

## EMISSIONS TRACKING

As outlined in our Environmental Protection Policy, EPS aims to limit our impact on the environment. To accomplish this goal we track, measure and quantify the CO<sub>2</sub> emissions from our diverse fleet.

To track our CO<sub>2</sub> emissions, EPS uses the Annual Efficiency Ratio (AER) and Energy Efficiency Operational Indicator (EEOI) formulas, as they are known to take into consideration factors such as fuel types, consumption, deadweight-tonnes, voyage distance and cargo weight. While this method produces acceptable metrics it is important to note that a variance in performance can be found when comparing similar vessels and voyages using the same methodology. To calculate these formulas we follow the International Maritime Organization's guidelines for mass conversion factors (C<sub>F</sub>) as shown in the table below. C<sub>F</sub> is a conversion factor between fuel consumption measured in g and CO<sub>2</sub> emission also measured in g based on carbon content. EPS' 2019 CO<sub>2</sub> Emissions Report can be found on the next page.

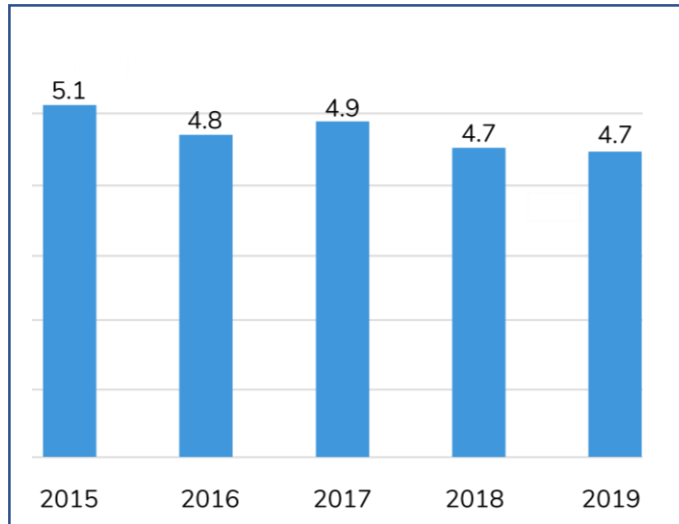


Fuel	Reference	Carbon Content	C <sub>F</sub> (t-CO <sub>2</sub> /t-Fuel)
Diesel/Gas Oil	ISO 8217 Grades DMX through DMC	0.875	3.206
Light Fuel Oil (LFO)	ISO 8217 Grades RMA through RMD	0.86	3.151
Heavy Fuel Oil (HFO)	ISO 8217 Grades RME through RMK	0.85	3.114
Liquified Petroleum Gas (LPG)	Propane	0.819	3.000
	Butane	0.827	3.030
Liquified Natural Gas (LNG)		0.75	2.750

In addition, EPS has commissioned an IACS class to validate the data required to obtain a Green House Gas Rating (GHG Rating) from RightShip, which verifies that vessels are operating at a certain level of efficiency that is suitable for the environment. A fleet wide study is currently underway that will produce a list of actionable items which will enhance the efficiency of our ships. It is our intention to have these independent parties continuously provide unbiased recommendations to ensure that our fleet is running in an environmentally efficient manner.

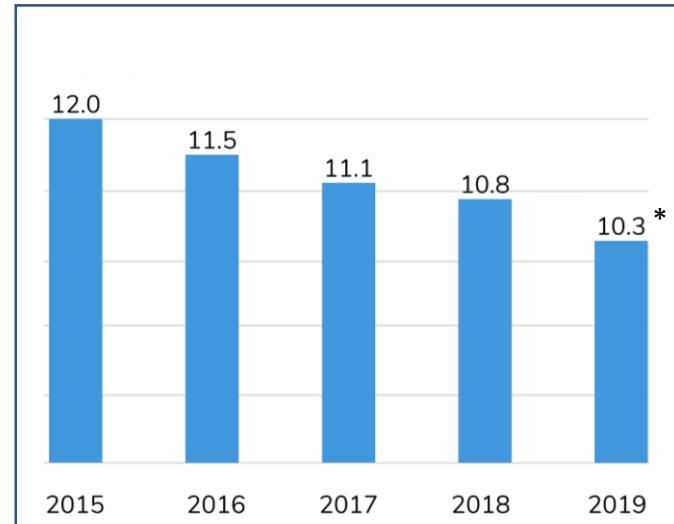
# 2019 CO<sub>2</sub> EMISSIONS REPORT

Annual Efficient Ratio (AER)  
g/DWT x mile



$$AER = \frac{\sum_j FC_j \times C_{Fj}}{DWT \times D}$$

Energy Efficiency Operational Indicator (EEOI)  
g/tonne x mile



$$EEOI = \frac{\sum_i \sum_j FC_j \times C_{Fj}}{\sum_i M_{cargo} \times D}$$

\* The 2019 EEOI industry average was 14 according to Clarksons Research.

EPS' total CO<sub>2</sub> emissions in 2019 was 2.5 million metric tonnes.

### Formula Legend

<i>j</i>	fuel type
<i>i</i>	voyage number
$FC_j$	mass of consumed fuel <i>j</i>
$C_{Fj}$	fuel mass to CO <sub>2</sub> mass conversion factor for fuel <i>j</i>
$M_{cargo}$	cargo carried (tonnes)
<i>D</i>	distance in nautical miles
<i>DWT</i>	deadweight tonnes