



DanishShipping

Energy efficiency continues to be key for decarbonization

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Agenda:

1. The impact of EEXI and CII, learnings and review
2. How do we measure efficiency and why is correct data key?
3. Why is it important to continue to improve efficiency?
4. What can we do to improve efficiency?



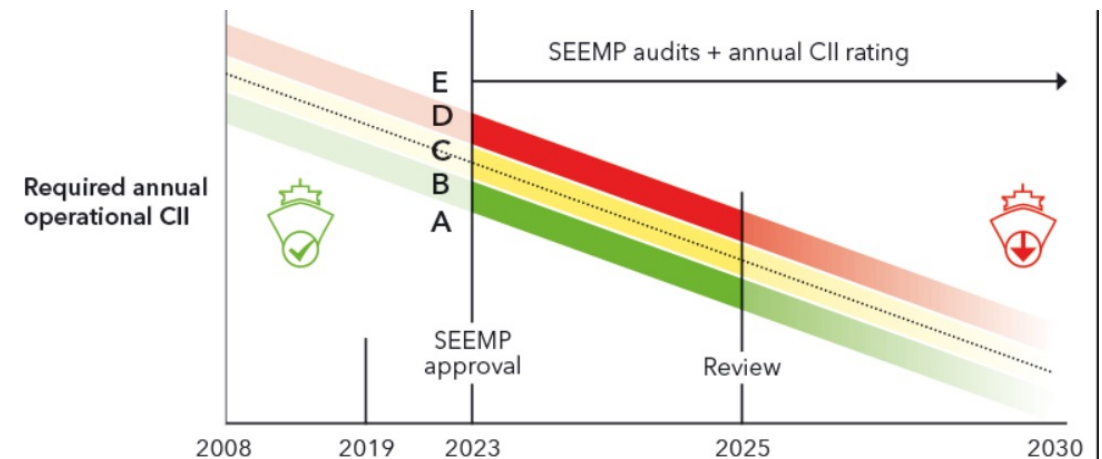
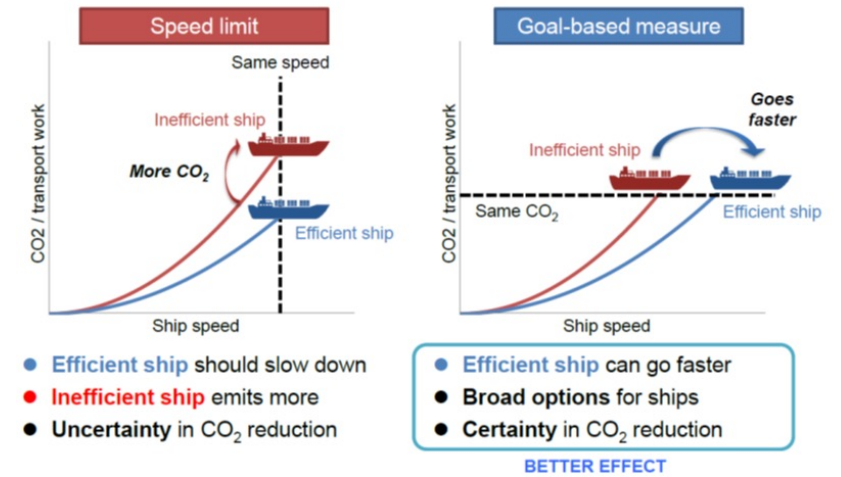
The impact of EEXI and CII learnings and review

EEXI

- Ensures a leveled playing field – new efficient ships are not discriminated
- May reduce the speed of some ships
- Provide a cap on individual ships emissions if the market picks up

CII

- Will reduce emissions from individual ships over time
- Will reduce the average speed of vessels
- May not reduce the sectors emissions as more vessels will be built
- May change the way charter contracts are made



The impact of EEXI and CII learnings and review

Learnings

- Some additional corrections may be needed e.g. waiting time short voyages etc.
- AER will not provide correct incentives to improve operational efficiency
- A large vessel partly loaded will have a better AER than a smaller vessel loaded with the same amount of cargo – i.e. no incentive to optimize utilization and a reward for ballast voyages

Particulars	Tanker 1	Tanker 2
Maximum DW	100,000 t	70,000 t
Actual DW	70,000 t	70,000 t
Payload	66,500 t	66,500 t
EEOI = CO ₂ emissions/ton payload/nm	6.66 >	6.56
Real AER (based on max. DW)	4.43 <	6.24

Review IMO Data Collection System & CII

- IMO DCS needs to be improved asap – larger granularity and transport work to be included
- CII shall be reviewed before 2026
- Carbon Intensity Code (CIC) to be completed in 2026
- CIC shall ensure mandatory and enforceable regulation



How do we measure efficiency and why is correct data key?

- CII - calculation
- Fuel consumption, nautical miles and vessels DW
- Only reduction of sailed nautical miles or reduced consumption can improve rating
- We need to look at utilization as well – i.e. real transport work



Correct data:

- A ship is a complex unit
- Many different consumptions on a ship – main engine, aux engines, boilers etc.
- Many factors can influence consumption
 - Weather, Cargo intake, Speed, Cargo related consumptions (pumping, cooling and heating)
- In order understand and optimize the vessel as a complete unit, many accurate datapoints are required

Why is it important to continue to improve efficiency?

New fuel types can reduce emissions from ships but!

- The fuels will be very expensive – costly production/infrastructure and high demand
- There may be limited supplies
- The energy density will increase the required number of bunker operations/year
- The energy requirement for productions of the fuels will be very high

It will be extremely important to operate vessels as efficient as possible – also in the future

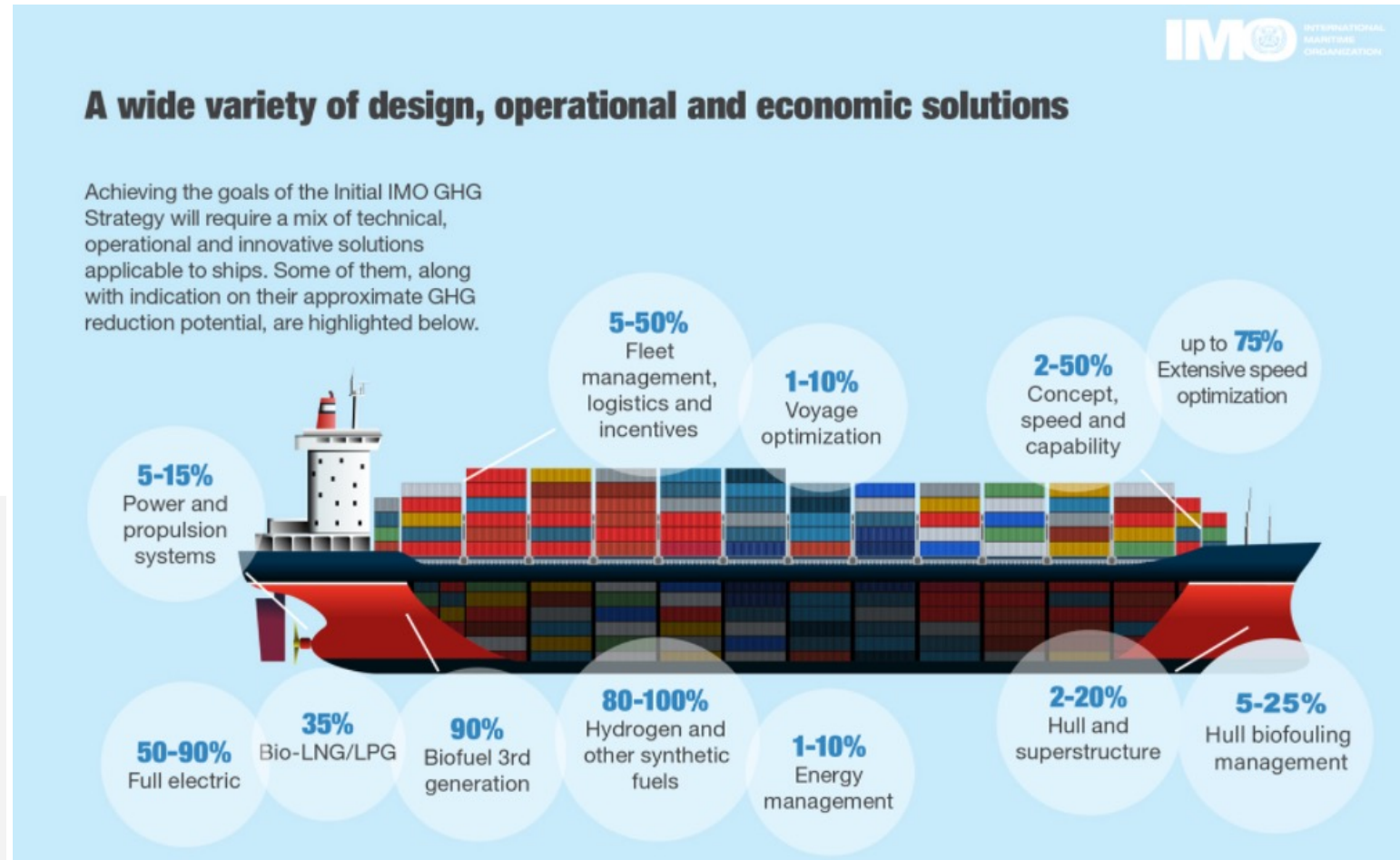
The best fuel of the future is the fuel you do not use!



What can we do to improve efficiency?

Technical improvement

- Many owners have already picked most of the low hanging fruits, but still a lot can be done



What can we do to improve efficiency?

Operational improvements

- Reduce waiting time – change waiting time to sailing time at lower speed
- Continual optimization of voyage and speed - e.g. weather routing
- Utilize the full capacity of the vessel
- Minimize number of ballast voyages
- Crew awareness
- Consider to change contractual agreements to share responsibility



Thank you!

