



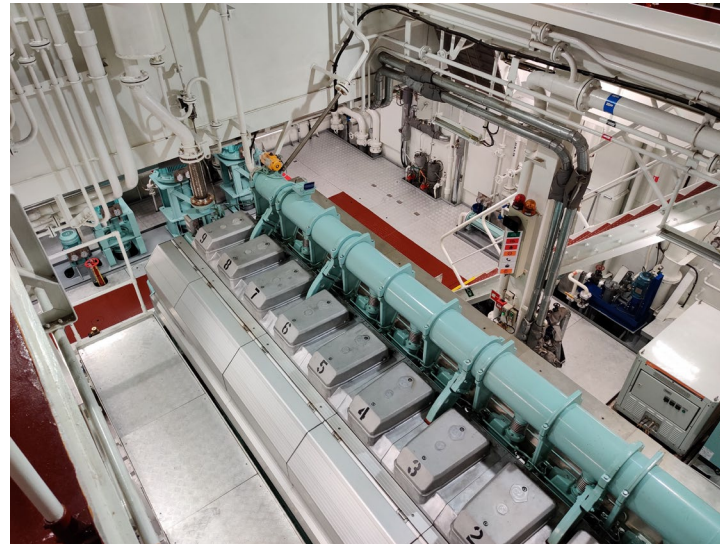
Furetank- Gasdagarna

Maj 2023



Jonatan Höglund

- Marine Engineer (Kalmar 2013)
- Chief engineer
- Newbuilding inspector
- Technical Superintendent

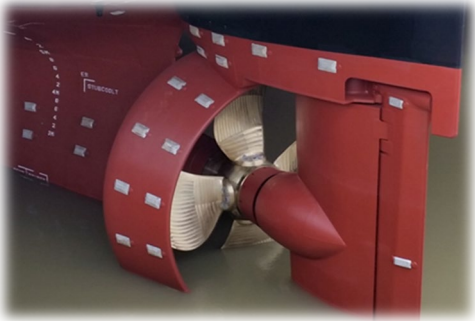


Furetank Group

- Furetank is focused on product & chemical tankers below 20,000 dwt and has been active in the North European petroleum products trade since the early 1950's
- Integrated ship owning company that provide technical, safety, crewing and commercial management services to own vessels and external partners
- Owned by the Höglund family, which has been involved in shipping business since the 17th century
- Offices in Gothenburg(Sweden) and Holbaek (Denmark)
- Have together with partners developed the VINGA-series, dual-fuel, low emission 18,000 dwt product/chemical tankers in total the series will comprise a total of 17 sister vessels.
- Founding partner of commercial joint venture Gothia Tankers Alliance, covering about 40 vessels in the small and intermediate size segmnets.

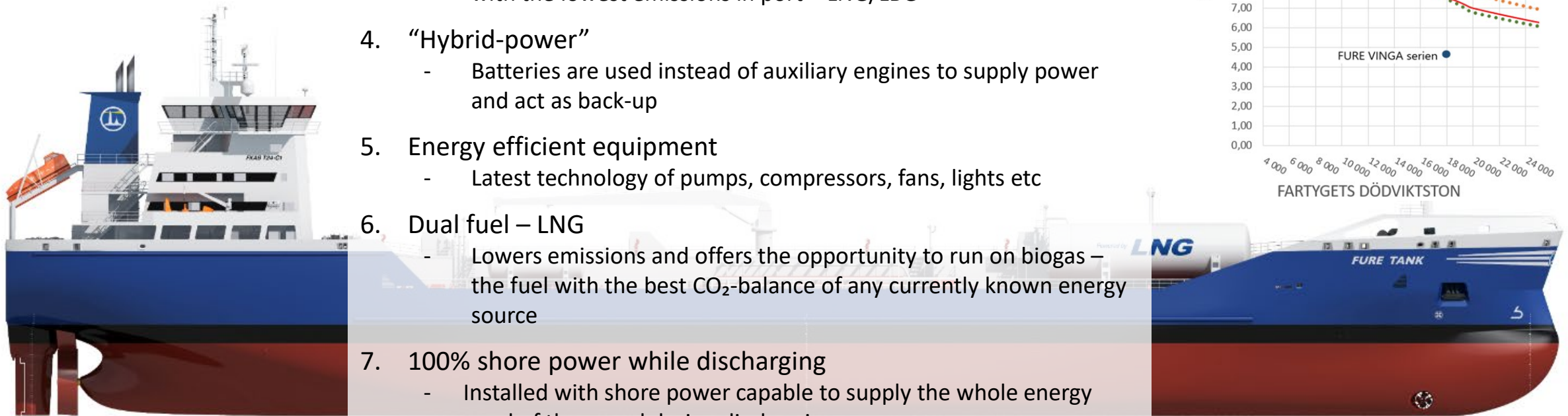
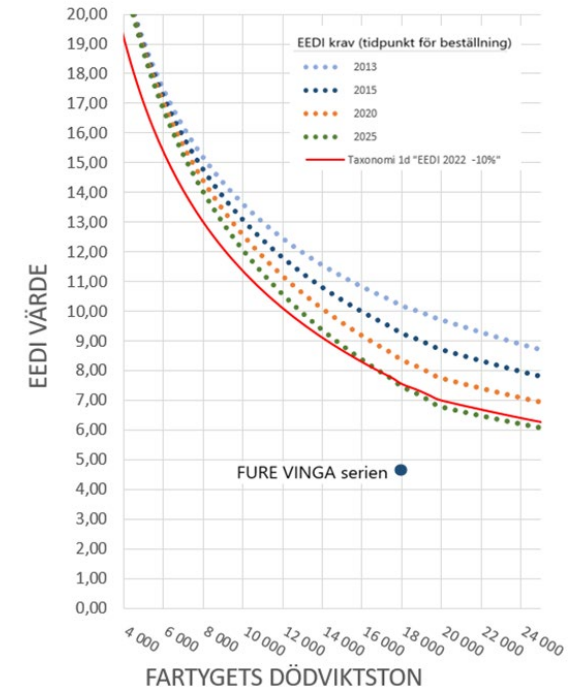


VINGA-series – designlösningar för minskad miljöpåverkan



1. Low drag hull design
 - Developed in cooperation with FKAB
2. Ducted propeller
 - Increases thrust and reduces power requirement on main engine and still meeting criteria for ice class 1A
3. Variable frequency on main engine
 - Main engine is used to power cargo pumps thus using the fuel with the lowest emissions in port – LNG/LBG
4. “Hybrid-power”
 - Batteries are used instead of auxiliary engines to supply power and act as back-up
5. Energy efficient equipment
 - Latest technology of pumps, compressors, fans, lights etc
6. Dual fuel – LNG
 - Lowers emissions and offers the opportunity to run on biogas – the fuel with the best CO₂-balance of any currently known energy source
7. 100% shore power while discharging
 - Installed with shore power capable to supply the whole energy need of the vessel during discharging

IMO EEDI

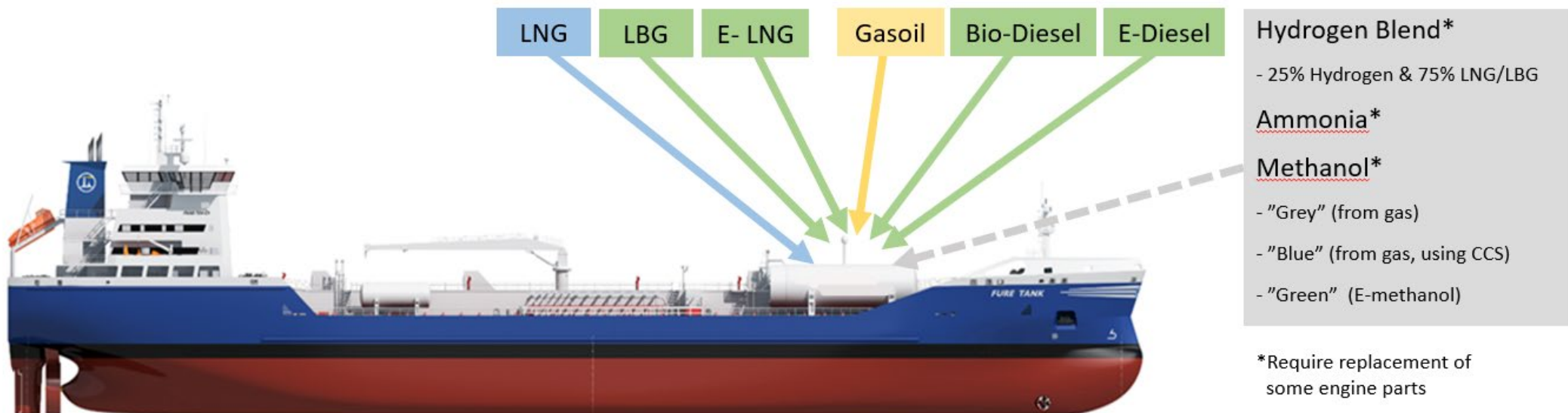


LNG "multi-fuel" – maximum fuel flexibility now and for the future

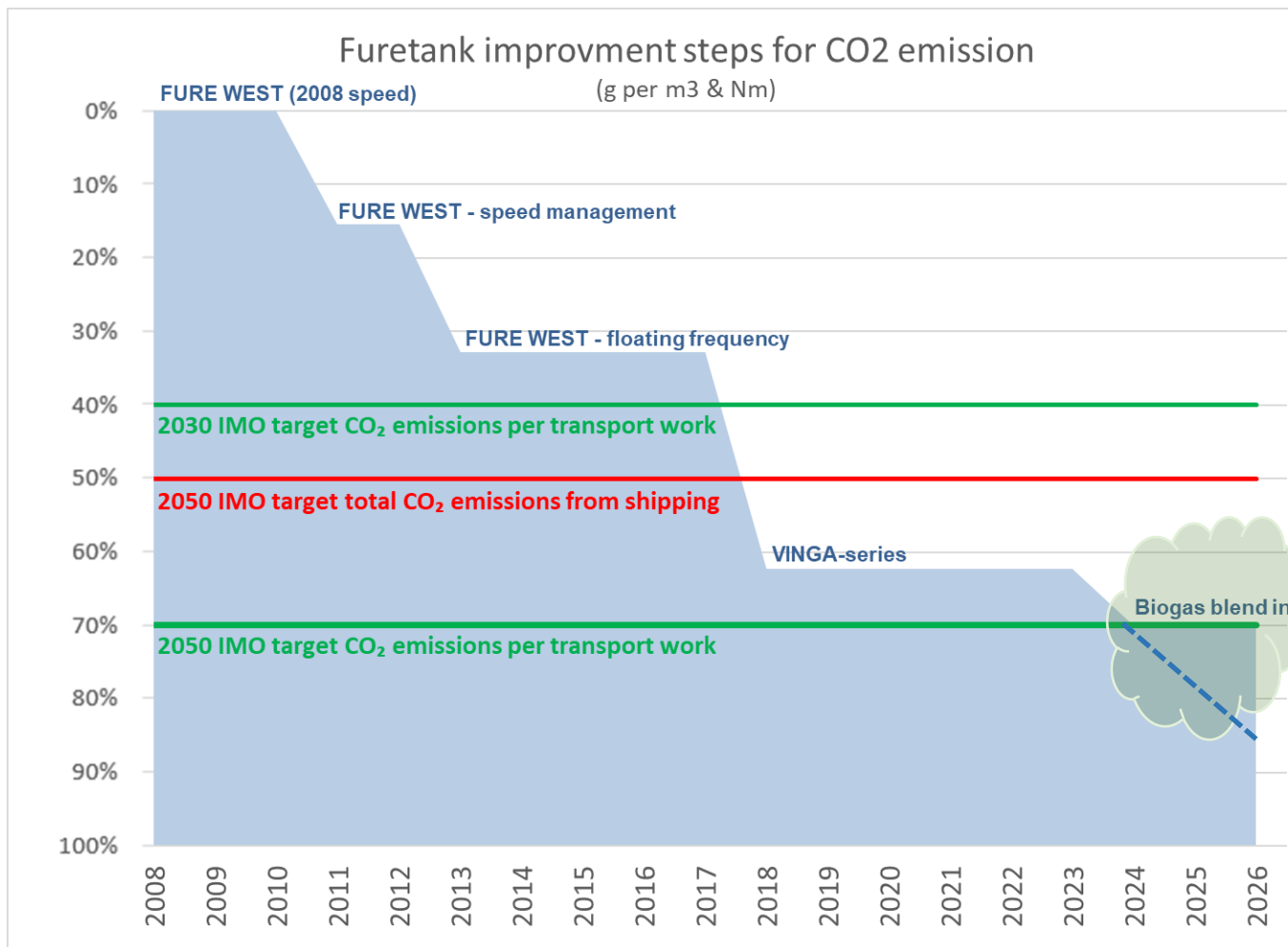
The choice of engine and fuel system on the VINGA-series offers multi-flexibility on fuel choice,

The VINGA-series;

- Can be powered by any of the presently available conventional fuels and bio-fuels
- Are ready for Hydrogen blends (25%) and possible fossil-free fuels like ammonia and "green" methanol should they become available in the future



Furetanks initiatives to reach IMO's target for CO2 emissions



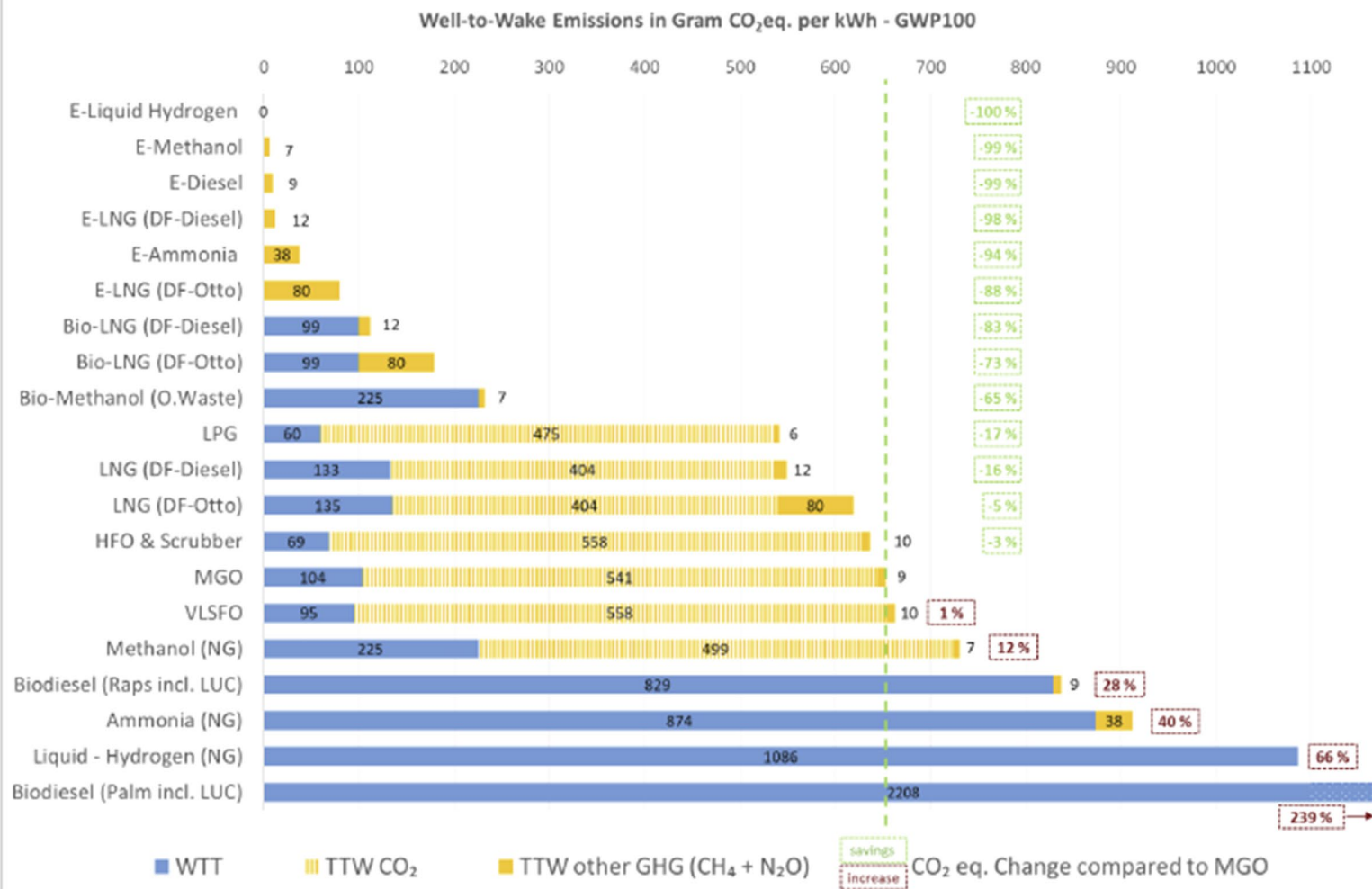
Key fuel technologies will be available in 3-8 years



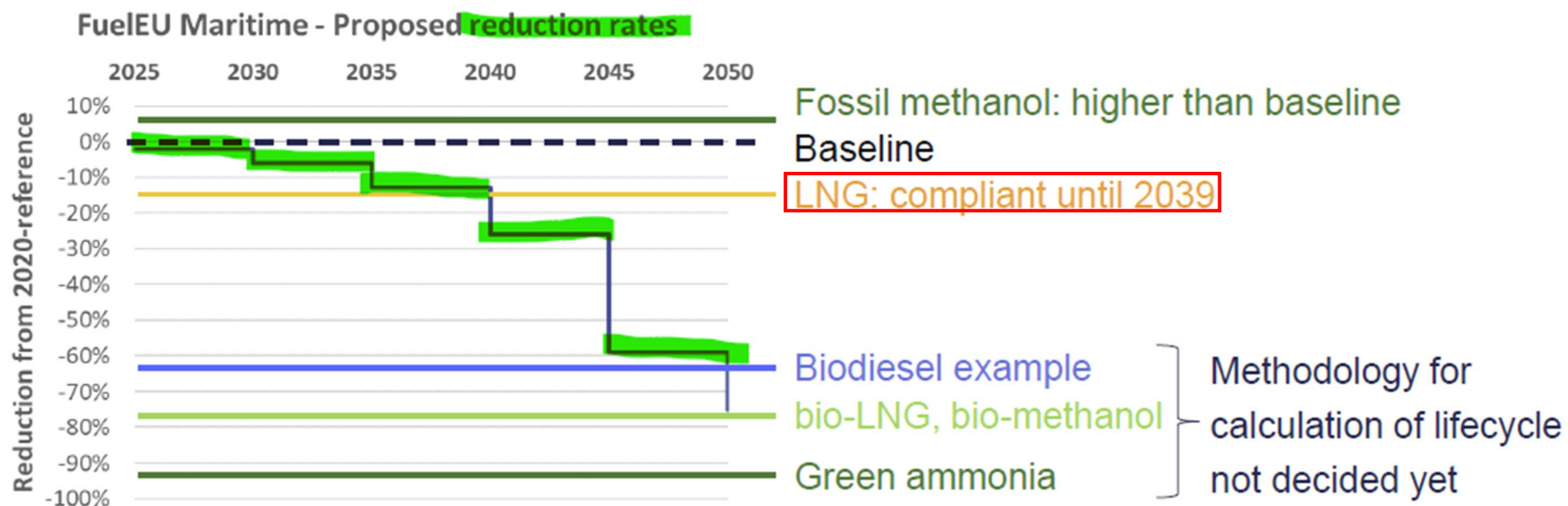


From Tank-to-Wake CO₂ to WTW CO₂ eq.

- TTW to WTW: avoid shifting emissions from downstream to upstream.
- CO₂ to GHG (CO₂ eq.): avoid suboptimization.
- Increasing interest and ongoing dialog



FuelEU Maritime will set requirements to Well-to-Wake emissions



Source: FuelEU Maritime proposal supplemented with calculations in ISWG-GHG 9/2

Note: the above is based the proposal from the Commission and may change during the dialogue between Commission, Parliament and Council.

Reduced Environmental impact – Discharge operation Antwerp

- Emissions of NOx and particles are damaging to human health and a major issue in densely populated regions
- The bars show VINGA-series total emissions in LNG-mode compared to a conventional vessel of 2008 design during passage in/out plus discharge operation in Antwerp

