

modvion



Wind turbine towers
made from wood

Stronger than steel & concrete
Transportable anywhere
Carbon negative

“All developers are asking when they can purchase turbines with Modvion towers”

Henrik Landgren
Director of Sales Nordics, Vestas
– *Worlds largest wind turbine manufacturer*

“By using modular Modvion towers in wood, we avoid logistical difficulties, reduce weight and approach completely carbon-neutral wind power”

Peter Wesslau
CEO, Rabbalshede Kraft AB
– *One of the leading wind project developers in the Nordics*

“We see great benefits in building wooden towers, not only for the climate, but also in lowering the cost of a new, renewable electricity generation. We are determined to make fossil free living happen within one generation, and this may be a vital step along the way”

Daniel Gustafsson
Head of Onshore Wind, Vattenfall
- *Leading European utility, operating over 1 400 wind turbines*

“We see that modular towers in laminated wood have significant market potential and can contribute to lowering the cost of new renewable electricity production by replacing steel and concrete with environmentally friendly and climate-smart wood”

Lars Borisson
Head of Onshore Origination & Development Nordics, RWE Renewables
- *Germany's largest energy utility and one of the largest worldwide in wind power*

“We are collaborating with Modvion on wooden wind tower technology to reduce CO₂ emissions over the entire life cycle, also enabling a simplification of the transport and installation phases, in line with our targets for sustainable growth”

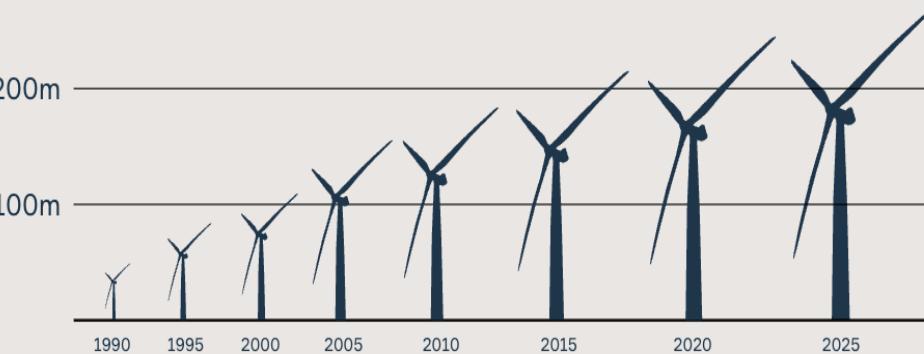
Nicola Rossi
Head of Innovation, Enel Green Power
- *Worlds largest private operator of renewable energy, based in Italy*

“In order to generate the most cost-efficient wind energy we need to build taller turbines. That's where Modvion's solution becomes very interesting. Being able to reach the stronger winds at heights of 290 metres, while reducing emissions, is an offering that we want to include in our projects as soon as possible”

Matilda Afzelius
CEO, RES Nordics
- *One of the world's largest independent renewable energy developers*

The market is constantly moving towards taller towers to deliver stronger financial returns

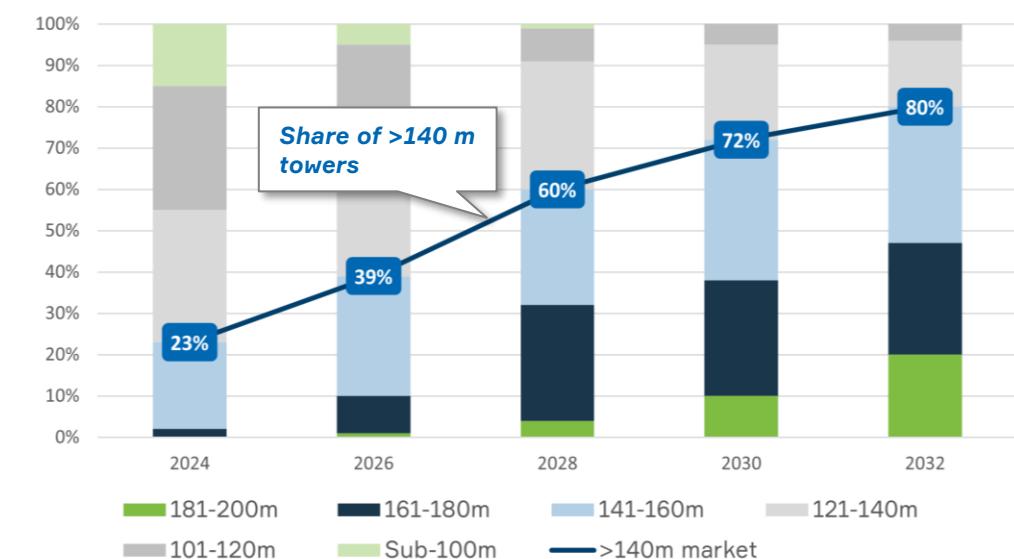
Historic tower height development



Source: Bloomberg NEF & Turbine OEM & Turbine OEM data

The share of 140+ m towers is expected to be worth over EUR 36bn/year in 2030 – this is our addressable market

Forecasted demand for tall towers 2024-2032



Extensive Market research material available in data room

Source: Brinckmann Global Wind Turbine Technology Forecasts 2024, GWEC Market Intelligence April 2024, GWEC Global Wind Report, Swedish Energy Agency.

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The market is struggling with the transition to even taller towers

- Transportation of large tower components by road becomes challenging or impossible
- Very few viable solutions available on the market
- Steel and concrete create significant carbon emissions

Modvion solves the problem

- Unrestricted transportability regardless of tower height, which enables full freedom in turbine size and site selection
- Lower manufacturing costs for tall towers, enabling high margins at highly competitive tower prices
- Net zero life cycle emissions - compared to 1 800 ton CO₂e/tower* (166 m) for steel and concrete solutions

* Source: Calculated using publicly available data: EPD NX5202407 by Nordex (2024), Life Cycle Assessment of Electricity Production from an onshore EnVentus V162-6.2 MW Wind Plant by Vestas (2023)

The value chain

- OEMs sell complete wind turbines to developers



Our go-to-market

- Driving demand from wind developers, using among other tools, LOIs indicating interest to buy
- Making towers available through Wind Turbine OEMs

Driving wind developer demand

LOIs with billion Euro potential signed with some of the world's largest energy companies

Austrian W.E.B. energy transition company with locations in eight countries and two continents. Has installed 284 wind power plants.



RES, active in 14 countries, recognised as the world's largest independent renewable energy company, established more than 23 gigawatts of renewable energy projects worldwide.



One of the leading wind project developers in the Nordics. Over SEK 3bn invested in 20 wind farms with total production capacity of 1.1 TWh.



Own and manage wind farms, today with over 200 active wind turbines across the south of Sweden. Strong focus on sustainable solutions.



German RWE Group is a world leader in renewables, with presence in Japan, Sweden, America, China and many other countries.



Vattenfall is a leading European energy company with app. 40 000 employees and focus on fossil free energy generation, with GW's of onshore project pipeline (1.5 GW only in Germany).



Fortum is a Finnish state-owned energy company that focuses on the Nordic region, generating and selling electricity and heat.



Triparty agreement with Vestas with the intention of being customer for first wind farm (seven 7 MW turbines) with Modvion towers, thereafter deploying Modvion towers in as much project pipeline as relevant.

15-20 towers SEK 500m annual potential, several suitable upcoming wind projects identified.

10+ towers, SEK 200-600m potential, several suitable upcoming wind projects identified, Brattön-Sällelund as one of them.

Triparty agreement with Vestas declaring the intention to be the customer for the first 6+ MW Modvion tower.

Identified suitable upcoming wind project in Lundåkra Sweden.

Joint engagement to qualify wooden towers into Vattenfall's future project pipeline on-going.

Co-operation intent and declaration of support from Fortum.

Making towers available through OEMs with 90% of the global market*

- In advanced stages with Vestas, the world's largest wind turbine OEM, to integrate our second-generation tower into their offering. Vestas is also an investor in the company.
- Ongoing dialogue and integration plan laid out with Nordex, Enercon & GE.
- In dialogue regarding integration opportunities with Siemens Gamesa.



30.5% market share



18.4% market share



6.5% market share



19.7% market share



14.3% market share

Total >140 m market demand across strategic partners 2030: ~9 000 towers/year

* Excluding Chinese market – Chinese manufacturers market share outside of China was 4.2% in 2023 - Source Rabobank 2024

Source: Company information, GWEC Market Intelligence April 2024, Brinckmann Global Wind Turbine Technology Forecasts 2024



Proof of concept

Our 150 m wind turbine has been in commercial operation for over 10 000 hours

"The initial phase of electricity production from the wind turbine has been highly successful. The availability has been excellent, and there have been no operational issues"

Björn Sjöström
CEO Varberg Energi

- Consists of 28 wood modules with 105 m hub height and a total height of 150 m including blades
- 2.0 megawatt Vestas V90 Turbine
- The 4th tallest wooden structure in the world

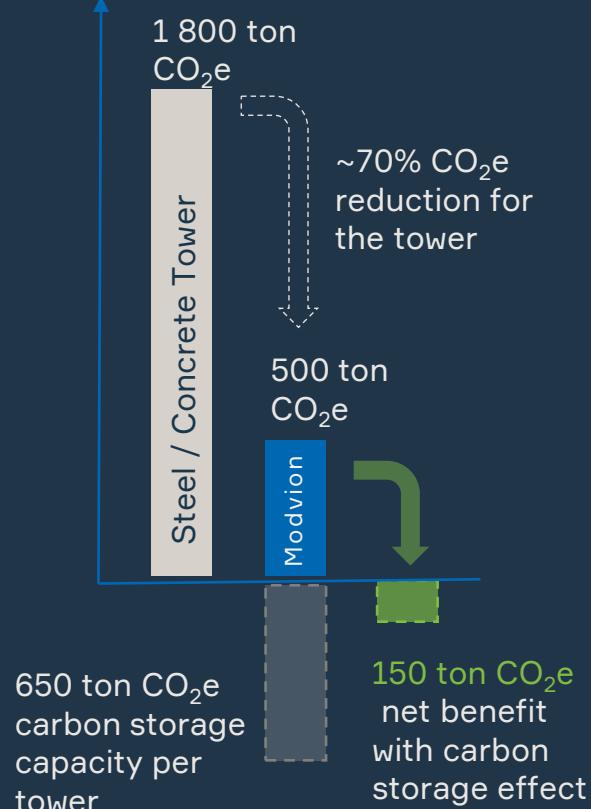
Looks like a standard wind turbine, until you step inside...

Skara, Sweden



How we decarbonise wind energy

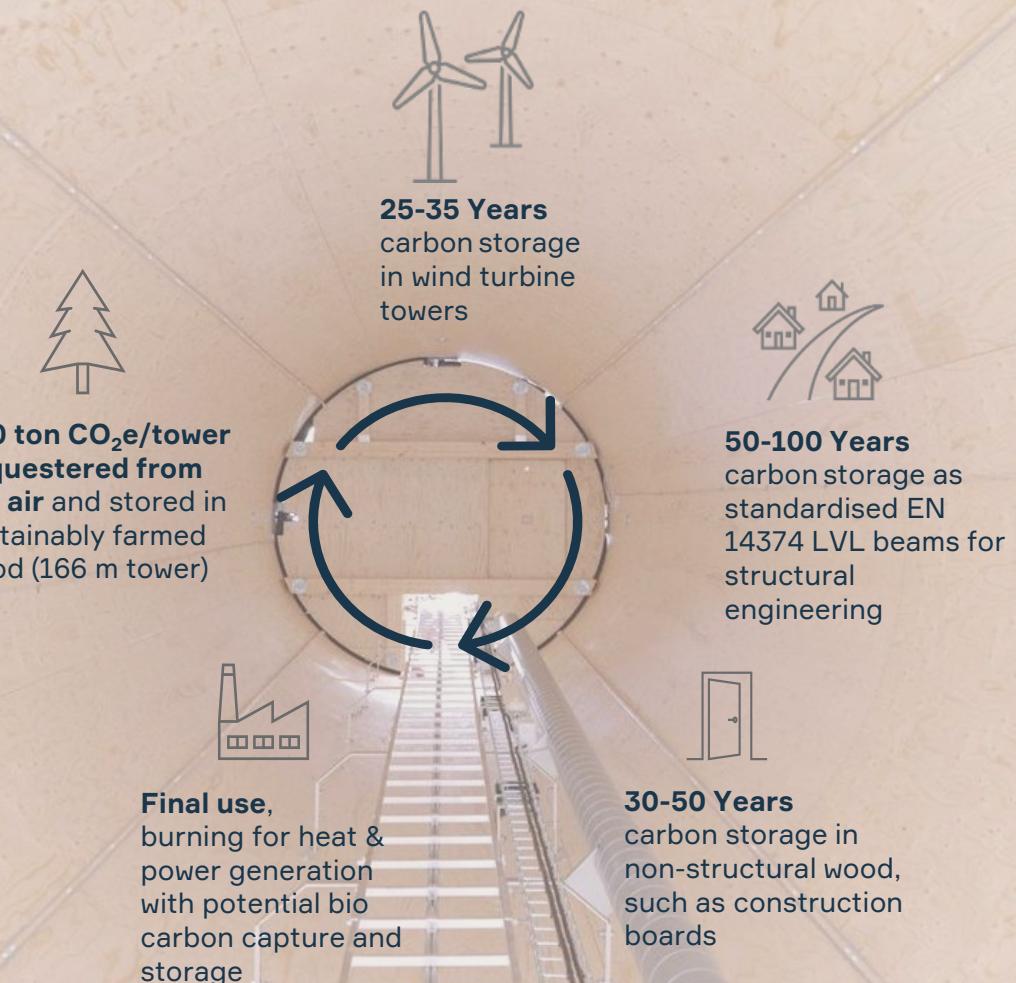
Tower manufacturing emissions (166 m)



Wind turbine emissions

- Hard to abate steel and concrete represent the majority of total wind life cycle emissions – with towers making the biggest impact
- A Modvion tower cuts CO₂ emissions for the whole wind turbine, including foundation, turbine and blades, by ~30%
- A Modvion tower stores more carbon in the wood than emissions produced in the tower's lifecycle, acting as a long-term carbon storage.

With 100+ years Carbon Storage Potential



Our secret sauce

Making wood stronger than steel & concrete

Multi-layered wood (LVL boards), manufactured to our specifications, are pressed and glued into curved modules, with up to 100 layers of wood veneer. They are then machined into final shape in a custom-built robot cell. Our LVL modules outperform carbon-intensive steel and concrete on strength to cost and weight ratio.

Built in modules, connected on site

Using lightweight wood material makes it possible to have easily transportable modules for any tower size. Modules are bonded together on site creating maintenance free joints.

The know-how to make it work

Extensive simulation capabilities, computational models, and world leading expertise in dynamically loaded wooden structures — crucial both for adapting our towers to new turbine platforms and enabling installation across diverse environments and wind profiles.

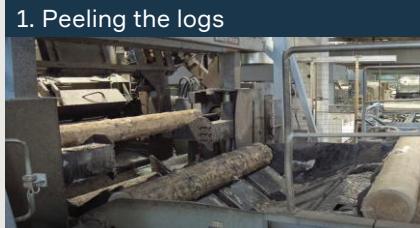
All the above are proprietary processes and methods, developed in-house and to a large extent IP protected



From forest to tower

Wood to LVL-boards

1. Peeling the logs



Certified pine or spruce logs from sustainable forestry arrives to the LVL mill and are steam heated to over 200 °C and 3-6 mm thick veneer is peeled off from the log with a sharp blade.

2. Grading the Veneer



The veneer is quality graded and individual veneer layers are placed in custom configurations according to Modvion's patented specification – key to further processing.

3. Layering & Gluing



After drying, several veneer layers are glued together under high pressure and temperature forming a 30-70 mm thick LVL-board.

4. Finished LVL-board



The finished LVL boards, 2.5 meters wide and up to 18 meters long, are sent to the module manufacturing plant.

LVL-boards to modules

5. Lamination & Shaping in Press



The LVL-boards are glued and pressed into curved conical modules with up to 100 individual veneer layers. This process is unique and patented.

6. Module Machining



The module is then machined into its final shape in an automated machining cell, using high precision robots.

7. Joint Machining & Assembly



Next step inside the robot cell is to machine the tight tolerance slots later used to join the modules to each other. Fasteners for tower internals, sealings and adapters are assembled.

8. Surface Coating



The last step of the module production is weatherproof coating, protecting the wood from the elements. An automated process in volume production.

Assembled on site

9. Transport to Site



The modules are wrapped, loaded and transported to the site by road with standard low-cost trucks and trailers.

10. Section Preassembly



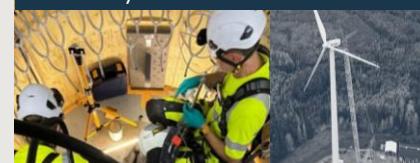
On-site, modules are bonded together on the ground to create full circular tower sections. Components such as access and cable ladders are installed.

11. Tower Stacking



The sections are then assembled on top of the foundation and following sections are stacked with a large crane. A steel top adapter on top enables a standard turbine interface.

12. Section Joining & Turbine Assembly



The sections are bonded together with our patented method. Finally, the turbine and blades are mounted before handover to the customer.

A patent portfolio that prevents competitors from building similar towers

Among a broad patent portfolio, we have a key patent covering circular towers made from LVL, where the circular cross-section is a fundamental requirement for efficient tower design.

We also have patents for bending LVL into modules, bonding sections to sections and for creating the necessary LVL properties.

15 registered patents, 20 active applications.

The competitive landscape

Concrete Hybrid Towers are the main competing technology for taller towers. However, they are hard to transport due to weight and are facing product issues. There is only one supplier with capacity – a monopoly that the wind industry wants to break.

Tubular steel towers have been the industry standard for decades but can't be used for taller towers due to transportability – no such towers above 115 m in Germany as an example.

Modular steel towers have been around for a long time with few installations, mainly due to price and high maintenance costs due to bolted joints.

	Carbon impact	Unrestricted transport	Suitable for 140+ m tower	Other
Concrete Hybrid Towers	High	No	Limited	Product issues, now high maintenance
Tubular Steel Towers	High	No	No	Low price but low heights
Modular Steel Towers	High	✓	Limited	High price, high maintenance
Modvion Wooden Towers	Low	✓	✓	Low maintenance need

Building a strong supply chain to secure the necessary delivery capacity

Strategic Suppliers

LVL Wood



- **Metsä** cooperation since 2016, the current main supplier of Modvion unique LVL
- Cooperation agreement with **Stora Enso**
- Dialogue and technical assessment with **VMG** both as an LVL supplier and module manufacturing partner

Contract
manufacturing
modules



Selection
Ongoing

Complete playbook for production set-up in place. Ongoing activities with:

- Major wood industry contract manufacturer with factories in several European locations and LVL experience
- Welded steel tower producer with 10+ factories world-wide and spare capacity
- Several steel tower manufacturers and wood industry actors globally

Installation



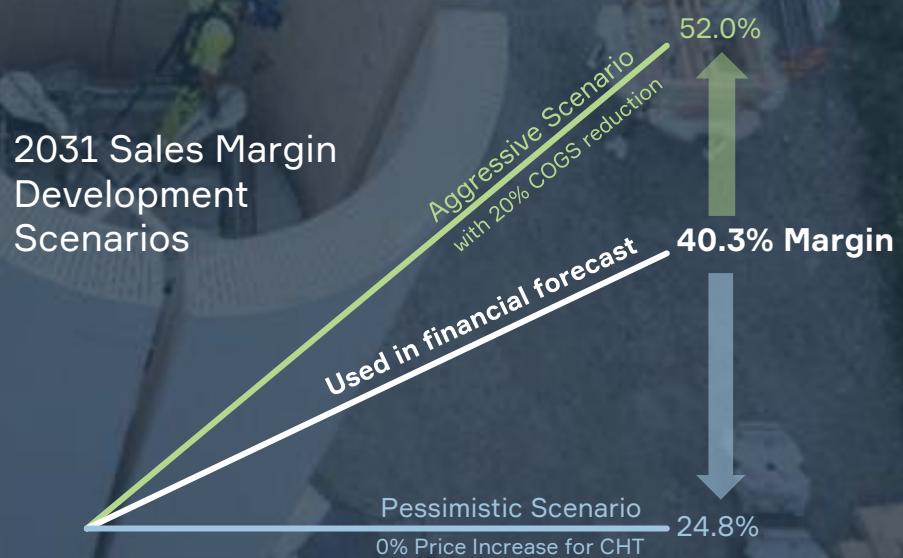
- **Maersk** serves as global project logistics partner, coordinating deliveries to sites
- **BMS Heavy Cranes** Logistics, crane and installation partner. Major partner to Vestas with engineering capacity for process and method development, crane configuration/rigging plans, including site layouts

Welded components, Coatings, Sealing, Adhesive, Fasteners & Other Standard parts

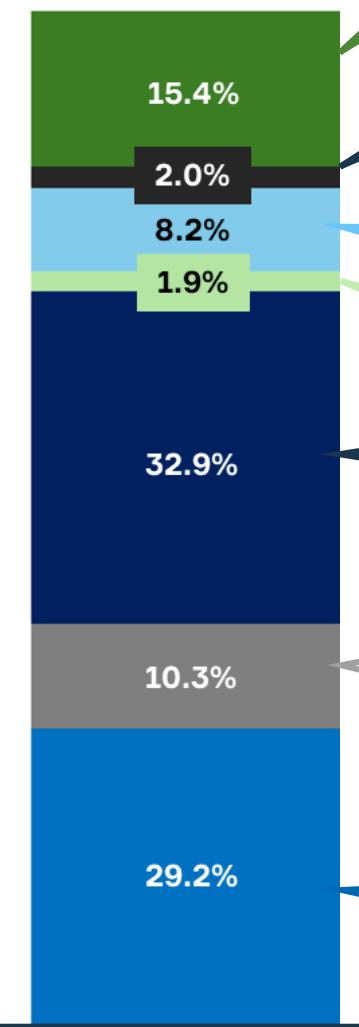


Selling towers with margins above 40%, with further upside potential

- With pricing on par with competing Concrete Hybrid Towers (CHT), without including any green premium
- Cost of competing CHT technology expected to increase due to increased costs from steel & concrete and EU carbon taxation (ETS/CBAM)
- With additional development we can enable >20% further COGS reductions in 2031 (aggressive scenario)



COGS breakdown



Precise numbers for pricing, COGS and margins are available under NDA in data room

Forecast

Figures in EURm

Key financials	2025	2026	2027	2028	2029	2030	2031	2032
Revenues	1	1	1	12	82	236	512	976
COGS	-	-	(0)	(8)	(59)	(155)	(310)	(578)
Gross income	1	1	1	4	22	81	202	397
Operating expenses	(5)	(6)	(9)	(11)	(10)	(16)	(25)	(39)
EBIT	(5)	(6)	(9)	(8)	12	63	176	357
Free cash flow	(1)	(5)	(12)	(9)	9	46	131	268
Key metrics	2025	2026	2027	2028	2029	2030	2031	2032
Towers ordered	----- Detailed numbers available under NDA -----							
Towers delivered								
EBIT margin	neg.	neg.	neg.	neg.	14%	27%	34%	37%

Aggressive scenario

A funding round in the upper end of the ask (slide 18) would enable additional development to reduce COGS >20% further, as well as **accelerated ramp up starting with first pre-series tower deliveries in 2027 instead of 2028**. Key aspects of this case, not included in the table above, are presented on the following slide.

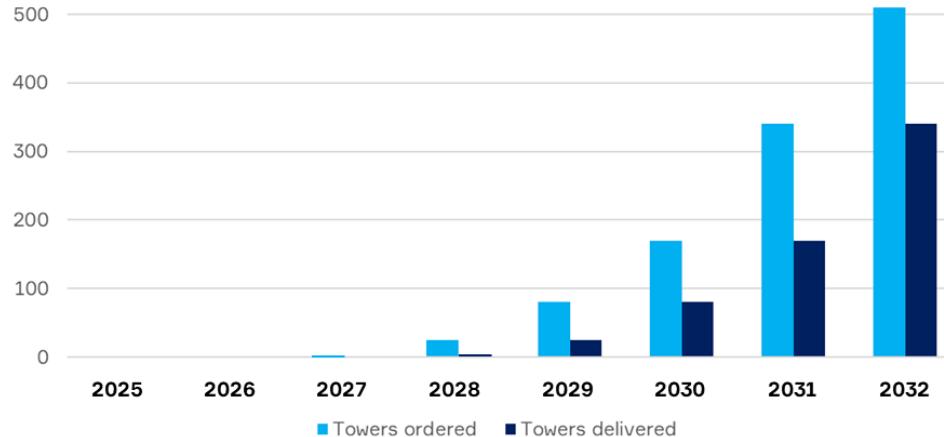
Assumptions

- Sales price assumed to follow forecasted CHT pricing (3rd party forecast)
- Volumes limited by production capacity scale-up, not sales
- COGS is best estimate per September 2025 – the used methodology has been 3rd party verified
- 5% contingency is added to COGS in the model
- Orders placed the year before delivery with partial pre-payment at order. Final payment at delivery
- First tower delivered in 2028
- Revenues until and including 2029 contains soft funding of EUR 0.9m per year

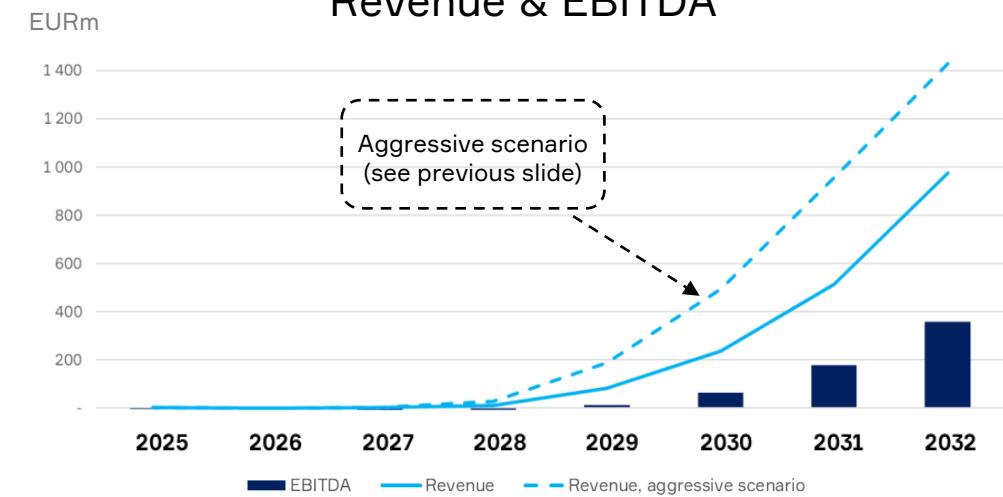
Note

- Detailed financial models, COGS calculations and 3rd party available in data room under NDA

Sales & Deliveries

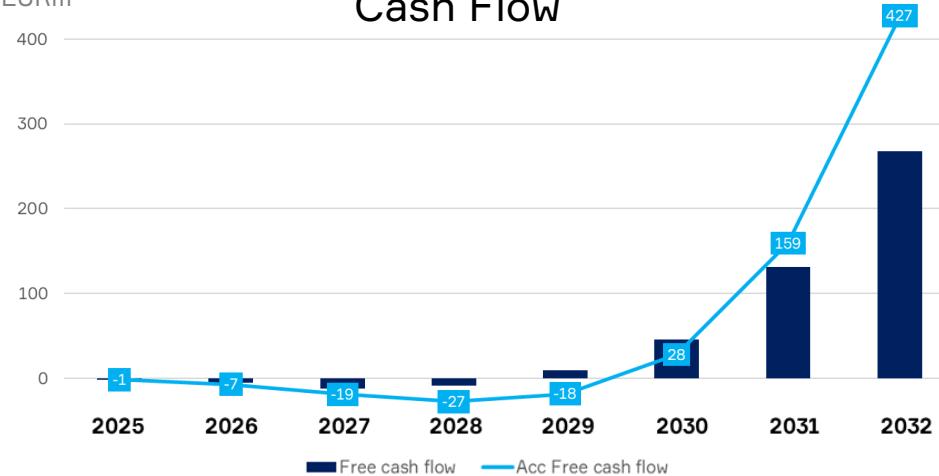


Revenue & EBITDA



EURm

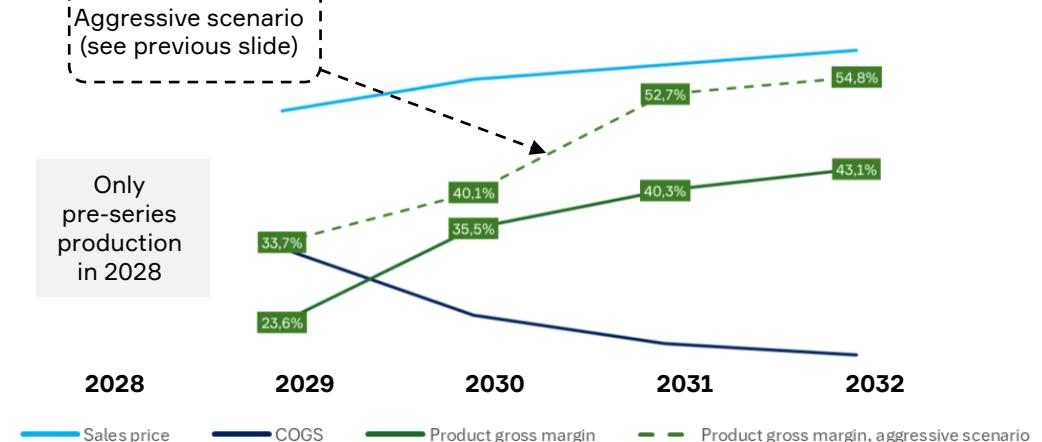
Cash Flow



Only pre-series production in 2028

Aggressive scenario (see previous slide)

Product Margins



Deep technical expertise and proven commercial execution



Maria-Lina Hedlund
CEO

Successfully managed multi-billion SEK global delivery projects for industry leaders such as Siemens and Volvo, and key to securing EUR 27m equity while at Modvion.



Uffe Vinther Schou
Sales – OEMs and wind developers

Former CCO at KK Wind Solutions and sales leader at Vestas and MHI Vestas Offshore Wind, secured deals worth over EUR 2bn and grew revenues at KK Wind from 0 to EUR 7m in two years.



Gustav Nilsson
Strategic partnerships

Over 16 years of strategic and operational experience in high-tech industries, including co-founding the electric utility vehicle start-up Nimbell and key roles at NEVS and Irisity.



Kennet Lundberg
CFO

30+ years of international CFO experience at FlexLink, Xellia Pharma, Hasselblad, and Azelio. Experienced in IPOs, external financing, and broad operational expertise.



Karin Björe
Product and technology development

Instrumental in bringing Modvion's first commercial multimegawatt tower from vision to reality. Background in automotive and cleantech, securing EUR 25m soft funding for Minesto.



Otto Lundman
Founder and business development

Modvion's CEO for ten years driving the company's growth, secured LOIs worth EUR 1bn and established the strategic partnership with Vestas.



Erik Osvaldsson
Building and managing supply chain - tower production and delivery capacity

MSc in software, robotics, and manufacturing with proven execution, including developing a proprietary robotic machining process when suppliers fell short.



Geir Söderin
Tower technology guru

One of Modvion's first team members, deep understanding of the product. Over 10 years from the construction industry, gaining expertise in building technology and wood construction.



David Olivegren
Founder, concept developer and wood expert

The Modvion modular concept is built on patents developed by David. He is an architect, innovator, boat builder, carpenter with knowledge and passion for the potential of wood.

EUR 8m+ round size

Where 8m takes us

- Tower design optimised for volume production
- Secured supply chain, including module contract manufacturing agreement
- Firm order for first 6+ MW tower(s)
- First tower confirmed with second OEM

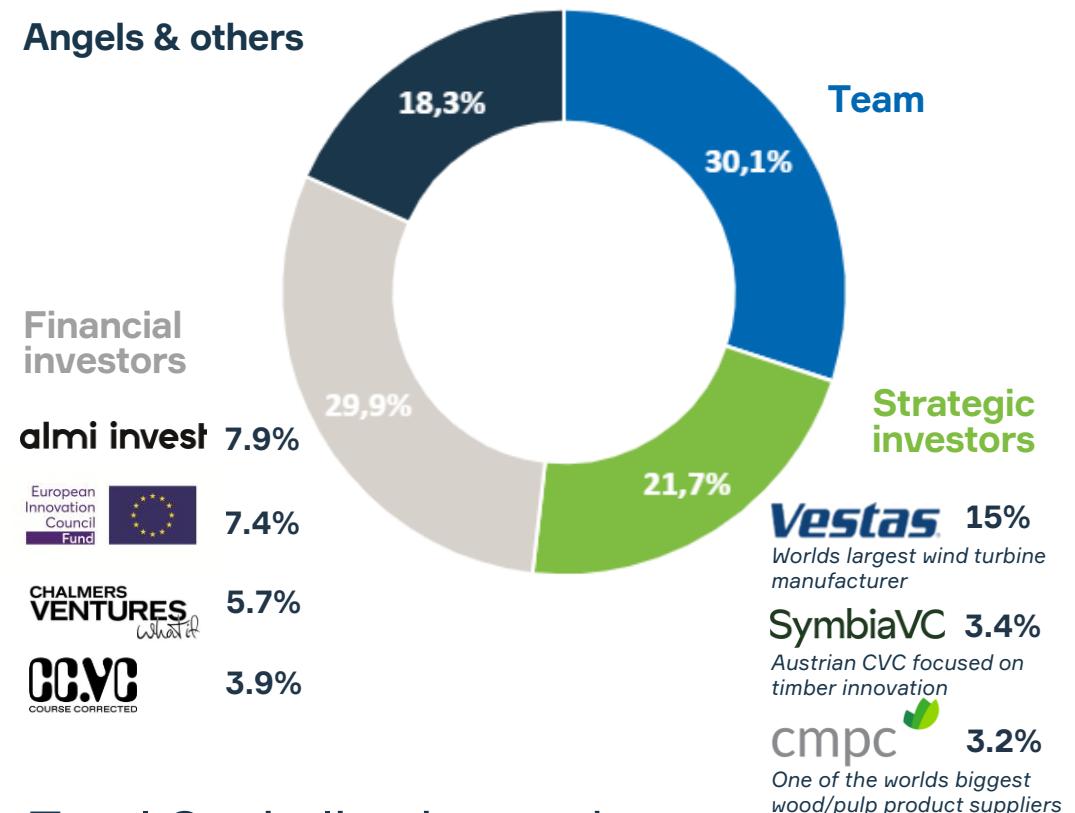
Where 16m takes us (aggressive scenario)

- Accelerate production ramp up by one year
- First pre-series production tower already in 2027
- >20% lower COGS from additional R&D

Major owners have indicated a willingness to participate

Ownership

Angels & others



Total Capitalisation to date

Equity: EUR 28m
Grants: EUR 5m



Welcome to our R&D factory to see it live

Maria-Lina Hedlund CEO

marialina@modvion.com

+46 (0) 76 250 2590

