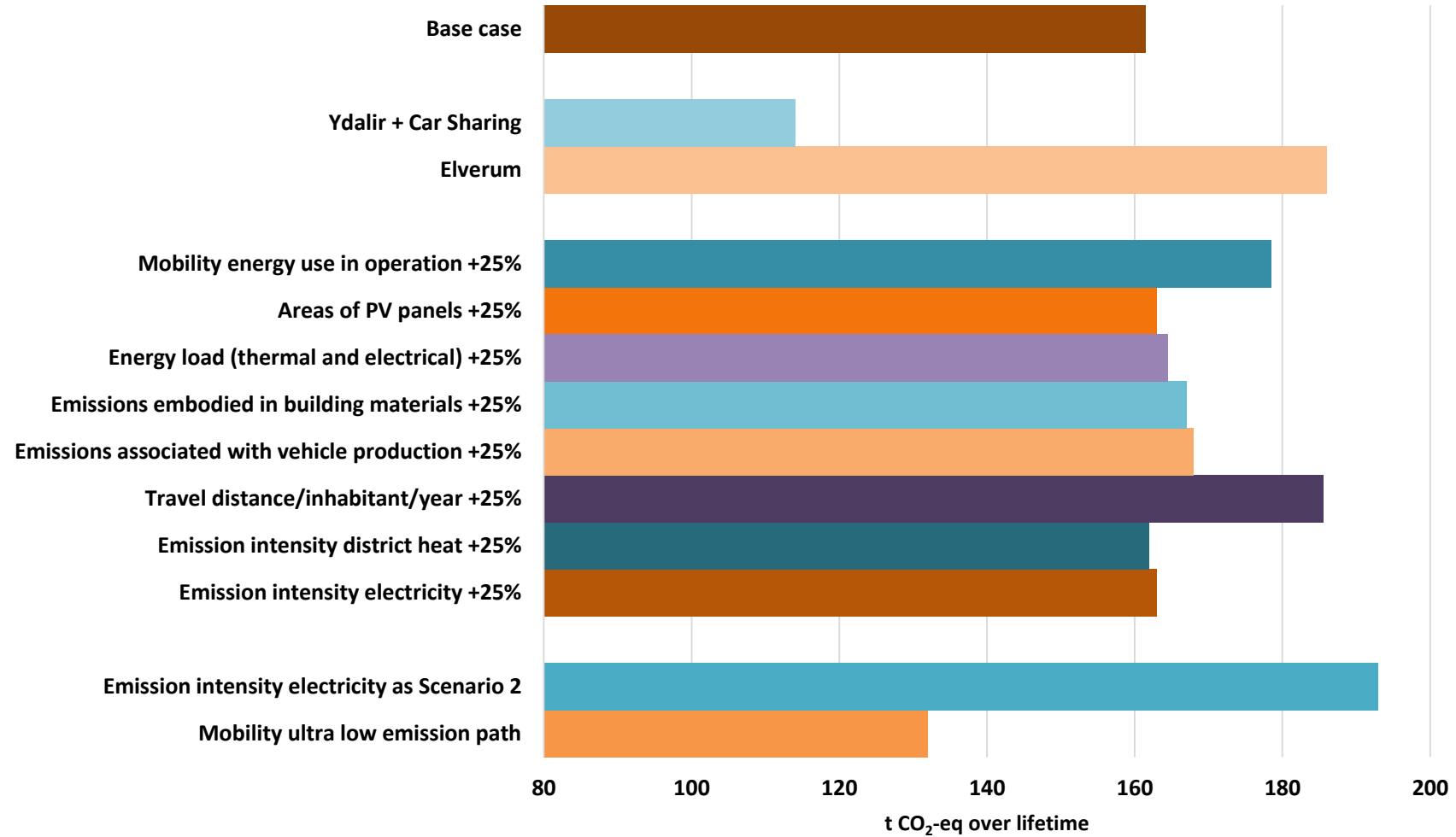
Scenario B



Scenario D



Sensitivity Analysis



Discussion

- Mobility
- Emission intensity
- Dynamic parameters
- Impact categories
- 0-ambition goal



Illustrated by Tegn_3

Conclusion



Illustrated by Tegn_3

- Ydalir
- Future work
- ZEN definition

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