

VIKING ENERGY WIND FARM

WIND TURBINE DELIVERIES & INSTALLATION

Jonny Flowers CEng MIMechE

**Wind Turbine Package
Manager**

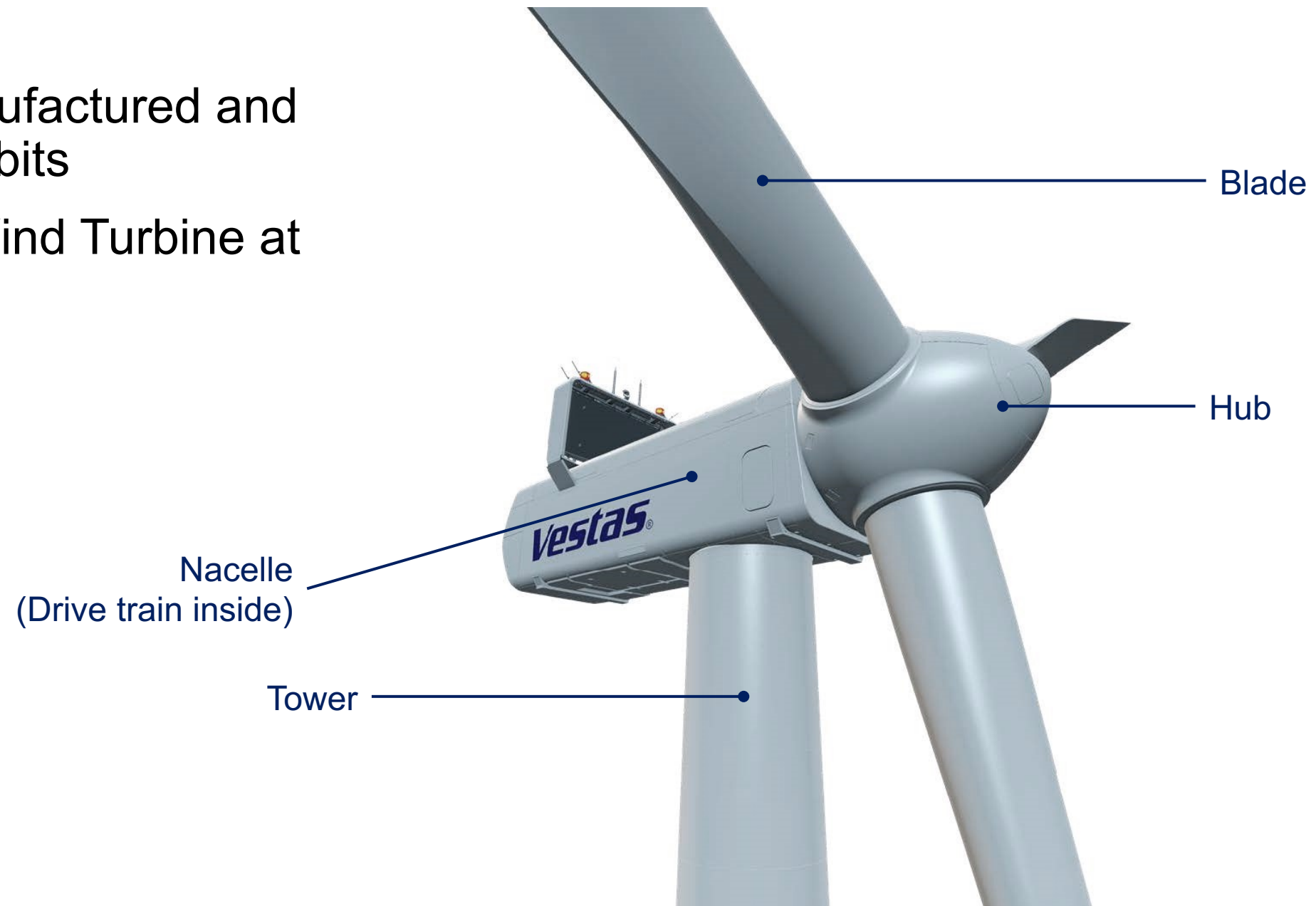


For a better
world of energy

WIND TURBINE COMPONENTS

What separate components make up a wind turbine?

- The wind turbine is manufactured and transported in separate bits
- Tower sections (4 per Wind Turbine at Viking)
- Nacelle
- Drive train
- Hub
- Blades



DELIVERY CONVOYS

How are components transported

- Scotland-based specialist haulier McFadyens will undertake the deliveries on behalf of Vestas
- There will be up to four wind turbine components per convoy
- Convoy will be escorted by specialist Police officers to ensure safety



DELIVERY CONVOYS

How are components transported

- There will be up to three convoys per day, 6 days a week (Mon – Sat) with up to four wind turbine components per convoy.
- Convoy travels from Lerwick Port and then enters the site by one of the four site entrances.
- Convoy travel time is estimated to be around 1 hour from leaving the port to entering the site.
- The times the convoys are expected to leave the port on weekdays between:

Mon-Fri

6am – 7am

11am – 12 noon

1pm – 2pm

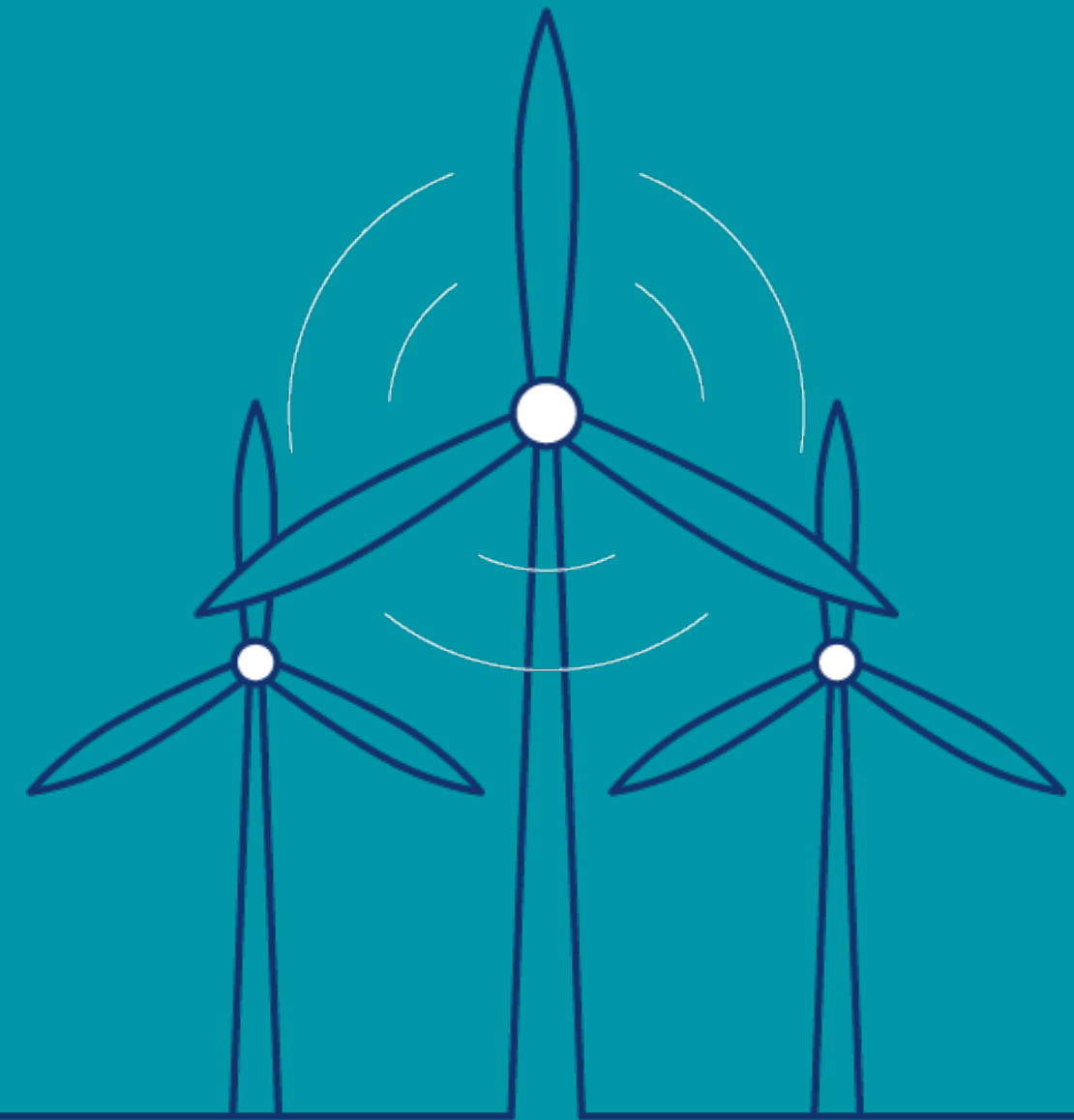
Sat

6am – 7am

10am – 11am

12 noon – 2pm

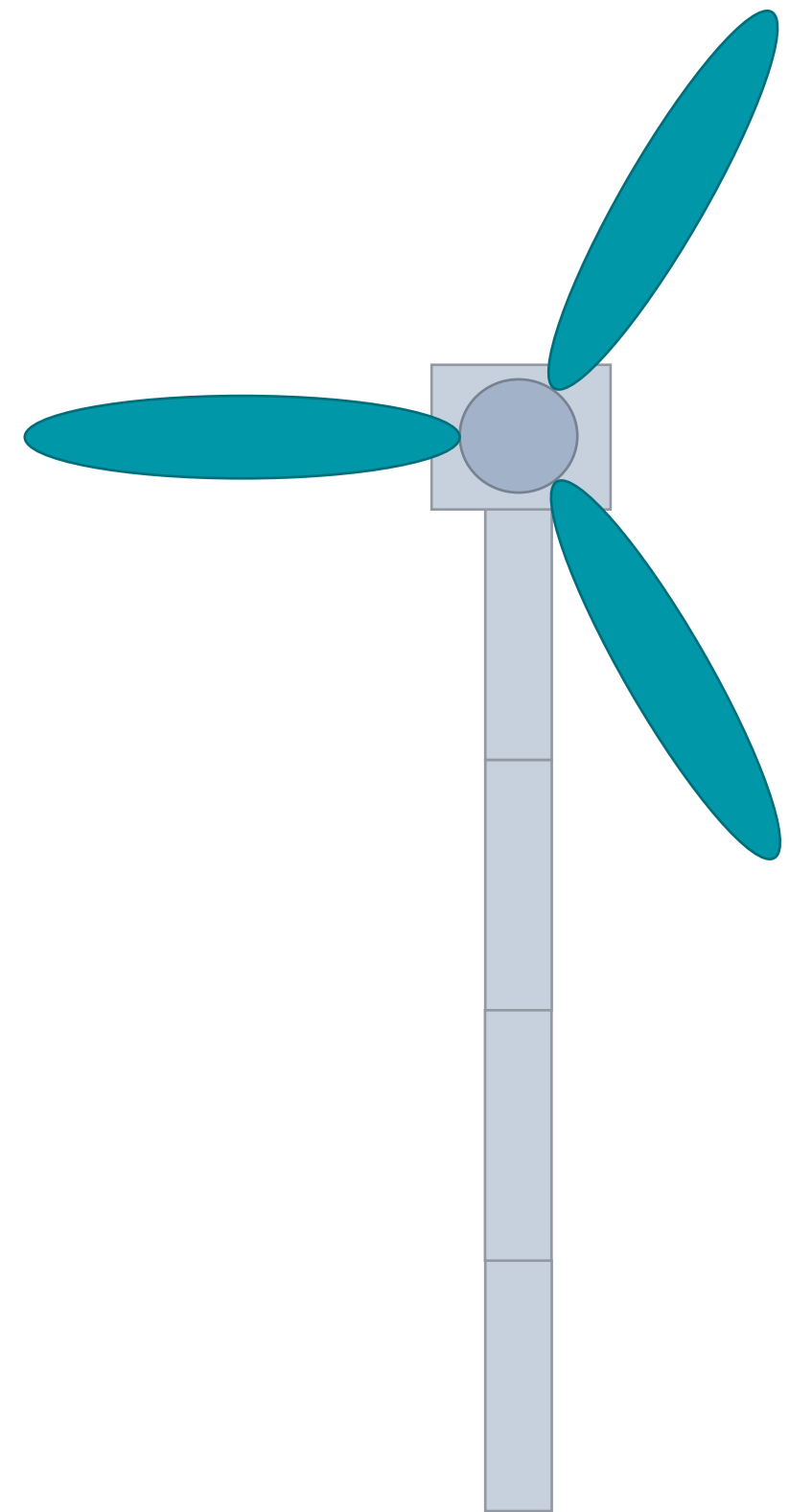
WIND TURBINE INSTALLATION



BUILDING A WIND TURBINE

How do we install each one?

- Smaller crane puts the bottom two tower sections up
- Bigger crane arrives and puts up the top two tower sections on top
- Nacelle, drivetrain and hub lifted on top of the tower
- One blade installed in horizontal position
- Hub rotated so next blade can also be installed horizontally
- Hub rotated again so third and final blade can also be installed horizontally



QUESTIONS?

