OPIS Global LPG & Naphtha Price Assessments

Methodology and specifications

December 2025

Contents

Introduction

OPIS has been a news and price reporting leader in the downstream refined products marketplace since 1977. We have served customers throughout the many industry segments.

OPIS benchmarks are underpinned by robust methodologies developed in consultation with market stakeholders and are in-line with market realities. Regular reviews by customers and editors ensure the benchmarks are fit for purpose and that there is an open communication channel with stakeholders. This enables the benchmarks to evolve with changing needs and market landscape.

All price assessments are subject to general methodology principles and policies found here: https://www.opisnet.com/about/methodology/

Pricing Methodology

Shipping and Freight

OPIS International LPG Very Large Gas Carrier (VLGC) Freight Rates

OPIS surveys a wide range of market participants to create daily LPG freight assessments for Very Large Gas Carriers (VLGC).

Spot Freight Rates

- Ras Tanura to Chiba (AG-Japan)
- Houston to Flushing
- Houston to Chiba
- Ras Tanura to India

While OPIS considers the bids, offers and transaction levels within a prevailing assessment cycle, market indications received outside the prevailing cycle and standard terms can also be considered in the event of an illiquid market.

Standard terms for the assessment are as follows:

- Cargo size: 46,200 metric tons, which is equivalent to the high end of 44,000 mt plus/minus 5%
- Cargo grades: 1 to 2 grades, fully refrigerated LPG
- Assessment cycle: For the Houston-Flushing and Houston-Chiba assessments, second forward half-month cycle from the index date. For example, on August 1st, the second forward half-month cycle is the first-half of September. The Ras Tanura-Chiba and Ras Tanura-India assessment cycles are for loadings 10-30 days forward from the day of publication.
- Sea margin: 5%
- Broker Commission: 1.25% - Address commission is not included.

Daily Pricing Mechanism: $/mt

The cut-off for data submission is 5 p.m. London time.

Time Charter Equivalent (TCE) Rates

OPIS derives from Spot Freight Rates a Time Charter Equivalent (TCE) rate, using the formula: TCE ($/day) = (VLGC Freight Rate ($/mt) x Cargo Size (mt) – Costs ($))/Voyage Duration. This TCE is then used to calculate rates for other routes.

OPIS produces a series of daily calculated VLGC freight assessments on specific routes in line with market practice, where the TCE's created from the main VLGC freight assessments will be used in the calculation of the targeted route.

Ras Tanura-India (Basis Ras Tanura-Chiba) TCE: Using the voyage parameters and misc. costs of the Ras Tanura-Chiba voyage, the time charter equivalent (TCE) rate is calculated from the daily assessed Ras Tanura-India spot $/mt rate to create a $/day figure.

Houston-India (Basis Houston-Chiba) TCE: Using the voyage parameters and misc. costs of the Houston-Chiba voyage, the time charter equivalent (TCE) rate is calculated from a derived Houston-India spot $/mt rate. This spot rate assumes a fixed 2.5% premium on the Houston-Chiba $/mt daily assessment.

All freight assessments are calculated on a round voyage basis, with the exception of Marcus Hook to Flushing, which assumes a ballast voyage to Houston following discharge at Flushing.

Vessels are assumed to load bunker fuels prior to the laden leg of the round trip, using 0.5% Very Low Sulfur Fuel Oil (VLSFO), and 0.1% Low Sulfur Marine Gasoil (LSMGO) or DMA in sulphur emissions control areas (SECA). LSMGO consumption is also assumed for power auxiliary systems at port.

Given vessels are assumed to have loaded bunker fuels for the laden leg of the voyage. The bunker fuel for the nearest load port or bunker hub is used in the calculation for the desired route.

All freight rates specify which canal is involved in the routing where relevant. The Houston to Chiba VLGC rate assumes one day laden and one day ballast at the Panama Canal. All routes assume 6 hours Notice of Readiness (NOR) at each port.

The Ras Tanura-India route includes an Additional War Risk Premium (AWRP) of $70,000.

The Houston-New Mangalore & Haldia routes assume laden and ballast of the voyage via the Cape of Good Hope.

Port costs and timings are reviewed on an annual basis.

Daily Pricing Mechanism: $/day

VLGC Specifications	
Deadweight Tonnage (DWT)	55,000
Gross Tonnage (GT)	49,000
Net Register Tonnage (NRT)	17,000
Length (m)	226
Beam (m)	37
Laden/Ballast Speeds (knots)	15
Laden Bunker Fuel Consumption (mt/day)	38
Ballast Bunker Fuel Consumption (mt/day)	38
Bunker Fuel Consumption in Port (mt/day)	10
Laden LSMGO Consumption (mt/day)	0.2

Ballast LSMGO Consumption (mt/day)	0.2
Port LSMGO Consumption (mt/day)	0.25

Source: OPIS

VLGC Derived Routes (46,200 mt)

Load Port	Discharge Port	VLGC Base Rate
Houston	Ningbo	Houston-Chiba
Houston	Yantai	Houston-Chiba
Houston	Yeosu	Houston-Chiba
Houston	Tanjung Uban	Houston-Chiba
Prince Rupert	Chiba	Ras Tanura-Chiba
Houston	San Pedro	Houston-Flushing
Houston	Suape	Houston-Flushing
Houston	Mohammedia	Houston-Flushing
Houston	Lavera	Houston-Flushing
Marcus Hook	Flushing	Houston-Flushing
Houston	Mombasa	Houston-Flushing
Houston	Yarimca	Houston-Flushing
Arzew	Yarimca	Houston-Flushing
Ras Tanura	New Mangalore & Haldia	Ras Tanura-India (basis RT-C)
Houston	New Mangalore & Haldia	Houston-India (basis H-C)
Houston	Pajaritos	Houston-Flushing
Houston	Monteverde	Houston-Chiba

Source: OPIS

Port Costs ($) & Port Times

Port	Costs ($)	Days Loading/Discharging	SECA Port
Ras Tanura	12,000	2	No
Chiba	75,000	2	No
Houston	45,000	2	Yes
Flushing	85,000	2	Yes
Ningbo	40,000	2	No
Yantai	34,500	2	No
Yeosu	50,750	2	Yes
Tanjung Uban	35,000	3	No
Prince Rupert	45,000	2	Yes
San Pedro	48,000	2	No
Suape	36,500	2	No
Mohammedia	120,000	2	No

Lavera	80,000	2	Yes
Marcus Hook	50,000	2	Yes
Mombasa	47,000	10	No
Yarimca	65,000	10	Yes
Arzew	60,000	2	No
New Mangalore	85,000	3	No
Haldia	95,000	4	No
Pajaritos	51,575	2	No
Monteverde	200,650	2	No

Source: OPIS

OPIS Midsize Gas Carrier (MGC) Assessments

12-month Time Charter Rates

OPIS assesses 12-month period charter rates for 38,000 cubic meter (cbm) and 40,000 cbm Midsize Gas Carriers (MGCs), which represent the price to fix from the previous week. The $/month assessments for both the 38,000 cbm and 40,000 cbm are rounded to the nearest $5,000/mt.

The 12-month period MGC charter rates for the 38,000 cbm and 40,000 cbm carriers will be published on Monday, or the next publication day if Monday is a U.S. holiday.

OPIS produces a series of daily calculated freight rates for specific routes on 38,000 cbm and 40,000 cbm MGCs based on the weekly MGC 12-month period charter assessments. The day rate for an MGC includes bunker fuel and port costs. All routes are assumed to be a round voyage with a 98% cargo load of a 38,000 cbm or 40,000 cubic meter MGC. The cargo is noted as metric tons.

Vessels are assumed to load bunker fuels prior to the laden leg of the round trip, using 0.5% Very Low Sulfur Fuel Oil (VLSFO), and 0.1% Low Sulfur Marine Gasoil (LSMGO) or DMA in sulphur emissions control areas (SECA). LSMGO consumption is also assumed for power auxiliary systems at port.

Given vessels are assumed to have loaded bunker fuels for the laden leg of the voyage. The bunker fuel for the nearest load port or bunker hub is used in the calculation for the desired route.

The Houston to Lagos MGC assessments includes a cost of $75,000 for armed guards during the vessel's discharge in Lagos and for one day either side.

All routes assume 6 hours Notice of Readiness per port and 12 hours bunkering per round voyage.

Fees and timings are reviewed on an annual basis including Panama Canal fees for voyages to La Pampilla and Quintero. The Houston-Lagos MGC assessments do not include port costs at Lagos, which are for the charterer's account.

Submissions for the weekly assessment must be submitted by 4:00 p.m. London time on Monday.

Weekly Pricing Mechanism: $/month

38,000 Cubic Meter MGC Specifications	
Deadweight Tonnage (DWT)	28,000
Gross Tonnage (GT)	25,000
Net Register Tonnage (NRT)	7,500
Length (m)	175
Beam (m)	28
Laden/Ballast Speeds (knots)	15
Laden Bunker Fuel Consumption (mt/day)	29
Ballast Bunker Fuel Consumption (mt/day)	27
Bunker Fuel Consumption in Port (mt/day)	4
Laden LSMGO Consumption (mt/day)	0.1
Ballast LSMGO Consumption (mt/day)	0.1
Port LSMGO Consumption (mt/day)	0.1

Source: OPIS

40,000 Cubic Meter MGC Specifications	
Deadweight Tonnage (DWT)	28,500
Gross Tonnage (GT)	26,250
Net Register Tonnage (NRT)	7,750
Length (m)	180
Beam (m)	29
Laden/Ballast Speeds (knots)	15
Laden Bunker Fuel Consumption (mt/day)	29
Ballast Bunker Fuel Consumption (mt/day)	27
Bunker Fuel Consumption in Port (mt/day)	4
Laden LSMGO Consumption (mt/day)	0.1
Ballast LSMGO Consumption (mt/day)	0.1
Port LSMGO Consumption (mt/day)	0.1

Source: OPIS

38,000 Cubic Meter MGC Derived Routes		
Route	**Cargo Grade**	**Cargo Size (mt)**
Houston-Tuxpan	Propane	21,700
Houston-Jorf Lasfar	Propane	21,700
Houston-Jorf Lasar	Butane	22,300
Houston-Flushing	Propane	21,700
Houston-Flushing	Butane	22,300

Marcus Hook-Flushing	Propane	21,700
Marcus Hook-Flushing	Butane	22,300
Houston-Lagos	Butane	22,300
Houston-Abidjan	Butane	22,300
Houston-La Pampilla	Propane	21,700
Houston-Quintero	Propane	21,700

Source: OPIS

40,000 Cubic Meter MGC Derived Routes

Route	Cargo Grade	Cargo Size (mt)
Houston-Tuxpan	Propane	22,800
Houston-Jorf Lasfar	Propane	22,800
Houston-Jorf Lasar	Butane	23,500
Houston-Flushing	Propane	22,800
Houston-Flushing	Butane	23,500
Marcus Hook-Flushing	Propane	22,800
Marcus Hook-Flushing	Butane	23,500
Houston-Lagos	Butane	23,500
Houston-Abidjan	Butane	23,500
Houston-La Pampilla	Propane	22,800
Houston-Quintero	Propane	22,800

Source: OPIS

MGC Port Costs & Port Times

Port	Cost ($)	Days Loading/Discharging	SECA Port
Houston	26,000	1	Yes
Marcus Hook	35,600	1	Yes
Jorf Lasfar	34,000	1.5	No
Flushing	45,000	1	Yes
Tuxpan	53,000	1	No
Lagos	N/A	4	No
Abidjan	102,000	9	No
La Pampilla	40,000	1	No
Quintero	109,000	1	No

Source: OPIS

EU ETS Cap-at-the-Port (EU CAP) Costs

An estimated EU ETS Cap-at-the-Port (EU CAP) price has been calculated for freight rate calculations on routes originating in the US and delivering in Europe. This will be applicable on voyages starting from January 2025 and will become increasingly stringent over the next few years, to encompass other GHG omissions.

The OPIS $/mt non-jurisdictional EU CAP has been applied for voyages that originate outside of the EU and destined for ports of discharge which are located within the EU. This price premium is calculated on fuel consumption on both the laden and ballast legs from Houston into ports in Flushing and Lavera and additionally calculated on in port consumption of conventional marine fuels. The total value of this CAP premium on the round voyage is then divided by the intake of the respective vessel sizes trading on these routes in order to calculate a $/mt equivalent on these routes.

For the MGC assessments, OPIS calculates the EU ETS CAP price by taking an average of both propane and butane parcel sizes.

Daily Pricing Mechanism: $/mt

More information on the OPIS EU CAP methodology can be found at
https://www.opisnet.com/about/methodology/#marine_europe

North America LPG & Naphtha Spot Pricing

LPG

OPIS FOB US Resale Differential assessments are reported as a differential range (cts/gal) to OPIS Mont Belvieu non-TET (EPC) propane and OPIS Mont Belvieu non-TET (EPC) normal butane on the day. Resale differentials are also known as spot terminal fees in industry practice.

Timing: Half-month cycles roll at the new calendar month and at mid-month.

Editors survey a range of market participants and assessments will be based on executed deals, bid-offer levels and netbacks to the Far East and Northwest Europe. Editors confirm and record deals done between 9:00 a.m. and 2:00 p.m. U.S. Eastern time.

- **OPIS FOB USGC Propane Resale Differentials**
  Partial and up to a full size Very Large Gas Carrier (VLGC) of fully-refrigerated propane loading FOB at U.S. Gulf Coast terminals (Enterprise, Targa, Nederland and Freeport) for two forward half-month cycles. Specification is export-grade low-ethane propane (maximum 2% ethane).
- **OPIS FOB USGC Normal Butane Resale Differentials**
  Partial and up to a full size Very Large Gas Carrier (VLGC) of fully-refrigerated normal butane loading FOB at U.S. Gulf Coast terminals (Enterprise, Targa, Nederland and Freeport) for two forward half-month cycles. Specification is export-grade normal butane (maximum 0.35% propane and maximum 6% isobutane).
- **OPIS FOB USGC 2:2 Resale Differentials**
  Partial and up to a full size Very Large Gas Carrier (VLGC) of fully-refrigerated normal butane and propane loading FOB at U.S. Gulf Coast terminals (Enterprise, Targa, Nederland and Freeport) for the forward half-month cycle. 2:2 represents a ratio of two tanks of propane to two tanks of normal butane.
- **OPIS FOB USEC Propane Resale Differentials**
  Partial and up to a full size Very Large Gas Carrier (VLGC) size cargoes of fully-refrigerated propane loading FOB at the U.S. East Coast terminal (Marcus Hook) for the forward half-month cycle. Specification is export-grade low-ethane propane (maximum 2% ethane).
- **OPIS FOB Western West Coast (WC) Canada Propane Resale Differentials**
  Very Large Gas Carrier (VLGC) size cargoes of fully-refrigerated propane loading FOB at the Western Canadian terminal (Prince Rupert) for the forward half-month cycle. Specification is export-grade low-ethane propane (maximum 2% ethane).
- **OPIS FOB USEC 38K and 40K CBM Differentials**
  Resale differentials for the 38,000 cubic meter and 40,000 cubic meter MGCs of semi-refrigerated propane loading FOB at the U.S. East Coast terminal (Marcus Hook).

Daily Pricing Mechanism: cts/gal

OPIS FOB USGC, FOB USEC and FOB WC Canada resale prices as expressed in $/mt, is calculated by the sum of OPIS Mont Belvieu non-TET (EPC) propane and normal butane assessments and the OPIS FOB Resale Differential for the first half-month cycle.

More information on OPIS Mont Belvieu spot pricing methodology can be found at https://www.opisnet.com/about/methodology/#ngl-spot-pricing

Naphtha

Domestic 40N+A naphtha is assessed as differentials (cts/gal) to USGC waterborne unleaded. OPIS uses conversion factor for the US cts/gal to US$/metric ton of 3.5749. Outright prices are published in the Global LPG & Naphtha Report.

Domestic 40N+A Naphtha
Values for domestic 40 N+A heavy naphtha reflect material with 38-44 N+A, an initial boiling point of 150-160 Degrees F., an end point of 350-380 Degrees F., +20 minimum color, a maximum RVP of 4.0 lbs., 3 parts per million maximum nitrogen, 500 parts per million maximum sulfur, and an API gravity of 56-60.

Daily Pricing Mechanism: cts/gal and $/mt

Paraffinic Naphtha
Assessments reflect 50,000-bbl barge volumes delivered on the U.S. Gulf Coast within 5 days from date of publication.
The assessment is typically reflective of material with the following specifications: 65 minimum paraffin content, 84 maximum API gravity, 500 ppm maximum sulfur, 13.0-lb. maximum RVP, 50 ppm maximum oxygenates, 50 ppb maximum lead, 10 ppb maximum arsenic, 5 ppb maximum mercury, 1 ppm maximum H2S in liquid, and +20 minimum Saybolt color.

Daily Pricing Mechanism: $/mt

More information on OPIS North America Naphtha spot pricing methodology can be found at https://www.opis.com/about/methodology/#international-feedstocks-pricing

OMBD and Delivered LPG Price Assessments

OPIS assesses a series of Mont Belvieu Delivered (OMBD) prices for VLGCs and the MGCs category from Houston to various ports around the world. The delivered prices incorporate the OPIS Mont Belvieu assessment in addition to the spot terminal fees and the cost of freight.

In addition, OPIS assesses delivered prices for voyages from the USEC, Mideast Gulf, WC Canada and Algeria.

OMBD prices are denoted via the Cape of Good Hope and via the Panama Canal where applicable.

VLGC OPIS Mont Belvieu Delivered Assessments	Other VLGC Delivered Assessments
South China (Houston – Ningbo)	USEC to Northwest Europe (Marcus Hook – Flushing)
East China (Houston – Yantai)	Mideast Gulf to Japan (Ras Tanura – Chiba)
South Korea (Houston – Yeosu)	Algeria to Turkey (Arzew – Yarimca)
Indonesia (Houston – Tanjung Uban)	WC Canada to Japan (Prince Rupert – Chiba)
Japan (Houston – Chiba)	Mideast Gulf to India (Ras Tanura – New Mangalore & Haldia)
Northwest Europe (Houston – Flushing)	
Caribbean (Houston – San Pedro)	
Brazil (Houston – Suape)	
Morocco (Houston – Mohammedia)	
West Mediterranean (Houston – Lavera)	
Turkey (Houston – Yarimca)	
East Africa (Houston – Mombasa)	
India (Houston-New Mangalore & Haldia)	
Mexico (Houston- Pajaritos)	
Ecuador (Houston-Monteverde)	

MGC Mont Belvieu Delivered Assessments	Other MGC Delivered Assessments
Mexico (Houston – Tuxpan)	USEC to Northwest Europe (Marcus Hook – Flushing)
Morocco (Houston – Jorf Lasfar)	
Northwest Europe (Houston – Flushing)	
Nigeria (Houston – Lagos)	
Cote d'Ivoire (Houston – Abidjan)	
Peru (Houston-La Pampilla)	
Chile (Houston-Quintero)	

Middle East LPG & Naphtha Spot Pricing

LPG

- **FOB Arab Gulf Propane and Butane**

  FOB Arab Gulf assessments reflect refrigerated propane or butane of cargo size 44,000-46,000 mt loading from major ports in the Middle East in the following calendar month from publication date.

  The FOB Arab Gulf Propane and Butane assessments are derived from the prompt month Saudi Contract Price (CP) swap and the respective FOB Arab Gulf Premium/Discount.

  The FOB Arab Gulf Premium/Discount assessments reflect the respective cash differential against the prompt month Saudi CP swap for propane and butane loading during the assessment period.

Naphtha

- **FOB Arab Gulf LR1 Physical Naphtha** and **FOB Arab Gulf LR2 Physical Naphtha**

  Assessed as freight netbacks from the CFR Japan Physical Naphtha assessment for a 55,000 mt and 75,000 mt cargo respectively loading major ports in the Middle East 20-40 days forward from day of publication.

- **FOB Arab Gulf LR1 Physical Naphtha Premium/Discount**

  Reflects the cash differential against FOB Arab Gulf LR1 Physical Naphtha for cargoes loading from major ports in the Middle East 20-40 days forward.

Daily Pricing Mechanism: $/mt

The cut-off for data submissions is 6 p.m. Singapore time.

Asia LPG & Naphtha Spot Pricing

LPG

- **CFR Japan Propane, Butane and LPG (11:11)**

  Specifications for CFR Japan and Far East assessments are based on the prevailing CFR Far East LPG Forward Contract for refrigerated propane, butane or LPG (11:11) of cargo size 22,000-23,000 mt delivering to Tokyo Bay, Japan.

  Far East propane and LPG (11:11) are assessed for cargoes delivering in three half-month cycles, starting 25 days forward.

  The CFR Japan physical assessments for propane and LPG (11:11) reflect cargoes delivering 25-40 days forward and are derived from the time-weighted average of the half-month cycle assessments.

  The CFR Japan butane assessment is derived from the LPG (11:11) and propane assessments.

  Far East propane and LPG (11:11) Premium/Discount reflect the cash differential for cargoes delivering in each half-month cycle. The pricing basis is the respective same-month Far East swap value.

- **Asia CFR South China Propane, Butane and LPG (11:11)**

  Specifications for CFR South China assessments follow the prevailing industry-accepted CFR Far East LPG forward contract for refrigerated propane, butane, or LPG (11:11, i.e. evenly-split ratio) of 22,000-23,000 mt delivering to ports in South China.

  CFR South China for propane, butane and LPG (11:11) are assessed for cargoes delivering 25-40 days forward to South China.

Naphtha

CFR Japan

Specifications for CFR Japan assessments are based on the latest CFR Far East Open Specification Form Naphtha Contract (OSN) with a minimum paraffin content of 65%.

- **CFR Japan Open Spec Naphtha** is assessed for 25,000 mt-size cargoes delivering in three half-month cycles of 30-45 days forward, 45-60 days forward and 60-75 days forward. The half-month cycles are rolled twice every month -- on the first publication day of the month and the first publication day after the 15th.
- **CFR Japan Physical Naphtha** is a calculated assessment covering the second (45-60 days) and third (60-75 days) half-month cycles and is derived from the low and high of these two cycles.
- **CFR Japan Premium/Discount** reflects the cash differential against CFR Japan Physical Naphtha for cargoes delivering into Japan within the first and second half-month cycles.

CFR Korea

Specifications for CFR Korea assessments reflect naphtha of 25,000 mt cargo size with merchantable quality largely similar to CFR Japan Open Spec Naphtha but with a minimum paraffin content of 70% and for delivery into Daesan.

- **CFR Korea Physical Naphtha** covers the first and second half-month cycles and is derived from the CFR Korea Premium/Discount and the CFR Japan Physical Naphtha assessments.
- **CFR Korea Premium/Discount** reflects the cash differential against CFR Japan Physical Naphtha for cargoes delivering into Daesan within the first and second half-month cycles.

FOB Singapore

- **FOB Singapore Physical Naphtha** is assessed as a freight netback from the first half-month cycle (30-45 days) for CFR Japan Open Spec Naphtha. The freight netback assumes a 30,000 mt cargo on a medium range tanker with a port charge of $0.05/bbl. OPIS applies a 9 bbl to 1 mt conversion factor for this assessment.

Daily Pricing Mechanism: $/mt

The cut-off for data submissions is 6 p.m. Singapore time.

Europe LPG & Naphtha Spot Pricing

LPG

- **OPIS Propane CIF ARA**

  The OPIS CIF ARA Propane assessment considers cargoes for 10-25 days forward delivery, basis Flushing, and in the volume range of 19,000 – 24,000 metric tons to capture the majority of bids, offers and deals. The grade, quality, delivery and nomination terms remain based on the prevailing industry-accepted forward contract, such as the TOT contract. Positions referencing alternative forward delivery contracts will be considered if the dates fall into the 10-25 day forward delivery range.

  Assessments consider physical spot deals and swaps transacted between 4:00-4:30 p.m. London time.

  Physical bids must have a minimum 5-day delivery date range and offers a maximum 5-day delivery date range entirely within the 10-25 days forward delivery period, basis Flushing.

  Deals, bids and offers that carry a minimum 50% fixed price component will be considered for the purpose of price discovery.

  Deals, bids and offers, which carry additional requirements that may be seen as restrictive, are not considered for pricing assessments.

  In the absence of reference month swap deals transacted on the above platforms between 4:00 p.m.-4:30 p.m. London time, OPIS will consider bids and offers levels for the reference month swap, in addition to spread trades linked to the reference month swap during this time period. Editors will also canvass market sources for a value for the reference month swap.

  For bids, offers and deals that carry a naphtha-related floating price component for the balance or next month, the floating value will be derived from swap deals transacted and close values on credible trading platforms and by surveying market participants for the 4:30 p.m. London time close naphtha swap value.

  When the 10-25 days forward delivery period crosses two calendar months, OPIS will roll forward the reference month swap considered in its assessment when eight days of the delivery period fall in the second month.

- **CIF ARA Butane**

  Butane prices are for field grade mixed butane cargoes above 4,000 metric tons delivered 10-25 days forward basis CIF ARA.

- **FOB Med Propane and Butane**

In the Mediterranean, OPIS assesses field grade and refinery grade propane and butane FOB basis Lavera 5-15 days forward. The assessment considers cargo sizes of 1,500 metric tons and above.

Naphtha

- **NWE Naphtha**

  The physical flat price assessment is based on public physical spot deals transacted between 4:00-4:30 p.m. London time.

  The OPIS CIF NWE Naphtha Settle Price assessment, will bring forward the roll of the reference month swap considered, when the 10-25 days forward delivery period crosses two calendar months.

  OPIS will roll the Naphtha CIF NWE reference month swap when eight days of the delivery period fall into the second month. This will change from the existing reference month roll, which takes place on the 25th of each month.

  OPIS assesses naphtha CIF NWE swaps, including multiple mini-swaps, based on a straight average of swaps, including multiple mini-swaps, seen cleared/concluded via credible trading platforms inside the 4:00-4:30 p.m. London timeframe. The method is to ensure complete validation and disclosure of price, volume and time traded. Swaps below 2kt and Mini Swaps below 20 lots (2kt) will be excluded.

  The physical differential for open spec material or paraffinic grades — premium, parity or discount — will be applied to the current day's physical price assessment. The assessment considers these differentials until the market demonstrates otherwise. In the absence of any demonstration of a change on the day, the differentials will remain unchanged.

  The assessment is rounded to the nearest 25 cents.

- **LVN and OSN Differential Assessment**

  OPIS assesses naphtha physical CIF NWE value-to-market by canvassing the market on a full-day basis for the Open Spec and for Paraffinic grade (LVN) naphtha (basis min 80% paraffins). Once assessed, the differentials are applied to the physical price assessment for the day to arrive at the outright levels for LVN and OSN.

Daily Pricing Mechanism: $/mt

Forward Curves

OPIS aggregates London close-of-business swap data from broker reports to help make up its Forward Curves. Editors may exclude data that falls outside what is considered the normal range. Reports received after that time may be evaluated for market perspective but will not be automatically included in the forward market range.

The cut-off for data submissions is 7:00 p.m. London time.

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