MARINE INSURANCE DAY 2018

IMO 2020 SESSION, OCTOBER 5, 2018

ABOUT MCQUILLING

McQuilling Services *is the marine transportation consulting and advisory group of McQuilling Partners, Inc. The primary focus of McQuilling Services is to provide clients commercial consulting services related to global seaborne transportation and related disciplines in the supply chain. The approach of the Company is to develop products and services based on specific client requirements, data, and the systematic employment of quantitative methods, bringing individually crafted solutions to client's needs. The Company employs a collaborative business model combining experienced internal resources with exceptional industry partners to produce a team of directed experts. This model creates a targeted, content-rich knowledge and experience base to serve clients' needs cost effectively.*

McQuilling Partners *is a privately-owned marine services company, providing transportation services to clients in the shipping, commodity and financial services industries. McQuilling Partners is a respected tanker specialist globally and is one of a select few firms that sit on both the International and the Asian Baltic Exchange Tanker Route panels. McQuilling Partners facilitates the physical transportation of liquid and dry bulk commodities annually through the provision of brokerage services and provides coverage in the wet freight derivatives market for all the traded routes. The firm has assisted numerous clients in the sale or purchase of marine assets, and advised them on their directed research and consulting requirements. Today, McQuilling is a privately held firm numbering over 160 people, specializing in the marine transportation of commodities for a global client base. Representing broad commercial experience in the international shipping markets, McQuilling provides professional, reliable and personalized service to clients from offices located in New York, Houston, Caracas, Lima, Mexico City, Rio de Janeiro, Athens, Dubai, Mumbai, New Delhi and Singapore.*

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The IMO's Historical Evolution in Environmental Regulations

- *The IMO established the International Convention for the Prevention of Pollution from Ship (MARPOL) in 1973 (entered into force in 1983)*
- *The primary objective was pollution prevention by oil from operational measures as well as accidental discharges (Annex I)*
- *In 1992, amendments to Annex I required all new tankers to have double hulls and that all single hull tankers be phased out by 2010*
- *Annex VI of MARPOL introduced regulations to control emissions levels of nitrogen oxides (NOx), sulphur oxides (SOx) and volatile organic compounds (VOS)*
- *This supported the effort to establish Emission Control Areas (ECA) which held stricter limitation on airborne emissions (US, Baltic Sea, North Sea) – maximum sulphur content of 1.5% (January 2015 reduced to 0.1%) – China adopted meaures*
- *On January 1, 2020, the latest amendment to Annex VI, will set a global sulphur emissions cap of 0.5%*

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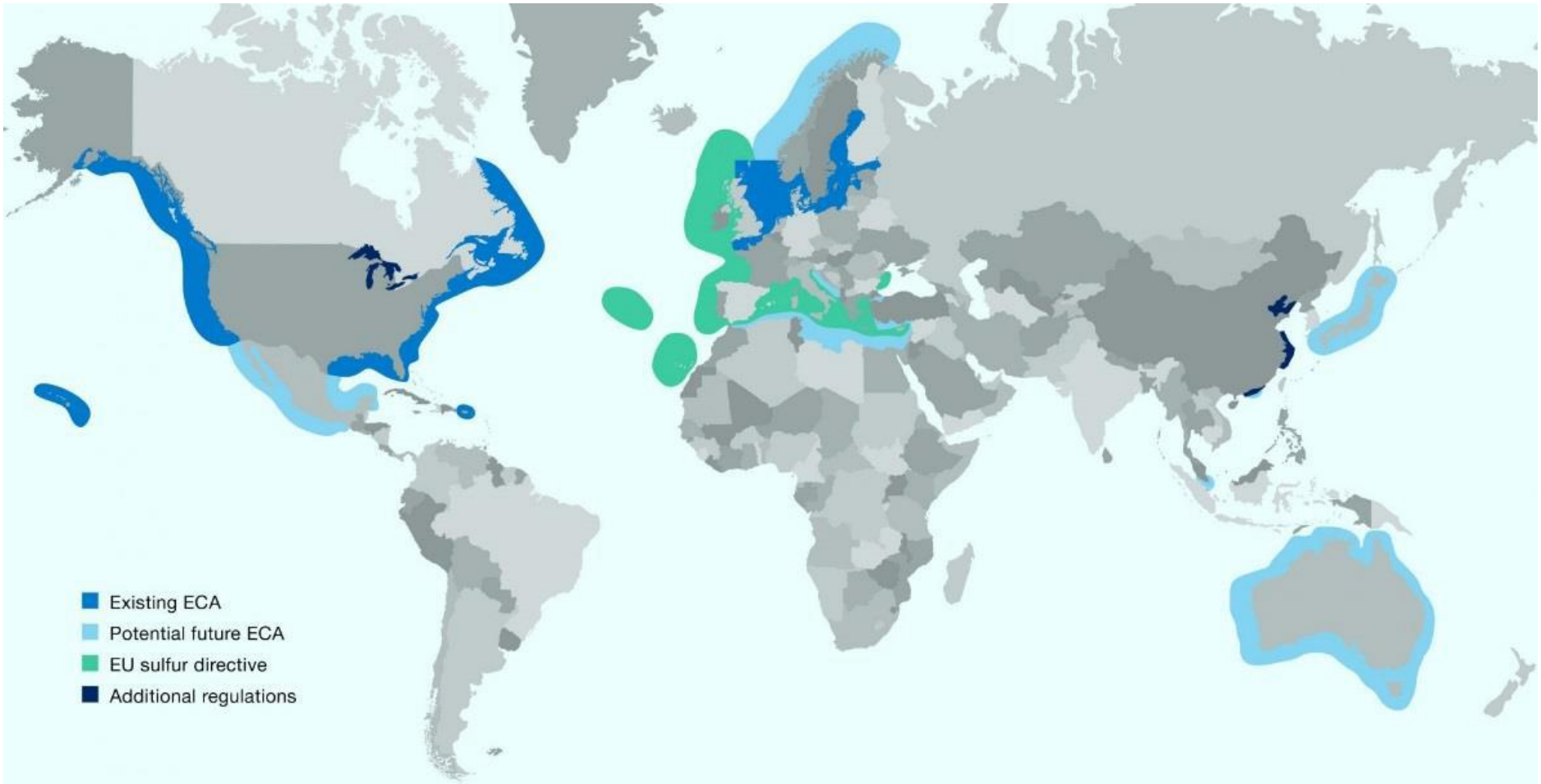
Current ECA Zones and Sulphur Directives



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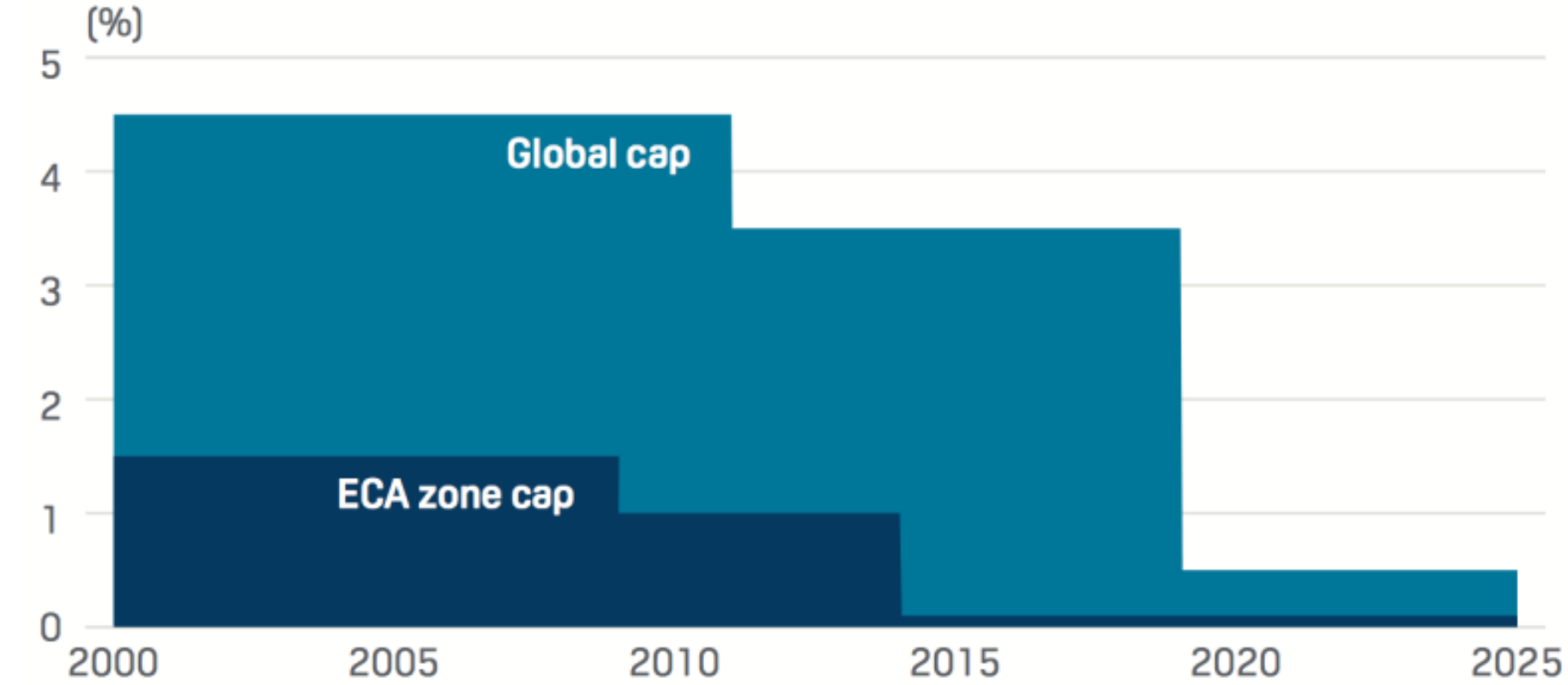
Global Cap Comes into Play in 2020



Source: IMO Website

- *October 2018 – MEPC Meeting 73 will focus on adoption certain compliance measures to ensure non-carriage of high sulphur fuel oil without the installation of an exhaust gas cleaning system (Scrubber)*

MEPC 73 – Potential Shift in IMO?

- *October 22-26 2018 – MEPC Meeting 73 is viewed as a last chance for the IMO to shift its position on the forthcoming regulations*
- *BIMCO, Intertanko, Intercargo as well as major flag states (Panama, Liberia, Marshall Islands, Bahamas) have lobbied the committee ahead of the meeting*
- *Flag states are ultimately the "enforcers" of the new IMO regulations in addition to port state controls, which can impose fines and prohibit vessels trading in their waters*
- *The "lobbying committee" has outlined key concerns from owners, including:*
  - *Incompatibility of blended fuel oils with engines*
  - *Lack of ISO standard for new fuel*
  - *Crew safety (off-spec bunkers can cause permanent damage to engines, while at sea in harmful conditions)*
  - *Fuel availability in all trading regions*
  - *<u>Exemptions were asked as a temporary solution (CARB example)</u>*

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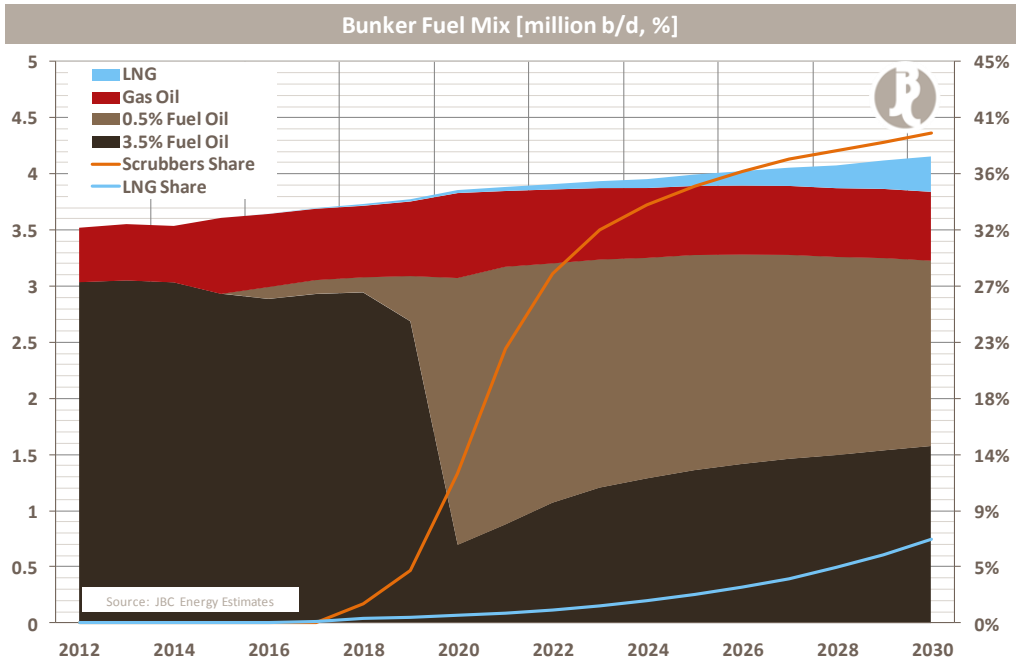
Bunker Fuel Mix | 2012-2030F

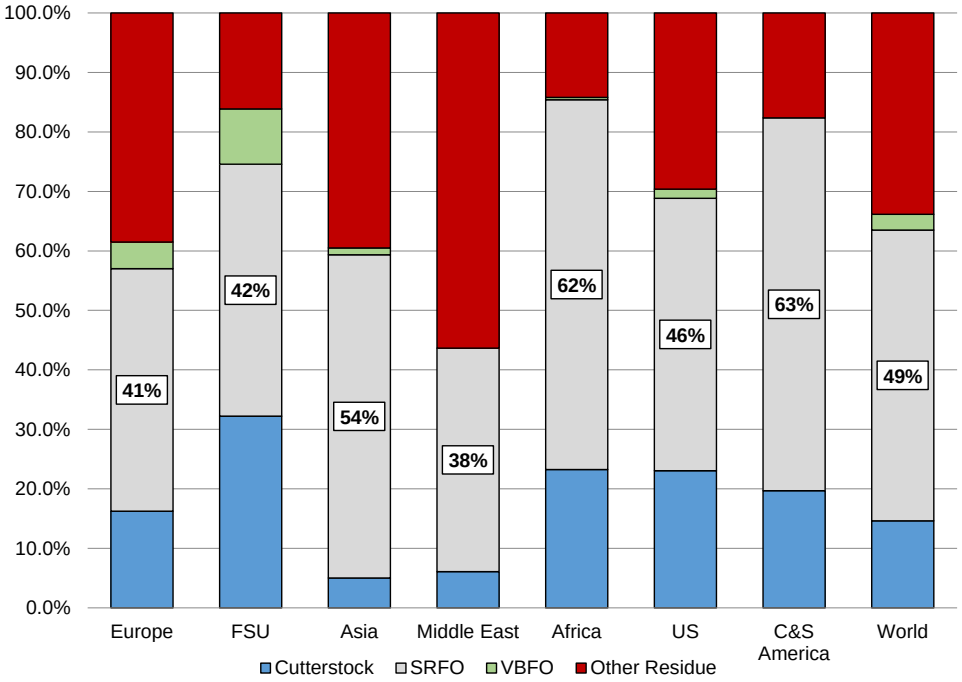


- *The 2020 IMO regulations will likely have a pronounced impact on vessel earnings*
- *Vessel owners will be required to switch to a cleaner bunker fuel (<= 0.5%) or alternatively process HSFO with the installation of an exhaust scrubber*
- *Adoption of scrubber systems will likely be slow at the onset, comprising of about 6-8% share*

Source: JBC Energy

- *LNG is one additional solution for the market in the long term (8% market share by 2030) – infrastructure is not there yet on a global scale*
- *Owners with scrubber systems in place for the early years of IMO regulations will benefit the most (expected differential of over US $320/mt – JBC Energy)*

0.5% Fuel Oil Regional Composition | 2020F

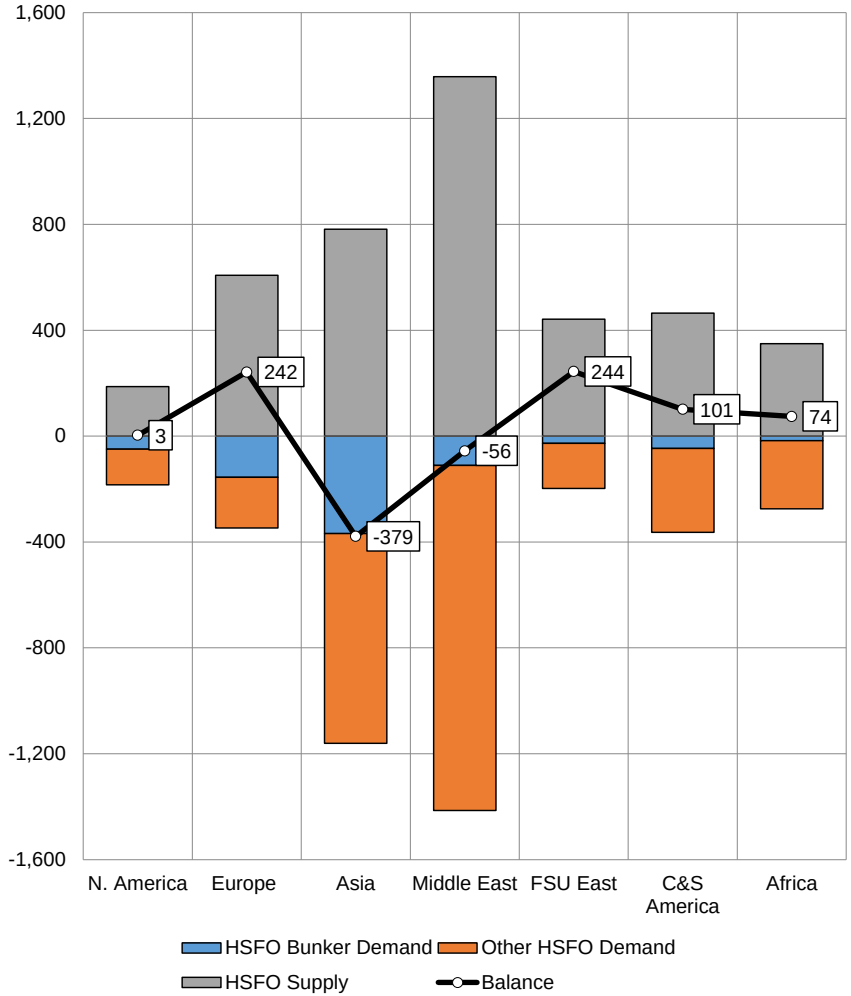


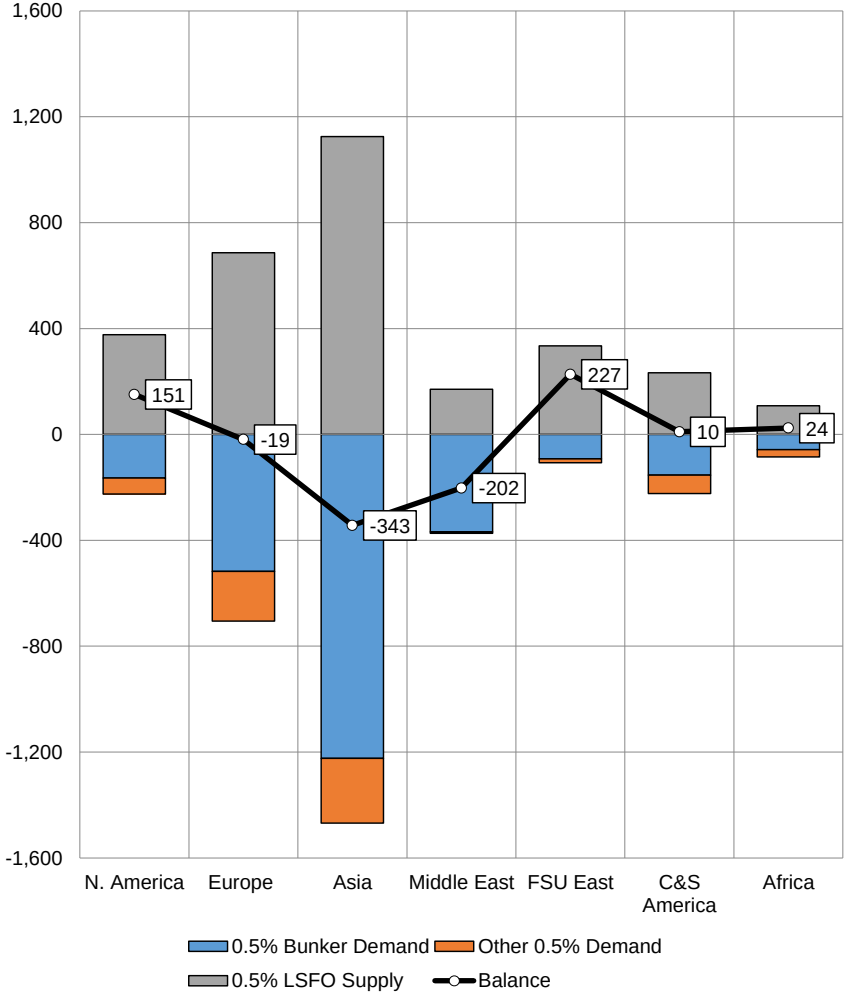
Source: JBC Energy, McQuilling Services

- *European pricing for 0.5% fuel oil is expected to be about US $320/mt higher than HSFO in 2020*
- *This region is net short low sulphur fuel oil, but long high sulphur components*
- *In the USG, the premium is expected to be about US $290/mt in 2020; this region should see the tightest spread*

- *Africa and part of South America with access to low sulphur crude oil feedstock are likely to produce a Straight Run Fuel Oil (preferred by owners)*
- *Premium pricing for Medium/Heavy Sweet Crudes to commence in 2020*
- *Blended fuel oil will likely be higher in places that are long blending components (cutterstock) including the Former Soviet Union (FSU, US)*

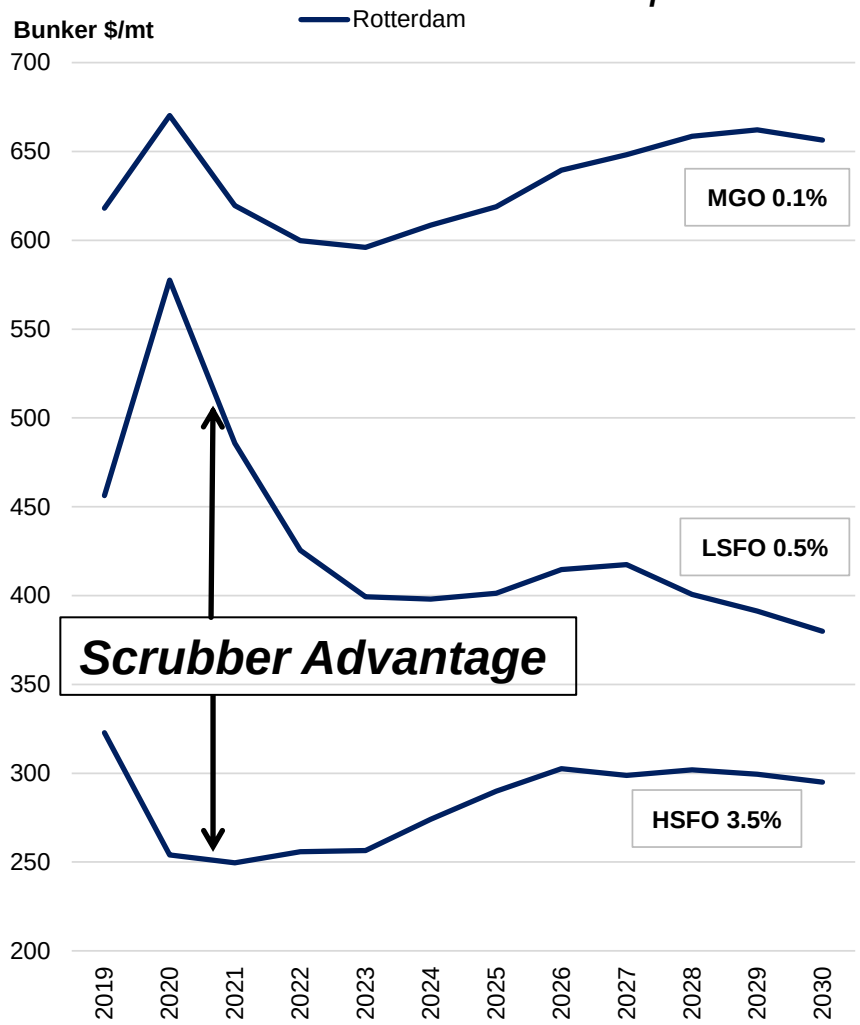
High Sulphur and 0.5% Fuel Oil Supply and Demand (2020F)

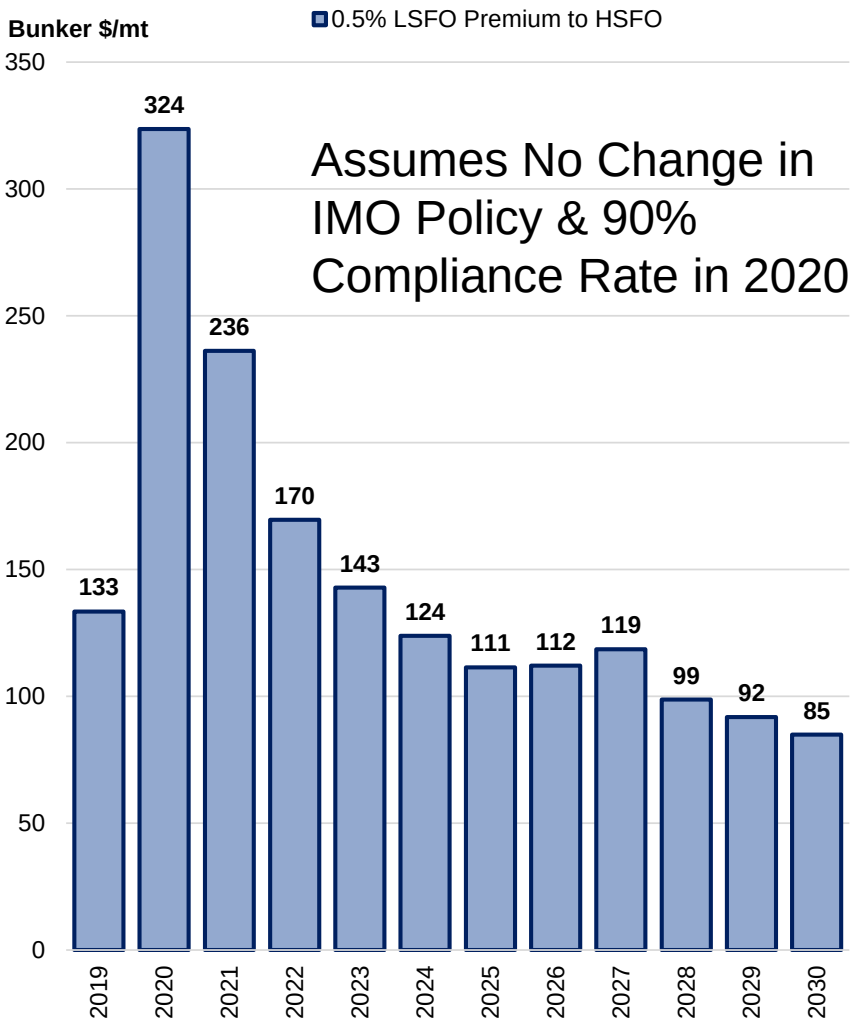




Source: JBC Energy, McQuilling Services

Crude Oil and Bunker Price Expectations | 2020-2030F





Source: JBC Energy, McQuilling Services

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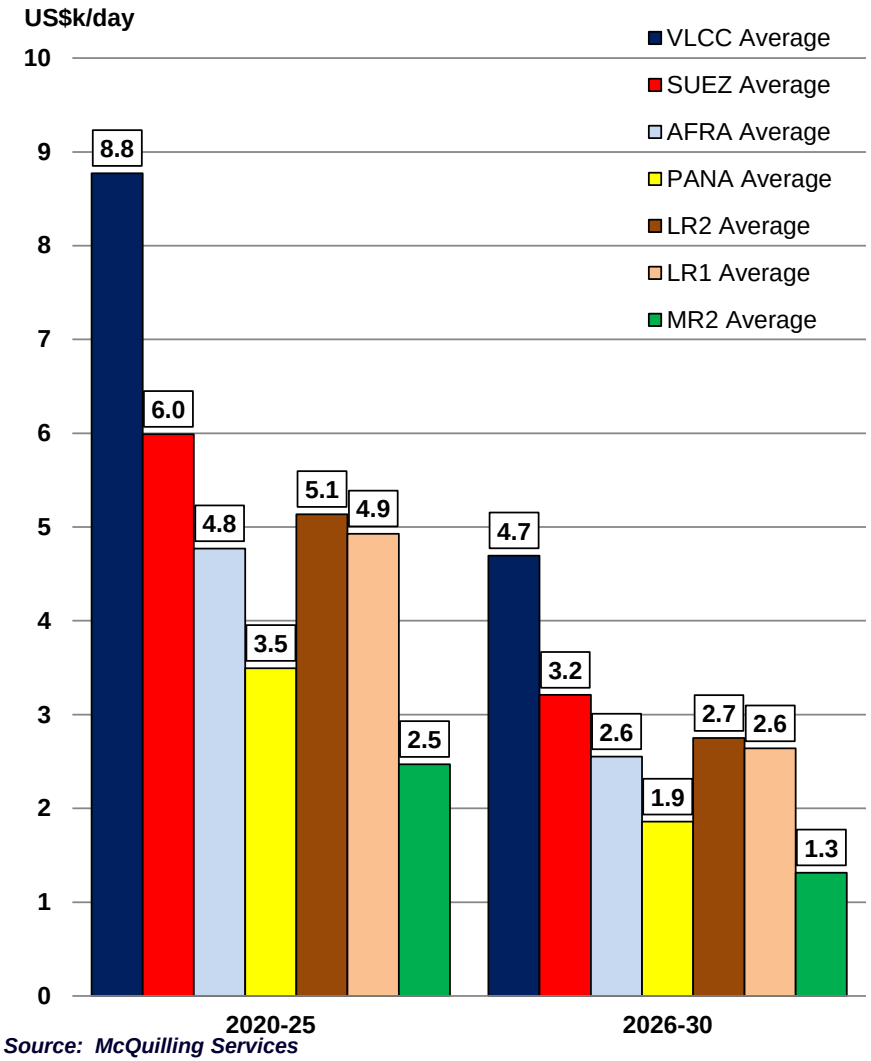
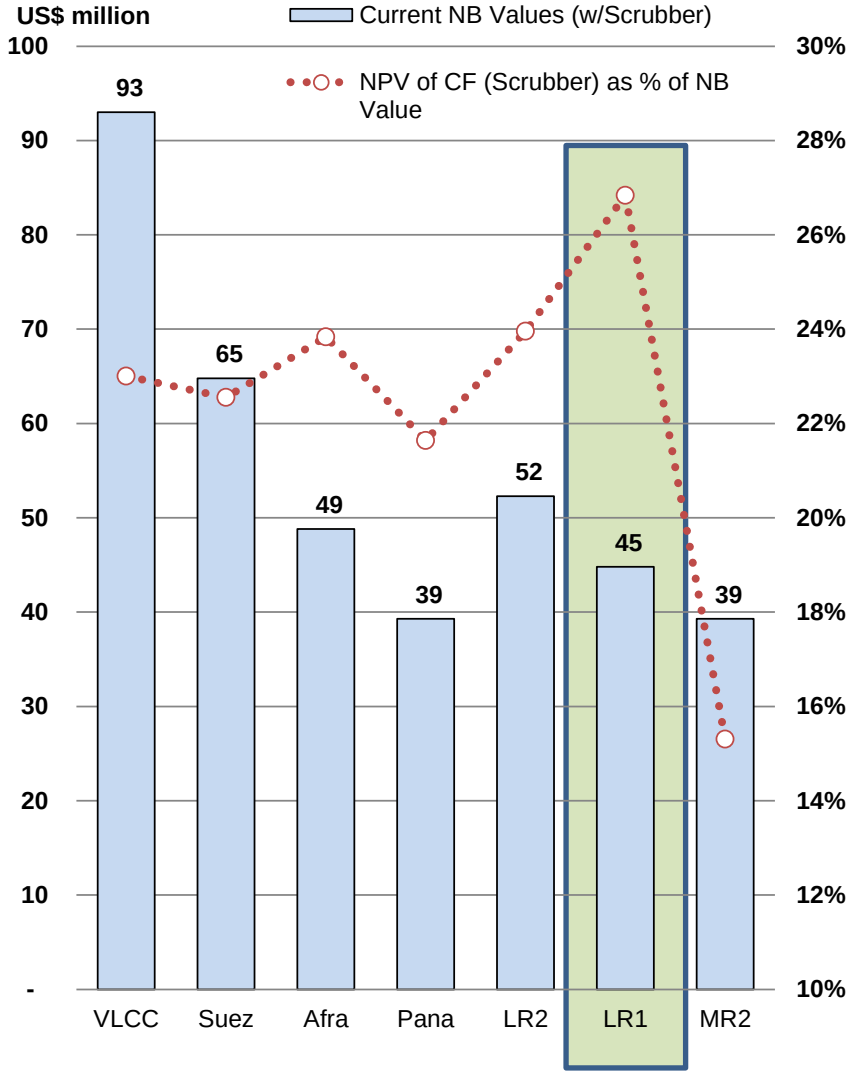
All Sectors – Fuel Cost Differentials (Left); NPV as % of NB Values (Right)





Source: McQuilling Services

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Key Takeaways

- *The introduction of the global 0.5% sulphur cap will be a major disruption to the maritime and downstream industries*
- *Early adopters of scrubbers will likely benefit from increased cash flows in the context of wide pricing differentials*
- *Simple refinery configurations will underperform more complex systems and likely lead to refinery closures in some areas*
- *Compliance will be a major concern, despite efforts to increase document gathering by flag states and port control measures (too many ships, not enough human resources – Norway example of drones can help)*
- *Fuel quality concerns may cause extensive damages to engines; example of recent off-spec consequences can be viewed as a sample of liabilities*
- *We believe fuel availability is less of a concern based on our projection of balances (trade flows will emerge)*
- *Potential exemptions from the IMO will need to be addressed at the upcoming MEPC 73 meeting on October 22-26*

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