



ZEN and the role of buildings – exemplified by pilot project Ydalir

Forum Wood Building Nordic 2017
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Why Ydalir?

- Housing, primary school and kindergarten close by the city center.
- New neighbourhood with high energy and emission ambitions in Elverum, Hedmark.
- 2030. 800 to 1000 housing units (approx. 100.000 m²).
- Combination of detached houses and block buildings, built around a school for approx. 350 students (approx. 5.000 m²) and a kindergarten with 8 units (approx. 1.500 m²).

Where?



Location and starting point

- 330 acres
- 1.5 km to the northeast of the city centre



Main goal

- **A new way** of development: Reduce mobile and stationary energy demand and greenhouse gas emissions.



Why ZEN?

- ZEN is new way of thinking and doing – difficult to convince the city council?
 - “The ZEN ambition speaks to our senses and emotions”
- ZEN membership anchored in:
 - **Strategic** plan for **energy - and climate work** in Elverum council
 - Guide for **use of wood** in Elverum council
 - : “Creating a city where modern use of wood becomes a part of the city's positive character”
- Challenge in regulations and economic risk

Pioneering project

- Environmental pioneer project for the city Elverum.
- The school is planned as a Zero Emission Building (ZEB) with ZEB-COM standard.



Buildings

- To ensure goal achievement: Masterplan
- Ambitions:
 - Environmental friendly construction process
 - Norwegian Passive House standard – or better
 - Environmental friendly materials
 - Extensive use of wood, including bearing constructions
 - Area effectiveness
 - New renewable energy production (building integrated solutions)
 - Energy storage solutions (in the neighborhood or in the buildings)
 - Explore how the buildings can provide flexibility to the energy system

Illustrations



From ZEB to ZEN – challenges in the in between

- ZEB aimed to eliminate the greenhouse gas emissions **caused by buildings**
 - Measurable
 - Defined by walls
- ZEN with an N for **Neighbourhood**
 - Several entrepreneurs
 - Creating a consistent living environment
 - Transportation

THANK YOU!

