

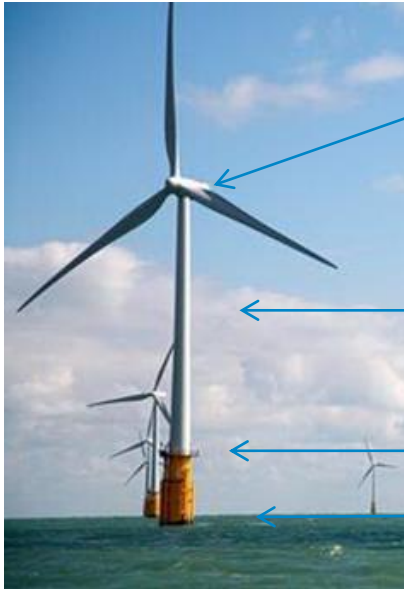


# An introduction to Crew Transfer Vessels and operations within Offshore Windfarms

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# WIND TURBINE CONSTRUCTION



Rotor / Blade

Nacelle /Turbine

Tower section

Transition Piece

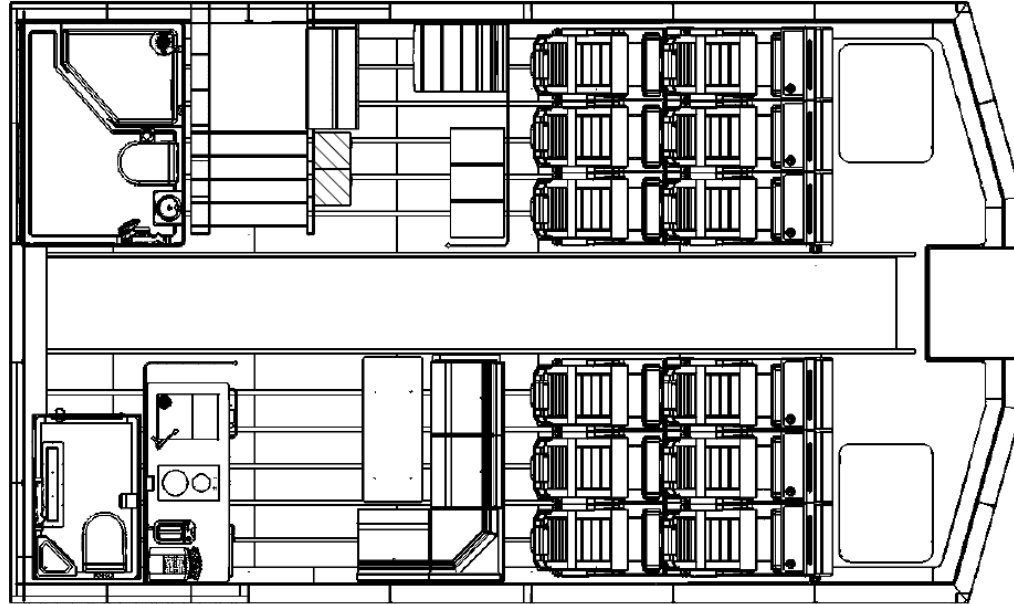
Foundation



# CREW TRANSFER VESSEL – GENERAL LAYOUT



# CREW TRANSFER VESSEL – GENERAL LAYOUT



# CTV GENERAL REQUIREMENTS

Good range of operations to better use “on site” time.

Larger operation range avoids need for OSV

Good operational speed to reduce transit time

Engine Fuel efficient – Major cost implication for Utility

Reduction of motion sickness improves wellbeing and safety

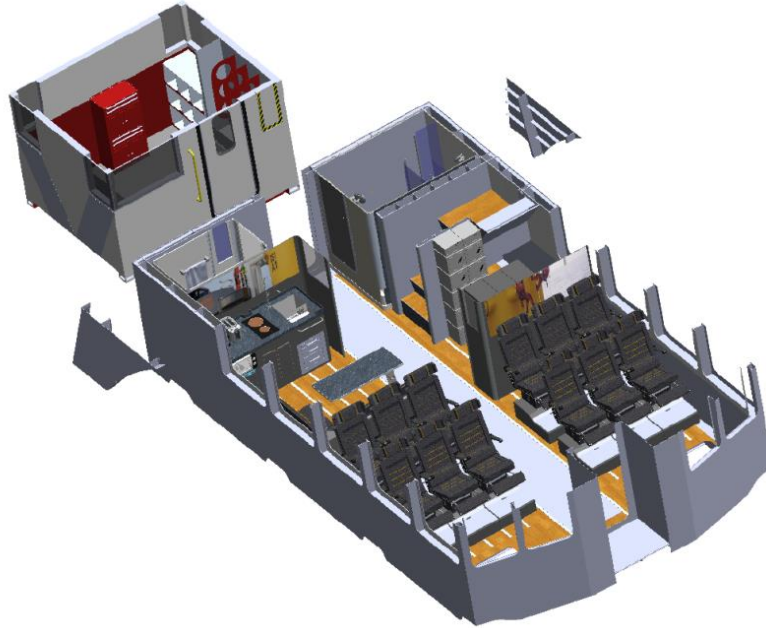
Reduction of motion sickness improves personnel efficiency

Efficiency of O&M personnel and maintenance is increased

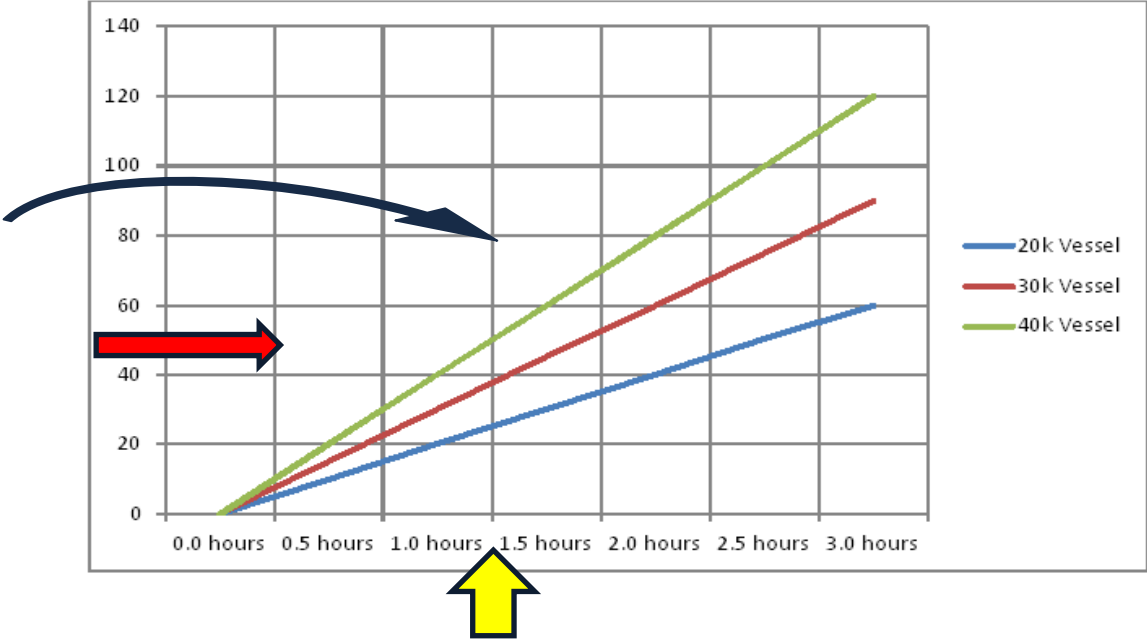




# CREW TRANSFER VESSEL – GENERAL LAYOUT



# CTV GENERAL SPEED REQUIREMENTS



# OPERATIONS & MAINTENANCE

## *Offshore Service vessels*

- **Benefits of Offshore accommodation Vessel?**
- Permanent on site personnel quick reaction to issues
- Reduction of time to transit to worksite
- Increased weather windows as vessel on site
- Reduction of time on CTV reduces motion sickness
- Helicopter transits to offshore accommodation
- Hotel standards improves well being offshore
- Full communications for operations and family





# CTV GENERAL REQUIREMENTS

Personnel now on site avoids need to transit

Flexible to react quickly in various roles

Can operate CTV's or "Walk to work" gangways

Efficient crane , heave / motion compensated

Ability to carry large POB to hotel standards

Ability to operate with CTVs and using boat landings

Good sea keeping qualities to reduce motion sickness  
and keep vessel working in large swells

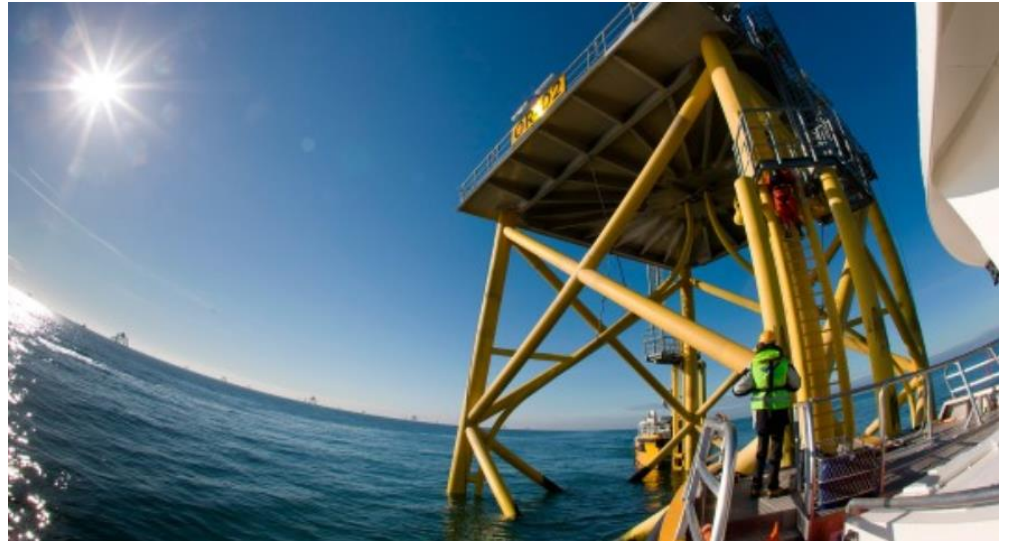


# OPERATIONS & MAINTENANCE

## Offshore Service vessels – The Future?

### (Construction support / commissioning / O&M?)

- Safe people transfer by motion compensated gangway with cargo lifting functionality up to Hs 3.0m
- Integrated step-less W2W system for efficient on-board logistics and high productivity
- Highly optimized hull form with Ulstein X-BOW and X-STERN to offer unmatched workability in adverse weather conditions
- Motion compensated E-H knuckle boom crane (capacity 10t w/o compensation, 6t without compensation), 26m liftiheight above water level
- State of the art hotel facilities to accommodate up to 120 persons and ample deck space for cargo storage (1000 m<sup>2</sup>)





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and free from fossil fuel within one generation.

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