



**MARITIME AND PORT AUTHORITY OF SINGAPORE
SHIPPING CIRCULAR
NO. 07 OF 2022**

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Applicable to: This circular should be brought to the attention to all Singapore ship owners, ship managers and the shipping community.

REVISED GREEN SHIP PROGRAMME UNDER THE MARITIME SINGAPORE GREEN INITIATIVE

This Circular serves to provide an update on the details of the Green Ship Programme (GSP) for Singapore-flagged ships, in view of the amendments to International Maritime Organisation (IMO)'s MARPOL Annex VI Energy Efficiency Design Index (EEDI) requirements which were adopted on 20 November 2020 and have entered into force on 1 April 2022 as well as the rising need to decarbonise the industry. The GSP is one of the four programmes under the Maritime Singapore Green Initiative (MSGI)¹. The key principle of the GSP is to reward ship owners who voluntarily adopt solutions that enable ships to exceed environmental regulatory standards set by the IMO. The GSP commenced on 1 July 2011 and based on the last revision in 2019, the GSP currently runs from 1 January 2020 until 31 December 2024.

2 With effect from 1 May 2022 until 31 December 2024, MPA will provide incentives to Singapore-flagged ships which:

- i. Exceed IMO's MARPOL Annex VI Phase 3 EEDI requirements by 10% or more;
- ii. Adopt engine capable of using low-carbon fuels with C_F (conversion factor between fuel consumption and CO₂ emission)² equivalent to or lower than LNG (i.e. (bio)-LNG, (bio)-methanol, (bio)-ethanol); or
- iii. Adopt engine capable of using zero-carbon fuels (e.g. ammonia, hydrogen).

Annex A shows the incentives for Singapore-flagged ships that qualify for the GSP. Note that vessels will now need to exceed IMO's Phase 3 EEDI requirements by 10% or more to enjoy discounts under the EEDI criterion for the GSP.

¹ The MSGI seeks to reduce the environmental impact of shipping and related activities and to promote clean and green shipping. The MSGI comprises Green Ship Programme, Green Port Programme, Green Energy and Technology Programme and Green Awareness Programme.

² As defined in Resolution MEPC.308(73) Section 2.2.1.

Exceeding IMO's MARPOL Annex VI EEDI requirement

3 A Singapore-flagged ship that exceeds the requirements of IMO's MARPOL Annex VI Phase 3 EEDI by 10% or more will enjoy a 50% reduction on the Initial Registration Fees (IRF) under both normal registration and Block Transfer Scheme (BTS) during the registration of the ship. It will also enjoy a 20% rebate on Annual Tonnage Tax (ATT) payable every year. Details of the EEDI-related criteria and applicable ship types can be found in **Annex B**.

4 A ship that is already registered with the Singapore Registry of Ships (SRS) which adopts energy efficient ship design that exceeds the requirements of IMO's MARPOL Annex VI Phase 3 EEDI by 10% or more can also take part in this programme, but will only enjoy the 20% rebate on ATT payable every year until 31 December 2024. For registration anew scenarios, that is, those involving existing ships in the Singapore Registry, there is no 50% reduction on the registration anew fees for the new ship owner as this fee is not considered as IRF. However, the ship owner can still enjoy the 20% rebate on ATT if the ship qualifies under the GSP.

Use of Low-Carbon Fuels

5 A Singapore-flagged ship that uses LNG or fuels with C_F (conversion factor between fuel consumption and CO₂ emission) lower than LNG as its primary fuel will enjoy 75% reduction on the IRF and 50% rebate on the ATT. Existing Singapore-registered ships can also take part in this programme, but will only enjoy the 50% rebate on ATT payable every year until 31 December 2024. Please refer to **Annex C** for the list of fuels and their corresponding C_F values.

Use of Zero-Carbon Fuels

6 The GSP will also recognise Singapore-flagged ships that use fuels with zero-carbon content (such as ammonia, hydrogen) as its primary fuel. These ships will enjoy 100% reduction on the IRF and 100% rebate on the ATT.

Documentary Evidence

7 To qualify for the GSP under the EEDI criterion, the ship owner has to submit a copy of the International Energy Efficiency (IEE) Certificate along with its accompanying supplement as proof that the attained EEDI of the ship exceeds IMO's EEDI Phase 3 requirements by 10% or more for that particular ship type and size at the time when the above financial incentives are to be applied.

8 To qualify for the GSP relating to the use of zero- and low-carbon fuels on Singapore-flagged ships, please submit the International Air Pollution Prevention (IAPP) Certificate with its accompanying supplements as well as the Engine International Air Pollution Prevention (EIAPP) Certificate with its accompanying supplements and any other relevant supporting documents.

9 If the documentary evidence (such as IEE Certificate or IAPP Certificate) is not ready at the time of provisional registration, the ship owner has to inform the Singapore Registry of Ships in writing at the point of provisional registration of the intention to participate in the GSP. The documentary evidence will then need to be submitted within

1 month of provisional registration. For existing ship owners who have made modifications to make their ships green and would like to enjoy the rebate on ATT, please provide the documentary evidence at least two months before the ATT due date.

There will be no pro-rated rebate if documentations are not submitted on time. Submissions can be made via email to marine@mpa.gov.sg.

10 Interested ship owners may approach one of our eight Recognised Organisations (ROs)³ for the issuance of the documentary evidence (such as IEE Certificate, IAPP Certificate and EIAPP Certificate).

11 Ships that qualify for the GSP will be given a “Green Letter of Recognition” issued by MPA. The “Green Letter of Recognition” will also be given to the company owning the qualifying ship.

12 This circular will take effect and supersede Shipping Circular No. 12 of 2019 on 1 May 2022.

13 Any queries relating to this shipping circular should be directed to the Singapore Registry of Ships dedicated contact via email: marine@mpa.gov.sg.

**CHEAH AUN AUN
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Annex A – Green Ship Programme incentives
Annex B – IMO and Green Ship reduction factors for the EEDI
Annex C – List of fuels and their respective carbon content

³ ABS, BV, CCS, DNV, KR, LR, NKK, RINA

Green Ship Programme incentives

Criteria*	Types of incentives and % reduction/rebate given	
	Initial Registration Fee (IRF)	Annual Tonnage Tax (ATT)
Adoption of <u>zero-carbon</u> fuelled engine	100%	100%
Adoption of engine capable of using <u>low-carbon fuels</u> (i.e. (bio)-LNG, (bio)-methanol, (bio)-ethanol)	75%	50%
EEDI reduction <u>exceeds</u> the IMO Phase 3 EEDI requirement by <u>10% or more</u>	50%	20%

*For vessels that can satisfy more than one criteria, the higher discount will apply

Initial Registration Fee for qualifying ships under the Green Ship Programme

IRF	IRF Rate (S\$/NT)	Minimum Amount (\$)	NT equivalent	Maximum Amount (\$)	NT equivalent
Normal registration*	2.50	1,250	500	50,000	20,000
Normal registration with EEDI	1.25	625	500	25,000	20,000
Normal registration low-carbon fuels	0.625	312.50	500	12,500	20,000
Normal registration zero-carbon fuels	0	0	-	0	-
BTS registration**	0.50	1,250	2,500	20,000	40,000
BTS EEDI	0.25	625	2,500	10,000	40,000
BTS low-carbon fuel	0.125	312.50	2,500	5,000	40,000
BTS zero-carbon fuel	0	0	-	0	-

*Normal registration IRF rate: S\$2.50/NT, with min S\$1,250 (500 NT) and max S\$50,000 (20,000 NT)

**BTS registration IRF rate: S\$0.50/NT, with min S\$1,250 (2,500 NT) and max S\$20,000 (40,000 NT)

Annual Tonnage Tax payable for qualifying ships under the Green Ship Programme

ATT	ATT Rate (S\$/NT)	Minimum Amount (\$)	NT equivalent	Maximum Amount (\$)	NT equivalent
Normal/BTS registration*	0.20	100	500	10,000	50,000
Normal/BTS registration EEDI, Existing Green Ship & Registration Anew scenarios	0.16	80	500	8,000	50,000
Normal/BTS registration low-carbon fuel	0.10	50	500	5,000	50,000
Normal/BTS registration zero-carbon fuel	0	0	-	0	-

*Both normal and BTS registration ATT rate: S\$0.20/NT, with min S\$100 (500 NT) and max S\$10,000 (50,000 NT)

MARPOL Annex VI Reduction Factors (in Percentage) for the EEDI Relative to the EEDI Reference Line

For reference, Table 1 below shows the most updated requirements of the IMO's EEDI. Amendments were adopted at MEPC 75 on 20 November 2020 pertaining to size categorisation, reduction factor values for each phase, and Phase 3 start date for the following ship types: gas carrier, container ship, general cargo ship, LNG carrier and cruise passenger ship with non-conventional propulsion. This is not the criteria for Singapore-flagged ships to qualify for the GSP. To qualify for the GSP, Singapore-flagged ships have to exceed the requirements of the IMO's Phase 3 EEDI requirements by 10% or more. More details can be found in Table 2.

Table 1

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 Mar 2022)	Phase 2 (1 Jan 2020 – 31 Dec 2024)	Phase 3 (1 Apr 2022 and onwards)	Phase 3 (1 Jan 2025 and onwards)
Bulk Carrier	20,000 DWT and above	0	10		20		30
	10,000 – 20,000 DWT	NA	0-10*		0-20*		0-30*
Gas Carrier	15,000 DWT and above	0	10	20		30	
	10,000 – 15,000 DWT	0	10		20		30
	2,000 – 10,000 DWT	NA	0-10*		0-20*		0-30*
Tanker	20,000 DWT and above	0	10		20		30
	4,000 – 20,000 DWT	NA	0-10*		0-20*		0-30*
Container Ship	200,000 DWT and above	0	10	20		50	
	120,000 – 200,000 DWT	0	10	20		45	
	80,000 – 120,000 DWT	0	10	20		40	
	40,000 – 80,000 DWT	0	10	20		35	
	15,000 – 40,000 DWT	0	10	20		30	
	10,000 – 15,000 DWT	NA	0-10*	0-20*		15-30*	
General Cargo Ship	15,000 DWT and above	0	10	15		30	
	3,000 – 15,000 DWT	NA	0-10*	0-15*		0-30*	

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 Mar 2022)	Phase 2 (1 Jan 2020 – 31 Dec 2024)	Phase 3 (1 Apr 2022 and onwards)	Phase 3 (1 Jan 2025 and onwards)
Refrigerated Cargo Carrier	5,000 DWT and above	0	10		15		30
	3,000 – 5,000 DWT	NA	0-10*		0-15*		0-30*
Combination Carrier	20,000 DWT and above	0	10		20		30
	4,000 – 20,000 DWT	NA	0-10*		0-20*		0-30*
LNG Carrier***	10,000 DWT and above	NA	10**	20		30	
Ro-ro Cargo Ship (Vehicle Carrier)***	10,000 DWT and above	NA	5**		15		30
Ro-ro Cargo Ship***	2,000 DWT and above	NA	5**		20		30
	1,000 – 2,000 DWT	NA	0-5**		0-20*		0-30*
Ro-ro Passenger Ship***	1000 DWT and above	NA	5**		20		30
	250 – 1,000 DWT	NA	0-5**		0-20*		0-30*
Cruise passenger ship*** having non- conventional propulsion	85,000 GT and above	NA	5**	20		30	
	25,000 – 85,000 GT	NA	0-5**	0-20*		0-30*	

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

** Phase 1 commences for those ships on 1 September 2015.

*** Reduction factor applies to those ships delivered on or after 1 September 2019, as defined in MARPOL Annex VI Reg. 2.43

Green Ship Programme reduction factors (in percentage) for the EEDI relative to the EEDI reference line

Table 2 below shows the reduction factors for ships to meet in order to qualify for the GSP.

Table 2

Ship Type	Size	Reduction factor required to qualify for GSP EEDI (10% higher than IMO EEDI Phase 3 requirements)
Bulk Carrier	20,000 DWT and above	40
	10,000 - 20,000 DWT	10-40*
Gas Tanker	15,000 DWT and above	40
	10,000 – 15,000 DWT	40
	2,000 – 10,000 DWT	10-40*
Tanker	20,000 DWT and above	40
	4,000 – 20,000 DWT	10-40*
Container Ship	200,000 DWT and above	60
	120,000 – 200,000 DWT	55
	80,000 – 120,000 DWT	50
	40,000 – 80,000 DWT	45
	15,000 – 40,000 DWT	40
	10,000 – 15,000 DWT	25-40*
General Cargo Ship	15,000 DWT and above	40
	3,000 – 15,000 DWT	10-40*
Refrigerated Cargo Carrier	5,000 DWT and above	40
	3,000 – 5,000 DWT	10-40*
Combination Carrier	20,000 DWT and above	40
	4,000 – 20,000 DWT	10-40*
LNG Carrier**	10,000 DWT and above	40
Ro-ro Cargo Ship (Vehicle Carrier)**	10,000 DWT and above	40
Ro-ro Cargo Ship**	2,000 DWT and above	40
	1,000 – 2,000 DWT	10-40*
Ro-ro Passenger Ship**	1000 DWT and above	40
	250 – 1,000 DWT	10-40*
Cruise passenger ship*** having non-conventional propulsion	85,000GT and above	40
	25,000 – 85,000GT	10-40*

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

** Phase 1 commences for those ships on 1 September 2015.

*** Reduction factor applies to those ships delivered on or after 1 September 2019, as defined in MARPOL Annex VI Reg. 2.43

Example 1

A 20,000 DWT bulk carrier newly registered on 1 May 2022 would have to attain a reduction factor of 40% and above (to exceed IMO's Phase 3 EEDI requirement by 10% or more) to qualify for the GSP. It will enjoy a 50% reduction on IRF, and 20% rebate on ATT payable every year until 31 December 2024.

Example 2

A 12,500 DWT container ship newly registered on 1 May 2022 would have to attain a reduction factor of 32.5% (as per the table, linear interpolation is required where the reduction factor = $\frac{15000-12500}{15000-10000} * (40\% - 25\%) + 25\% = 32.5\%$) and above (to exceed IMO's Phase 3 EEDI requirement by 10% or more) to qualify for the GSP. It will enjoy a 50% reduction on IRF, and 20% rebate on ATT payable every year until 31 December 2024.

Annex C

List of fuels and their respective carbon content

The list below is based on the table provided in Resolution MEPC.308(73) Section 2.2.1 (C_F: Conversion factor between fuel consumption and CO₂ emission).

Type of fuel	C _F		Remarks
1 Diesel/Gas Oil	3.206		Higher C _F values than LNG, not applicable for GSP
2 Light Fuel Oil (LFO)	3.151		
3 Heavy Fuel Oil (HFO)	3.114		
4 Liquefied Petroleum Gas (LPG)	Propane	3.000	Higher C _F values than LNG, not applicable for GSP
	Butane	3.030	
5 Liquefied Natural Gas (LNG)	2.750		Applicable for GSP
6 Methanol	1.375		
7 Ethanol	1.913		

As of date of issue of this shipping circular, only **Methanol and Ethanol** have lower C_F values than LNG.