

Real-life Experiences with Wind Technologies

Challenges and Opportunities

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Our HHX.blue Experiences

Our aim is to reflect experiences gained in the field!

- regulation - levels of greening
- regulation - definition of terms and requirements
- selection of technology
- financing
- yard and installation logistics

Important Note!

It is not possible or reasonable or fair to generalise the challenges faced in WASP promotion from our experiences!

Regulation

In few words: confusion!

- what is understood with greening? → it seems that many owners are still confused! is it only about CO_2 emissions? ← confusion with wider *air quality* policies that involve also SO_x , NO_x , etc.
- how much is the mandatory decarbonization level till 2025 (or 2030) and what is the safe level for a new project (say 50% energy savings vis-a-vis a pure conventional design?)

Selection of Technology

In few words: lack of a clear methodology or classification of solutions

- there is need for a technology-selection tool ← *which technology suits the needs of my ship?*
- competition with other technologies ← *my advisors suggest other technologies*
- the brand name / reputation of the technology providers ← *how many projects are concluded?*
- the risk of pioneering rests mainly with the owners ← *it safer to 'slow-steam' than to invest in any new technology!*
- it is not only energy efficiency ! There are many aspects, such as noise, structural integrity, etc. that concern owners and operators.

Financing

- depends on the ship type, size, age as well as the capacity of the owner
- securities are critical
- pricing and ticket-size are also important
- shared economy models require solvency and financial capacity from both sides: owners and technology providers
- concerns from the investors

Yard and Installation Logistics

- delivery of equipment within a time-window ← production issues
- meeting the time-window the ship is in the yard for repair and retrofit
- yard / customs clearance ← taxation, dues, etc
- licenses to the yard, ownership of solutions/patents

Thank You for Your Attention!

We are here to promote WASP! Please contribute your ideas!