

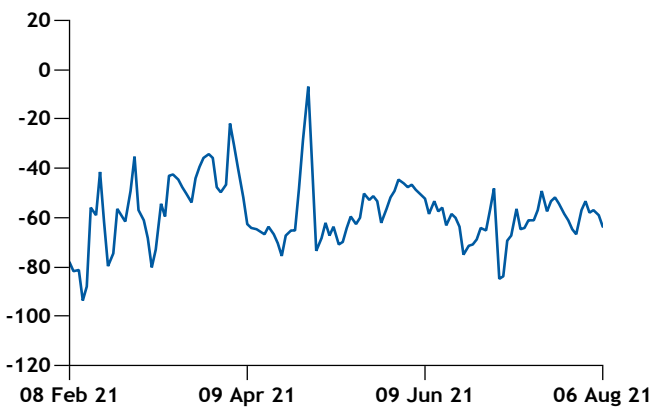
## OVERVIEW

Asia-Pacific: Prices edged higher

Europe: Butane tightness eased

North America: Propane rose.

Propane: Mt Belvieu non-LST diff to cif ARA \$/t



Propane diff to naphtha, cif ARA \$/t



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## PRICES

| Key prices                                     |                    | \$/t                |                   |         |
|--|--------------------|---------------------|-------------------|---------|
|  | Mid                | ±                   |                   |         |
| Propane cif ARA (large cargoes)                | 624.25             | +7.25               |                   |         |
| Butane cif ARA (large cargoes)                 | 641.25             | -16.75              |                   |         |
| daf Brest propane                              | 635.000            |                     |                   |         |
| daf Brest propane-butane mix                   | 626.000            | +0.500              |                   |         |
| Propane Argus Middle East Index                | 661.00             | +7.00               |                   |         |
| Butane Argus Middle East Index                 | 657.00             | +9.00               |                   |         |
| Propane Argus Far East Index™ (AFEI™)          | 692.00             | +6.00               |                   |         |
| AFEI™ diff to Propane M1                       | 1.00               | -0.50               |                   |         |
| Butane Argus Far East Index™ (AFEI™)           | 688.00             | +8.00               |                   |         |
| AFEI™ propane calculated netback USGC          | 577.60             | +4.00               |                   |         |
| Propane Argus Ningbo Index                     | 693.50             | +6.50               |                   |         |
| Butane Argus Ningbo Index                      | 689.50             | +8.50               |                   |         |
| Propane Argus South China Index                | 696.00             | +7.50               |                   |         |
| Butane Argus South China Index                 | 692.00             | +9.50               |                   |         |
| Pearl River Delta Index (Yn/t)                 | 4,698              | +5                  |                   |         |
| Americas: Propane Mont Belvieu pipeline fob    |                    |                     |                   |         |
|  | VWA                | ±                   | Low High ±        |         |
| Enterprise                                     | 107.972            | +0.500              | 107.250 - 108.750 | +0.500  |
| LST  | 109.825            | +0.625              | 107.875 - 111.000 | +1.750  |
| fob USGC, diff to Mont Belvieu                 |                    |                     | 4.500 - 5.250     |         |
| USGC export fob \$/t                           |                    | +3.9                | 597.4 - 601.3     | +3.9    |
| US propane del Japan (AUSJ) \$/t               |                    | +6.5                | 684.0 - 688.0     | +6.5    |
| US propane del ARA (AUSE) \$/t                 |                    | +7.0                | 644.0 - 648.0     | +7.0    |
| International comparisons (Aug)                |                    | \$/t                |                   |         |
|  | Propane            |                     | Butane            |         |
| Argus North Sea Index™ (ANSI™)                 | 608.00             |                     | 632.00            |         |
| Sonatrach fob Bethioua                         | 620.00             |                     | 650.00            |         |
| Saudi Aramco                                   | 660.00             |                     | 655.00            |         |
| KPC (Kuwait)                                   | 660.00             |                     | 655.00            |         |
| Propane AFEI™ Far East to Mideast Gulf netback | 649.50             |                     | 645.50            |         |
| Regional assessments                           |                    | \$/t                |                   |         |
| Propane  | Mt Belvieu         | NW Europe           | AFEI              |         |
| Physical spot                                  | 562.75             | 624.25              | 692.00            |         |
| Aug  | 570.50             | 625.50              | 690.50            |         |
| Sep  | 573.00             | 625.50              | 689.50            |         |
| Oct  | 571.25             | 624.50              | 688.75            |         |
| Argus arbitrage                                |                    | \$/t                |                   |         |
| Propane  | NWE diff to Mt Bel | AFEI diff to Mt Bel | AFEI diff to NWE  |         |
| Physical spot                                  | -61.50             | -129.25             | -67.75            |         |
| Aug  | -55.00             | -120.00             | -65.00            |         |
| Sep  | -52.50             | -116.50             | -64.00            |         |
| Oct  | -53.25             | -117.50             | -64.25            |         |
| Naphtha  |                    | \$/t                |                   |         |
|  | ±                  | Bid                 | Ask               |         |
| cif northwest Europe                           | -3.25              | 662.00              | 663.00            | -3.25   |
| cif Mediterranean                              | -3.00              | 655.50              | 656.50            | -3.00   |
| cfr Japan                                      | +18.25             | 671.50              | 676.50            | +18.25  |
| fob Mideast Gulf                               | +15.900            | 650.15              | 655.15            | +15.900 |
| LPG freight                                    |                    | \$/t                |                   |         |
| VLGC Mideast Gulf-Japan                        |                    |                     | 42.50             |         |
| VLGC Houston-Chiba                             |                    |                     | 88.00             |         |
| VLGC Houston-Flushing                          |                    |                     | 48.00             |         |
| 4000t Tees-Mohammedia butane                   |                    |                     | 69.00             |         |
| 1,800t Tees-Lisbon butane                      |                    |                     | 82.00             |         |
| 1,800t Tees-ARA                                |                    |                     | 39.00             |         |

## NORTHWEST EUROPE

### Large cargo

Gunvor again bid for a dated ToT cargo over 27-31 August – which now marks the far end of the 10-25 day's forward Argus assessment timeframe. It bid first at 50pc \$616/t and 50pc August -\$5/t and last up at \$621/t and August -\$4/t. With August cif ARA assessed at \$625.50/t, the final bid is worth \$621.25/t. Large cargo value is supported to a \$7.25/t gain to \$624.25/t. Versus August swaps, physical value has gained \$2.75/t to sit at a mild \$1.25/t discount. It was expected that as later-August dates came under assessment cash discounts could be eroded. There is stronger demand towards the end of the month, and early-September which will begin to be under assessment on Monday, than in mid-August where there was a dearth of buying.

The large cargo butane finally saw some length emerge, easing tightness. Equinor offered 7,000t of normal butane cif Flushing, Antwerp or Ternuezen over 16-20 August on the vessel Zoe Schulte or substitute first at 50pc \$650/t and 50pc 100pc of August naphtha, and last down at \$645/t and 98.50pc of August naphtha. With August naphtha assessed at \$653.50/t, the offer is worth \$644.35/t. Large cargo butane value is assessed at \$641.25/t cif ARA, down \$16.75/t outright. No buying emerged from Vitol who had bid the same 15-19 August cif Antwerp on Thursday at a fixed price high of \$655/t.

A fire at Russian state-controlled Gazprom's Novy Uren-goy condensate treatment plant, that led to the suspension of the Surgut gas processing plant (GPP), will negatively affect LPG exports this month. Any longer and it would likely see increased demand for ARA railcars from Poland to plug gaps in railed and seaborne Russian supply. Last year, due to steady recent reductions in Russian LPG exports, Polish demand saw unusually high railcar premiums to large cargoes in Spring. Reductions in Russian supply would not necessarily need to last until winter to see compensatory increased demand at ARA terminals.

### New ANSI freight for 2020-21

Following consultation with the shipping industry, the freight rate used to calculate the Argus North Sea Index (ANSI) for October 2020-September 2021 will be set at \$21/t – up by \$0.50/t compared with 2019-20. The freight rate is based on average time-charter rates for a 20,000t cargo on a one-load/two-port discharge basis for routes Braefoot Bay, Karsto or Mongstad terminals to Antwerp, Flushing or Terneuzen.

| Northwest Europe and Mediterranean          |        |        |          | \$/t    |     |          |
|---|--------|--------|----------|---------|-----|----------|
|   | ±      | Bid    | Ask      | ±       |     |          |
| <b>Propane</b>                              |        |        |          |         |     |          |
| cif ARA (large cargoes)                     | +7.25  | 621.25 | - 627.25 | +7.25   |     |          |
| fob northwest Europe (small)                | +7.25  | 623.25 | - 629.25 | +7.25   |     |          |
| cif ARA (small)                             | +7.25  | 662.25 | - 668.25 | +7.25   |     |          |
| fob ARA (barge)                             | -22.00 | 561.00 | - 567.00 | -22.00  |     |          |
| fca ARA (rail)                              | -22.00 | 561.00 | - 567.00 | -22.00  |     |          |
| cif Mediterranean (large)                   | +7.25  | 617.25 | - 623.25 | +7.25   |     |          |
| fob Mediterranean (small)                   |        | 626.00 | - 632.00 |         |     |          |
| fca Mediterranean (rail)                    |        | 630.00 | - 636.00 |         |     |          |
| <b>Propane averages (Aug)</b>               |        |        |          | Price   | ±   |          |
| cif ARA (large cargo)                       |        |        | 617.650  | +1.650  |     |          |
| fob ARA barge                               |        |        | 568.381  | -17.809 |     |          |
| <b>Butane</b>                               |        |        |          |         |     |          |
| cif ARA (large cargoes)                     | -16.75 | 638.25 | - 644.25 | -16.75  |     |          |
| fob northwest Europe (small)                | -2.00  | 647.00 | - 653.00 | -2.00   |     |          |
| cif ARA (small)                             | -16.25 | 619.75 | - 625.75 | -16.25  |     |          |
| fob ARA (barge)                             | -3.25  | 631.25 | - 637.25 | -3.25   |     |          |
| fca ARA (rail)                              | -3.25  | 646.25 | - 652.25 | -3.25   |     |          |
| cif Mediterranean (large)                   | -16.75 | 624.75 | - 630.75 | -16.75  |     |          |
| fob Mediterranean (small)                   | +11.00 | 660.00 | - 666.00 | +11.00  |     |          |
| <b>Butane averages (Aug)</b>                |        |        |          | Price   | ±   |          |
| cif ARA (large cargo)                       |        |        | 647.150  | -1.475  |     |          |
| fob ARA barge                               |        |        | 634.655  | -2.631  |     |          |
| <b>Ice Brent futures settlement</b>         |        |        |          |         |     |          |
| Oct   |        |        | 70.70    | -0.59   |     |          |
| Nov   |        |        | 70.32    | -0.48   |     |          |
| Dec   |        |        | 69.87    | -0.39   |     |          |
| <b>Competing fuels, 5 Aug</b>               |        |        |          | Bid     | Ask | ± 29 Jul |
| NWE small-scale LNG €/MWh                   |        | 46.45  | 46.75    | +1.65   |     |          |
| NWE small-scale LNG \$/t propane equivalent |        | 770.44 | 775.42   | +24.72  |     |          |

### Coasters

Erratic butane buying interest is making for skittish pricing relative to naphtha. Gasoline blending interest has provided some sellers with tantalising returns approaching naphtha parity on a delivered basis. But most are facing more reluctant buying from crackers looking to low 90s, or even sub-90 as a percentage of naphtha. Preventing prices from falling back is a lack of supply as soaring natural gas prices have led to reports that ARA refineries are burning LPG rather than gas, while one or two buyers are mopping up specific parcels, giving specifications and dates greater weight than usual.

Fob tonnes are supported by the lack of arbitrage from the US increasing interest in taking tonnes south. Although there were no public bids to follow up on interest earlier in the week, public bidding in the south helped to keep that

option interesting. But outright prices edged back in step with weaker naphtha.

Fob propane stuck to its small premium to large, lifting prices in tandem with gains in large cargoes, although spot discussion remains muted.

## ARA

Propane barge and railcar prices slid on Friday after 200t reportedly changed hands at \$564/t fca. Market sources continued to describe ample supplies in the region which is likely contributing to the pressure in prices, as well as a preference of butane as a feedstock for the petrochemical sector where current margins are favourable.

Nevertheless, activity on butane barges and railcars has remained elusive in recent weeks with no new fresh indications, although traders said product availability was low. As such the grade continued to maintain a percentage in the high 90s relative to naphtha.

## Reported done (\$/t)

\$564 fca ARA (propane railcars/trucks, 200t, loading 9-13 August)

## Assessment rationale

Propane ARA large cargo (PA0000400) was assessed on the basis of transactions, bids and offers, as and when these are identified in the market commentary, and other market data, in accordance with the methodology.

Butane ARA/UK large cargo (PA0000360) was assessed on the basis of transactions, bids and offers, as and when these are identified in the market commentary, and other market data, in accordance with the methodology.

| FSU/eastern Europe                               |       |        |          | \$/t   |  |
|--|-------|--------|----------|--------|--|
|  | ±     | Bid    | Ask      | ±      |  |
| <b>Daily</b>                                     |       |        |          |        |  |
| fob Black Sea propane-butane mix                 |       | 645.0  | - 665.0  | +5.0   |  |
| fob Black Sea propane                            | +5.0  | 630.0  | - 640.0  | +5.0   |  |
| fob Black Sea butane                             | +5.0  | 660.0  | - 670.0  | +5.0   |  |
| daf Brest propane-butane mix                     |       | 625.00 | - 627.00 | +1.00  |  |
| daf Brest propane-butane mix €/t                 | +1.00 | 529.00 | - 531.00 | +2.00  |  |
| daf Brest propane                                |       | 630.00 | - 640.00 |        |  |
| daf Brest propane €/t                            |       | 533.00 | - 542.00 | +1.00  |  |
| daf Brest differential to cif ARA (large)        |       | 11     |          |        |  |
| daf Ukraine propane-butane mix                   |       | 685.00 | - 720.00 | +20.00 |  |
| fot Burgas (Lukoil posted) propane-butane mix    |       | 758.0  |          | -1.0   |  |
| Argus Polish Domestic Index (APDI)               |       | 704    |          | -1.5   |  |
| <b>Weekly</b>                                    |       |        |          |        |  |
| daf Bekabad propane-butane mix                   |       | -      | -        | -      |  |
| daf Ukrainian-Romanian border propane-butane mix |       | -      | -        | -      |  |

## MEDITERRANEAN

The week ended with a revival of activity in the afternoon window as Petroineos sought 4,500t of butane meeting French specifications with 30pc olefin content loading on the Epic Manhattan over 13-15 August at Lavera. Petroineos initially bid \$659/t for the cargo to be EUR 1 certified or \$642/t without the certification. The firm then increased its proposals to \$660/t and \$643/t respectively, but sellers remained quiet and the buyer withdrew its bids. Butane coasters prices therefore climbed to \$663/t on a fob Lavera basis.

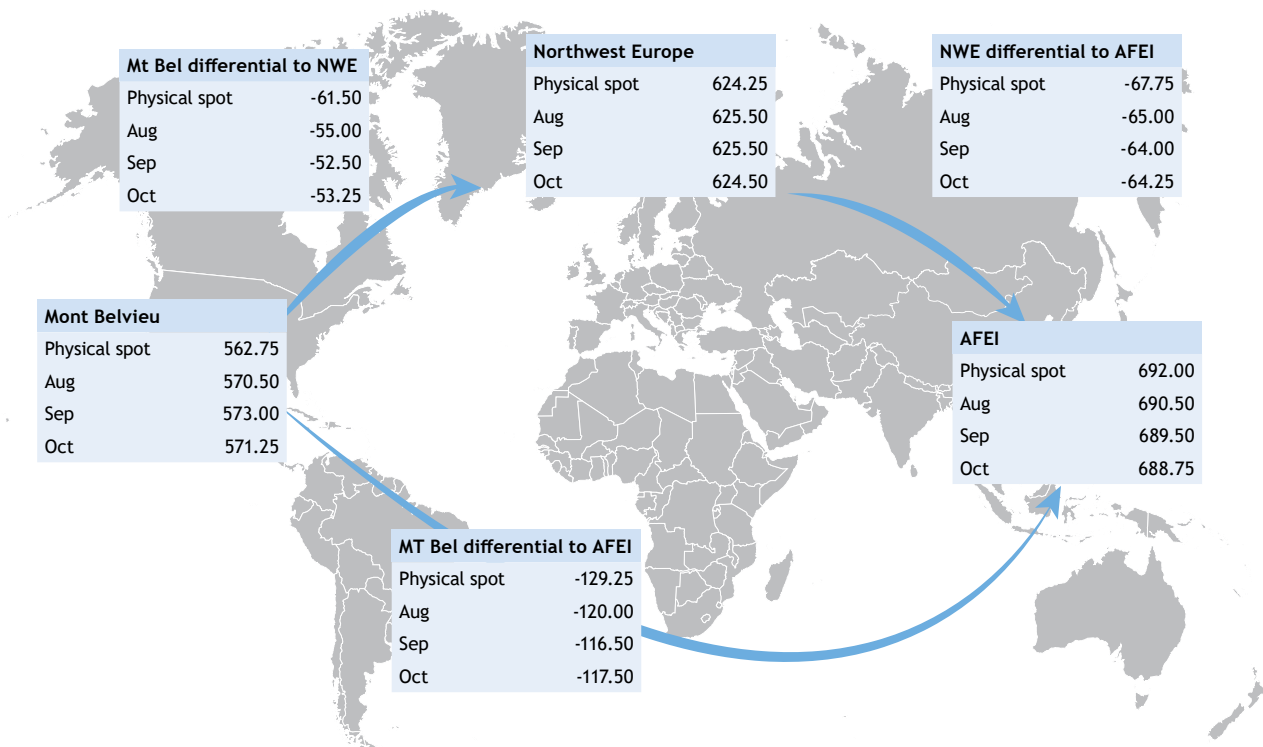
No discussions emerged on propane side which kept prices stagnant

| Current refinery outages |                     |                   |         |                      |                   |                         |
|--------------------------|---------------------|-------------------|---------|----------------------|-------------------|-------------------------|
| Refinery                 | Capacity ('000 b/d) | Company           | Country | Unit(s)              | Since             | Reason                  |
| Ashdod                   | 84                  | Paz Oil           | Israel  | Full                 | July              | Maintenance             |
| Midia                    | 100                 | Rompetrol (KMG)   | Romania | Full                 | 2 July            | Fire                    |
| Fawley                   | 270                 | ExxonMobil        | UK      | Partial              | 28 May            | Maintenance             |
| Leuna                    | 210                 | Total             | Germany | General              | 10 May            | Maintenance             |
| Coruna                   | 120                 | Repsol            | Spain   | Delayed coker, VDU   | April             | Economics               |
| Bilbao                   | 240                 | Petronor (Repsol) | Spain   | CDU                  | 30 November 2020  | Economics               |
| Donges                   | 222                 | TotalEnergies     | France  | Full                 | 24 November 2020  | Economics               |
| Bilbao                   | 240                 | Petronor (Repsol) | Spain   | Platforming unit     | 6 October 2020    | Maintenance             |
| Bilbao                   | 240                 | Petronor (Repsol) | Spain   | Naphtha hydrotreater | 5 September 2020  | Weak demand             |
| Antwerp                  | 115                 | Gunvor            | Belgium | General              | 26 May 2020       | Mothballed, loss-making |
| Grangemouth              | 210                 | Petroineos        | UK      | CDU and FCC          | Early in pandemic | Mothballed              |
| Bilbao                   | 240                 | Petronor (Repsol) | Spain   | Visbreaker           | 7 April 2020      | Unplanned maintenance   |

*Every effort has been made to verify information directly with appropriate company sources. Some information has been obtained from usually reliable sources, but cannot be officially confirmed with the refinery concerned. The list will be updated when new information becomes available.*

LPG arbitrage

\$/t



International swap prices (4:30pm London) \$/t

|                             | Propane cif ARA | Naphtha northwest Europe | Propane CP | Propane Argus Far East Index (AFEI) <sup>™</sup> | Propane Mont Belvieu LST (¢/USG) | Propane less naphtha | AFEI <sup>™</sup> less propane cif ARA | Mont Belvieu less Propane cif ARA | propane Mont Belvieu less AFEI <sup>™</sup> | AFEI <sup>™</sup> less propane CP |
|-----------------------------|-----------------|--------------------------|------------|--|----------------------------------|----------------------|--|-----------------------------------|---|-----------------------------------|
| M1 differential to physical | -1.25           | +9.00                    |            | +1.50  | -                                |                      |  |                                   |   |                                   |
| Aug 21                      | 625.50          | 653.50                   | na         | 690.50   | 109.375                          | -28.00               | +65.00                                 | -55.66                            | -120.66                                     | na                                |
| Sep 21                      | 625.50          | 641.50                   | 658.50     | 689.50   | 109.500                          | -16.00               | +64.00                                 | -55.00                            | -119.00                                     | +31.00                            |
| Oct 21                      | 624.50          | 632.50                   | 656.50     | 688.75   | 109.125                          | -8.00                | +64.25                                 | -55.96                            | -120.21                                     | +32.25                            |
| Nov 21                      | 623.50          | 624.50                   | 657.00     | 687.75   | 109.000                          | -1.00                | +64.25                                 | -55.61                            | -119.86                                     | +30.75                            |
| Dec 21                      | 620.00          | 617.00                   | 655.50     | 683.75   | 108.000                          | +3.00                | +63.75                                 | -57.32                            | -121.07                                     | +28.25                            |
| Jan 22                      | 617.00          | 612.00                   | 651.50     | 675.75   | 106.875                          | +5.00                | +58.75                                 | -60.18                            | -118.93                                     | +24.25                            |
| Feb 22                      | 603.00          | 604.50                   | 639.50     | 660.75   | 104.125                          | -1.50                | +57.75                                 | -60.51                            | -118.26                                     | +21.25                            |
| Mar 22                      | 571.00          | 597.00                   | 608.50     | 627.25   | 97.250                           | -26.00               | +56.25                                 | -64.33                            | -120.58                                     | +18.75                            |
| Apr 22                      | 539.00          | 589.00                   | 576.50     | 593.25   | 90.625                           | -50.00               | +54.25                                 | -66.84                            | -121.09                                     | +16.75                            |
| May 22                      | 519.50          | 581.00                   | 551.50     | 570.75   | 86.375                           | -61.50               | +51.25                                 | -69.49                            | -120.74                                     | +19.25                            |
| Jun 22                      | 506.50          | 575.25                   | 534.50     | 555.75   | 83.875                           | -68.75               | +49.25                                 | -69.51                            | -118.76                                     | +21.25                            |
| Jul 22                      | 501.50          | 570.25                   | 527.50     | 550.25   | 82.750                           | -68.75               | +48.75                                 | -70.37                            | -119.12                                     | +22.75                            |
| Aug 22                      | 500.50          | 565.25                   | 524.00     | 546.25   | 82.375                           | -64.75               | +45.75                                 | -71.33                            | -117.08                                     | +22.25                            |
| 3Q21                        | 625.50          | na                       | 658.50     | 690.00   | 109.438                          | na                   | +64.50                                 | -55.33                            | -119.83                                     | +31.50                            |
| 4Q21                        | 622.75          | 624.75                   | 656.25     | 686.75   | 108.708                          | -2.00                | +64.00                                 | -56.38                            | -120.38                                     | +30.50                            |
| 1Q22                        | 597.00          | 604.50                   | 633.25     | 654.50   | 102.750                          | -7.50                | +57.50                                 | -61.67                            | -119.17                                     | +21.25                            |
| 2Q22                        | 521.75          | 581.75                   | 554.25     | 573.25   | 86.958                           | -60.00               | +51.50                                 | -68.70                            | -120.20                                     | +19.00                            |
| 2022                        | 526.25          | 571.50                   | 556.00     | 582.00   | 88.030                           | -45.25               | +55.75                                 | -67.61                            | -123.36                                     | +26.00                            |

| Calculated LPG freight rates |          |       |
|------------------------------|----------|-------|
| Route                        | Size (t) | \$/t  |
| <b>VLGC</b>                  |          |       |
| Houston-Mohammedia           | 46,200   | 47.50 |
| Marcus Hook-Flushing         | 46,200   | 36.84 |
| Houston-Suape                | 46,200   | 43.04 |
| Houston-Quintero             | 46,200   | 54.05 |
| Ras Tanura-New Mangalore     | 46,200   | 15.46 |
| <b>MGC</b>                   |          |       |
| Marcus Hook-Flushing         | 21,700   | 46.40 |
| Houston-Flushing             | 21,700   | 61.93 |
| Houston-Suape                | 21,700   | 55.67 |
| Ras Tanura-New Mangalore     | 22,000   | 25.25 |
| Houston-Callao               | 21,700   | 56.58 |

## FSU

The daf Brest assessments for propane-butane mix slightly increased following new indications which came through the Argus Open Markets (AOM) platform. Four deals with a total volume of 1,100t were initiated on AOM at floating prices with premiums of \$45/t to \$48/t over the average of assessments ten days after the deal date. Prices for propane were stable as all indications reported were within the current Argus range.

Argus fob Black Sea assessment for propane-butane mix, propane and butane moved higher amid livelier demand. A mix cargo of at least 3,500t of Kazakh product was sold on the spot market for delivery to Romania.

The high edge of the daf Ukraine propane-butane mix price range rose as sellers increased their levels amid limited supplies from Russia and Belarus.

## INTERNATIONAL SWAPS

Swap trading was very thin at the end of the week. Cif ARA propane swaps for August gained \$4.5/t at the front month, with a bid-offer range of \$625/t - \$628/t heard during the assessment period. But value was assessed closer to the bid level, in line with the views of market participants, and a 2,000t trade for September at \$624.5/t, agreed a few minutes after the timestamp. The August-September spread was flat, in line with 3,000t and 7,000t deals struck just prior to the assessment period.

| Middle East and Asia-Pacific averages |         | \$/t   |
|---------------------------------------|---------|--------|
|                                       | Price   | ±      |
| <b>Middle East (Sep)</b>              |         |        |
| Propane                               | 0.600   | -0.150 |
| Butane                                | 0.600   | -0.150 |
| <b>Argus Middle East Index</b>        |         |        |
| Propane                               | 660.400 | +0.150 |
| Butane                                | 654.800 | +0.550 |
| <b>Argus Far East Index™ (Aug)</b>    |         |        |
| Propane                               | 693.900 | -0.475 |
| diff to M1                            | 1.700   | -0.180 |
| Butane                                | 688.300 | -0.075 |
| 11+11 propane-butane mix (Aug)        | 691.100 | -0.275 |
| <b>Argus Ningbo Index (Aug)</b>       |         |        |
| Propane                               | 695.300 | -0.450 |
| Butane                                | 689.700 | -0.050 |
| <b>Argus South China Index (Aug)</b>  |         |        |
| Propane                               | 695.100 | +0.225 |
| Butane                                | 689.500 | +0.625 |
| Pearl River Delta Index (Yn/t)        | 4,717   | -5     |
| South Africa LPG Index MTD            | 780.023 | +0.119 |

Naphtha swaps fell around \$5/t across the curve due to weaker crude, which narrowed the propane-naphtha spread to -\$28/t for August. By December and January, the curve suggested propane could be worth more than naphtha, as reduced exports from the US are expected to increase global propane prices this winter. AFEI swaps were largely steady, slipping only \$0.25/t to \$690.5/t for August. CP swaps fell \$4.5/t to \$658.5/t for September, with losses of around \$8-9/t recorded on the rest of the curve, potentially linked to increasing supply from the Mideast.

## Reported done (\$/t)

624.5(2kt) Sep cif ARA  
 0(3kt), 0(7kt) Aug-Sep cif ARA  
 7(2kt) Sep-Dec cif ARA  
 -24(5kt) Sep propane-naphtha  
 662(2kt) Sep CP  
 661(2kt) Oct CP  
 1(1kt) Sep-Oct CP  
 692(2kt), 691(2kt), 692(3kt), 685.5(5kt), 691(5kt) Sep AFEI  
 0.5(5kt), 1(10kt), 0.75(2kt), 0.75(3kt) Sep-Oct AFEI  
 1(5kt) Oct-Nov AFEI  
 29(5kt), 30(3kt), 31(3kt) Sep AFEI-CP  
 29.5(5kt) Oct AFEI-CP

| Argus African LPG Indexes |              |        |                     |        |                    |       |             |       |
|---------------------------|--------------|--------|---------------------|--------|--------------------|-------|-------------|-------|
|                           | South Africa | ±      | West Africa Propane | ±      | West Africa Butane | ±     | East Africa | ±     |
| Index \$/t                | 780.62       | +7.78  | 676.26              | +6.40  | 682.82             | +2.46 | 689.41      | +8.46 |
| MTD average \$/t          | 779.90       | +0.17  | 670.72              | +1.39  | 683.35             | -0.13 | 687.83      | +0.39 |
| Index local currency/kg   | 1135.7 ZARc  | +23.89 | 278.3 NGN           | +2.64  | 281 NGN            | +1.02 | 75.01 KES   | +0.92 |
| <b>Calculation</b>        |              |        |                     |        |                    |       |             |       |
| Underlying price \$/t     | 659.40       | +7.80  | 599.33              | -17.67 | 605.89             | +1.98 | 657.60      | +7.30 |
| Freight + logistics \$/t  | 121.22       | -0.02  | 74.63               | +21.77 | 74.63              | -1.32 | 31.81       | -0.24 |

## FREIGHT

The cost of freight for a VLGC from Ras Tanura to Chiba held flat on the day at \$42.50/t to close the week, down by 50¢/t from last Friday, with only one Mideast Gulf fixture over the week.

India's state-controlled BPCL placed the Gas Al Negeh on subjects to load from Ras Tanura, from 26 August, destined for India. The fixture rate was heard around \$44/t on a Ras Tanura to Chiba basis. Voyages to India usually command a slight premium to standard Ras Tanura to Chiba trips.

Fellow Indian firm IOC sought a VLGC to ship a cargo from Mina Al Ahmadi, loading from 6-7 September, destined for India. And state-controlled HPCL continued to seek a vessel to ship a cargo from Yanbu to India from 31 August.

Vessel delays at the Panama Canal increased again on Friday and the Canal Authority estimated a 15-day wait for both northbound and southbound Neopanamax vessels on Friday, up from nine-days for northbound and 12-days for southbound voyages on Friday last week.

The northwest European coaster market was mute to end the week after a flurry of activity on Thursday. Coaster rates for a voyage from Tees to ARA slipped by 50¢/t to close at \$39/t, flat week on week. While the Tees to Lisbon coaster rate fell by \$1/t to \$82/t.

No fixtures were concluded on Friday and Italy's Eni still seeking shipping for a prompt 2,000-2,100t chemical grade propylene (CGP) cargo from Milazzo.

UK-Chinese venture Petroineos were seen bidding in the LPG product window for 4,500t of butane on a fob Lavera basis, loading from 13-15 August. It had also placed Epic Manhattan on subjects.

The rate for a 4,000t coaster loading from Tees to Mohammedia fell another \$1/t to end the week at \$69/t. The coaster rate between Tees and Mohammedia fell by \$3.50/t, week on week, with little activity on the route. Pricing ideas from market participants widened throughout the week, with some as wide as \$10/t on Friday, given the lack of liquidity on the route.

## MIDDLE EAST

Spot differentials for propane and butane cargoes loading 1-10 September from the Mideast Gulf were assessed unchanged at parity to the September CP.

The Argus Middle East Index (AMEI) assessments for propane and butane were at \$661/t and \$657/t respectively.

September propane CP swaps rose by \$7/t on the day to settle at \$661/t at Asian timestamp while its butane counterpart was assessed \$4/t lower at \$657/t.

| Asia-Pacific                    |          |        |       |        |          | \$/t  |
|---------------------------------|----------|--------|-------|--------|----------|-------|
|                                 | CP basis | Timing | ±     | Bid    | Ask      | ±     |
| <b>Propane</b>                  |          |        |       |        |          |       |
| Gulf CP fob                     | Sep      | Sep    |       | -5.00  | / 5.00   |       |
| Argus Middle East Index         |          |        |       |        | 661.00   | +7.00 |
| Japan CP cfr                    | Aug      | 1H Sep | +6.00 | 30.00  | / 34.00  | +6.00 |
| Japan cfr                       |          |        | +6.00 | 690.00 | - 694.00 | +6.00 |
| Argus Far East Index™ (AFEI™)   |          |        |       |        | 692.00   | +6.00 |
| AFEI™ diff to M1                |          |        |       |        | 1.00     | -0.50 |
| <b>Butane</b>                   |          |        |       |        |          |       |
| Gulf CP fob                     | Sep      | Sep    |       | -5.00  | / 5.00   |       |
| Argus Middle East Index         |          |        |       |        | 657.00   | +9.00 |
| Japan CP cfr                    | Aug      | 1H Sep | +8.00 | 31.00  | / 35.00  | +8.00 |
| Japan cfr                       |          |        | +8.00 | 686.00 | - 690.00 | +8.00 |
| West coast India CP cfr         | Aug      | Aug    | +8.00 | 26.00  | / 30.00  | +8.00 |
| Argus Far East Index™ (AFEI™)   |          |        |       |        | 688.00   | +8.00 |
| <b>11+11 propane-butane mix</b> |          |        |       |        |          |       |
| Japan cfr                       |          |        | +7.00 | 688.00 | - 692.00 | +7.00 |
| Argus Mixed Index               |          |        |       |        | 690.00   | +7.00 |
| <b>Propane pressurised</b>      |          |        |       |        |          |       |
| South China CP fob              | Aug      | Aug    |       | 38     | / 48     |       |
| South China fob                 |          | Aug    |       | 698    | / 708    |       |
| South China CP cfr              | Aug      | Aug    |       | 68     | / 78     |       |
| South China cfr                 |          | Aug    |       | 728    | / 738    |       |
| Vietnam CP cfr                  | Aug      | Aug    |       | 85     | / 95     |       |
| <b>Butane pressurised</b>       |          |        |       |        |          |       |
| South China CP fob              | Aug      | Aug    |       | 38     | / 48     |       |
| South China fob                 |          | Aug    |       | 693    | / 703    |       |
| South China CP cfr              | Aug      | Aug    |       | 68     | / 78     |       |
| South China cfr                 |          | Aug    |       | 723    | / 733    |       |
| Vietnam CP cfr                  | Aug      | Aug    |       | 85     | / 95     |       |

| Propane swaps (5pm Singapore) |  |             |     | \$/t   |
|-------------------------------|--|-------------|-----|--------|
| CP swaps                      |  | AFEI™ swaps |     |        |
| Sep                           |  | 661.00      | Aug | 692.00 |
| Oct                           |  | 660.00      | Sep | 691.00 |
| Nov                           |  | 660.00      | Oct | 691.00 |

| Butane swaps (5pm Singapore) |  |                                      |     | \$/t |
|------------------------------|--|--------------------------------------|-----|------|
| CP swaps                     |  | Propane/Butane CP swaps Differential |     |      |
| Sep                          |  | 657.00                               | Sep | +4.0 |

## ASIA -PACIFIC

### Refrigerated

Asian prices lagged crude's recovery on Friday. September Argus Far East Index (AFEI) propane swaps rebounded by \$6.5/t on the day to close at \$691/t despite larger gains in the crude complex. The front-month Brent futures rose by nearly \$1.8/bl. Instead, September AFEI swaps maintained a \$118/t premium over September LST at Asian timestamp.



In the afternoon window, Trafigura returned to bid for 23,000t propane arriving in second-half September at September AFEI -\$0.5/t. Litasco competed with a higher bid at September AFEI +\$0.5/t but failed to attract any selling interest in the public sphere. But private offers were heard at around September AFEI +\$2-3/t.

Itochu also re-surfaced with a bid for 11,500t+11,500t arriving in first-half September at September AFEI +11/t, up from +\$8/t yesterday. The higher cash premium, compared to pure propane cargoes languishing at +\$1/t, was unable to elicit counteroffers as spot cargoes in the prompt period had mostly been placed.

11,500t+11,500t cargoes arriving 31 August were assessed at \$690/t, reflecting the average of propane and butane AFEI for second-half August arrival. 11,500t+11,500t cargoes arriving 1-15 September were assessed at \$690/t, reflecting the average of propane and butane AFEI for first-half September arrival. The Argus Mixed Index spanning 31 August-15 September averaged \$690/t.

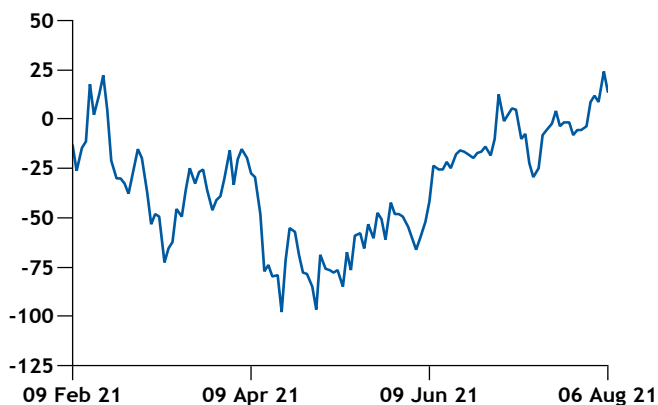
The Argus cfr Ningbo propane Index for cargoes arriving 31 August were assessed at August AFEI +\$1.5/t at \$693.5/t, in consideration of private discussions. Cfr propane cargoes arriving 1-15 September were valued at September AFEI +\$2.5/t or \$693.5/t, in consideration of private discussions. The Argus propane Ningbo Index spanning 31 August-15 September averaged \$693.5/t.

The Argus cfr Ningbo butane Index for cargoes arriving 31 August were assessed at \$689.5/t, reflecting September propane-butane CP differentials assessed at +\$4/t today. Cfr butane cargoes arriving 1-15 September were assessed at \$689.5/t, reflecting the same flat structure as cfr Ningbo Index for propane. The Argus butane Ningbo Index spanning 31 August-15 September averaged \$689.5/t.

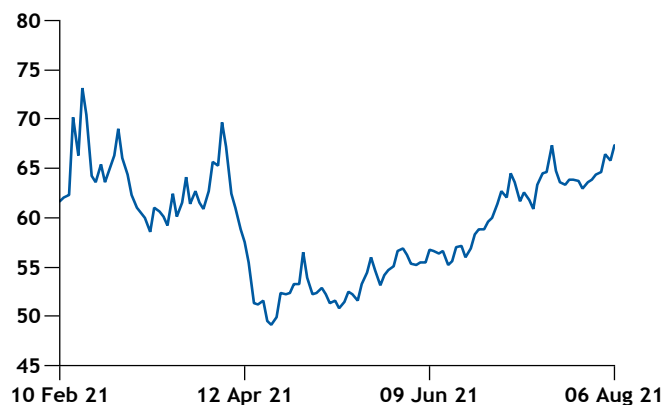
The Argus South China propane Index for cargoes arriving 31 August were assessed at August AFEI +\$4/t or \$696/t, in consideration of private discussions. Cfr propane cargoes

| China wholesale propane/butane mix |      | yuan/t |         |      |
|------------------------------------|------|--------|---------|------|
|                                    | ±    | Bid    | Ask     | ±    |
| <b>South China</b>                 |      |        |         |      |
| <b>Ex terminal</b>                 |      |        |         |      |
| Dongguan                           | +10  | 4,680  | - 4,720 |      |
| Zhuhai                             |      | 4,660  | - 4,730 | +10  |
| Shenzhen                           |      | 4,680  | - 4,720 |      |
| Raoping                            |      | 4,700  | - 4,740 |      |
| Nansha                             | +20  | 4,680  | - 4,720 |      |
| Shantou                            |      | 4,700  | - 4,740 |      |
| Yangjiang                          | -50  | 4,480  | - 4,520 | -50  |
| Pearl River Delta Index            |      |        | 4,698   | +5   |
| <b>Ex refinery</b>                 |      |        |         |      |
| Maoming                            | -50  | 4,450  | - 4,500 | -50  |
| Guangzhou                          | +50  | 4,650  | - 4,700 | +50  |
| <b>East China</b>                  |      |        |         |      |
| <b>Ex terminal</b>                 |      |        |         |      |
| Ningbo                             |      | 4,800  | - 4,850 |      |
| Wenzhou                            |      | 4,800  | - 4,850 |      |
| Taicang                            |      | 4,800  | - 4,850 |      |
| Shanghai                           |      | 4,800  | - 4,850 |      |
| Zhangjiagang                       |      | 4,800  | - 4,850 |      |
| Fujian                             |      | 4,850  | - 4,950 |      |
| <b>Ex refinery</b>                 |      |        |         |      |
| Shanghai                           |      | 4,650  | - 4,700 |      |
| Zhenhai                            |      | 4,700  | - 4,750 |      |
| Yangzi                             | +50  | 4,800  | - 4,850 | +50  |
| Fujian                             |      | 4,630  | - 4,760 |      |
| Gaoqiao                            |      | 4,650  | - 4,700 |      |
| Qingdao                            |      | 4,650  | - 4,700 |      |
| <b>Northeast China ex refinery</b> |      |        |         |      |
| Daqing                             |      | 4,650  | - 4,700 |      |
| Dalian                             |      | 4,550  | - 4,600 |      |
| <b>Northwest China ex refinery</b> |      |        |         |      |
| Urumqi                             | +100 | 3,400  | - 3,450 | +100 |
| <b>Inland China ex refinery</b>    |      |        |         |      |
| Lanzhou                            |      | 0      | - 0     |      |
| Yan-An                             | -105 | 4,645  | - 4,650 | -105 |

Japan: Butane diff to naphtha \$/t



Propane LST ratio to Nymex WTI %



arriving 1-15 September were assessed at September AFEI +\$5/t or \$696/t, in consideration of private discussions. The Argus South China propane Index spanning 31 August-15 September averaged \$696/t.

The Argus South China butane Index for cargoes arriving 31 August were assessed at \$692/t, reflecting September propane-butane CP differentials assessed at +\$4/t today. Cfr butane cargoes arriving 1-15 September were assessed at \$692/t, reflecting the same flat structure as the south China Index for propane. The Argus South China butane Index spanning 31 August-15 September averaged \$692/t.

### Assessment rationale

Propane Argus Far East Index (AFEI) (PA0000403) was assessed based on other market data.

The September AFEI and CP propane swaps were valued at \$691/t and \$661/t respectively.

Cfr propane cargoes arriving 1-15 September were valued at September AFEI +\$1/t or \$692/t in consideration of private discussions. Cargoes arriving 31 August were valued at parity to first-half September values, at \$692/t, as trading in the prompt market had largely concluded. The propane AFEI spanning 31 August-15 September averaged \$692/t.

The propane AFEI rose by \$6/t from the previous session.

Butane Argus Far East Index (AFEI) (PA0000361) was assessed on the basis of other market data.

Cfr butane cargoes arriving 31 August were assessed at \$688/t, reflecting September propane-butane CP differentials assessed at +\$4/t today. Cargoes arriving 1-15 September were assessed at \$688/t to reflect the same flat structure between second-half August and first-half September of the propane AFEI. The butane AFEI spanning 31 August-15 September averaged \$688/t.

The butane AFEI rose by \$8/t from the previous session.

### Pressurised

Pressurised cargo premiums were stable owing to a lack of prompt demand from regional importers.

Terminals in south China maintained their offers for August-loading cargoes at August CP +\$43/t on a fob basis, while notional selling indications into north Vietnam were at August CP +\$90/t basis cfr Haiphong.

China's domestic wholesale prices were largely stable both in the south and the east on Friday. Jiangsu province continued to restrict logistical operations as it put more areas into lockdown to prevent the further spread of Covid-19. But lower supplies from refineries and healthy demand from bottling plants supported prices even as commercial demand weakened. In south China ample supplies offset the impact of high import costs.

The Pearl River Delta index (PRD) inched up slightly by 5yuan/t to Yn4,698/t as after expectation of limited import arrivals in the coming days dissuaded terminals from offering discounts. China Gas Guangzhou, JOVO Dongguan, Sino-benny Shenzhen prices all traded at Yn4,700/t today. Zhuhai terminal prices edged higher by Yn5/t at Yn4,695/t today as Siamgas prices were unchanged at Yn4,730/t, New Ocean prices picked up to Yn4,700/t, and CNOOC Gaolan kept flat at Yn4,630/t today.

Shantou and Raoping's terminal prices were unchanged at Yn4,720/t amid thin spot trade. Yangjiang terminal prices fell by Yn50/t to Yn4,500/t to compete with the nearby Maoming refinery.

In south China, refinery prices at Guangzhou firmed up by Yn50/t on the back of low inventories, while Maoming refinery prices extended their losses, falling by Yn50/t amid increased supply.

In east China, prices at the Yangzi refinery climbed up by Yn50/t as it's the only supply source amid the lockdown in Nanjing, Jiangsu. Other prices at refineries and terminals remained flat today as tight refinery supply was offset by lower commercial demand in some regions.

In northeast China, both Daqing and Dalian refinery prices were unchanged today with cautious buying sentiment. Urumqi refinery prices in northwest China moved up by Yn100/t.

## ANNOUNCEMENT

### Argus successfully completes annual losco assurance review

Argus has completed the ninth external assurance review of its price benchmarks covering crude oil, products, LPG, petrochemicals, biofuels, thermal coal, coking coal, iron ore, steel, natural gas and biomass benchmarks. The review was carried out by professional services firm PwC. Annual independent, external reviews of oil benchmarks are required by international regulatory group losco's Principles for Oil Price Reporting Agencies, and losco encourages extension of the reviews to non-oil benchmarks. For more information and to download the review visit our website <https://www.argusmedia.com/en/about-us/governance-compliance>



In inland China, Yan'an refinery prices went down by Yn105/t as the supply doubled to 500 t today.

### US GULF EXPORTS

Buying interest for spot September-loading cargoes remained thin as market participants monitored increasing delays for non-booked vessels on the Panama Canal. The September LST/FEI spread held steady, near \$117-118/t on paper midday Friday. The last discussions for spot loadings were heard on either side of 5¢/USG.

Details emerged of a recent early September fixture at \$88/t on a Houston-Chiba or \$48/t on a Houston-Flushing basis. Other September fixtures reported this week ranged from \$82-86/t on a Houston-Chiba basis. The Panama Canal Authority estimated a 15-day wait both northbound and southbound for Neopanamax vessels Friday.

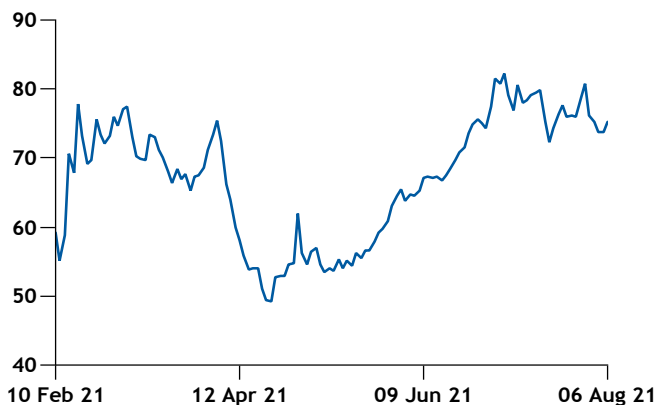
| US Gulf coast LPG                          |         |         |         |
|--|---------|---------|---------|
|  | Low     | High    | Mean    |
| <b>Propane</b>                             |         |         |         |
| fob USGC, diff to Mont Belvieu ¢/USG       | +4.500  | +5.250  | +4.875  |
| fob USGC ¢/USG                             | 114.375 | 115.125 | 114.750 |
| fob USGC \$/t                              | 595.9   | 599.8   | 597.8   |
| del Japan (AUSJ) \$/t                      | 684.0   | 688.0   |         |
| del ARA (AUSE) \$/t                        | 644.0   | 648.0   |         |
| AFEI™ propane calculated netback USGC \$/t |         |         | 577.60  |
| <b>Butane</b>                              |         |         |         |
| fob USGC ¢/USG                             | 133.38  | 134.12  | 133.75  |
| fob USGC \$/t                              | 604.19  | 607.59  | 605.89  |
| LPG freight                                |         |         |         |
|  | Price   |         |         |
| Handysize Houston EC Mexico \$/t           | 25.00   |         |         |
| VLGC Houston-Chiba \$/t                    | 88.00   |         |         |
| VLGC Houston-Flushing \$/t                 | 48.00   |         |         |

| Americas: Mont Belvieu pipeline fob (Aug) |         |        |         |           | ¢/USG  |
|---|---------|--------|---------|-----------|--------|
|   | VWA     | ±      | Low     | High      | ±      |
| <b>Enterprise</b>                         |         |        |         |           |        |
| Propane                                   | 107.972 | +0.500 | 107.250 | - 108.750 | +0.500 |
| Propane equivalent \$/t                   |         | +2.605 | 558.773 | - 566.588 | +2.605 |
| Butane                                    | 128.167 | +1.000 | 127.750 | - 128.500 | +0.500 |
| Butane equivalent \$/t                    |         | +4.530 | 578.708 | - 582.105 | +2.265 |
| Purity ethane                             | 34.165  | -0.500 | 33.750  | - 34.500  | -0.250 |
| Purity ethane equivalent \$/t             |         | -4.000 | 249.000 | - 255.000 | -1.000 |
| Ethane-propane mix                        | 31.750  | +0.250 | 31.500  | - 32.000  | -1.000 |
| Isobutane                                 | 128.000 | +0.000 | 127.000 | - 128.750 | +0.750 |
| Natural gasoline                          | 159.167 |        | 157.000 | - 161.750 | +2.250 |
| <b>LST</b>                                |         |        |         |           |        |
| Propane                                   | 109.825 | +0.625 | 107.875 | - 111.000 | +1.750 |
| Butane                                    | 127.375 | +0.750 | 127.125 | - 127.625 | +0.750 |
| <b>Targa</b>                              |         |        |         |           |        |
| Propane                                   | 110.250 | +1.500 | 110.000 | - 110.500 | +1.500 |
| Ethane                                    | 34.031  | -0.500 | 33.750  | - 34.000  | -0.375 |

| US Enterprise averages |  |         | ¢/USG  |
|------------------------|--|---------|--------|
| Month to date          |  |         | ±      |
| Propane (Aug)          |  | 107.775 | +0.056 |
| Butane (Aug)           |  | 128.163 | -0.009 |

| US forward market           |        |         |           |        | ¢/USG |
|-----------------------------|--------|---------|-----------|--------|-------|
|                             | ±      | Low     | High      | ±      |       |
| <b>Mont Belvieu propane</b> |        |         |           |        |       |
| Aug                         | +0.250 | 109.250 | - 109.750 | +0.250 |       |
| Sep                         | +0.750 | 109.750 | - 110.250 | +0.750 |       |
| Oct                         | +0.750 | 109.375 | - 109.875 | +0.750 |       |
| Nov                         | +0.750 | 109.250 | - 109.750 | +0.750 |       |
| 4Q21                        | +0.625 | 108.875 | - 109.375 | +0.625 |       |
| <b>Mont Belvieu butane</b>  |        |         |           |        |       |
| Aug                         | +0.875 | 128.000 | - 128.500 | +0.875 |       |
| Sep                         | +0.500 | 127.875 | - 128.375 | +0.500 |       |
| Oct                         | +0.500 | 126.750 | - 127.250 | +0.500 |       |
| Nov                         | +0.625 | 125.750 | - 126.250 | +0.625 |       |
| 4Q21                        | +0.500 | 125.500 | - 126.000 | +0.500 |       |

Propane LST diff to ethane non-LST ¢/USG



MtB: Nat gasoline diff to butane non-LST ¢/USG



## AMERICAS DEALS

| Mont Belvieu spot deals |        |         |        |
|-------------------------|--------|---------|--------|
|                         | Timing | ¢/USG   | bl     |
| Butane EPC              | Aug    | 127.500 | 5,000  |
|                         | Aug    | 127.750 | 10,000 |
|                         | Aug    | 127.875 | 10,000 |
|                         | Aug    | 128.000 | 10,000 |
|                         | Aug    | 128.375 | 10,000 |
|                         | Aug    | 128.500 | 10,000 |
|                         | Aug    | 128.500 | 10,000 |
|                         | Aug    | 128.500 | 10,000 |
| Ethane EPC              | Aug    | 33.750  | 10,000 |
|                         | Aug    | 33.875  | 10,000 |
|                         | Aug    | 33.875  | 10,000 |
|                         | Aug    | 34.000  | 10,000 |
|                         | Aug    | 34.125  | 25,000 |
|                         | Aug    | 34.125  | 10,000 |
|                         | Aug    | 34.125  | 10,000 |
|                         | Aug    | 34.250  | 10,000 |
|                         | Aug    | 34.250  | 5,000  |
|                         | Aug    | 34.250  | 5,000  |
|                         | Aug    | 34.375  | 20,000 |
|                         | Aug    | 34.375  | 10,000 |
|                         | Aug    | 34.375  | 5,000  |
|                         | Aug    | 34.375  | 5,000  |
|                         | Aug    | 34.500  | 10,000 |
| Ethane EPC/Ethane Targa | Aug    | 0.000   | 25,000 |
|                         | Aug    | 0.000   | 10,000 |
|                         | Aug    | 0.000   | 10,000 |
|                         | Aug    | 0.000   | 5,000  |
|                         | Aug    | 0.000   | 5,000  |
|                         | Aug    | 0.000   | 5,000  |
| Ethane Targa            | Aug    | 33.750  | 10,000 |
|                         | Aug    | 34.000  | 25,000 |
|                         | Aug    | 34.000  | 10,000 |

## US

## Mont Belvieu light NGLs

Mont Belvieu, Texas, LST propane rose, valued at 66.43pc of Nymex WTI.

August LST propane opened 1.75¢/USG higher at 110¢/USG and traded between 107.875-111¢/USG. An LST/EPC spread priced LST at a 0.625¢/USG premium. September propane was discussed at 110¢/USG during the afternoon.

August EPC propane opened 0.5¢/USG higher at 108¢/USG and traded between 107.25-108.75¢/USG.

Hattiesburg propane traded between 109.5-110¢/USG.

August EPC ethane weakened. Ethane opened 0.375¢/USG lower at 34.125¢/USG and fell to 33.75¢/USG before recovering to 34.5¢/USG. August EPC/Targa spreads priced the caverns at parity.

| Mont Belvieu spot deals  |             |         |         |
|--------------------------|-------------|---------|---------|
|                          | Timing      | ¢/USG   | bl      |
|                          | Aug         | 34.250  | 5,000   |
|                          | Aug         | 34.250  | 5,000   |
|                          | Aug         | 34.375  | 5,000   |
| Isobutane EPC            | Aug         | 127.000 | 10,000  |
|                          | Aug         | 127.875 | 10,000  |
|                          | Aug         | 127.875 | 10,000  |
|                          | Aug         | 128.000 | 10,000  |
|                          | Aug         | 128.500 | 10,000  |
|                          | Aug         | 128.750 | 10,000  |
| Isobutane EPC/Butane EPC | Aug         | 0.000   | 10,000  |
|                          | Aug         | 0.125   | 10,000  |
| Natgasco EPC             | Aug         | 157.000 | 10,000  |
|                          | Aug         | 157.750 | 10,000  |
|                          | Aug         | 158.750 | 10,000  |
|                          | Aug         | 158.750 | 10,000  |
|                          | Aug         | 159.000 | 10,000  |
|                          | Aug         | 159.250 | 10,000  |
|                          | Aug         | 159.750 | 10,000  |
|                          | Aug         | 160.500 | 10,000  |
|                          | Aug         | 161.750 | 10,000  |
|                          | Propane EPC | Aug     | 107.250 |
| Aug                      |             | 107.250 | 10,000  |
| Aug                      |             | 107.500 | 10,000  |
| Aug                      |             | 107.750 | 10,000  |
| Aug                      |             | 108.000 | 10,000  |
| Aug                      |             | 108.000 | 10,000  |
| Aug                      |             | 108.250 | 10,000  |
| Aug                      |             | 108.250 | 10,000  |
| Aug                      |             | 108.250 | 10,000  |
| Aug                      |             | 108.250 | 10,000  |
| Aug                      |             | 108.250 | 5,000   |
| Aug                      |             | 108.500 | 10,000  |
| Propane LST              | Aug         | 108.500 | 10,000  |
|                          | Aug         | 108.750 | 10,000  |
|                          | Aug         | 107.875 | 10,000  |
|                          | Aug         | 108.000 | 10,000  |
|                          | Aug         | 108.375 | 10,000  |
|                          | Aug         | 109.000 | 10,000  |
|                          | Aug         | 109.250 | 10,000  |
|                          | Aug         | 109.500 | 10,000  |
|                          | Aug         | 109.500 | 10,000  |
|                          | Aug         | 109.875 | 10,000  |
| Propane LST/EPC          | Aug         | 110.000 | 10,000  |
|                          | Aug         | 111.000 | 50,000  |
|                          | Aug         | 111.000 | 10,000  |
|                          | Aug         | 0.625   | 10,000  |

Targa ethane opened 0.625¢/USG lower at 33.75¢/USG and rose to 34¢/USG.

September Nymex light sweet crude futures fell by 81¢/bl to settle at \$68.28/bl.

## Mont Belvieu heavy NGLs

Mont Belvieu, Texas, EPC butane strengthened, bucking losses in crude and RBOB.

August EPC butane opened 1¢/USG higher at 128.375¢/USG and traded between 127.75-128.5¢/USG. An EPC/Targa spread priced EPC at a 0.75¢/USG premium. September butane was discussed at 128.125¢/USG during the afternoon.

August Targa butane traded at 127.75¢/USG.

EPC isobutane opened 0.5¢/USG higher at 128¢/USG and traded between 127-128.75¢/USG. EPC isobutane/butane spreads priced isobutane at a 0.125¢/USG premium or the products at parity.

August EPC natural gasoline strengthened, opening 3.5¢/USG higher at 161.75¢/USG and falling as low as 157¢/USG.

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### Fire at Gazprom plant to hit LPG exports

A fire at Russian state-controlled Gazprom's Novy Urengoy condensate treatment plant will affect LPG exports this month, according to market participants.

The fire, which happened yesterday, led to the suspension of the Surgut gas processing plant (GPP) that produces LPG and NGLs used as feedstock at the Zapsibneftekhim petrochemical complex. The fire was contained, and an investigation has begun into its cause.

Surgut GPP produces about 150,000 t/month of LPG and is the largest supplier of the product to the Russian market. According to traders, Gazprom will suspend LPG exports and reduce shipments under direct contracts. Surgut also produces 90-100,000 t/month of NGLs, which are sent for processing at Zapsibneftekhim.

"[Zapsibneftekhim operator] Sibur Holding is now facing a difficult choice, either to reduce the production of polyolefins or to reduce the LPG production, because there is simply nowhere to replace the falling volumes of raw materials," a market participant said. Most likely, the company will reduce LPG production and cut supplies both for domestic use Russia and for export.

The fire affected the condensate de-ethanisation unit of the first stage of Novy Urengoy. It is not yet known how much the second stage, condensate processing, has suffered. If the damage is slight it could resume operation in the second half of August at half capacity, market participants said.

If it is a longer outage, the absence of exports could be felt in the coming winter when northwest Europe is facing a potentially drastic return to tight LPG supplies, after years in which US exports have enabled year-round petrochemical consumption. Russian supply has already been [diverted from](#)

[export markets](#) to meet the needs of Zapsibneftekhim.

It is possible that Gazprom will accelerate construction of the nearby 4mn t/yr Achimov condensate stabilisation unit, in order to partially compensate for the consequences of the accident at Novy Urengoy.

By Svetlana Novolodskaya

### Hungary's Mol swings to profit, lifts outlook

Hungarian integrated oil firm Mol has upgraded its target for this year's financial performance after it swung to a profit in the April-June quarter from a loss a year earlier on wider refining and petrochemical margins, increased motor fuel sales and higher oil and gas prices.

The company increased its full-year forecast for current cost of supply earnings before interest, tax, depreciation and amortisation, or clean CCS ebitda, to around \$3bn from the previous target of about \$2.3bn. This is an indicator Mol considers key to measure its performance.

The company posted a profit of 185.9bn forint (\$622mn) in the second quarter compared with a Ft41.5bn loss a year earlier. It also swung to a Ft276.6bn profit for January-June from a Ft90bn loss in the first half of 2020.

Mol's group refining margin rose by 59pc from a year earlier to \$4.40/bl during April-June, as the negative effects of "depressed" diesel crack spreads were offset by recovering gasoline refining margins and favourable price differentials for the company's Russian Urals crude imports against Brent crude. Mol's integrated petrochemical margin hit a historically high level at €949/t in the second quarter.

Combined throughput at Mol's three refineries in Hungary, Slovakia and Croatia fell by 4pc from a year earlier to 4.27mn t for April-June because of planned maintenance, although overall petroleum product sales rose by 7pc to 4.37mn t. The company complemented its own output with purchases from third parties to tap increased product demand in its core markets in central and eastern Europe.

Mol's April-June motor fuel sales rose by 8pc from the previous year in Hungary and 17pc each in Slovakia and Croatia, mostly as local restrictions related to the Covid-19 pandemic eased. Total gasoline sales rose by 8.9pc to 921,000t, while diesel sales climbed by 11.1pc to 2.55mn t. Petrochemical sales edged up by almost 1.9pc to 379,000t.

Mol's April-June upstream production fell by 5pc from a year earlier to 111,200 b/d of oil equivalent (boe/d). But its upstream business remained a key profit driver for the company, as its average realised crude and condensate price rose by 123pc to \$65.20/bl and its realised gas price was also up by 144pc to \$35.90/boe.

By Bela Fincziczki

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### Japan's Idemitsu posts lower petchem sales

Japanese refiner and petrochemical producer Idemitsu reduced sales of its April-June petrochemical goods over the year, because of a refinery turnaround, despite recovering demand from the Covid-19 economic downturn.

Idemitsu sold 886,000t of basic petrochemical products such as ethylene, paraxylene and styrene monomer during April-June, down by 10.8pc from 993,000t a year earlier. Sales declined because of lower production during the scheduled maintenance of its 190,000 b/d Chiba refinery from 28 April-6 June, the company said. But demand for petrochemical products rebounded on the year, from when the country was under the first state of emergency and manufacturing activities were stagnated.

Demand recovery from the Covid-19 pandemic prompted domestic petrochemical firm Mitsu Chemicals to increase its April-June sales of basic petrochemical goods and polymers, especially polypropylene (PP) and PP compounds. Mistui Chemicals revised up its April 2021-March 2022 profit forecast to ¥99.5bn (\$906.2mn), up by 25.9pc from previous expectations in May.

Fellow producer **Toray** also raised its 2021-22 profit forecast, while Mitsubishi Chemical predicted higher April-September profit than its previous expectation.

By Nanami Oki

### Japan's Astomos to operate LPG-fuelled VLGC

Japanese LPG importer Astomos plans to start operating a LPG-fuelled very large gas carrier (VLGC) in late August, prompted by tightening environmental restrictions and hopes of promoting LPG as a marine fuel.

Astomos will receive the 84,229m<sup>3</sup> VLGC *Crystal Asteria* from domestic shipbuilder Kawasaki Heavy Industries (KHI). KHI is [currently building the vessel](#) at its Sakaide shipyard in Japan's southwest Kagawa prefecture, on Shikoku island. Singapore-based shipowner Kumiai Navigation will operate the vessel for Astomos.

The VLGC will be equipped with KHI's dual-fuel LPG engine, [known as ME-LGIP](#), which can run on both pressurised LPG and fuel oil. The engine can reduce sulphur oxide emissions by 90pc and CO<sub>2</sub> emissions by 20pc compared with conventional fuel oil.

Astomos may consider further switching to LPG rather than fuel oil as a bunker fuel. Japan's LPG industry has been eyeing marine fuel as a new source of growth to help offset shrinking domestic demand, which has been falling since 2006. Japan used 13mn t of LPG in the April 2020 to March

2021 fiscal year, down by 30.6pc from 2006-07, according to the Japan LPG association.

By Nanami Oki

### Australia continues to export no propane

There were no Australian propane shipments in June for the third consecutive month, the first time in the past 10 years this has occurred. But there was a rebound in butane shipments in June from the two-year low touched in May.

Prior to April there were only two months since November 2010, May 2019 and November 2018 that there have been no propane exports. The only month over the same period that there were no butane exports was in May 2019.

Argus started collating LPG trade data supplied from the Australian Bureau of Statistics (ABS) in November 2010.

There were no details on export destinations for the butane shipments.

The average export price for combined shipments was \$495.80t in June, down from \$503.03/t in May and above the average of \$340.41/t in June 2020. The June average export price was based on a US-Australia dollar exchange rate of \$0.7645.

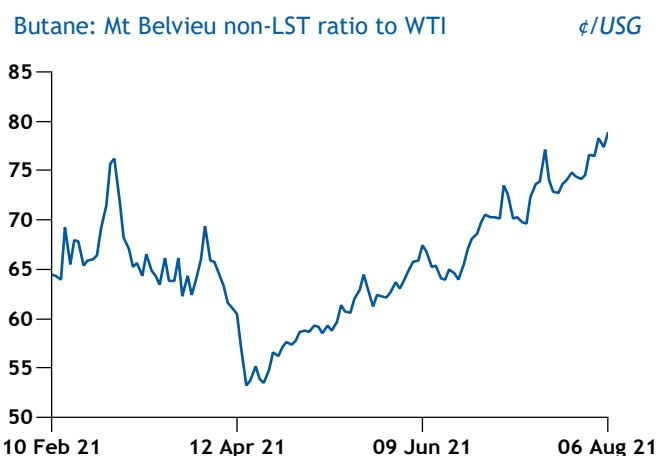
By Kevin Morrison

### Pembina increased NGL sales in 2Q

Pembina increased natural gas liquids (NGL) sales during the second quarter as demand approaches pre Covid-19 levels.

The company sold 173,000 b/d of oil equivalent (boe/d) during the quarter, up by 11pc compared to the same quarter in 2020 and just shy of 175,000 boe/d sold in the second quarter of 2019, prior to the pandemic.

Pembina expects volumes to continue to rise amid higher



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commodity prices and stronger producer activity in western Canada.

The expansion of Pembina's new 25,000 b/d Prince Rupert LPG export terminal remains deferred, with a final investment decision expected in the first quarter of 2022. The company continues to explore petrochemical opportunities in western Canada following [cancellation of Inter Pipeline deal](#).

Pembina deferred plans to develop an integrated propane dehydrogenation (PDH) and polypropylene (PP) facility in Alberta in March of last year to cut spending following the Covid-19 outbreak.

Pembina reactivated the expansion of Phase IX Peace pipeline during the quarter, while the Phase VIII Peace pipeline expansion remains deferred.

By Yulia Golub

### IPL Redwater fractionator volumes fell in 2Q

Fractionation volumes at Inter Pipeline's (IPL) Redwater Olefinic fractionator in Alberta decreased in the second quarter because of scheduled plant maintenance.

The company reported volumes at 29,700 b/d of NGLs, down from 37,500 b/d in the second quarter of 2020.

IPL continues to advance work at its 525,000 t/yr integrated propane dehydrogenation (PDH) and polypropylene (PP) Heartland petrochemical complex (HPC) in Alberta. The start of polypropylene facility operations is expected early in the second quarter of 2022, with the PDH unit ramping up operations several months later.

HPC can produce polypropylene before the PDH facility comes online by utilizing feedstock from the Redwater olefinic fractionator.

By Yulia Golub

### LyondellBasell lifts Texas PP force majeure

LyondellBasell today lifted a force majeure on polypropylene (PP) out of its Bayport, Texas, facility, which was declared in the aftermath of the mid-February freeze that shuttered production throughout the US Gulf coast region.

The company had previously lifted a force majeure on production out of its Lake Charles, Louisiana, facility on 1 July.

LyondellBasell has approximately 843,000 metric tonnes (t)/yr of capacity at its Lake Charles site and an additional 1.086mn t/yr of capacity at its Bayport plant.

Although the force majeure is lifted, the company will continue to control sales until further notice to keep supply and demand in balance, according to a letter to customers.

By Michelle Klump

### ExxonMobil suspended from climate group

ExxonMobil said a decision by a climate group that promotes a carbon tax to suspend the oil major's membership is "counterproductive" to addressing environmental issues.

The biggest US oil producer was dropped from the Climate Leadership Council (CLC) just weeks after a [company lobbyist was secretly recorded](#) saying ExxonMobil's public support for a carbon tax was little more than a public relations ploy.

"CLC's decision is disappointing and counterproductive," ExxonMobil said in a statement. "It will in no way deter our efforts to advance carbon pricing that we believe is a critical policy requirement to tackle climate change."

The oil major has faced increasing pressure from investors and climate campaigners over its perceived failure to set out a clear strategy to navigate the energy transition. That [culminated in a boardroom coup in May](#) when a relatively unknown hedge fund succeeded in replacing three board members with its own nominees.

The covert recording in which the lobbyist said ExxonMobil had sought to undermine climate legislation only served to add fuel to the fire.

"After careful consideration, we have decided to suspend ExxonMobil's membership in both the Council and Americans for Carbon Dividends, our advocacy arm," chief executive Greg Bertelsen said.

ExxonMobil had been a founding member of the Climate Leadership Council since 2017. The group promotes a carbon dividends plan centered on a nationwide carbon price to cut US carbon emissions in half by 2035.

After the lobbying scandal erupted in June, the company's chief executive Darren Woods issued an apology and said the lobbyists in question had never been involved in drawing up the company's policy stances on these issues.

Founding members of the Climate Leadership Council range from energy companies including Shell and BP, to non-profits such as the World Wide Fund for Nature and World Resources Institute.

By Stephen Cunningham

### Panama Canal Panamax lock wait times ease

Wait times for vessels without a reservation to transit the Panama Canal's Panamax locks eased to one-month lows three weeks after the end of maintenance on the east lane of the Canal's Gatun locks.

The wait time for northbound transit through the locks today eased to four days, down from 11 on 16 July, and the wait time for southbound transit today eased to three days,



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down from 12 on 16 July.

Despite this, congestion for medium range (MR) clean tankers, which transit the Panamax locks, has persisted near the Canal's southern entrance, limiting tonnage replenishment in the Atlantic basin. As of 1:15pm ET today, 13 MR tankers were waiting near the southern entrance, up from 11 on 20 July, according to Vortexa.

The continued congestion has provided upward pressure to clean tanker freight rates in the Atlantic basin of the Americas. US Gulf coast MR tanker rates jumped to one-month highs in late July as a surge in export demand met tightened tonnage supply in the region, but rates have corrected down this week amid limited demand.

### Neopanamax delays persist

Wait times for the Canal's Neopanamax locks have continued to rise over the past week after retreating slightly in late July. The wait times for both northbound and southbound transit through the locks rose today to 15 days, up from six days on 26 July.

Like MR tankers, congestion for very large gas carriers (VLGCs), which transit the Neopanamax locks, has also persisted near the Canal's southern entrance, limiting tonnage replenishment and providing upward pressure to LPG freight rates in the Atlantic basin.

As of 1:15pm ET, nine very large gas carriers (VLGCs), which transit the Neopanamax locks, were waiting near the southern entrance, up from four on 20 July, according to Vortexa.

Since 6 July, the Houston-Chiba VLGC freight rate has risen by 21pc to \$85.50/metric tonne, a one-month high.  
*By Michael Connolly*

### Atlantic hurricane season set to intensify

The 2021 Atlantic hurricane season should have more storms than previously anticipated as conditions remain conducive, according to the National Oceanic and Atmospheric Administration's (NOAA) mid-season update.

"After a record-setting start, the 2021 Atlantic hurricane season does not show any signs of relenting as it enters the peak months ahead," a NOAA administrator said.

Atlantic sea surface temperatures are not expected to be as warm as they were during the 2020 season, which had a record-breaking 30 storms, 14 hurricanes and seven major hurricanes, NOAA said. But reduced vertical wind shear and an enhanced west Africa monsoon are likely to contribute to increased hurricane activity this season.

The August update expects 15-21 named storms versus 13-20 in the previous outlook. Seven to 10 of them are

expected to become hurricanes, three to five of which will become major hurricanes. Thus far, the season has had five storms and one non-major hurricane.

A normal hurricane season has 14 named storms, seven hurricanes and three major hurricanes, according to NOAA's data updated earlier this year.

Oil and natural gas markets are less exposed to hurricane activity due to increased onshore production over the last several years, although storms that make landfall along the US Gulf coast can still disrupt refinery operations and ports, including LNG export facilities. Hurricanes can also knock out electrical infrastructure along the coast and for miles inland in several US states, stunting gas-fired power demand.

The 2021 Atlantic hurricane season began on 1 June and ends on 30 November.

*By David Haydon*

### Mexico LPG cap to cull distributors: Amexgas

Mexico's LPG price caps will lead to closures of some private-sector distributors and further staff cuts at those that remain, some of which have already laid off close to 30pc of workers, an association head said.

"A price determined by a formula at an office desk can have the best of intentions, but it will inevitably generate market distortions because it is impossible to consider all the differentiated prices and costs," Amexgas president Carlos Serrano said.

The government last weekend set maximum LPG prices for the first time since 2017 to curb price increases of about 60pc over the last year that threatened a presidential electoral promise to control energy costs.

Mexico's last-mile LPG distributors responded with a two-day strike that ended yesterday, complaining that the cap does not allow them to make a living and that larger wholesalers are keeping too much of the margin.

These independent operators, who purchase from larger private-sector LPG distributors, have a profit of about Ps0.20/l (3.7¢/USG) under the new system, compared with Ps3-4/l (67¢/USG) before. They supply about 80pc of LPG directly to households in the Mexico City area.

But even larger LPG companies will be forced to cut call center and distribution staff or reduce operations to stay in business, and blockages and shortages could persist, Serrano said.

The price cap is just the latest issue to weigh on smaller distributors. Amexgas also asked the government for better regulation and permits for last-mile distributors, as they estimate there are 4,000 operating in the country but the



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energy regulatory commission (CRE) has only issued 40 permits.

"We do not want sanctions or for them to be put out of business as they are an integral component of the Mexican LPG chain," Serrano said. "It is important to regulate them in the right way."

Talks with the government on both the price cap and other issues continue, he said.

Mexico has roughly 1,300 LPG distribution plants, 5,000 LPG retail stations and 35,000 tank trucks used to supply most of Mexico's 120mn population that still use the fuel widely for cooking. Mexico's LPG industry employs about 200,000 people.

By Sergio Meana

### Mexico auto output, exports tumbled in July

Mexican light vehicle production and exports fell sharply in July from the previous year, as global supply chain disruptions continued to plague the industry.

Production declined to 221,843 vehicles, a 27pc drop from the 301,815 units produced in July 2020, according to the country's statistics agency (Inegi).

Mexican vehicle exports declined by 24pc in July to 202,021 units from 264,520 units a year earlier.

The July figures marked the first time this year that monthly figures fell on an annual basis, as data had been compared to weak 2020 output that was affected by Covid-related factory shutdowns and economic contraction.

But the shortage of global semiconductors is taking a greater toll on the auto industry than previously expected. Mexico's auto parts association had forecast supply chain problems to subside by July, but automakers have continued to temporarily shut their operations in Mexico on the prolonged chip shortage.

Nissan paused operations at its Aguascalientes plant last month, while General Motors called for some stoppages as well.

Yet Mexico's domestic auto sales rose by 13pc to 82,157 in July from 72,921 a year earlier, although the figure was below July 2019 levels.

GM has led the industry in Mexico production so far this year, followed by Nissan and Stellantis, according to Inegi.

The Mexican economy has struggled to recover from Covid-19. Its export sector has received a boost from fiscal stimulus and strong consumer demand in the US, but tepid manufacturing and construction growth in recent months have raised concerns the recovery may be weaker than expected.

The Mexican Institute of Finance Executives (IMEF) index, a key measure of Mexican manufacturing activity, leveled out at 52.2 in July, signaling weak growth amid an economic recovery.

In the first seven months of the year, 76pc of Mexico's exports went to the US, while 7pc went to Canada and 5pc went to Germany, according to Mexico's Amia auto association.

By Jens Erik Gould

### Brazil's vehicle output falls to 13-month low

Brazil's vehicle output fell in July to the lowest in 13 months as the global shortage of semiconductors hindered production for another month.

Production in July fell to 163,556 vehicles, down by 4.2pc from a year earlier and 39pc less than in July 2019, before the Covid-19 pandemic hit the sector, according to vehicle association Anfavea. Output was the lowest since June 2020 and the lowest for the month of July since 2003.

Production of buses fell by 9.2pc from July 2020 and automobile output fell by 4.2pc, outweighing truck output that more than doubled.

Vehicle registrations in July rose by 0.5pc from a year earlier to 175,453 units, but still lagged behind 2019 by 28pc. Almost 79pc of newly licensed vehicles were flex-fueled –



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capable of running on E27 gasoline or E100 hydrous ethanol – followed by 16pc running on diesel and 3.3pc on gasoline. Electric vehicles represented 2.2pc of the fleet of newly-registered vehicles.

Vehicle exports in July fell to 23,766 units, down by 18pc from year earlier and a 43pc drop from 2019.

There is domestic and international demand for more vehicles than what Brazil is currently supplying, but the lack of semiconductor chips and other materials has “kept the sector from supplying everything that is demanded,” according to Anfavea’s president Luiz Carlos Moraes. The semiconductor shortage is not forecast to be resolved before 2022, he said.

By Rebecca Gompertz

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For prices used in financial benchmarks, Argus publishes daily explanations of the assessment rationale with supporting data. This information is available to permissioned subscribers and other stakeholders.

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