Höegh LNG Method statement

Sustainability report – reported emission and energy figures

Reliable data is key to correct reporting. Our vessels report fuel consumption and all other relevant metrics through a digitalised reporting tool on daily, monthly or per voyage basis. Data quality is ensured through regular verification of these reported figures.

Fleet fuel consumption figures are based on flow meter readings, and the reported figures are further used for conversion to the reported parameters in the Sustainability Report (Scope 1 emissions, energy consumption, energy efficiency indexes).

Emission factors for the various types of fuels are taken from the Fourth IMO GHG Study 2020. https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/Fourth%20IMO%20GHG%20Study%202020%20-%20Full%20report%20and%20annexes.pdf

Energy consumption is derived by using reported fuel consumption figures and energy conversion factor from DEFRA (Department for Environment Food & Rural Affairs, UK).

CO_2 emissions = fuel consumed (ton) x relevant conversion factor + vented volumes in CO_2e

The reported CO_2 emissions include vented volumes from gas freeing operations and tank pressure control. The vented volumes are measured via flow meter and reported at the time of occurrence. The reported vented volumes are converted from methane to CO_2equivalents using the Methane 100-year Global Warming Potential of 28.

Methane slip from LNG burned in the vessel engines and other consumers are calculated using emission factors.

Fuel type	Methane Emission Factor (g CH4/kg fuel)
HFO	0.05
MDO	0.045
LNG	8.265 (mean value between 5.31 and 11.22 from IMO GHG 4)

SOx emissions = fuel consumed (ton) x relevant conversion factor

$$g\,SO\,x = g\,fuel * 2 * 0.97753 * fuel\,sulphur\,fraction$$

Energy consumption = fuel consumed (tonnes) x relevant conversion factor

CII = annual CO_2 emissions divided by design deadweight (MT) of the vessels multiplied by distance travelled (nm)
[g CO_2 / (MT dwt x nm)]

FSRU emission Index = annual CO2 emissions divided by annual delivered natural gas
[CO2 (ton) / NG send-out (ton)]