Danske Bank – Offshore Wind Energy Seminar

Morten Buchgreitz

08 March 2023

Agenda

Offshore in Vestas

Manufacturing footprint

Commercial pipeline

The V236 platform & prototype

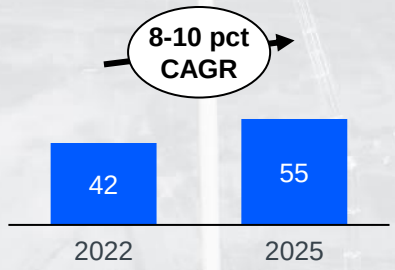
Q&A

Our Portfolio – Offshore as one of the attractive growth drivers

Vestas uniquely positioned in the industry

ONSHORE
Restarting growth

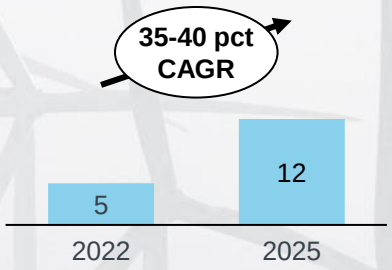
Market expectation
2022-2025
New installations (GW)*



- Declining activity expected in 2023
- Increase in 2024 and 2025 driven by USA, Europe, and Africa

OFFSHORE
Global expansion

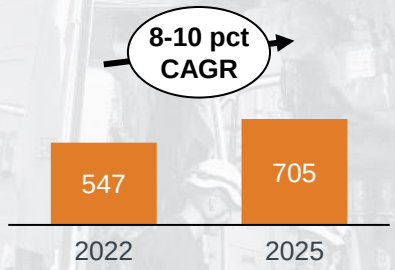
Market expectation
2022-2025
New installations (GW)*



- Strong expansion in Europe and new markets such as the USA and Korea and broader Asia Pacific
- Growth to accelerate post 2024 but PPA levels needs adjustments

SERVICE
Solid growth

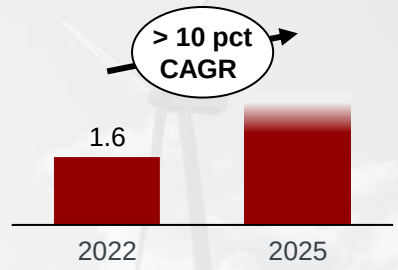
Market expectation
2022-2025
Installed fleet (GW)*



- Solid growth from high base
- Power price increases and electricity shortage to drive higher need for output optimisation

DEVELOPMENT
Foundation in place

Vestas' expectation
2022-2025
FOI generated (GW)*



- Ambition in Development to outgrow the total market growth in FOI generated
- Own developed projects to further leverage side deals

Source: WoodMackenzie


Vestas
PRESENTS

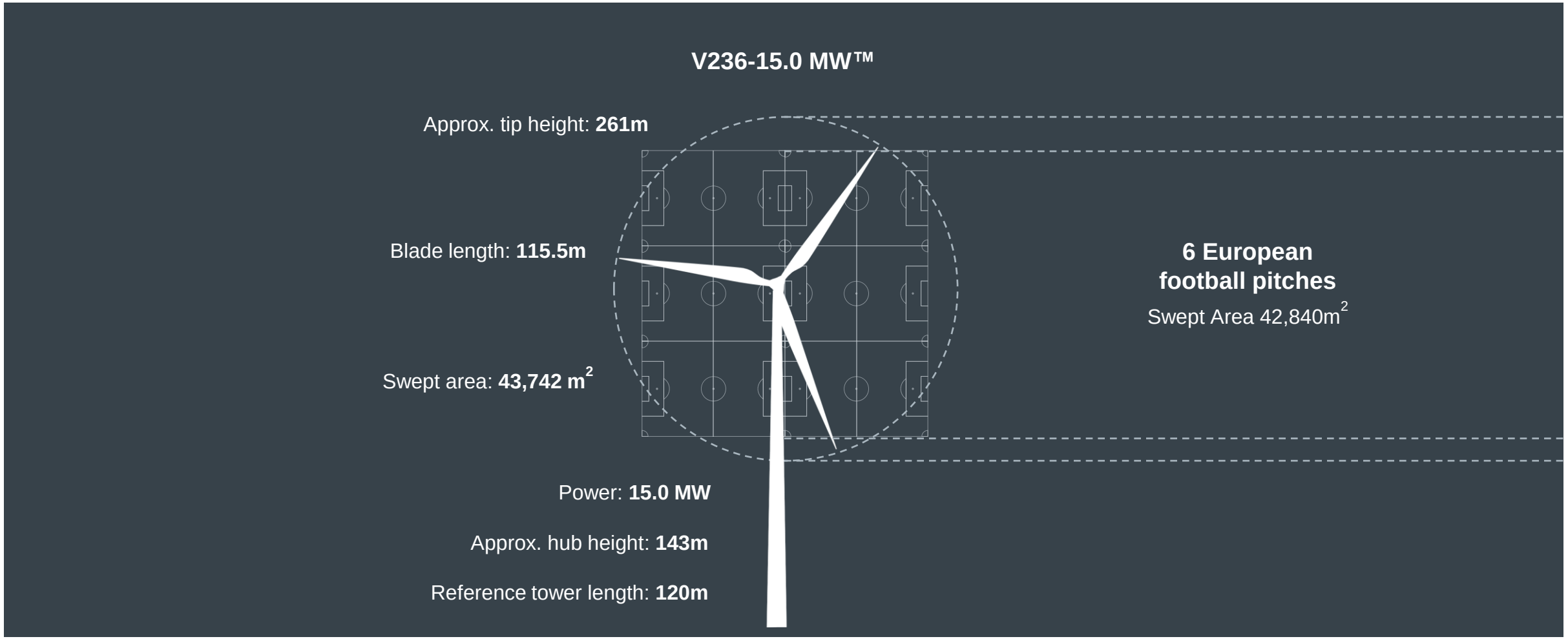

Vestas

V236


V236
Vestas
V136
V100
CONVOI EXCEPTIONNEL
MAN
DANMARK
MAN
SJÆRTRANSPORT
SCANIA

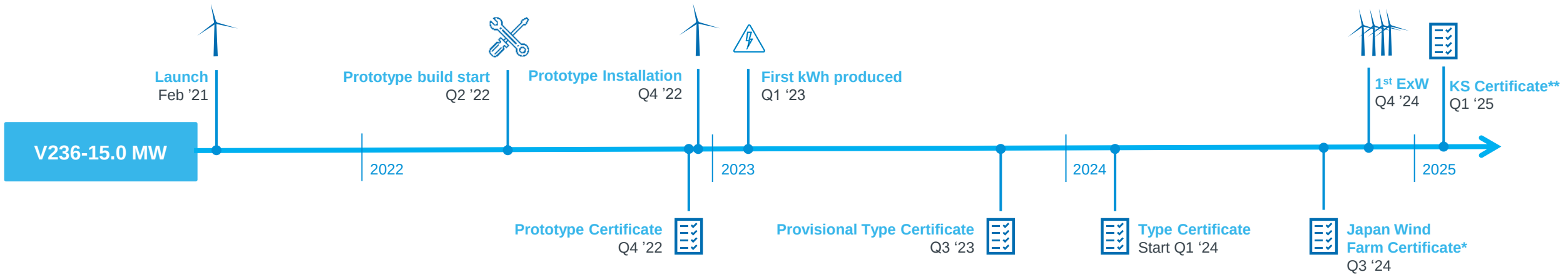
Optimal power generation from the industry’s largest swept area

V236-15.0 MW™ with a swept area larger than 6 European football pitches



- **First KWH** produced in December 2022
- Production equivalent to consumption of **20,000 European households**

V236-15.0 MW™ timeline



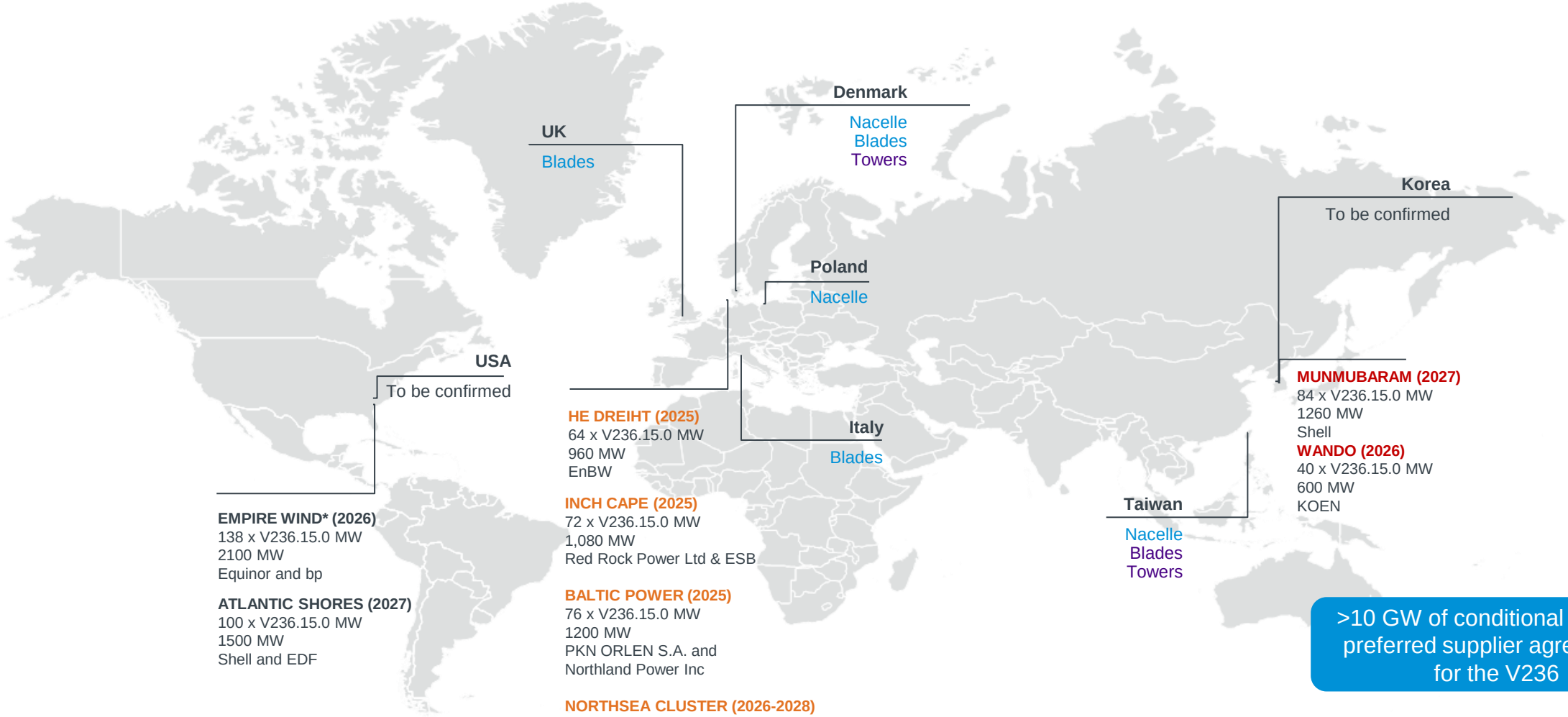
**The Japan wind farm certificate is handled by ClassNK. The certificate is issued on an installation project specific basis, and hence the dates are the first possible scenario which can be achieved, provided that an actual installation project is available to support the certification process. In addition, the timeline is subject to ClassNK confirmation.*

***The KS type certification (Korean Standard certification) is based on IECRE certification activities. The first version of the KS certificate will be based on a KEA tower manufacturing evaluation for the first commercial tower (EU). The actual KS type certificate will be updated with the footprint for the relevant South Korean projects once towers are in production.*

Dates refer to the end of the period unless anything else has been communicated.

Global offshore manufacturing footprint & V236 PSA projects

A flexible setup with supply from Vestas' own factories and partner factories for V164, V174 and V236



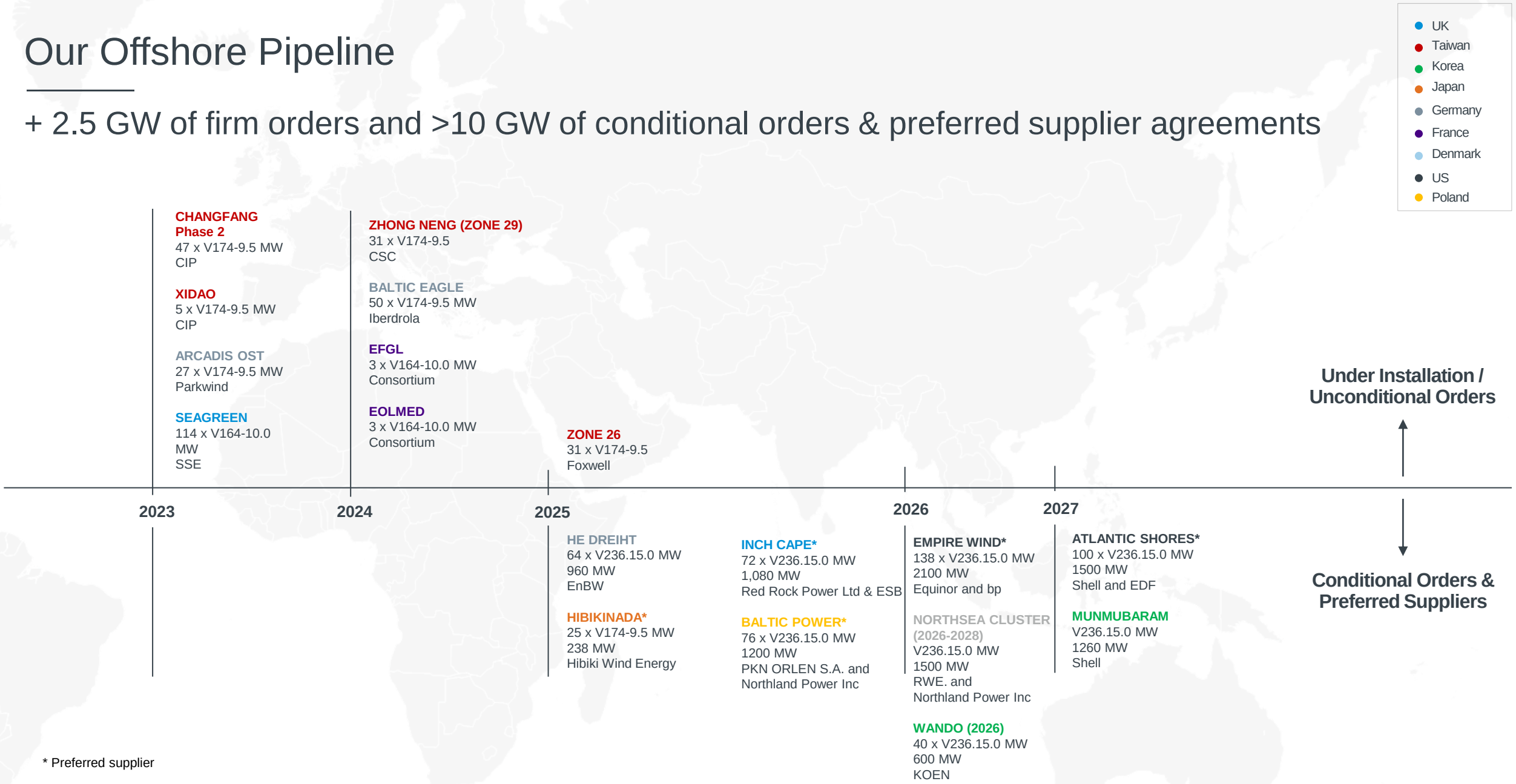
>10 GW of conditional orders & preferred supplier agreements for the V236

Vestas' factory

Vestas' partner factory

Our Offshore Pipeline

+ 2.5 GW of firm orders and >10 GW of conditional orders & preferred supplier agreements



* Preferred supplier

A calculated leap to **V236-15.0 MW™**

Building on proven track record from both offshore and onshore

Optimisation and upgrade of existing, proven and reliable technology from V164-9.5 MW, V164-10.0 MW and V174-9.5 MW 9 MW variants

Proven system designs on **136 GW+ combined installed fleet from Vestas** on- and offshore
(2 MW, 4 MW, EnVentus and 9 MW platforms)

Worldwide application in IEC I extreme wind conditions up to 50 m/s + IEC T up to 57 m/s

RNA structure design **lifetime of 30 years**

Lightweight and high performing turbine due to **technology improvements in drivetrain design** and **extreme loads mitigating design**

Any questions?