Making net zero wind power possible

We build wind turbine towers.
In wood.

Modvion accelerates the transition to renewable energy and materials by building wind turbine towers made from laminated wood.

Renewable energy built with renewable materials.

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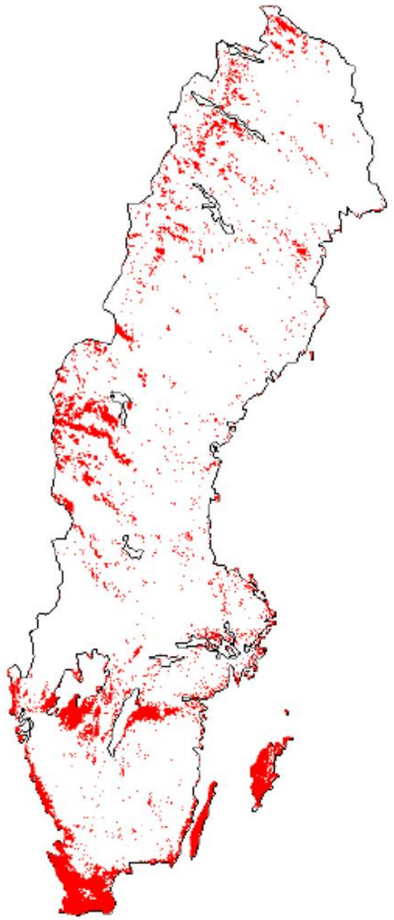
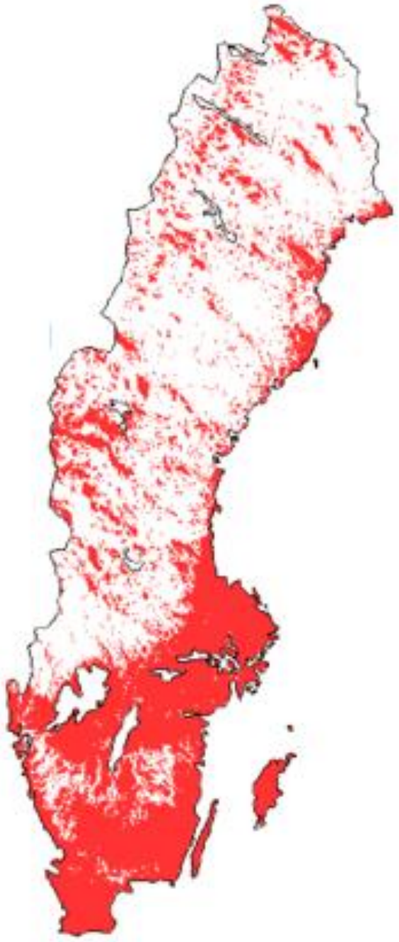
Wind 35% of global electricity 2050

Taller towers = stronger winds and cheaper energy production

100m height



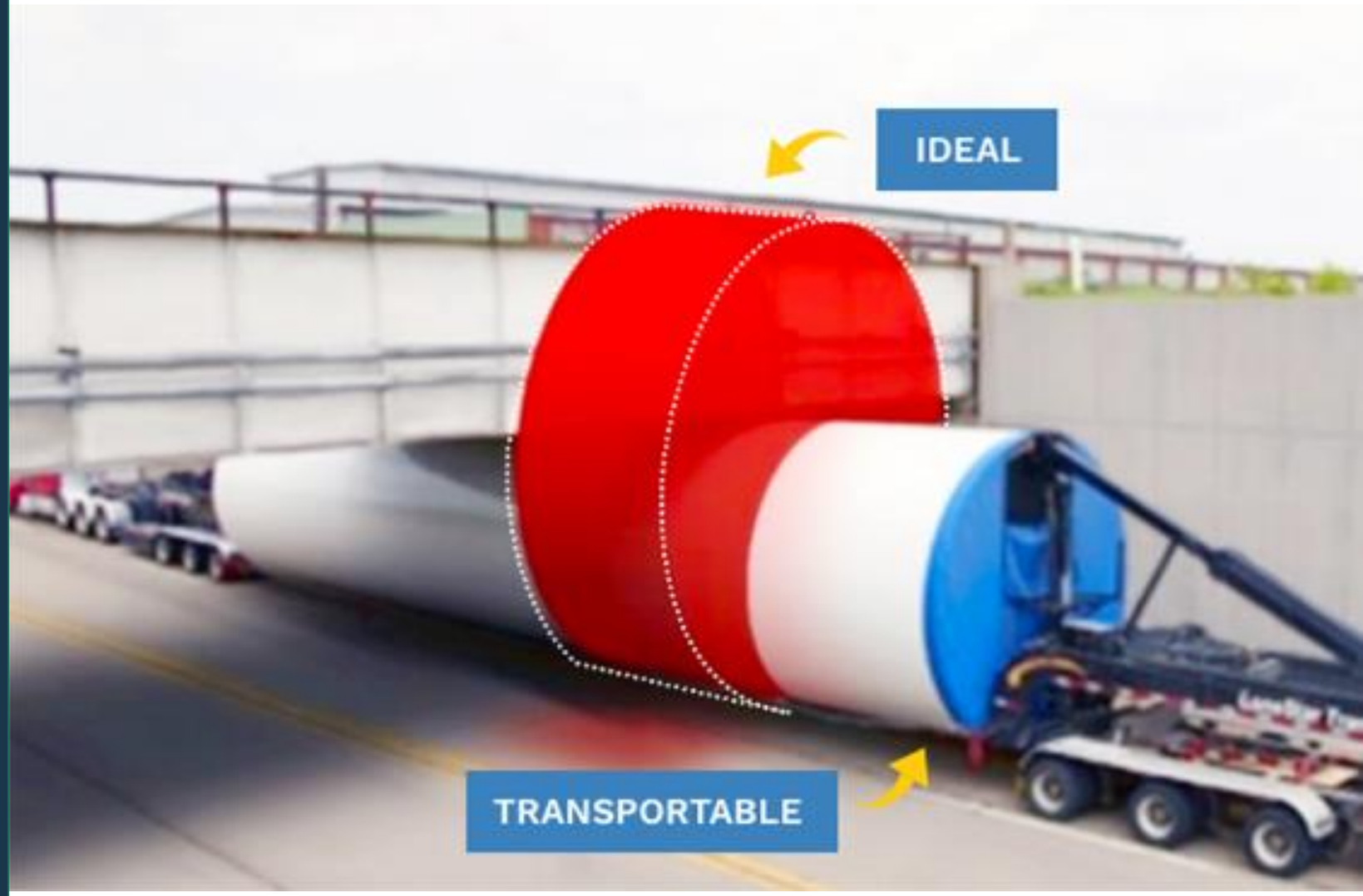
140m height



Source: Swedish Energy Agency 2019

Conventional towers limit growth

Wind turbines are growing but the roads don’t.



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Enabling net-zero wind power

>100% less

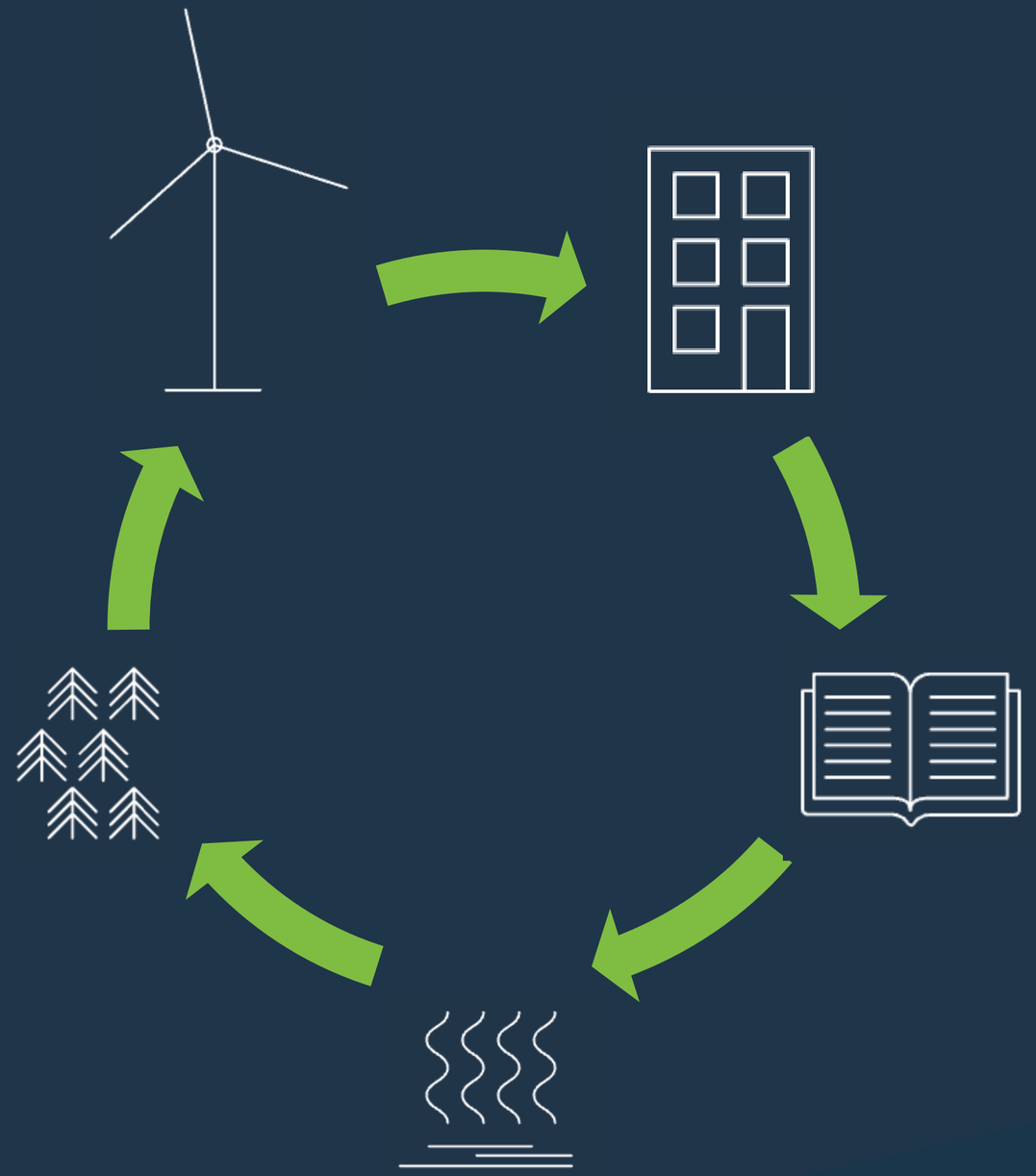
Emissions for the tower

Carbon sink

Wood stores CO_2

30% total

Reduction for the industry



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2023:
Commercial installation

- The details
  - Hub Height 105m
  - Tower Height 103.3m
  - Base Diameter 5.65m
- Turbine
  - Vestas V90-2.0MW
  - Rotor Diameter 90m
- Location
  - Skara, Sweden.

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Tower wall

- Lvl
- Custom lay up
- Bendable in one direction
- Modular load bearing shell design
- 28 curved modules in this tower

Modules for the Wind of Change tower were produced at our factory in Gothenburg.
One module is 15m long.

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Modules are assembled into tower sections on site.

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LIEBHERR
LR 1250
modvion

nckynningsrud.com
815 11 511
MAX LOAD
500KG
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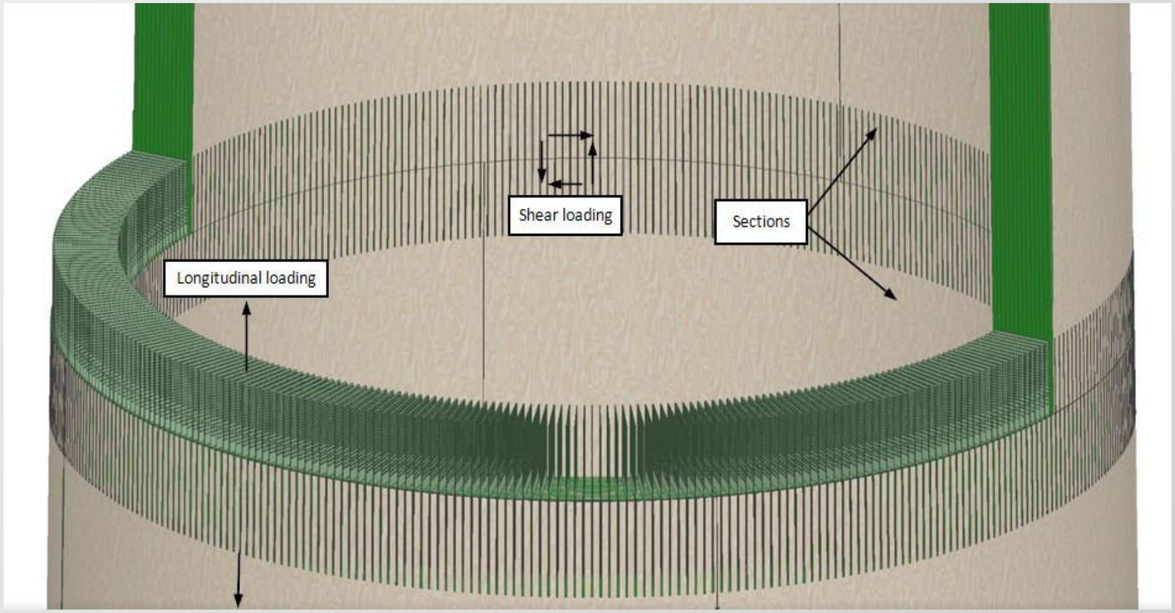
Joints

- Longitudinal joint
  - Connects the modules along the long edge.
  - Adhesive Joint

- Transversal Joint
  - Connects the tower sections.
  - GiP (Glued in Plates) type joint



The tower sections are stacked to form the tower.
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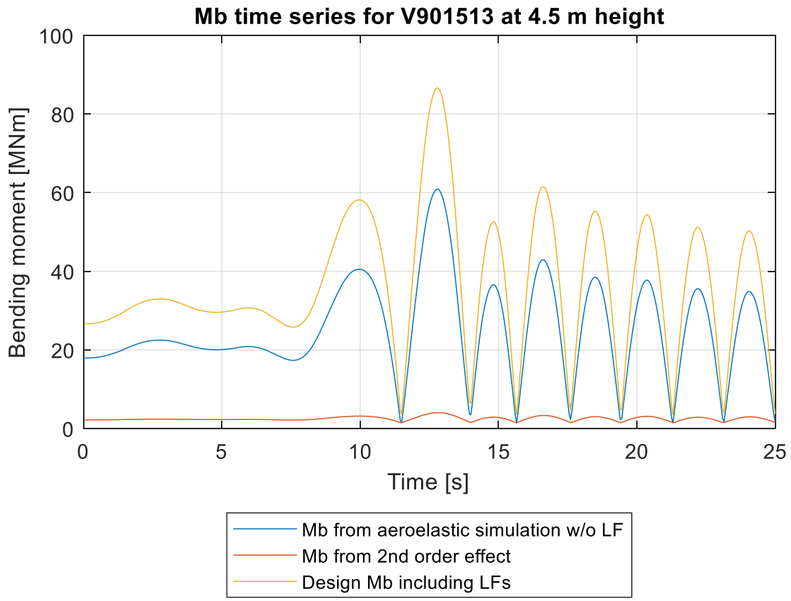
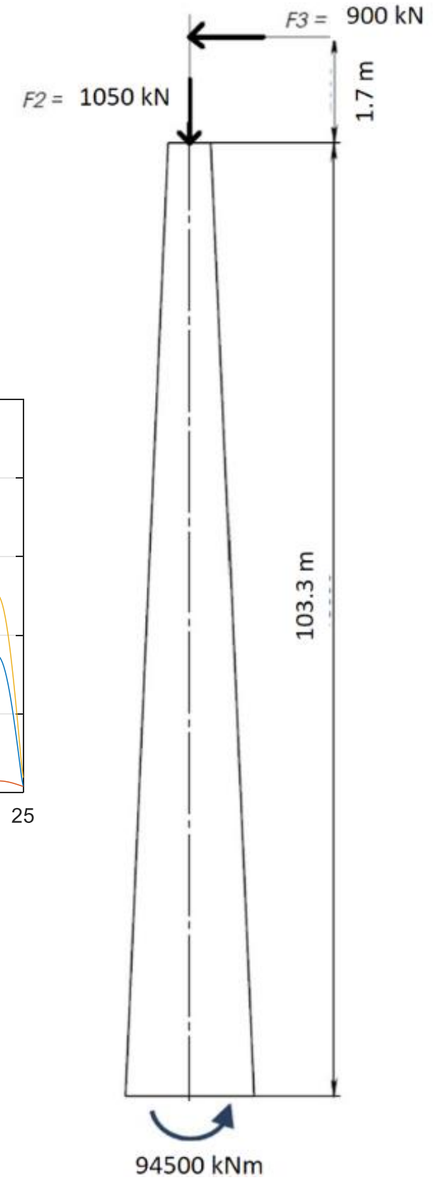
Loads

- Many dynamic load cases evaluated
- Extreme stress
- Fatigue damage





Verification

- Standards
  - Design
    - EIC61400
      - Wind turbine industry standard
    - Eurocode
  - Materials
    - EN 14374 – LVL
    - EN 17334 – GiR
- Comprehensive strength test program
    - Tower wall
    - Joints
- Third party review
  - Design basis
  - Design assessment

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This project has received funding from the European Union's Horizon 2020 research and innovation program.

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