
# Company update

**8 June 2021 | Torgeir E. Ramstad | CEO**

# Creating a leading Offshore Wind T&I Contractor

## A growth story from ~80% reliance on O&G to complete exit in 10 years

Oil & Gas

Offshore Wind

**Transportation**
Five Heavy Transportation Vessels



→ Foundations

**Installation**
Alfa Lift under construction
Alfa Lift 2 under consideration

Dogger Bank →

Foundations

**Installation**
VIND 1 under construction
Options for three more

→ Turbines

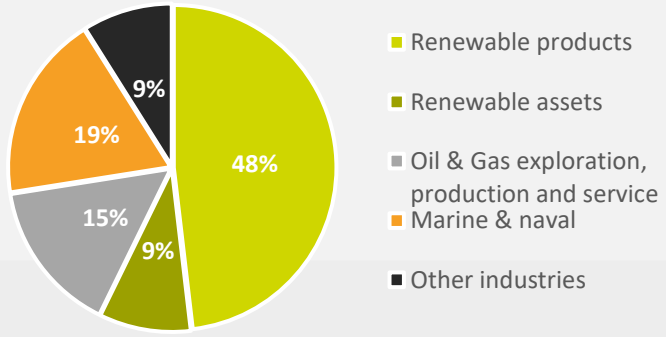
| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Renewable share: | 0% | | | | 50%+ | | | | 95% | | Exit O&G |

# Transportation

## Status operations and contracts

- Markets continue to be affected by hesitation to commit due to Covid-19 restrictions, but activity levels and pricing continue to show improvements as predicted.
- YTD utilisation in Q1 was 90% and is rising.
- All five vessels were fitted with exhaust gas scrubbers in 2019 to a total Capex of $11.4 million. Savings on fuel cost compared to using Low Sulphur Fuel Oil 0.5% stands at $8.9 million or a payback of 78% so far.

**Revenue per cargo category (Apr. 20 - Mar. 21)**





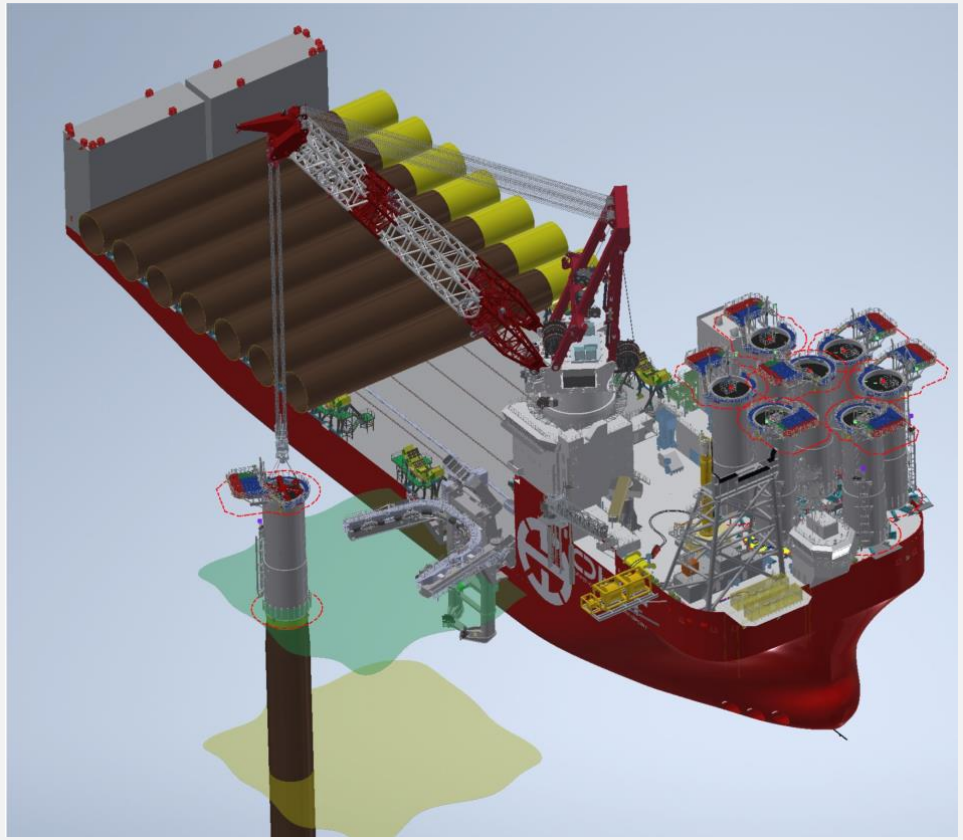
Albatross with WTIV “Apollo” on the way to China.
Image courtesy Piet Sinke.

Falcon with offshore wind jack-up barge “JB118” on the way to China.

# Installation

## Dogger Bank A and B projects

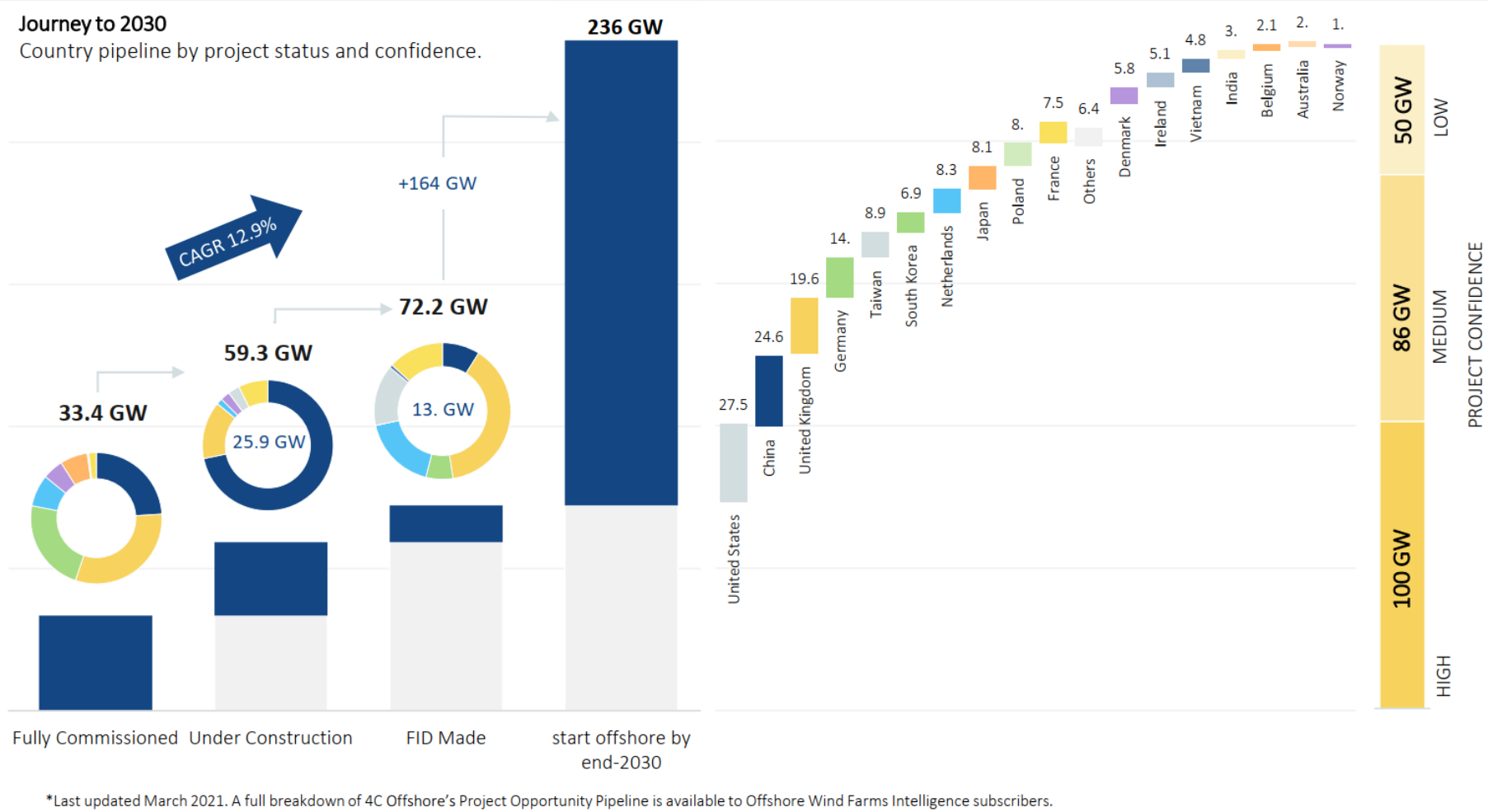
- The scope is to install 190 foundations on the world’s largest windfarm
- The Dogger Bank A and B projects are in detail design and showing good progress.
- We have placed a major subcontract for the rental of the piling hammer with Menck GmbH.
- Other subcontracts for grillage and lifting equipment have been placed or are imminent.
- No undesired incidents and the Client relationship remains good and constructive.
- Start offshore construction in Q3 2022 – completion in time for the busy 2024 season.



Alfa Lift installing a Transition Piece following Monopile installation.

# Market forecasts to 2030 continue to grow

## Bottom-fixed accounts for approx. 95%

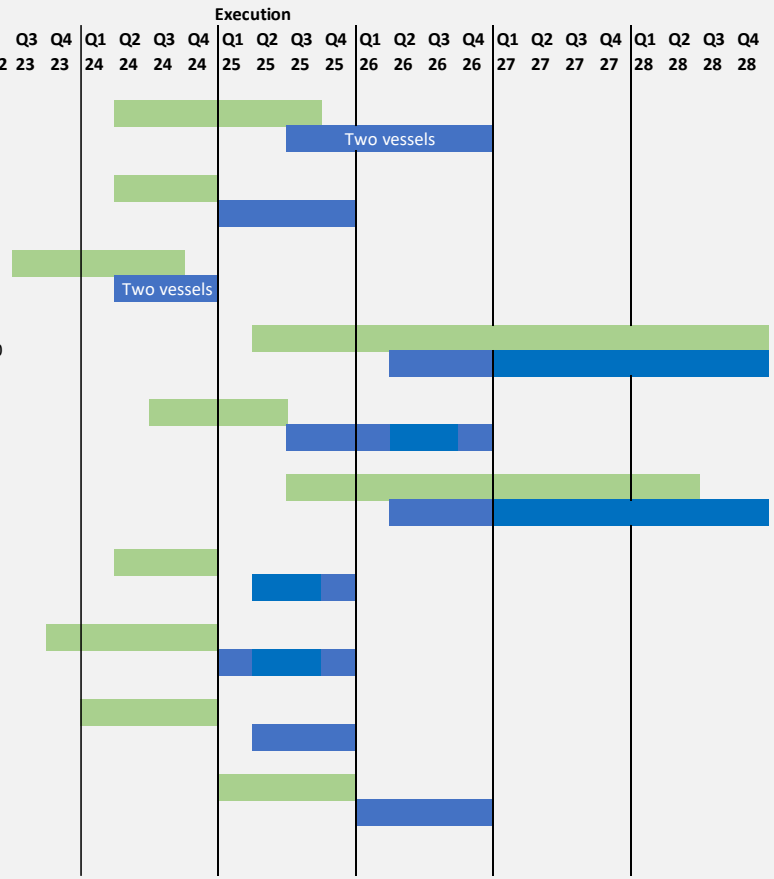



*Last updated March 2021. A full breakdown of 4C Offshore's Project Opportunity Pipeline is available to Offshore Wind Farms Intelligence subscribers.

# Selected projects in the market

## Around 1,800 units to be installed globally in 2024 (excl. China)

| Project | Country | End Client | Scope | # Units Phase 1 | # Units Phase 2 | MW Capacity Phase 1 | MW Capacity Phase 2 |
|---|---|---|---|---|---|---|---|
| East Anglia Hub | UK | Scottish Power | Monopiles WTG | 225 | | 3,100 | |
| He Dreiht | DE | EnBW | Monopiles WTG | 67 | | 900 | |
| Gode Vind 3 + Borkum Riffgrund 3 | DE | Ørsted | Monopiles WTG | 107 | | 1,142 | |
| Empire/Beacon Wind | US | Equinor | Monopiles/Jackets WTG | 54 | 100 | 816 | 3,690 |
| Dogger Bank C | UK | Equinor/SSE | Monopiles WTG | 87-105 | | 1,500 | |
| Norfolk Vanguard & Boreas | UK | Vattenfall | Monopiles WTG | 270 | | 3,600 | |
| Inch Cape | UK | Red Rock | Monopiles WTG | 72 | | 1,000 | |
| Moray West | UK | EDPR | Monopiles WTG | 60 | | 900 | |
| Baltic Power | Poland | Northland/PKNO | Monopiles/Jackets WTG | 76 | | 1,200 | |
| Baltyk II & III | Poland | Equinor | Monopiles WTG | 120 | | 1,440 | |



# Market fundamentals

**The size of the WTG installation market is not governed by the number of projects and WTGs scheduled to be installed in any given year.**

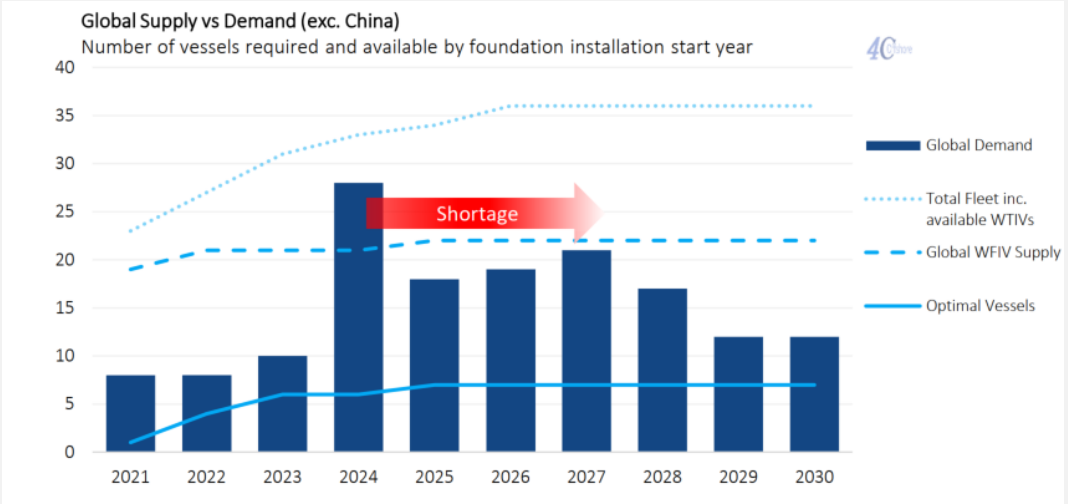
**It is governed by the number of foundations successfully installed in the previous year…**

# 4C: Only one existing vessel considered “optimal” for MP installation

## No. of “optimal” newbuilds count six, however some will focus on WTG installation

**Newbuilds**

| | | | | | | Installation capability | | Monopile Installation[4] | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name[1] | Operator | Status | Delivery | Lift Capacity[2] | Market | WTIV | Jacket[3] | 1500 t | 2000 t | Mission Equipment[5] |
| Alfa Lift * | OHT | Construction | Q4 2021 | 3000 | | | X | X | X | ✓ |
| Les Alizes * | Jan de Nul | Construction | 2022 | 5000 | | | X | X | X | ✓ |
| Voltaire * | Jan de Nul | Construction | 2022 | 3000 | | X | X | X | X | ✓ |
| NG-20000X-G 1 | Cadeler | Order expected | 2024 | 2000 | | X | X | X | X | |
| Alfa Lift 2 | OHT | Order expected | 2025 | 3000 | | | X | X | X | Likely |
| NG-20000X-G 2 | Cadeler | Order expected | 2025 | 2000 | | X | X | X | X | |
| Charybdis * | Dominion | Ordered | 2023 | 2200 | US | X | X | X | | Likely |
| Eneti WTIV * | Eneti Inc | Ordered | 2023 | 1500 | | X | X | X | | Likely |
| JU VIND 1 * | OHT | Ordered | 2023 | 2500 | | X | X | X | | ✓ |
| Bokalift 2 * | Boskalis | Under Construction | 2021 | 4000 | | | X | | | |
| Green Jade * | CDWE | Under Construction | 2022 | 4000 | TW | | X | X[6] | X[6] | |
| Bold Tern (U) * | Fred. Olsen | Upgrade ordered | 2022 | 1600 | | X | X | | | |
| Tbd * | Penta-Ocean | Ordered | 2022 | 1250 | JP | X | X | | | |
| Tbd * | Shimizu | Under Construction | 2022 | 1250 | JP | X | X | | | |
| Tbd * | Obayashi | Ordered | 2023 | 1250 | JP | X | X | | | |
| Wind Orca (U) * | Fred. Olsen | Upgrade ordered | 2024 | 1600 | | X | X | | | ✓ |
| Wind Osprey (U) | Fred. Olsen | Order expected | 2025 | 1600 | | X | X | | | ✓ |




Developers who are forced to use suboptimal vessels could face similar schedule and cost issues as seen in Taiwan lately.

Source: Installation Vessel Supply and Demand: Analysis to 2030 by 4C Offshore

# Capability range for different types of products

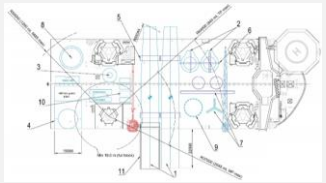
## Precise limits depend on various other design parameters

Monopiles

Alfa Lift

Alfa Lift 2
(option)

VIND 1



MP Weight (t) 500 750 1,000 1,250 1,500 1,750 2,000 2,250 2,500 2,750 3,000

WTGs

VIND 1

WTG size (MW) 6 8 10 12 14 16 18 20 22

# Actively reducing footprint

**Examples:**

- The transportation fleet is already the most fuel efficient in the industry.
- Choice of solutions for Alfa Lift will reduce greenhouse gas emissions even when compared with LNG.
- VIND jack-ups will emit 20% less than a conventional jack-up performing the same work

| | Transportation fleet  | Alfa Lift  | VIND  |
|---|---|---|---|
| **Design** | *-* | ***Ulstein*** <br> ***DNV Clean Design*** | ***GustoMSC NG-14000XL-G*** <br> ***DNV Clean Design*** |
| **Fuels** | ***HSFO/MDO*** | ***HSFO/MDO – future Bio-fuel*** | ***MDO - future $H_2$*** |
| **SOx** | ***Open loop scrubber*** | ***Hybrid scrubber*** | ***Low sulphur fuel*** |
| **NOx** | *-* | ***SCR - Tier III*** | ***SCR - Tier III*** |
| **Greenhouse Gas Emissions** | • ***Optimized hull design*** <br> • ***World's most energy efficient type machinery*** <br> • ***Shore power*** <br> • ***Active weather routing*** <br> • ***Waste heat recovery*** | • ***Hybrid battery*** <br> • ***Optimized hull design*** <br> • ***MAN CR Ecomapping*** <br> • ***Kongsberg automation*** <br> • ***Shore power*** | • ***Hybrid battery*** <br> • ***Optimized hull design*** <br> • ***Future Hydrogen fuel*** <br> • ***Siemens DC electrical system*** <br> • ***Regeneration of energy from crane and jacking*** <br> • ***Waste heat recovery*** <br> • ***Shore power*** |
| **Other** | ***Ballast water treatment*** | ***Ballast water treatment*** | ***Ballast water treatment*** |

# Thank you

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