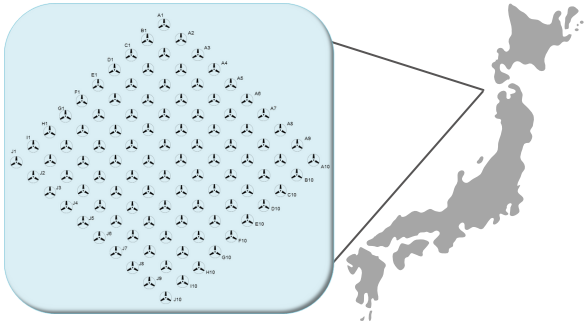
Japan Offshore Wind Insight

JBA consulting

This country insight report summarises the expected durations and vessel costs for the installation of an offshore wind farm (monopiles and transition pieces), off the north west coast of Japan. The work was carried out using JBA's ForeCoast Marine Design Desk software.



Two vessel strategies were compared:
The first was based on the use of two Jack up Barges (JUB), with a day rate of $180,000 / day and an operating threshold of 2.5 m significant wave height.
The second was based on the use of 2 Heavy Lift Vessels (HLV) supplied by 4 feeder barges, with a day rate of $130,000 / day and an operating threshold of 1.6m significant wave height.

TURBINES	CAPACITY	HUB HEIGHT
100	1,000 MW total	120m

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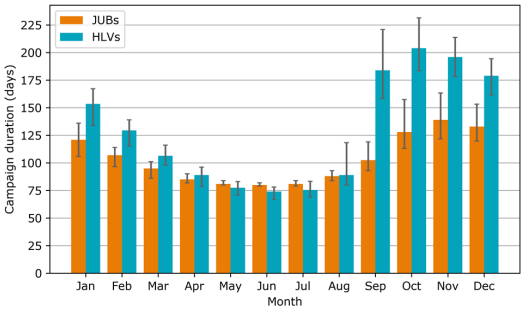
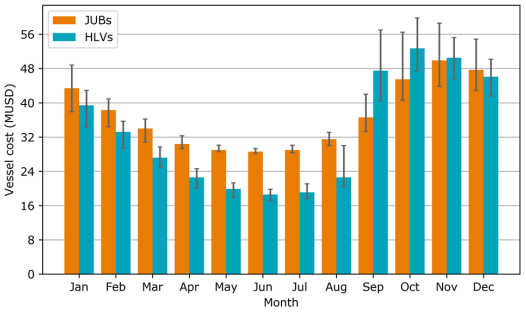
CAMPAIGN DURATIONS

- Clear seasonal trend
- Significantly higher durations during the winter months, when using the more weather sensitive HLVs compared to the JUBs



VESSEL COSTS

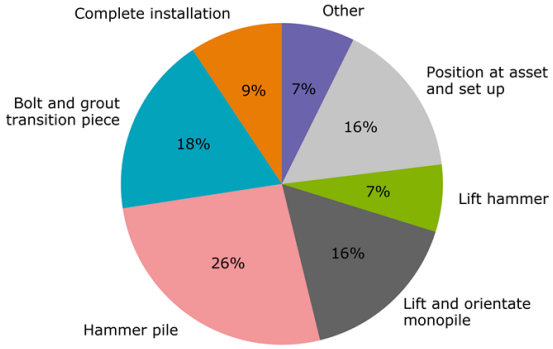
- The vessel costs associated with the use of the JUBs is generally higher compared to the HLVs, most significantly for start dates May-Aug.
- For campaigns starting in months Sept-Nov, the lower day rate of the HLV and feeder barges is offset by the long campaign durations in these months.



N.B. Simulations were started at the beginning of each month. Each bar in the plots represents the expected cost/duration if the installation campaign starts in that month.

DOWNTIME CONTRIBUTIONS

- This plot shows which operations contribute most to downtime,



The findings shown are for illustrative purposes only and are based on a hypothetical case study.