

OPIS Global Marine Fuels Market Methodology

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This document outlines the methodology employed by OPIS, a Dow Jones company, in the assessment of daily Global Marine Fuels prices.

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Introduction

OPIS methodologies are developed in consultation with market stakeholders to ensure fair, accurate, and representative price assessments. Each benchmark is underpinned by clearly defined processes that reflect actual market behavior and conditions. [View OPIS Spot Price Assessment General Methodology here.](#)

Price Discovery

OPIS applies a full-day assessment process across all covered markets, gathering, testing and evaluating pricing data throughout the trading session. OPIS Global Marine Fuels spot price assessments are published daily while Global Methanol Bunkers are assessed weekly.

Data submission timeframes are specified in this guide for each region's price assessments. Information on publishing dates is made publicly available through the [OPIS Holiday Publishing Schedule](#). Registered stakeholders are notified in advance of any schedule changes.

OPIS Average prices represent the numerical mid-point of the OPIS Low and the OPIS High, assessed using spot market data discovered during the data submission timeframe. Last prices represent where OPIS assesses spot market close based on market data discovered at the data submission deadline. Locate the market specific OPIS Price Code reference and API codes [here](#).

Global Methanol Bunkers

OPIS calculates a weekly price for Grey Methanol in Houston, Singapore and Rotterdam.

Product Specifications

- **Grey Methanol:** Purity on a dry basis min 99.85% W/W. Acetone max 30 mg/kg. Ethanol max 50 mg/kg. Sulphur max 0.5 mg/kg. Water max 0.100% W/W. Specific gravity 20°/20° of 0.7910 to 0.79305. Contains characteristics comparable to IMPCA specifications fuels and must fall within accepted business standards of marine fuels.

Locations

- US Gulf Coast, FOB
- Southeast Asia, CFR
- West Europe, FOB

Calculation

- **Grey Methanol:** Calculated on prices published in the OPIS by Dow Jones Chemical Market Analytics Global Methanol - Weekly Report: FOB USGC, W. Europe FOB Rotterdam, Spot T2, and SE Asia CFR, Main Ports, as well as storage and logistics costs reviewed and or updated every Monday. Global holidays may affect publishing in which price assessments will be updated on the following business day.

- **Grey Methanol VLSFO Equivalent:** Price represents a calculated VLSFO replacement value, considering the amount of energy contained by methanol vs VLSFO using the following market assumptions: a VLSFO heating value of 41.00 gigajoules per metric ton and a methanol heating value of 19.93 GJ/mt.

View the Chemical Market Analytics Methanol price assessment methodology [here](#).

Pricing Mechanism: US \$/mt

Asia-Mideast Gulf

OPIS assesses daily Low, High, and Average prices for Asia-Mideast Gulf marine fuels.

Bunkers

Data Submissions

All ports' delivered bunker fuel assessments reflect pricing data received between 9 a.m. and 5:30 p.m. Singapore time.

Products & Specifications

- **380 CST HSFO:** Conforms with DMB ISO 8217:2017, with a maximum sulfur content of 3.5%.
- **0.5% VLSFO:** Conforms with DMB ISO 8217:2017, with a maximum sulfur content of 0.5%.
- **LSMGO:** Low sulfur marine gasoil, conforms with DMB ISO 8217:2017, with a maximum sulfur content of 0.1%.
- **LSMDO:** Low-sulfur marine diesel oil that generally conforms with DMB ISO 8217:2017, with a maximum sulfur content of 0.1%.

Locations

- **Singapore:** Delivered Singapore
- **Fujairah:** Delivered Fujairah
- **Chiba:** Delivered Chiba
- **Busan:** Delivered Busan
- **Kaohsiung:** Delivered Kaohsiung
- **Zhoushan:** Delivered Zhoushan

Timings: Delivering within 5-10 days; Buyer and seller must adhere to standard nomination procedures for the Singapore market, typically requiring 72 hours of advance notice.

Volume

- **380 CST HSFO and 0.5% VLSFO:** 500 - 1,500 mt cargo
- **LSMGO and LSMDO:** Minimum 50mt cargo

Calculations

- **Singapore Bulk Fuel Basis Diff:** Spot differentials are applied to OPIS HSFO and VLSFO Swaps prices that are normalized based on the refined products' loading windows.

- **FOB Fujairah:** Assessments represent a freight netback, calculated using OPIS FOB Singapore price assessments and freight rates provided by market sources for 80,000 mt of dirty petroleum products from Fujairah to Singapore.

Pricing Mechanism:

- US \$/bbl
- US \$/mt

Bulk Fuel Oil

Data Submissions

Singapore Bulk Fuel Oil spot assessments reflect pricing data received between 9 a.m. and 4:30 p.m. Singapore time.

Products & Specifications

- **380 CST HSFO:** Specifications: Approximate Kinematic Viscosity: At 50 C, max 380 cst. Flash point 60 C minimum. Pour point (upper) winter quality, 30 C maximum; summer quality, same. Ash 0.10 m/m maximum. Sulfur, statutory requirements. Vanadium max 350 mg/kg. Aluminum plus silicon, 60 mg/kg max; water, 0.5% maximum.
- **0.5% VLSFO:** Primarily a marine fuel, specifications may vary slightly due to blending but must contain a maximum of 0.5% sulfur and contain characteristics comparable to IFO fuels and must fall within accepted business standards of marine fuels. The final assessment will take into account the various blends available. Given the wide range of 0.5% sulfur blend specifications, OPIS uses a conversion rate from barrels to metric tons of 6.702, reflecting an average API of 19.

Timing: Delivery within 15-30 days

Volume: 20,000-40,000 mt

Location

- **Singapore FOB:** FOB Singapore cargoes, originating from approved terminals in Singapore and Johor, Malaysia
- **Fujairah FOB:** FOB Fujairah cargoes, originating from approved terminals in Fujairah

Timing

- **Prompt:** Prompt month, 14-16 days forward, with a rolling laycan
- **Prompt +1:** Month after Prompt timing, with a rolling laycan
- **Prompt +2:** Month after Prompt +1 timing, with a rolling laycan

Roll: Prompt timing rolls to the next month on the 16th day of the current month, except for February, when timing rolls on the 15th day. If the final trade date for a specific loading window falls on a weekend or publishing holiday, the timing roll will take place on the following business day

Calculation: The FOB Fujairah Bulk Fuel Oil VLSFO spot assessment is based on a freight netback from the Singapore Bulk Fuel Oil VLSFO spot assessment. The Arab Gulf-to-Singapore 80,000 mt freight rate is considered for the netback.

Pricing Mechanism

- US \$/bbl
- US \$/mt

Europe

OPIS assesses daily Low, High, and Average prices for Europe marine fuels.

Data Submissions

Europe Marine fuels assessments reflect pricing data received between 9 a.m. and 4:30 p.m. London Time.

Bunkers

Products & Specifications

- **HS 380 CST:** Conforms with DMB ISO 8217:2024m with a maximum sulfur content of 3.5%.
- **0.5% VLSFO:** Conforms with DMB ISO 8217:2024, with a maximum sulfur content of 0.5%.
- **LSMGO:** Low-Sulfur Marine Gasoil, conforms with DMB ISO 8217:2024, with a maximum sulfur content of 0.1%.

Locations

- **Rotterdam:** Delivered Rotterdam
- **Antwerp:** Delivered Antwerp
- **Hamburg:** Delivered Hamburg
- **Istanbul:** Delivered Istanbul
- **Gibraltar:** Delivered Gibraltar
- **Piraeus:** Delivered Piraeus

Timing: Delivery within 3-10 days

Volume: 1,000 to 3,000 mt

Pricing Mechanism

- US \$/bbl
- US \$/mt

Bulk Fuel Oil

Products & Specifications

- **HSFO:** Conforms with that of DMB ISO 8217:2024 with a maximum sulfur content of 3.5%.
- **0.5% VLSFO:** Conforms with that of DMB ISO 8217:2024 with a maximum sulfur content of 0.5%.
- **DMA:** Conforms with that of DMB ISO 8217:2024 with a maximum sulfur content of 0.1%.

Locations

- **ARA:** Barge, FOB basis Amsterdam, Rotterdam and Antwerp
- **Mediterranean:** Cargo, CIF basis Genoa/Lavera (other western Mediterranean ports considered)
- **NWE:** Cargo, CIF basis North West Europe

Timing

- **ARA**
 - **DMA:** Loading 3-30 days forward
 - **VLSFO and HSFO:** Loading 3-15 days forward Monday and Tuesday; 5-15 days forward Wednesday to Friday
- **Mediterranean:** Delivery 10-25 days forward
- **NWE:**
 - **DMA:** Loading 3-30 days forward
 - **VLSFO and HSFO:** Loading 3-15 days forward Monday and Tuesday; 5-15 days forward Wednesday to Friday

Volume

- **ARA**
 - **DMA:** 1,000 - 5,000 metric tons barges
 - **VLSFO and HSFO:** 2,000 - 5,000 mt barges
- **Mediterranean:** 25,000 - 30,000 mt cargoes
- **NWE**
 - **DMA:** 1,000 - 5,000 metric tons barges
 - **VLSFO and HSFO:** 2,000 - 5,000 mt barges

Calculation

NWE Bulk Cargoes (CIF) are derived via a fixed differential to ARA FOB barge prices.

- **NWE Bulk Cargo DMA:** Derived as a fixed differential to the DMA FOB barge price. Prices are published in dollars per metric ton and dollars per barrel, using a conversion rate of 7.07.
- **NWE Bulk Cargo VLSFO:** Derived as a fixed differential to the VLSFO FOB barge price. Prices are published in dollars per metric ton and dollars per barrel, using a conversion rate of 6.702.
- **NWE Bulk Cargo HSFO:** Derived as a fixed differential to the HSFO FOB barge price. Prices are published in dollars per metric ton and dollars per barrel, using a conversion rate of 6.35.

Pricing Mechanism

- US \$/bbl
- US \$/mt

Americas

OPIS assesses daily Low, High, and Average prices and differentials for Americas marine fuels. Differentials are assessed versus the NYMEX ULSD futures.

Data Submissions

Americas Marine fuels assessments reflect pricing data received between 9 a.m. and 5 p.m. Eastern Time.

Bunkers

Products & Specifications

- **HSFO:** Conform with ISO 8217:2024, with a maximum sulfur content of 3.5%.
- **VLSFO:** Conform with ISO 8217:2024, with a maximum sulfur content of 0.5%.
- **LSMGO:** Conform with ISO 8217:2024, with a maximum sulfur content of 0.1%.

Loading Locations

- Houston
- New Orleans
- New York
- Philadelphia
- Norfolk
- Savannah
- Seattle
- Panama
- Los Angeles
- Vancouver
- Manzanillo
- Veracruz
- Valparaiso

Timing

- **U.S. East Coast, U.S. Gulf Coast, Latin and Central America:** Delivery within 3-7 days
- **U.S. West Coast:** Delivery within 7-10 days.

Volume

- **Houston:** 500-2,000 mt
- **New Orleans:** 250-2,000 mt
- **New York:** 500-2,000 mt
- **Savannah:** 250-2,000 mt
- **Panama:** 500-2,000 mt
- **Los Angeles:** 750-3,000 mt
- **Seattle:** 300-2,500 mt
- **Philadelphia:** 500-2000 mt

- **Norfolk:** 500-2000 mt
- **Vancouver:** 500-3000 mt
- **Manzanillo:** 500-2000 mt
- **Veracruz:** 500-2000 mt
- **Valparaiso:** 500-2000 mt

Pricing Mechanism: US \$/mt

Bulk Fuel Oil

Products & Specifications

- **0.3% ULSFO:** Gravity of min 10.5 to max 24.9 API. Viscosity of max 300 SSF. Pour point of max 110 F. Min of 149,000 BTU/gal. Flash point of min 175. FBS&W of max 1.0%. Sediment of max 0.3%.
- **0.5% VLSFO:** Primarily a marine fuel, specifications may vary slightly due to blending but must contain a maximum of 0.5% sulfur and contain characteristics comparable to IFO fuels and must fall within accepted business standards of marine fuels. The final assessment of 0.5%S will take into account the various blends available.
- **1.0% SFO:** Aluminum+Silicon (Al+Si) content of max 80 ppm. Nitrogen of max 0.5%. Vanadium of max 150 ppm. Gravity of min 10.1 to max 18.0 API. Viscosity of min 70 to max 250 SSF. Flash Point of min 150 F. Pour point of max 60 F. Ash of max 0.1%. BS&W of max 1.0%. Water by distillation of max 1.0%. Sediment by extraction of max 0.1%. Vanadium of max 150 ppm. Sodium of max 60 ppm. Asphaltenes of max 8%. Min of 151,000 BTU/gal, H₂S of max 50 ppm.
- **HSFO:** Gravity of min 10 API. Viscosity of max 300 SSF. Vanadium of max 300 ppm. Al+Si of max 80 ppm. Flash point of min 150 F. BS&W of max 1%. Ash of max 0.1%.

Locations

- **U.S. East Coast:** Delivered basis New York Harbor
- **U.S. Gulf Coast:** FOB Houston

Timings

- **U.S. Gulf Coast:** Delivery within 7-9 days
- **U.S. East Coast:** Delivery within 10-15 days

Volume

- **U.S. Gulf Coast:** 45,000 bbl (one or two bottoms)
- **U.S. East Coast:** 50,000 bbl (one or two bottoms)

Calculations

- **HSFO-VLSFO Swap Spread:** Calculated for each timing based on the difference between the OPIS ARA HSFO Swap price and the OPIS ARA VLSFO Swap price.

Pricing Mechanism

- US \$/bbl
- US \$/mt

Marine Fuels Swaps

OPIS assesses Singapore HSFO and VLSFO Swaps prices with a timestamps of 4:30 p.m. Singapore time, FOB ARA with a timestamp of 4:30 p.m. UK time, and Houston with a timestamp of 5 pm ET.

Products

- **HSFO**
- **VLSFO**
- **HSFO-VLSFO Swap Spread**

Locations

- **Singapore**
- **ARA**
- **Houston**
- **East-West**

Timing

- **Prompt:** Current month
- **Forward:** One month beyond current month
- **Forward+1:** Two months beyond current month

Roll: Prompt timing rolls on the 15th of each month, except for February, which rolls on the 14th.

Calculations

- **HSFO-VLSFO Swap Spread:** Calculated for each timing based on the difference between the OPIS Singapore HSFO Swap price and the OPIS Singapore VLSFO Swap price.
- **East-West:** Swap spreads calculated based on the difference between Singapore and Europe HSFO and VLSFO swap prices at 4:30 p.m. UK time.

Pricing Mechanism

- US \$/mt
- US \$/bbl (Houston)

Europe Marine Cap-at-the-Port (CAP)

OPIS assesses Europe Marine Cap-at-the-Port (CAP) prices based on the EU ETS Directive on maritime emissions from shipping voyages across Europe's jurisdictional and non-jurisdictional routes and the OPIS EUA assessment.

Products

- **HFO Jurisdiction EU CAP**
- **HFO Non-Jurisdiction EU CAP**
- **LFO Jurisdiction EU CAP**
- **LFO Non-Jurisdiction EU CAP**

- **LNG Jurisdiction EU CAP**
- **LNG Non-Jurisdiction EU CAP**
- **LPG Butane Jurisdiction EU CAP**
- **LPG Butane Non-Jurisdiction EU CAP**
- **LPG Propane Jurisdiction EU CAP**
- **LPG Propane Non-Jurisdiction EU CAP**
- **Methanol Jurisdiction EU CAP**
- **Methanol Non-Jurisdiction EU CAP**
- **MGO Jurisdiction EU CAP**
- **MGO Non-Jurisdiction EU CAP**

Timing

- Current day pricing based on the OPIS EUA Current Year Vintage prompt timing assessment.
- OPIS Europe Marine CAP calculations will reflect CO₂(e) values during the calendar year of reported emissions and will roll CO₂(e) values on the first business day of the compliance year.

Pricing Mechanism

- €/mt
- US \$/mt

Calculation

- OPIS uses its assessment for European Union Allowances (EUA) to calculate a daily cap-at-the-port price for obligated fuels.
- **EU CAP** = OPIS daily current year, prompt month EUA assessment average €/mt x CO₂(e) of obligated fuel for the route in the compliance year.
- Jurisdiction emissions are defined as emission from ships departing from and arriving at a port under the jurisdiction of an EU Member State as well as emissions within the berth and during steaming within such a port.
- Non-Jurisdiction emissions are defined as emission from ships either departing from an EU Member State port and arriving at a port outside of its jurisdiction or vice versa.
- Europe Marine CAP annual carbon emissions values for fuel burned across jurisdictional routes are based on the following EU ETS marine compliance obligations: 40% of CO₂ in 2024, 70% of CO₂ in 2025, and 100% of CO₂e (including CH₄ & N₂O) in 2026 and beyond.
- Carbon emissions values for fuel burned across non-jurisdictional routes are based on the following EU ETS marine compliance obligations: 20% of CO₂ in 2024, 35% of CO₂ in 2025, and 50% of CO₂e in 2026 and beyond.
- OPIS European Union Allowances (EUA) methodology can be viewed [here](#).

Carbon Emissions Equivalency Values for Obligated Fuels

Product	2024 CO2 Value	2025 CO2 Value	2026 CO2e Value
HFO Jurisdiction	1.246	2.18	3.163
HFO Non-Jurisdiction	0.623	1.09	1.582
LFO Jurisdiction	1.26	2.206	3.2
LFO Non-Jurisdiction	0.63	1.103	1.6
LNG Jurisdiction	1.1	1.925	2.779
LNG Non-Jurisdiction	0.55	0.963	1.39
LPG Butane Jurisdiction	1.212	2.121	3.03
LPG Butane Non-Jurisdiction	0.606	1.061	1.515
LPG Propane Jurisdiction	1.2	2.1	3
LPG Propane Non-Jurisdiction	0.6	1.05	1.5
Methanol Jurisdiction	0.55	0.963	1.375
Methanol Non-Jurisdiction	0.275	0.481	0.688
MGO Jurisdiction	1.282	2.244	3.255
MGO Non-Jurisdiction	0.641	1.122	1.628

OPIS EU CAP prices are published daily with the OPIS Global Marine Fuels Report. If the publish date falls on an OPIS European publishing holiday, OPIS EU CAP prices will reference the previously assessed OPIS EUA price.

Fuel BTU Indicators

BTU content is derived from industry accepted standards for each of the three main marine fuels: LSMGO, 0.5%S VLSFO, and HS 380 CST per barrel and per metric ton, which are constant. The total BTU content of each fuel is divided by the daily assessment price to arrive at BTUs/\$. Conversion from barrels to metric tons are: 7.44 bbl/mt for LSMGO; 6.702 bbl/mt for 0.5%S VLSFO; and 6.35 bbl/mt for HS 380 CST.