

## ANNEX 1

### DRAFT AMENDMENTS TO MARPOL ANNEX VI

#### Regulation 2

- 1 Paragraph 2.26 is amended and new paragraphs 2.38 to 2.42 are added as follows:
- 26 "Gas carrier" means a cargo ship constructed or adapted and used for the carriage in bulk of any liquefied gas other than LNG carriers as defined in paragraph 38.
- 38 "LNG carrier" means a cargo ship constructed or adapted and used for the carriage in bulk of liquefied natural gas (LNG):
- .1 for which the building contract is placed on or after [date of entry into force]; or
- .2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after six months after [date of entry into force]; or
- .3 the delivery of which is on or after 48 months after [date of entry into force].
- 39 "Cruise passenger ship" in relation to chapter 4 means a passenger ship not having a cargo deck, designed exclusively for commercial transportation of passengers in overnight accommodations on a sea voyage.
- 40 "Conventional propulsion" in relation to chapter 4 means a method of propulsion where a main engine is the prime mover and coupled to a propulsion shaft either directly or through a gear box.
- 41 "Non-conventional propulsion" in relation to chapter 4 means a method of propulsion, other than conventional propulsion, including diesel-electric propulsion, turbine propulsion, and hybrid propulsion systems.
- 42 "Cargo ship having ice-breaking capability" in relation to chapter 4 means a cargo ship which is designed to break level ice independently with a speed of at least 2 knot when the level ice thickness is 1.0 m or more having ice bending strength at least 500 kPa.

#### Regulation 19

- 2 A new sub-paragraph 19.2.2 is added as follows:
- ".2 ships not propelled by mechanical means, and platforms including FPSOs and FSUs and drilling rigs, regardless of their propulsion."
- 3 Paragraph 19.3 is amended as follows;

"3 Regulations 20 and 21 shall not apply to ships which have non-conventional propulsion~~diesel-electric propulsion, turbine propulsion or hybrid propulsion systems~~. However, regulations 20 and 21 shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion, constructed on or after [date of entry into force]. Regulations 20 and 21 shall not apply to cargo ship having ice-breaking capability".

## Regulation 21

4 Paragraph 21.1 is replaced as follows:

"1 For each:

- .1 new ship;
- .2 new ship which has undergone a major conversion; and
- .3 new or existing ship which undergone a major conversion that is so extensive that the ship is regarded by the Administration as a newly constructed ship;

which falls into one of the categories in regulation 2.25 to 2.31, 2.33 to 2.35, 2.38 and 2.39 and to which this chapter is applicable, the attained EEDI shall be as follows;

$$\text{Attained EEDI} \leq \text{Required EEDI} = (1-X/100) \times \text{reference line value}$$

Where X is the reduction factor specified in table 1 for the required EEDI compared to the EEDI Reference line."

5 New rows are added to Table 1 in regulation 21.2 for ro-ro cargo ships (vehicle carrier), LNG Carrier, cruise passenger ship having non-conventional propulsion, ro-ro cargo ships and ro-ro passenger ships, and mark \*\* and \*\*\* and their explanations are added, as follows:

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
<u>LNG Carrier***</u>	<u>10,000 DWT and above</u>	<u>n/a</u>	<u>10**</u>	<u>20</u>	<u>30</u>
<u>Ro-ro cargo ship (vehicle carrier)***</u>	<u>10,000 DWT and above</u>	<u>n/a</u>	<u>5**</u>	<u>15</u>	<u>30</u>
<u>Ro-ro cargo ship***</u>	<u>2,000 DWT and above</u>	<u>n/a</u>	<u>5**</u>	<u>20</u>	<u>30</u>
	<u>1,000 – 2,000 DWT</u>	<u>n/a</u>	<u>0-5* **</u>	<u>0-20*</u>	<u>0-30*</u>
<u>Ro-ro passenger ship***</u>	<u>4,000 GT and above</u>	<u>n/a</u>	<u>5**</u>	<u>20</u>	<u>30</u>

	<u>1,000 - 4,000 GT</u>	<u>n/a</u>	<u>0-5* **</u>	<u>0-20*</u>	<u>0-30*</u>
<u>Cruise passenger ship*** having non-conventional propulsion</u>	<u>85,000 GT and above</u>	<u>n/a</u>	<u>5 **</u>	<u>20</u>	<u>30</u>
	<u>25,000 – 85,000 GT</u>	<u>n/a</u>	<u>0-5* **</u>	<u>0-20*</u>	<u>0-30*</u>

\* Reduction factor to be linearly interpolated between the two values dependent upon vessel size. The lower value of the reduction factor is to be applied to the smaller ship size.

\*\* Phase 1 commences for those ships when the amendments to MARPOL Annex VI come into effect.

\*\*\* Reduction rate applies those ships constructed on or after [date of entry into force].

**Note:** n/a means that no required EEDI applies."

6 New rows are added to Table 2 in regulation 21.3 for ro-ro cargo ship (vehicle carrier), LNG carrier, cruise passenger ship having non-conventional propulsion, ro-ro cargo ships and ro-ro passenger ships as follows:

<b>Ship type defined in regulation 2</b>	<b>a</b>	<b>b</b>	<b>c</b>
<u>2.33 Ro-ro cargo ship (vehicle carrier)</u>	<u><math>(DWT/GT)^{-0.7} \cdot 780.36</math> where <math>DWT/GT &lt; 0.3</math> <u>1812.63</u> where <math>DWT/GT \geq 0.3</math></u>	<u>DWT of the ship</u>	<u>0.471</u>
<u>2.34 Ro-ro cargo ship</u>	<u>1405.15</u>	<u>DWT of the ship</u>	<u>0.498</u>
<u>2.35 Ro-ro passenger ship</u>	<u>752.16</u>	<u>DWT of the ship</u>	<u>0.381</u>
<u>2.38 LNG carrier</u>	<u>[.....]</u>	<u>DWT of the ship</u>	<u>[.....]</u>
<u>2.39 Cruise passenger ship having non-conventional propulsion</u>	<u>170.84</u>	<u>GT of the ship</u>	<u>0.214</u>

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