

Freight Impacts of IMO 2020

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Eden Roc Hotel, Miami, September 2019

What can we expect on the first of January?



S&P Global Platts Shipping

Consists of a global team, working from London, Singapore and Houston

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Daily Publications

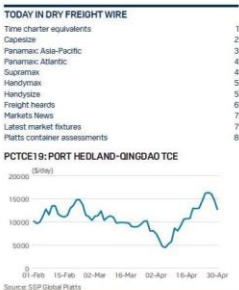
We publish three daily reports: **Dirty Tankerwire**, **Clean Tankerwire** and **Dry Freight Wire** with a recent addition of **Platts Container Rates (PCR)** and **Platts Bunker Charges (PBC)**

S&P Global
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DRY FREIGHT WIRE

Volume 5 / Issue 83 / April 30, 2018

TIME CHARTER EQUIVALENTS, APRIL 30 (\$/day)					
Route	vessel delivery	Load port	Discharge port	Platts symbol	Close Change
Capesize					
PTCE028	China-Japan range	Port Hedland, Western Australia	Qingdao, China	CHASAE	12,682 -20.00
PTCE029	China-Japan range	Sacchara Bay, South Africa	Qingdao, China	CHASAE	14,359 +1.00
PTCE034	China-Japan range	Tubane, Brazil	Qingdao, China	CHASAE	15,969 +1.00
PTCE038	Asia range/Passero	Tubane, Brazil	Qingdao, China	CHASAE	26,785 +1.00
PTCE041	Asia range/Passero	Puerto Bolivar, Colombia	Rotterdam, Netherlands	CHASAE	18,996 +0.00
Panamax					
PTPCE08	South China	South Kalimantan, Indonesia	Paradi, India	CHASAE	10,881 +0.00
PTPCE09	South China	South Kalimantan, Indonesia	Mundra, India	CHASAE	10,789 +0.00
PTPCE10	South China	East Kalimantan, Indonesia	Guangzhou	CHASAE	10,933 +0.12
PTPCE11	East coast India	Richards Bay, South Africa	Paradi, India	CHASAE	11,693 -1.00
PTPCE12	East coast India	Richards Bay, South Africa	Mundra, India	CHASAE	11,678 -1.00
PTPCE13	North China	Hay Point, Australia	Paradi, India	CHASAE	10,459 +0.00
PTPCE14	North China	Hay Point, Australia	Qingdao, China	CHASAE	10,127 +0.00
PTPCE15	India	Hamilton Road, Virginia	Rotterdam, Netherlands	CHASAE	8,413 +0.00
PTPCE16	Singapore	Santos, Brazil	Qingdao, China	CHASAE	10,499 +0.00
PTPCE17	Singapore	Santos, Brazil	Qingdao, China	CHASAE	15,459 +0.00
Ultramax					
PTUCE01	Singapore	South Kalimantan, Indonesia	Paradi, India	CHASAE	14,948 +0.00
PTUCE02	Singapore	South Kalimantan, Indonesia	Navalai, India	CHASAE	13,296 +0.00
PTUCE03	East coast India	Richards Bay, South Africa	Paradi, India	CHASAE	10,093 +0.00
PTUCE04	East coast India	Richards Bay, South Africa	Kandla, India	CHASAE	9,942 +0.00
Supramax					
PTSC022	Singapore	South Kalimantan, Indonesia	Paradi, India	CHASAE	13,176 +0.00
PTSC023	Singapore	South Kalimantan, Indonesia	Navalai, India	CHASAE	11,751 +0.00
PTSC024	South China	East Kalimantan, Indonesia	Guangzhou	CHASAE	9,361 +0.00
PTSC025	East coast India	Richards Bay, South Africa	Navalai, India	CHASAE	7,837 +0.00
PTSC026	East coast India	Richards Bay, South Africa	Kandla, India	CHASAE	7,837 +0.00
PTSC027	West coast India	Mina Sag, UAE	Paradi, India	CHASAE	11,087 +0.00
PTSC028	West coast India	New Orleans, Louisiana	Kashima, Japan	CHASAE	22,070 +0.00
PTSC029	West coast India	New Orleans, Louisiana	Kashima, Japan	CHASAE	15,117 +0.00
PTSC030	West coast India	Houston, Texas	Kashima, Japan	CHASAE	22,000 +0.00
PTSC031	West coast India	Houston, Texas	Kashima, Japan	CHASAE	14,993 +0.00



Agenda

What am I going to talk about today?

- 1** IMO 2020 Compliance Strategies
- 2** Fuel prices: Supply & Demand
- 3** Shipping in 2020 and beyond
- 4** Case Study: **Indonesia**

“From 1 January 2020, the limit for sulphur in fuel oil used on board ships operating outside designated emission control areas will be reduced to 0.50%”

International Maritime Organization

How can you comply with IMO 2020?

You can burn 0.5% LSFO or MGO

- Lower emissions
- Limited operational difficulty
- Guaranteed compliance
- Low capital expenditure
- Fuel costs more
- Can increase maintenance costs
- Cleaning costs

You can install a “scrubber”

- Exhaust Gas Cleaning System
- Can continue burning HSFO
- Lower fuel costs
- HSFO widely available
- High capital expenditure
- Complicated to install
- Risk of banning, non-compliance
- Sludge handling and disposal
- Failure risk

You can burn another fuel entirely

- LNG, Electric, Wind Power
- Nuclear?
- New build
- Lower CO₂ emissions
- Very high capital expenditure
- Long lead times

Option 1: Burn Low Sulphur Fuel Oil or Marine Gas Oil

“KPC and Ardmore Shipping will be using low sulphur fuels in their ships from next month, said sources involved in the task. Ardmore has 19 MR tankers.”

S&P Global Platts, September 23, 2019

Bunker Wire 0.5% Assessments

APAC/Middle East

Singapore

Fujairah

Japan

South Korea

Hong Kong

Shanghai

Zhoushan

Europe

Algeciras

Durban

Gibraltar

Malta

Piraeus

Rotterdam

Americas

Houston

New York

Los Angeles

Balboa

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BUNKERWIRE

Volume 43 / Issue 183 / Tuesday, September 17, 2019

MARINE FUEL 0.5% BUNKER (\$/mt)

Asia Pacific/Middle East				Europe				Americas			
Delivered		Mid	Change	Delivered		Mid	Change	Delivered		Mid	Change
Singapore	MFSP000	600.000	+66.000	Algeciras	MFAG000	610.000	+30.000	Houston	MFHO000	580.000	-16.000
Fujairah	MFJF000	620.000	+66.000	Durban	MFDB000	644.000	+10.000	New York	MFNY000	583.000	-20.000
Japan	MFJP000	595.000	+36.000	Gibraltar	MFGB000	610.000	+30.000	Los Angeles	MFLO000	550.000	-6.000
South Korea	MFSD000	635.000	+76.000	Malta	MFML000	575.000	+20.000				
Hong Kong	MFHK000	590.000	+40.000	Piraeus	MFPR000	550.000	+6.000				
Shanghai	MFSD000	620.000	+80.000	Rotterdam	MFRT000	575.000	+20.000				
Zhoushan	MFZS000	610.000	+66.000								
Ex-Wharf											
Singapore	MFSP000	585.000	+80.000					Houston	MFHO000	555.000	-16.000
Fujairah	MFJF000	600.000	+66.000					New York	MFNY000	565.000	-20.000
								Balboa	MFBA000	575.000	-17.600

MARINE FUEL (PGB page 30)

		\$/mt	Change	vs FO 380 MOPS strip	Change
0.5% FOB Singapore cargo	AMFSA000	527.160	+27.880	AMOP000	70.180
0.5% FOB Fujairah cargo	AMFFA000	513.790	+28.820		
0.5% FOB Rotterdam barge	PUMFD000	553.000	-6.760		
0.5% FOB US Gulf Coast barge	AUGMB000	454.750	-18.260		
0.5% Divd US Atlantic Coast barge	AUAMB000	492.750	-24.760		
\$/barrel					
0.5% FOB US Gulf Coast barge	AUGMA000	73.190	-2.870		
0.5% Divd US Atlantic Coast barge	AUAMA000	77.600	-3.900		

MARINE FUEL 0.5% DERIVATIVES, SEP 17

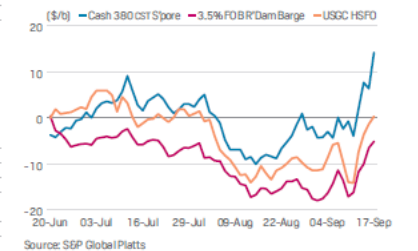
		Balance* Sep \$/mt	Change		Month 1 Oct \$/mt	Change		Month 2 Nov \$/mt	Change
0.5% FOB Singapore cargo	FOFS000	NA	NANA	FOFS001	527.750	+17.760	FOFS002	530.750	+18.660
0.5% FOB Fujairah cargo	FOFF000	NA	NANA	FOFF001	512.700	+17.760	FOFF002	514.500	+18.660
0.5% FOB Rotterdam barge	AMRAS000	NA	NANA	AMRAS001	530.500	+7.260	AMRAS002	512.250	+7.260
0.5% vs. 3.5% FOB Rotterdam barge	AMRBS000	NA	NANA	AMRBS001	195.000	0.000	AMRBS002	232.250	0.000
\$/barrel									
0.5% FOB US Gulf Coast barge	AUSAS000	NA	NANA	AUSAS001	73.150	-2.900	AUSAS002	74.850	-0.800
0.5% vs US Gulf Coast HFO barge	AUSBS000	NA	NANA	AUSBS001	21.300	-1.660	AUSBS002	31.000	0.000

*Balance month swaps are assessed from 1st through the 15th of the month; Asia swaps are assessed through the 14th of February

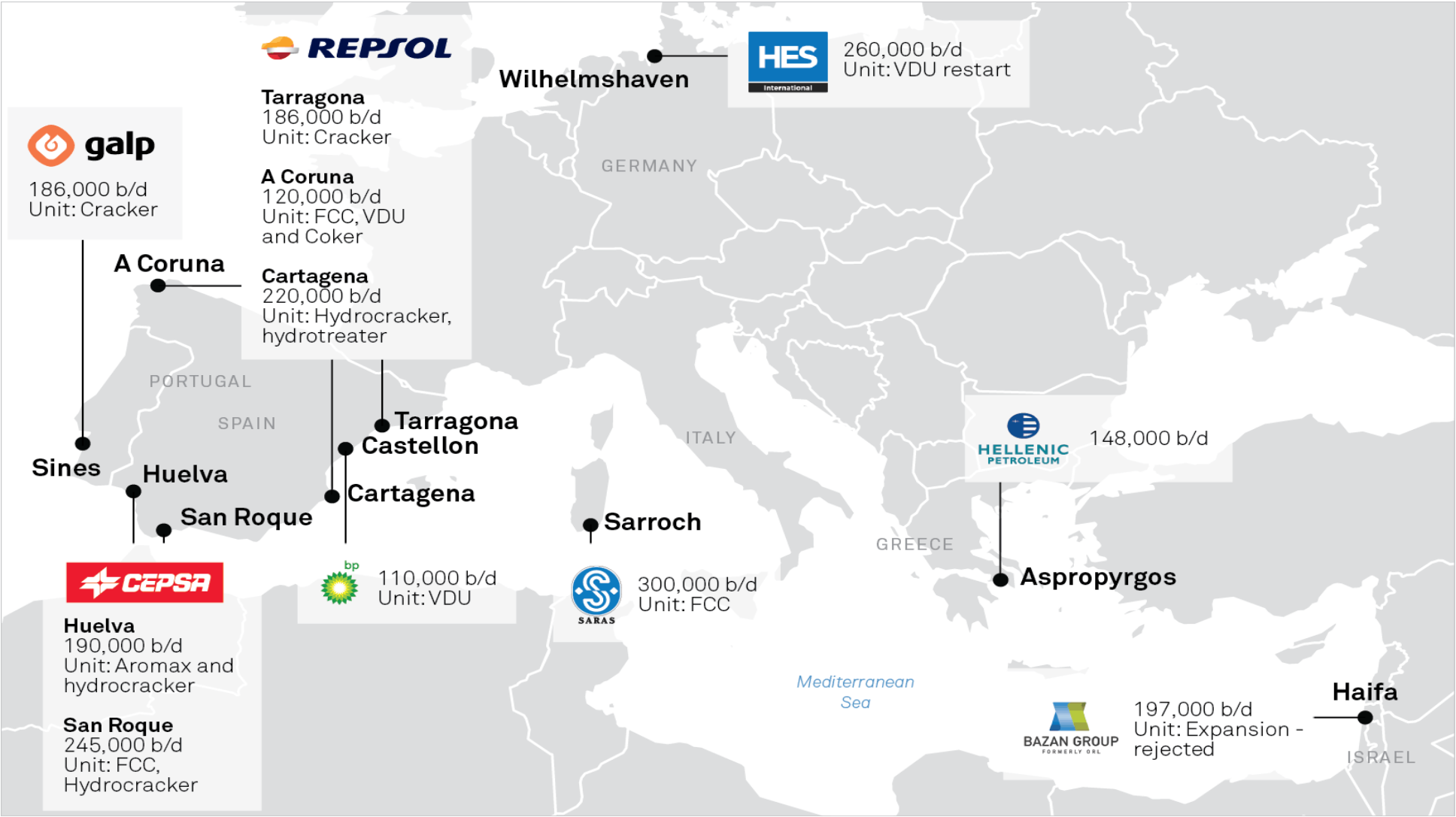
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GLOBAL FUEL OIL CRACKS

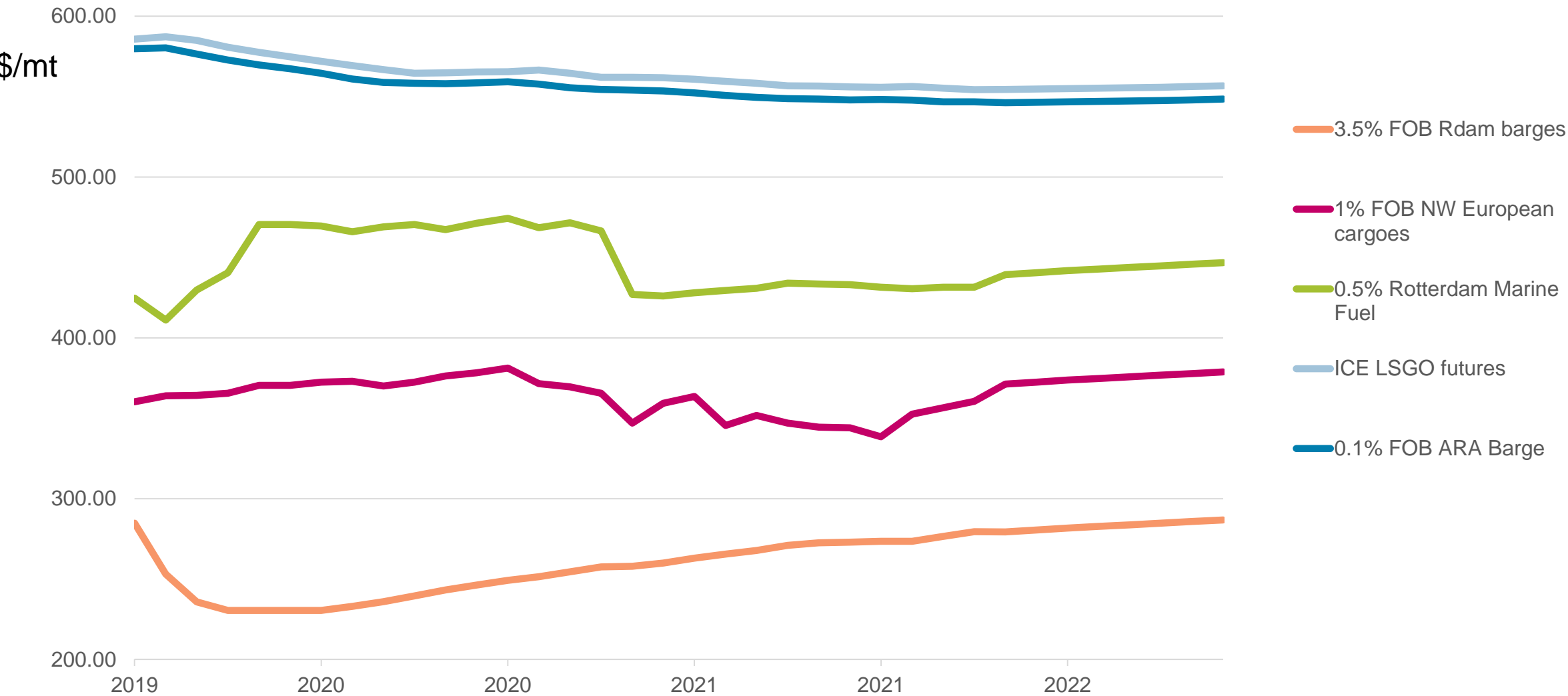


Some refiners already have 0.5% available



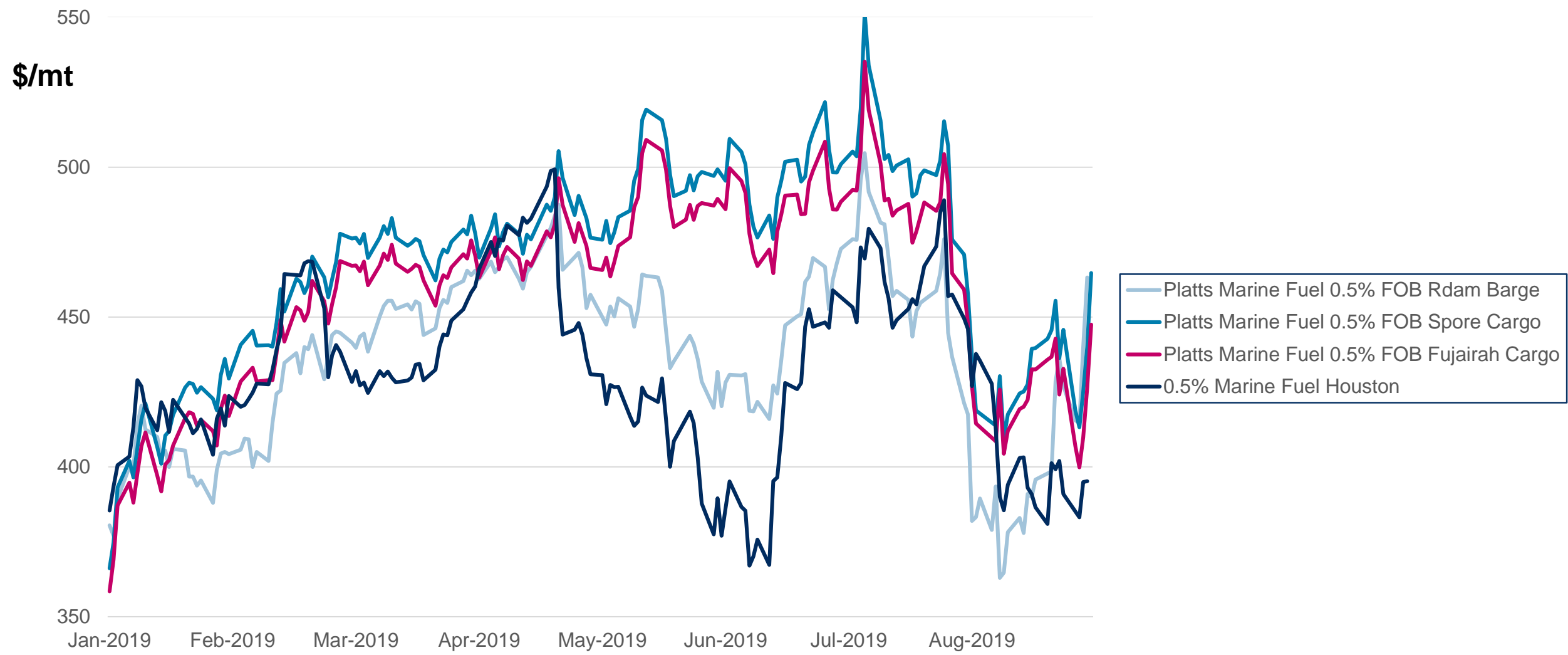
Source: S&P Global Platts

Wide flat price spread remains on the European forward curve



Source: S&P Global Platts

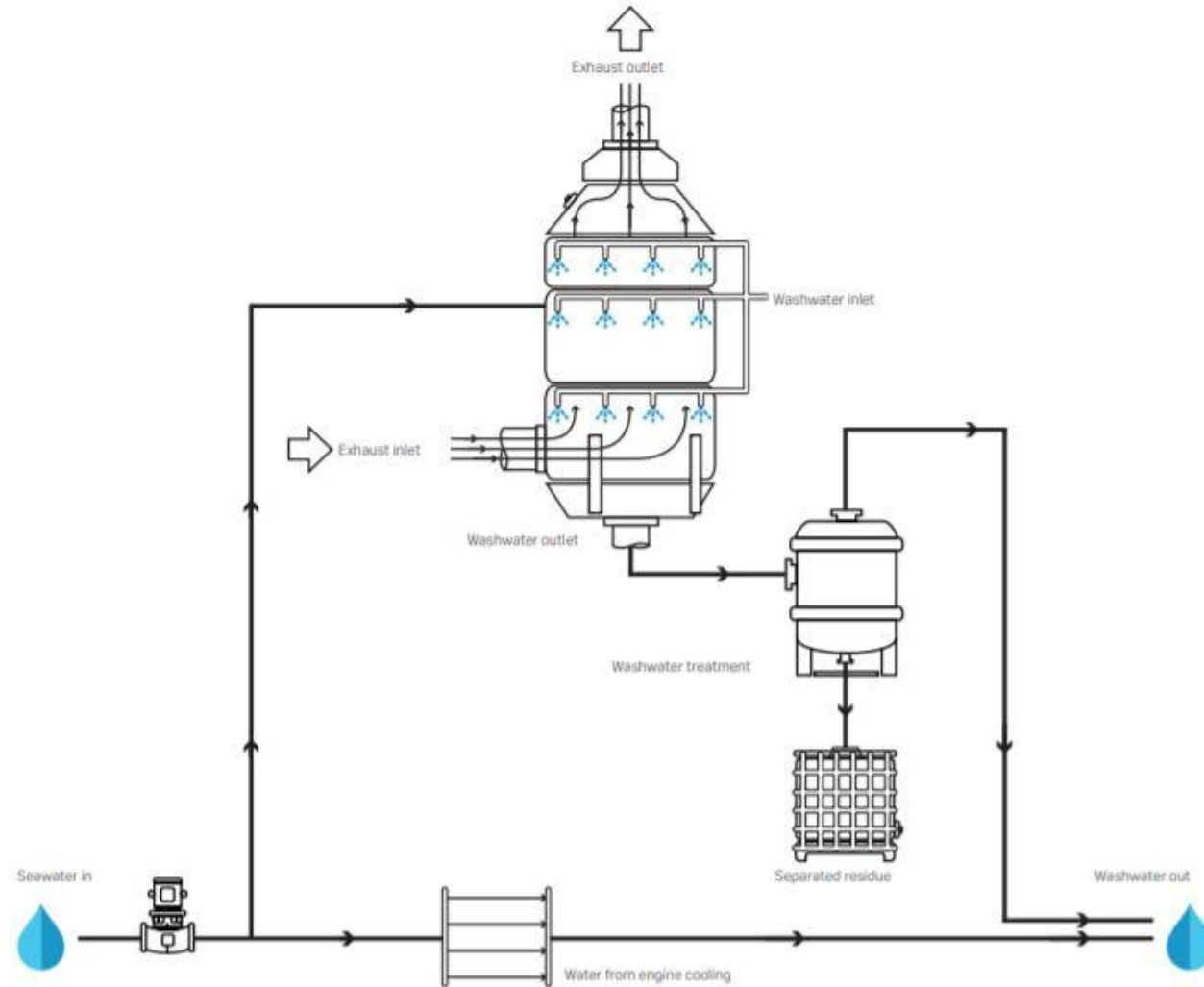
Global 0.5% marine fuel assessments



Source: S&P Global Platts

Option 2: Fit a scrubber

A common* open-loop scrubber design



- ***70%** of all scrubber installed or on order are open-loop
- Open-loop **banned** in Singapore, China, Fujairah

Source: S&P Global Platts Analytics & Exhaust Gas Cleaning Systems Association

Scrubber uptake

- Pace of scrubber additions **has increased**
- We expect **2,400** ships to have scrubbers installed on January 1, 2020.
- Total consumption: 600 MB/day HSFO

Source: Platts Analytics: "Making Waves Supplement IV: August"

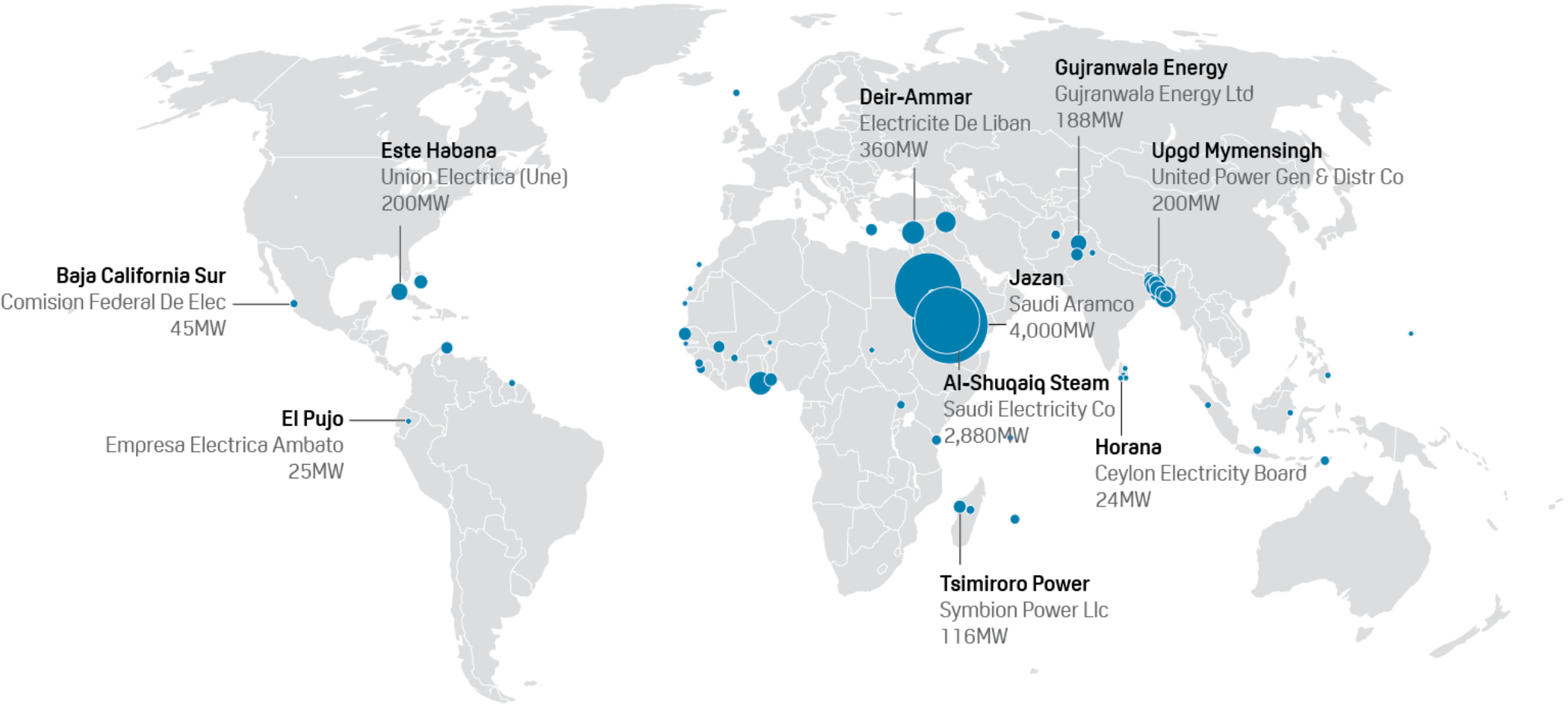
Scrubber uptake

- Scrubbers increase to over 3,500 installations by December 2020
- Over 4,500 by December 2021
- Including 54 of 79 VLCCs currently on order

Source: Platts Analytics: "Making Waves Supplement IV: August"

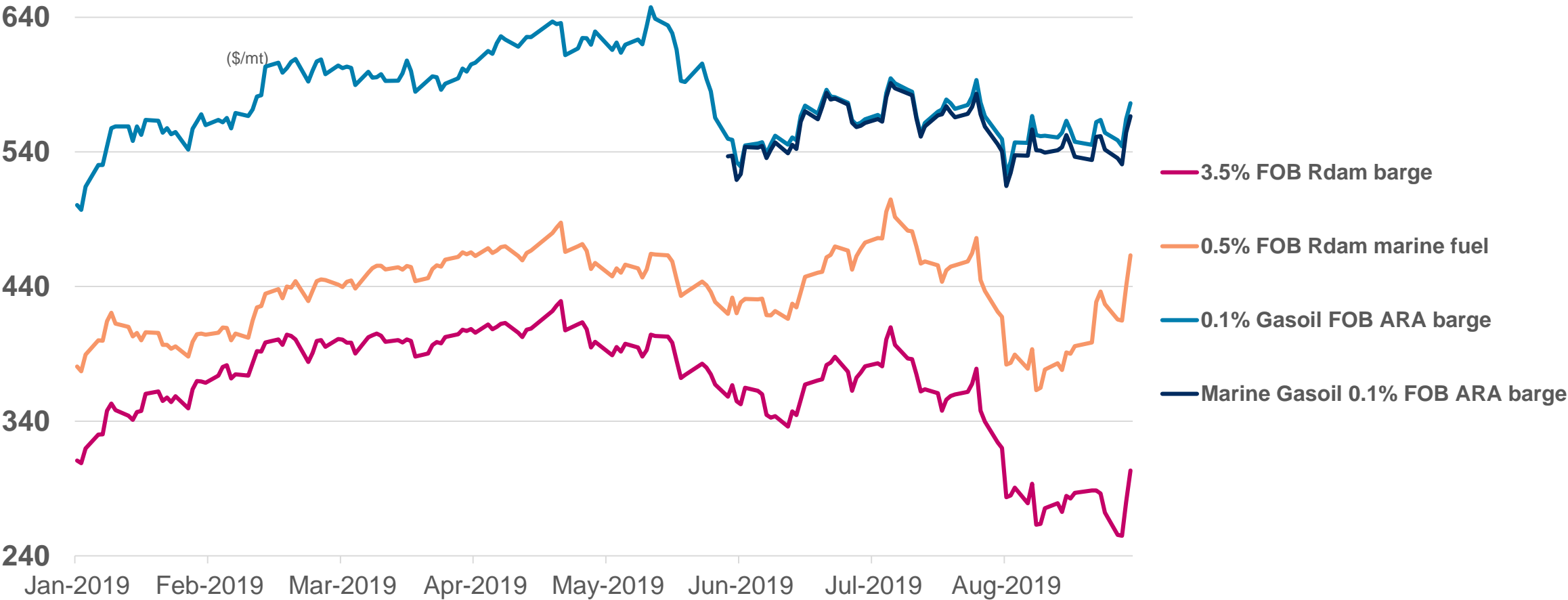
Fuel oil's new buyers – power generation demand

Power generation plants expected to come online



Source: S&P Global Platts Analytics

Platts European marine fuel assessments in 2019 (\$/mt)



Source: S&P Global Platts

Scrubber reliability

Scrubbers were not invented in 2019

- “Ferry operator DFDS has just celebrated **10 years** of continued scrubber operation on *Ficaria Seaways*...”
- “During this period the scrubber exceeded 55,000 working hours.
- For the 12 months ending June 30, 2019, results show a **downtime of 0.0012%**”

Source: Lloyd's List, VesselFinder, Clean Shipping Alliance



Worst Case Scenario: **Failure**



Option 3: Build new ships

ESL Shipping's Viikki & Haaga: LNG-powered Handysizes

- Sinotrans & CSC Jinling Shipyard 2018
- 25,600 dwt
- LNG-powered
- 57% reduction in CO₂
- 92% reduction in SO₂
- 25% for Nox
- Price: ~\$30m each



Source: ESL Shipping

The Oshima Ultramax 2030



- LNG Fuel
- Battery, with shaft generator
- Solar panels
- Hard sail
- Claims to have a **50% better** EEDI (Energy Efficiency Design Index) than comparable vessels
- Price: **not listed**

Case Study: **Indonesia**

“Indonesia **needs more time to comply with global rules requiring low-sulphur marine fuels... The national interest should be put forward before the implementation.”**

*Ministry of Transportation (Indonesia), **July** 2019*

“Indonesia **will enforce the 0.5% sulphur cap regulations from January 1 2020 on all Indonesian-flagged vessels both for domestic and foreign shipping.”**

*Ministry of Transportation (Indonesia), **August** 2019*

Indonesia

- Largest importer of **wheat** in the world in 2019
- Imports from Australia, Argentina, and the Black Sea
- Australian wheat will have difficulties retaining competitiveness over Black Sea **above the \$25/mt FOB price spread**



FOB price spreads: Russian Wheat 12.5% vs APW Wheat

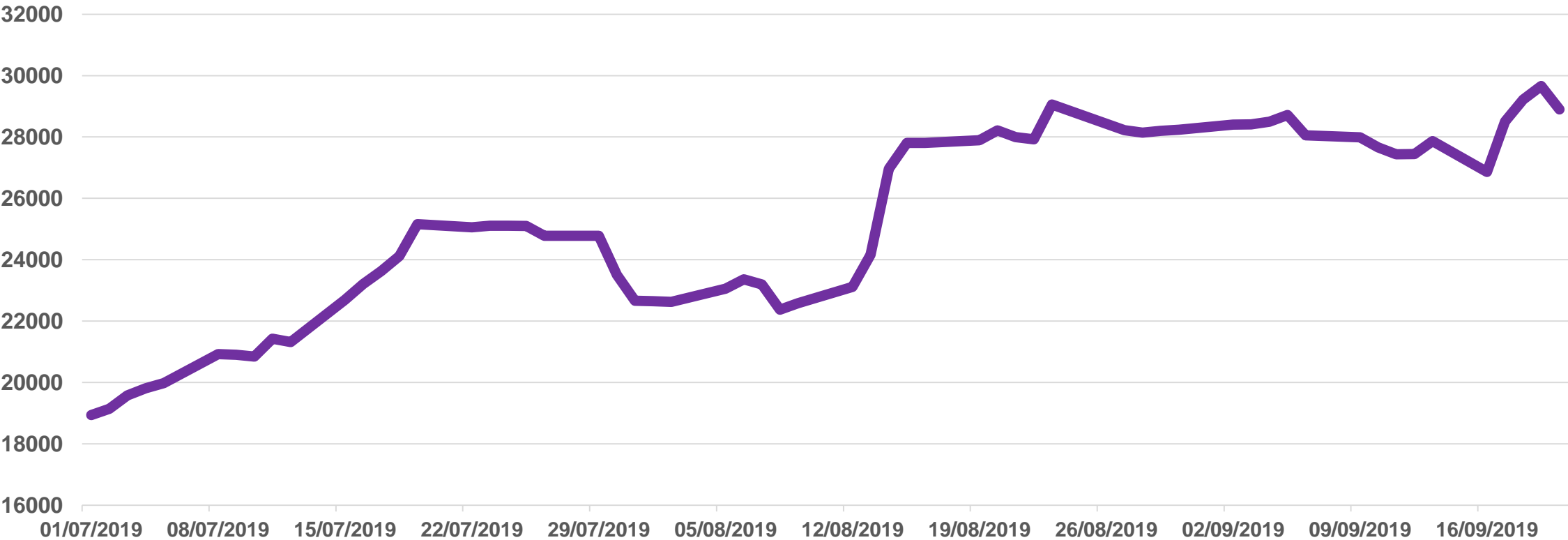
\$20-30/mt spread required for Black Sea - Indonesia arb to work



Yuzhny to Cigading, 50,000 mt grains time charter equivalent

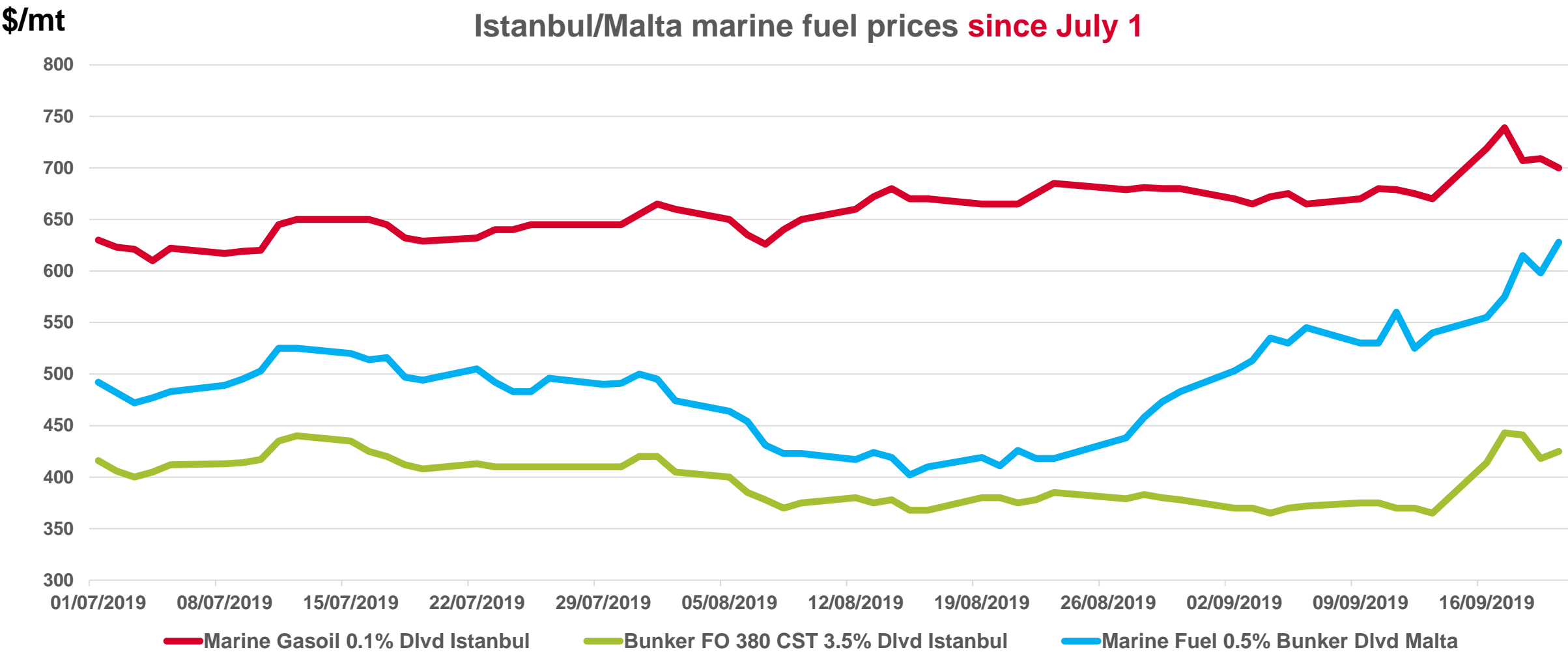
• (\$/day)

DBF Grains Yuzhny Ukraine-Cigading Indonesia 50kt \$/day DOP Can Close



Source: Platts

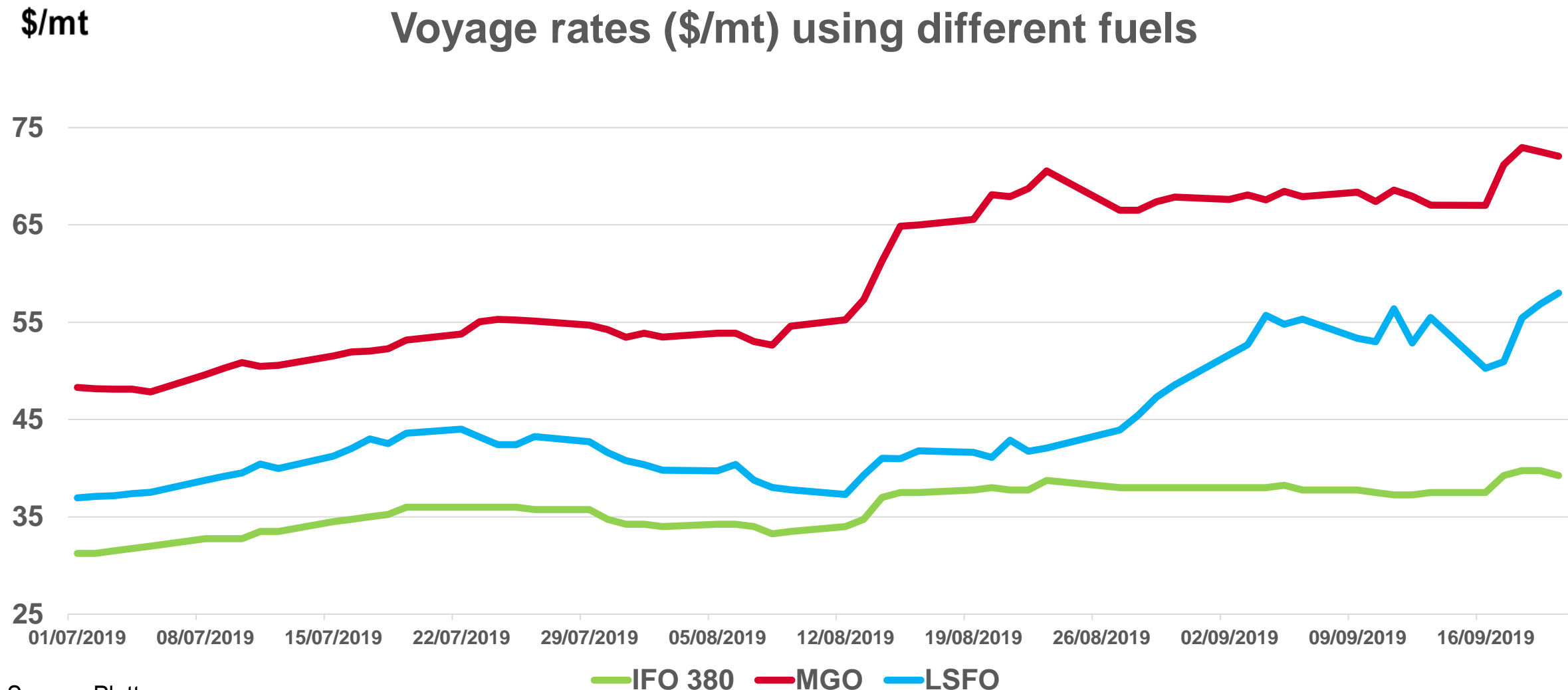
Marine Gasoil vs IFO 380 vs LSFO 0.5%



Source: Platts

S&P Global
Platts

Yuzhny to Cigading, 50,000 mt grains freight



Source: Platts

How will IMO 2020 impact Black Sea grains?

- Freight will rise significantly, favouring shorthaul voyages
- Increase in 'locally-sourced' grains for SE Asia market, such as APW wheat
- Disruption: Russia and Ukraine increasing cultivated area – means more grains for export: **lower FOB values can offset the freight increase**
- Emerging trade flow from Argentina could be cut short, but given their dominance on wheat supply, Russia and Ukraine here to stay

Contact & Further Reading



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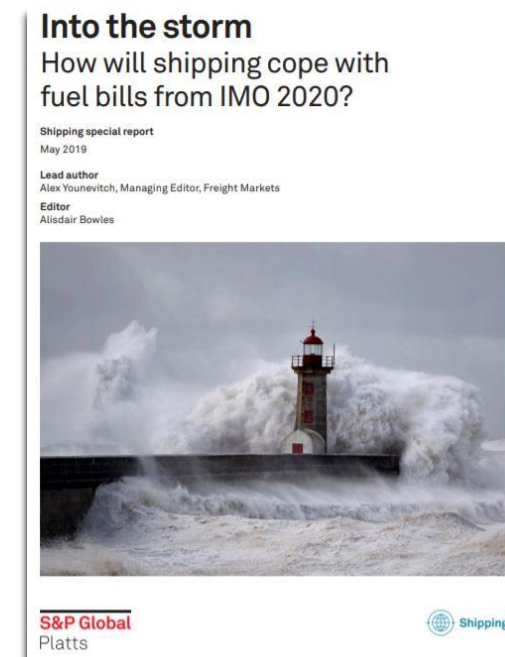
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