# Ethanol & Biodiesel Information Service

Ethanol Futures [cts/gal contract price]

	March 2023	April 2023	May 2023	3 June 2023
CBOT	216.10	216.10	216.10	216.10
		Settlement Thursday, Feb.	ruarv 23. 2023	Source: Chicago Board of Trade

Settlement Thursday, February 23, 2023

#### Ethanol Market Overview:

## Ethanol trading turns shaky after delayed EIA report, corn losses

**February 27, 2023** • Volume 20, Issue 9

Spot ethanol trading remained thin last week following a long holiday weekend that also delayed the weekly release of governmentreported ethanol supply and production data - data that ultimately left the market weighing a longtime supply high as well as the strongest output yet this year.

In Chicago, some nearby through any-February in-tank transfers ran \$2.19 by \$2.20/gal by the middle of last week before a string of deals fetched \$2.195/gal. However, after the Thursday market had time to chew on weekly Energy Information Administration data showing higher supply along with rallying output - as well as some backtracking in blending signals - ethanol for next week and into early March slumped into trading at \$2.17/gal.

Bulk market trading remained particularly light all last week. Outside of a handful of physical deals at the Chicago-area Argo terminal, ethanol spot activity remained "eerily quiet," noted one market source. Another suspected the holiday short week and the added wait for weekly EIA ethanol numbers had a hand in keeping some market players on the sidelines.

Thursday ethanol spots also had corn losses casting a wider shadow on the market by late afternoon. Chicago Board of Trade front-month March corn that settled on 13.75cts losses at \$6.6025/bu Thursday and shed almost 22cts in value over the last two sessions -- and ethanol markets seemed unable to shake off those losses the way it did before Thursday.

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## **Ethanol & Gasoline Component Spot Market Prices**

U.S. RINs (prices in U.S. \$/RIN)

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.		
U.S. Ethanol RiNs								
Current Yr	1.6150-1.6300	Holiday	1.6200-1.6300	1.6300-1.6500	1.6100-1.6350	1.62750		
Previous Yr	1.6300-1.6400	Holiday	1.6300-1.6400	1.6400-1.6600	1.6200-1.6450	1.63813		
U.S. Cellulo	sic RINs							
Current Yr	1.9200-1.9800	Holiday	1.9300-1.9600	1.9200-1.9600	1.9300-1.9700	1.94625		
Previous Yr	1.9600-2.0000	Holiday	1.9300-1.9700	1.9200-1.9700	1.9300-1.9800	1.95750		
U.S. Biodies	sel RINs							
Current Yr	1.6550-1.6650	Holiday	1.6600-1.6700	1.6700-1.6800	1.6400-1.6800	1.66500		
Previous Yr	1.7700-1.7750	Holiday	1.7600-1.7850	1.7700-1.7950	1.7600-1.7750	1.77375		
U.S. Advan	U.S. Advanced Biofuel RINs							
Current Yr	1.6400-1.6700	Holiday	1.6500-1.6700	1.6600-1.6800	1.6300-1.6800	1.66000		
Previous Yr	1.7525-1.7825	Holiday	1.7500-1.7850	1.7600-1.7950	1.7500-1.7750	1.76875		

#### Chicago (prices in U.S. \$/gal.)

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Ethanol	2.1800-2.2125	Holiday	2.1950-2.2050	2.1900-2.2000	2.1500-2.1900	2.19031
DP ETH	2.1850-2.2100	Holiday	2.1950-2.2050	2.1900-2.2000	2.1500-2.1900	2.19063
B100 SME	5.9500-6.0500	Holiday	6.0300-6.1300	5.9500-6.0500	5.9900-6.0500	6.02500
RBOB Unl	2.2832-2.2982	Holiday	2.2806-2.3456	2.2426-2.2726	2.2970-2.3220	2.29273
RB0B Pre	2.7332-2.7482	Holiday	2.7306-2.7956	2.6926-2.7226	2.7470-2.7720	2.74273
CBOB Unl	2.2682-2.2832	Holiday	2.2656-2.3306	2.2276-2.2576	2.2820-2.3070	2.27773
ULSD	2.6221-2.6796	Holiday	2.6869-2.7594	2.6098-2.6823	2.6031-2.6756	2.66485

#### Chicago Rule 11 (prices in U.S. \$/gal.)

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Current Yr	2.1300-2.1550	Holiday	2.1500-2.1625	2.1500-2.1600	2.1350-2.1500	2.14906

See page 2 for more spot pricing locations ▶

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## OPIS

### Ethanol & Gasoline Component Spot Market Prices [prices in U.S \$/gal.]

#### **Gulf Coast**

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Ethanol	2.2700-2.2900	Holiday	2.2750-2.3000	2.2750-2.2900	2.2400-2.2800	2.27750
B100 SME	6.0200-6.0900	Holiday	6.1000-6.1700	6.0200-6.0900	6.0600-6.0900	6.08000
RBOB Unl	2.3382-2.3432	Holiday	2.3431-2.3481	2.2501-2.2601	2.2848-2.2948	2.30780
RB0B Pre	2.5757-2.5807	Holiday	2.5806-2.5856	2.4876-2.4976	2.5223-2.5323	2.54530
CBOB Unl	2.3182-2.3232	Holiday	2.3231-2.3281	2.2301-2.2476	2.2548-2.2648	2.28624
Unleaded	2.4407-2.4432	Holiday	2.4431-2.4456	2.3276-2.3376	2.3573-2.3698	2.39561
ULSD	2.6421-2.6506	Holiday	2.7244-2.7344	2.6483-2.6548	2.6408-2.6508	2.66828
61ULSD	2.6421-2.6506	Holiday	2.7244-2.7344	2.6483-2.6548	2.6408-2.6508	2.66828
			New York			

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Ethanol	2.2500-2.3100	Holiday	2.2800-2.3000	2.2800-2.3075	2.2600-2.2825	2.28375
ITT ETH	2.2750-2.2800	Holiday	2.2800-2.3000	2.2700-2.2900	2.2500-2.2700	2.27688
Ethanol Fwd	2.245-2.255	Holiday	2.285-2.305	2.28-2.3	2.27-2.29	2.27875
B100 SME	6.3700-6.5000	Holiday	6.4500-6.5800	6.3700-6.5000	6.4100-6.5000	6.46000
RBOB Unl	2.3607-2.3707	Holiday	2.3656-2.3756	2.2726-2.2801	2.3095-2.3195	2.33179
RB0B Pre	2.7482-2.7582	Holiday	2.7556-2.7656	2.6626-2.6701	2.6845-2.6945	2.71741
CBOB Unl	2.3607-2.3707	Holiday	2.3656-2.3756	2.2726-2.2801	2.3095-2.3195	2.33179
CBOB Pre	2.7482-2.7582	Holiday	2.7556-2.7656	2.6626-2.6701	2.6845-2.6945	2.71741
ULSD	2.6996-2.7096	Holiday	2.7794-2.7894	2.7023-2.7123	2.6956-2.7056	2.72423

#### Los Angeles

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Ethanol	2.3800-2.5000	Holiday	2.3700-2.5000	2.3700-2.4900	2.3800-2.5100	2.43750
CARBOB - R	2.9832-2.9932	Holiday	2.9456-2.9556	2.8676-2.9076	2.9445-2.9545	2.94398
CARBOB - P	3.2132-3.2232	Holiday	3.1756-3.1856	3.0976-3.1376	3.1745-3.1845	3.17398
ULSD	2.8518-2.8618	Holiday	2.9236-2.9336	2.8518-2.8618	2.7308-2.7508	2.84575

### Nebraska (fob Railcar) 2/20 Tues. 02/21 Wed.

2.0000-2.0400

Wed. 02/22

2.0000-2.0300

2.2900-2.3400

Thurs. 02/23 Wkly. Avg.

2.02250

2.0100-2.0500

2.3000-2.3600

			Tampa				
	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.	
Ethanol	2.3300-2.3600	Holiday	2.3200-2.3600	2.3200-2.3500	2.3300-2.3700	2.34250	
			Dallas				
	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.	
Ethanol	2.2300-2.2800	Holiday	2.2200-2.2800	2.2200-2.2700	2.2100-2.2800	2.24875	
San Francisco							
	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs, 02/23	Wkly. Avg.	
	111.02/1/	11011. 02/20	1063. 02/21	Wed. 02/22	111013. 02/23	may. Avg.	
Ethanol	2.3800-2.5000	Holiday	2.3700-2.5000	2.3700-2.4900	2.3800-2.5100	2.43750	
Ethanol				2.3700-2.4900			
Ethanol			2.3700-2.5000	2.3700-2.4900			
Ethanol	2.3800-2.5000	Holiday	2.3700-2.5000 Washington	2.3700-2.4900	2.3800-2.5100	2.43750	
	2.3800-2.5000 Fri. 02/17	Holiday  Mon. 02/20	2.3700-2.5000 Washington Tues. 02/21	2.3700-2.4900 n Wed. 02/22	2.3800-2.5100 Thurs. 02/23	2.43750 Wkly. Avg.	

2.3000-2.3500

#### Methodology and Definitions:

OPIS derives ethanol, gasoline and biodiesel prices from many means, including surveying buyers and sellers via phone/e-mail, and receiving postings electronically from producers and purchasers. While OPIS makes best efforts to ensure the accuracy and timeliness of its prices, it in no way guarantees either the accuracy or timeliness of any of the data included herein. Definitions are as follows:

**Ethanol Spot Price (Bulk Barge/Rail):** These are large quantity pure ethanol deals transacted or being discussed in certain FOB markets.

**Brazil Ethanol:** Undenatured anhydrous ethanol cargoes, FOB Brazil terminals for export, typically 50,000 bbl or more available 5-30 days from the date of publication. The assessment generally reflects price at the Santos export terminal, though others may be used for assessment purposes.

Block Term Contract Values: These are the three-to-six month contract deals between large buyers and sellers of pure ethanol. Some are done as fixed, and those deals are reported in the "Fixed" column. Other deals are done based on a differential to certain gasoline benchmarks (usually conventional spot unleaded). Those formulae are tracked and reported by market each week in the "Formula" column and calculated (based on the closing Thursday price of the gasoline benchmark) to arrive at a "Formula Calculated" price. All deals ["Fixed" and "Formula"] are reported from a weighted average survey.

**Bulk Truck Spot Prices (Rack):** These are the prices for truck quantities of pure ethanol at storage points in the given market. These prices are not posted – they are offered to buyers given supply and demand dynamics at prices discovered and published by OPIS.

**Splash Blend Rack Prices:** These are the average of the Thursday closing price that producers and resellers are posting at various rack locations. Typically prices are for small quantities that marketers pull to blend into gasoline to create and deliver ethanol-blended gasoline to accounts.

Splash Blend Producer Prices: These are the average of the Thursday closing price that producers (not resellers) are posting at various rack locations. Typically prices are for small quantities that marketers pull to blend into gasoline to create and deliver ethanol-blended gasoline to accounts.

Low Carbon Fuel Standard Credits: Traded in U.S. dollars per metric ton of carbon dioxide [CO2], this represents the daily traded price range or range of bids and offers on carbon credits generated for compliance under California's Low Carbon Fuel Standard program implemented by the California Air Resources Board. Trading is for credits transferable in the current calendar year, until the last month of the year when deals for the following year may also be considered.

2.3000-2.3400

Fri. 02/17

2.0100-2.0400

Ethanol

Mon. 02/20

Holiday

Holiday



#### California Low Carbon Fuel Standard

Carbon Credit: \$/MT; Carbon Intensity Pts: \$/Cl; Carbon Credit per Gallon Diesel: \$/gal; Carbon Credit per Gallon Gasoline: \$/gal]

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Carb Credit	65.000-66.000	Holiday	64.500-72.500	72.000-85.000	70.000-72.000	70.8750
CI Pts BD	0.0082-0.0083	Holiday	0.0081-0.0091	0.0091-0.0107	0.0088-0.0091	0.00894
CI Pts Eth	0.00530-0.00538	Holiday	0.00526-0.00591	0.00587-0.00693	0.00571-0.00587	0.005779
CC Dsl	0.0988-0.1003	Holiday	0.0980-0.1102	0.1094-0.1292	0.1064-0.1094	0.10771
CC Gas	0.0977-0.0992	Holiday	0.0969-0.1089	0.1082-0.1277	0.1052-0.1082	0.10650
CC Dsl 95	0.0938-0.0953	Holiday	0.0931-0.1047	0.1039-0.1227	0.1010-0.1039	0.10230
CC Gas 90	0.0879-0.0892	Holiday	0.0872-0.0980	0.0974-0.1149	0.0947-0.0974	0.09584

#### Oregon Clean Fuels Program

Carbon Credit: \$/MT; Carbon Intensity Pts: \$/CI; Carbon Credit per Gallon Diesel: \$/gal; Carbon Credit per Gallon Gasoline: \$/gal]

	Fri. 02/17	Mon. 02/20	Tues. 02/21	Wed. 02/22	Thurs. 02/23	Wkly. Avg.
Carb Credit	121.000-123.000	Holiday	121.000-123.000	121.000-123.000	121.000-123.000	122.0000
CI Pts BD	0.0153-0.0155	Holiday	0.0153-0.0155	0.0153-0.0155	0.0153-0.0155	0.01539
CI Pts Eth	0.00986-0.01003	Holiday	0.00986-0.01003	0.00986-0.01003	0.00986-0.01003	0.009945
CC Dsl	0.1370-0.1393	Holiday	0.1370-0.1393	0.1370-0.1393	0.1370-0.1393	0.13815
CC Gas	0.1254-0.1275	Holiday	0.1254-0.1275	0.1254-0.1275	0.1254-0.1275	0.12645
CC Dsl 95	0.1302-0.1323	Holiday	0.1302-0.1323	0.1302-0.1323	0.1302-0.1323	0.13125
CC Gas 90	0.1128-0.1147	Holiday	0.1128-0.1147	0.1128-0.1147	0.1128-0.1147	0.11375
Eth CI 69.89	2.3800-2.4900	Holiday	2.3700-2.4900	2.3700-2.4800	2.3800-2.5000	2.43250

The last word from ethanol shipping within the week on railcars under Rule 11 terms had \$2.145/gal done Thursday, down from a \$2.155/gal midweek market. Some FOB Nebraska or Iowa talks on the Union Pacific line remained at \$2.00/gal or more – \$2.02/gal traded earlier in the week and Thursday talks stalled at \$2.01 by \$2.05/gal.

Other bulk markets occasionally traded ethanol by latter half of last week. In the east, New York Harbor in-tank transfers at Sewaren traded \$2.28/gal before Thursday when last discussions indicated \$2.25 by \$2.27/gal. Western markets also remained largely quiet, though some New Mexico railcars shipping within the week got done at \$2.26/gal by midweek before word of Nevada-bound cars on Thursday trading hands at \$2.345/gal.

Contrary to some trade hopes, the emergence of day-late EIA ethanol data Thursday morning did not appear to do much to spark any added spot ethanol activity. Sources noted the appetite for nearby physical material through the day remained more or less unchanged in immediate aftermath of the report, despite the heavier slump in corn futures prices at the time.

At 1.029 million b/d, ethanol production over the EIA report week ending Feb. 17 climbed 15,000 b/d from the week before, or almost 1.5%, to reach the highest weekly production rate since plants matched that figure more than two months ago. Over the last two EIA report weeks, production recovered a total 29,000 b/d and slightly outpaced the same time last year in each week.

EIA also recorded an inventory build based largely on swelling Midwest [PADD 2] stocks, with nationwide ethanol

stockpiles up a net 249,000 bbl week to week, or 1%, and at 25.588 million bbl touching a new 46-week high. Against year-ago holdings, U.S. ethanol stockpiles ran only slightly higher, by 0.32%, but moved 5.5% ahead of the week's five-year average.

Midwest stockpiles, at the same time, added 390,000 bbl of ethanol, swelling regional supply almost 4.1% from the week before to 10.03 million bbl – revisiting the 10-million-bbl level for the first time since the first week of January. Even so, Midwest ethanol storage held 2.5% less than a year ago.

EIA-reported ethanol inventory and production both tended to show-up on the high side of pre-report expectations from analysts and traders, though by most accounts neither figure constituted much of a surprise.

Despite a week-to-week pop in implied gasoline demand, ethanol blending indications from EIA slumped after making solid gains the previous week.

Ethanol blender net input at 854,000 b/d retreated 20,000 b/d week to week, a 2.3% drop that left it almost 2% behind the same time in

2022. Conventional gasoline blending with ethanol at 5.526 million b/d fell 2.3% behind the year-ago week after dropping 111,000 b/d, or 2%, week to week.

EIA's reading of gasoline demand, however, added 636,000 b/d, and at 8.910 million b/d implied offtake jumped 7.7% from the week before as well as leapfrogging 2.9% ahead of the same week last year. That is the highest offtake number yet this year from EIA, moving well ahead of what it reported the same time last year and during the same week in 2021.

It is also a hopeful number, if realized in subsequent weeks, for those looking for stronger ethanol blending rates ahead. Notably, over the past half dozen years, mid-to-late February U.S. gasoline demand estimates from EIA landed between 8.6 million and 9 million b/d.

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#### Renewable Credit Markets:

# RINs slip from three-week Highs; LCFS credits briefly touch five-month high

Ethanol-related D6 and biomass-based diesel D4 Renewable Identification Number credits rose to three-week highs early last week but slipped Thursday, the same day California Low Carbon Fuel Standard credits fell from a five-month high after administrators met to discuss the clean fuel program's future.

The 2023 D6 RIN assessment reached a three-week high of \$1.625/RIN on Tuesday and added 1.5cts on Wednesday.

But those gains were erased completely Thursday, when the assessment dropped 1.75cts to \$1.625/RIN, matching the level from Friday. Thursday's assessment was up 1ct week to week.

2023 D4 RINs were in the same boat Thursday, losing all the ground they'd covered earlier in the week when they slipped 1.5cts to \$1.66/RIN, flat with Friday's assessment. Thursday's assessment was also up 1ct on the week.

Discussions around 2024 D4 RINs continued Thursday, about a week after market sources first reported interest in those credits – far earlier in a calendar year than forward-year RINs normally attract attention. Many players attribute the early buying interest to growing renewable diesel capacity in the U.S. Reported bids and offers Thursday put 2024 D4 RINs at a 6.5ct discount to 2023 D4 RINs.

The OPIS Renewable Volume Obligation assessment fell to 19.25cts/gal Thursday, down 0.189ct after four days on the rise. That assessment, which measures the implied cost of Renewable Fuel Standard compliance for refiners and importers of gasoline or diesel who do not blend biofuels, was still up 0.116ct week to week.

RIN markets were muted most of last week compared to much livelier LCFS credit markets, which drew many traders away. LCFS credit prices jumped \$13 Wednesday in what appeared to be a bullish reaction to a workshop held that day by the California Air Resources Board to discuss possibly changing the program's annual carbon intensity reduction

benchmarks. The OPIS LCFS assessment climbed to \$78.50/credit Wednesday, its highest level since Sept. 16, 2022.

But most of Wednesday's gains were given back Thursday, when sources reported LCFS credits for prompt transfer changing hands at \$70 and \$72/credit. The assessment slipped to \$71/credit Thursday, down \$7.50 for what would've been its largest day-to-day movement (in either direction) since June 2022 had it not been for the assessment's \$10 jump the previous day. The credits on Thursday were up \$6.50 week to week, higher for a third week.

Oregon Clean Fuel Program credits on Thursday were assessed at \$122/credit, unchanged on the day and the week. Washington state Clean Fuel Standard credits the same day were assessed at \$71/credit.

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# CARB 'moving quickly' to boost LCFS targets by 2024: Agency

The California Air Resources Board (CARB) is "moving quickly" in its latest rulemaking process, with a goal of establishing revised carbon intensity targets for the Low Carbon Fuel Standard (LCFS) program by 2024, the agency said in a workshop last week.

LCFS stakeholders – especially low-carbon fuel producers – have been sounding the alarm to CARB for months, saying the current targets are being greatly outpaced by surging credit

#### In Key Markets

			Etnanol Buy	ing Prices			
	Ethanol Spot Block Term Q4-Q1 Contract Values Price				Bulk Truck	Splash Blend	Splash Blend
City, State	(Bulk Barge/Rail)	Fixed	Formula	Formula (calculated)	Spot Prices (rack)	Rack Price	Producer Prices
Albany, NY	221.00	238.00			224.50	N/A	N/A
Houston, TX	226.00	245.00	NYMEX RBOB Unl -1.5	236.45	230.00	188.73	N/A
New Haven, CT	230.75	247.50	NYMEX RBOB Unl -2.5	235.45	N/A	N/A	N/A
New York, NY	227.13	244.00	NYMEX RBOB Unl -6	231.95	231.50	N/A	N/A
Chicago, IL	217.00	235.00	NYMEX RB0B Unl -12.25	225.70	220.00	N/A	N/A
Louisville, KY	218.50	N/A	N/A	N/A	221.50	N/A	N/A
Minneapolis, MN	213.00	N/A	N/A	N/A	216.00	224.79	224.67
St. Louis, MO	218.00	236.50	NYMEX RBOB Unl -11	226.95	222.00	300.00	N/A
Los Angeles, CA (79.9)	244.50	273.00	NYMEX RB0B Unl 27	264.95	250.00	N/A	N/A
Phoenix, AZ	233.00	246.00	NYMEX RBOB Unl -0.5	237.45	236.00	N/A	N/A
San Francisco, CA (79.9)	244.50	273.00	NYMEX RBOB Unl 27	264.95	250.00	N/A	N/A
Washington	236.50	N/A	N/A	N/A	N/A	N/A	N/A

Ethanol Ruying Drices

#### Ethanol Truck & Spot Prices

City, State	Spot Prices (Rack)	Rack Price	Producer Prices
Cleveland, OH	222.50	177.32	116.00
Decatur, IL	217.50	N/A	N/A
Des Moines, IA	215.00	223.94	223.17
Doniphan, NE	207.00	231.04	230.17
Fargo, ND	210.00	239.75	236.25
Indianapolis, IN	223.00	N/A	N/A
Kansas City, KS	212.50	236.71	232.67
Madison, WI	226.00	234.25	N/A
Omaha, NE	212.00	230.54	227.50
Peoria/Pekin, IL	216.50	N/A	N/A
Sioux City, IA	212.00	228.83	225.67
Sioux Falls, SD	210.50	226.32	225.13
Topeka, KS	213.50	236.88	238.50
Wichita, KS	213.50	240.52	236.00
Denver, CO	225.00	246	N/A



generation that has resulted in low credit prices. Earlier this month, the OPIS LCFS credit assessment hit \$60/credit, the lowest level since July 2016.

"We understand how important it is to everyone that we update the LCFS, so we are moving quickly to the rulemaking process with our goal of having regulatory amendments become effective in early 2024," said Katrina Castellano of CARB's alternative fuels section.

The current 2030 targets set a 20% reduction in greenhouse gas emissions in California's transportation pool using a 2010 baseline, along with an 11.25% reduction in 2023 and a 12.5% reduction in 2024. It's currently unclear where CARB could set

### National Renewable Fuels Averages

Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline [10%]	E-85 Racks	E-85 Retail (w/ tax)	
218.282	242.239	242.175	157.806	300.505	
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD
658.332	298.252	279.545	,	291.352	292.645

### **Key Renewable Fuels Regional Averages**

	Northeast								
Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline (10%)	E-85 Racks	E-85 Retail (w/ tax)					
227.130		231.446	189.712	363.395					
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD				
660.000	289.855	296.528		286.760	290.222				

#### Southeast

Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline (10%)	E-85 Racks	E-85 Retail (w/ tax)	
227.130	245.803	222.133	210.073	288.425	
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD
688.900	292.683	,		282.151	278.707

#### **Gulf Coast**

Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline (10%)	E-85 Racks	E-85 Retail (w/ tax)	
226.000	248.400	238.347	178.009	274.403	
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD
651.045	271.863	272.345		288.418	292.021

#### **Midwest**

Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline [10%]	E-85 Racks	E-85 Retail (w/ tax)	
210.000	235.081	222.803	112.843	257.499	
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD
585.000	300.681	276.962		286.590	286.879

#### Rockies

Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline (10%)	E-85 Racks	E-85 Retail (w/ tax)	
226.000	244.063	280.827	,	338.763	
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD
	351.217	,	,	369.532	357.586

#### West Coast

Ethanol Spot	Ethanol Rack w/ RIN	Ethanol Blended Rack Gasoline [10%]	E-85 Racks	E-85 Retail (w/ tax)	
233.000	279.000	321.916	312.250	375.338	
B100 w/ RIN	B20 w/ ULSD	B15 w/ ULSD	B10 w/ ULSD	B5 w/ ULSD	B2 w/ ULSD
714.000	325.393	,	,	315.334	,

the 2024 target should the agency finalize the rulemaking in time, but graphics included in the workshop slides suggest a possible target of 16.25%, which is currently the target scheduled for 2027.

In a prior workshop in November 2022, CARB introduced three illustrative scenarios with CI reduction targets of 25%, 30% and 35%, all higher than the current 2024 target of 20%. All three scenarios featured an ultimate aim of a 90% CI reduction target in 2045, an ambitious goal that would better align the LCFS program with California's broader goal of achieving carbon neutrality in 2045.

In Alternative A – the least stringent of the three options – CARB introduced a schedule of a 25% reduction in 2030, 39% reduction in 2035 and 60% reduction in 2040. In Alternative B – the medium option – CARB introduced a schedule of a 30% reduction in 2030, 45% reduction in 2035 and 65% reduction in 2040. In Alternative C – the most ambitious option – CARB introduced a schedule of a 35% reduction in 2030, 51% reduction in 2035 and 69% reduction in 2040.

CARB said last week that the majority of stakeholder feedback supported a 2030 compliance target of at least 30% CI reduction and that 25% by 2030 was not sufficiently aggressive enough to encourage investment in low-carbon fuel production infrastructure.

"While the changes are definitely bullish, you're still building a very large number of LCFS credits this year, and it will take a lot of speculative interest to just maintain current prices, let alone have a rally," one LCFS trader told OPIS. "Until the bank actually draws from high levels, it's going to be hard to see a sustained rally. If we see a sustained rally, we'll probably start seeing new hedging pressure, especially coming from the back end of the curve."

For the purpose of the workshop, staff modeled the middle scenario that sets a 30% target by 2030 and 90% by 2045.

"Staff understands the importance of maintaining strong price signals to support investment in low-carbon fuel production as well as the need for long-term market certainty," Castellano said. "In addition to revising the CI targets, the acceleration mechanism and the CI stepdown are two other mechanisms that staff are considering that would help provide additional market certainty."

CARB is considering mechanisms that would automatically adjust the CI targets to accelerate investment if the program is overperforming. Ideally, such a mechanism would prevent another round of surging credit generation that swells the cumulative credit bank and depresses prices.

In its presentation, CARB also showed preliminary credit price estimates out to 2045. The agency estimated credit prices rising to \$110/credit in 2024 and \$150/credit in 2025 before reaching the maximum credit price from 2026 to 2033. The maximum credit price is \$200/credit in 2016 dollars, adjusted for inflation. That cap was set at \$239.18/credit for 2022

compliance. CARB is not currently considering increasing the cap, agency staff said.

LCFS credit prices tumbled in 2022 as credit generation from low-carbon fuels greatly outpaced deficit generation from fossil fuels, the cumulative credit bank continues to swell and obligated stakeholders achieve compliance with relative ease.

The workshop materials ignited an apparent bullish reaction in credit trading last week. OPIS on Thursday assessed the credits at \$71/credit – up \$6.50 week to week – in an active day of trading, and that followed midweek activity in which credit trades reportedly reached as high as \$85/credit.

Last week CARB also provided updates on a few considerations and assumptions in its modeling, including possible limits on crop-based feedstocks in the diesel pool [primarily from renewable diesel], biomethane crediting, medium- and heavy-duty zero-emission vehicle refueling infrastructure, electric forklift crediting, intrastate jet fuel and petroleum crediting.

CARB said it expects to release its regulatory package in the coming months, ahead of a board hearing tentatively scheduled for late summer.

The agency will accept written feedback through March 15.

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### **Weekly Biofuels Stock Performance**

Company	Symbol		2/23/23	2/16/23	change	% change
Adecoagro SA	AGRO	仓	8.25	8.14	\$0.11	1.35%
Aemetis	AMTX	Û	3.90	4.51	-\$0.61	-13.53%
Alto Ingredients	ALT0	仓	3.02	2.97	\$0.05	1.68%
The Andersons, Inc.	ANDE	Û	44.24	44.74	-\$0.50	-1.12%
Archer Daniels Midland	ADM	仓	82.05	81.42	\$0.63	0.77%
Bunge	BG	仓	98.42	97.55	\$0.87	0.89%
Cielo Waste Solutions Corp	CMC.V	⇔	0.070	0.070	C\$0.00	0.00%
Cosan	CSAN	Û	11.88	12.15	-\$0.27	-2.22%
Darling Ingredients	DAR	Û	67.56	67.72	-\$0.16	-0.24%
FutureFuel Corp.	FF	Û	8.73	9.07	-\$0.34	-3.75%
GEV0	GEV0	Û	1.860	2.060	-\$0.20	-9.71%
Green Plains	GPRE	Û	34.04	35.97	-\$1.93	-5.37%
Marathon Petroleum	MPC	仓	125.52	123.41	\$2.11	1.71%
Corporation						
Neste	NESTE.HE	Û	44.83	45.14	-€0.31	-0.69%
Novozymes	NVZMY	Û	49.50	50.20	-\$0.70	-1.39%
REX American Resources	REX	Û	33.06	33.52	-\$0.46	-1.37%
Valero Energy	VL0	Û	132.43	133.97	-\$1.54	-1.15%
Velocys	VLS.L	Û	4.17	4.23	-£0.05	-1.24%
DJIA	DJI	Û	33,153.91	33,696.85	-\$542.94	-1.61%

# Darling Ingredients to receive used cooking oil from Panda Express

Fast-food chain owner Panda Restaurant Group Inc. chose Darling Ingredients to recycle its used cooking oil into sustainable products such as renewable diesel, the rendering company confirmed last week.

Darling's restaurant service brand, DAR PRO Solutions, will collect and recycle UCO from nearly all of the nearly 2,400 Panda Express restaurants in the U.S. Trade sources indicate that most of the oil used at U.S.-based Panda Express outlets is soybean based.

"Panda is moving to our proprietary indoor equipment,"
Suann Guthrie, a senior vice president of investor relations, told
OPIS last week. "We will pick up some new stores and are now
Panda's provider of choice for new builds."

Guthrie would not divulge terms of the deal, including the volumes involved and the length of the contract. The company stated that UCO is a particularly desirable feedstock for renewable fuel production due its lower carbon intensity versus alternative feedstocks.

Darling has a big footprint in renewable diesel production with a stake in Diamond Green Diesel, which just opened its newest facility in Port Arthur, Texas, in November, adding nearly 500 million gal/yr to its output capacity. Along with output at its St. Charles, La., operation, the two plants could combine to produce as much as 1.2 billion renewable diesel gal this year.

Darling collects about half of the used cooking oil in the U.S., Guthrie said, adding that the agreement "is just one more example of how Darling Ingredients continues to build its market presence and strengthen its vertical integration for renewable diesel and soon-to-be sustainable aviation fuel production."

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# United Airlines creates sustainable aviation fuel fund

United Airlines Holdings Inc. is launching a fund backed by several big-name aerospace and financial companies to invest in startups aiming to produce sustainable aviation fuel, in one of the largest efforts yet to lower emissions from air travel.

Created through United's venture investing arm, the new fund will start with more than \$100 million from the company and partners including Air Canada, Boeing Co., JPMorgan Chase & Co., Honeywell International Inc. and General Electric Co., United said last week.

Last year's climate law spurred United to accelerate the fund, which will be capped at \$500 million, the company said.

United, Air Canada and other airlines that participate are expected to sign clean-fuel supply agreements with the startups they back. Companies that invest alongside United

could share in the carbon credits tied to the production of that sustainable aviation fuel, the company said.

The new fund will be one of the largest sources of cash in the nascent industry of making low-carbon jet fuel. Its launch highlights the pressure faced by the airline industry to reduce emissions. It is part of a recent move by large companies toward startup investing to develop green-energy technologies.

Aviation is one of the most difficult areas to decarbonize. Batteries are too heavy for all but very short flights, and alternatives to conventional jet fuel typically cost several times more and often require huge amounts of water and energy to produce.

Some startups are aiming to turn everything from fats, oils and greases to trash into sustainable aviation fuel, while others are attempting to offer alternative technologies like hydrogen fuel cells or electric flying taxis.

Nearly all of the efforts are years away from achieving meaningful scale.

The sector is expected to benefit from the climate law known as the Inflation Reduction Act, which offers tax credits for sustainable aviation fuel that are expected to close some of the price gap with jet fuel. Beefy subsidies for green hydrogen produced from renewable electricity and carbon capture are also pushing some companies toward synthetic fuels – also called e-fuels – that offer the tantalizing possibility of potentially unlimited supply.

"That piece of legislation single-handedly made dozens of startups viable," Michael Leskinen, president of United Airlines Ventures, said in an interview. "It spurred us to move faster in the formation of this fund."

The Biden administration is offering additional funding to startups in the industry and has set a goal of hitting 3 billion gallons of sustainable-aviation-fuel production by 2030. Current supply is in the tens of millions of gallons.

Chicago-based United has been one of the most aggressive airlines in acting on climate change, investing in a number of startups and committing to slash emissions to zero by midcentury. It has rejected traditional carbon offsets that are used by businesses to neutralize their environmental footprints and linked to projects such as keeping trees standing. Their impact on emissions is often unclear.

United differentiates between traditional offsets and carbon credits linked to new sustainable-aviation-fuel production, Leskinen said.

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#### Government Policy:

# SAF tax credit should rely on DOE model, not CORSIA: Ethanol groups

Stakeholders for the biofuel and refining industries told the Department of the Treasury last week that a forthcoming tax credit for sustainable aviation fuel production should

be awarded using a domestic, entrenched lifecycle carbon assessment (LCA) model from the Department of Energy instead of the international model recommended by Congress.

This position clashed with those from representatives for fuel retailers and marketers, who argued that LCA should be left to the International Civil Aviation Organization under its Carbon Offsetting and Reduction Scheme for International Aviation [CORSIA] – as the model's more-stringent parameters would, among other things, prevent abuse of the new credit and its scaling reward system.

The comments, which were due Feb. 17, come after President Joe Biden in late August signed into law the Inflation Reduction Act which included, among an outpouring of funding for actions related to climate change, an extension and eventual overhaul of a tax credit scheme for producers of renewable fuels.

Part of that overhaul included the creation of a \$1.25/gal credit for SAF production through to Dec. 31, 2024. The credit, which will be awarded to fuel blends that can reduce carbon emissions by at least 50% compared with conventional jet fuel, can increase by 1ct up to a cap of \$1.75/gal for each additional percentage point in reduced emissions.

But in response to a notice from the Treasury this December alongside the Internal Revenue Service on guidance for the credit, stakeholders largely focused on which LCA model the agency should use to administer the scheme.

Much of the debate in that regard hinges on Congress' decision to write the provision in a somewhat open-ended manner - as the final version of IRA defers to either CORSIA or "any similar methodology" that falls under criteria within the Clean Air Act.

Stakeholders from the ethanol industry argued in their comments Friday that the latter portion of the provision's LCA language should then permit the use of the Greenhouse Gases. Regulated Emissions, and Energy Use in Technologies (GREET) model - long the method of choice for the industry in assessing carbon intensity.

Geoff Cooper, president and chief executive officer of the Renewable Fuels Association, said in comments to the agency that the ethanol industry possesses the scale and capacity to deliver the volume of feedstock required for forward-facing SAF targets to be met, so long as the agency does not lean on "rules which effectively pick one technology or feedstock over another or use incomplete or outdated science [that] could serve as a barrier to entry and keep production volumes from reaching targets" like CORSIA.

"With the right policy signals and support - including technology-neutral LCA, particularly Argonne GREET, ethanolto-jet technologies can quickly scale up to meet the future SAF needs of the aviation sector," Cooper said.

He added that the use of two different models for tax credit issuance "could create administrative challenges for both industry and regulators, and it could also create perverse incentives or disincentives for the production of certain lowcarbon fuels in the marketplace."

Further, GREET is better suited for the job of assessing SAF production domestically due to its allowance for individual pathway scoring instead of "overbroad categories consisting of default values, which may not accurately represent the wide range of technologies and practices used in the industry," Cooper said.

They were even joined by stakeholders on the refining side in this case, as Patrick Kelly, senior director of fuel and vehicle policy at the American Petrochemical & Fuel

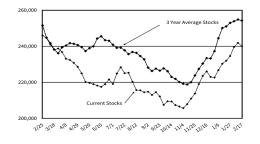
#### Key Supply and Demand Statistics [thousand barrels]

#### Ethanol Supply Last Week Ethanol Current 3-Yr Ava PADD 1 Inventories 7.974 8,069 7,848 PADD 2 Inventories 10.030 9 640 9 203 PADD 3 Inventories 4,778 4,759 4,527 PADD 4 Inventories 389 365 379 PADD 5 Inventories 2 417 2,507 2 669 25.588 25.340 24.627 Total Inventories 35.000

8172122 912122 9123122 10174122 1114122 12122122 22122122 116123 1127123 211712

#### Gasoline Supply

Gasoline	Current	Last Week	3-Yr Avg
PADD 1 Inventories	63,600	64,400	66,600
PADD 2 Inventories	51,300	49,900	58,067
PADD 3 Inventories	86,800	88,200	89,333
PADD 4 Inventories	7,400	7,200	9,133
PADD 5 Inventories	31,000	32,200	31,100
Total Inventories	240,100	241,900	225,133



#### **Ethanol Production**

Ethanol	Current	Prev Mo	3-Yr Avg
PADD 1	369	369	510
PADD 2	29,805	29,767	29,390
PADD 3	725	672	612
PADD 4	435	462	362
PADD 5	212	185	343
Total Production	31,546	31,455	31,217

#### **Gasoline Production**

Gasoline	Current	Last Week	3-Yr Avg
PADD 1	3,058	3,042	3,040
PADD 2	2,265	2,370	2,372
PADD 3	1,940	2,140	2,138
PADD 4	295	298	307
PADD 5	1,393	1,464	1,436
Total Production	8,951	9,314	9,294



Manufacturers, said the model should be chosen for its consistency, scientific rigor, and ability to accurately account for sustainable farming practices.

The model's methods of assessing land use change and feedstock carbon intensity, Kelly said, "allow biofuel feedstock suppliers to determine differentiated feedstock emissions at farm-level and encourage sustainable and low LUC risk farming practices to further reduce GHG emissions."

And yet, not all were convinced that GREET should take center stage in the scheme over CORSIA, as David Fialkov, executive vice president of government affairs for both NATSO and SIGMA, argued that its assessments on lower induced land use change alone render the model ineligible as a "similar methodology" to CORSIA.

Further, Fialkov said that Congress explicitly wrote the provision without mention of the GREET model, as issuing the credit using the model would not result in the desired emissions reductions that would come from the same process using CORSIA.

To quell any confusion over the provision's rather openended use of the term "similar methodology" for other models that could apply outside of CORSIA, Fialkov said Treasury should expressly note that GREET cannot be used to assess the credit.

Fialkov also called for parity in the credit amounts offered between the SAF and biodiesel tax credits, as he said "preferential tax treatment" for SAF could result in higher diesel prices.

"Because biodiesel/renewable diesel and SAF utilize, and compete for, the same limited cooking oil, animal fat, and vegetable oil feedstock to produce renewable fuel, a higher tax credit for SAF provides an economic advantage that will result in a migration of feedstock away from biodiesel/renewable diesel towards SAF," Fialkov added.

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#### In Key Commodity Markets:

### In finished markets...

Crude and refined product futures endured a six-session slide over the past week, partially on the back of swelling supplies in upstream feedstocks but also on bleak near-term outlook for gasoline demand in the U.S.

The NYMEX front-month March RBOB contract that settled Thursday at \$2.3795/gal added 4.19cts from Wednesday and stood about 5.6cts lower week to week. The forward-month April RBOB gasoline contract added 3.46cts on Thursday to settle at \$2.5848/gal, losing about 6.06cts on the week to hover around a 20.53ct premium to the front-month contract.

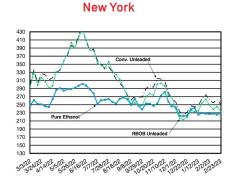
The slightly lower levels seen in gasoline futures were influenced by a similar downward trend in upstream crude oil futures. The front-month April West Texas Intermediate [WTI] crude oil futures contract settled higher by \$1.44 on Thursday at \$75.39/bbl, shedding \$3.10 from a week prior. The sharp contango structure seen in gasoline was not evident in crude oil futures on Thursday – the forward-month May contract stood just 21cts over the April contract.

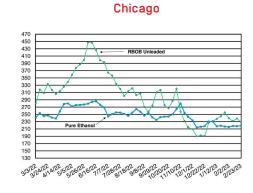
Gasoline and crude oil futures had mostly bearish reactions on Wednesday to the latest round of weekly supply and demand estimates from the U.S. Energy Information Administration (EIA).

For the week that ended Feb. 17, the agency said crude oil inventories added about 7.647 million bbl to 479.041 million bbl, the highest level since May 2021. Gasoline stocks, on the other hand, moved lower, shedding 1.856 million bbl to 240.066 million bbl, retreating from an 11-month high hit in the previous week. Gasoline stocks stood about 2% lower year on year.

Regionally, gasoline stocks were lower amid large draws on the Gulf and West Coasts. Gulf Coast supplies lost 1.437 million bbl to 86.805 million bbl, and West Coast supplies shed 1.164 million bbl to 31.002 million bbl. Additionally, East Coast stocks shed 813,000 bbl to 63.55 million bbl, slipping from a 13-month high hit in the previous week. On the build side, PADD 2 Midwest stocks swelled 1.39 million bbl to 51.292 million bbl, and Rocky

### Ethanol vs. Spot Unleaded and "BOBs" in Key Markets







Note: OPIS Refined Spots and Ethanol averages are based on full-day prompt assessments for each market.

Mountain stocks added 14,000 bbl to 7.249 million bbl.

Gasoline exports fell to 768,000 b/d, from 786,000 b/d in the previous week, standing above the year-ago level of 685,000 b/d. Exports outpaced imports, which retreated to 476,000 b/d from the week-ago level of 590,000 b/d and led the 417,000 b/d posted a year prior.

Gasoline production fell by 363,000 b/d on week to 8.951 million b/d. Production was lower than the year-ago rate of 9.409 million b/d and the five-year average at 9.48 million b/d. With the lower gasoline production, the U.S. refinery utilization rate slipped to 85.879% from 86.468% in the week prior, well below the year-ago rate of 87.398%.

EIA's measurement of gasoline demand was at 8.91 million b/d, jumping 636,000 b/d on the week. Demand stood above the year-ago level of 8.657 million b/d and the five-year average of 8.739 million b/d.

An OPIS survey of more than 15,000 retail stations nationwide showed that nationally, the average volume of fuel sold by retailers during the week ending Feb. 18 was lower by 0.9% from the previous week. Sales volumes were 4.6% below where they were during the same week in 2022 and stood 17.6% below the demand seen in the same week of 2020.

On the refinery front, Suncor Energy on Tuesday reported another vapor leak in refining equipment at its 111,700 b/d Commerce City Refinery near Denver. The leak follows a similar report that the company issued Friday as the company works to restart operations at the facility, which has been closed since a severe cold snap in December caused a fire and equipment damage. Lastly, the Cenovus CEO said last week the repair estimate stemming from a September 2022 fire is not significant, and the refinery near Toledo, Ohio, is expected

to get up to full rates by around mid-Q2 2023. The refinery has remained shut following a deadly fire in September 2022,

In cash gasoline markets, Gulf Coast CBOB discounts hovered about 33cts under the NYMEX RBOB contract, shedding 23cts from the week-ago level. Chicago CBOB added a nickel to an 8.5ct discount to the Merc, Group 3 sub-octane gasoline markets added a quarter-cent to stand 4.75cts under, and New York CBOB differentials gained a penny from a week prior at about a 3.75ct discount.

In West Coast cash gasoline markets, Los Angeles CARBOB premiums shed 20cts to a 38ct premium, San Francisco CARBOB premiums surged 25cts to a 50ct premium, and Pacific Northwest sub-octane gasoline differentials added 3cts to a 33ct premium.

At retail pumps, U.S. gasoline prices on a national average for regular unleaded gasoline were at \$3.385/gal on Friday, according to the latest data from AAA using data compiled by OPIS. That had street prices down 3.6cts from week-ago levels and 6.1cts under month-ago levels. On a year-to-year comparison, prices are now 15.8cts below the average of \$3.543/gal at the same time of 2022.

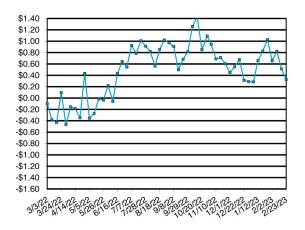
U.S. average rack-to-retail gasoline margins in the week that ended Feb. 20 moved lower from the previous week. OPIS data had retail margins averaging 33.7cts/gal in the U.S., down 0.9ct to a three-week low. Retail prices shed 1.2cts to \$3.417/gal, while rack prices shed 1.3cts to \$2.831/gal.

### In natural gas...

While the short trading week was largely a soft one for U.S. natural gas markets, prices swung higher in most cases Thursday despite a relatively thin stock draw in the government's weekly inventory estimate.

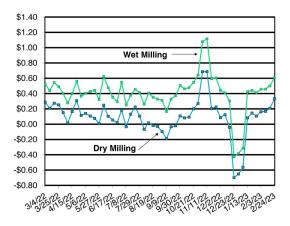
### Plant Profitability

#### Biodiesel Gross Margins for Midwestern Plants (\$/gal)



\*Biodiesel production margin calculated from cash feedstock costs and sales values for soy methyl ester biodiesel plants and are estimates of industry trends under current market conditions. Profits for any given biodiesel plant could be higher or lower.

#### Ethanol Gross Margins for Midwestern Plants (\$/gal)



\*Dry Milling margin calculated from cash feedstock and product sales values for wet and dry-mill plants and are an estimate of the industry trend under current market conditions. Profits for any given ethanol plant could be higher or lower.



Next-day Henry Hub spot values eased each day over the last week until prices ended Thursday 10cts up on the day, though at around \$2.18/MMBtu, it still lost 31cts in the week-to-week comparison. At the same time, Chicago Citygate gas at \$2.28/MMBtu for the day added 8cts but that left it 14cts lower than a week ago.

Trade talk had some in the market looking beyond the bulky nature of natural gas stockpiles currently on hand, which helped traders shrug off the 71 Bcf storage draw that EIA reported Thursday for the week ending Feb. 17. While less than

half the draw that the five-year average for the week – 177 Bcf – would indicate as normal, the figure was slightly more than most anticipated, and that helped some ignore the figure. There is also the added demand from the Freeport LNG plant gradually coming back into operation and its export hopes adding support late last week. West Coast and New England dealing with cold fronts ran into steep demand gains by late in the week that emerged to rally gas prices in those regions.

On the NYMEX, natural gas futures climbed for the second session in a row Thursday, settling front-month March up 14cts

#### National Renewable Fuel Feedstock/Co-Product Price Index

Feedstock/Co-product	Location/Source	Spot Price	Previous	4-Wk. Avg.
Palm Olein	US/Gulf Coast	\$0.555/lb	\$0.5475	\$0.5431
Soybean Oil - Crude Degummed	Central Illinois	\$0.6483/lb	\$0.6390	\$0.6368
Soybean Oil - Crude Degummed	Central Illinois - USDA	\$0.6311/lb	\$0.6401	\$0.6324
Soybean Oil - RBD*	Central Illinois - USDA	\$0.7433/lb	\$0.7290	\$0.7243
Canola Oil	West Coast	\$0.7834/lb	\$0.7690	\$0.7706
Canola Oil	Midwest	N/A	N/A	N/A
Corn Oil - Crude	Midwest	\$0.61/lb	\$0.6100	\$0.6138
Corn Oil - Refined	Midwest	\$1.055/lb	\$1.0550	\$1.0588
Corn Oil - Distillers	Midwest	\$0.5783/lb	\$0.5971	\$0.6188
Beef tallow	Chicago	\$0.565/lb	\$0.5700	\$0.5913
Choice White Grease	Chicago	\$0.56/lb	\$0.5600	\$0.5813
Poultry Fat [Low FFA]**	Southeastern US	\$0.62/lb	\$0.6200	\$0.6175
Yellow Grease	Illinois	\$0.47/lb	\$0.4700	\$0.4975
Methanol	US Gulf Coast	\$1.09/gal	\$1.1150	\$1.1013
Soy Meal [Hi-Pro]***	Illinois Truck	\$510.5/ton	\$502.50	\$509.38
Corn	Central Illinois	\$6.98/bu	\$7.0300	\$7.0025
Soybeans	Central Illinois	\$15.51/bu	\$15.4400	\$15.4375
Crude Glycerin [80%]	FOB Midwest	\$0.065/lb	\$0.6500	\$0.2088
DG-S [Distillers Dried Grains w/ Solubles]	Eastern Cornbelt - USDA	\$256.67/ton	\$253.3300	\$252.7075
Corn	Kansas City - USDA	\$6.9175/bu	\$7.1100	\$7.0631
ULSD	OPIS National Average	\$2.7025/gal	\$2.8275	\$2.8174
RBOB	OPIS National Average	\$2.5678/gal	\$2.6165	\$2.5866
Ethanol	OPIS National Average	\$2.1828/gal	\$2.1775	\$1.9227
Unleaded RFG	OPIS National Average	\$2.2985/gal	\$2.3634	\$2.3640
Natural Gasoline	Mt. Belvieu Non-TET	\$1.6187/gal	\$1.6675	\$1.6478
Natural Gasoline	Conway In-well	\$1.6375/gal	\$1.6975	\$1.6834
Ethanol RINs (Current Year)	OPIS National Average	\$1.6225/RIN	\$1.6125	\$1.5913
Ethanol RINs [Previous Year]	OPIS National Average	\$1.6325/RIN	\$1.6250	\$1.6050
Cellulosic RINs (Current Year)	OPIS National Average	\$1.95/RIN	\$1.9450	\$1.9550
Cellulosic RINs [Previous Year]	OPIS National Average	\$1.955/RIN	\$1.9750	\$1.9588
Biodiesel RINs (Current Year)	OPIS National Average	\$1.66/RIN	\$1.6500	\$1.6288
Biodiesel RINs (Previous Year)	OPIS National Average	\$1.7675/RIN	\$1.7625	\$1.7375
Advanced Biofuel RINs (Current Year)	OPIS National Average	\$1.655/RIN	\$1.6450	\$1.6238
Advanced Biofuel RINs (Previous Year)	OPIS National Average	\$1.7625/RIN	\$1.7575	\$1.7325
West Coast LCFS Carbon Credit	California/Oregon	\$96.5/mt	\$93.2500	\$93.2500
West Coast LCFS Carbon Intensity	California/Oregon	\$0.0072/CI	\$0.0068	\$0.0068

<sup>\*</sup>refined, bleached, deodorized \*\*free fatty acids \*\*\*high protein

Data provided, in part, by World Energy, www.worldenergy.net

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at \$2.314/MMBtu, which still dropped in 7.5cts week to week. April contracts at \$2.432/MMBtu gained 13.4cts on the day but also dropped week to week, down 5.3cts.

Still, after the weekly draws reported by EIA, natural gas supply nationwide at 2,195 Bcf held a 21.9% surplus against the same week in 2022 as well as 15.2% more than the five-year average for the week.

The average rate of natural gas withdrawals from storage so far during the current November-through-March drawdown season is 23% behind the five-year average for this point in the year. EIA estimates that if the rate of draws match the five-year average rate of 8.9 Bcf/day through the balance of the season, total inventory would come to 1,821 Bcf by the end of March, or about 18.9% more than the five-year average.

Notably, early last week the Federal Energy Regulatory Commission approved the Freeport LNG plant – down since June 8 – to return phase 1 to service at the Texas plant. At least one ship reportedly loaded LNG from storage there and departed.

For the week of Feb. 22, EIA noted 22 LNG-carrying vessels with a combined 82 Bcf capacity exited U.S. ports.

Meantime, the six-month NYMEX futures strip settled Thursday averaging \$2.6820/MMBtu, down 5.45cts week to week but boosting its premium over Henry Hub next-day cash prices to about 50.2cts.

#### In corn markets...

Corn futures turned decidedly weaker heading into the back half of last week in the wake of an initial U.S. Agriculture Department forecast that some said appeared heavy amid ongoing questions over U.S. export prospects.

Front-month March corn dropped 13.75cts on the Chicago Board of Trade Thursday settlement, and at \$6.6025/but the contract shed 20.25cts over the last two sessions to drop it 13.75cts week to week. The Thursday selling brought the largest one-day CBOT price drop since Jan. 4. At the same time, the next-up May corn contract, which is now the most actively traded, settled the session at \$6.5925/bu, losing 15cts day to day and 15.75cts week to week.

While some trade sources pointed to the timing of USDA's Ag Outlook Forum that pegged 2023-2024 corn planting at a hefty 91 million acres – up from the current 88.6 million – it was largely in line with industry expectations. However, the agency's initial shot at the season's corn carry at 1.887 billion bu showed up some 4.3% higher than average pre-forum trade forecast.

The forum's early glimpse of anticipated 2023-2024 cash corn prices offered a \$5.60/bu season average, a price that if realized would be a 16.4% drop from the USDA's existing forecast for the current 2022-2023 marketing year.

Analysts still put more market-moving weight on other issues last week, continuing to keep the focus on export prospects

and the how weather is impacting crops in global grain competitors in South America.

Argentine corn crops remain thirsty amid some scattered rainfall and a dry outlook for late last week. The Buenos Aires Grain Exchange cut its expectations for the crop by 7.9% last week, taking the forecast down 3.5 million metric tons, to 41 million tons. Brazil's corn crop is under the cloud of a late start to its second planting season due to rainy weather that delayed its soy harvest.

Some analysts foresee the possibility of stronger case for U.S. corn exports going forward, but for last week a holiday-delayed USDA Export Sales report had net 2022-2023 corn sales for the week ended Feb. 16 at 823,200 metric tons. That is about the midrange of expectations for the week, but still down 20% week to week and 30% behind the previous four-week average.

Cash corn prices for Kansas City yellow No. 2 truck corn ranging \$6.8525-\$6.9825/bu fell 17.75cts to 20.25cts week to week. Chicago No. 2 yellow corn cash prices running \$6.6025-\$6.6525/bu lost 20.75cts on the week.

#### In biodiesel...

Conventional diesel saw its discount to biodiesel continue to grow by Thursday on a large dip in pricing for the fossil fuel at domestic racks, while those of the biofuel saw a lesser decrease.

The U.S. B100 rack price on Thursday averaged \$6.583/gal, down 4.4cts from the prior week, while the average rack price for on-road diesel fell 14.3cts from the week prior, to \$2.891/gal nationwide.

The front-month March soybean oil futures contract gained 0.14ct last week to 62.04cts/lb, while the bean oil/heating oil, or BOHO, spread rose by nearly 11.3cts to about \$1.86/gal. The higher the spread, the more expensive it is to produce biodiesel.

OPIS assessed 2023 biomass-based diesel D4 Renewable Identification Number credits averaged \$1.66/RIN by Thursday, up 0.1ct from the previous week.

Including the \$1/gal federal blender's credit and a D4 RIN that provided \$2.49 in added per-gallon value, the fossil fuel saw its 11.8-ct discount to the biofuel from the week prior grow to 20.2cts by Thursday

### In DDGs...

While mixed pricing for Midwest distillers dried gains appeared last week, the market took a softer turn by the latter half as supply appeared easy and the support that feed markets enjoyed from strong soymeal values continued to erode by late last week.

FOB lowa DDG values from \$255 to \$285/ton over the week ran flat to \$10 higher from the week before, but the week-to-week comparison out of Minnesota had prices coming off by \$5-\$15 from, with quotes at \$250 to \$275. Eastern Corn Belt DDGs dropped as much as \$20 on the week, with prices from \$235 to \$275 showing in those states.



To the west, Nebraska DDGs ran flat to \$10 higher at \$280 to \$300, while those in Kansas quoting \$260 to \$280 ran flat to \$10 higher on the week.

Outside the region, New Orleans DDGs had mixed pricing, running from \$4 lower to \$12 up against the week before, at \$308 to \$324. In California, DDGs at \$337 slipped \$3 from a week ago, while \$330 in the Pacific Northwest had DDGs there shaving \$5 on the week.

Production continued look firm for the second straight week and based on EIA processor data reached the highest rate of operations yet this year. The data for the week ending Feb. 17 had Midwest regional plants boosting operations almost 2% from the week before and 3.4% over the last two weeks – lately running almost 1.9% higher than the same time last year.

Trade sources noted supply is healthy, and DDGs are starting to get pressured due to slipping values in recent weeks for other feedstuffs such as soymeal.

### In natural gasoline...

Mont Belvieu non-TET (Enterprise) natural gasoline (c5) prices receded from midweek gains, while other companion grades tied to the non-TET market remained inactive.

Belvieu non-TET c5 averaged \$1.61875/gal by Thursday, easing 0.8% from the previous day, even though crude oil prices had made a comeback. Companion grades of c5 – TET and other non-TET [Targa] – maintained 2.5-3cts premiums to the non-TET market, owing in part to a strong waterborne market.

TET was gauged at 3cts over non-TET, while Targa was talked 2.5cts over non-TET, translating to \$1.64875/gal and \$1.64375/gal, respectively. Like Belvieu, Conway c5 prices trended lower, averaging \$1.6375/gal on Thursday.

Edmonton natural gasoline for February was last seen at \$4.975/bbl over the front month WTI futures average, or \$1.94885/gal. March was gauged at \$4.925/bbl over the forward WTI average, or \$1.913925/gal.

#### In ultra-low-sulfur diesel...

Since rolling into 2023, ultra-low-sulfur diesel futures on the NYMEX shed nearly 38cts – or about 12% – by late last week, and clearly a big part of the price slump this year is based on warmer-than-normal winter temperatures over most of the U.S. that dampened distillate demand as well as boosting what had been very low inventories going into the heating season.

By the Thursday NYMEX settle, front-month March ULSD futures that slipped 0.67ct for the session to \$2.7081/gal dropped 10.27cts week to week. April ULSD at \$2.6908/gal shed 1.1cts on the day and 10.03cts on the week. The losses came as crude oil and gasoline futures firmed during the day, but the latest weekly data released Thursday from EIA showed U.S. distillate inventories climbed while those for gasoline posted a drawdown.

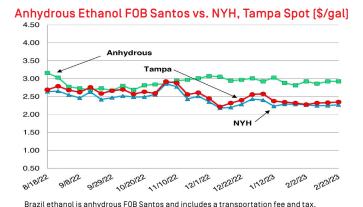
The 2.7 million bbl build in total distillate stocks over the EIA report week ending Feb. 17 nationwide supply was at 121.935 million bbl, up 2.26% on the week and 1.9% year to year, pushing to the highest number since the week ended Jan. 28, 2022. ULSD segment supply climbed 1.8% from the week before, adding more than 1.99 million bbl and the 112.429 million bbl on hand moved almost 2.4% higher than the same time in 2022.

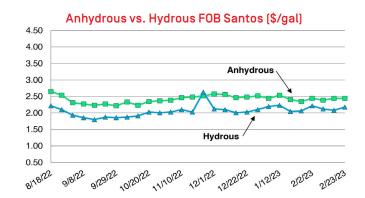
EIA recorded distillate inventory gains in every region of the country over the report week, except for the East Coast [PADD 1], where stocks were flat week to week. The East region, however, likely saw some intra-PADD movements last week with Southeast inventory falling by 2.5 million bbl and Mid-Atlantic stocks building by 2.4 million bbl.

EIA showed distillate production up 4.3% from the week before – and at 4.7 million b/d – running slightly ahead of the same week last year. At the same time, it estimated demand at 3.771 million b/d falling 3.2% on the week and running 11% below a year ago. Distillate demand topped 4 million b/d only once so far this year.

Distillate spot prices at some key bulk markets reflected the bearish scenario by late last week, with economic slowdown worries adding some drag to the market. Gulf Coast cash ULSD trading on Thursday ran 4.5cts under the NYMEX benchmark and an implied outright price at \$2.6458/gal dropped 9.75cts week to week.

#### **Brazil Ethanol Spot**







In Chicago, prompt ULSD futures implied \$2.6381/gal in Thursday trading that last fetched a 7cts-to-NYMEX discount, and that had outright values there shedding 11.77cts week to week.

#### European and Brazilian Markets:

### **European Markets**

European airline Wizz Air has agreed to be supplied with Neste MY Sustainable Aviation Fuel (SAF), the Finnish refiner said Wednesday.

The agreement gives Wizz Air the opportunity to purchase 36,000 tons annually over a period of three years beginning in 2025.

The volumes to be purchased "are a key part of the airline's environmental strategy to reduce carbon emissions intensity per passenger kilometer by 25% by 2030 and reach net-zero by 2050," Neste said.

The airline has been adding new aircrafts to its fleet that can fly with up to 50% SAF blend, it added.

Neste also said Wednesday that Bell Textron launched the first single-engine helicopter to fly using 100% SAF.

Safran Helicopter Engines, manufacturer of the engine on the flight, and GKN Aerospace, the fuel system component supplier, conducted thorough testing on the undertaking, according to Neste.

Bell called the flight "a monumental achievement for sustainability and decarbonization in the rotorcraft industry."

Neste said the collaboration "demonstrates that we are one step closer to enabling the entire aviation industry to take full advantage of 100% SAF as the key means to significantly reduce greenhouse gas emissions of air travel."

Germany exported a record 2.3 million mt of biodiesel in the 2022 marketing year, national biofuel industry trade group UFOP said Thursday.

The Netherlands took in a leading 1.16 million mt, 21% more than in 2021. The previous record high reached in 2020 was exceeded by 124,000 mt.

Trade to Belgium, the second-largest recipient, also increased, with that country buying about 635,900 mt of German biodiesel last year, up 61% from 2021.

Shipments to the U.S. totaled 287,200 mt, twice the volumes reported for 2021, UFOP said.

Those countries were followed by Poland, which bought 246,000 mt, Sweden at 98,000 mt and Austria, which imported 59.000 mt of German biodiesel.

German biodiesel imports in the 2022 marketing year were up 31% year to year to 1.36 million mt, according to the industry group.

The Netherlands was the largest supplier, sending 722,000 mt to Germany, up from 519,000 mt in 2021, followed by Belgium, which exported 330,000 mt, up from 229,000 mt in the prior year, and Malaysia, which supplied Germany with 119,000 mt, up from 65,000 mt in the 2021 marketing year.

UFOP noted the rise in imports from Austria, saying the 82,000 mt of biodiesel it sent to Germany marked a 150% increase.

Poland's total fell to 78,000 mt from 116,000 mt while France's slipped to 42,000 mt from 77,000 mt.

Danish carbon emissions reduction technology firm Topsoe and Sasol have signed a memorandum of understanding (MoU) for a 50/50 joint venture in 2023 to produce SAF at scale, the South Africa-headquartered chemicals and energy company Sasol said Tuesday.

Further details on production volumes or costs were not disclosed.

The joint venture will develop the production of SAF from non-fossil fuel feedstock using green hydrogen, sustainable resources and biomass as feedstock, according to Sasol. The production process will be based on Sasol's Fischer Tropsch gas synthesis technology.

"If we are to reach net zero on a global scale by 2050 in order to fight climate change, all solutions need to be put into play, and creating a low-carbon aviation sector is an important piece of the puzzle," said Topsoe Chief Executive Officer Roeland Baan.

Aviation currently accounts for 3% of global carbon emissions, Sasol said.

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#### **Brazilian Markets**

Anhydrous Ethanol \$2.3659-\$2.5173 Hydrous Ethanol \$2.1009-\$2.2523 [FOB Santos, 2/23/23, prices in U.S. \$/gal]

Brazil's São Martinho last week said that its R\$ 1.5 billion recorded net revenue in the third quarter of 2022 came as a result of higher sugar prices and lower pricing for ethanol.

The firm saw EBITDA in the quarter drop 13% from the second quarter of 2022, which it attributed to higher production costs.

On a call to discuss the results, Felipe Vicchiato, chief financial officer and investor relations director at the firm, said the company was able to increase ethanol exports to 79,000 cubic meters in the quarter. Vicchiato said this increase allowed Sao Martinho to minimize the impact of lower ethanol pricing for domestic sales during the quarter.

"We have been hedging for disciplined reasons, and also for risk control reasons," Vicchiato said of the company's current strategy.

"And with the corn ethanol plant, for sugar next year, I'm saying that we will still have 60% ethanol and 40% sugar for next year because I have a mill in Goias, I have a plant in Goias that crushes 7.5 million tons of sugarcane."

He went on to note that recently elected President of Brazil Lula De Silva has been a "major ambassador" of ethanol.

He said predictability from the new administration is important, saying that many of the investments being made in the sector rely on three-year time frames.

Vicchiato went on to explain that the firm is positioned well to deal with weak ethanol prices in the short term, adding that "you may see the possibility of [Sao Martinho] gaining market share over other players that have less of a financial ability to cope with lower prices of ethanol for a longer time."

#### Market update

Ex-mill anhydrous ethanol assessments decreased slightly last week, while those of hydrous ethanol rose slightly from the week prior.

For the week ended Feb. 17, the University of São Paulo's CEPEA economic research center assessed ex-mill anhydrous ethanol in São Paulo state at R\$3.06/liter, down almost 2% from the week prior and about 3.27% below its assessment from the comparable period of 2022.

For the same week, CEPEA assessed ex-mill hydrous ethanol at \$2.698/liter, up more than 1.8% week to week and off about 6.35% year to year.

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#### News of the Week:

# Bursa Malaysia to work with government agency to build VCM ecosystem

National stock exchange Bursa Malaysia announced Monday it will work with government agency Malaysia Green Technology and Climate Change Corporation to build and promote the country's voluntary carbon market ecosystem following the launch of the Bursa Carbon Exchange last December.

The duo signed a memorandum of collaboration on Monday to identify, guide, connect and nurture key players in the carbon market ecosystem.

The agreement keeps in mind the need to develop a pipeline of carbon offset projects to support increasing demand by corporates, the bourse added.

The two parties will also develop a national VCM handbook to provide relevant information to generate carbon credits using international standards acceptable to the BCX.

"The VCM handbook is a pivotal option for companies in realizing carbon trading as part of their climate and sustainability strategies," said Shamsul Bahar bin Mohd Nor, CFO of MGTC.

# EU Council approves REPowerEU, auction timeline expected soon

The European Union Council has rubber-stamped REPowerEU on Tuesday, the bloc's plan to break away from dependence on Russian fossil fuels, which sets the stage for an increased supply of carbon allowances for the market later this year.

The REPowerEU plan has been a priority for the EU since the plan was first unveiled back in May 2022. It will mobilize a €300 billion (\$320.5 billion) war chest to fund the cross-border deployment of renewable energy networks and boost the clean energy transition across the EU.

Members of the European Parliament agreed to allocate 30% of the REPowerEU plan's spending on cross-border green energy initiatives that will involve co-operation from local and regional authorities. Parliament approved the REPowerEU package last week by a majority vote.

# Subway announces plans to install EV chargers at US restaurant locations

The Subway sandwich shop franchise on Tuesday became the latest fast-food company to target electric vehicle owners, announcing plans to install EV chargers at some of its restaurant locations.

Subway said it is partnering with charging network operator GenZ EV Solutions to offer what it is calling Subway Oasis charging parks, which will feature smaller format fast chargers, Wi-Fi, picnic tables, canopies and playgrounds.

The company said it expects to begin offering charging locations sometime this year, with the program including a multiyear rollout. The initial charging parks will be in select, new or newly remodeled restaurants across the U.S., the company said.

A Subway announcement about the plan said it is intended to "offer added convenience for on-the-go guests, while doing good for the planet and generating incremental revenue for franchisees."

The company said its large footprint means it is well positioned "to offer a quick, reliable charge to EV motorists and contribute to a national network of charging stations." Subway

said its franchisees operate nearly 37,000 restaurants in more than 100 countries.

## Mexico faces range of challenges in transition to EVs: Analyst

Efforts in Mexico to speed the adoption of electric vehicles faces several challenges, including the addition of a sufficient number of charging stations and the adoption of tax credits to encourage consumers to buy EVs, an analyst said Feb. 20.

In a webinar organized by the Association of Retail Equipment Suppliers, Guillermo Garcia Alcocer, an energy specialist with the ITAM Academic Institute, said Mexico will need to add 38,000 charging stations by 2041 to meet the project demand for the vehicles.

Garcia Alcocer said Mexico currently has 2,089 EV charging stations, adding that the number will have to increase by about 2,000 each year through 2041.

In addition, he said he believes the Mexican government must work to develop regulations to provide incentives to build out an EV infrastructure, including battery manufacturing, an expanded electricity network and increase the number of EVs it imports.

And while he said that while EVs use in Mexico will increase over the next several years, the country is unlikely to see a significant number of EVs until 2030.

## Australia can cut 92% of industry emissions by 2050 without offsets: Report

Australia can cut its industry emissions by 92% in 2050 from its 2020 levels with the remaining 8% to be covered by high quality and verifiable offsets in its transition towards net zero emissions, according to a report published by the Australian Industry Energy Transition Initiative Feb. 20.

Partly funded by the Australian government and conducted in collaboration with key industry players, ETI outlined decarbonization pathways for the export-oriented industry sectors that include iron and steel, aluminum, other metals, chemicals and liquefied natural gas.

The target can be achieved under ETI's "coordinated action scenario" which requires actions from all sectors of the Australian economy stretching beyond their current efforts across climate policy and low-emissions technology development and deployment.

The ETI in its latest report calls for significant investment, renewable energy and hydrogen deployment to keep the country on track to limit warming to 1.5 degrees C.

## ICE to offer WCA futures contracts beginning March 27

The Intercontinental Exchange will offer Washington Carbon Allowances futures contracts for trading beginning on March 27, according to a notice the exchange posted Tuesday.

Washington state enacted its cap-and-invest program in January, which aims to decrease carbon dioxide emissions by 45% below 1990 levels and achieve net-zero emissions by 2050. The program will cover about 75% of the state's CO2 emissions. The inaugural WCA auction will have 6.2 million allowances on offer with an auction reserve price of \$22.20/mt for 2023 and take place Feb. 28, according to the Washington Department of Ecology.

ICE will offer WCA contracts for vintage years 2023 and 2024 along with the current auction clearing price. The exchange offers a variety of environmental products, including California Carbon Allowance futures, California Carbon Offset futures, and Regional Greenhouse Gas Initiative futures, California Low Carbon Fuel Standard credits and Renewable Energy Certificates.

## Ethanol margin down on poor pricing, greater input Costs: CARD

The average U.S. margin for ethanol slipped significantly from the week prior on weaker pricing for the biofuel and stronger input costs, according to data from Iowa State University's Center for Agricultural and Rural Development released Wednesday.

The school said the average return over operating costs at a typical dry-mill ethanol plant in the week ended Feb. 17 fell to 12.86cts/gal, down from 20.86cts/gal in the previous week. Last week's margin was down 1.47cts from the corresponding week of 2022, when the average margin recorded was 14.34cts/gal.

CARD said the average lowa ethanol price fell to \$2.03/ gal from \$2.065/gal the week prior, which is 1.4cts lower on the year.

The school also said the average margin at a typical continuous flow biodiesel plant that uses soybean oil as a feedstock was down 5.47cts from the week prior at 23.72cts/ gal. In the same week of 2022, the average margin was minus 38.76cts/gal.

The average lowa biodiesel price was level week-to-week at \$5.64/gal. In the same week of last year, the price was \$5.70/gal.

## National Corn Growers Association board elect new CEO

Board members for the National Corn Growers Association elected Neil Caskey as the group's new chief executive officer



Wednesday, according to a news release.

He is set to begin the role Feb. 27.

NCGA President Tom Haag said the board found Caskey to be "well known as someone who gets the job done well."

"The board and I are certain that Neil will usher in new ideas and take the organization to new heights," Haag said.

Caskey said in the release that it would be "quite an honor to lead an organization that I care so much about."

"We have a great team in place, and I look forward to forging full-speed ahead and pushing for wins on some of our top issues, like the Next Generation Fuels Act, fighting Mexico's ban on genetically modified corn and securing reauthorization of the farm bill," Caskey said.

Caskey previously served as the organization's vice president for several years, during which the group said he took a leading role in challenging Mexico in its bid to ban genetically modified corn.

## BP to begin trial supply of HVO-blended diesel to BHP in Western Australia

BP Plc will begin a trial supply of diesel blended with hydrogenated vegetable oil to assist mining company BHP decarbonize its iron ore operations in Western Australia, the companies said in separate news releases Thursday.

BP said it will initially supply BHP diesel with 20% HVO blend and increase up to a 50% HVO blend. The trial includes a number of haul trucks, dozers and an excavator at BHP's Yandi mine in the Pilbara region of Western Australia.

The HVO is to have internationally recognized certification as being sourced from more sustainable feedstocks such as waste products and the trial will run for three months, BHP said in its news release.

"bp's ambition to be net zero by 2050 or sooner recognizes the crucial role we have to work with our customers and partners to meet their decarbonization needs," Frédéric Baudry, president of BP Australia and senior vice president, fuels and low carbon solutions, Asia Pacific, said.

"Globally, bp plans to increase its investment in low carbon energy. Forging strategic partnerships with companies like BHP enables bp to create solutions that satisfy the increasing demand for lower carbon fuels in sectors like mining and transport," Baudry said.

BP last week announced its plan to build a 10,000 barrels per day [b/d] biorefinery at the site of its former Kwinana oil refinery in Western Australia, with plans to build four more such plants globally.

Its planned Kwinana biorefinery will repurpose existing oil refining infrastructure to produce sustainable aviation fuel and renewable diesel from bio feedstocks by 2026. The project has reached the front-end engineering and design (FEED) phase and a final investment decision is targeted for the end of this year, as reported. BP in March 2021 ceased fuel production at the 152,000 b/d Kwinana refinery.

# Weak ULSD futures hurting traditional refiners, biomass-based diesel makers

Weaker ULSD futures that have eroded margins for traditional refiners since the start of the year are also leaving biomass-based diesel producers in a tougher spot.

Since the start of 2023, the NYMEX front-month ULSD futures are down more than 37cts/gal based on Wednesday's settlement, largely on above-normal winter temperatures across much of the U.S., including the Northeast.

Over the same period, front-month soybean oil futures on the Chicago Board of Trade have fallen by only 0.37ct/lb, which equates to a 2.77ct/gal decline.

Continued weakness in ULSD futures and stronger soybean oil prices expanded the bean oil/heating oil, or B0H0, spread, to \$1.99745/gal Wednesday, the widest it has been since Nov. 30, when it was just under \$2.28/gal.

Biodiesel and renewable diesel producers use the B0H0 spread to gauge blending economics and the higher the spread, the more expensive it is to produce biomass-based diesel.

Prices for Renewable Identification credits under the Renewable Fuel Standard can help to bridge the gap between ULSD and soybean futures. OPIS Tuesday assessed current-year D4 RINs at \$1.665/credit and at \$1.675/credit Wednesday, the highest value since Jan. 27.

## For subscription information, please contact OPIS Customer Service.

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