

HIGHLIGHTS

- European biodiesel prices firm after strong losses this week
- Prompt HVO premiums post large losses in ARA range
- UCO prices in wide range but trending down in NWE
- European renewable fuel tickets track physical lower
- Asia-Pacific biofuels: Chinese UCO falls further

MARKET COMMENTARY

NWE biodiesel price rise on stronger gasoil

Outright fob ARA range biodiesel prices rose on Friday driven by a rise of \$21.77/t in the underlying gasoil price. The RME/Fame 0 spread continued to narrow, falling to the lowest level since 2021.

The value of the spread declined to \$29.83/t, from \$35/t in the previous session, its lowest since 2 August 2021.

Trade for Fame 0 was initiated three times for 24 March-14 April loading in a \$12/t range of \$358-370/t. Spot value was assessed at the \$362.67/t traded average, up by \$2.67/t and the outright rose by \$24/t to \$1,131/t.

RME trade was initiated twice at \$390/t and \$395/t. Spot value was assessed at the \$392.50/t traded average, lower by \$2.50/t. The outright price rose by \$19/t to \$1,161/t.

Trade for Ucome was initiated at \$520/t, where spot value was assessed. This was down by \$10/t and outright Ucome rose by \$11.77/t to \$1,288.70/t.

In paper, a 2Q RME/Fame 0 spread traded twice at +\$25-30/t (\$390-400/t, \$365-370/t) for 3,000t/month, and 3Q RME/Fame 0 traded at +\$75/t (\$410/t, \$335/t) for 2,000t/month. A 2Q/3Q RME spread traded at \$25/t (\$395/t, \$420/t) for 2,000t, and April/2Q RME traded at +\$15/t (\$385/t, \$370/t) for 6,000t against 2,000t/month. 2Q/3Q Fame 0 traded at +\$35/t (\$365/t, \$330/t) for 4,000t/month and 2Q/3Q Ucome at +\$35/t (\$555/t, \$590/t) 1,000t/month.

A 2Q Ucome/Fame 0 spread traded at +\$180-185/t (\$540-555/t, \$360-370/t) for 3,000t/month. May RME traded at \$385/t for 500t, 2Q RME at \$385/t for 1,000t/month, and 2Q Fame 0 twice at \$367-370/t for 4,000t/month in total.

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PRICES

Biofuels spot prices				\$/t
RED biodiesel fob ARA range				
	Bid	Ask	±	
Palm OME	1,086.00	1,096.00	+24.00	
Rapeseed OME	1,156.00	1,166.00	+19.00	
Soya OME	1,136.00	1,146.00	+24.00	
FAME 0°C CFPP	1,126.00	1,136.00	+24.00	
FAME -10°C CFPP	1,153.00	1,163.00	+20.00	
UCOME	1,283.70	1,293.70	+11.77	
Tallow OME	1,253.70	1,263.70	+11.77	
Advanced FAME 0°C CFPP	1,363.70	1,373.70	+11.77	
RED marine biodiesel dob ARA range				
	Mid	±		
B10	575.62	+6.30		
B20	595.75	+6.61		
B30	615.87	+6.90		
B50	656.12	+7.51		
B100	741.74	+9.02		
RED hydrotreated vegetable oil (HVO) fob ARA range				
	Bid	Ask	±	
HVO (Class I) diff to 7-28 days Ice gasoil* \$/m³ (17 Mar)	+935.00	+945.00	-155.00	
HVO (Class I) diff to 7-28 days Ice gasoil* (17 Mar)	+1,198.72	+1,211.54	-198.72	
HVO (Class I)	2,031.48	2,044.30	-175.13	
HVO (Class II) diff to 7-28 days Ice gasoil* \$/m³ (17 Mar)	+939.00	+949.00	-156.00	
HVO (Class II) diff to 7-28 days Ice gasoil* (17 Mar)	+1,203.85	+1,216.67	-200.00	
HVO (Class II)	2,036.61	2,049.43	-176.41	
HVO (Class III) diff to 7-28 days Ice gasoil* \$/m³ (17 Mar)	+995.00	+1,005.00	-145.00	
HVO (Class III) diff to 7-28 days Ice gasoil* (17 Mar)	+1,275.64	+1,288.46	-185.90	
HVO (Class III)	2,108.40	2,121.22	-162.31	
*HVO-escalated				
Sustainable aviation fuel (SAF)^ fob ARA range				
	Bid	Ask	±	
SAF diff to 7-28 days Ice gasoil* \$/m³ (17 Mar)	+1,780.00	+1,790.00	nc	
SAF diff to 7-28 days Ice gasoil* (17 Mar)	+2,342.11	+2,355.26	nc	
SAF	3,196.78	3,209.93	+24.20	
^Hydrotreated Esters and Fatty Acids (HEFA-SPK)				
*SAF-escalated				
Bionaphtha fob ARA range				
	Bid	Ask	±	
Bionaphtha	2,095.00	2,105.00	-80.00	

RED biodiesel fob ARA range, premium to Ice gasoil 7-28 day

Transaction	Price (\$/t)
FAME 0°C CFPP, loading 24 Mar 2023 - 14 Apr 2023 (1,000t)	
Petroineos buys from BP	+370.00
Astra Bioplant buys from Mercuria	+358.00
Petroineos buys from BP	+360.00
Rapeseed OME, loading 24 Mar 2023 - 14 Apr 2023 (1,000t)	
Viterra B.V. sells to Shell	+395.00
Mercuria sells to Shell	+390.00
UCOME, loading 24 Mar 2023 - 14 Apr 2023 (1,000t)	
Cargill buys from BP	+520.00

Hydrotreated biofuels prices (volume)

	Bid	Ask	±
HVO fob ARA range (Class II)*	1,588.56	1,598.56	-137.60
SAF fob ARA range*	2,429.55	2,439.55	+18.40
Bionaphtha fob ARA range*	1,445.55	1,452.45	-55.20

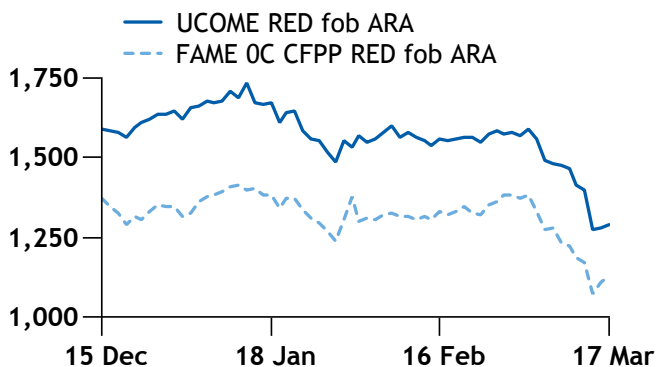
*HVO, SAF and bionaphtha have assumed densities of 0.78kg/l, 0.76kg/l and 0.69kg/l respectively.

Ice gasoil swaps

	Value	±
7 to 28 days forward	768.70	+21.77
7 to 28 days forward (HVO-escalated)	832.76	+23.59
7 to 28 days forward (SAF-escalated)	854.67	+24.20

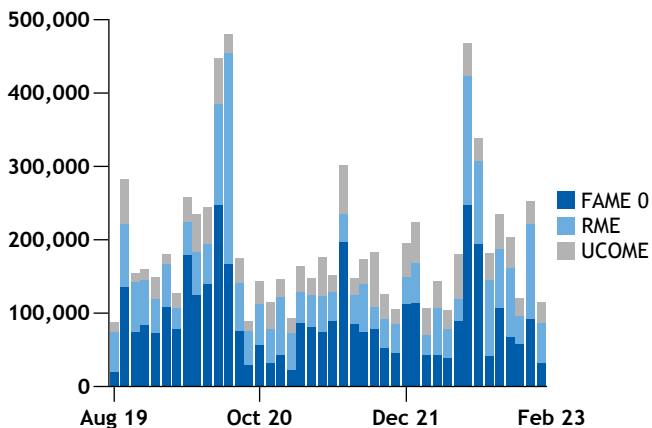
FAME 0C CFPP vs UCOME RED fob ARA

\$/t



Total trade volumes RME, Fame 0, UCOME

t



ANNOUNCEMENT

The holiday calendar showing which Argus reports are not published on which days is now available online <https://www.argusmedia.com/en/methodology/publishing-schedule>

Ice gasoil settle

Contract	Value	±
Apr	775.50	+25.25
May	743.75	+16.75
Jun	724.25	+12.50

Biofuels spot prices

	Bid	Ask	±
RED ethanol fob ARA range			
T2 premium ethanol inc duty €/m³	915.50	925.50	nc
T2 premium ethanol inc duty	1,236.89	1,250.40	+5.15
T2 premium ethanol diff to Eurobob oxy	+502.14	+515.15	
T2 ethanol inc duty €/m³	870.50	880.50	nc
T2 ethanol inc duty	1,176.10	1,189.61	+4.90
T2 ethanol diff to Eurobob oxy	+441.35	+454.36	
RED biomethanol			
Biomethanol fob ARA range netback	1,271.00	1,279.00	nc
Biomethanol fob ARA range diff to methanol	+908.64	+918.64	
Biomethanol cif UK	1,305.00	1,315.00	nc
ETBE			
ETBE fob Rotterdam (16 Mar)	972.25	973.00	-37.63
Diff to MTBE (16 Mar)			+30.00

Feedstock prices

	Bid	Ask	±
Rapeseed oil (RSO)			
Contract			
RSO fob Dutch mill	prompt	900.00	910.00 -20.00
RSO fob Dutch mill	MJJ	888.00	892.00 -20.00
RSO fob Dutch mill	ASO	925.00	935.00 -10.00
RSO fob Dutch mill	NDJ	945.00	955.00 -4.00
Sunflower oil (SFO)			
SFO fob northwest Europe 6 ports	AMJ	980.00	1,015.00 -17.50
Used cooking oil (UCO)			
UCO fob ARA range		1,085.00	1,095.00 -40.00
UCO cif ARA		985.00	995.00 -35.00
UCO ex-works Netherlands €/t		1,040.00	1,050.00 -60.00
UCO ex-works Netherlands		1,108.62	1,119.28 -59.09
Tallow fca northwest Europe			
Contract			
Tallow categories 1 and 2 €/t		810.00	820.00 -10.00
Tallow categories 1 and 2		863.45	874.11 -7.02
Tallow category 3 €/t		1,230.00	1,240.00 -15.00
Tallow category 3		1,311.16	1,321.82 -10.48
Palm oil mill effluent (POME)			
POME cif ARA		965.00	975.00 nc

Alternative marine fuels

Argus calculated the price of B30 blend of VLSFO and advanced biodiesel this week at a 29pc – or \$156.50/t – premium to VLSFO. Across the week, VLSFO had been tight in ARA due to delivery delays caused by problems in the blending process at some terminals.

The average price of B100 pure biodiesel this week was calculated at a 34pc premium to MGO, or \$251.75/t premium, compared to \$398.50/t on 10 March.

In the week, the diesel supply on the continent has started to tighten where supplies had been ample in previous sessions.

The weekly average advanced HBE-G price for 2023 compliance ticked lower by €0.16/GJ on the week to €10.80/GJ, on the back of persistent soft demand and falling spot biodiesel prices.

Advanced Fame 0 premiums over spot fob ARA range Ucome rose by \$50/t to \$80/t driven by sharp declines to the latter biodiesel. The weekly average advanced Fame 0 price was \$1,405.97/t, down from \$1,552.30/t the previous week.

Hydrotreated vegetable oil

Hydrotreated vegetable oil (HVO) premiums fell sharply in the ARA market as offers moved lower and bids were scarce.

Interest for HVO (Class II) were set in a \$850-949/m³ range at the close, but no deals were done, and the Class II premium to HVO-escalated 7-28 days Ice gasoil was assessed at \$944/m³, the midpoint of a \$10/m³ range from the best offer and down by \$156/m³ on the week.

Buying and selling interest for HVO (Class I) was in a wide \$800-1,000/m³ range by the close. Participants said crop-based HVO was still at a discount, albeit minimal, to UCO-based product and the Class I premium was assessed at \$940/m³, down by \$155/m³ on the week.

Interest for HVO (Class III) was absent from Argus Open Markets (AOM) but those in the market said that, while prices for UCO-based HVO are pressured by strong supply and limited demand, a tighter Class III market was keeping prices at a premium to Class II. But, amid sharp drops in both waste and crop-based HVO prices, the Class III premium was set at \$1,000/m³, down by \$145/m³ on the week.

Liquidity was subdued in the wider market, with relatively cheaper tickets and sharp drops in conventional biodiesel prices hitting demand. Most Chinese HVO producers have planned maintenance, with one firm saying it will have a one-month-turnaround for each plant in the next few weeks.

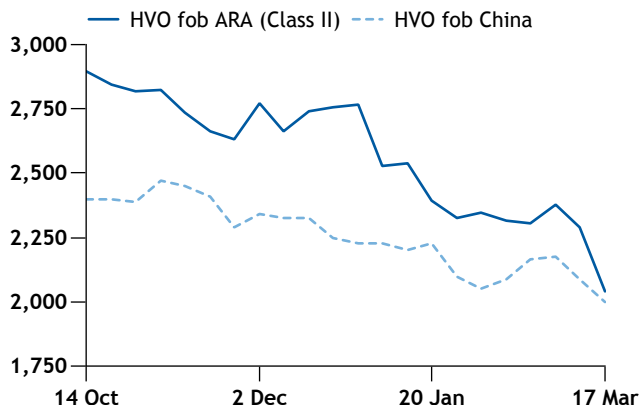
The used cooking oil (UCO)-based fob ARA range bionaphtha price hit fresh lows as selling interest softened in northwest Europe, while demand was subdued from both petrochemicals and road transport.

Gasoil spreads		\$/t	
	Month	Value	±
Palm oil-gasoil spread (Pogo)	Jun	147.25	-17.25
Bean oil-gasoil spread (Bogo)	Jul	549.25	-6.00

RED swaps and forward physical prices		\$/t	
Contract		Mid	±
RME RED swap			
Apr		1,120.00	-25.00
May		1,108.00	-11.00
Jun		1,105.00	+2.00
3Q 23		1,114.00	-24.00
4Q 23		1,125.00	-24.00
1Q 24		1,107.00	-26.00
Fame 0°C CFPP RED swap			
Apr		1,115.00	nc
May		1,083.00	-11.00
Jun		1,065.00	-13.00
3Q 23		1,034.00	-24.00
4Q 23		1,000.00	-19.00
1Q 24		982.00	-21.00
UCOME RED swap			
Apr		1,300.00	-15.00
May		1,268.00	-16.00
Jun		1,245.00	-13.00
3Q 23		1,279.00	-14.00
4Q 23		1,260.00	-4.00
1Q 24		1,242.00	-6.00
PME RED forward physical			
Apr		1,075.00	nc
May		1,043.00	-11.00
Jun		1,035.00	-13.00
3Q 23		1,014.00	-24.00
4Q 23		980.00	-19.00
1Q 24		952.00	-21.00
SME RED forward physical			
Apr		1,115.00	nc
May		1,083.00	-11.00
Jun		1,070.00	-13.00
3Q 23		1,044.00	-24.00
4Q 23		1,030.00	-19.00
1Q 24		1,022.00	-21.00
Fame -10°C CFPP RED forward physical			
Apr		1,120.00	-22.00
May		1,106.00	-11.00
Jun		1,101.00	nc
3Q 23		1,106.00	-24.00
4Q 23		1,113.00	-23.00
1Q 24		1,095.00	-25.00
Ethanol NWE T2 RED swap €/m ³			
Apr		877.00	+6.00
May		869.00	+1.00
Jun		852.00	-5.00
3Q 23		813.00	-11.00
4Q 23		771.00	-6.00
1Q 24		761.00	-4.00

RED HVO fob ARA (Class II) vs HVO fob China

\$/t



Sustainable aviation fuel

The hydroprocessed esters and fatty acids synthetic paraffinic kerosene (HEFA-SPK) premium was unchanged on the week, but the outright price moved lower in line with losses in SAF-escalated 7-28 days Ice gasoil.

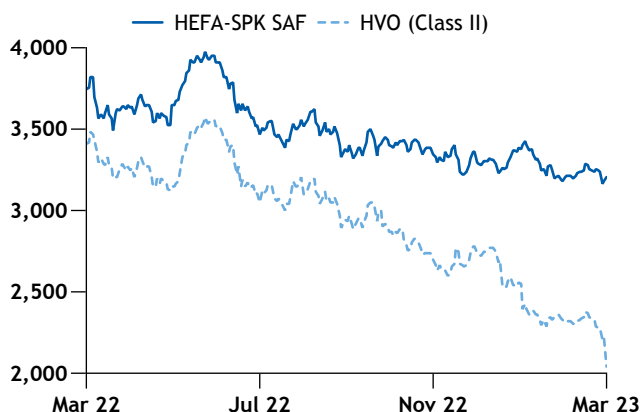
Values for HEFA-SPK were largely heard at a premium of around \$2,400/t to fossil jet, while indications for co-processed SAF were in a wide range, depending on location and sustainability certifications. Pressure on UCO and HVO values has so far had a limited impact on SAF prices, according to participants, with offers reported at premiums of up to \$2,600/t over fossil jet. But softer HBEs in the Netherlands has seen some buyers lower bids.

Jet fuel prices dropped this week because of sharp declines to Ice Brent crude and Ice gasoil futures prices. Europe is over-supplied with jet fuel with demand not yet at pre-pandemic levels. More flows are arriving from east of Suez and jet fuel refinery output increased in February.

The HEFA-SPK premium to SAF-escalated Ice gasoil was unchanged at \$1,785/m³ on Friday, but the outright was lower on the week at \$3,203.36/t. This equates to a premium of around \$2,408/t to the weekly jet fuel average.

HEFA-SPK SAF vs HVO (Class II) fob ARA

\$/t



Food and feed crop feedstocks

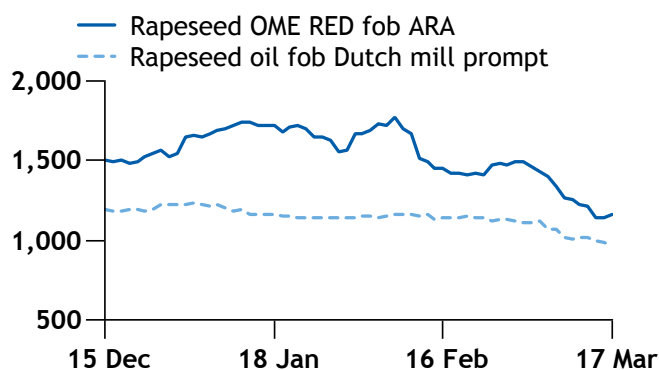
Fob Dutch mill rapeseed oil (RSO) prices continued to fall across the curve on Friday, tracking losses in the wider vegetable oil complex.

May-June-July (MJJ) changed hands at €890/t, informing the strip's assessment at €888-892/t, pulling the midpoint down by €20/t on the session. No interest was heard for March and offers for April had fallen by €20/t on the session to €910/t by Friday. In the absence of spot trade, prompt RSO 5-40 days loading was assessed in line with €20/t losses in April offers and MJJ, the next closest strip, at €900-910/t.

August-September-October (ASO) was bid-offered and assessed at €925-935/t, softening the strip by €10/t from Thursday. Interest in November-December-January (NDJ) was heard at €940-955/t. The strip was set in a €10/t range from the most competitive offer at €945-955/t, easing by €4/t.

Rapeseed OME RED fob ARA vs RSO prompt

\$/t



Waste and advanced feedstocks

Used cooking oil (UCO) prices posted strong losses on Friday, tracking softer Ucome prices on the week.

UCO cif ARA was assessed at \$985-995/t, down by \$35/t on the day and \$60/t on the week. Traded levels and wider interest was far apart in the second half of the week. UCO cif ARA with maximum 6.5pc free fatty acid, 1.5pc moistures, impurities and unsaponifiables, and minimum 80 iodine value (IV) traded at \$975/t. Offer were heard as high as \$1,040/t for UCO with max 5pc FFA, minimum 80 IV, and sulphur content of 50ppm. A trade with EUR1 was heard at \$1,050/t in the previous session.

Trade ex-works Netherlands was in a wide range on Friday. The assessment softened by €60/t to €1,040-1,050/t with some deals well below that. Trades were heard below €1,000/t with around standard specifications, but also well above the assessed level.

UCO fob ARA range was without bids or offers for loading between 24 March to 14 April on Argus Open Markets (AOM).

But outside the window, trade was also reported between \$1,050-1,200/t. The Argus assessment moved lower by \$40/t on the session and \$65/t from 10 March, to \$1,085-1,095/t. This was in line with price declines in the wider European UCO and Ucome markets, but taking into account higher traded levels.

Activity was muted on European animal fats markets, but prices softened, tracking losses in the wider waste feed-stocks market and HVO (Class III) prices.

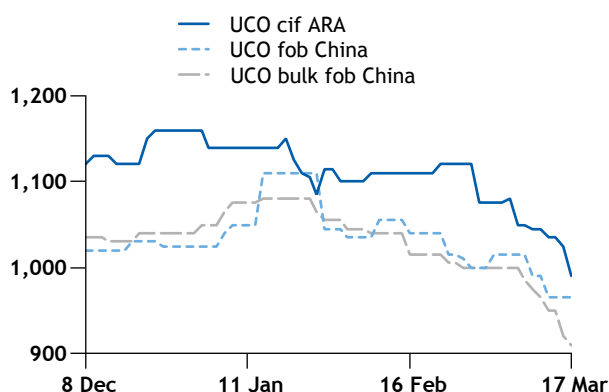
Tallow category 1 and 2 prices softened by €10/t on the session to €810-820/t, but this was €70/t lower than 10 March. Participants said that they expect prices to ease further on the back of falling tallow methyl ester (TME) prices, but no trades were reported in the second half of the week to support a significant drop.

The tallow category 3 assessment was set at €1,230-1,240/t on Friday, down by €15/t on the day and from 10 March at €1,245-1,255/t.

Palm oil mill effluent (Pome) prices eased in the week on the back of lower demand. The Argus Pome cif ARA assessment was set at \$965-975/t, unchanged on the session but down by \$10/t from 10 March.

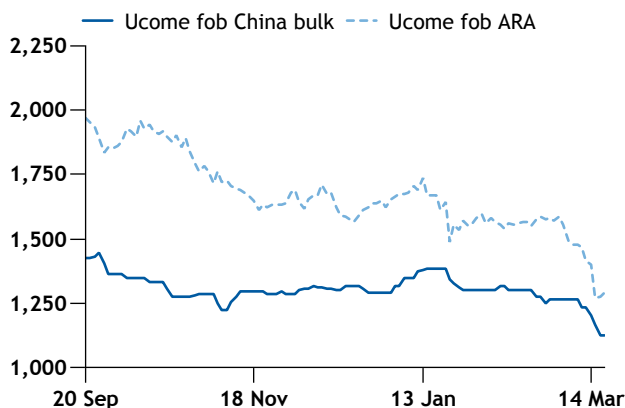
UCO cif ARA vs fob China

\$/t



RED Ucome fob China vs Ucome fob ARA

\$/t



European ethanol

T2 spot ethanol prices were unchanged on Friday as interest remained wide in the ARA hub.

No barges changed hands in Friday's afternoon window. At the close of interest, bids remained at €860/m³ and €864/m³ for 25-29 March loading, against a €890/m³ offer for the same loading dates. Another offer remained at €888/m³ for later 28 March-1 April loading.

Argus left the T2 spot ethanol price unchanged at €875.50/m³, while the minimum 85pc GHG savings ethanol remained at €920.50/m³.

The premium for 85pc GHG narrowed by €10/m³ to €45/m³ in the previous session because an increase in imports into the ARA region eased supply pressures.

Trade for lower GHG savings ethanol paper reported to Argus comprised 3Q/1Q at +€52-55/m³ (€812-815/m³, €760/m³), 4Q/1Q at +€10/m³ (€770/m³, €760/m³), 2Q/4Q at +€91/m³ (€866/m³, €775/m³) and 2Q three times at €866/m³.

Renewable fuel tickets

Tickets markets for 2023 continued to move lower on the back of softer physical biofuel values and thinning demand.

Prices in Germany for greenhouse gas (GHG) emission reduction certificates continued on a downward trajectory, slipping to levels last seen in May 2021.

Participant said that a rise in physical volumes of advanced biodiesel in Germany is reducing the need for 2023 GHG credits and has stunted liquidity. For 2023, Other GHG credits traded once at €290/t CO₂e on Tuesday with bids and offers falling to €280-290/t CO₂e on Friday, down by €27.50/t CO₂e on the week. 2023 double-counting credits fell by €50/t CO₂e to €565-575/t CO₂e. Conventional and IXB certificates for 2023 were lower by €28/t CO₂e and €25.50/t CO₂e, respectively, with bids and offers at €250-260/t CO₂e and €255-270/t CO₂e on Friday. The premium for 2023 advanced single-counting GHG credits was at €3.10-3.40/GJ range.

For 2022, Other GHG credits traded at €280/t CO₂e early in the week with bids and offers at €270-285/t CO₂e on Friday, down by €27.50/t CO₂e on the week. Conventional and IXB credits stood at €240-260/t CO₂e and €245-265/t CO₂e. The premium for 2022 advanced single-counting GHG credits was at €3.00-3.25/GJ, while 2022 double-counting certificates were lower by €58/t CO₂e at €540-560/t CO₂e.

In the Netherlands, activity picked up for 2022 renewable fuel units (HBE). Some obligated parties have room to carry over tickets and were buying 2022 HBEs. 2022 HBE-Gs traded at €9.45/GJ and €9.50/GJ midweek and again at €9.30/GJ later in the week. Bids and offers fell by €0.20/GJ to €9.10-9.50/GJ on Friday. 2022 HBE-Os were at parity with HBE-Gs, HBE-IXBs were at €8.90-9.40/GJ, down by €0.05/GJ

on the week. 2022 HBE-Cs were flat at €8-9/GJ. For 2023, HBE-Gs and -Os ticked lower by €0.22/GJ to €10.10-10.75/GJ and HBE-IXBs were down by €0.15/t CO₂e on the week at €10.00-10.60/GJ. HBE-Cs fell to €8.20-9.00/GJ.

In the UK, buying interest for 2022 RTFCs was strong with companies looking to buy to meet final compliance, but supply was scarce. Prices for 2023 declined tracking falling Ucome values. But 2023 RTFCs remained firmer than the relative physical blend cost of Ucome.

2023 Other RTFCs traded at 27p/RTFC and 26.50p/RTFC with interest in a 25-26.50p/RTFC range on Friday, down by 1.75p/RTFC on the week. 2023 Crop RTFCs had a discount of 0.5p/RTFCs to Other RTFCs. 2022 Other RTFCs firmed by 1.50p/RTFC on the week, set in a 29-31p/RTFC range on Friday. 2022 Crop RTFCs were at 28.50-30.50p/RTFCs.

Renewable gas GOOs

Renewable gas guarantee of origin (RGGO) prices in the UK, Denmark and the Netherlands moved largely sideways this week, apart from waste-based UK certificates, which softened along the curve.

Participants said the Greenhouse Gas (GHG) Protocol update on its scope 2 guidance still creates insecurity in the European biomethane markets. The initiative, a collaboration between World Resources Institute and the World Business Council for Sustainable Development, on 14 March closed a survey seeking feedback on possible changes to its framework for reporting emissions associated with energy consumption. The GHG Protocol secretariat will now analyse responses and determine whether it will progress updates. It would then publish updated guidance in early 2025.

UK waste RGGOs for 2023 vintage fell by £1.25/MWh on the week to £34/MWh, while 2022 waste RGGOs stood at £33/MWh, lower by £0.75/MWh.

In Denmark, waste RGGOs traded at €51.50/MWh with interest for 2023 set in a €50-54/MWh range. And manure-based RGGOs with a maximum carbon intensity of -90g CO₂/MJ changed hands at €69.50/MWh.

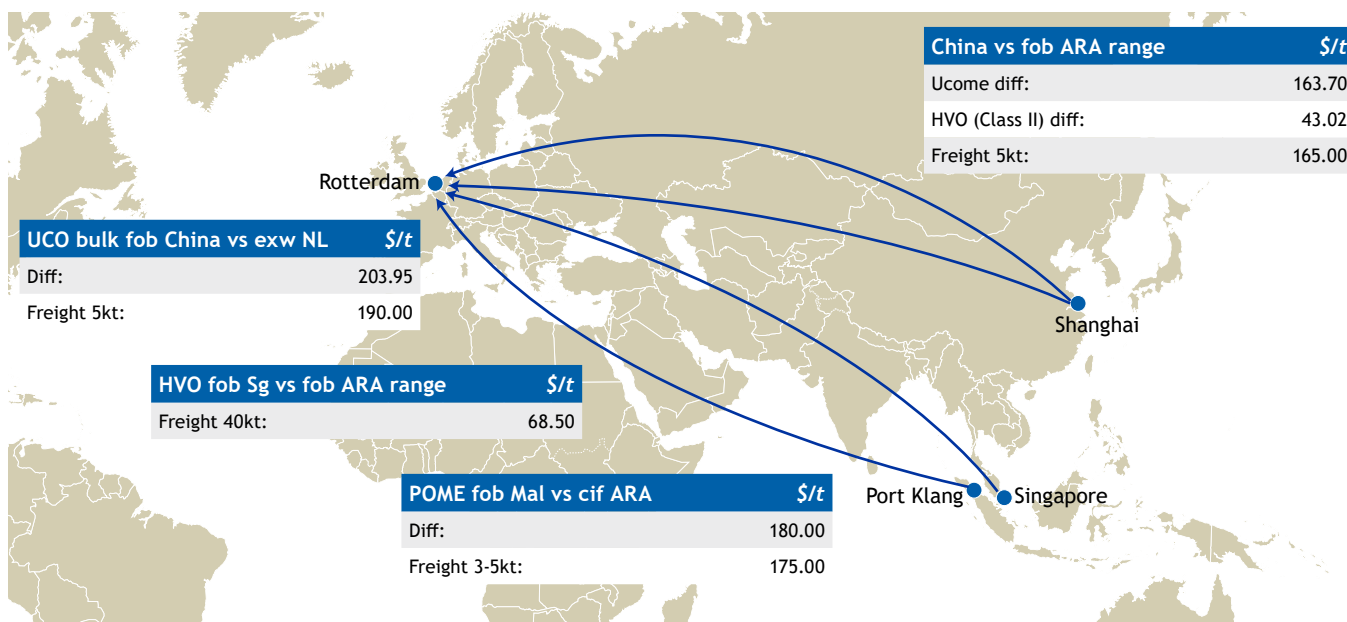
In the Netherlands, bids and offers for unsubsidised product emerged at €65-73/MWh and subsidised 2023 European waste RGGOs traded at around €37/MWh.

In Latvia, the domestic gas transmission operator (TSO) Conexus Baltic Grid has announced the development of the region's first centralised biomethane injection points into the common gas transmission system. Canada-based biomethane producer Anaergia has commissioned a 3.9mn m³/yr biomethane plant in Northern Italy. And British waste management company Transwaste have ordered a biogas upgrader from Finland's Wartsila to produce 6 million m³/yr (63.3GWh/yr) of biomethane from waste for the UK grid.

Renewable fuel ticket prices		
	Bid	Ask
German GHG reduction obligation*		
Conventional GHG quota		
2022	240	260
2023	250	260
Single-counting advanced GHG quota €/GJ		
2022	3.00	3.25
2023	3.10	3.40
Double-counting advanced GHG quota		
2022	540	560
2023	565	575
Other GHG quota		
2022	270	285
2023	275	290
Annex IX part B GHG quota		
2022	245	265
2023	255	270
Netherlands renewable fuel unit**		
Conventional renewable fuel unit (HBE-C)		
2022	8.00	9.00
2023	8.20	9.00
Advanced renewable fuel unit (HBE-G)		
2022	9.10	9.50
2023	10.10	10.75
Other renewable fuel unit (HBE-O)		
2022	9.10	9.50
2023	10.10	10.75
Annex IX part B renewable fuel unit (HBE-IXB)		
2022	8.90	9.40
2023	10.00	10.60
<i>*Treibhausgasminderungsverpflichtung **Hernieuwbare brandstofeenheden</i>		
UK renewable transport fuel certificate		
Crop-based RTFC		
2022	28.50	30.50
2023	24.50	26.00
Other RTFC		
2022	29.00	31.00
2023	25.00	26.50

Renewable gas guarantees of origin (16 Mar)					
	Unit	Bid	Ask	Mid	±
Denmark					
2022 crop	€/MWh	29.50	31.50	30.50	nc
2023 crop	€/MWh	31.00	33.00	32.00	nc
2024 crop	€/MWh	31.50	33.50	32.50	nc
2022 waste	€/MWh	49.00	52.00	50.50	-0.50
2023 waste	€/MWh	50.00	54.00	52.00	nc
2024 waste	€/MWh	50.50	54.50	52.50	nc
Netherlands					
2022 crop	€/MWh	30.00	32.00	31.00	nc
2023 crop	€/MWh	30.50	32.50	31.50	nc
2024 crop	€/MWh	31.50	33.50	32.50	nc
2022 waste	€/MWh	49.00	52.00	50.50	-0.50
2023 waste	€/MWh	50.00	54.00	52.00	nc
2024 waste	€/MWh	50.50	54.50	52.50	nc
UK					
2022 crop	£/MWh	20.00	23.00	21.50	nc
2023 crop	£/MWh	21.00	24.00	22.50	nc
2024 crop	£/MWh	21.50	24.50	23.00	nc
2022 waste	£/MWh	32.00	34.00	33.00	-0.75
2023 waste	£/MWh	33.00	35.00	34.00	-1.25
2024 waste	£/MWh	33.50	35.50	34.50	-1.25

International biofuels / feedstock differentials and freight



Asia-Pacific biofuels: Chinese UCO falls further

Chinese domestic and export used cooking oil (UCO) prices fell further on 17 March as demand continued to weaken, following sharp losses in UCO methyl ester (Ucome) prices in Europe this week.

There were no bids or offers on the Asian Argus Open Markets (AOM) window for Chinese products loading between 16-29 April.

Outside AOM, standard bulk UCO was offered at \$920-940/t fob China against bids below \$900/t fob from European buyers on 17 March. No fresh negotiations for premium bulk UCO emerged. China bulk UCO as a result was assessed at \$900-920/t fob with the best bid/offer level and premium UCO fell in line with regular products.

A deal for 200t regular flexibag UCO closed at \$1,030/t cif Amsterdam-Rotterdam-Antwerp (ARA) early this week before the market dropped but emerged on 17 March. The seller said container freight from south China to the ARA hub was now between \$800-1,100 depending on the shipping line. Most market participants agreed that the workable price dropped further during the second half of this week.

Domestic UCO continued to fall with softer offers between 6,700-6,800 yuan/t (\$972-987/t) dap including value-added tax (VAT) against a stable best bids at around Yn6,500/t dap with VAT.

There were no fresh indications for Chinese Ucome on 17 March as most participants were cautious about giving numbers without a clear sign of when the market would bottom out. China Ucome as a result was assessed flat at \$1,050-1,200/t fob on 17 March.

International biofuels spot prices			\$/t
	Bid	Ask	±
RED biodiesel			
BGME fob China	1,050.00	1,200.00	nc
UCOME fob China	1,050.00	1,200.00	nc
UCOME fob Straits of Malacca	1,045.00	1,195.00	nc
PME fob Malaysia	825.00	1,085.00	+22.50
PME fob Indonesia	730.00	1,065.00	+27.50
Biodiesel			
PME ex-works Indonesia	912.00	916.00	+13.00
SME fob Argentina upriver (16 Mar)	1,482.60	1,493.62	+12.05
Houston fob B100 (16 Mar)	1,664.23	1,679.18	+18.26
Houston fob B100 (16 Mar) €/USG	556.60	561.60	+6.11
Marine biodiesel			
B24 dob Singapore	797.50	817.50	+9.50
RED hydrotreated vegetable oil (HVO)			
HVO fob China (17 Mar)	1,950.00	2,050.00	-85.00
HVO fob Singapore (Class I) netback	1,962.98	1,975.80	-168.13
HVO fob Singapore (Class II) netback	1,968.11	1,980.93	-169.41
HVO fob Singapore (Class III) netback	2,039.90	2,052.72	-155.31
Sustainable aviation fuel (SAF)*			
SAF fob Singapore netback	3,128.28	3,141.43	+31.20
*Hydrotreated Esters and Fatty Acids (HEFA-SPK)			
Bionaphtha			
Bionaphtha cfr northeast Asia	2,200.00	2,250.00	-65.00
Ethanol			
fob Pakistan	930.00	960.00	+5.00
fob Pakistan (hydrous)	860.00	890.00	+5.00
cfr Mumbai	835.00	855.00	nc
cfr Philippines \$/m ³	680.00	700.00	nc
B-grade cfr northeast Asia \$/m ³	750.00	800.00	nc
cfr China	655.00	850.00	+7.50

Most hydrotreated vegetable oil (HVO) producers had planned maintenance for their plants, with one firm saying it will have a one-month-turnaround for each plant in the next few weeks. But this did not stop HVO prices falling along with limited buying interest from Europe.

Pome firmer

The southeast Asian UCO and Ucome markets closed the week quietly, with no activity posted on AOM.

Outside AOM, bulk UCO indicative offers were at \$960/t fob strait of Malacca, following a weaker Chinese market and poor buying interest for the feedstock. This assessment is now \$35/t above bulk UCO fob China, as buyers prioritise low-free fatty acid content over high iodine value moving into the summer months in Europe.

Indonesian palm oil mill effluent (Pome) was sold on 17 March at \$795/t fob Belawan for 5,000t loading in the second half of April to a Chinese HVO producer. Another trade for Pome was done at \$800/t fob Indonesia for 8,000t, according to a trader, with the shipment part of a co-loading cargo heading to China. Other bulk offers emerged at \$770-790/t fob Indonesian ports, while a Pome flexibag offer surfaced at \$800/t fob Jakarta, but no corresponding bids emerged.

Freight rates continued on a downtrend from last week, pressured by weaker clean product tonnage demand in Asia. Exports from China have fallen as domestic demand for jet fuel, gasoline and gasoil from the construction sector strengthens, while turnarounds at many northeast Asian refineries have also curbed exports.

A 25,000t cargo of UCO and Ucome was fixed this week to load on the UACC Riyadh between north China and ARA loading at the end of March at a rate of \$136/t. Another 25,000t of UCO, Ucome and palm oil was fixed to load between two ports in the strait of Malacca and Spain at the end of March for a lump sum of \$3mn.

A 28,000t cargo of UCO loaded at two ports in China and one port in the strait of Malacca during the first half of this month on SC Shipping, which will sail to the US Gulf coast (USGC) for a lump sum rate of \$4mn. A shipping enquiry for 18,000-30,000t of UCO shipping from two ports in China to the USGC, loading over 5-15 April, is in the market.

Ethanol cargo delivered to India

Delivered ethanol values to Asia were largely flat against the previous week, with gains in ethanol prices fob Houston offsetting lower freight rates from the USGC.

The NCC Nasma berthed at India's Mumbai on 14 March this week, carrying a 18,000t cargo of industrial ethanol from the USGC. The cargo done between \$840-850/t cfr Mumbai in mid-February. Another 16,000t cargo loaded on

International feedstock spot prices			\$/t
	Bid	Ask	±
RED feedstocks			
Brown grease dap China CNY/t	5,500.00	5,700.00	-50.00
Brown grease dap China	797.45	826.45	-6.83
UCO dap China CNY/t	6,500.00	6,700.00	-150.00
UCO dap China	942.44	971.44	-21.25
Premium UCO bulk fob China	930.00	960.00	-10.00
UCO bulk fob China	900.00	920.00	-10.00
Premium UCO diff to UCO bulk fob China		+35.00	
UCO fob China	950.00	980.00	nc
UCO fob Indonesia	970.00	1,005.00	nc
UCO bulk fob Straits of Malacca	930.00	960.00	+5.00
UCO fob Vietnam	980.00	1,000.00	nc
POME fob Malaysia/Indonesia	780.00	800.00	+10.00
Feedstocks			
Palm olein Malaysia/Indonesia fob			
Prompt	950.00	970.00	+7.50
May	937.50	957.50	+10.00
Jun	922.50	942.50	+10.00
Jul	912.50	932.50	+10.00
Arg SBO diff to CBOT 1st mth (16 Mar) €/lb	-9.50	-9.00	

Freight (17 Mar)			\$/t
	Size '000t	Bid	Ask ±
Malaysia - ARA			
Palm Oil	15-30	85.00	90.00 -8.00
PME	3-5	145.00	155.00 -10.00
UCO/Pome	3-5	170.00	180.00 -10.00
Malaysia - West Med			
Palm Oil	15-30	80.00	85.00 -8.00
PME	3-5	140.00	150.00 -10.00
UCO/Pome	3-5	165.00	175.00 -10.00
Singapore - ARA			
HVO	40	66.00	71.00 -7.00
China - ARA			
UCO	5	185.00	195.00 -10.00
Ucome/HVO	5	160.00	170.00 -10.00
US - China			
Ethanol	40-50	59.00	74.00 +6.50

Reference prices			\$/t
	Month	Settle	±
CBOT soybean oil futures (16:30 London time)			
	May	1,263.47	+4.19
	Jul	1,264.79	+4.41
	Aug	1,252.89	+4.85
Malaysia palm oil futures			
	Apr	903.23	-3.82
	May	886.29	-5.22
	Jun	871.57	-4.63
	Bid	Ask	±
Glycerine fob SE Asia	270.00	290.00	nc

the USFC during the first half of this month heading to India, having traded at \$870-880/t cfr at the end of February.

Pakistani extra neutral alcohol was offered at \$890/t fob Karachi but a trader said this was too high, with European buyers unwilling to pay above \$860/t.

Chinese fuel-grade ethanol prices remained stable this week at Yn7,350-7,450/t ddp Shandong with the price mutually agreed between producers and national oil firms.

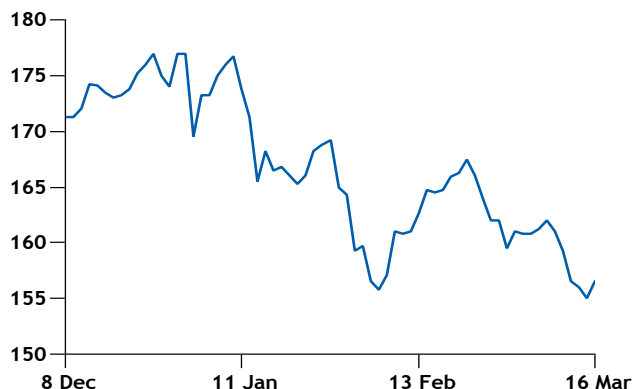
US biofuels

RIN credits gained value despite thinning activity as the session progressed. The Argus Renewable Volume Obligation (RVO) rose by 0.17¢/USG on the session to 18.86¢/USG.

Ethanol D6 RIN credits from 2023 last traded at 154¢/RIN, a 1.25¢/RIN gain from the previous session. Prior year credits were last bid and offered at 155¢/RIN and 155.5¢/RIN, respectively. Deals were closed for 2023 biomass-based diesel RIN credits at 157.5¢/RIN. Last reported buying interest was at the same level, while selling interest was posted at 159¢/RIN, equating to a rise of 1.75¢/RIN. Cellulosic biofuel RIN credits received buying interest at 195¢/RIN.

Ethanol market activity further dwindled to start the session. Chicago Rule 11 railcars rose shipping next week were bid at 219¢/USG with no offer. Values for prompt in-tank transfers at Kinder Morgan's Argo terminal were unchanged, as were New York Harbor front month barges.

RIN biomass-based diesel (D4) current year ¢/RIN



Americas

The Argentinian soybean oil market ticked down this week, running counter to stronger futures benchmark values.

Discounts for April widened by 0.05¢/lb to CBOT -9.25¢/lb. Buyers took at least 2,000t of soyoil delivered in May-July strip at CBOT -9.2¢/lb. In Chicago, futures benchmark for May had gains closing at 57.73¢/lb, up by 57.73¢/lb. RED-certified biodiesel edged up by \$7.14/t to \$1,488/t fob Rosario.

Biodiesel spot price averages March to date		\$/t	
		Bid	Ask
RED			
Palm OME fob ARA range		1,183.38	1,193.38
Rapeseed OME fob ARA range		1,304.69	1,314.69
Soya OME fob ARA range		1,251.08	1,261.08
FAME 0°C CFPP fob ARA range		1,236.46	1,246.46
FAME -10°C CFPP fob ARA range		1,297.92	1,307.92
UCOME fob ARA range		1,445.79	1,455.79
Tallow OME fob ARA range		1,401.94	1,411.94
Advanced FAME 0°C CFPP fob ARA range		1,507.33	1,517.33
International			
RED Ucome fob China		1,192.31	1,260.00
RED PME fob Malaysia		951.92	1,115.00
RED PME fob Indonesia		842.69	1,073.08
SME fob Argentina (to 16 Mar)		1,477.21	1,501.82
HVO spot price averages March to date		\$/t	
		Bid	Ask
RED			
HVO fob ARA range (Class I)		2,266.48	2,279.30
HVO fob ARA range (Class II)		2,282.66	2,295.48
HVO fob ARA range (Class III)		2,331.57	2,344.39
International			
RED HVO fob China		2,013.33	2,160.00
Feedstocks spot price averages March to date		\$/t	
		Bid	Ask
RED			
RSO fob Dutch mill prompt €/t		978.85	988.85
UCO fob ARA range		1,085.00	1,095.00
UCO cif ARA		1,045.38	1,055.38
UCO ex-works Netherlands		1,203.71	1,214.34
Tallow (categories 1 and 2) fca northwest Europe		939.19	949.82
Tallow (category 3) fca northwest Europe		1,325.17	1,335.80
POME cif ARA		974.62	984.62
International			
RED premium bulk UCO fob China		996.92	1,032.31
RED bulk UCO fob China		960.77	986.15
RED POME fob Malaysia/Indonesia		776.92	802.31
Ethanol spot price averages March to date		\$/t	
		Bid	Ask
RED			
T2 premium ethanol fob ARA range inc duty €/m³		922.75	932.75
T2 premium ethanol fob ARA range inc duty		1,243.25	1,256.73
T2 premium ethanol diff to Eurobob oxy		+458.77	+471.75
T2 ethanol fob ARA range inc duty €/m³		869.29	879.29
T2 ethanol fob ARA range inc duty		1,171.22	1,184.69
T2 ethanol diff to Eurobob oxy		+386.74	+399.71
International			
fob Pakistan		926.15	954.62

NEWS

Poland's biodiesel, ethanol output falls in 4Q 2022

Poland's ethanol production fell in the fourth quarter of last year and biodiesel output edged lower, with significant falls recorded in volumes of waste-based biodiesel, according to data released by Poland's National Support Centre for Agriculture (KOWR).

Poland produced 76,500t of ethanol in the fourth quarter of 2022 – a fall of 7.5pc on the quarter but up by 16pc when compared with the same period a year earlier. Of this total share, 8pc or 6,000t of ethanol was eligible for double counting. This up 12.3pc from the previous quarter and by 32.6pc on the year. Poland's production of crop-based ethanol fell by 8.9pc on the quarter to 70,400t – but this was 9,000t higher than the fourth quarter of 2021.

Production of waste-based biodiesel, primarily from used cooking oil (UCO) feedstock, reached 19,700t in the fourth quarter, a fall of 5,350t compared with July-September. The output of crop-based biodiesel, mainly from rapeseed oil (RSO) feedstock, was steady compared with the third quarter at 234,400t in the last quarter of 2022.

Poland's biofuel blending mandate was 8.8pc last year, rising to 8.9pc in 2023 and 9.1pc in 2024. This year, the country aims to reach 6.2pc of biodiesel and 3.2pc of ethanol in its total road fuel energy share.

Beginning in 2018, Poland's biofuels mandate allows the double counting of waste-based fuels produced from feedstocks found in Annex IX of the Renewable Energy Directive (RED II), and the country currently has a 7pc crop cap.

By Portia Kentish

Proposed Asia-Pacific biofuels publishing change

Argus proposes to assess and publish Asia-Pacific biofuels prices on UK public holidays that are not also public holidays in Singapore because of the growing independence of the regional market. Fob Singapore netbacks for HVO and SAF will continue to follow the UK holiday schedule. A full publishing schedule is available at www.argusmedia.com.

Argus will accept comments on this proposed change until 24 March 2023. To discuss comments on this proposal, please contact Amma Parmar at amandeep.parmar@argusmedia.com. Formal comments should be marked as such and may be submitted by email to biofuels@argusmedia.com and received by 24 March 2023. Please note, formal comments will be published after the consultation period unless confidentiality is specifically requested.

French wheat conditions best in many years

Earlier worries about the 2023-24 French soft wheat crop have dissipated following recent rainfall, with the percentage of acreages rated "excellent" at their highest since the 2017-18 season, according to agricultural and sea products agency FranceAgriMer.

And conditions could further improve as next week's prospects also look favourable to the crops – rainfall in central and northern France is set to provide sufficient moisture for wheat and barley development, according to state meteorological agency MétéoFrance.

FranceAgriMer rated 5pc of French soft wheat areas as "excellent" as of 12 March, up by one percentage point (pp) on the week and by three pp on the year.

FranceAgriMer rated 95pc of the crop as "good-to-excellent", in line with week-ago levels but an improvement from last season's 92pc.

And development is advancing faster than last season, with just over a third of the crop having reached the "ear-at-1cm" stage as of 12 March on average nationally, ahead of last season by 22pp. In the northern Hauts-de-France region – accounting for over 20pc of French soft wheat output – 15pc of crop was reported at the "ear-at-1cm" stage, compared with just 2pc a year ago.

French durum wheat crop conditions also improved in the week ending 12 March, with 11pc of areas now rated "excellent" and 92pc "good-to-excellent" – the latter rating representing a one pp improvement on the week and four pp on the year.

French winter barley crop conditions were also stable on the week, with 92pc of the crop rated "good-to-excellent" compared with 89pc a year ago. But development is slightly lagging last season's pace by one pp, with 8pc of areas having reached the "ear-at-1cm" stage as of 12 March. This is, however, in line with the previous five-year pace.

By Anna Sneiderman

French refineries to halt operations as strikes deepen

Four out of France's six refineries are stopping operations or plan to stop by 20 March, as industrial action deepens over changes to pension rights.

Workers and union officials say the refineries are shutting in response to the government's decision to force through its new pensions law using a controversial clause of the constitution that allows it to pass regulations without a vote in parliament. It also appears that refineries are running short of crude, as strikes by dockers and port workers hamper discharge. The contentious passage of the pension

reforms on 16 March, which include raising the eligible age to 64 from 62, has triggered widespread strikes and protest action across France today. Roads, ports and railway lines have been blockaded. A string of parliamentary parties have also tabled a no confidence motion in the government of prime minister Elisabeth Borne. "Anger is rising," one refinery worker said.

TotalEnergies' 219,000 b/d Donges and 246,900 b/d Gonfreville refineries, UK-Chinese refiner Petroineos' 210,000 b/d Lavera plant and ExxonMobil's 207,100 b/d Port Jerome refinery should all be closed by Monday, according to workers. Donges is still running at the moment but workers there voted to extend their strike by another week to 24 March. No deliveries of oil products are leaving the plant.

"With the blockade of deliveries, we will indeed have to stop certain units once maximum stock levels are reached," TotalEnergies said. "But this will be done unit by unit, depending on the situation."

At the French Mediterranean terminal of Fos-Lavera, 4.3mn bl of crude is waiting at the mouth of the port, including around 1.2mn bl of Libyan grades – Mellitah, Sirtica and Amna – 1mn bl of Caspian CPC Blend and 1.9mn bl of Angolan Olombendo. The latter is likely to be split with another port. A small cargo of 200,000 bl of Italian crude has been waiting to unload at Fos-Lavera since 25 February.

The Fos refinery is still operating but at very low run rates. Products are being allowed to leave by striking staff, as storage tanks there are full. "Some products are being let out on a spot basis," workers said. Meanwhile, the Port Jerome refinery near the northern Atlantic port of Le Havre is shutting as it does not have enough crude to maintain throughput, workers said. Refinery staff there had previously voted to return to work. The adjacent Gravenchon petrochemical plant will also halt operations.

No crude appears to have discharged at Le Havre since 10-11 March after a vessel delivered around 700,000 bl of US WTI. Two cargoes are waiting at sea including around 1mn bl of Nigerian Odudu on the *Maran Solomon*, which has been anchored near Le Havre since the start of the month. A 600,000 bl cargo of Libyan Brega is also waiting.

By Adam Porter

DCC to supply Air Greenland with SAF

Aviation fuel supplier DCC Shell Aviation will supply Air Greenland with sustainable aviation fuel (SAF).

SAF will make up as much as 5pc of the fuel consumption on the airline's route between Kangerlussuaq, Greenland, and Copenhagen, Air Greenland said. The SAF will be produced from biowaste. DCC Shell Aviation Denmark, a joint venture between Shell Aviation and DCC Energy,

supplies SAF to Danish aircraft operator [Alsie Express](#) and signed a letter of intent to supply [Scandinavian Sunclass Airlines with synthetic SAF](#).

By Daniel Khalupsky

US RIN generation rose 12pc in February: EPA

US generation of RIN credits last month rose by 12pc from a year earlier, driven largely by gains in renewable diesel and biodiesel credits.

Total RIN generation in February rose to 1.72bn, up from 1.54bn in February 2022, according to the US Environmental Protection Agency (EPA). On a daily basis, February generation increased to 61.4mn RINs/d, up from 56.5mn RINs/d in January. Ethanol D6 RINs increased last month to 1.13bn, up by 5.6pc from February 2022.

Biomass-based diesel D4 RIN generation rose to 514mn, up by 30pc from a year earlier. About 81pc of D4 RINs generated in February came from non-ester renewable diesel and biodiesel.

RINs are tradable credits used to show compliance under the EPA's Renewable Fuel Standard (RFS) programme. Obligated parties such as fuel refiners and importers generate RINs when they blend renewable fuels into conventional transportation fuels. Obligated parties that do not blend can purchase RIN credits from blenders to show compliance.

By Matthew Cope

Changes to HVO fob ARA range price assessments

Following consultation, Argus will change its RED hydrotreated vegetable oil (HVO) fob ARA range prices based on developments in spot market trade. These changes will be effective from 1 July 2023.

For HVO classes I, II and III:

- cloud point will change from maximum -5°C to maximum -7°C
- a maximum fatty acid methyl ester (FAME) content of 0.5pc will be included in the specification
- a minimum cetane number of 70 will be included in the specification
- additives with the exception of lubricity additives will be excluded from the specification

Additionally, Argus will reduce greenhouse gas (GHG) savings for RED HVO (Class II) fob ARA range to minimum 85pc based on a fossil fuel comparator of 94g CO₂ equivalent/MJ from minimum 87pc currently.

The changes will also affect RED HVO fob Singapore netbacks, which are calculated as RED HVO fob ARA range assessments less the weekly Singapore to ARA region HVO freight assessment.

