Getting the Offshore Wind Vessel Projection Right

OWJ Feb 26, London

RenewMarine Ltd

Where is the new reality we find the sector in.....

Who am I:

- Stephen Bolton CEng, MBA, LBS SEP
- 25 years Offshore Wind Sector
- Past 10 years dedicated focus on SOV / CSOV technology
- Operating independent since July 23 supporting;
  - All things SOV / CSOV
  - Strategy & Business Plan; defining / planning / implementing
    - RM Strategy Jigsaw ™ approach
  - Stakeholder engagement; direct and LinkedIn campaign based
  - Equipment contracting and deliver; inc 1.25MW shore charging box based on marine type approved battery technology
- Clients:

Plus:

- Various consultant houses
- International Bank
- And more...

Agenda

1. Introduction
2. A process not a chart
3. Fundamental Input
4. Assumptions
5. Latest results – powered by INTELATUS
6. Comments
7. Final Thoughts

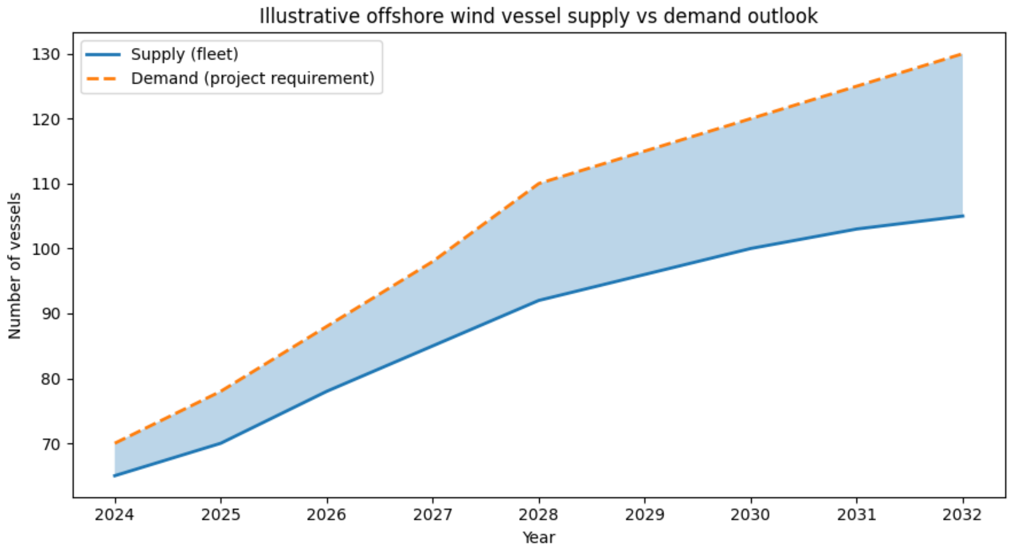
Introduction

Vessel supply / demand analysis follows a process, its NOT a chart:

A Process:

1. The Question:
"Is there a supply / demand gap in this vessel class"

2. The Answer:



3. The Outcome:
"Lets order vessels"

The reality:

The chart presents a view, someone's view, at a point in time.

How aligned / understanding are you of the uncertainties in their process?

The Process

Inputs and Assumptions are critical

Look Up

The Driver

(Predicted future installation of WTG's)

Look Down

Project Attrition (Political, Economic...)

Look Back & Forward

Vessel Utilisation (seasonal, supply impacted..)

Vessel Effectiveness (Days per structure, weather sensitivity...)

Growth driver (By wtg's installed or annual rate of installation)

Other Sector / Non-sector demands (O&G, O&M....)

Look Forward

Vessel database (existing, in build, options)

Look Left & Right

Sector Dynamics (what comes before or after)

FACT + Knowledge

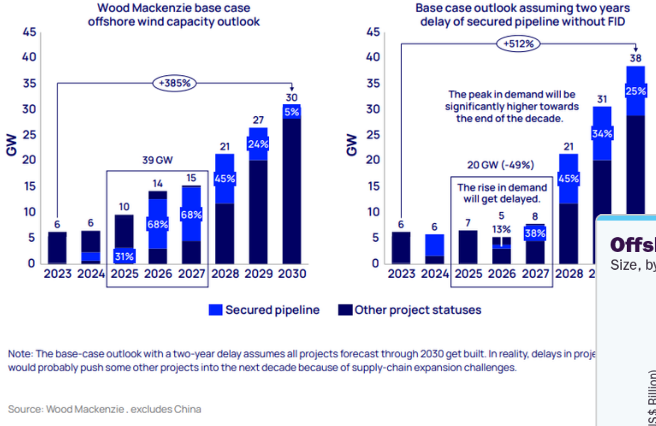
However:
Data is not sufficient
Sector understanding is required
And beware of top down data

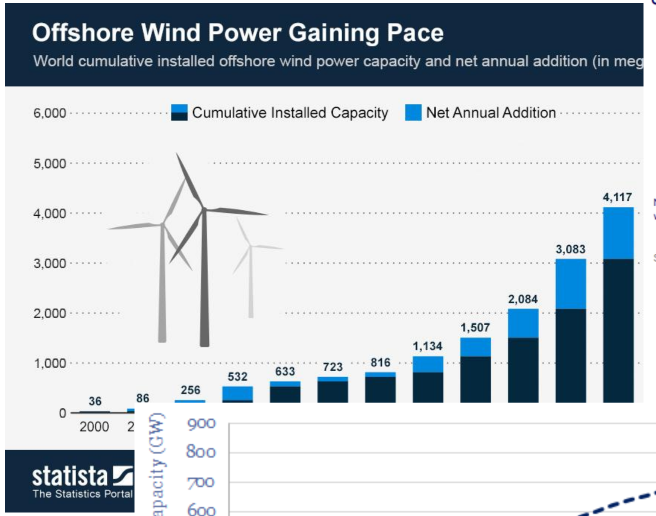
A high degree of future unknown; over ~20 years!

The fundamental Input

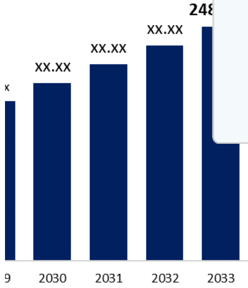
The easy part in your process

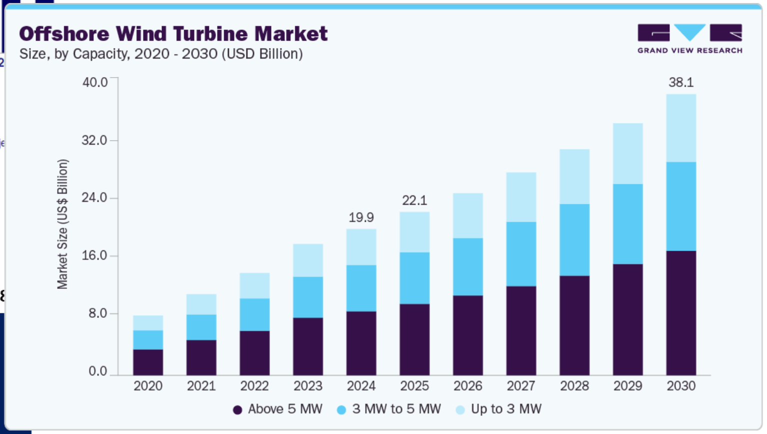
- Data sources exist…..

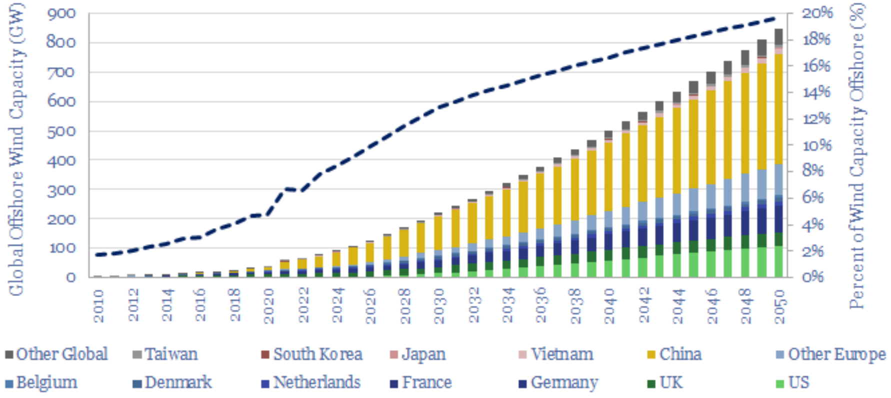




Offshore Wind Energy Market



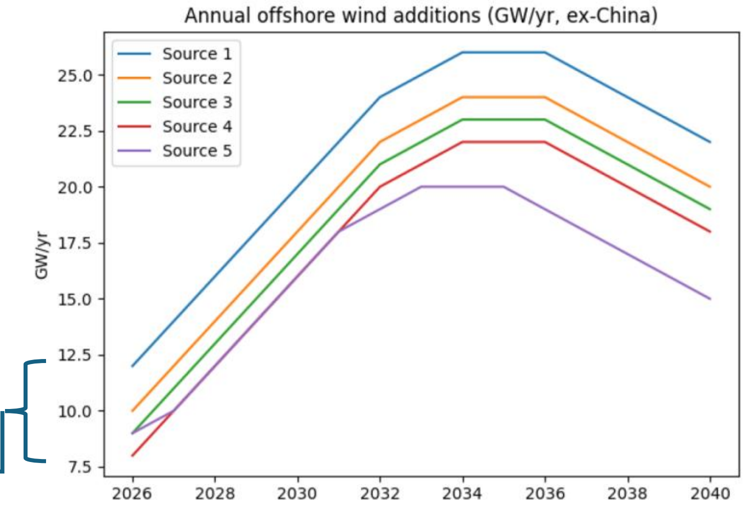


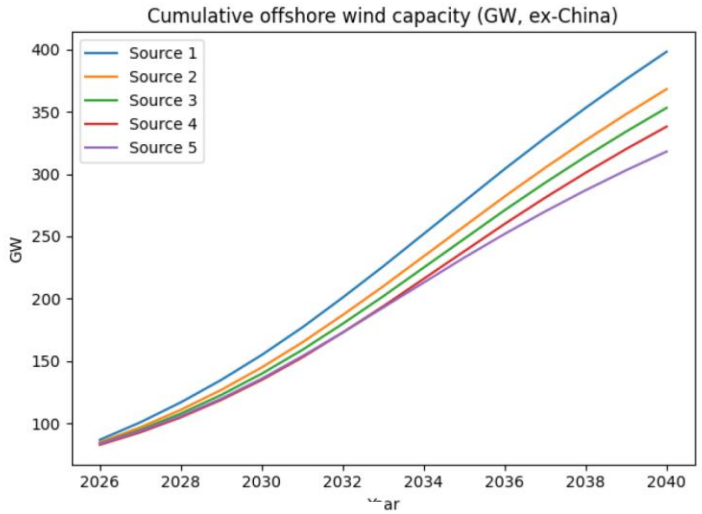


- Your expert will have their version
- All is good…..or is it.

The fundamental Input (2)

Actually its the biggest RISK in your process





Highest is >1.5 x lowest
Same impact on vessel demand

Milestone year	Min cumulative capacity (GW)	Max cumulative capacity (GW)	Absolute variance (GW)
2025	75	75	0
2030	135	155	20
2035	233	278	45
2040	318	398	80

Almost equivalent to everything built in 25 years!!

- ➢ **Maybe ask a few?**
- ➢ **Maybe understand the deltas / form your own opinion?**

The assumptions

Stock or Flow focus

1. **O&M = Stock**

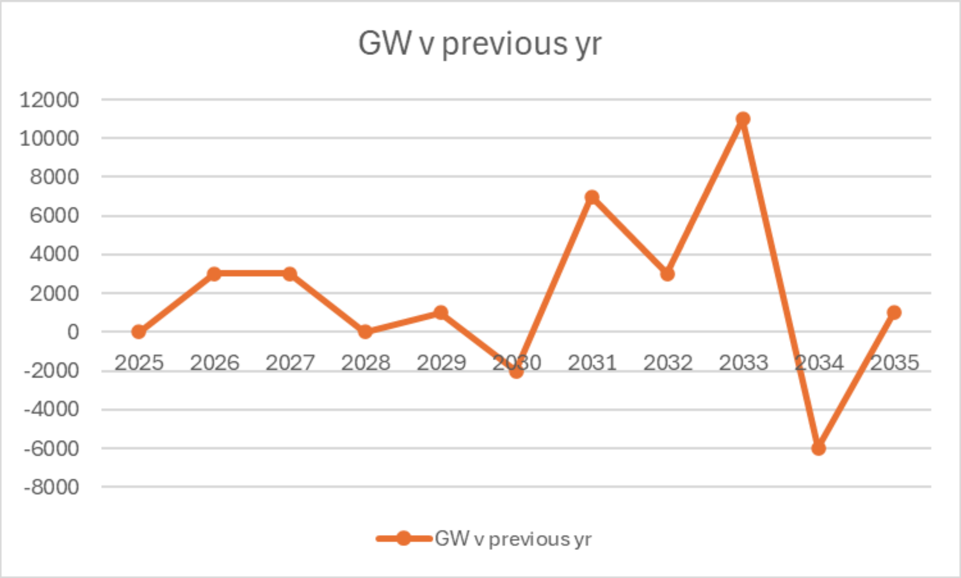
Vessel growth grows cumulatively with wind farms installed

Always grows if wind farms are being built.

2. **Construction = Flow**

Vessel growth is aligned to rate of deployment in given year

Requirement can reduce if the rate of deployment decreases



Logic applies to all Construction related vessels.

A forward curve of cumulative growth does not mean year on year additional vessels!

The assumptions (2)

OtherS

Other sector demand

- Relevant to all vessel types
- From:
  - O&G (its growing impact)
  - Offshore wind O&M pull (MCE and more)

Planned and announced FPSOs, Rest of the World 2025–2030

Name	Country	Build type	Status	Operator	Participants	Associated field	Start year	Oil Prod (mbd)	Gas Prod (mmcfd)
Johan Castberg		New Build	Planned	equinor	Eni SpA (20.88%) Equinor ASA (50.00%) HitecVision AS (9.12%) Petoro AS (20.00%)	Drivis, Havis, Johan Castberg, Skrugard	2025	189	290
Petrojarl Knarr		Conversion	Planned	altera INFRASTRUCTURE	Brookfield Corp (100.00%)	Rosebank	2027	63	47
Buchan Redevelopment		Conversion	Announced	NEO ENERGY	HitecVision AS (50.00%) Jersey Oil and Gas Plc (20.00%) Serica Energy Plc (30.00%)	Buchan Redevelopment	2027	-	-
Hummingbird Spirit		Conversion	Announced	ping	Dagang NeXchange Bhd (90.00%) Ping Petroleum Sdn Bhd (10.00%)	Avalon	2028	25	-
Cheviot		New Build	Announced	W	Waldorf Production Ltd (100.00%)	Cheviot	2028	-	-
Cambo		New Build	Announced	ITHACA	Delek Group Ltd (100.00%)	Cambo	2028	-	-
BW Opal		New	Planned	BW OFFSHORE	BW Offshore Ltd (100.00%)	Barossa	2025	11	850
Equus		New	Announced	WESTERN GAS	Western Gas Corporation Pty Ltd	Equus	2027	-	-
Browse 2		New	Announced	Woodside Energy	BP Plc (44.3%); China National Petroleum Corp (10.6%); Mitsubishi Corp (7.20%); Mitsui & Co Ltd (7.20%); Woodside Energy Group Ltd (30.60%)	Browse, Torosa	2030	-	1,100
Browse 1		New	Announced	Woodside Energy	BP Plc (44.3%); China National Petroleum Corp (10.6%); Mitsubishi Corp (7.20%); Mitsui & Co Ltd (7.20%); Woodside Energy Group Ltd (30.60%)	Brecknock, Browse, Calliance	2030	-	1,100
Polok and Chinwol		-	Announced	REPSOL	Harbour Energy PLC (25.00%); Petroliam Nasional Bhd (28.33%); PTT Public Co Ltd (16.67%); Repsol SA (30.00%)	Chinwol, Polok	2028	-	-
Bay du Nord		New Build	Announced	equinor	BP Plc (35.00%); Equinor ASA (65.00%)	Bay du Nord	2028	188	-

Fleet Size

- Existing
- Future
- Options / versus likelihood
- Cabotage

Brochure versus reality

- Very relevant to WTIV / HLV market
- How is crane defined; above deck / sea?
- Is a crane curve available
- Rigging impact
- Is mission equipment available
- MAJOR CONSIDERATION as we move to >15MW / XXXL monopiles

Bottom up analysis needed, not top down
Project specific analysis needs to follow

Latest Results

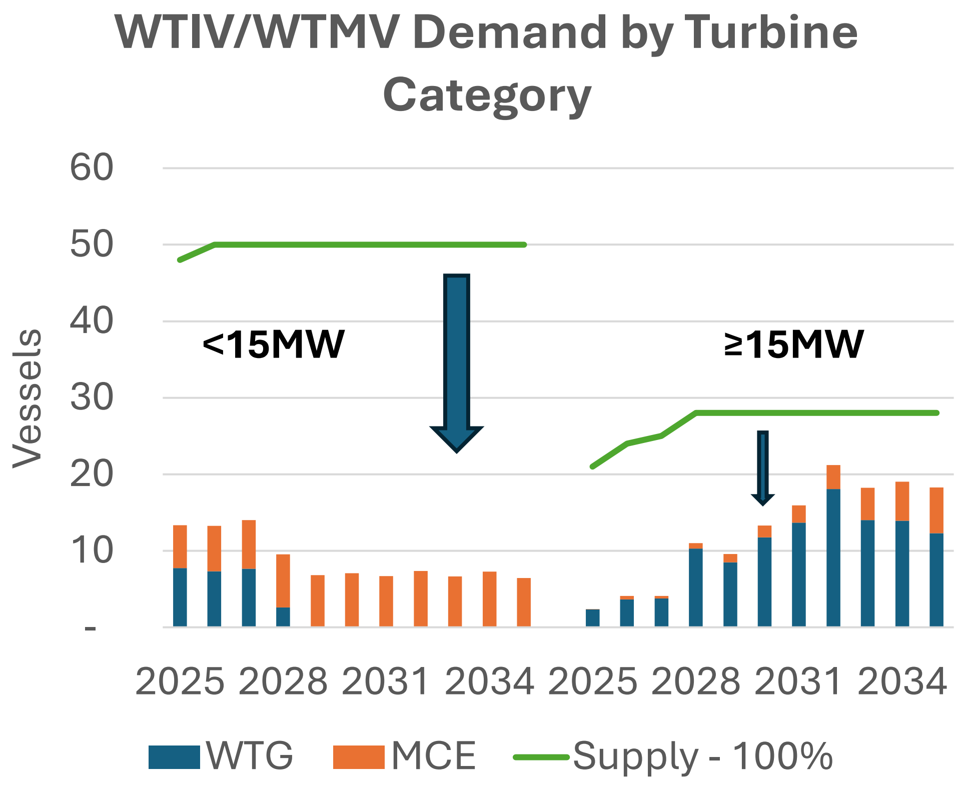
“Renew Marine powered by Intelatus”

Based on a Q1 2026 bottom-up analysis
Foundations and Turbines – Intelatus
CSOV’s – Renew Marine

Bottom- Up:
Every project has been considered individually
Every vessel has been considered individually

Wind Turbine Installation

Oversupply

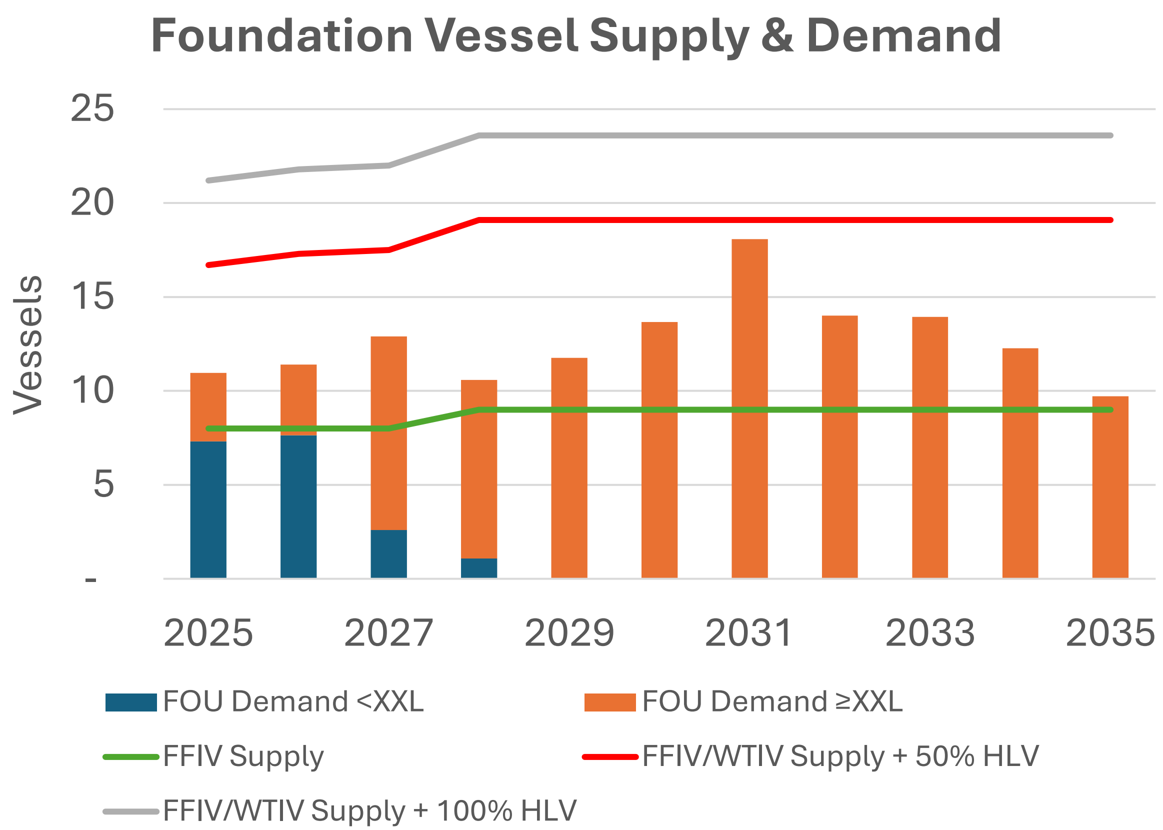


Biggest threat

- O&G pull
- Likely limited to <15MW class vessels

Foundation Installation

Complex at best!



Pure FFIV basis is under supply

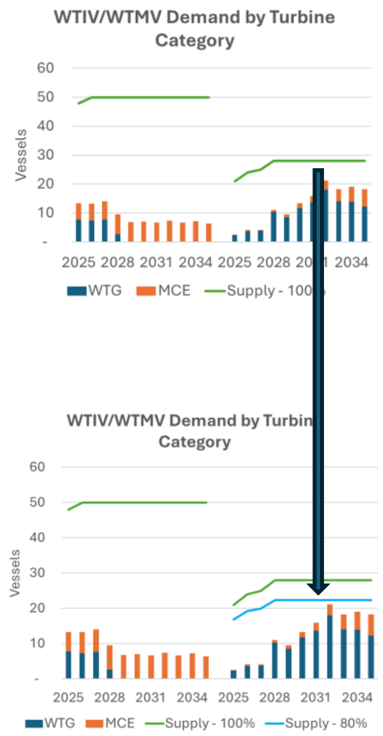
Needs support from HLV market:

O&G impact

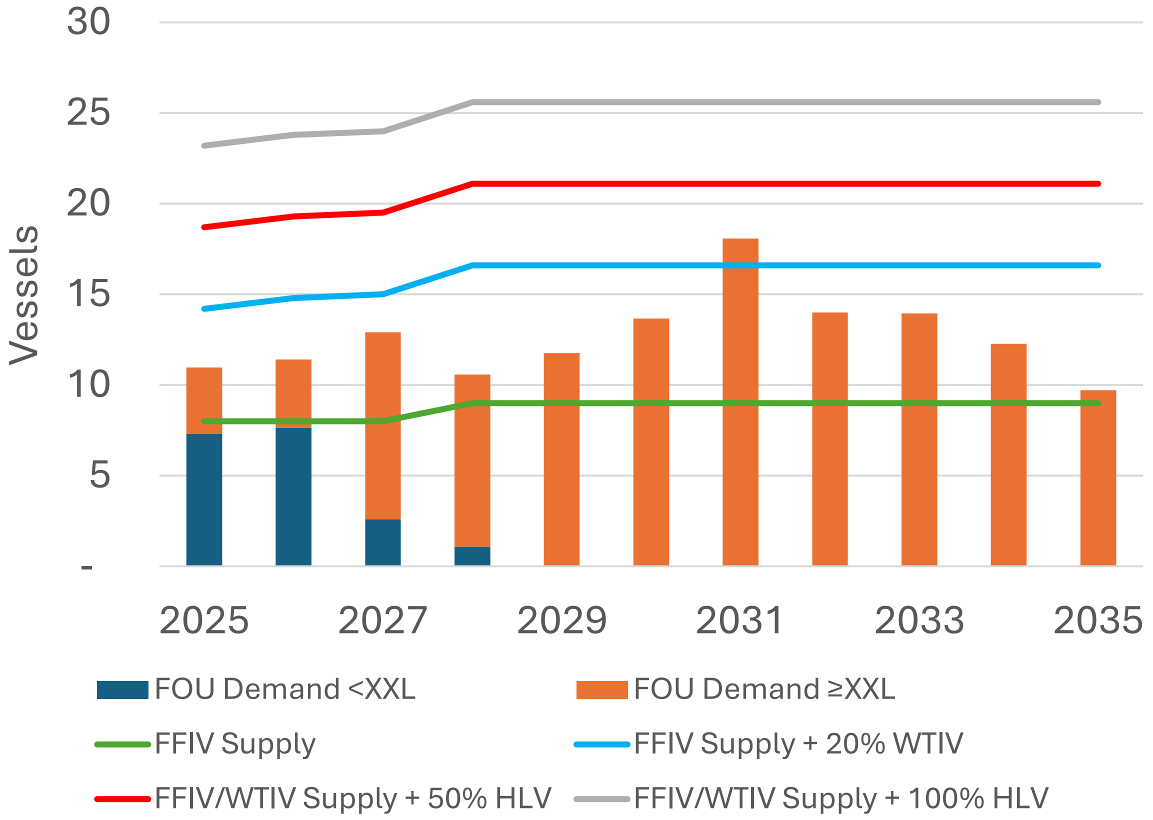
Efficiency impact

Foundation Installation

WTIV support



Foundation Vessel Supply & Demand

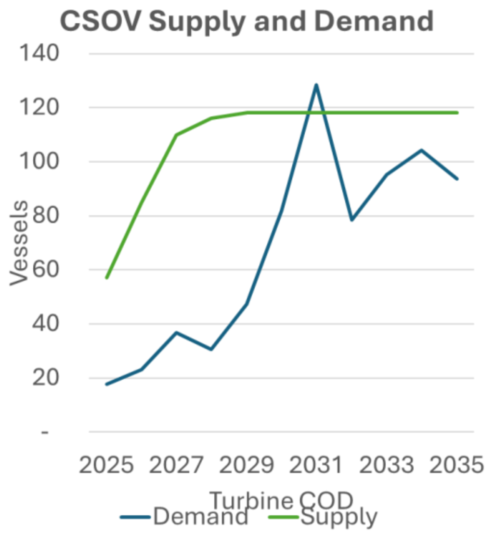


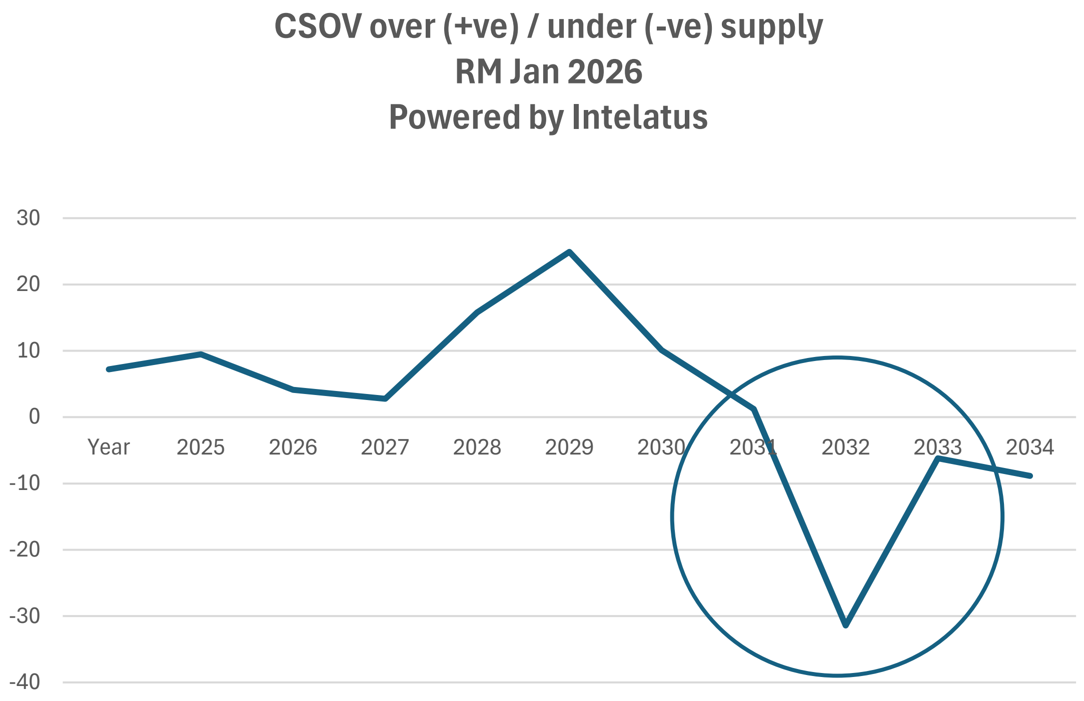
WTIV support seems key?

Is a WTIV company the same as a FFIV company??

CSOV Demand

Oversupply to Undersupply to Balance





Oversupply extends to 2031

Highly sensitive to WTG size

Peak build in 2032

Change in AVG WTG size 2032

INTELATUS GLOBAL PARTNERS

Comments

Nothing is certain; A view at a point in time

Acceptance of Chinese OEMs.

- Scale of entry of Chinese installation and maintenance vessels to European, EAPAC and other markets.
- They are here in relation to foundations, cables and a lot of vessels that dock in Europe each day if not hour

Black swans.

- Think USA…Technology changes…
- FUEL! – what impact will it have?

The Target driven kicker

- I mentioned it at the start…..is it still present?…does it deserve to be?…is it a / the driver for vessel oversupply?

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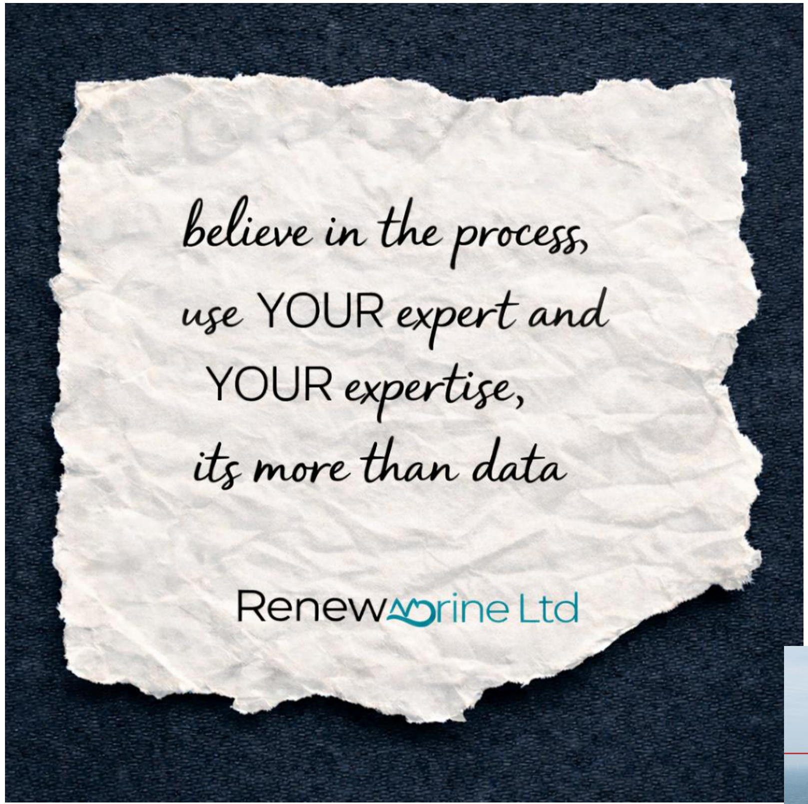
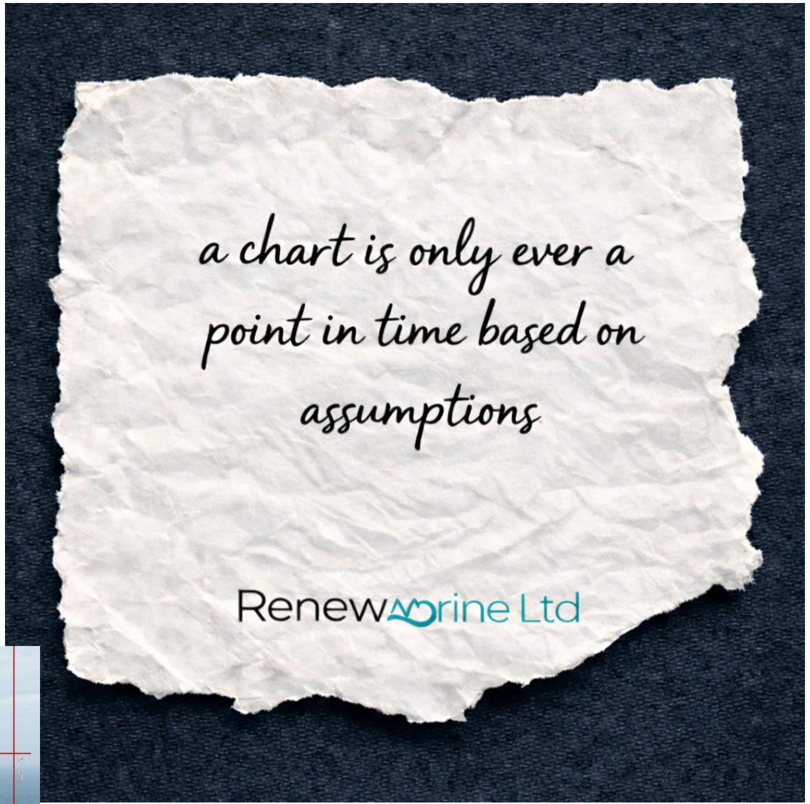
Final Thoughts





Reach out, here to help!

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