

GX EUROPEAN REFINED PRODUCTS MARKET ANALYSIS

The Big Picture

- · Brent: Late crude selloff signals jittery mood
- · Gasoline: F5 leads rise in Fbob Oct trade volumes
- · Jet: NWE barge MOC volumes up, cargoes down
- · Diesel: NWE cargo liqiudity at 8-month high; natgas costs test refinery models

Eurobob Oxy Gasoline NWE FOB Barges 830.50 +7.25
EUROBOBC □

Jet Fuel NWE CIF Cargoes 741.00 -9.00
JETNWEC □

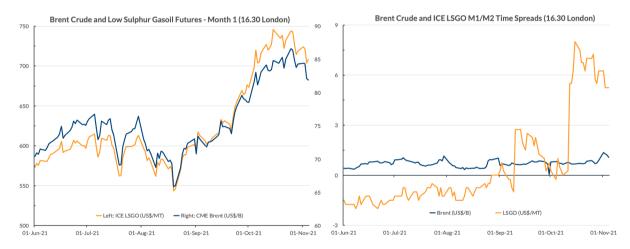
ULSD NWE CIF Cargoes 713.50 -14.00
ULSDNWEC □

Naphtha NWE CIF Cargoes 745.25 -8.50

NAPNWE □

Late crude selloff signals jittery mood, volatility lies ahead; OPEC+ holds steady

A sharp selloff in crude prices around Thursday's close in Europe on reports of higher Saudi production brought a distinctly bearish tinge to proceedings which had been missing in recent weeks amid the bullish global energy price shock.



Oil markets had previously bounced back from last Thursday's dip after the transient reactions to US inventory builds and Iranian negotiations picking up faded away relatively quickly. Prompt CME Brent futures were trading tentatively close to the \$84.50/b mark from last Friday to Tuesday this week. But soon after, a set of bearish EIA data and new developments on the Iranian front had the European crude benchmark fall to \$82.12/b on Wednesday at 16.30 London time.

Prices took a breather on 2 November after the API reported a 3.6mn bbl build in US crude oil stocks for the week ended 29 October, but then fell the next day as the EIA highlighted a 3.29mn bbl crude oil inventory build.

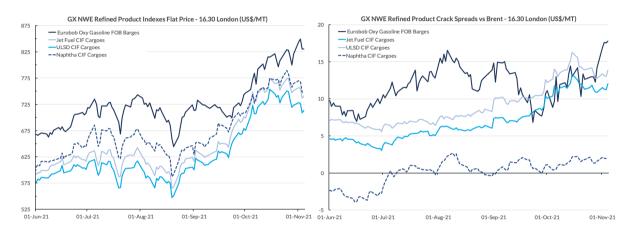
Prices were – and still are – supported by the unavoidable truth that the oil markets remain undersupplied. While Iranian oil might provide relief down the curve (29 November has been decided as the date of the resumption of talks on bringing the Iran agreement back to life), the reality of supply and demand dynamics is supportive of high prices. In preparation for today's OPEC meeting, the OPEC+ Joint Technical Committee had met on 28 October and reviewed the plan for December production. The conclusion, as expected, was to keep the increase in production quotas steady at 400,000 b/d as previously agreed – despite bids from many consumer countries' leaders to increase production in an attempt to keep prices in check.

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Prices have also received a short-term boost in the past week, with outages in Libya and Nigeria noticeably restricting supply. But OPEC remains entrenched in its position – not without reason. While relief on the front end of the curve could keep prices in check, the coalition is aware that the balance is frail. According to the IEA, crude supply might catch up with demand sometime in early 2022 were OPEC+ to remain on its current course in terms of planned production increases. With the threat of another wave of Covid-19 infections this winter looming and fears of social restrictions growing, it is understandable the producers wish to remain prudent. The Joint Technical Committee's global oil supply deficit was assessed at 300,000 b/d for 4Q2021, down from the initial 1.1mn b/d estimate.

The latest selloff, however, indicates markets remain jittery and suggests volatility should be expected.

On Thursday, 4 November at 16.30 London time, the front-month Brent contract was last reported trading at \$81.90/b, down \$1.90/b on the week. In Northwest Europe, ICE Low-Sulphur Gasoil futures had last traded at \$708.50/MT, up \$4.50/MT day on day but down \$5.75/MT on the week. The Eurobob gasoline November swap was heard around \$745.38/MT, down \$2.66/MT on the day and down \$35.46/MT on the week (against the November swap assessed on 28 October, as the contracts roll on the first of the month).



Middle distillates remained supported by lower inventories and firm demand. Crack spreads for the key transportation fuels held around the US\$12/b mark for jet cargoes and closer to US\$14/b for diesel. The broader distillate fundamentals, encapsulated by the \$5.25/MT backwardation over the ICE LSGO M1-M2 timespread, remain overwhelmingly bullish. The return of transatlantic travel is expected to bolster crude oil consumption and high natural gas prices remain a headwind to diesel production for European refiners (see more below).

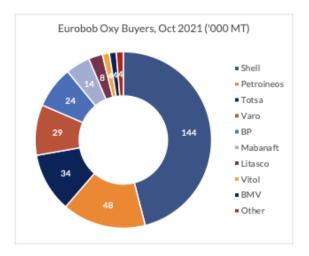
Light ends continue to benefit from the current market dynamics. Gasoline stocks in the US are standing at a 4-year low, while retail prices skyrocket. Despite the summer driving season being well past us, Eurobob Oxy Barge cracks versus front month CME Brent futures just reached \$17.61/b on 2 November, their highest since the start of the pandemic. Naphtha prices have remained relatively steady over the past few weeks, with continued demand for the petrochemical feedstock. LPG remains well out of the cracking pool, with the propane-naphtha spread back at close to \$90/MT on 3 November after a momentary dip. Butane prices also experienced a boost this week, reaching 108.9% of naphtha earlier this week. Equinor, a main supplied of LPG for the Northwest European market, has diverted a sizeable portion of its supply to the natural gas stream to capture more revenue, which has added some more pressure on supply in Europe.

Gasoline: E5 leads rise in Ebob spot Oct trade volumes; WAF demand bolsters 95 Ron sales

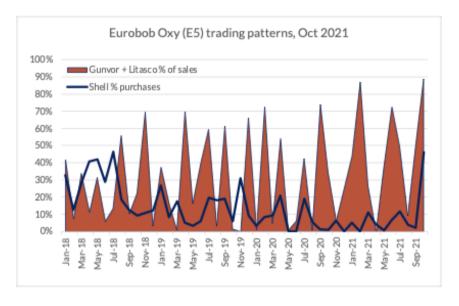
Traded volumes in the all-day spot Eurobob gasoline barge market in October rose from the previous month, but remained below year-earlier levels. A total of 363,000 MT changed hands, up from 299,400 MT in September. Increased trading of Eurobob Oxy (E5) barges masked a steep drop in Eurobob Non-Oxy (E10) buying interest. Volumes on the latter have fallen for four months in a row, declining last month to their lowest monthly total since April 2020.

Oxy gasoline crack spreads to crude firmed from September, averaging around +\$12.05/bl, up from +\$11.43/bl. On an outright basis, GX Eurobob Oxy averaged \$799/MT last month and the Non-Oxy grade \$811.50/MT. GX Eurobob Non-Oxy (E10) averaged its highest monthly premium to the Oxy grade of the year so far, rising to +\$12.50/MT, up from +\$8.95/MT in September.





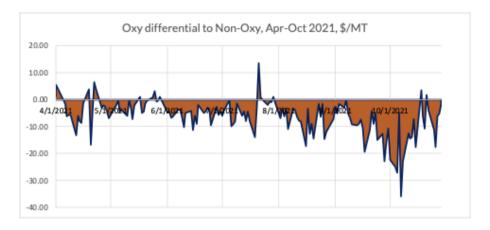
Eurobob Oxy activity was dominated by strong buying interest from Shell and Petroineos and enthusiastic selling interest from Gunvor. Shell's purchases soared to their highest since March 2018, at 144,000 MT. The major's 46% share of purchases was the highest since July 2018. Petroineos purchases rose 12-fold from September to 48,000 MT – their highest since at least 2017. Totsa's purchases hit double-digit figures for the first time since June, while Litasco's, ExxonMobil's and Gunvor's purchases all fell to four-month lows.



Selling interest was highly concentrated last month: Gunvor accounted for two-thirds of sales. Adding in Litasco's share brought the two companies to a combined 89%. Litasco's sales doubled from September to their highest since May, while Varo's 10,000 MT was the highest since May 2020.

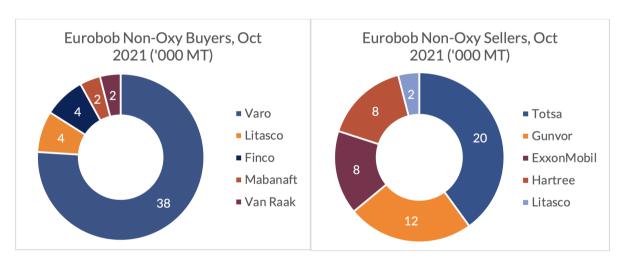


On the Non-Oxy grade, the pool of buyers was broadly similar to September. Barge loading delays contributed to lower trading liquidity, which in turn manifested itself in large swings in the Oxy differential to Non-Oxy:



While Varo retained its customary top buying spot, volumes slumped to 38,000 MT – the least Varo has purchased in a month since May 2020. BP and BMV both stepped back from the buy side last month, while Litasco's and Mabanaft's purchases fell month-on-month.

Hartree re-entered the Non-Oxy market for the first time since January, selling 8,000 MT in October. Otherwise on the sell side, ExxonMobil's volumes fell to a four-month low, while Totsa's declined to their lowest since January.



Meanwhile, in the market for 95 Ron gasoline barges, traded volumes picked up significantly in the end-of-day trading window in late October. Trading interest in the window for this gasoline grade is typically associated with NWE gasoline export interest to Nigeria. A total of $55,000 \, \text{MT}$ of $95 \, \text{Ron}$ gasoline traded in the barge market window in September, and this rose to $77,000 \, \text{MT}$ last month. Tanker tracker Kpler is forecasting a rise in European gasoline inflows into West Africa: arrivals in the week commencing 1 November are forecast at $751,000 \, \text{b/d}$ – the highest single-week figure if realised. November totals are forecast to hit a four-month high of $463,000 \, \text{b/d}$.

Jet Fuel: NWE barge MOC volumes up, cargoes down in Oct; Europe air traffic at new highs

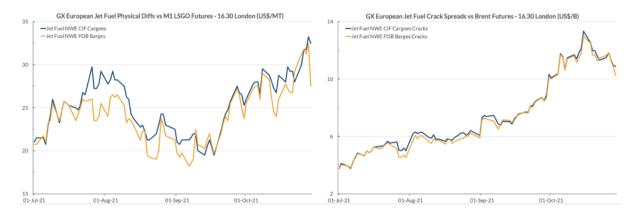
Overview: Spot trading activity in Northwest Europe's end-of-day pricing window for jet fuel saw growth on barges in October, while cargo volumes fell for a third-consecutive month. European air traffic recovered to within 20% of pre-pandemic levels.

And the market prepared itself for the reopening of transatlantic travel between the US and Europe from 8 November, after the Biden administration confirmed new entry rules based on individual risk around Covid-19 vaccination and testing status in a long-awaited rollback of the Trump-era country blanket bans.

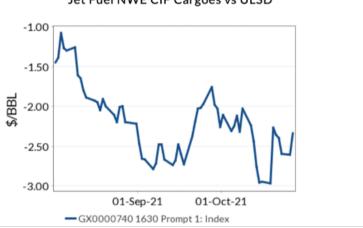


On FOB NWE (basis FARAG) Barges, concluded MOC window deal volumes totalled 35,000 MT last month, up from 15,000 MT in September and the most since July. CIF NWE Cargo volumes fell to 270,000 MT from 390,000 MT, the lowest since May.

The jet fuel flat price added almost US\$100/MT or more than 15% during October, as the global energy price crisis continued to drive more oil demand from natural gas users and sent Brent crude rallying by more than US\$5/b to almost US\$84/b.



Discipline on the part of oil cartel OPEC+ not to expand its production agreement (despite calls from the White House to do so) kept oil supply tight, while weekly reports of further drawdowns in US inventories also provided ongoing support. Jet physical differentials vs ICE LSGO futures, which more closely track the specific fundamentals jet fuel, surged to more than US\$33/MT over the front-month contract from US\$25.50/MT – the highest since GX started publishing its index in September 2020. Improving aviation demand in Asia bolstered jet cash premiums in Singapore and other regions reacted to keep pace. Jet's relative weakness versus diesel in Europe would have continued to incentivise refiners to maximise distillate production over kerosene.



Jet Fuel NWE CIF Cargoes vs ULSD

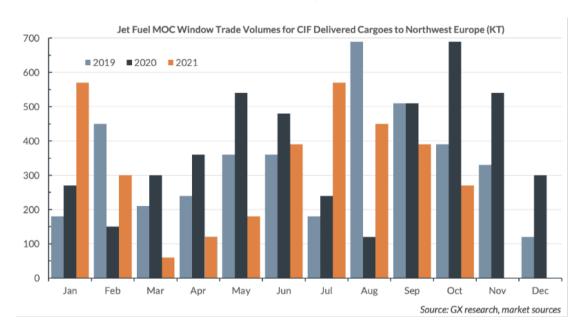
Jet fuel demand for OECD Europe totalled 1.091mn b/d in October, according to OilX analysts, up slightly on September's 1.084 mn b/d – which was itself revised higher from an earlier estimate of 1.008mn b/d). Demand has now held above the 1mn b/d mark for three consecutive months for the first time since the pandemic struck in March 2020. However, demand is projected to fall to 948,000 b/d in November on lower seasonal consumption patterns. Lower demand and an uptick in refinery output will contribute to a narrowing supply & demand balance deficit, with the market currently seen net-long by 19,000 b/d in November versus net-short by 139,000 b/d in October.

European air traffic climbed to some 81% of 2019 levels by 31 October, up by around 9% over the month, according to Eurocontrol. The seasonal decline in traffic volumes seen in recent weeks was slower than for the last normal year before the pandemic, suggesting overall appetite for air travel in and out of the region was holding up relatively well. The total number of flights on the last day of October was 5,240 less than the same day in 2019, compared to 8,469 fewer on the first day of the month.

The Biden administration, after much delay, released details of its new non-essential travel policy. From 8 November, vaccinated travellers from several dozen countries, including the UK, most of continental Europe, China, and India, will be allowed entry into

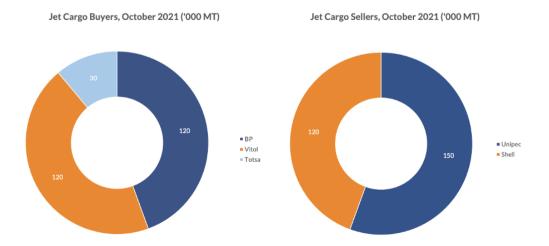


the US if they show proof of a negative Covid-19 test within three days of travel. The unvaccinated must show a negative test within one day of travel. Children under 18 won't need to be fully vaccinated but will still have to return a negative test to travel. News of a shift from the Trump-era travel ban was first signalled by the White House on 20 September, when world leaders gathered in New York for the UN General Assembly, but the relaxation date of 8 November was not announced until 15 October. Flight bookings to the US jumped after each announcement and now stand at more than 70% of pre-pandemic levels, industry title *Travel Weekly* reported, citing ticketing data from research company Forward Keys. "This data yet again demonstrates the enormous pent-up demand for travel," Juan Gómez, head of market intelligence at ForwardKeys, said. Other expectations, however, are more moderate. "Anyone hoping for an explosion of international inbound visitors will be disappointed," Henry Harteveldt, a travel-industry analyst in San Francisco, told the *Associated Press*. "Nov 8 will be the start of the international travel recovery in the US, but I don't believe we see full recovery until 2023 at the earliest." One Energy Aspects analyst expects the impact of the rule change could boost oil consumptions by 200,000 b/d this quarter, while others see the demand gains in excess of 250,000 b/d according to estimates published by Bloomberg.



Jet CIF NWE Cargoes

- **Prices:** GX Jet CIF NWE Cargoes averaged US\$751.44/MT in October, up from US\$651.67/MT in September; while the physical differential to M1 LSGO futures averaged +US\$28.98/MT, up from +US\$22.61/MT. The product crack spread versus Brent futures rose to US\$11.53/b from US\$7.73/b.
- MOC Volume: October's traded volume totalled 270,000 MT, down from 390,000 MT the previous month. This compared to the 690,00 MT traded in Oct 2020 and 390,000 in Oct 2019.

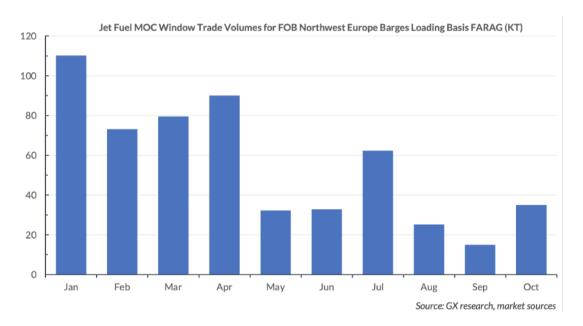


• Sellers and Buyers: Shell returned on the sell side for the first time since February, offloading four cargoes (120,000 MT) in as many days. But Unipec retained its place as the largest seller, with five cargo sales (150,000 MT) bookending the



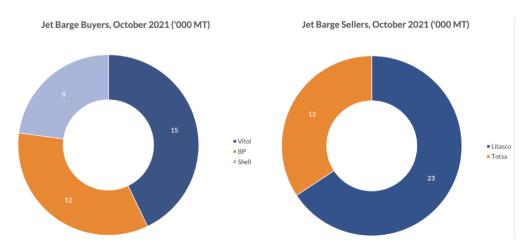
month. BP and Vitol both purchased four cargoes (120,000 MT apiece), while Totsa was also on the buy-side for one cargo.

- **So Far This Year In The MOC**: The traded window volume for cargoes has totalled 3.30mn MT during January-October, compared to 3.66mn MT over the same period in 2020 and 3.57mn MT in 2019.
- 2021 Sellers: Unipec remains well ahead of the pack, with window sales over Jan-Oct standing at 2.31mn MT, followed by Vitol (390,000 MT), Totsa (240,000 MT), Shell (270,000 MT) and BP (90,000 MT).
- 2021 Buyers: Shell remained the single-largest buyer so far in 2021 with 1.38mn MT, despite no purchases last month, followed by Vitol (780,000 MT), BP (630,000 MT), Totsa (300,000 MT), Glencore (120,000 MT) and Unipec (90,000 MT).
- Locations: France's Le Havre and the Netherland's Rotterdam the jet fuel market's two so-called "par ports" in NWE remain the only basis delivery locations seen in 2021. In October, Rotterdam deliveries outnumbered those to Le Havre (150,000 MT vs 120,000 MT). So far this year, Le Havre accounts for a total of 1.92mn MT versus 1.38mn MT for Rotterdam.
- Context: October's trades were scheduled to be delivered over the course of the month and into November. Seaborne cargo imports into NWE from East of Suez rose 5% in October to 1mn MT, according to Kpler tanker tracking data. In a snapshot taken at 1130 GMT on 3 November, this month's arrivals were so far estimated at 330,000 MT.z



Jet FOB NWE (FARAG) Barges:

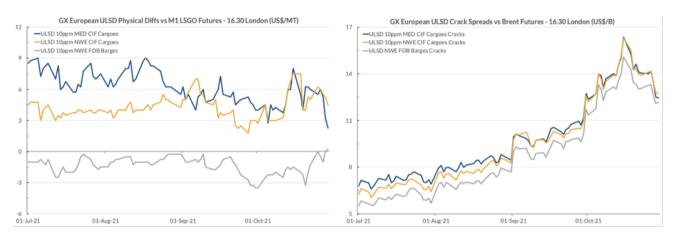
- **Prices:** GX Jet FOB NWE Barges averaged US\$750.23/MT in October, up from US\$650.99/MT in September; while the physical differential to M1 LSGO futures averaged +US\$27.78/MT, up from +US\$21.93/MT. The product crack spread versus Brent futures rose to US\$11.37/b from US\$7.64/b.
- MOC Volume: October's traded volume totalled 35,000 MT across nine barges sized between 3,000-4,000 MT. Volumes are up from last month's 2021 low of 15,000 MT; but remain well below the peak recorded in January.



• Sellers and Buyers: The month's sellers included Litasco (23,000 MT up from 8,000 MT last month) and Totsa (12,000 MT up from 4,000 MT); while the buyers are led by Vitol (15,000 MT up from 8,000 MT), Shell (8,000 MT up from 4,000 MT) and BP returns as a buyer after a month's absence (12,000 MT).

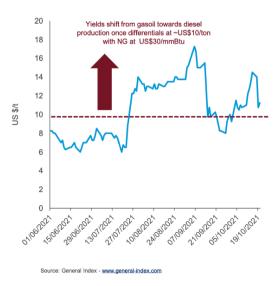
Diesel: NWE cargo MOC trade surges to 8-month high; natgas costs test refinery models

Overview: The volume of CIF delivered cargoes for the MOC window in North West Europe surged to an eight-month high in October, satisfying a diverse pool of buying interest across the region. Spot window trading activity for ULSD 10ppm CIF NWE Cargoes totalled 420,000 MT, more than double the 180,000 MT recorded in September. Deliveries were slated for Amsterdam, Hamburg, Le Havre, Rouen, Londonderry and Thames – the widest range of locations seen in a single month this year. Activity in the Mediterranean window slumped to a solitary cargo, while traded volumes on barges fell too. Backwardation across the dieselbased ICE LSGO futures widened sharply as the impact of additional demand as well as a squeeze on production due to the natural gas price shock continued to be felt.



Crack spreads for the main ULSD benchmarks peaked above US\$16/b mid-October, before falling back. Energy Aspects described diesel as in the grip of a "spiralling supply crunch" as natural gas prices impact refinery output and the curtailment of Chinese exports squeezes the global distillate pool. "European refiners, pinched by record gas prices, are sacrificing diesel yields to cut sour crude intake," EA analysts wrote in a 22 October report.

NWE Diesel - Gasoil differential (US\$/ton)



Wood Mackenzie said in a report to clients that strong diesel cracks supported by "peak seasonal demand and tight regional stocks" are keeping the diesel-gasoil spread wide and, despite higher natural gas costs, so far limiting the widespread closure of diesel hydrocracking and hydrotreatment capacity in NWE. These units use hydrogen - typically produced in methane steam reformers using natural gas - in the desulphurisation process to satisfy product quality specifications, such as the 'ultra-low' 10ppm grade for diesel. But only "20% of monitored diesel hydrocracking and hydrotreatment capacity is currently offline across NWE," according to Wood Mackenzie's European Refinery Monitoring Service. WoodMac used GX data to indicate a shift toward diesel production at recent price levels (see chart). However, it added: "Diesel's premium to gasoil in NWE is likely to narrow in November on higher distillate imports from the Middle East." An uptick in gasoil demand for off-grid heating purposes in the colder winter months could also narrow the spread. In those circumstances, refiners will likely be watching the diesel-gasoil spread to gauge the profitability of the hydrogen-dependent units going forward.

Data from analysts OilX showed OECD Europe demand for distillates (diesel and gasoil combined) reached 6.497mn b/d in October, down from 6.6mn b/d in September (which had itself been revised up on an earlier estimate of 6.467mn b/d). Demand surpassed Oct 2020 levels of 6.261mn b/d but remained below the five-year average of 6.633mn b/d. Regional inventories fell to

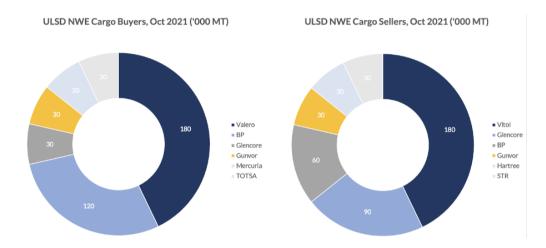


436.700mn bl from 439.015mn bl. Refinery output totalled 5.211mn b/d on a yield of 40.2%, up from 5.092mn b/d on a yield of 39.7%.

In trade flows, NWE's diesel seaborne cargo imports from the Baltic and Russia rose to $1.812\,\mathrm{MT}$ in October from $1.666\,\mathrm{MT}$ in September, according to Kpler tanker tracking. East of Suez arrivals jumped to $966,000\,\mathrm{MT}$ from $466,000\,\mathrm{MT}$. Imports from the United States fell to $134,000\,\mathrm{MT}$ from $175,000\,\mathrm{MT}$. In the Mediterranean Basin, imports from the Black Sea rose to $292,000\,\mathrm{MT}$ from $166,000\,\mathrm{MT}$. Arrivals from East of Suez rose to $993,000\,\mathrm{MT}$ from $902,000\,\mathrm{MT}$. There were no imports from the US, compared to $24,000\,\mathrm{MT}$ the previous month.

ULSD CIF NWE Cargoes

• **Prices:** GX ULSD CIF NWE Cargoes averaged US\$727.23/MT in October, up from US\$633.20/MT in September. The physical differential to M1 LSGO futures averaged +US\$4.78/MT, up from +US\$4.15/MT. The product crack spread versus Brent futures rose to US\$13.90/b from US\$10.13/b.



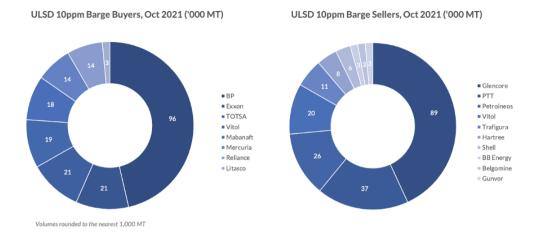
- MOC Volume: A total of 420,000 MT across 14 cargoes traded in the NWE end-of-day pricing window in October, up from 180,000 MT in September and matching the 2021 high recorded in February.
- Buyers and Sellers: Valero jumped to the top of the buyer roster with 180,000 MT bought across six cargoes. Regular
 buyer BP purchased 120,000 MT, with one cargo apiece going to Glencore, Gunvor, Mercuria and Totsa. Vitol remained
 the top seller, doubling its sales this month to 180,000 MT; Glencore tripled its sales to 90,000 MT; and BP doubled its
 monthly volume to 60,000 MT. Gunvor, Hartree and Shell each sold one cargo.
- Location: Of the 14 cargoes, six were sold basis Le Havre, three basis Hamburg and two basis Amsterdam. Rouen was the basis for a second sale in as many months. Thames returned for the first time since March. And Londonderry appeared for the first time this year.
- So Far This Year in the MOC: The cumulative traded volume this year now stands at 2.52mn MT. BP is the largest single buyer on 1.05mn MT, followed by Glencore, Totsa and Valero who have each purchased 300,000 MT. Litasco has bought 210,000 MT, while Mabanaft, Mercuria and Trafigura have each bought 90,000 MT. Gunvor has purchased 60,000 MT and BB Energy 30,000 MT. On the sell side, there is no runaway participant. Glencore tops the sales at 630,000 MT, followed by Gunvor (450,000 MT), Vitol (420,000 MT), BP (390,000 MT), Mercuria (180,000 MT), Litasco (120,000 MT), Trafigura (120,000 MT), Unipec (90,000 MT), Hartree (60,000 MT), Mabanaft (30,000 MT) and Shell (30,000 MT).

ULSD FOB NWE Barges

- **Prices:** GX ULSD FOB NWE Barges averaged US\$720.75/MT in October, up from US\$627.55/MT in September. The physical differential to M1 LSGO futures averaged -US\$1.70/b, down from -US\$1.51/MT. The product crack spread versus Brent futures rose to US\$13.03/b from +US\$9.37/b.
- Futures: The discounted physical differential pricing to the closely related ICE LSGO futures now comes against a backdrop of bullish structural dynamics. The Month 1 LSGO futures contract averaged a premium (backwardation) over Month 2 of +US\$4.44/MT in October, up from +S\$1.09/MT in September and compared to a discount (contango) of -US\$0.85/MT in August.
- **Stocks:** Diesel/gasoil stocks across NWE were estimated by analysts OilX at 262mn bl for October, broadly stable month on month, based on a snapshot taken at 1215 GMT on 3 November. Volumes were above the five-year average of



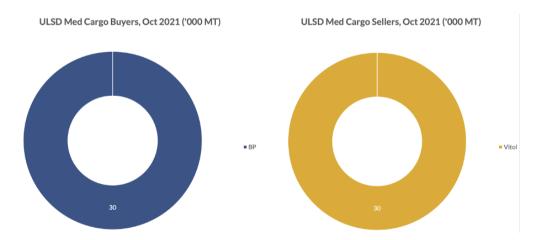
259.111mn bl and almost 8.5% below October 2020 levels. Early OilX predictions are for stocks to fall to around 260mn bl in November.



- MOC Volume: Deals done in the end-of-day pricing window for 10ppm barges totalled 206,200 MT in October, down from 390,140 MT in September.
- Buyers: BP regained its position as the top buyer, purchasing 95,700 MT (up from 12,300 MT), while Vitol's purchases fell to 19,250 MT, less than 10% of what it bought last month. The other buyers included Exxon (21,000 MT), Totsa (21,000 MT), Mabanaft (17,700 MT), Mercuria (14,350 MT), Reliance (14,200 MT) and Litasco (3,000 MT).
- Sellers: Glencore retained its position as the top seller, offloading 88,950 MT, down from 136,550 MT last month. Totsa didn't sell any barges, breaking a sell-side presence stretching back to May. Other sellers included PTT (36,700 MT), Petroineos (25,900 MT), Vitol (20,200 MT), Trafigura (11,250 MT), Hartree (8,200 MT), Shell (6,000 MT), BB Energy (3,000 MT), Belgomine 3,000 MT) and Gunvor (3,000 MT).

ULSD CIF MED Cargoes

• Prices: GX ULSD CIF Med Cargoes averaged US\$727.22/MT in October, up from US\$634.30/MT in September. The physical differential to M1 LSGO futures averaged +US\$4.88/MT in October, down from +US\$5.24/MT. The product crack spread versus Brent futures rose to US\$13.91/b from +US\$10.27/b.



- MOC Volume: Only one 30,000 MT cargo traded in the Mediterranean window in October, 25% of last month's volume. October matches July and February as 2021 months with just a solitary traded cargo.
- Buyers and Sellers: Vitol sold a cargo to BP, basis Koper, Slovenia.
- So Far This Year in the MOC: Cumulative traded volumes for 2021 total 630,000 MT. BP is the top buyer on 180,000 MT, followed by Glencore and Vitol with 120,000 MT apiece and Shell on 60,000 MT. One cargo each has been bought by Exxon, Gunvor, Litasco, Repsol and Totsa. Among the sellers, Repsol has provided one-third of all sales (210,000 MT). Petroineos has sold 90,000 MT, with 60,000 MT offloaded by each Cepsa, Gunvor and Vitol. One cargo apiece has been sold by Glencore, Saras and Shell.



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