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MARPOL 2020 Global Sulphur Limit

From 2020, regulation for sulphur content in fuel oil will be tightened by MARPOL 2020 Global Sulphur Limit to reduce the amount of sulphur oxide emitting from ships. Details from ONE is now available, to strengthen the understanding of this regulation and further information on ONE's stance.

Q. What is "2020 Global Sulphur Limit"?

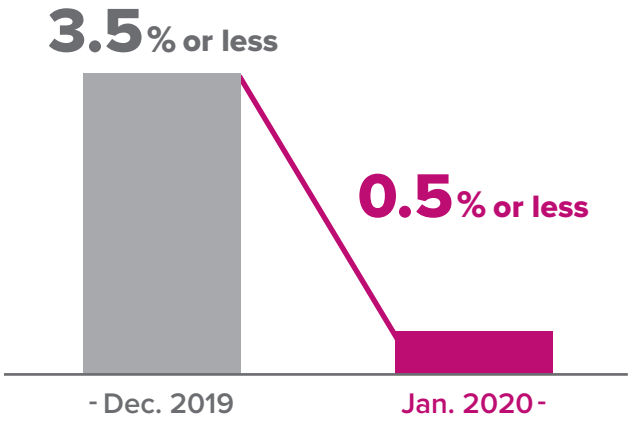
2020 Global Sulphur Limit is to be implemented to improve major health and environmental benefits for the world, particularly for populations living close to ports and coasts, by drastically reducing the amount of sulphur oxide emitting from ships.

International Maritime Organization (IMO) is a specialised agency of the United Nations, responsible for safety and security of the shipping industry and regulating maritime pollution of ships.

IMO has set regulation to limit sulphur content in fuel oil to less than 0.5%, which will take effect from 1 January 2020. Current global limit for sulphur content in fuel oil is 3.5%.

The International Convention for the Prevention of Pollution from Ships (MARPOL), is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes and is divided into six Annexes. [1]

IMO INTERNATIONAL MARITIME ORGANIZATION



Q. How will the industry deal with "2020 Global Sulphur Limit"?

Various business partners of shipping companies such as shipyards, manufacturers, bunker suppliers and refineries are fully aware of this regulation and are preparing and developing compliant equipment and oil.

ONE'S ACTION AND STANCE

1. What is ONE's stance on "2020 Global Sulphur Limit"?

We, Ocean Network Express (ONE), are fully aware of the environmental impact by our ships' emission, and with commitment to our sustainable business model, we are well prepared and ready to comply with this regulation. We have launched a cross-functional task force to evaluate from technical aspect and established ONE's stance on 2020 Global Sulphur Limit. Several options have been researched to identify the possible best and most cost-efficient method to comply with the regulation.

Three major options have been identified for consideration:

1. Using low-sulphur compliant oil (Low Sulphur Gas Oil - LSGO)
2. Applying scrubber system on vessel
3. Using low-sulphur compliant Liquefied Natural Gas (LNG)

2. Using low-sulphur compliant Hybrid Oil*.

Hybrid oil is one of the compliant oils. ONE's container vessels are equipped to adopt low-sulphur compliant hybrid oil without requiring special modification. At current, we identified this as one of the most realistic and cost-efficient solutions, to enable ONE to be compliant ready by 1 January 2020.
We are in discussion with bunker suppliers for specifications.

ONE'S ACTION AND STANCE

3. Applying scrubber* system on vessel.

Three ways can be considered for applying scrubber system on vessel:

1. retro-fitting scrubber to existing vessels
2. fit new vessels with scrubber
3. To charter scrubber equipped vessels

There are several existing ONE vessels that can be installed with scrubber system. Due to large size of equipment, cargo hold space must be sacrificed for scrubber installation.

Installation process:

- **vessel is docked to prepare for retro-fitting resulting in phasing-out from service during the period**
- **installation typically requires more than one month to complete which leads to long idling time**

As building of new vessel with scrubber may take 2 - 3 years upon order confirmation, this approach will not be in time for ONE to be compliant by January 2020. However, we will consider this approach for possible next phase. ONE is also evaluating to charter vessels with scrubber system to expand the number of compliant vessels in the fleet.

4. Using LNG*.

LNG is another category of compliant oil being considered as one of the solutions and vessels must be specifically equipped with LNG powered engine. Similarly to building of new vessel with scrubber, it takes 2 - 3 years to build a new LNG powered engine ship, which this approach would not be in time for ONE to be compliant by January 2020.

Services where ONE can deploy LNG powered vessel are also limited as there are constraints on availability of LNG bunkering facility. Although our LNG powered vessel deployment plan is not concrete at this moment, evaluation is underway where development of LNG bunkering environment is being further analysed.

What is the general situation of current and near future availability of LNG bunkers and LNG bunkering facilities globally?

Currently, there are existing facilities and projects in Europe and we see some ongoing projects in Asia, such as in Singapore and Japan.

OPERATIONAL IMPACT

Any operational impact?

Low Sulphur Gas Oil (LSGO) may be one of the most popular compliant fuels, widely available especially by 2020. Current market difference of High Sulphur Fuel Oil (HSFO) and LSGO is approximately $150-200 per metric ton. This gap is expected to increase after 1 Jan 2020 due to LSGO demand and this will certainly impact operational cost.

When will ONE start adopting “2020 Global Sulphur Limit”?

Although the regulation takes effect only from 1 Jan 2020, ONE will start complying with the regulation before the effective date kicks in as it takes several months to transit from non-compliant fuel. We are reviewing details of the regulation during this period to ensure full compliance and will timely announce updates.

THE ALLIANCE (THEA) STANCE

Any discussion among consortia members?

THEA is considering how we can technically and operationally overcome this challenge although commercial aspect of this regulation shall be decided individually.

*Low-sulphur compliant Hybrid Oil – Hybrid oil refers to a blended product with specifications like HFO, and/or to certain refinery products that have not been used as fuel. They do not necessary fit into the traditional specifications for MGO, MDO or RFO.

*Scrubber - Scrubber is the system to control air pollution that can remove Sox from exhaust.

*LNG - Stands for “Liquefied Natural Gas”, containing less SOx or NOx compared to vessel bunker oil. Natural Gas is liquefied below minus -162 Celsius (-260 Fahrenheit) and solid content being one six hundredth, suitable for transportation requiring special tank to maintain temperature and control pressure.

[1] Source:
http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx

Should you have any questions, please contact your nearest ONE representative.

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