

W U T I S

Equity Research Division

Vestas

Wind Turbine Manufacturer

Vestas®

Target Price: € 33.8

Current Price: € 26.6

Upside Potential: 27.1%

Recommendation: BUY

Investment Horizon: 1 Year

Vienna, 27.01.2023

Team Overview

Equity Research



**Rodrigo
Gonzalez**

**Head of
Equity Research**

- Task Distribution
- Story Guideline



**Timon
Aberham**

Associate

- Financial Analysis
- Valuation



**Frida
Leka**

Associate

- Industry Research
- Market Overview



**Ilinca
Suciu**

Associate

- Business Model



**Kilian
Frischauf**

Associate

- Share Performance
- Analyses



**Marvin
Knopp**

Analyst

- Financial Analysis
- Valuation



**Christo
Genchev**

Analyst

- Business Overview
- Risks



MSc.(WU)



BSc. (WU)



BSc. (WU)



BSc. – 3rd Sem. (WU)



BSc. – 3rd Sem. (WU)



MSc. – 3rd Sem. (WU)



BSc. – 5th Sem. (WU)

1	Investment Thesis	3
2	Business Overview	5
3	Market & Industry Overview	10
4	Peer Benchmarking	15
5	Valuation	19
6	Conclusion	23
7	Appendix	25

Share Price Performance

Short-term consolidation after a significant increase in share price



Share Price – Major Events

- [1] Mar 2020 (-33.6%) – **Market crash** due to **pandemic** and economic uncertainty leading to a decline in share price
- [2] Mar 2020 - Jan 2021 (+211.3%) – Approval of **acquisition of Mitsubishi Heavy Industries** (709-million-euro deal) enables Vestas to take on a leadership position in the off-shore market segment
- [3] 24th-28th Feb 2022 (+25.8%) – Consolidation of share price positively impacted by **Russian invasion**, as Europe aims to reduce its reliance on Russia accelerating global energy transition
- [4] Oct 2022 - now (+58.9%) – **Strong guidance** for 2023 as well as overcoming past problems lead to an increase in share price

Key Statistics

- **IPO:** 1st May 1998
- **Ticker:** VWS.CO (OMXC20)
- **52-week range:** 131.30-241.90 (DKK)
- **Market Cap:** \$31.55 bn

Competition drifts closer, but Vestas stands out in the industry

Key Investment Highlights



1

Established Player

Decades of **experience** in the market have given Vestas the right platform to become the dominant turbine supplier globally

2

Favorable Regulatory Conditions

Further wind farm installments are expected to be driven by accelerated **government incentive** programs, particularly in the offshore segment

3

Technology

Vestas has historically been at the forefront of **innovation**, a standard which they continue to uphold with their newest turbine designs

4

Capitalizing on Growth Markets

Vestas' market positioning and product quality create the ideal synergies for Vestas to penetrate the **growing offshore segment** and increase their servicing operations

5

Market Concentration

Despite its leading position in the market, Vestas faces **growing competition** from companies located in the **Asia-Pacific** region

6

Capital Structure

Debt conservative approach driving a higher cost of capital for Vestas' relative to its peers



Vestas

WUTIS – Equity Research

Business Overview

Company Overview

Vestas is an established global wind turbine manufacturer, backed by decades of experience

Business Description



Vestas Wind Systems A/S **designs, manufactures, installs, and services** wind turbines, operating in **three segments** (Onshore, Offshore, Service)

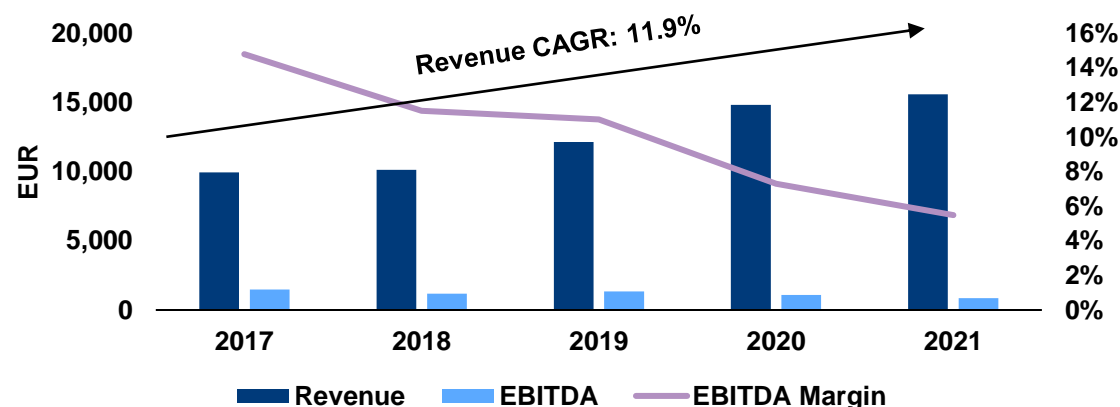


Headquartered in Aarhus, **Denmark** and founded in **1898**, Vestas is now employing over 29,000 people all over the world



Operations across North America, Europe, the Middle East, Africa and Asia

Financials



Management Team



Henrik Andersen
CEO since 2019, with managing experience of over 18 years



Hans Martin Smith
CFO since 2022, with over 19 years in Vestas

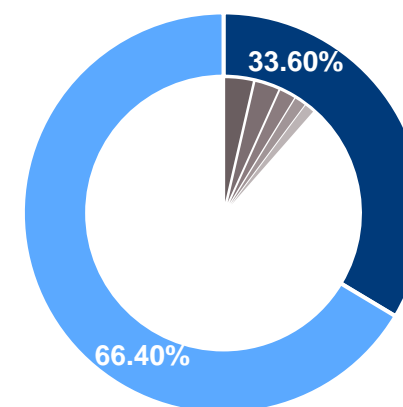


Christian Venderby
CSO (Service) since 2019



Tommy Nielsen
COO since 2019, over 25 years in the company

Shareholder Structure












■ Institutions
■ Public and Other

■ Vanguard Group Inc.
■ Baillie Gifford & Co
■ Norges Bank Investment
■ Management
■ Schroder Investment
■ Management Ltd.
■ Nordea Investment
■ Management AB

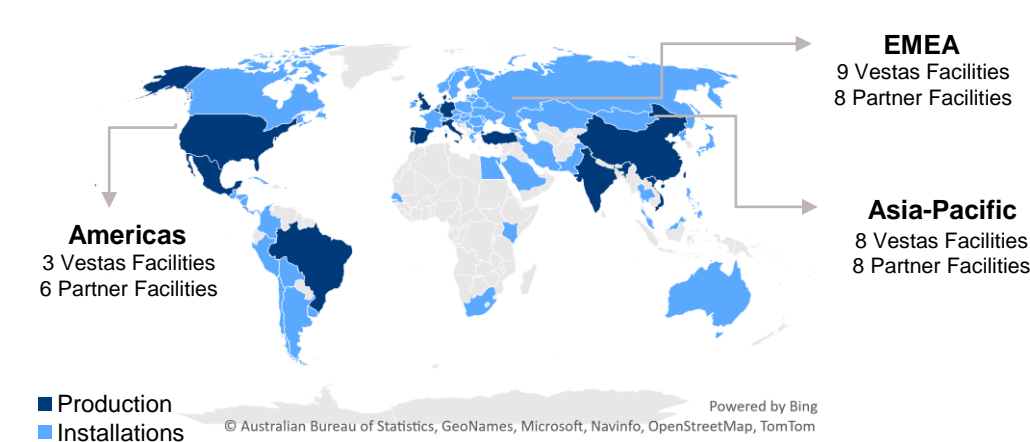
Business Model

Vestas is able to deliver quality operations across its global business segments

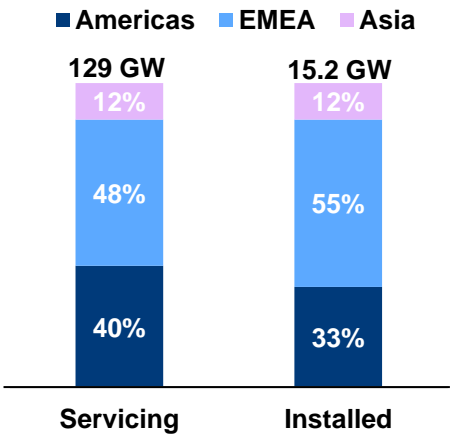
Business Overview

Business Segments	Power Solutions		Services	Other	Revenue Split					
		Onshore Core Business		Offshore Young Market		Onshore & Offshore		Vestas Ventures		75%
	Vestas is a Global Leader in developing, manufacturing and installing onshore wind turbines, with over an experience of over 40 years		Having finalised the integration of MHI Vestas Offshore Wind in early 2021 and introduced the V236-15.0 MW™, Vestas is firmly disrupting the market		Service solutions and performance optimisation for Vestas and non-Vestas wind turbines globally to improve business case certainty			Power-to-X		9%
								Project Development		16%

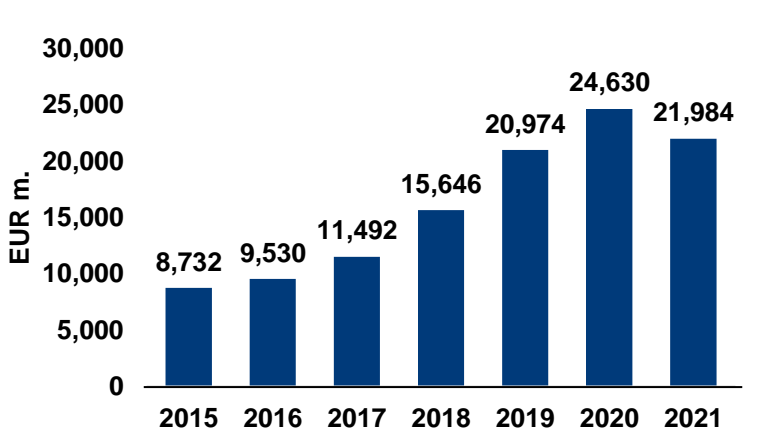
Global Operations



Vestas Capacity 2021



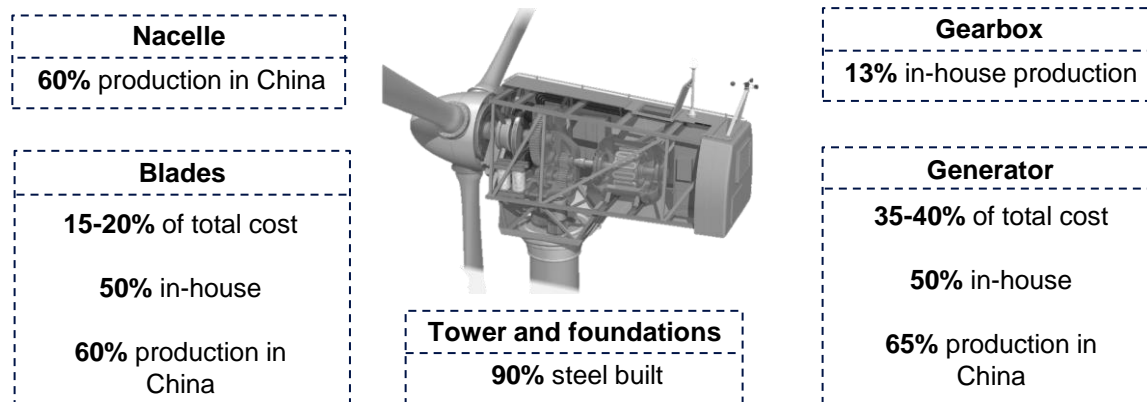
Vestas Order Backlog



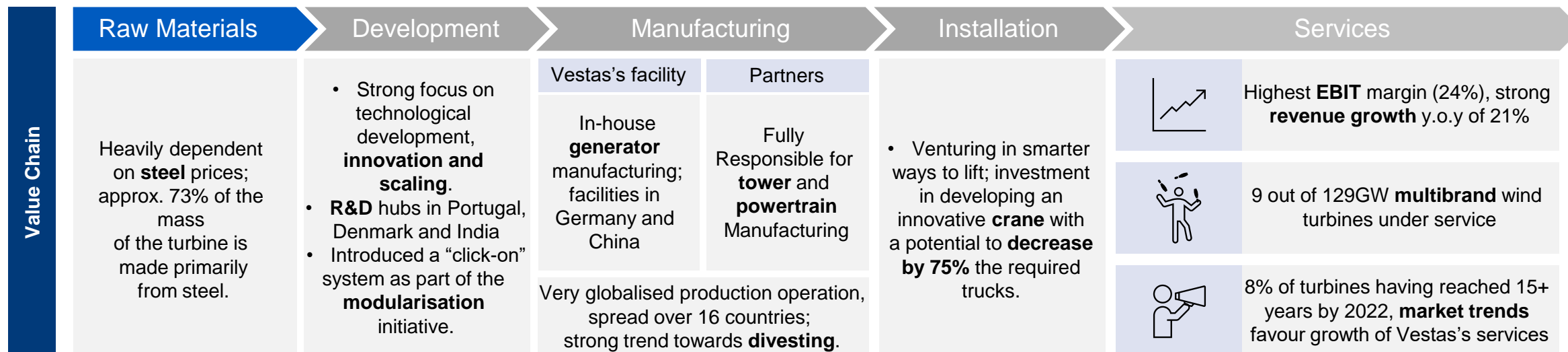
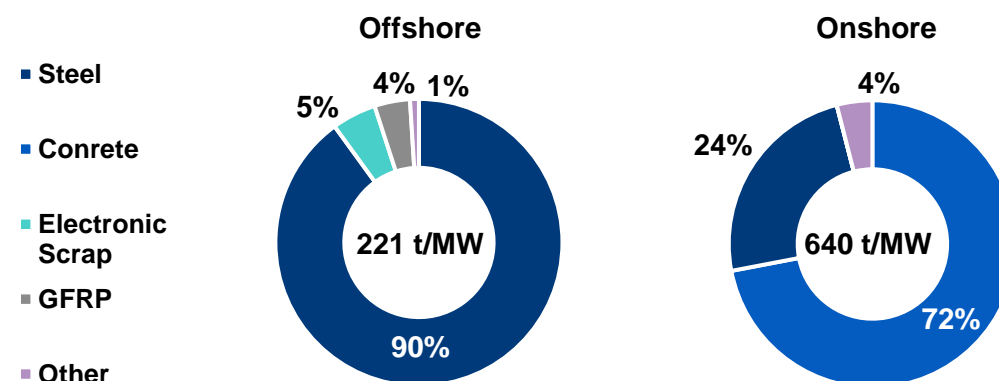
Manufacturing Components

High manufacturing quality is key to a superior product

Turbine Component Split

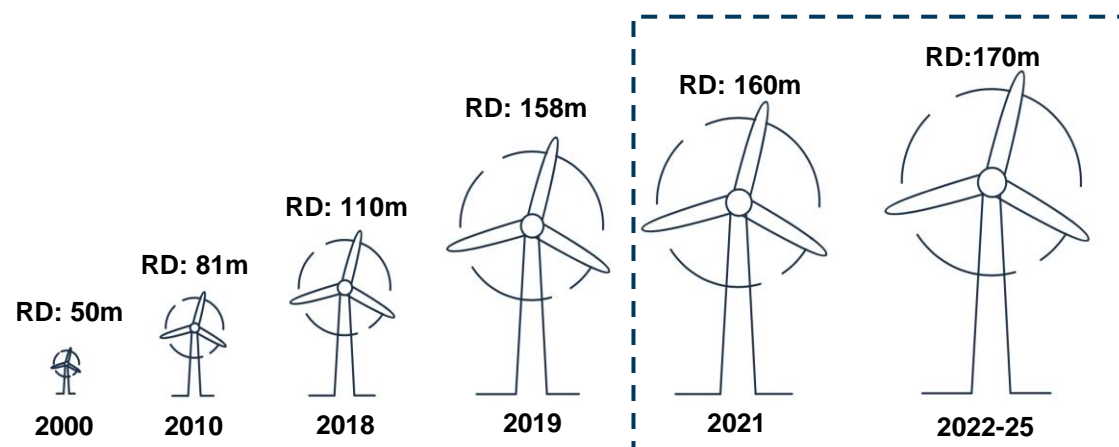


Main Materials Breakdown for Offshore and Onshore Wind Farms



Innovation and product development remain at the core of Vestas' high performance

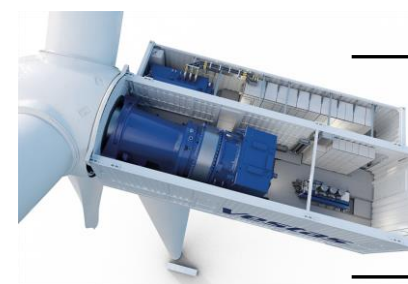
Historic Development of Rotor Size & Current Product Mix



Modularization



Vestas has been **developing** their concept of modularization **since 2012**, launching their **first modular design in 2019**



The nacelle is broken down into **two main components**

Designed to fit standard **transportation constraints**

Important step in **circularity initiative**

Product Lines	2MW Platform	
	+54 GW	4 Models
	Designed for onshore segment	Energy Returns: 26-35
	4MW Platform	
	+61 GW	20 Models
	Rotor Diameter: 105-155m	Energy Returns: 31-50
	Offshore	
	+8GW	4 Models
	Designed first 15MW Turbine	Longest Blade: 236m

EnVentus
Fully Modular Components
4 Main Models
Allows for greater customization
Energy Return: 34-42

Benefits



Synergies of Onshore and Offshore

Side and main components can be shared across different turbine models. Allows for design standardizations.



Increasing the Lifetime of the Turbine

Using a simple click-on system, it becomes much easier to replace outdated or defective components, with newer, more efficient ones.



Supply Chain

As turbine sizes are increasing over time, the ability to easily transport turbines and components without additional costs remains crucial.



Vestas

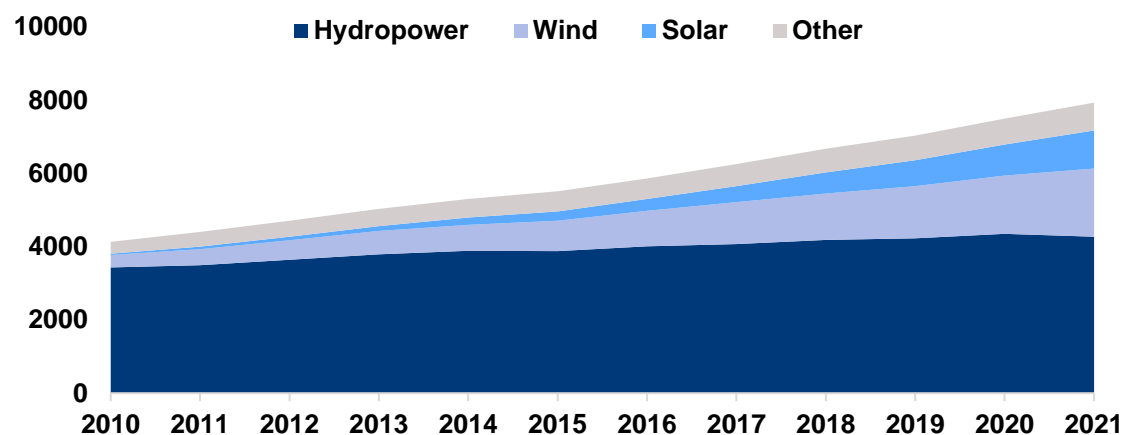
WUTIS – Equity Research

Market & Industry Overview

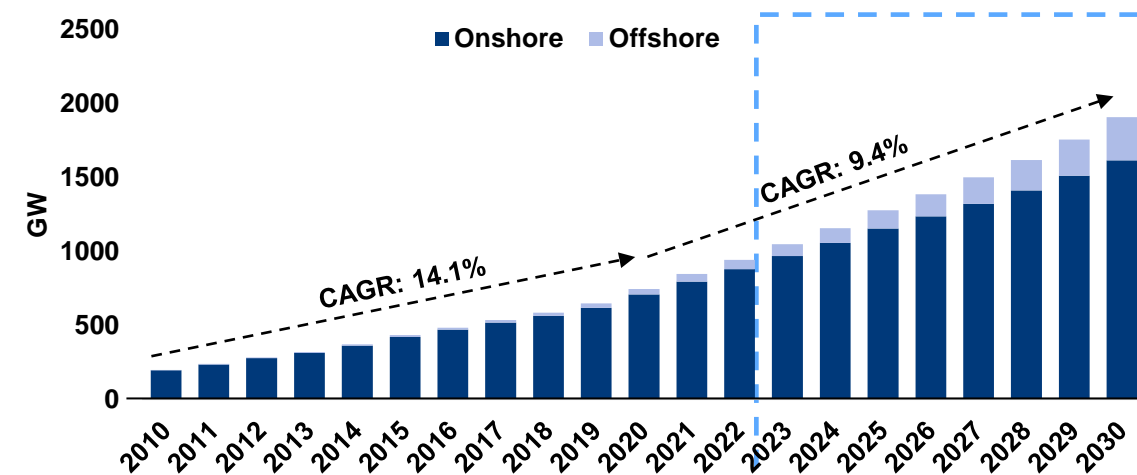
Market Overview I

2021 presented a record year of installments in a consistently growing market

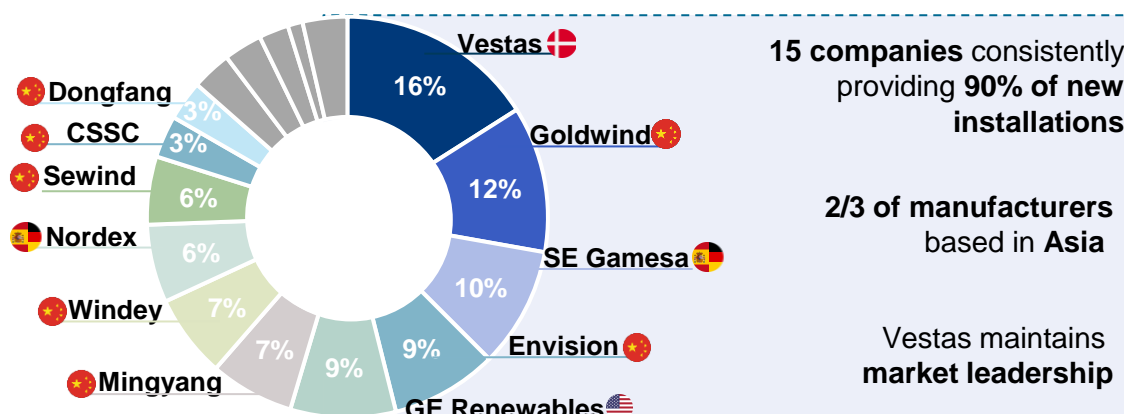
Renewable Energy Generation Globally



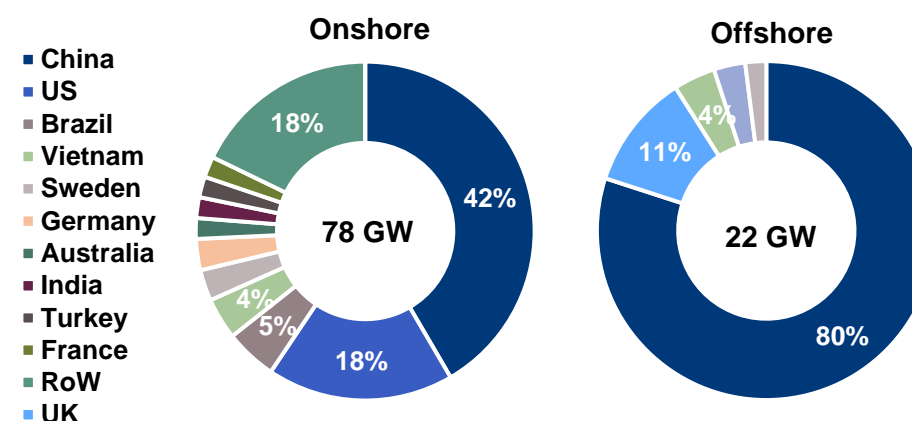
Global Cumulative Installed Wind Power Capacity



Top Wind Turbine Suppliers in the Annual Global Market 2021

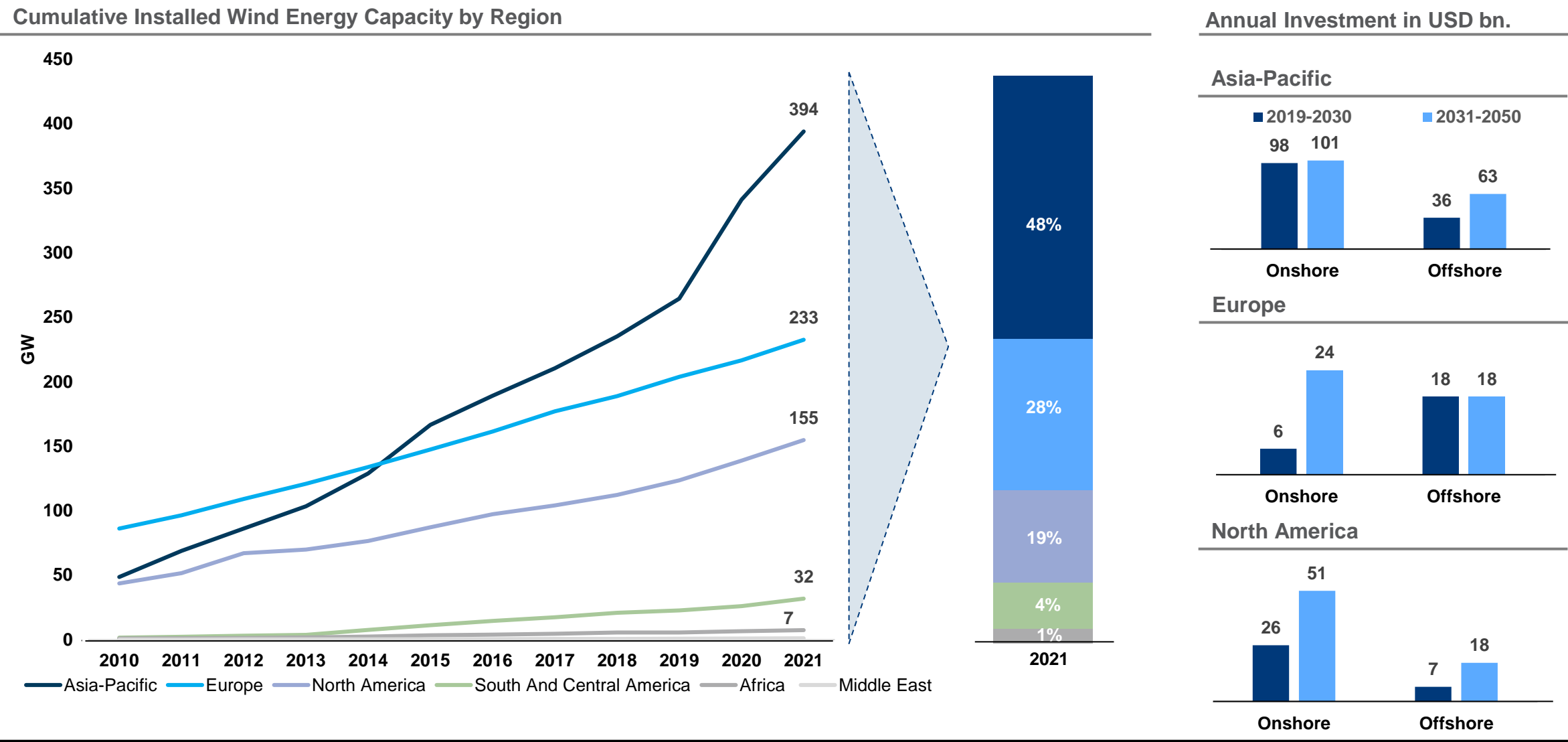


Geographic Breakdown of New Installations



Geographic Breakdown

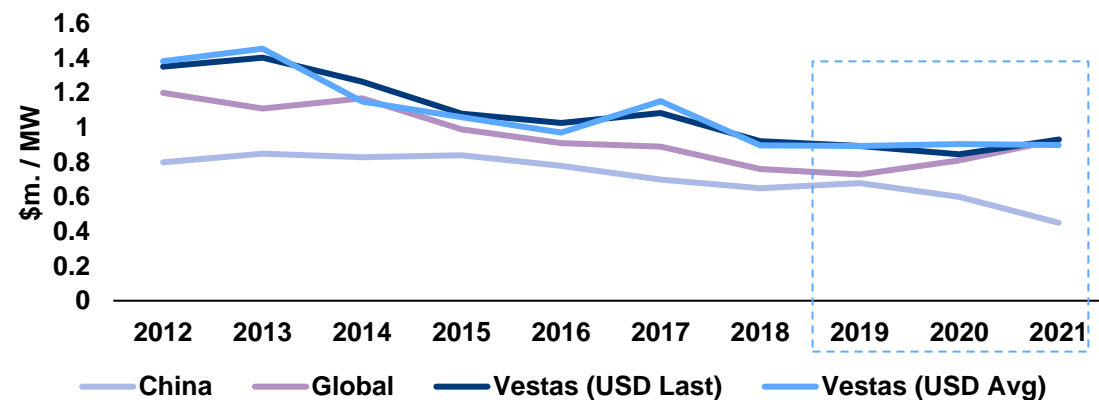
Asia currently maintains the highest number of installed wind energy capacity with plans of growth in the future



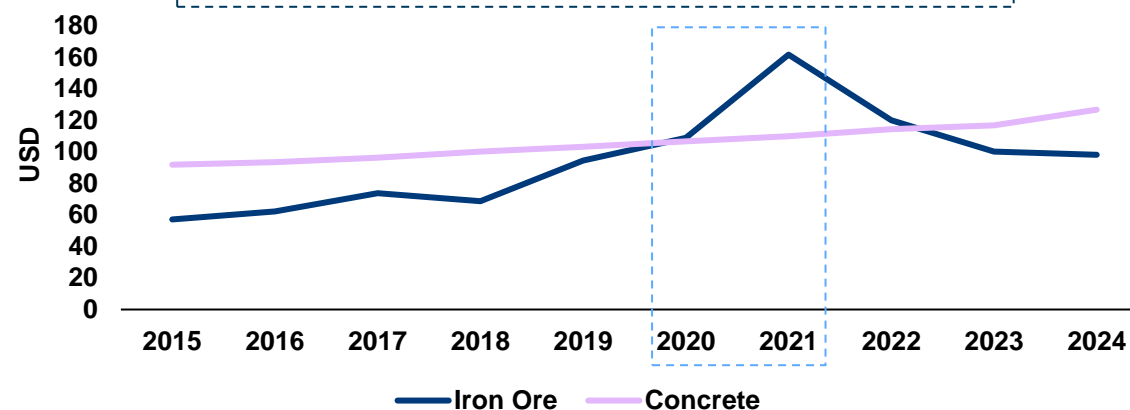
Market Overview II

Despite increases in raw material costs Vestas was able to maintain consistent outputs

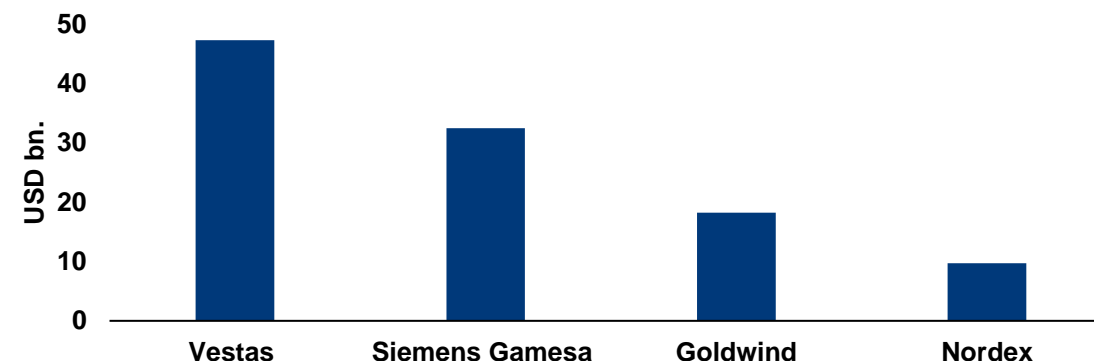
Development of Average Selling Price and Raw Material Costs



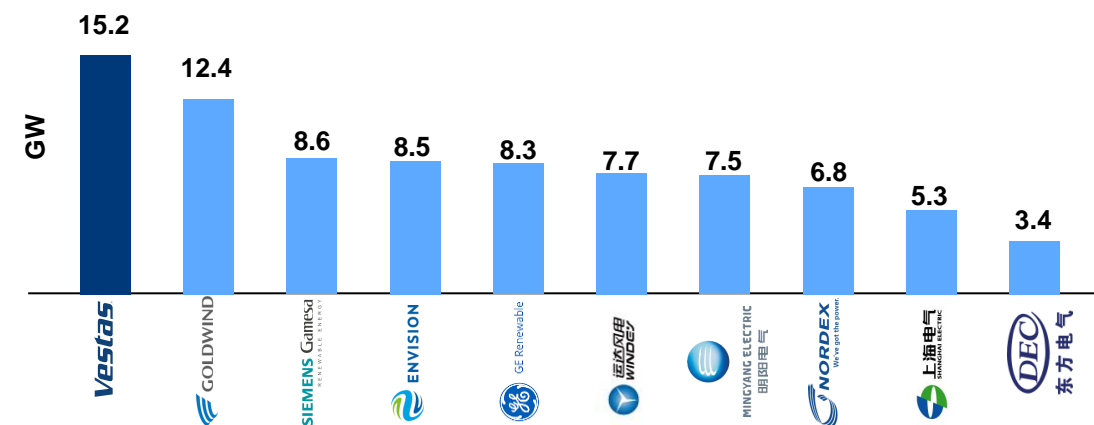
The overall trend of **decreasing ASP** faced pressures arising from **increasing raw material costs** during 2020 and 2021



Comparison of Backlog and Total Installed Capacity in 2021

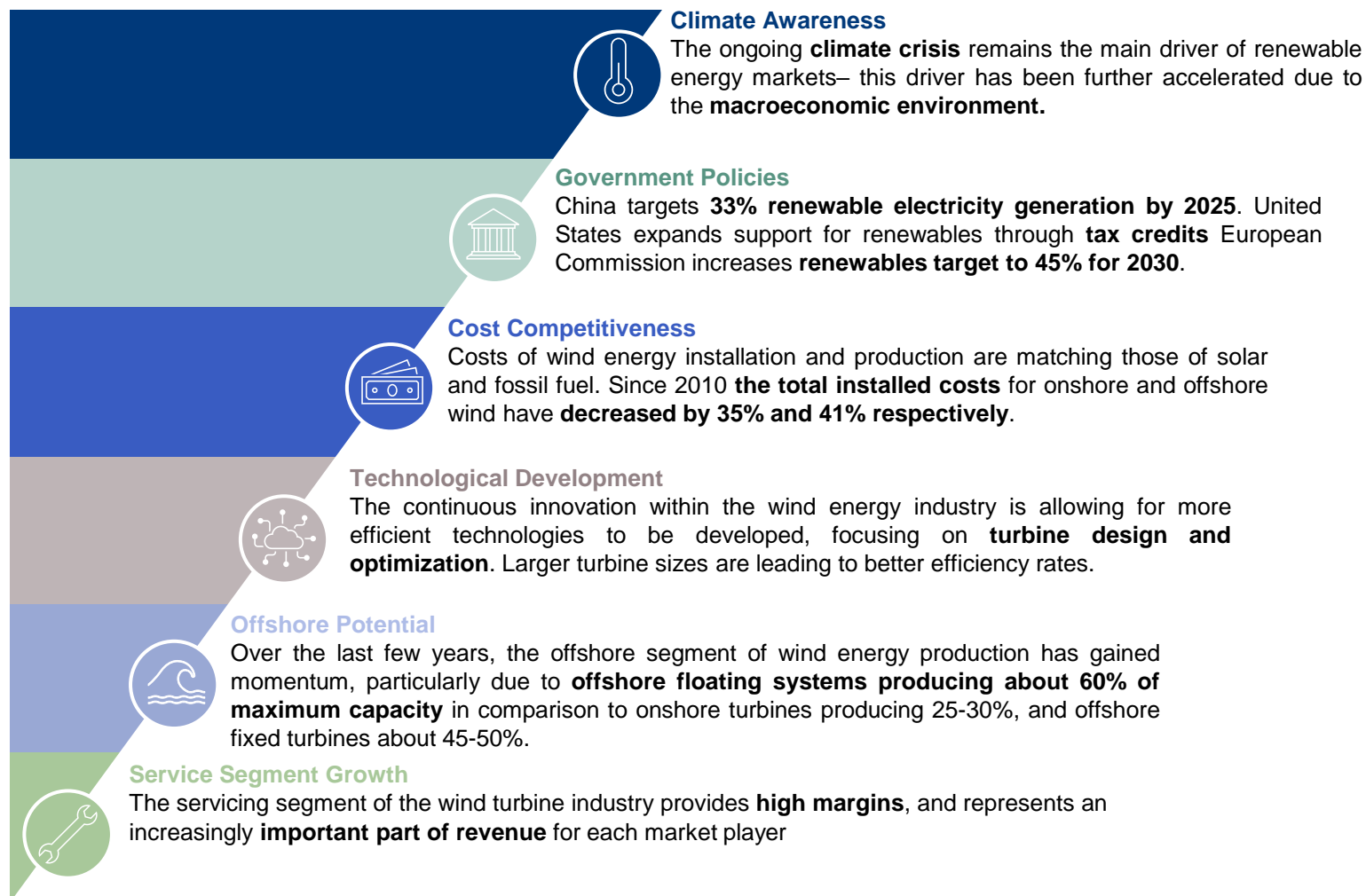


Vestas maintains the **greatest value of order backlog** and delivered the **greatest number of new installments** in 2021

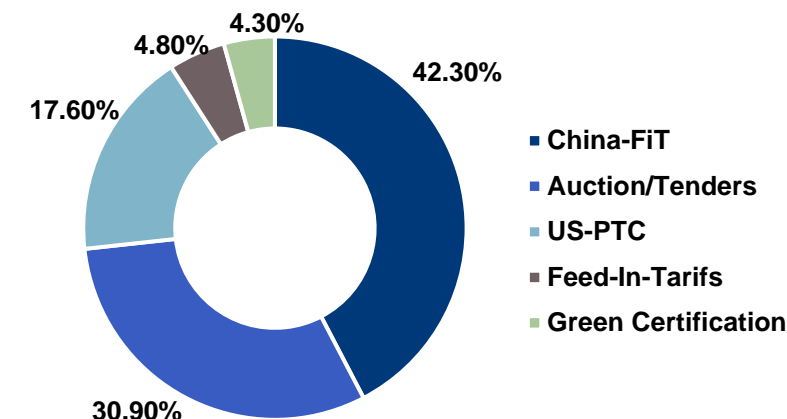


A stable market environment driven by government incentives provides a favorable outlook for wind investments

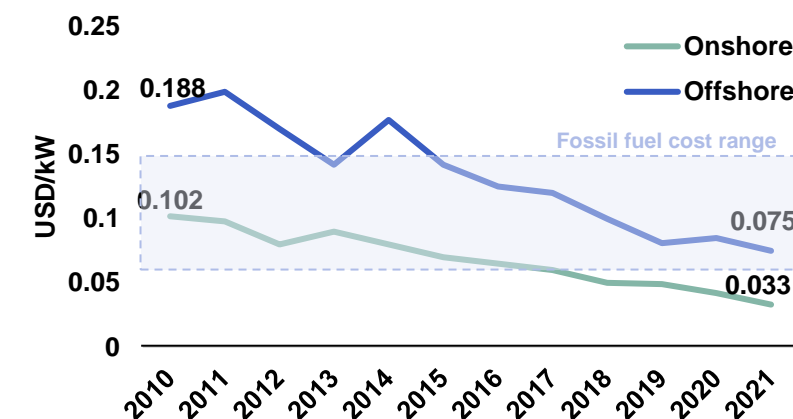
Current Market Trends Driving Industry Growth



Wind Energy Investment Incentive Schemes 2021



Levelized Cost of Electricity





Vestas

WUTIS – Equity Research

Peer Benchmarking

Comparable Benchmarking I

Strong winds coming from Asia

W U T I S

Comparable Companies

Best Peers

SIEMENS Gamesa
RENEWABLE ENERGY

GOLDWIND

Tier I

INOXWIND
Greening INDIA

MINGYANG ELECTRIC
明阳电气

SUZLON
POWERING A GREENER TOMORROW

NORDEX
We've got the power.

Similar Companies Not Included

ENVISION

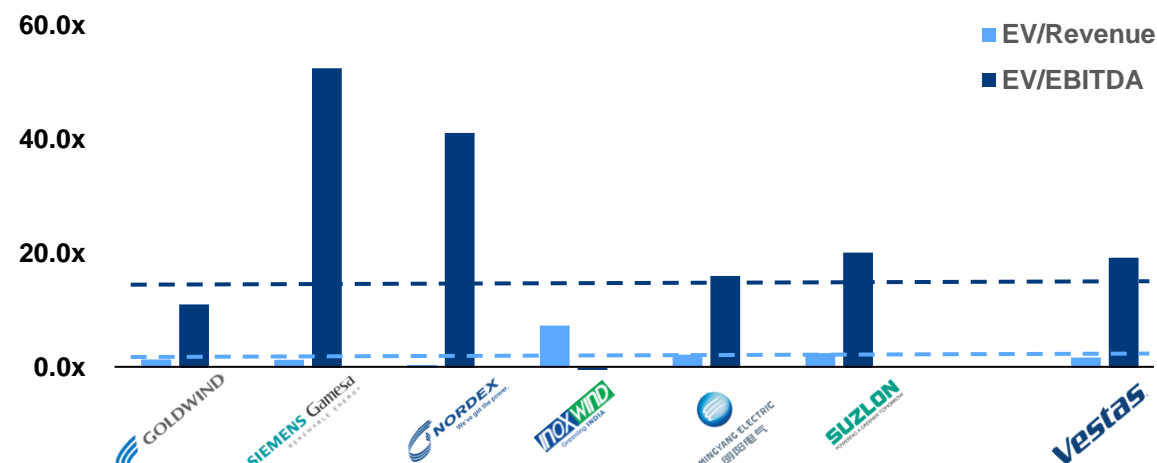
Ørsted

上海电气
SHANGHAI ELECTRIC

GE Renewable Energy

DEC
东方电气

Comparable Company Analysis



Peer Group Rationale



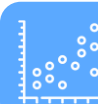
Wind Turbine Producers

The best peers were chosen by looking at the companies operating in the same business segments, and having similar operations and revenue.



Offshore, Onshore, & Service Segments

Best Peers only include companies for which the main revenue streams are generated in those three end markets.



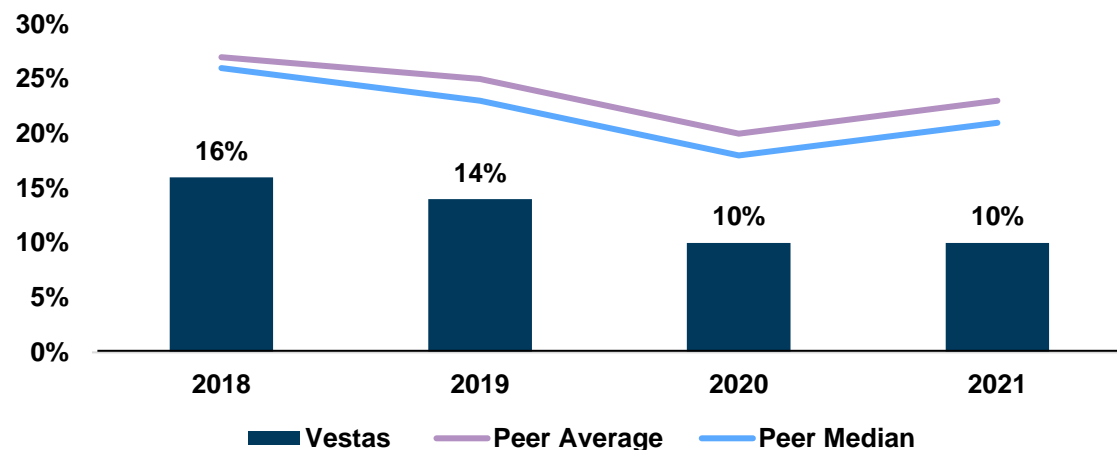
Common Theme

Companies similar in size are considered, further extreme outliers got excluded, in order to not distort multiple valuation.

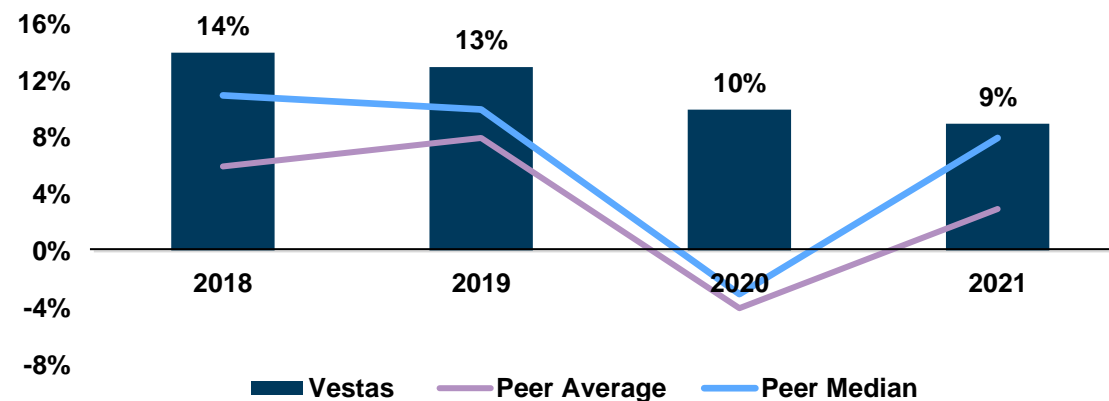
Comparable Benchmarking II

Vestas has a favourable position in spite of industry-wide declining margins

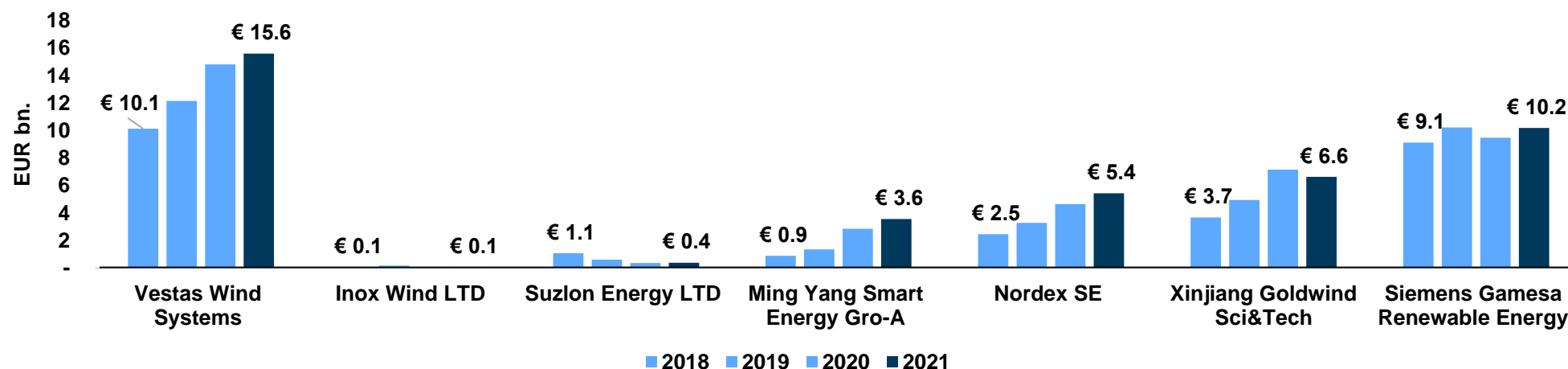
Gross Margins



EBITDA Margins



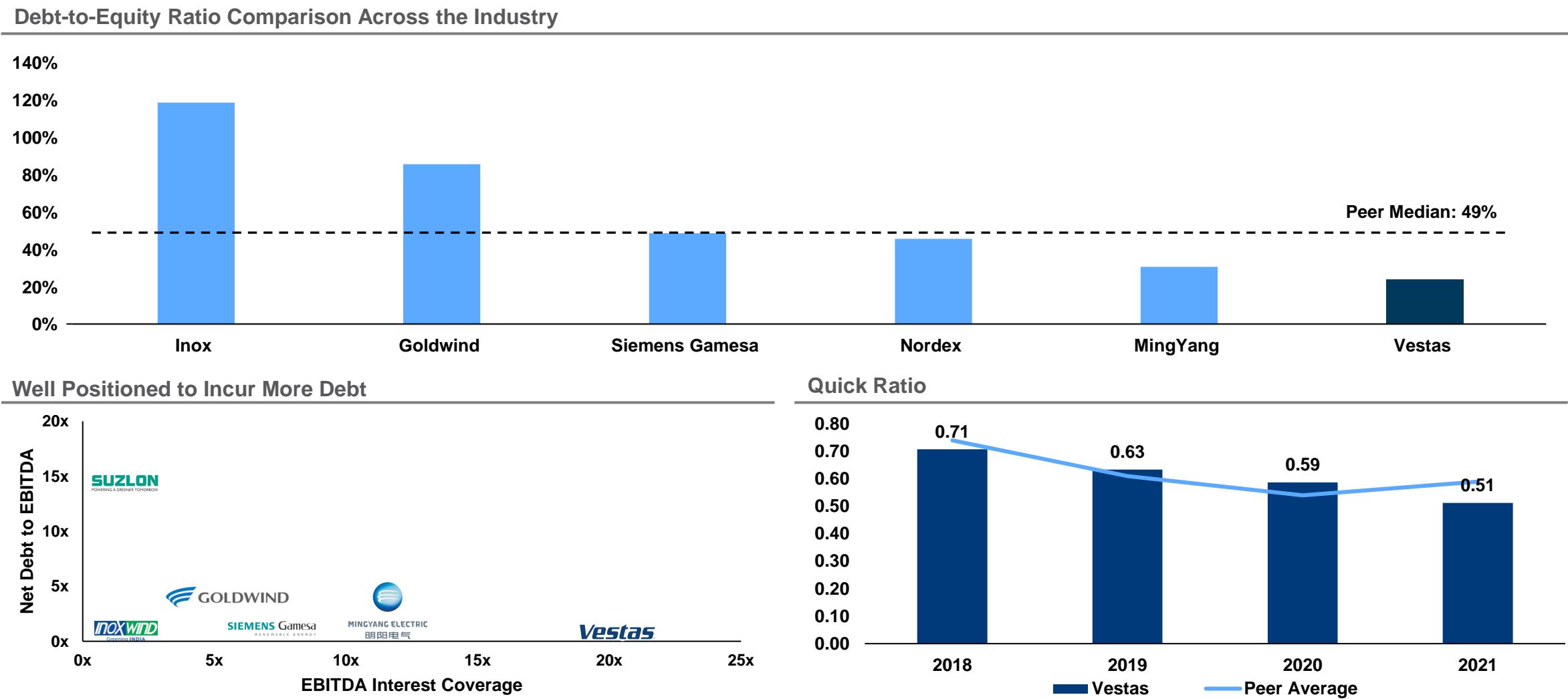
Revenue Comparison



In addition to a **significant increase in revenues**, Vestas has been able to maintain their **market leadership**, and even **widen the gap with Siemens Gamesa**.

Comparable Benchmarking III

With its current D/E Ratio Vestas has the capacity to easily take on more debt for future development





Vestas

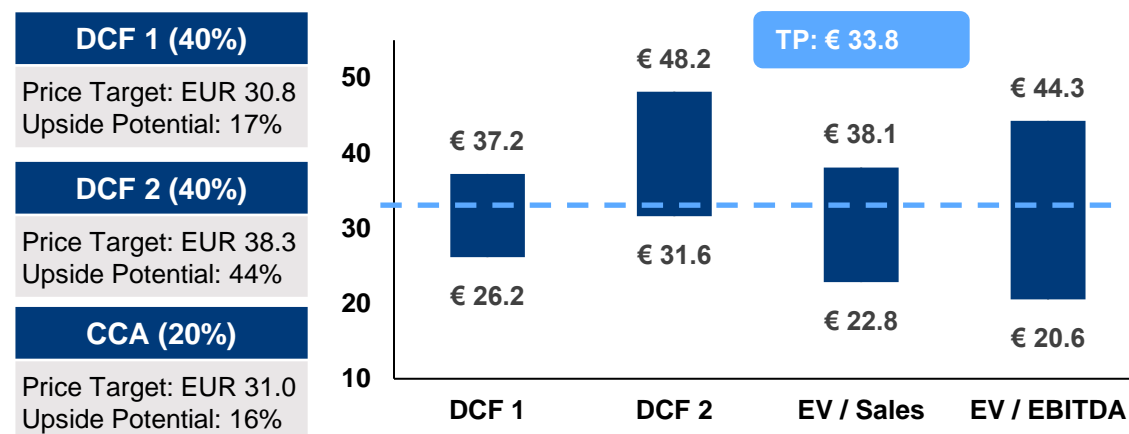
WUTIS – Equity Research

Valuation

Valuation Summary

27 % upside potential derived from a set of valuation methods with sound fundamentals

Valuation Approach with DCF Overweight



Margin Assumptions Based on Phasing Out of Fixed Price Contracts

Costs of Goods Sold
Gross Profit Margin improves at a CAGR of 8% as price increases are passed on and inputs cost fall, resulting in a 2029 sustained 20% already seen in the past

OPEX
High R&D and SG&A expenses incurred as offshore is developed to a mature stage, peaking in 2025 and gradually decreasing to historical levels thereafter

Key Margins see significant Improvements

- Negative EBIT margin of 4% in LTM 3Q22 peaks at positive 14% in 2029 with further growth potential due to technology innovations
- EBITDA and EBIAT increase in a similar manner to 19% and 10% respectively

Revenue Assumptions: Two Main Drivers

1) Green Transition

Total capacity to reach 2,000 GW by 2030 on the back of favourable regulation

2) Offshore Segment Growth

V236-15.0MW turbine will boost sales and enable Vestas to become market leader

Wind Capacity Addition

Vestas' deliveries to increase in line with total additions, resulting in a revenue CAGR of 10% and stable share of Service segment

Sales Mix

Costly offshore technology sales inflate at a CAGR of 20% to make up 33% of revenues by 2029, compared to c. 15% historically

Total sales rise at a CAGR of 11% in the projection period, more than doubling from EURm 14,255 in LTM 3Q22 to 32,124 in 2029

DCF Key Metrics Show Need for Improving the Capital Structure

Capital Structure
We consider a D / E split of 20% / 80% scenario in DCF 2 as currently inefficient ratio of 8% / 92% is very likely to be further adjusted by new CFO

10.5% WACC
9.5%

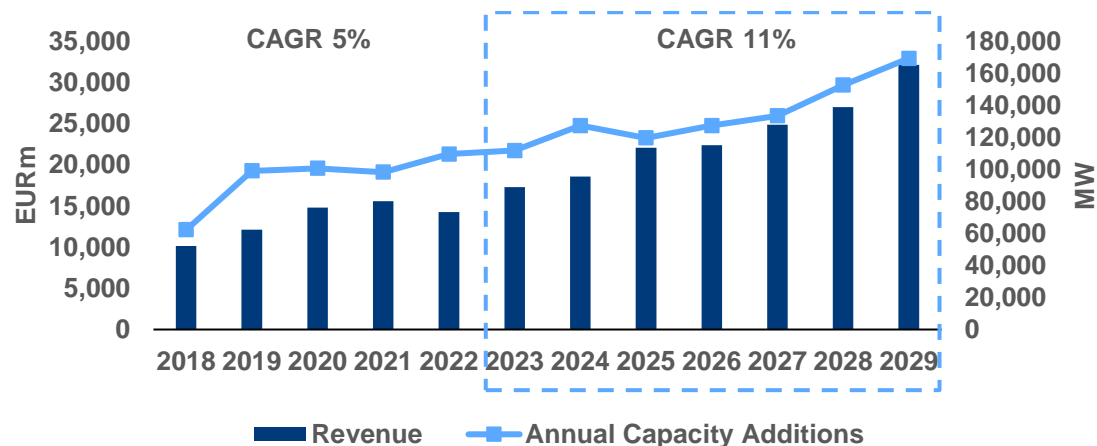
WACC
Taking into account elevated risk sentiment in the stock market and rising credit costs leads to CoE of 11.2% and CoD of 3.1%

Terminal Growth Rate
Terminal Value is calculated with to a perpetual growth rate of 4.5%, derived from a moderate increase of 115GW wind p.a. compared to 200GW for Net Zero

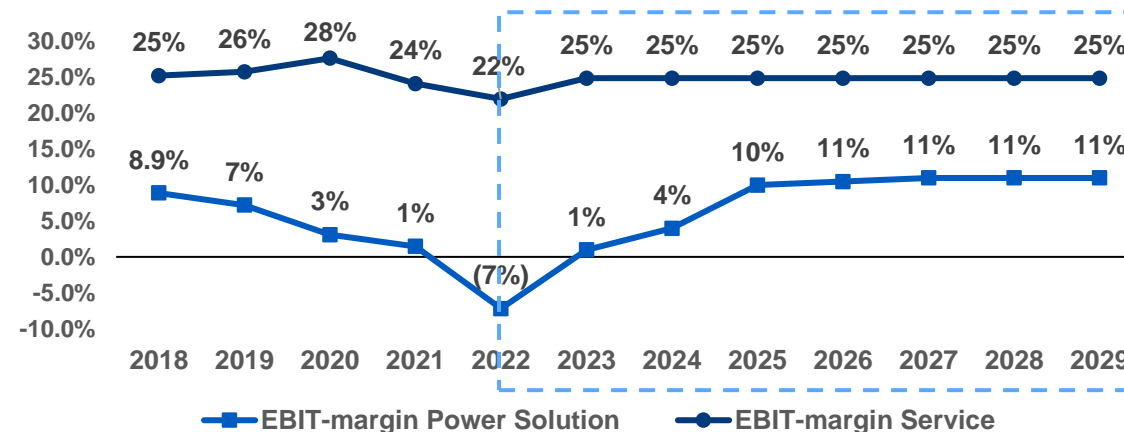
DCF Analysis

Stable and conservative Free Cashflows result in solid upside potential

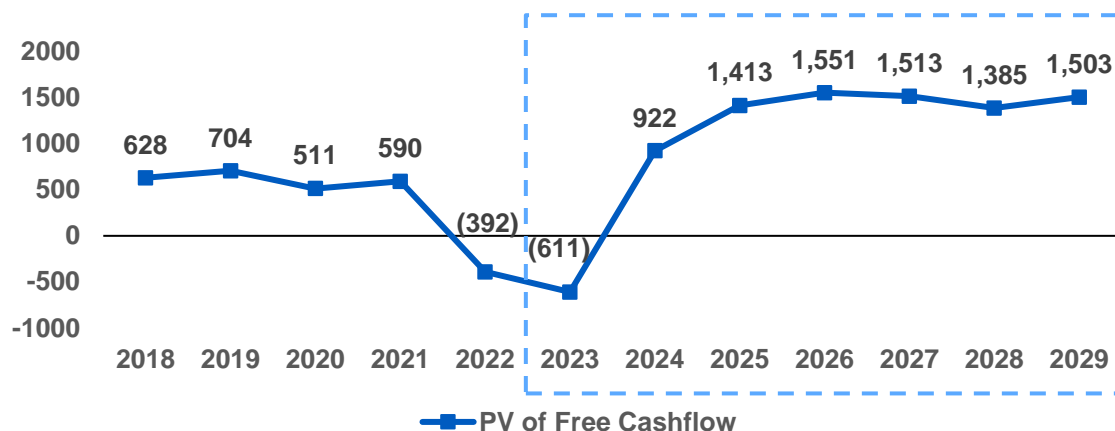
Revenue Growth and Capacity Additions



Operating Assumptions – Power Solutions & Service EBIT Margin



Forecasted Free Cashflow (EUR m.)



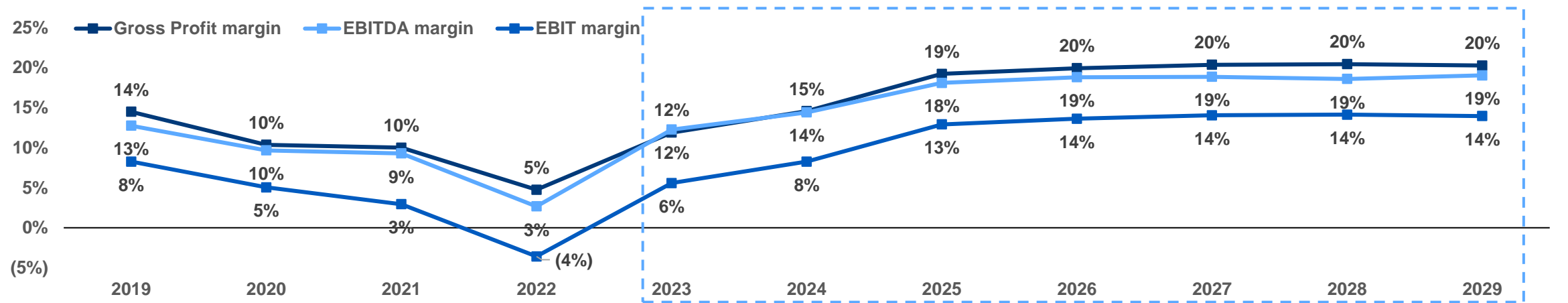
Sensitivity Analysis – WACC & Terminal Growth Rate (Share Price in €)

		Perpetuity Growth Rate				
		3.5%	4.0%	4.5%	5.0%	5.5%
WACC	8.5%	40.4	44.4	49.5	56.0	64.6
	9.0%	36.1	39.3	43.2	48.2	54.5
	9.5%	32.50	35.11	38.25	42.09	46.88
	10.0%	29.47	31.63	34.18	37.24	40.97
	10.50%	26.88	28.69	30.79	33.27	36.25
	11.00%	24.65	26.17	27.92	29.97	32.39
	11.50%	22.69	23.99	25.47	27.18	29.18

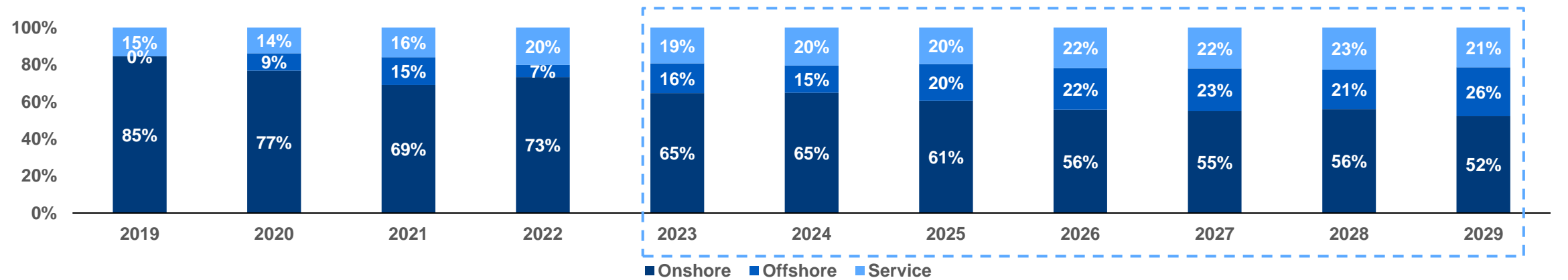
Financial Indicators

Margins will recover from recent unfavourable market conditions

Margin Development



Revenue Segment Split



A photograph of an offshore wind farm at sunset. The sky is a gradient of blue and orange, and the water is dark blue with ripples. Several wind turbines are visible, with the one in the foreground being the most prominent. The text is overlaid on the left side of the image.

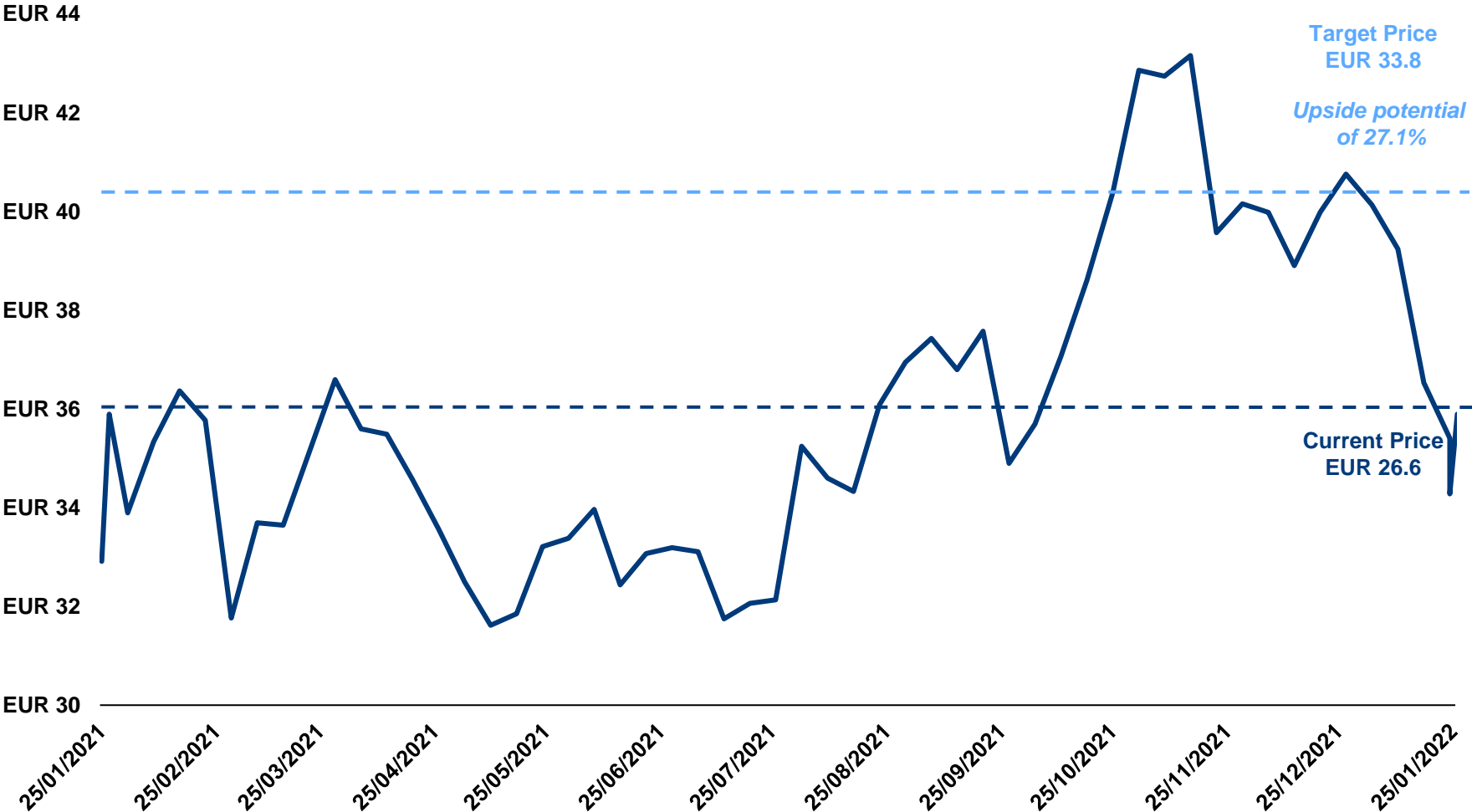
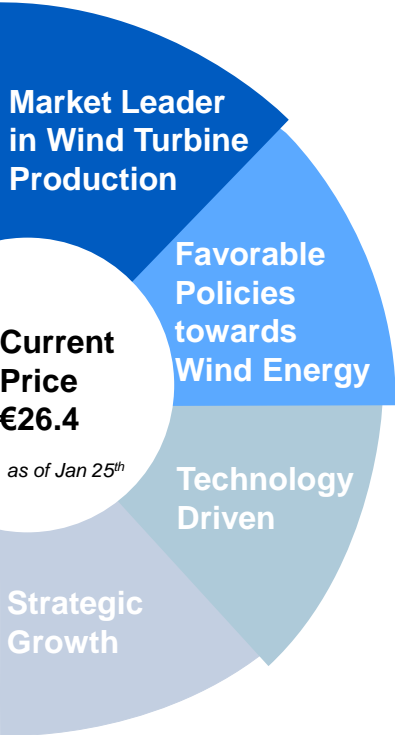
Vestas

WUTIS – Equity Research

Conclusion

Conclusion

Wind Energy? We're big fans...





Vestas






WUTIS – Equity Research

Appendix

Corporate Strategy	Sustainability
Industry Maturation & Profitability To ensure future success, the industry must mature as fast as it has grown, becoming more industrialised, standardised, and disciplined. It must also become more profitable.	Circularity Roadmap Program to accelerate progress towards zero-waste turbines
Extending Leadership in Onshore and Service Vestas will focus on key markets by leveraging technology development, market-leading products, modularization, and quality in everything they do	Net Zero 2030 Vestas aims for net zero within own operations by 2030 including partners and suppliers
Building a Leading Position in Offshore Introducing competitive technology, developing the V236-15.0 MW product efficiently; competitive supply chain; strengthen global offshore functions; synergies from integration	System-Wide Electrification Goal of expanding renewable energy consumption by driving electrification across the entire energy system
Supply Chain and Operations Maturation Additionally, the company is also prioritizing supply chain optimization, mitigation of disruptions, and strong collaboration with suppliers and customers	Industry Growth Sustainability in industry requires profitability and growth

Appendix: Catalysts

A variety of events may impact Vestas' share price

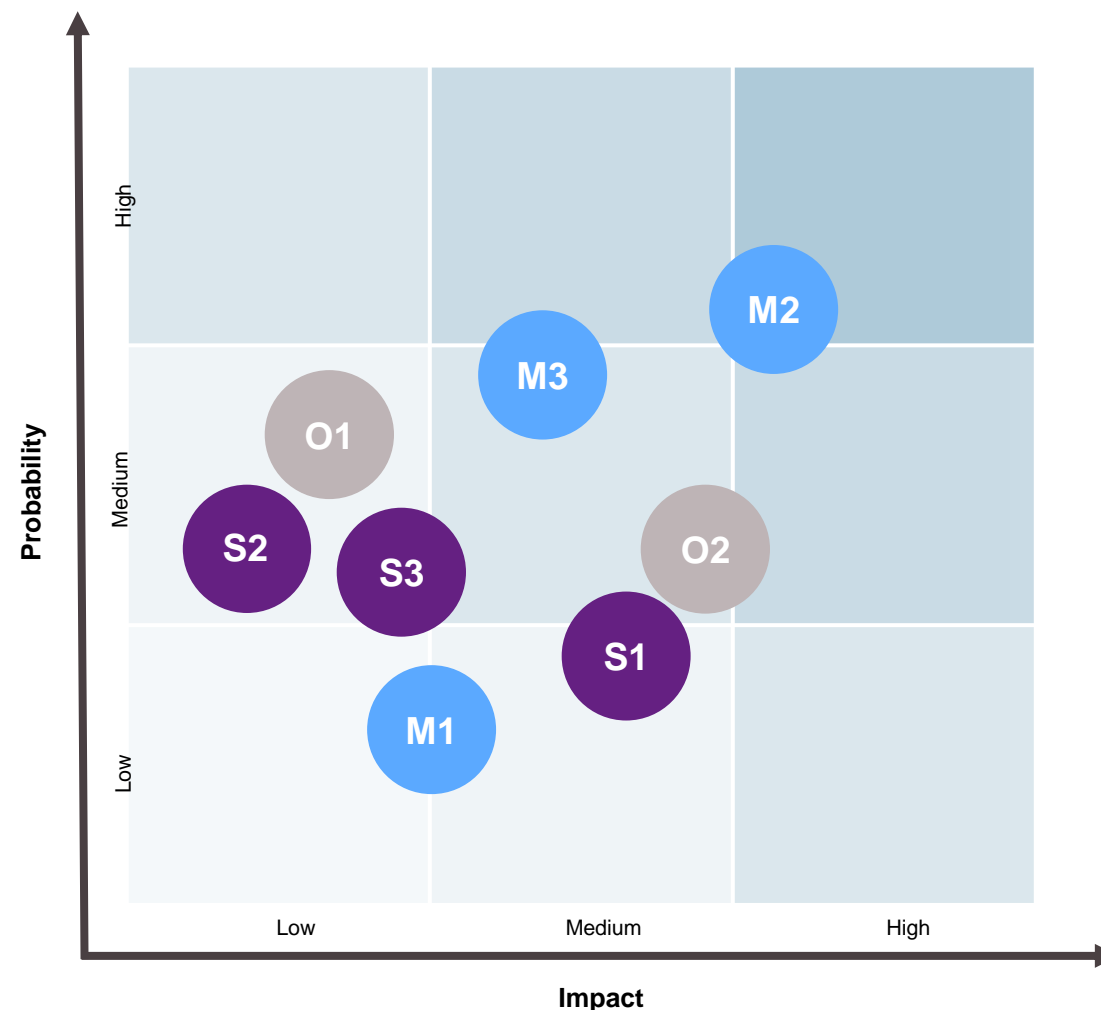
Catalyst	Type	Influenced Factor	Estimated Impact on Share Price
Halt of government incentives	Hard	Revenue Pipeline	<ul style="list-style-type: none"> Strong – Vestas depends on government incentives that promote the adoption of wind turbines as the levelized cost of electricity is higher than non-renewable energy sources 
Market concentration	Soft	Margins	<ul style="list-style-type: none"> Medium – Acquisitions could lead to further market concentration which could further increase competition among the biggest producers 
Russian invasion	Soft	Revenue	<ul style="list-style-type: none"> Medium – The Russian invasion has reshaped the energy sector, especially in the EU that has since been decreasing energy dependence on Russia 
New acquisitions or joint ventures partnerships	Hard	Revenue Reputation	<ul style="list-style-type: none"> Medium – Acquisitions and the establishment of partnerships will impact future performance by diversifying the company's portfolio and increasing market leadership in segments 
Spreading awareness about climate change	Soft	Revenue Projects	<ul style="list-style-type: none"> Strong – Increasing societal support will lead to behavioral change in politics, increasing governmental support initiatives 

Appendix: Company Specific Risks

Fierce competitions and supplier dependency are key risks to Vestas

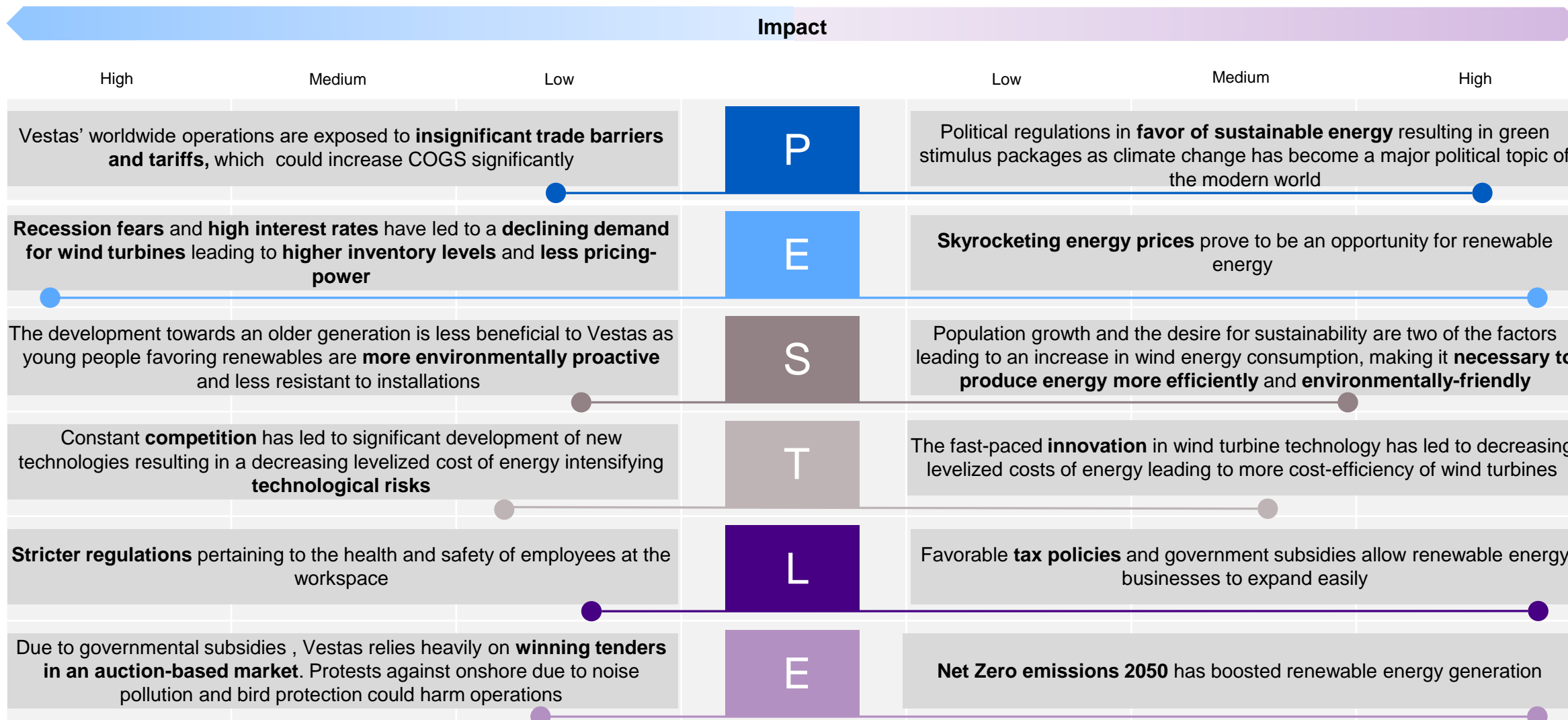
M1	Operating in complex markets with various risks such as security challenges , impacts on local communities, protectionism and trade barriers
M2	Supply chain disruptions from factors such as port congestions, shortages in transportation, and adverse weather conditions
M3	Fast product cycles and the need to continuously innovate and launch new products to stay competitive, hampering profitability
O1	Although the company has done its part to mitigate financial risks, interest rates , commodity prices and currency fluctuations could all impact profits
O2	Cyber risks such as hacking or system failure that can disrupt operations and lead to loss of intellectual property and personal data
S1	Vestas could face competition not only from its own industry but from other renewables , like solar, which make be more cost-competitive
S2	Public opposition to wind turbines due to aesthetic, environmental or health concerns
S3	Russia - The risk of not being able to re-enter the Russian market poses a potential threat to the company's operations and profitability.

Market **M** – Operations **O** – Strategic **S**



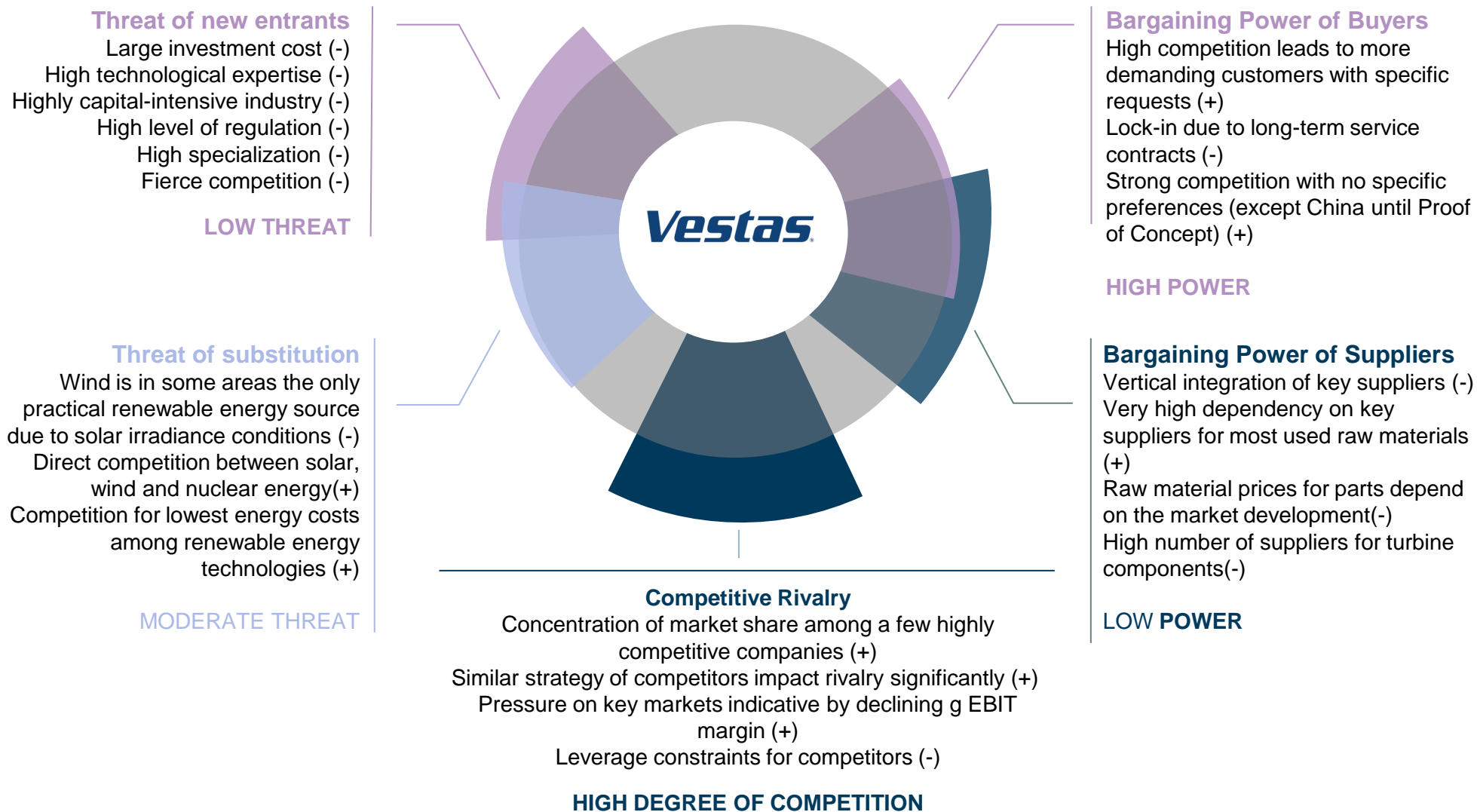
Appendix: PESTLE Analysis

Vestas is subjected to several risks and opportunities generated by the macro environmental factors



Appendix: Porter's Five Forces

The wind turbine industry is characterized by a high rivalry among competitors



Appendix: SWOT Analysis

Strengths predominate weaknesses, enabling organic growth

STRENGTHS

- Outstanding **product quality and technology** – also compared to the largest wind turbine manufacturers
- **Market leadership** position and **brand recognition in 88 countries**
- Strong **client relationship** due to long-term service contracts
- Strong **focus on R&D** allows developing innovative products needed to succeed in a competitive environment
- **Global manufacturing** sites ensuring supply confidence
- **Focus on sustainability** (most sustainable company in 2022) and strategic investments in the key growing off-shore market segment

OPPORTUNITIES

- **Robust outlook** for wind turbine demand (accelerated by governmental subsidies)
- **High-growth industry** due to investments and transition to sustainable sources of energy
- Strategic investments in **off-shore segment** enable Vestas to become a market leader equipped with superior technology due to new offshore turbine

Vestas

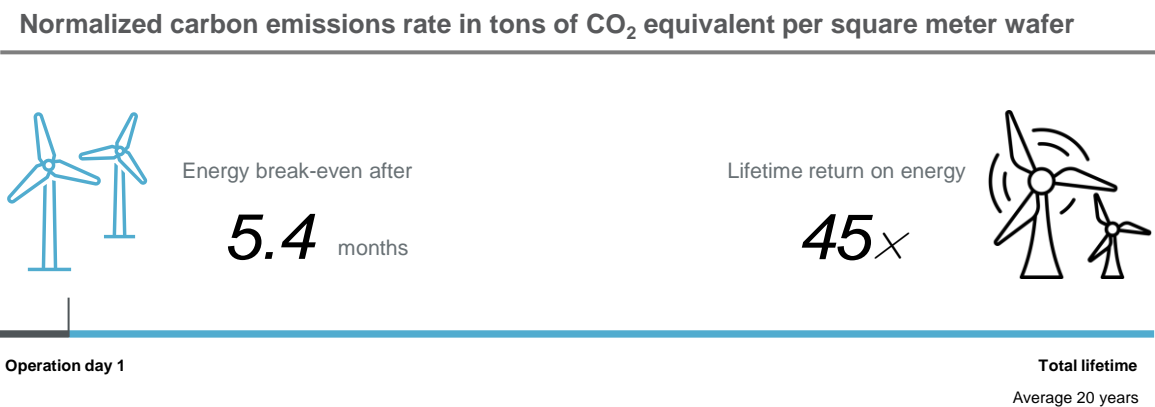
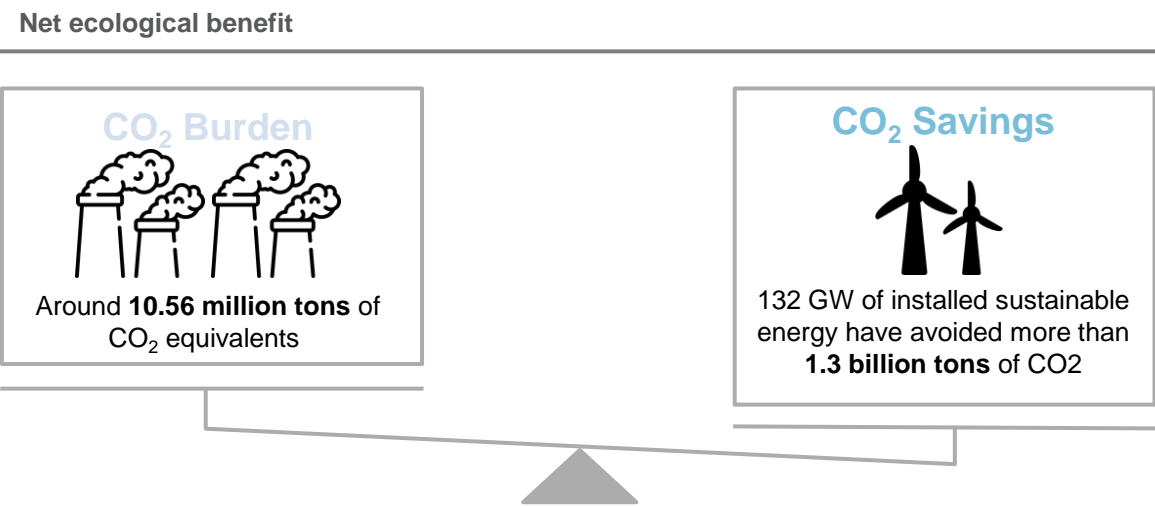
- Small market share in growing, high potential markets like China and high dependence on core markets like US and Denmark
- Vestas **depends on government initiatives** to support green energy due to higher energy costs compared to oil and gas

WEAKNESSES

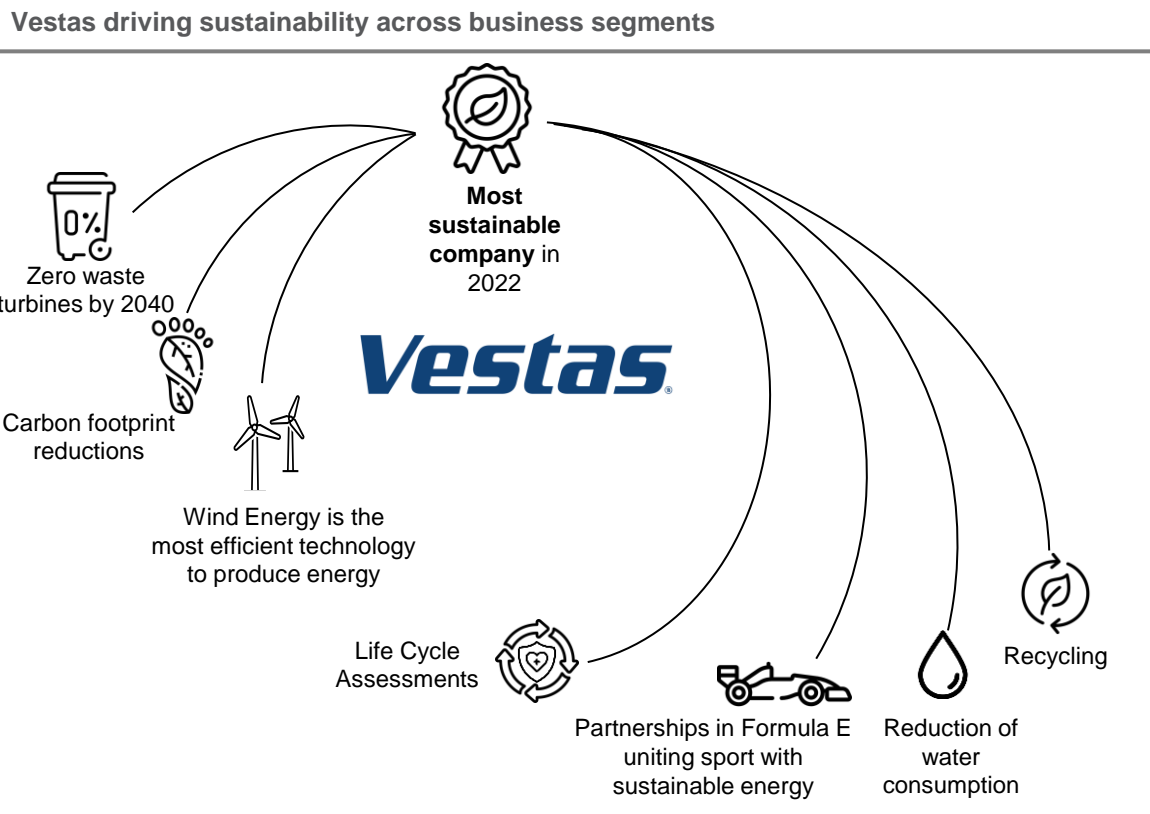
- **Political environment** (e.g. trade wars) could impede Vestas' global operations
- **Protests** against onshore turbines due to noise pollution and bird protection
- Increasingly **complex, dynamic and highly competitive industry (entire energy sector)** making it more difficult to keep pace

THREATS

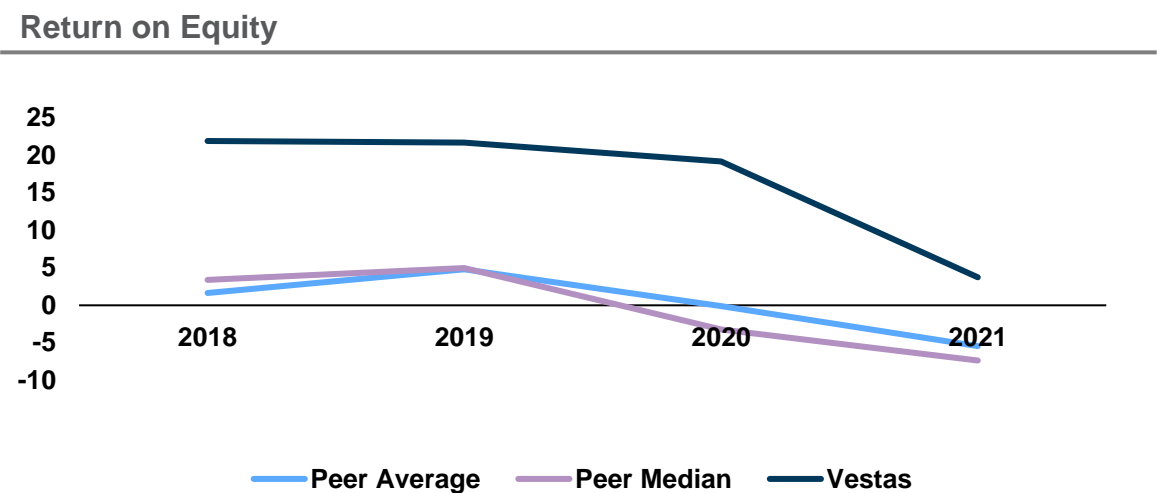
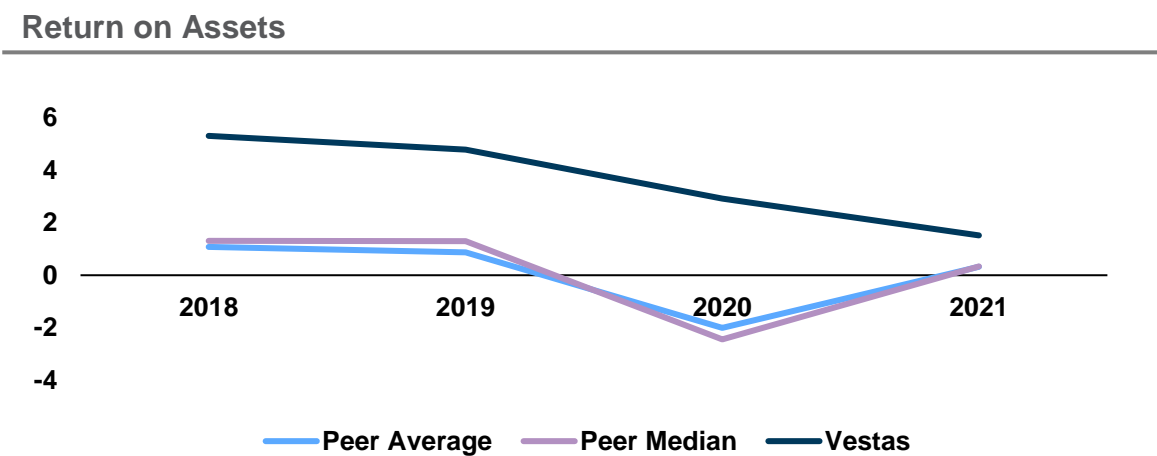
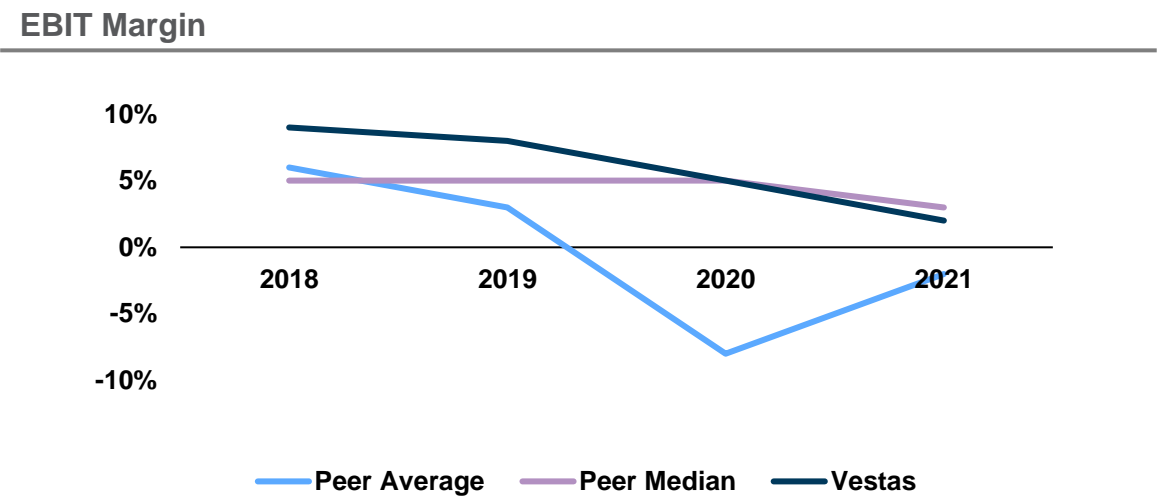
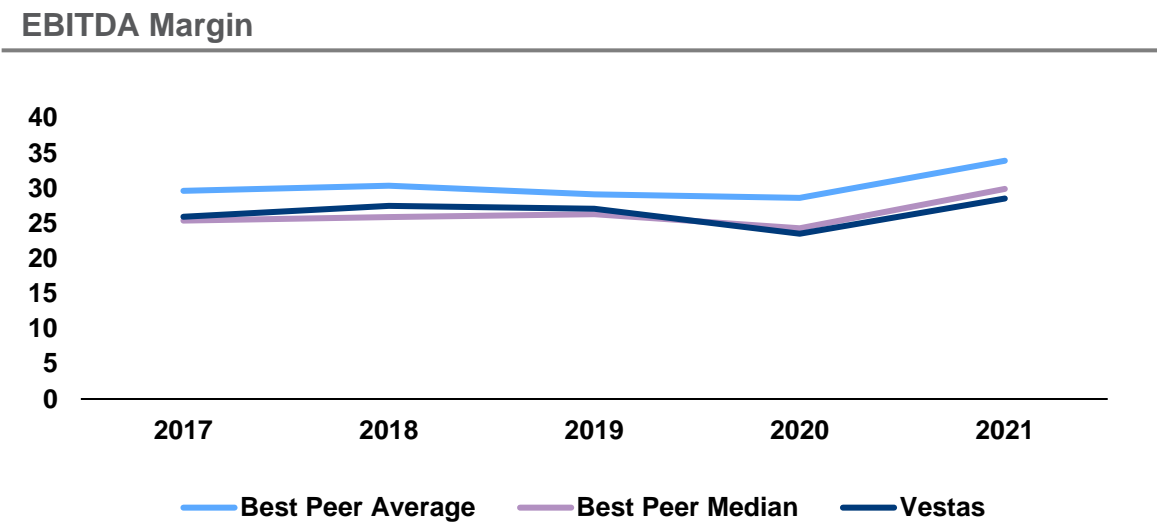
Vestas minimizes direct CO₂ emissions in production cycle

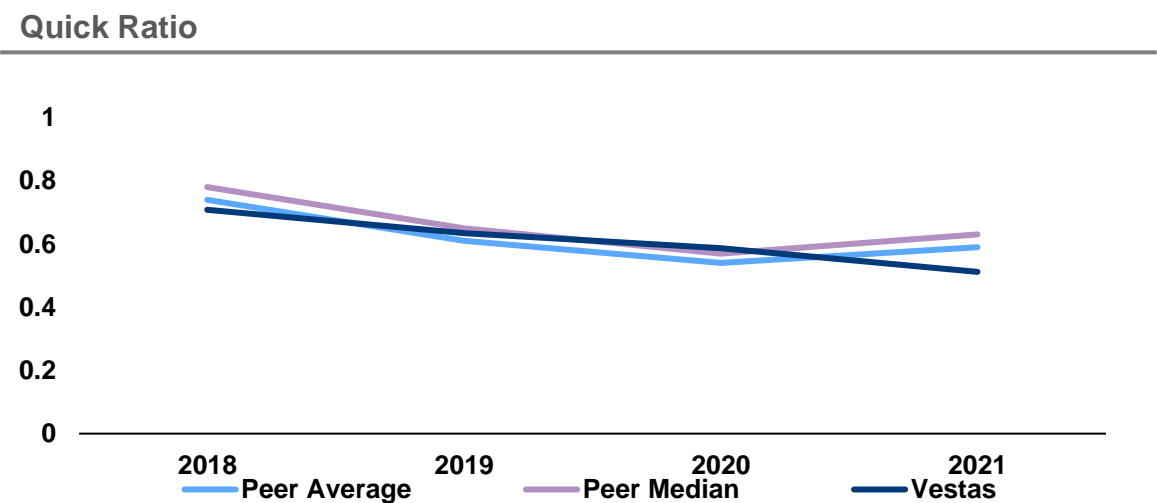
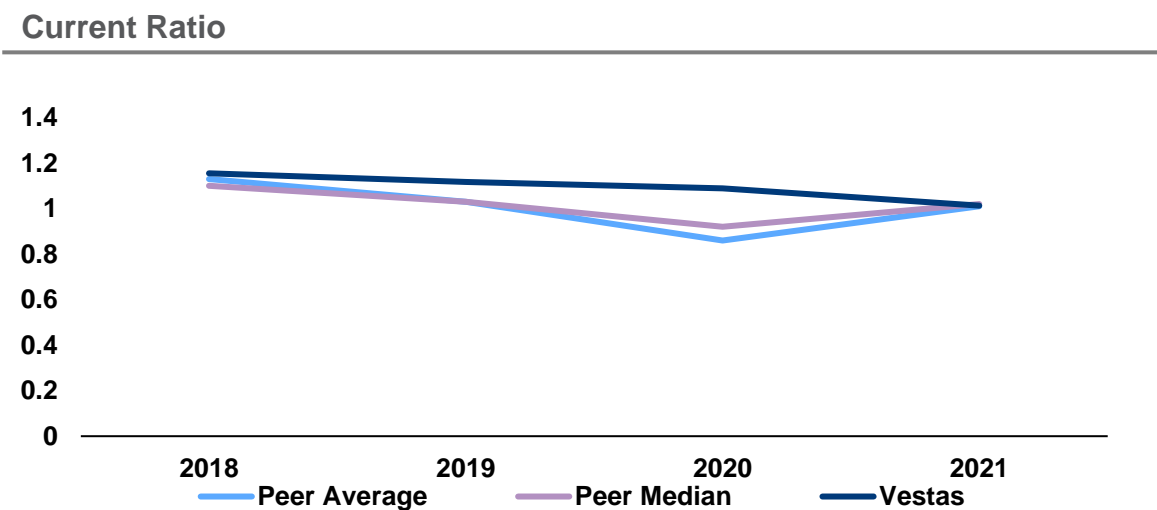
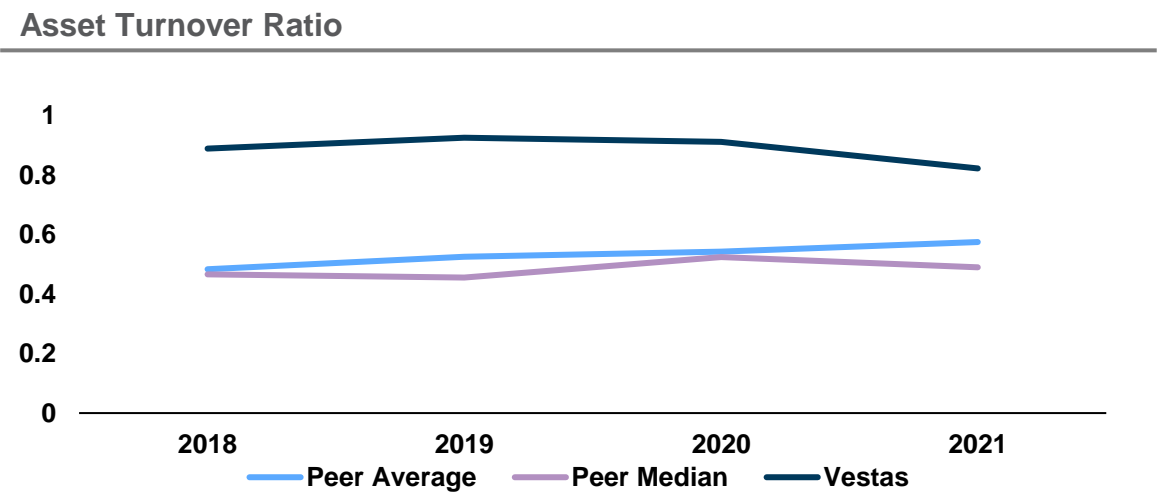
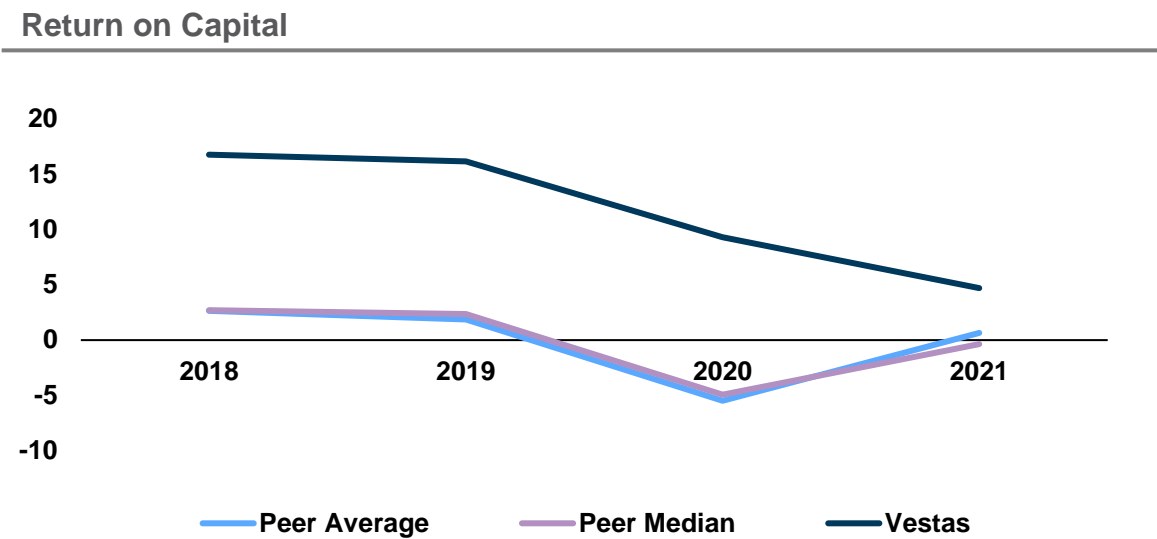


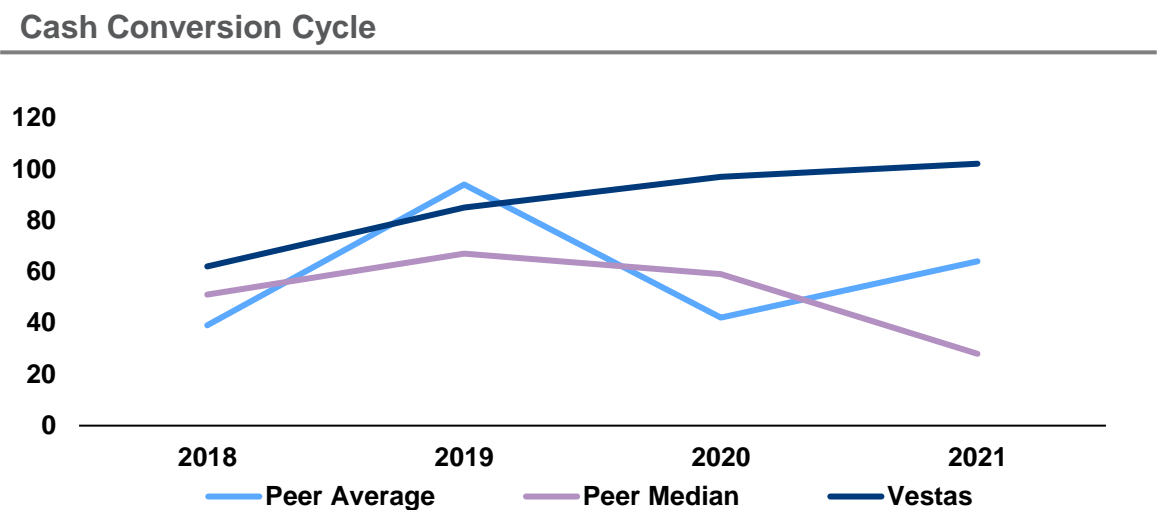
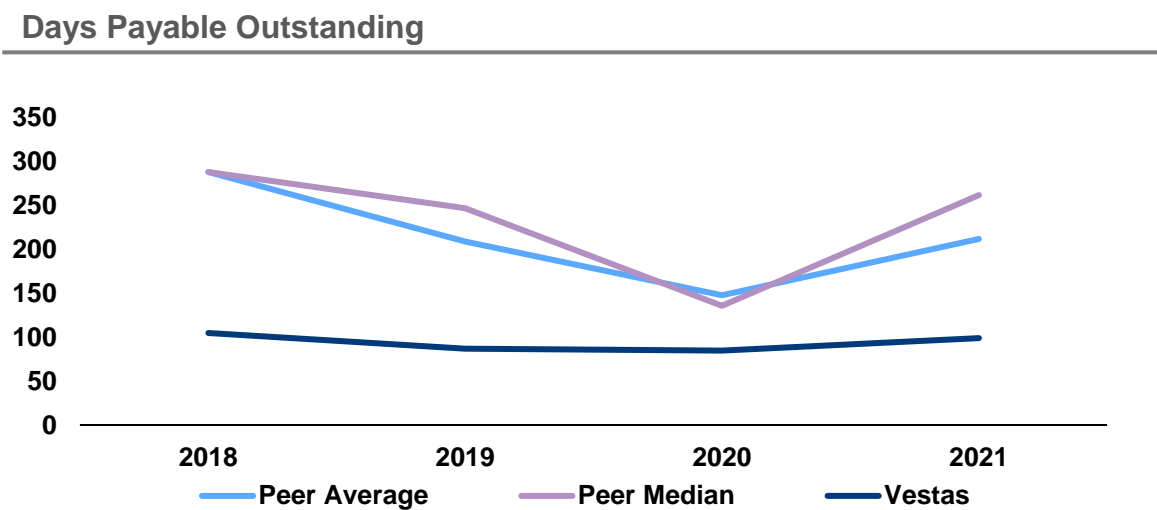
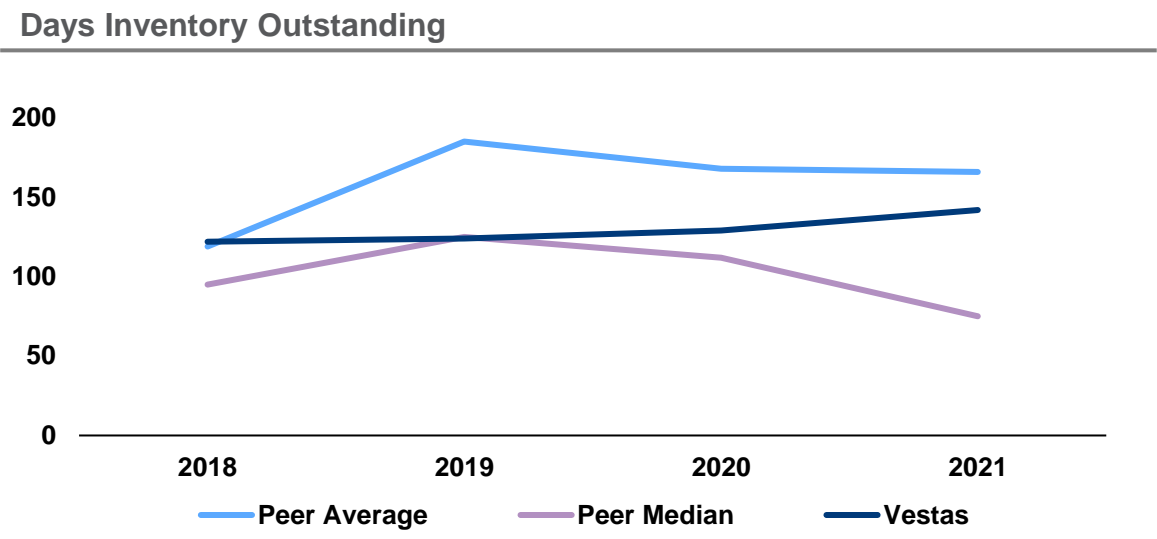
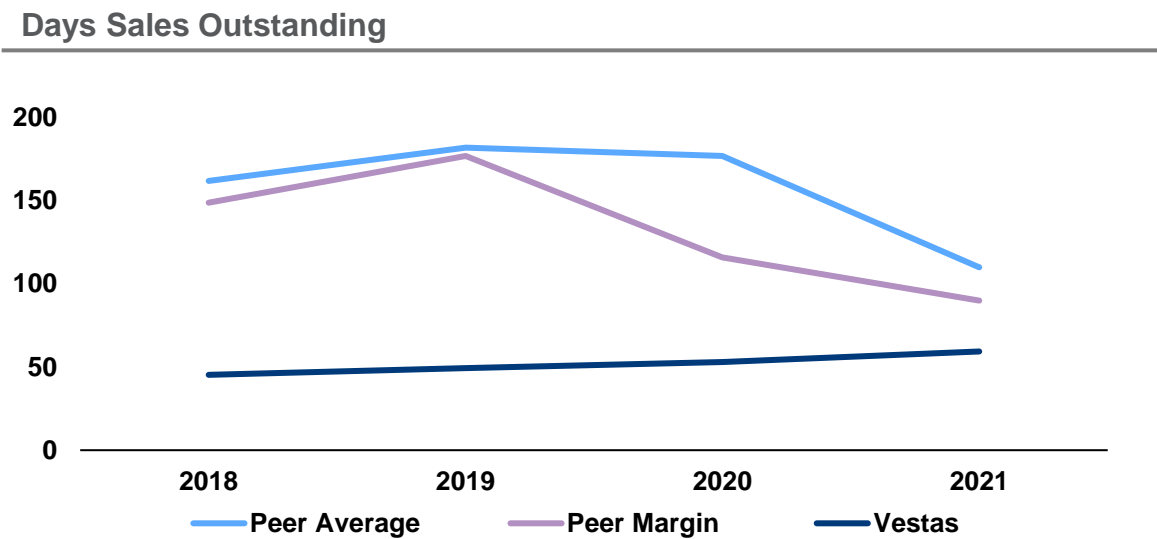
Although Vestas products are already powerful drivers of environmental sustainability, it announced to be **carbon neutral by 2030** and to produce zero-waste turbines by 2040



- Vestas' products and innovation help in mitigating climate change
- Being enabler of renewable energies
 - Increasing energy efficiency
 - Contributing to CO₂ emission reduction
 - Focusing on recyclability of turbines
 - Becoming carbon neutral until 2030

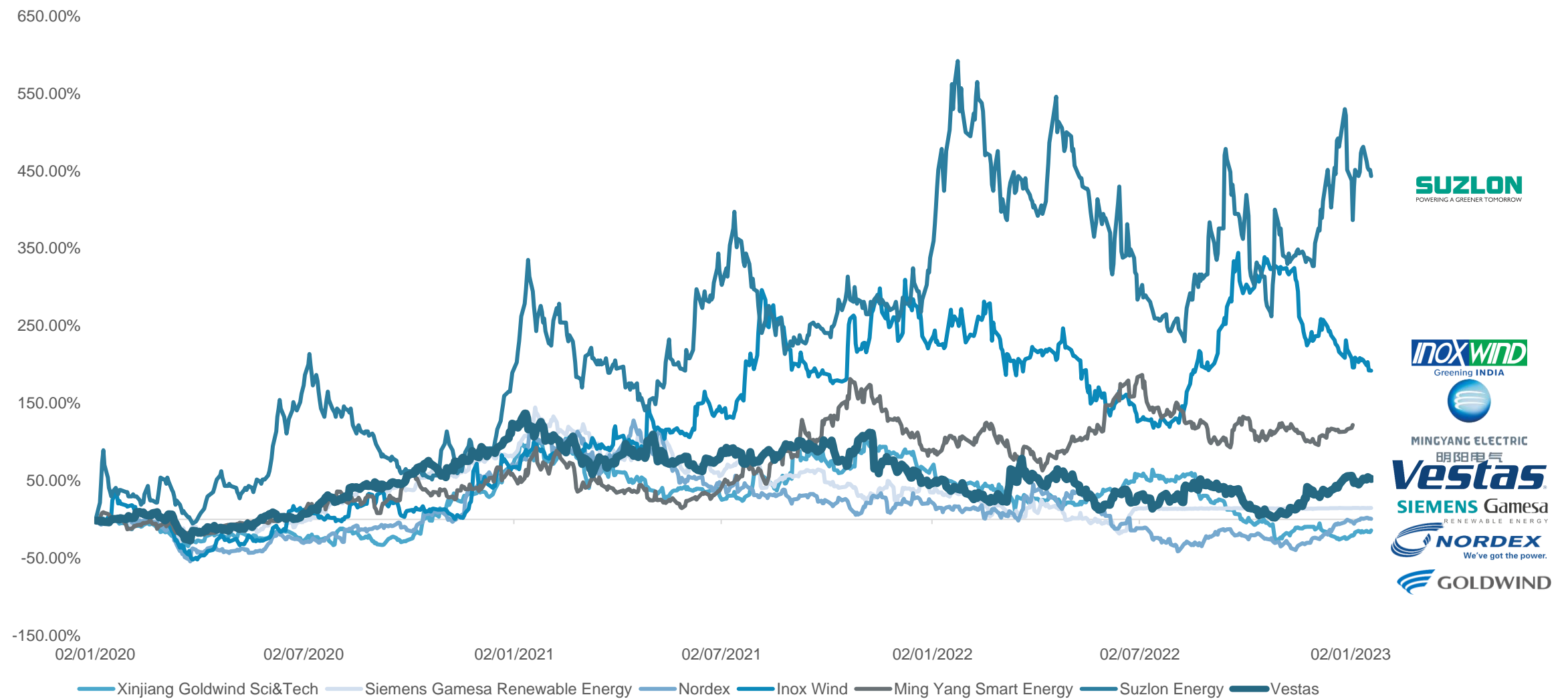






Appendix: Best Peer Share Price Performance

Comparison of Vestas and Best Peers



Disclaimer

Legal

This document is being made available by WUTIS Trading and Investment Society, acting through its society ("WUTIS"), for information purposes only and for the sole and exclusive use of the addressee in connection with the matter or possible transaction to which this document relates. This document is incomplete without reference to, and should be assessed solely in conjunction with, the oral briefing provided by WUTIS. This document is strictly confidential and remains the property of WUTIS. You agree that you shall only use this document for the purpose of evaluating and considering the matter or possible transaction to which this document relates.

This document may not be distributed, published, reproduced, or disclosed, in whole or in part, to any other person, nor relied upon by you or any other person, nor used for any other purpose at any time, in each case without the prior written consent of WUTIS. This document does not constitute, nor does it form part of an offer to sell or purchase, or the solicitation of an offer to sell or purchase, any securities or any of the businesses or assets described herein or an offer or recommendation to enter into any transaction described herein nor does this document constitute an offer or commitment to provide, arrange or underwrite any financing. You are responsible for making your own independent investigation and appraisal of the risks, benefits, appropriateness and suitability of any transaction or matter contemplated by this document and WUTIS is not making any recommendation (personal or otherwise) or giving any investment advice and will have no liability with respect thereto. The decision to proceed with any transaction or action contemplated by this document must be made by you in the light of your own commercial assessments and WUTIS will not be responsible for such assessments.

Neither WUTIS nor any of its subsidiaries or affiliates, nor any of their respective officers, directors, employees or agents (WUTIS together with such persons being the "WUTIS Group") accepts any liability whatsoever for any direct, indirect or consequential losses (in contract, tort or otherwise) arising from the use of this document or its contents or any reliance on the information contained herein. WUTIS Group is not responsible for any specialist advice, including legal, regulatory, accounting, model accounting, tax, actuarial or other advice.

This document was prepared on the basis of information and data, obtained from publicly available sources and, where applicable, from you and/or any other entity that may be involved in any transaction or matter contemplated by this document (and/or any of your or the aforementioned entities' affiliates), in each case prior to or on the date hereof. The information in this document has not been independently verified by WUTIS. WUTIS has relied on any information provided by you or from third party or public sources as complete, true, fair, accurate and not misleading. With respect to any financial or operating forecasts and analyses provided to it, WUTIS has assumed that they are achievable and have been reasonably and properly prepared on bases reflecting the best currently available information, estimates and judgments as to the future financial performance of the entity(ies) to which they relate and that such forecasts or analyses would be realized in the amounts and time periods contemplated thereby. No member of the WUTIS Group, makes any warranty or representation, express or implied, as to the accuracy, completeness or reasonableness of the information (including projections and assumptions) contained in this document whether obtained from or based upon third party or public sources or otherwise. This document is given as at the date hereof, may not be final, is based on information available to WUTIS as at the date hereof, is subject to any assumptions set out therein and is subject to change without notice. Accordingly, this document may be based on (a) data and information that may no longer be current and (b) estimates that may involve highly subjective assessments. It should be understood that subsequent developments may affect this document and the WUTIS Group does not undertake any obligation to provide any additional information or to update any of the information or the conclusions contained herein or to correct any inaccuracies which may become apparent. Any data or information regarding, or based on, past performance is no indication of future performance. Members of the WUTIS Group are involved in a wide range of commercial banking, investment banking and other activities out of which conflicting interests or duties may arise. In the ordinary course of its business, the WUTIS Group may provide services to any other entity or person whether or not a member of the same group as you (a "Third Party"), engage in any transaction (whether on its own account, on behalf of any Third Party or otherwise, and including any transaction or matter contemplated by this document), notwithstanding that such services, transactions or actions may be adverse to you or any member of your group, and the WUTIS Group may retain for its own benefit any related remuneration or profit.

The WUTIS Group operates in accordance with a conflicts of interest policy which identifies conflicts of interest it faces in the ordinary course of its business, and establishes organizational and procedural measures to manage those conflicts where it is reasonably able to do so. Neither WUTIS nor any other part of the WUTIS Group shall have any duty to disclose to you or utilize for your benefit any non-public information acquired in the course of providing services to any other person, engaging in any transaction (on its own account or otherwise) or otherwise carrying on its business. WUTIS' research analysts and research departments are independent and are subject to certain regulations and internal policies. WUTIS research analysts may hold opinions and make statements or investment recommendations and/or publish research reports with respect to any company referred to herein, the transactions contemplated herein or any person or entity involved therein or related thereto that differ from or are inconsistent with the views or advice communicated by WUTIS.