

SUBMISSION COVER SHEET

IMPORTANT: Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 19-310 (2 of 4)

Organization: New York Mercantile Exchange, Inc. ("NYMEX")

Filing as a: **DCM** **SEF** **DCO** **SDR**

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 8/22/19 **Filing Description:** Initial Listing of Four (4) Marine Fuel 0.5% (Platts) Futures Contracts

SPECIFY FILING TYPE

Please note only ONE choice allowed per Submission.

Organization Rules and Rule Amendments

- Certification § 40.6(a)
- Approval § 40.5(a)
- Notification § 40.6(d)
- Advance Notice of SIDCO Rule Change § 40.10(a)
- SIDCO Emergency Rule Change § 40.10(h)

Rule Numbers:

New Product

Please note only ONE product per Submission.

- Certification § 40.2(a)
- Certification Security Futures § 41.23(a)
- Certification Swap Class § 40.2(d)
- Approval § 40.3(a)
- Approval Security Futures § 41.23(b)
- Novel Derivative Product Notification § 40.12(a)
- Swap Submission § 39.5

Product Terms and Conditions (product related Rules and Rule Amendments)

- Certification § 40.6(a)
- Certification Made Available to Trade Determination § 40.6(a)
- Certification Security Futures § 41.24(a)
- Delisting (No Open Interest) § 40.6(a)
- Approval § 40.5(a)
- Approval Made Available to Trade Determination § 40.5(a)
- Approval Security Futures § 41.24(c)
- Approval Amendments to enumerated agricultural products § 40.4(a), § 40.5(a)
- "Non-Material Agricultural Rule Change" § 40.4(b)(5)
- Notification § 40.6(d)

Official Name(s) of Product(s) Affected:

Rule Numbers:

August 22, 2019

VIA ELECTRONIC PORTAL

Mr. Christopher J. Kirkpatrick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20581

Re: CFTC Regulation 40.2(a) Certification. Notification Regarding the Initial Listing of Four (4) Marine Fuel 0.5% (Platts) Futures Contracts. NYMEX Submission No. 19-310 (2 of 4)

Dear Mr. Kirkpatrick:

New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) is notifying the Commodity Futures Trading Commission (“CFTC” or “Commission”) that it is self-certifying the initial listing of four (4) Marine Fuel 0.5% (Platts) Futures contracts (the “Contracts”) for trading on the CME Globex electronic trading platform and for submission for clearing via CME ClearPort effective on Sunday, September 8, 2019 for trade date Monday, September 9, 2019, as described below.

Contract Title	USGC Marine Fuel 0.5% Barges (Platts) (mt) Futures
NYMEX Rulebook Chapter	1413
Commodity Code	UP5
Settlement Type	Financial
Contract Size	1,000 metric tons
Pricing Quotation	U.S. dollars and cents per metric ton
Minimum Price Fluctuation	\$0.001 per metric ton
Value per tick	\$1.00
First Listed Contract	October 2019
Termination of Trading	Last business day of the contract month
Listing Schedule	Monthly contracts listed for the current year and next 3 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
CME Globex Match Algorithm	First-In, First-Out (FIFO)
Block Trade Minimum Threshold	5 contracts

Contract Title	USGC Marine Fuel 0.5% Barges (Platts) (mt) BALMO Futures
NYMEX Rulebook Chapter	1412
Commodity Code	UPB
Settlement Type	Financial
Contract Size	1,000 metric tons
Pricing Quotation	U.S. dollars and cents per metric ton
Minimum Price Fluctuation	\$0.001 per metric ton
Value per tick	\$1.00
First Listed Contract	October 2019
Termination of Trading	Last business day of the contract month

Listing Schedule	Monthly contracts listed for the current year and next 3 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
CME Globex Match Algorithm	First-In, First-Out (FIFO)
Block Trade Minimum Threshold	5 contracts

Contract Title	USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures
NYMEX Rulebook Chapter	1414
Commodity Code	UPM
Settlement Type	Financial
Contract Size	1,000 metric tons
Pricing Quotation	U.S. dollars and cents per metric ton
Minimum Price Fluctuation	\$0.001 per metric ton
Value per tick	\$1.00
First Listed Contract	October 2019
Termination of Trading	Last business day of the contract month
Listing Schedule	Monthly contracts listed for the current year and next 3 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
CME Globex Match Algorithm	First-In, First-Out (FIFO)
Block Trade Minimum Threshold	5 contracts

Contract Title	USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) BALMO Futures
NYMEX Rulebook Chapter	1414
Commodity Code	BPU
Settlement Type	Financial
Contract Size	1,000 metric tons
Pricing Quotation	U.S. dollars and cents per metric ton
Minimum Price Fluctuation	\$0.001 per metric ton
Value per tick	\$1.00
First Listed Contract	October 2019
Termination of Trading	Last business day of the contract month
Listing Schedule	Monthly contracts listed for the current year and next 3 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
CME Globex Match Algorithm	First-In, First-Out (FIFO)
Block Trade Minimum Threshold	5 contracts

Exchange Fees

Exchange Fees	Member	Non-Member	International Incentive Programs (IIP/IVIP)
CME Globex	\$0.85	\$1.35	\$1.10
EFP	\$0.85	\$1.35	

Block	\$0.85	\$1.35	
EFR/EOO	\$0.85	\$1.35	

Exchange Processing Fees	
Cash Settlement	\$0.10
Facilitation Fee	\$0.60
Give-Up Surcharge	\$0.05
Position Adjustment/Position Transfer	\$0.10

Trading and Clearing Hours

CME Globex and CME ClearPort	Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)
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NYMEX is self-certifying block trading on the Contracts with a minimum block threshold of five (5) contracts for the USGC Marine Fuel 0.5% Barges (Platts) (mt) Futures, USGC Marine Fuel 0.5% Barges (Platts) (mt) BALMO Futures, USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures, and USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) BALMO Futures contracts.

These minimum block threshold levels of five (5) contracts are aligned with the Exchange’s existing petroleum futures and options contracts.

The Exchange reviewed the designated contract market core principles (“Core Principles”) as set forth in the Commodity Exchange Act (“CEA” or “Act”) and identified that the Contract may have some bearing on the following Core Principles:

- **Compliance with Rules:** Trading in the Contracts will be subject to the rules in Rulebook Chapter 4 which include prohibitions against fraudulent, noncompetitive, unfair and abusive practices. Additionally, trading in this Contracts will also be subject to the full panoply of trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the Rulebook. As with all products listed for trading on one of CME Group’s designated contract markets, activity in the Contracts will be subject to extensive monitoring and surveillance by CME Group’s Market Regulation Department. The Market Regulation Department has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.
- **Contract Not Readily Subject to Manipulation:** The Contracts are not readily subject to manipulation because of its structural attributes, underlying market and reliance on a well administered index. Final settlements are based on an index published by S&P Global Platts and licensed to the Exchange.
- **Prevention of Market Disruption:** Trading in the Contracts will be subject to the RuleNYMEX, which include prohibitions on manipulation, price distortion, and disruption to the cash settlement process. As with any new product listed for trading on a CME Group designated contract market, trading activity in the Contracts proposed herein will be subject to monitoring and surveillance by CME Group’s Market Regulation Department.

- **Position Limitations or Accountability:** The speculative position limits for the Contracts as demonstrated in this submission are consistent with the Commission's guidance.
- **Availability of General Information:** The Exchange will publish on its website information regarding the Contract's specifications, terms, and conditions, as well as daily trading volume, open interest, and price information.
- **Daily Publication of Trading Information:** The Exchange will publish the Contract's trading volumes, open interest levels, and price information daily on its website and through quote vendors for the Contracts.
- **Execution of Transactions:** The Contracts will be listed for trading on the CME Globex electronic trading and for clearing through CME ClearPort. The CME Globex trading venue provides for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.
- **Trade Information:** All requisite trade information for the Contracts will be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- **Financial Integrity of Contracts:** The Contracts will be cleared by the CME Clearing House, a derivatives clearing organization registered with the CFTC and subject to all CFTC regulations related thereto.
- **Protection of Market Participants:** NYMEX Rulebook Chapters 4 and 5 set forth multiple prohibitions that preclude intermediaries from disadvantaging their customers. These rules apply to trading in all of the Exchange's competitive trading venues.
- **Disciplinary Procedures:** Chapter 4 of the Rulebook contains provisions that allow the Exchange to discipline, suspend or expel members or market participants that violate the Rulebook. Trading in the Contracts will be subject to Chapter 4, and the Market Regulation Department has the authority to exercise its enforcement power in the event rule violations in these products are identified.
- **Dispute Resolution:** Disputes with respect to trading in the Contracts will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. Chapter 6 allows all nonmembers to submit a claim for financial losses resulting from transactions on the Exchange to arbitration. A member named as a respondent in a claim submitted by a nonmember is required to participate in the arbitration pursuant to Chapter 6. Additionally, the Exchange requires that members resolve all disputes concerning transactions on the Exchange via arbitration.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.2(a), the Exchange hereby certifies that listing the Contracts complies with the Act, including regulations under the Act. There were no substantive opposing views to listing of the Contracts.

The Exchange certifies that this submission has been concurrently posted on the Exchange's website at <http://www.cmegroup.com/market-regulation/rule-filings.html>.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or via e-mail at CMEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/ Christopher Bowen
Managing Director and Chief Regulatory Counsel

Attachments: Exhibit A: NYMEX Rulebook Chapters
Exhibit B: Position Limit, Position Accountability, and Reportable Level Table in Chapter 5 of the NYMEX Rulebook (attached under separate cover)
Exhibit C: NYMEX Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table
Exhibit D: Cash Market Overview and Analysis of Deliverable Supply

Exhibit A

NYMEX Rulebook

Chapter 1412

USGC Marine Fuel 0.5% Barges (Platts) (mt) BALMO Futures

1412101. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

1412102. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the balance of month arithmetic average of the "\$/metric ton" quotations from the Platts US Marketscan under the heading "Marine Fuel" for "0.5% FOB US Gulf Coast barge" starting from the selected start date through the end of the contract month, inclusive.

1412103. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

1412103A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

1412103B. Trading Unit

The contract quantity shall be 1,000 metric tons. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

1412103C. Price Increments

Prices shall be quoted in U.S. dollars and cents per metric ton. The minimum price fluctuation shall be \$0.001 per metric ton. There shall be no maximum price fluctuation.

1412103D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5. A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion. Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

1412103E. Termination of Trading

Trading shall cease on the last business day of the contract month

1412104. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1412105. DISCLAIMER

See [NYMEX/COMEX Chapter iv. \("DISCLAIMERS"\)](#) incorporated herein by reference.

Chapter 1413 USGC Marine Fuel 0.5% Barges (Platts) (mt) Futures

1413101. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

1413102. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the arithmetic average of the "\$/metric ton" quotations from the Platts US Marketscan under the heading "Marine Fuel" for "0.5% FOB US Gulf Coast barge" for each business day that it is determined during the contract month.

1413103. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

1413103A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

1413103B. Trading Unit

The contract quantity shall be 1,000 metric tons. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

1413103C. Price Increments

Prices shall be quoted in U.S. dollars and cents per metric ton. The minimum price fluctuation shall be \$0.001 per metric ton. There shall be no maximum price fluctuation.

1413103D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5. A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion. Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

1413103E. Termination of Trading

Trading shall cease on the last business day of the contract month

1413104. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1413105. DISCLAIMER

See [NYMEX/COMEX Chapter iv. \("DISCLAIMERS"\)](#) incorporated herein by reference.

Chapter 1414
USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel
0.5% Barges (Platts) Futures

1414101. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

1414102. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the arithmetic average of the \$/mt quotations from Platts US Marketscan under the heading "Marine Fuel" for "0.5% FOB Gulf Coast barge" minus the arithmetic average of the \$/mt quotations from the Platts European Marketscan under the heading "Marine Fuel" for "0.5% FOB Rotterdam barge" for each business day that it is determined during the contract month.

The Floating Price is calculated using the non-common pricing convention. In calculating the spread differential, the balance of month average for each component leg of the spread shall be calculated by using all days on which the prices are published in the month (from the selected start date through the end of the contract month, inclusive) for each component leg of the spread, followed by the calculation of the spread differential between the two averages.

1414103. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

1414103A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

1414103B. Trading Unit

The contract quantity shall be 1,000 metric tons. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

1414103C. Price Increments

Prices shall be quoted in U.S. dollars and cents per metric ton. The minimum price fluctuation shall be \$0.001 per metric ton. There shall be no maximum price fluctuation.

1414103D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5. A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion. Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

1414103E. Termination of Trading

Trading shall cease on the last business day of the contract month

1414104. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1414105. DISCLAIMER

See [NYMEX/COMEX Chapter iv. \("DISCLAIMERS"\)](#) incorporated herein by reference.

Chapter 1415
USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel
0.5% Barges (Platts) BALMO Futures

1415101. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

1415102. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the balance of month arithmetic average of the \$/mt quotations the Platts US Marketscan under the heading "Marine Fuel" for "0.5% FOB Gulf Coast barge" minus the balance of month arithmetic average of the high and low quotations from the Platts European Marketscan under the heading "Marine Fuel" for "0.5% FOB Rotterdam barge" from the selected start date through the end of the contract month, inclusive.

The Floating Price is calculated using the non-common pricing convention. In calculating the spread differential, the balance of month average for each component leg of the spread shall be calculated by using all days on which the prices are published in the month (from the selected start date through the end of the contract month, inclusive) for each component leg of the spread, followed by the calculation of the spread differential between the two averages.

1415103. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

1415103A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

1415103B. Trading Unit

The contract quantity shall be 1,000 metric tons. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

1415103C. Price Increments

Prices shall be quoted in U.S. dollars and cents per metric ton. The minimum price fluctuation shall be \$0.001 per metric ton. There shall be no maximum price fluctuation.

1415103D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5. A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion. Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

1415103E. Termination of Trading

Trading shall cease on the last business day of the contract month

1415104. FINAL SETTLEMENT

Delivery under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1415105. DISCLAIMER

See [NYMEX/COMEX Chapter iv. \("DISCLAIMERS"\)](#) incorporated herein by reference.

Exhibit B

**NYMEX Rulebook
Chapter 5
("Trading Practices and Qualifications")**

Position Limit, Position Accountability, and Reportable Level Table

(under separate cover)

Exhibit C

NYMEX Rulebook

Chapter 5

(“Trading Practices and Qualifications”)

Rule 588.H. (“Globex Non-Reviewable Ranges”) Table

(Additions are underscored.)

Instrument Name	Globex Symbol	Outright			Spreads	
		Globex Non-Reviewable Ranges (NRR)	NRR: Globex Format	NRR: Ticks	NRR: Globex Format	NRR: Minimum Outright Ticks
<u>USGC Marine Fuel 0.5% Barges (Platts) (mt) Futures</u>	<u>UP5</u>	<u>\$2.00 per metric ton</u>	<u>2000</u>	<u>2000</u>	<u>N/A</u>	<u>N/A</u>
<u>USGC Marine Fuel 0.5% Barges (Platts) (mt) BALMO Futures</u>	<u>UPB</u>	<u>\$2.00 per metric ton</u>	<u>2000</u>	<u>2000</u>	<u>N/A</u>	<u>N/A</u>
<u>USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures</u>	<u>UPM</u>	<u>\$2.00 per metric ton</u>	<u>2000</u>	<u>2000</u>	<u>N/A</u>	<u>N/A</u>
<u>USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) BALMO Futures</u>	<u>BPU</u>	<u>\$2.00 per metric ton</u>	<u>2000</u>	<u>2000</u>	<u>N/A</u>	<u>N/A</u>

Exhibit D

Cash Market Overview and Analysis of Deliverable Supply

New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) is launching four (4) cash-settled futures contracts based on the S&P Global Platts (“Platts”) 0.5% sulphur marine fuel assessments in Rotterdam and Houston as noted in the table below. The specification for Marine fuel is changing to 0.5% sulphur from the current level of 3.5% and is being mandated by the International Maritime Organisation (IMO) commencing January 1, 2020. Middle distillates are expected to become a major blendstock for the marine fuel market enabling refiners to produce sufficient quantities of IMO 2020 compliant fuels with a sulphur content of 0.5%.

Platts launched new assessments for 0.5% Marine Fuel for the Ports of Houston, Singapore and Rotterdam on January 2, 2019 and NYMEX has already listed futures contracts based on these price assessments.

Contract Title	Commodity Code	Rulebook Chapter
USGC Marine Fuel 0.5% Barges (Platts) (mt) BALMO Futures	UPB	1412
USGC Marine Fuel 0.5% Barges (Platts) (mt) Futures	UP5	1413
USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures	UPM	1414
USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) BALMO Futures	BPU	1415

Background to IMO 2020

Commencing in 2020, the fuel oil market is set to undergo significant changes following the 2016 ruling by the International Maritime Organisation (“IMO”)¹ to reduce the sulphur content in Marine Fuels from 3.5% to 0.5%. The change is expected to have a significant pricing impact on both the shipping markets, the refiners and the blenders that must adhere to the stricter fuel standards. Shipping companies face the prospect of having to comply with the 0.5% sulphur limits for bunker fuel unless they have installed scrubbers which clean the emissions. As a result, some shipping firms may opt to continue to bunker with 3.5% fuel oil. Other fuels such as LNG and Methanol may also be used.

At the key ports of Rotterdam, Houston and Singapore, the blenders and refiners are currently finalising plans to make sufficient fuels available. Each of these locations are significant blending centres with sufficient storage therefore the Exchange believes that sufficient quantities of compliant bunker fuel will be made available. The refiners are currently testing batches of IMO compliant fuel at the major ports and are marketing this as Very Low Sulphur Fuel Oil (“VLSFO”) and working to ensure compatibility between each location such that a shipping firm could bunker in any location and not face issues over fuel quality.

Data Sources:

The Exchange determined to use data collected by the **U.S. Department of Energy (“DOE”) Energy Information Administration (“EIA”)** for its analysis and evaluation of deliverable supply estimates for residual fuel oil in the Gulf Coast. The EIA provides detailed data on the key components of deliverable supply. The EIA provides such data on a weekly, monthly, and annual basis.

¹ IMO <http://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx>

Data provided by **Eurostat**² was used in this analysis to review the production and import volumes for fuel oil and gasoil/diesel in the Netherlands and the broader ARA region. Eurostat is compiled by the statistical office of the European Union and aims to provide the EU with accurate statistics that enable comparisons between countries and regions. The statistical authorities in each individual member state are responsible for collecting the data. After verification and analysis, the individual authorities send the data to Eurostat who consolidate such data. In addition, Eurostat ensures that all parties are employing the same methodology in collecting and reporting data. Currently, Eurostat does not provide volumes for 0.5% fuel specifically, although they have announced their intention to do so commencing January 2020³. Therefore, the Exchange determined it most appropriate to use Eurostat data for fuel oil with less than 1% as this is the most prevalent quality of fuel oil and is expected to be a significant blendstock to achieve the IMO 2020 0.5% bunker fuel.

The final settlement prices for each of the proposed new Platts contracts are based on the price assessment of the respective underlying physical markets as assessed and published by Platts⁴, a division of **S&P Global ("Platts")**. Platts is a leading global provider of energy, freight, petrochemicals, metals and agriculture information, and a premier source of benchmark price assessments for those commodity markets. The marine fuel assessments for Europe and Singapore reflect the transactional value prevailing at 16:30 hours local time in each location but the US Market assessments reflect the transactional value prevailing at 14:30 EST; and align with the closing Futures Settlement Prices as made public by NYMEX. The information is published in real time as it is received on Platts information services and Platts Global Alert; and is published daily in European Marketscan, the Asia Pacific/Arab Gulf Marketscan and the US Marketscan.

Market Overview

Bunker fuel is the industry term for defining the fuel that ships burn. Typically, the fuel is a low-grade heavy oil used to power a ship. There are two basic types of **marine fuels** - distillate and residual. A third type is a mixture of these two, commonly called "intermediate." Distillate fuel is composed of petroleum fractions of crude oil that are separated in a refinery by a boiling or "distillation" process. High Sulphur Fuel Oil is the main bunker fuel for Europe and Singapore and based on the port sales volumes accounts for about 84% of the bunker fuels sold⁵ There are hundreds of bunkering ports around the world and thousands of firms that provide the actual bunkering service⁶.

Bunker fuels are split between residual fuel and distillate, but the so-called marine distillate fuel sector remains small when compared to the residual fuel sector. Currently, the split is about 15% marine distillate and 85% residual fuel oil. The largest distillate segment is Marine Gasoil. More recently, bunker suppliers have sold low sulphur varieties of the Fuel oil-based bunker fuels and the equivalent distillate based bunker fuels. Refiners are working with their customers to test new Very Low Sulphur Bunker fuels which will be compliant with the new 0.5% sulphur spec. This is being done to ensure compatibility between the different suppliers therefore ensuring that ships can bunker at any port without any operational difficulties (as all the major specs are compatible).

In the maritime sector, residual fuels tend to also be standardized by their maximum viscosity. For instance, IFO 380 is an intermediate fuel oil with a maximum viscosity of 380 centistokes (cst) and up to 3.5% Sulfur. However, under IMO 2020 regulations, the maximum sulphur content will be changing to 0.5% sulphur from January 2020 onwards. These fuel oils are blended with blending components or cutter stocks to achieve

² <http://ec.europa.eu/eurostat>

³ **EU Directive – article 6** <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0802&rid=2>

⁴ S&P Global Platts - <https://www.spglobal.com/platts/en>

⁵ <https://www.iea.org/publications/freepublications/publication/TrackingCleanEnergyProgress2017.pdf>

⁶ <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1001TZU.PDF?Dockey=P1001TZU.PDF>

internationally-accepted product specifications provided by the international standard, ISO 8217, that defines the requirements for fuel grades for use in marine diesel engines. Accordingly, marine fuel grades carry three letters: the first “D” or “R” specifies “distillate fuel” vs. “residual fuel.” The second “M” signifies “marine fuel” use. The third letter designates the individual grade. Residual marine (RM) fuels have 15 grades depicted by letters A through H, K, and L. For example, RMG 380 stands for “residual marine fuel G at a maximum viscosity (at 100° C) of 380CST⁷ For the purposes of this analysis, the term HSFO will be used to refer to RFO, HFO, IFO 380CST and RMG 380CST (all with a maximum sulfur content of 3.5%), which are used interchangeably in the industry.

The low sulphur fuel oil markets are primarily the domain of the power generation sector however, over the last few years, most of the countries in the Mediterranean and Northwest Europe have switched away from fuel oil for generation leaving Cyprus and parts of Greece as the main buyers (or volumes get shipped outside of Europe). High sulphur fuel oil is also sold into parts of the Middle East for direct burning into power generation.

In the United States there are six grades of fuel oil, numbered 1 through 6. The lower the number, the lighter the fuel is, with a lower boiling point, viscosity and energy content per gallon. No. 1 through No. 4 fuel oil grades are considered to be distillate fuels, while No. 5 and No. 6 fuel oils, also referred to as heavy fuel oil (“HFO”) and residual fuel oil (“RFO”), are the heavier oil that remains after the distillate fuel oils are distilled away in refineries. The largest market for the heavy, No. 6 RFO is bunker fuel, where the material fuels large, sea-going vessels. This market sees demand of over 250 million metric ton a year, globally⁸. RFO is also used for the production of electric power (“utility-grade RFO”), space heating and various industrial purposes. Since No. 6 RFO is the most common form of vessel fuel, the term “bunker fuel” or “bunker-grade RFO” is often used as a synonym for the No. 6 RFO. Between 6 and 15 major suppliers operate in the Houston Port area, though major suppliers like Shell Marine Products, Valero Marketing and Supply Co., Chemoil Corp., BP Marine Fuels, and Bominflot Atlantic LLC dominate⁹. In addition, several smaller suppliers have storage terminals in or near the port area and operate barge delivery services.

For the US market, Platts has introduced a 0.5% marine fuel price in metric tons in addition to the existing barrel price to internationalise the bunker arbitrage market. The Platts market will be converted from barrels per metric ton using a density of 6.35 barrels per metric ton (b/mt). The standard industry conversion for the residual portion is 6.35 b/mt for Europe and Singapore.

Fuel oil with a sulphur content of less than 1% is expected to be used by refiners as a significant blendstock for the 0.5% marine fuel market however there is insufficient data to split out the supply of fuel oil for each quality at this stage therefore it is not possible to state a precise percentage that Marine fuel would represent of the product mix. Therefore, the Exchange has adopted a conservative approach to derive such a value. To do this, the Exchange has applied a haircut of 20% to the Northwest Europe Imports and Refinery Production volumes of the fuel oil volumes with a sulphur content of less than 1%. This has been based on the proportion of high sulphur to low sulphur physical trades, as reported in the cash market. Using this data, it is possible to state that around 80% of the trades were 3.5% or high sulphur with the remainder at 1%.

Within this data category, Germany does not report volumes by fuel quality and reports data only within the total fuel oil category. Therefore, the Exchange has added the total German Refinery Production and Imports to the NWE Imports and Refinery Production however a haircut of 50% has been applied to the

⁷ <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1001TZU.PDF?Dockey=P1001TZU.PDF>.

⁸ <https://www.spglobal.com/platts/en/our-methodology/price-assessments/oil/platts-usgc-high-sulfur-fuel-oil-price-assessment-explained>

⁹ <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1001TZU.PDF?Dockey=P1001TZU.PDF>

German figures. In the Net Total DS for NWE we have shown the deliverable supply reflecting all the haircuts for Northwest Europe as 1.263 million metric tons per month or 1,263 monthly futures contract equivalents. A full month by month breakdown by country is shown in **Appendix A**.

A summary table below shows the deliverable supply for Low Sulphur Fuel Oil in Northwest Europe

	NWE Imports (excl. Germany)	NWE Production (excl. Germany)	German Refinery Production**	German Imports**	Total NWE supply
2016	526	556	615	210	1,278
2017	569	489	615	189	1,248
2018	508	571	619	179	1,262
3-year average	534	538	616	193	1,263

*Reduced by 20% - shown in the net total DS for NWE – Belgium, France (50%) and the Netherlands

**German volumes haircut by 50% - reflected in the total NWE supply

Port of Rotterdam and Bunker Sales

The port of Rotterdam is the largest port in Europe and the tenth largest bunkering port in the world by volume¹⁰. There are many suppliers active at the port and several large refineries and storage operators are located close to the port. Situated at the end of the Rhine River network, it is ideally placed to supply energy products to the inland European market via barge. The port authority publishes quarterly and yearly bunker sales volumes for marine fuel oil, gasoil and diesel. Based on the average volumes sold from 2016 to 2018, total volumes for bunker fuel oil was 7 million metric tons per year or 583,333 metric tons per month. Marine distillate volumes are much smaller representing about 15% of the total bunker volumes sold. There is a very small volume of lubes that are sold in Rotterdam however, they are insignificant in terms of volume, so the Exchange has excluded this data.

Bunker Sales in Port of Rotterdam

Source: Port of Rotterdam Authority¹¹

Units: Metric tons (converted from cubic metres)*

	Fuel Oil	MGO	MDO	Total
2013	8,740,920	449,498	2,895	9,193,312
2014	8,746,104	593,058	20,096	9,359,258
2015	7,777,274	1,446,137	147,837	9,371,248
2016	7,550,443	1,262,788	123,046	8,936,277
2017	7,347,366	1,228,303	130,126	8,705,795
2018	7,047,778	1,202,373	91,749	8,341,900

*Fuel oil density 0.89 and MGO/MDO density 0.885

Within parts of Northwest Europe such as the North Sea and in the Baltic sea area, the fuel oil sold is for 0.1% sulphur as these regions are part of an emission control area (ECA) that came into effect in 2015. The ECAs established under MARPOL Annex VI for SOx¹² are: the Baltic Sea area; the North Sea area;

¹⁰ Port of Rotterdam – Facts and Figures https://www.portofrotterdam.com/sites/default/files/facts-and-figures-port-of-rotterdam_0.pdf.

¹¹ Port of Rotterdam - <https://www.portofrotterdam.com/en>

¹² IMO – Page 5 (Emission Control Areas)

[http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Sulphur-oxides-\(SOx\)-%E2%80%93-Regulation-14.aspx](http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Sulphur-oxides-(SOx)-%E2%80%93-Regulation-14.aspx)

the North American area (covering designated coastal areas off the United States and Canada); and the United States Caribbean Sea area (waters around Puerto Rico and the United States Virgin Islands). The fuel oil data shown in the table represents both high and low sulphur fuel oil as both grades of fuel oil are sold in Rotterdam to ships operating inside and outside the Emission Control Areas.

Dutch Refiners produced around 443,000 tons per month of fuel oil with a sulphur content of less than 1%. Imports into the Netherlands were an additional 359,000 metric tons per month. Both data sets were collated using the three-year average Eurostat data through January 2019 inclusive, the latest data available.

Gulf Coast 0.5% Marine Fuel

In its deliverable supply estimate for 0.5% marine fuel, the Exchange will focus on refinery production, imports, and stock levels. The IMO mandate will require that refiners and blenders produce a lower sulfur 0.5% marine fuel oil that will meet the tighter global sulfur specifications starting in January 2020. Currently, the EIA data for fuel oil does not provide a breakdown for 0.5% sulfur marine fuel oil. The EIA provides stocks, import and refinery production data¹³ for three categories of fuel oil Sulfur levels: 1) less than 0.31% Sulfur; 2) 0.31% to 1.00% Sulfur; and 3) greater than 1.00% Sulfur. In its deliverable supply estimate for 0.5% marine fuel, the Exchange will utilize the EIA data for the category of “less than 0.31% sulfur and will assess a haircut of 50% for the category of “0.31% to 1.00% sulfur” to arrive at a supply estimate for 0.5% sulfur marine fuel. It is important to re-state that the fuel oil market is a “blend-to-spec” market, where the existing benchmarks that trade in the physical market (such as 1% Sulfur or 3% Sulfur fuel oil) are not necessarily the end-user product. Rather, the products are blended to meet the specifications of whatever end-use the product will be used in, mainly utility or bunkers. Therefore, the IMO mandate will require a new benchmark based on 0.5% sulfur marine fuel, which will be blended and produced for use in the bunkers market. For purposes of calculating the deliverable supply, the Exchange will use the industry standard conversion factor of 6.35 barrels per metric ton.

Refinery Production

According to the EIA and Table 1 below, the three-year average for refinery and blender production of residual fuel oil in the category of “less than 0.31% Sulfur” in PADD 3 (Gulf Coast) is 35,250 barrels per day (b/d). Further, after applying a 50% reduction for the category of “0.31% to 1.00% Sulfur,” the three-year average for refinery and blender production of residual fuel oil in the category of “0.31% to 1.00% Sulfur” in PADD 3 is 7,580 b/d. Therefore, the total three-year average for refinery and blender production is 42,830 b/d (35,250 b/d plus 7,580 b/d) or 6,745 metric tons (5,551 mt/d plus 1,194 mt/d), which is equivalent to 1.3 million barrels per month or 262,362 metric tons per month.

Table 1: Net Refinery and Blender Production: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur

Date	Gulf Coast (PADD 3) Refinery and Blender Net Production of Residual Fuel Oil, Less than 0.31% Sulfur (Thousand Barrels per Day)	Gulf Coast (PADD 3) Refinery and Blender Net Production of Residual Fuel Oil, 0.31 to 1.00% Sulfur (Thousand Barrels per Day)
May-2016	32	14
Jun-2016	32	11

¹³https://www.eia.gov/dnav/pet/pet_pnp_refp_a_epprx_ypr_mbbldpd_m.htm,
<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MRMRPP32&f=M>,
http://www.eia.gov/dnav/pet/pet_pnp_refp_a_epprh_ypr_mbbldpd_m.htm

Jul-2016	29	10
Aug-2016	27	6
Sep-2016	25	12
Oct-2016	32	18
Nov-2016	33	28
Dec-2016	35	15
Jan-2017	31	17
Feb-2017	37	12
Mar-2017	33	16
Apr-2017	35	10
May-2017	37	9
Jun-2017	37	9
Jul-2017	29	5
Aug-2017	30	11
Sep-2017	33	11
Oct-2017	39	14
Nov-2017	33	13
Dec-2017	30	7
Jan-2018	47	22
Feb-2018	39	13
Mar-2018	42	15
Apr-2018	41	16
May-2018	30	38
Jun-2018	32	21
Jul-2018	40	31
Aug-2018	43	19
Sep-2018	42	18
Oct-2018	40	14
Nov-2018	35	15
Dec-2018	37	15
Jan-2019	45	18
Feb-2019	43	10
Mar-2019	29	13
Apr-2019	35	20
Three-Year Average	35.25	15.17

Imports

According to the EIA and Table 2 below, the three-year average of imports¹⁴ in the category of “less than 0.31%” are estimated at 12,360 barrels per day (b/d). To further refine the data, consistent with the approach to production data, the Exchange applied a 50% reduction for the category of “0.31% to 1.00% Sulfur”. After applying the 50% reduction, the three-year average of imports in the category of “0.31% to

¹⁴ https://www.eia.gov/dnav/pet/pet_move_impccp_a2_r30_EPPRX_im0_mbbldpd_m.htm,
https://www.eia.gov/dnav/pet/pet_move_impccp_a2_r30_EPPRY_im0_mbbldpd_m.htm

1.00% Sulfur” are estimated at 3,250 b/d. Therefore, the total three-year average for imports is 15,610 b/d (12,360 b/d plus 3,250 b/d) or 2,458 mt/d (1,947 mt/d plus 512 mt/d), which is equivalent to 468,330 barrels per month or 73,753 metric tons per month.

Table 2: Imports of Residual Fuel Oil: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur (based on End-of Month Data)

Date	Gulf Coast (PADD 3) Imports of Residual Fuel Oil, Less than 0.31% Sulfur (Thousand Barrels per Day)	Gulf Coast (PADD 3) Imports of Residual Fuel Oil, 0.31 to 1.00% Sulfur (Thousand Barrels per Day)
May-2016	0	7
Jun-2016	1	11
Jul-2016	11	18
Aug-2016	0	30
Sep-2016	2	4
Oct-2016	0	7
Nov-2016	24	14
Dec-2016	6	0
Jan-2017	8	0
Feb-2017	4	0
Mar-2017	6	9
Apr-2017	15	10
May-2017	0	10
Jun-2017	8	6
Jul-2017	6	10
Aug-2017	11	2
Sep-2017	18	0
Oct-2017	0	0
Nov-2017	8	6
Dec-2017	11	0
Jan-2018	18	2
Feb-2018	10	0
Mar-2018	7	9
Apr-2018	0	8
May-2018	61	5
Jun-2018	8	9
Jul-2018	49	0
Aug-2018	39	0
Sep-2018	22	9
Oct-2018	32	11
Nov-2018	10	10
Dec-2018	0	10
Jan-2019	0	0
Feb-2019	17	0
Mar-2019	19	2
Apr-2019	14	15
Three-Year Average	12.36	6.50

Stocks

The EIA provides stocks data¹⁵ on a monthly basis by PADD for three categories of Sulfur levels: less than 0.31% Sulfur, 0.31% to 1.00% Sulfur and greater than 1.00% Sulfur. According to the EIA, the three-year average of stocks in the category of “less than 0.31% sulfur” are estimated at 1.29 million barrels or 203,150 metric tons. Further, the three-year average of “0.31% to 1.00% sulfur” stocks are estimated at 3.52 million barrels or 554,331 metric tons. For the purposes of estimating deliverable supply, the Exchange will apply a reduction of 50% for the stocks in the category of “0.31% to 1.0% sulfur” so that the three-year average will be 1.76 million barrels or 277,008 metric tons. Therefore, the total estimated stock levels for Gulf Coast 0.5% marine fuel is 3.05 million barrels (1.29 million plus 1.76 million) or 480,157 metric tons (203,150 metric tons plus 277,008 metric tons).

Due to the level of production and imports in the Gulf Coast, the Exchange has also included stocks in its estimate of deliverable supply. However, to be conservative, the Exchange will apply a further 50% reduction to the estimated stocks levels to account for variability, operational minimums and contingency storage. Consequently, the Exchange has estimated the stocks component of deliverable supply to be 1.55 million barrels (50% of 3.1 million barrels). The level of stocks in the USGC is shown in the table below.

Table 3: EIA Stocks of Residual Fuel Oil: Less Than 0.31% Sulfur, 0.31% to 1.00% Sulfur

Date	Gulf Coast (PADD 3) Ending Stocks of Residual Fuel Oil, Less than 0.31% Sulfur (Thousand Barrels)	Gulf Coast (PADD 3) Ending Stocks of Residual Fuel Oil, 0.31 to 1.00% Sulfur (Thousand Barrels)
May-2016	2,545	2,980
Jun-2016	2,612	3,117
Jul-2016	2,271	2,245
Aug-2016	2,174	2,962
Sep-2016	2,177	3,235
Oct-2016	1,800	5,543
Nov-2016	2,269	5,413
Dec-2016	2,271	5,289
Jan-2017	1,496	4,273
Feb-2017	1,623	4,065
Mar-2017	1,382	5,119
Apr-2017	1,096	4,812
May-2017	950	4,979
Jun-2017	888	3,741
Jul-2017	1,043	3,196
Aug-2017	753	3,342
Sep-2017	1,074	4,099
Oct-2017	976	3,468
Nov-2017	978	3,794
Dec-2017	650	4,467
Jan-2018	860	3,710
Feb-2018	954	3,648
Mar-2018	1,129	3,667

¹⁵<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MRLSTP31&f=M>,
<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MRMSTP31&f=M>,
<http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MRGSTP31&f=M>

Apr-2018	1,235	2,736
May-2018	841	2,863
Jun-2018	773	2,424
Jul-2018	675	3,070
Aug-2018	741	2,486
Sep-2018	705	2,748
Oct-2018	844	3,086
Nov-2018	996	2,589
Dec-2018	900	2,539
Jan-2019	1,302	2,575
Feb-2019	879	2,592
Mar-2019	1,089	2,760
Apr-2019	1,608	2,980
Three-Year Average	1,293	3,517

Analysis of Deliverable Supply

Appendix C to part 38 of the Commission's regulations defines deliverable supply as "the quantity of the commodity meeting the contract's delivery specifications that can reasonably be expected to be readily available to short traders and saleable by long traders at its market value in normal cash marketing channels at the derivative contract's delivery points during the specified delivery period, barring abnormal movement in interstate commerce."

Europe Marine Fuel 0.5%

For Northwest Europe, the Exchange has calculated the basis of deliverable supply as production and imports of fuel oil with a sulphur content of less than 1%. To be conservative in our approach, the Exchange applied a reduction of 20% to the deliverable supply volumes. As Germany does not report statistics by fuel oil quality, the Exchange used the total fuel oil production numbers and applied a reduction of 50% to the German numbers to account for fuel oil with a sulphur content of less than 1% with the remainder being fuel oil with a sulphur content of greater than or equals to 1%. Northwest Europe has been classified as Belgium, the Netherlands, Germany and 50% of France with the remainder of France being considered as the Mediterranean.

Combined production and import volumes of fuel oil with a sulphur content of less than 1% in Northwest Europe is around 1.48 million tons per month, broken down at 848,000 tons per month of refinery production and 632,000 tons per month of imports. Based on discussions with market participants and industry reports, it is understood that German production for high sulphur fuel oil is limited with most volumes falling into the lower sulphur categories. Therefore, a reduction of 50% to the German Production volumes could be considered to be very conservative. A reduction of 50% has also been applied to the German import volumes for total fuel oil. Using the Production and imports for fuel oil of less than 1% coupled with a reduction production and import number for Germany, the Exchange has estimated deliverable supply for Northwest Europe is around 1.48 million tons per month or 1,488 monthly contracts equivalent (based on a futures contract with a 1,000mt lot size).

The Exchange excluded fuel oil from the category of greater than or equals to 1% as there is no capacity to include adding these products into the existing NYMEX spot month position limits without breaking through the 25% of deliverable supply volumes on an aggregate basis. By excluding the existing 1% fuel oil as the basis of deliverable supply, the Exchange believes that the deliverable supply volumes for Northwest Europe are extremely conservative since a proportion of this quality of fuel oil will be diverted into the very low sulphur bunker pool.

The Exchange has excluded **stocks** due to the month on month variability in the overall levels. The stock levels tend to fluctuate depending on local supply and demand factor and due to this variability in the levels, the Exchange decided to exclude stock levels from the calculation of deliverable supply and has not been included in this analysis. **Exports** have also been excluded as this typically takes away volume from the market and therefore in this market, the Exchange does not consider this to be fully representative of deliverable supply.

Term supply contracts do exist but in a typical term agreement in the cash market there is a provision that allows flexibility for re-trading of the contracted quantity in the spot market, so the term agreements do not restrict the potential deliverable supply.

Gulf Coast 0.5% Marine Fuel

In its analysis of deliverable supply, the Exchange relied on: 1) production, 2) imports, and 3) stocks data. Table 1 below summarizes the deliverable supply components for Gulf Coast 0.5% marine fuel oil. The deliverable supply of Gulf Coast 0.5% marine fuel is estimated 4.13 million barrels per month or 650,000 metric tons per month, which is equivalent to 4,130 contracts and 650 contracts, respectively. Utilizing a conversion factor of 6.35 barrels per metric ton, the Exchange has set spot month limits at 800 contracts (equivalent to 800,000 barrels), which is approximately 19% of the monthly deliverable supply.

Term supply contracts do exist but in a typical term agreement in the cash market there is a provision that allows flexibility for re-trading of the contracted quantity in the spot market, so the term agreements do not restrict the potential deliverable supply.

Table 1: Deliverable Supply Components for Gulf Coast 0.5% Fuel Oil, Thousand Barrels per Month

	Production (Thousand Barrels per Month)	Imports (Thousand Barrels per Month)	Stocks (After Applying 50% Haircut of Total) (Thousand Barrels per Month)	Deliverable Supply (Thousand Barrels per Month)
2016 (May-Dec)	1,129	336	3,056	4,521
2017	1,178	304	2,594	4,076
2018	1,466	731	1,926	4,123
2019 (Jan-Apr)	1,369	439	1,973	3,781
Average	1,285	452	2,387	4,125

Position limits of the **USGC Marine Fuel 0.5% (Platts) (mt) Futures** will aggregate into USGC Marine Fuel 0.5% (Platts) Futures (commodity code H5F and rulebook chapter 1400). The deliverable supply of Gulf Coast 0.5% marine fuel is estimated at 4.13 million barrels month, which is equivalent to 4,130 contracts. The Exchange has set spot month limits at 800 contracts (equivalent to 800,000 barrels), which is approximately 19% of the monthly deliverable supply.

Position limits of the **USGC Marine Fuel 0.5% Barges (Platts) (mt) BALMO Futures** will aggregate into USGC Marine Fuel 0.5% Barges (Platts) Futures (commodity code H5F and rulebook chapter 1400). The deliverable supply of Gulf Coast 0.5% marine fuel is estimated at 4.13 million barrels month, which is equivalent to 4,130 contracts. The Exchange has set spot month limits at 800 contracts (equivalent to 800,000 barrels), which is approximately 19% of the monthly deliverable supply.

Position limits of the **USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures** market will aggregate into USGC Marine Fuel 0.5% Barges (Platts) Futures (commodity code H5F and rulebook chapter 1400) and European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures (commodity code R5F and rulebook chapter 1401). The deliverable supply of Gulf Coast 0.5% marine fuel is estimated at 4.13 million barrels month, which is equivalent to 4,130 contracts.

The Exchange has set spot month limits at 800 contracts (equivalent to 800,000 barrels), which is approximately 19% of the monthly deliverable supply. The deliverable supply of European Marine Fuel is 1.238 million metric tons (equivalent to 1,238 lots) therefore the spot month limit of 300 lots equates to 24.2% of the monthly deliverable supply.

Position limits of the **USGC Marine Fuel 0.5% Barges (Platts) (mt) vs. European FOB Rdam Marine Fuel 0.5% Barges (Platts) BALMO Futures** market will aggregate into USGC Marine Fuel 0.5% Barges (Platts) Futures (commodity code H5F and rulebook chapter 1400) and European FOB Rdam Marine Fuel 0.5% Barges (Platts) Futures (commodity code R5F and rulebook chapter 1401). The deliverable supply of Gulf Coast 0.5% marine fuel is estimated at 4.13 million barrels month, which is equivalent to 4,130 contracts. The Exchange has set spot month limits at 800 contracts (equivalent to 800,000 barrels), which is approximately 19% of the monthly deliverable supply. The deliverable supply of European Marine Fuel is 1.238 million metric tons (equivalent to 1,238 lots) therefore the spot month limit of 300 lots equates to 24.2% of the monthly deliverable supply.