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## 2020 Maritime Industry Perspective Demand, Compliance, and Enforcement

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7 June 2017

Brussels



It's been ~seven months since MEPC 70 decided on 2020 for the 0.5% Sulphur Rule

## **The View is still Rather Murky**

- Demand Forecasts for Compliant Fuel in 2020 Cover a Wide Range between 2 and 4 MBDs.
- Shipowners' "Do Nothing" Strategy still Prevails.
- **Consistent and Effective Implementation** is the IMO's Desired Mantra, however much IMO Tries to Ignore the Concept of "**Common But Differentiated Responsibility**."
- **Port State** and **Bunker State** Control Roles are Unclear

# Demand for Compliant Marine Fuels

## Scrubbers are the Key

- If all ships currently running on HSHFO **installed scrubbers**, the 2020 Rule would have virtually **no impact** on fuel demand.
- Demand Forecasts for Compliant Fuel in 2020 Cover a Wide Range between 2 and 4 MBDs.
  - EnSys/Navigistics' forecasts for "**Switch**" volumes at the high end.
  - IEA at the low end.

# Shipowners' "Do Nothing" Approach to 2020

## **The 2020 Sulphur Rule is a rare regulation where “doing nothing” is a viable strategy**

- “Doing nothing” means buying compliant fuel with no capital expenditures and minimal action (change lubricants).
  - Maersk & Hapag Lloyd have adopted fleet-wide
  - Intertanko’s proposed “Distillates only” strategy back in 2007
- Remember most shipowners were “**unaware**” of the 0.5% sulphur rule until passed at MEPC 70 in late October 2016.
- Competing with Ballast Water Management System regulations for capital (>\$2 million per ship).

# Shipowners' Concerns

## **Some concerns are illogical**

- Concerned that High Sulphur Heavy Fuel Oil (HSHFO) will no longer be available after 1/1/2020
  - Reality refiners may want to “give it away.”

# Shipowners' Concerns

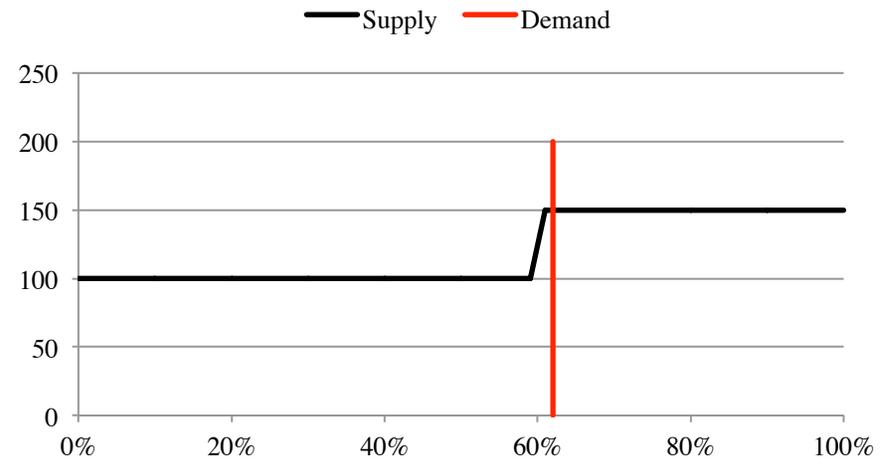
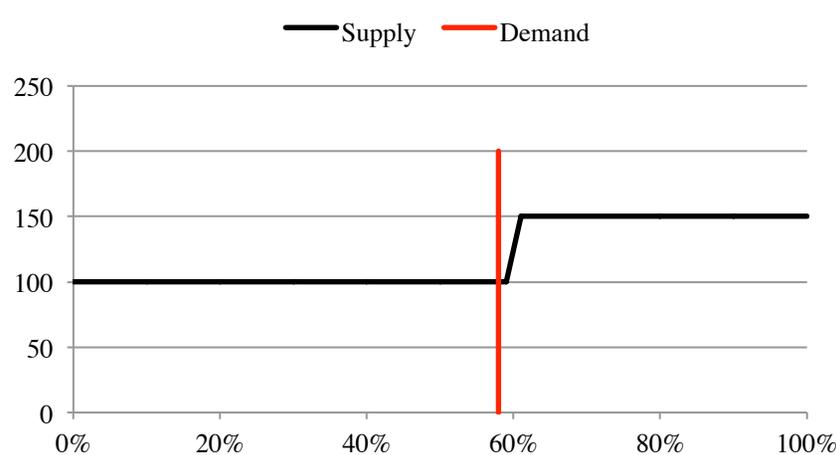
## Some concerns have some basis

- Uncertainty over spread between HSHFO and 0.5% compliant fuel (i.e., the benefit of scrubbers)
  - Remember 2012 and the 1% sulphur change in ECAs – Initially met with distillates then 1% HFO with a \$100 per ton differential appeared in most ECA ports.
  - Also 2015 when 0.1% sulphur change in ECAs – Initially met with distillates then 0.1% HFO appeared in the Baltic and North Sea ECAs.
  - Current (5/15/2017) differential in Rotterdam 3.5% HSHFO and 0.1% MGO is ~\$150 per ton
  - However 0.1% FO (termed ULSFO) is about \$115 per ton differential
- Concerned that a scrubber will “overload” the engineering staff and require an additional engineer.

# Shipowners' Concerns

## Some concerns have some basis

- Ability to achieve scrubber benefits – economic theory may come into play if the “marginal” ship is equipped with a scrubber (high penetration rate) then freight rates will be based on the cost of HSHFO and there will be difficulty obtaining payback for the “fixed” cost of buying and installing a scrubber.



# Shipowners' Concerns

## **What is the real “installed” cost and how long will it take?**

- Estimated costs from <\$2 million to >\$12 million.
- Matson Lines (U.S. Jones Act containership operator) installed scrubbers on each of three 1987 built 1,668 TEU containerships (16.6 MW diesel direct drive power plants) at a cost of \$8 million per ship (installed in China).
- Carnival Cruise Line reports the average installation time for their 155 EGCSs on 62 ships (all open loop) was 14 days.
  - One U.S. operator reported 23 weeks to install a closed loop scrubber plus associated discharge treatment system (allowed direct overboard discharge)

# Shipowners' Concerns

## **Still Some Regulatory Uncertainty**

- Wash Water – overboard discharge (will it be banned)
  - No Discharge Zones - Will they proliferate?
  - Creating another “magic pipe” situation?
  - Reception facilities?
- How to handle scrubber malfunctions?
  - Will they have to carry 0.5% compliant fuel onboard?
  - Will they get an exemption until repaired? Only current voyage?

# Shipowners' Concerns

## Implementing the 2020 0.5% Rule

- MARPOL Annex VI allows for “Fuel Oil Non-Availability Report” (FONAR) waiver from the 0.5% Rule.
  - Ships are not required to divert from planned voyage to obtain compliant fuel.
  - How will FONARs be issued?
  - How long will FONARs be allowed? Months? Years?
  - Will IMO take an active role in tracking FONARs?

# Shipowners' Concerns

## Enforcing the 2020 0.5% Rule

- IMO not a regulatory body and has no enforcement powers
- All enforcement through **Flag State** (where vessel is registered), **Port State** (where a vessel calls), and **“new” Bunker State** (where a ship takes on fuel).
  - Only Flag State has authority outside of territorial waters (on the “high seas”).  
The three largest Flag States are Panama, Marshall Islands (U.S. territory), and Liberia.
  - Port State Control (PSC) has increased importance – U.S., Europe, and Japan are major PSC enforcement areas. PSC agreements based on the Paris and Tokyo Memoranda of Understanding – 3<sup>rd</sup> Joint Ministerial Declaration on PSC signed 3-4 May 2017 by 29 nations.
  - Bunker State Control is a new concept that has arisen with the 2020 Rule

# Shipowners' Concerns

## **Enforcing the 2020 0.5% Rule**

- Under current rules, if a PSC inspector discovers a ship (after 1/1/2020) with HSHFO onboard and no scrubber installed that claims it used 0.5% fuel in the nation's territorial waters, the only option the PSC inspector has (at this time) is to refer the ship to its Flag State for discipline.
- Proposals to expand the authority of PSC

# Enforcing the 2020 0.5% Rule

## **IMO's Subcommittee on Pollution, Prevention, and Response (PPR)**

- PPR 4 (the fourth meeting of PPR) began the process of developing an implementation plan for the 2020 0.5% Rule in January 2017
- PPR 4 will submit its “plan for developing an implementation plan” to MEPC 71 in July 2017.
- PPR4's Working Group on Air Pollution reported:  
finalize a justification and scope for a new output on what additional measures may be developed to promote consistent implementation of the 0.50% global sulphur limit, including identification of an appropriate timeline for finalization of the output, using documents.....
- Many proposals for enforcement were put forward.
  - Debunkering non-compliant fuel if no scrubber installed
  - US Coast Guard – any non-compliant fuel onboard is evidence of violation.

# Questions?

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