

# Specifications Guide Global Biofuels

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## Definitions of the trading locations for which Platts publishes indexes or assessments

All the assessments listed here employ S&P Global Energy's Platts Assessments Methodology, as published at [https://www.spglobal.com/commodityinsights/plattscontent/\\_assets/\\_files/en/our-methodology/methodology-specifications/platts-assessments-methodology-guide.pdf](https://www.spglobal.com/commodityinsights/plattscontent/_assets/_files/en/our-methodology/methodology-specifications/platts-assessments-methodology-guide.pdf).

These guides are designed to give Platts subscribers as much information as possible about a wide range of methodology and specification questions.

This guide is current at the time of publication. Platts may issue further updates and enhancements to this guide and will announce these to subscribers through its usual publications of record. Such updates will be included in the next version of this guide. Platts editorial staff and managers are available to provide guidance when assessment issues require clarification.

The following global biofuels guide contains the primary specifications and methodologies for Platts biofuels assessments throughout the world. The various components of this guide are designed to give Platts subscribers as much information as possible about a wide range of methodology and specification issues.

The assessments listed in this guide reflect the prevailing market value of the specified product at the following times (where there are exceptions, these are highlighted against the relevant assessments):

**Asia:** 16:30 Singapore time

**Europe:** 16:30 London time

**South America:** 16:30 Sao Paulo time

**North America:** 13:30 Central time

**Ethanol**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>Asia</b>											
<b>Bioethanol (Fuel Grade)</b>											
Bioethanol CIF Philippines	\$/ cu m	AAWAA00	AAWAA03	AAWAA04	Spot	CIF	Subic Bay	30-75 days forward	3,000	5,000	cubic meter
Bioethanol CIF Philippines H3	\$/ cu m	AAWAB00	AAWAB03	AAWAB04	Spot	CIF	Subic Bay	30-45 days forward	3,000	5,000	cubic meter
Bioethanol CIF Philippines H4	\$/ cu m	AAWAC00	AAWAC03	AAWAC04	Spot	CIF	Subic Bay	45-60 days forward	3,000	5,000	cubic meter
Bioethanol CIF Philippines H5	\$/ cu m	AAWAE00	AAWAE03	AAWAE04	Spot	CIF	Subic Bay	60-75 days forward	3,000	5,000	cubic meter
<b>Ethanol (Industrial)</b>											
Ethanol Grade B CFR Ulsan	\$/ cu m	AAXVA00	AAXVA03	AAXVA04	Spot	CFR	Ulsan	60-90 days forward	5,000		cubic meter
Ethanol FOB Karachi Industrial grade (weekly)	\$/mt	ASEFB04			Spot	FOB	Karachi	30-45 days forward	2,000	3,000	metric ton
Ethanol FOB Karachi Industrial grade (weekly)	\$/ cu m	ASEFE04			Spot	FOB	Karachi	30-45 days forward	2,000	3,000	cubic meter
<b>Ethanol (ENA)</b>											
Ethanol FOB Karachi Extra Neutral Alcohol (weekly)	\$/mt	ASEFA04			Spot	FOB	Karachi	30-45 days forward	2,000	3,000	metric ton
Ethanol FOB Karachi Extra Neutral Alcohol (weekly)	\$/ cu m	ASEFD04			Spot	FOB	Karachi	30-45 days forward	2,000	3,000	cubic meter
<b>Ethanol (Anhydrous)</b>											
Ethanol FOB Karachi Anhydrous grade (weekly)	\$/mt	ASEFC04			Spot	FOB	Karachi	30-45 days forward	2,000	3,000	metric ton
Ethanol FOB Karachi Anhydrous grade (weekly)	\$/ cu m	ASEFF04			Spot	FOB	Karachi	30-45 days forward	2,000	3,000	cubic meter
Bioethanol CFR India one-month shipment(weekly)	\$/mt	CIAES04			Spot	CFR	Nhava Shiva, Mundra	front and second month	3,000	5,000	metric ton
Bioethanol CFR India one-month shipment(weekly)	\$/cu m	CIBES04			Spot	CFR	Nhava Shiva, Mundra	front and second month	3,000	5,000	cubic meter
Bioethanol CFR India two months shipment(weekly)	\$/mt	CICES04			Spot	CFR	Nhava Shiva, Mundra	front and second month	3,000	5,000	metric ton
Bioethanol CFR India two months shipment(weekly)	\$/cu m	CIDES04			Spot	CFR	Nhava Shiva, Mundra	front and second month	3,000	5,000	cubic meter
<b>Europe</b>											
<b>Ethanol (Fuel Grade)</b>											
Ethanol T2 FOB Rotterdam	€/cu m	AAYDT00	AAYDT03	AASLT00	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	2,000	cubic meter
Ethanol T2 FOB Rotterdam	\$/cu m	AAYDT10	AAYDT13	AAYDT14	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	2,000	cubic meter
Ethanol T1 FOB Rotterdam	\$/cu m	AAWUQ00	AAWUQ03	AAWUQ04	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	2,000	cubic meter

**Ethanol**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
Ethanol T2 High GHG Savings Premium FOB Rotterdam	€/cu m	AASNR00	AASNR03	AASNR04	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	1,000	cubic meter
Ethanol T2 High GHG Savings Premium FOB Rotterdam	\$/cu m	AASNS00	AASNS03	AASNS04	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	1,000	cubic meter
Ethanol T2 High GHG Savings FOB Rotterdam	€/cu m	AGSSQ00	AGSSQ03	AGSSQ04	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	1,000	cubic meter
Ethanol T2 High GHG Savings FOB Rotterdam	\$/cu m	AGSSR00	AGSSR03	AGSSR04	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	1,000	cubic meter
Ethanol T2 FOB Rotterdam Premium	€/cu m	AASNR00	AASNR03	AASNR04	Spot	FOB	Rotterdam	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	2,000	cubic meter
Ethanol T1 CIF NWE Cargo	\$/cu m	AAYDS00	AAYDS03	AASLS00	Spot	CIF	Rotterdam	10-25 days forward (Monday-Friday)	3,000		cubic meter
Platts FOLicht Ethanol Fuel Grade DAP East Europe	€/hl	PGEEJ04	PGEEJ03		Spot	DAP	East Europe	7-36 days forward	30	60	cubic meter

**Ethanol (Beverage 96 ENA)**

Platts FOLicht Ethanol Beverage 96 DAP Central Europe	€/hl	PGEEA04	PGEEA03		Spot	DAP	Central Europe	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP East Europe	€/hl	PGEEC04	PGEEC03		Spot	DAP	East Europe	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP South Europe	€/hl	PGEEE04	PGEEE03		Spot	DAP	South Europe	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP West Europe	€/hl	PGEEG04	PGEEG03		Spot	DAP	West Europe	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 FOB Northwest European Ports	€/hl	PGEEI04	PGEEI03		Spot	FOB	Northwest European Ports	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP Central Europe	€/hl	PGEEB00			Contract	DAP	Central Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP East Europe	€/hl	PGEED00			Contract	DAP	East Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP South Europe	€/hl	PGEEF00			Contract	DAP	South Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Beverage 96 DAP West Europe	€/hl	PGEEH00			Contract	DAP	West Europe	Current Quarter	30	60	cubic meter

**Ethanol (Industrial 99)**

Platts FOLicht Ethanol Industrial 99 FOB Northwest European Ports	€/hl	PGEEK04	PGEEK03		Spot	FOB	Northwest European Ports	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol Industrial 99 DAP Central Europe	€/hl	PGEET00			Contract	DAP	Central Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Industrial 99 DAP East Europe	€/hl	PGEEU00			Contract	DAP	East Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Industrial 99 DAP South Europe	€/hl	PGEEV00			Contract	DAP	South Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Industrial 99 DAP West Europe	€/hl	PGEEW00			Contract	DAP	West Europe	Current Quarter	30	60	cubic meter

**Ethanol (Industrial 96)**

Platts FOLicht Ethanol Industrial 96 DAP Central Europe	€/hl	PGEEQ00			Contract	DAP	Central Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Industrial 96 DAP South Europe	€/hl	PGEER00			Contract	DAP	South Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol Industrial 96 DAP West Europe	€/hl	PGEES00			Contract	DAP	West Europe	Current Quarter	30	60	cubic meter

**Ethanol**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>Ethanol (REN 96)</b>											
Platts FOLicht Ethanol REN 96 DAP Central Europe	€/hl	PGEEL04	PGEEL03		Spot	DAP	Central Europe	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol REN 96 DAP West Europe	€/hl	PGEEN04	PGEEN03		Spot	DAP	West Europe	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol REN 96 FOB Northwest European Ports	€/hl	PGEEP04	PGEEP03		Spot	FOB	Northwest European Ports	7-36 days forward	30	60	cubic meter
Platts FOLicht Ethanol REN 96 DAP Central Europe	€/hl	PGEEM00			Contract	DAP	Central Europe	Current Quarter	30	60	cubic meter
Platts FOLicht Ethanol REN 96 DAP West Europe	€/hl	PGEE000			Contract	DAP	West Europe	Current Quarter	30	60	cubic meter

### Ethanol futures

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
T2 Ethanol Futures Assessment M1	€/cu m	AAXCL00	AAXCL03	AAXCL04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M2	€/cu m	AAXCM00	AAXCM03	AAXCM04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M3	€/cu m	AAXCN00	AAXCN03	AAXCN04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M4	€/cu m	AAXC000	AAXC003	AAXC004	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M5	€/cu m	AAXCP00	AAXCP03	AAXCP04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M6	€/cu m	AAXCQ00	AAXCQ03	AAXCQ04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M7	€/cu m	AAXCR00	AAXCR03	AAXCR04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M8	€/cu m	AAXCS00	AAXCS03	AAXCS04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M9	€/cu m	AAXCW00	AAXCW03	AAXCW04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M10	€/cu m	AAZZA00	AAZZA03	AAZZA04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M11	€/cu m	AAZB00	AAZB03	AAZB04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter
T2 Ethanol Futures Assessment M12	€/cu m	AAZC00	AAZC03	AAZC04	Future	Ethanol T2 FOB Rotterdam (AAYDT00)			1,000		cubic meter

### Physical Ethanol

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>North America</b>											
<b>Ethanol (fuel grade)</b>											
Ethanol Chicago (terminal)	¢/gal	AALRI00	AALRJ00		Spot	ITT	ITT Kinder Morgan Argo Terminal, Chicago	5-15 days forward	5,000		barrels
Ethanol Chicago (terminal) any-M1	¢/gal	AALRA00	AALRA03		Spot	ITT	ITT Kinder Morgan Argo Terminal, Chicago	Front-month	5,000		barrels
Ethanol Chicago (terminal) any-M2	¢/gal	AALRB00	AALRB03		Spot	ITT	ITT Kinder Morgan Argo Terminal, Chicago	Second-month	5,000		barrels
Ethanol Chicago IL Swap Balmo	¢/gal	ESCM000			Future	Ethanol Chicago (terminal)	Chicago area terminals	1 st through 15th day of month	42,000		gallons
Ethanol Chicago IL Swap Mo01	¢/gal	ESCM001			Future	Ethanol Chicago (terminal)	Chicago area terminals	Next calendar month forward	42,000		gallons
Ethanol Chicago IL Swap Mo02	¢/gal	ESCM002			Future	Ethanol Chicago (terminal)	Chicago area terminals	Two calendar months forward	42,000		gallons
Ethanol Chicago (Rule 11)	¢/gal	AAVWD00	AAVWD03		Spot	FOB	Chicago	This week (Monday through Wednesday) Next Week (Thursday, Friday)	145,000		gallons
Ethanol NYH Barge (M1)	¢/gal	AAMPF00	AAMPG00		Spot	FOB	New York Harbor	Front-month	25,000		barrels
Ethanol NYH Barge (M2)	¢/gal	AAUEG00	AAUEG03		Spot	FOB	New York Harbor	Second-month	25,000		barrels
Ethanol NYH ITT	¢/gal	ANYHA00	ANYHA03		Spot	ITT	Sewaren Terminal	5-15 days forward	5,000		barrels
Ethanol Houston 5-15 Barge	¢/gal	AATGJ00	AATGJ03		Spot	FOB	Houston	5-15 days forward	10,000		barrels

### Physical Ethanol

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
Ethanol Dlvd Rail Houston 15-30 days	¢/gal	AABFE00	AABFE03		Spot	Dlvd rail	Pasadena, Bayport, Texas City and Galveston terminals	15-30 days forward	1		unit train
Ethanol Dlvd Rail Houston Differential to Chicago Swap	¢/gal	AACFF00			Spot						
North California Rail Car Ethanol	¢/gal	AAMFT00	AAMFW00		Spot	Dlvd rail	Richmond, Stockton, McClellan Park and Sacramento terminals	This week (Monday through Thursday) Next Week (Friday)	145,000		gallons
Ethanol North California Rail 70 CI	¢/gal	AENCA00	AENCA03		Spot	Dlvd rail	Richmond, Stockton, McClellan Park and Sacramento terminals	This week (Monday through Thursday) Next Week (Friday)	145,000		gallons
Ethanol NorCal Rail Premium to Ethanol Chicago IL Swap Mo01	¢/gal	AAVXD00	AAVXD03		Spot	Dlvd rail	Richmond, Stockton, McClellan Park and Sacramento terminals	This week (Monday through Thursday) Next Week (Friday)	145,000		gallons
Ethanol NorCal Rail 70 CI to Chi Spread Mo01	¢/gal	AENCB00	AENCB03		Spot	Dlvd rail	Richmond, Stockton, McClellan Park and Sacramento terminals	This week (Monday through Thursday) Next Week (Friday)	145,000		gallons
Ethanol delivered Toronto	¢/gal	BFEAT00	BFEAT03		Spot	Dlvd rail	Toronto, Ontario	15-30 days forward	145,000		gallons
CFR CI cost per gallon	¢/gal	BFECT00			Calculation		Toronto, Ontario				gallons
Ethanol cash margin	c/gal	AECMA00			Calculation	FOB	Chicago				

### South America

#### Brazil Ethanol fuel and non-fuel grade

Ethanol FOB Santos Cargo c/gal	¢/gal	AATAE00	AATAE03	AATAE04	Spot	FOB	Santos, Brazil	10-30 days from date of publication	10,000 cu m		gallon
Ethanol FOB Santos Cargo \$/cu m	\$/cu m	AAWFO00	AAWFO03	AAWFO04	Spot	FOB	Santos, Brazil	10-30 days from date of publication	10,000 cu m		cubic meter
Ethanol FOB Santos Cargo Real/cu m	Real/cu m	AAWFP00	AAWFP03	AAWFP04	Spot	FOB	Santos, Brazil	10-30 days from date of publication	10,000 cu m		cubic meter
Anhydrous ANP Domestic Ex-mill Ribeirao with taxes	Real/cu m	AAXNN00		AAXNN04	Spot	EXW	ex-mill Ribeirao Preto	1-7 days from date of publication	500 cu m	1,500 cu m	cubic meter
Hydrous Ethanol CIF Paulinia	Real/cu m	ADROA00	ADROA03	ADROA04	Spot	CIF	Paulinia, Brazil	1-15 days from date of publication	500 cu m	1,500 cu m	cubic meter
Hydrous FOB Santos/Paranagua \$/cu m	\$/cu m	AAXNR00		AAXNR04	Spot	FOB	Santos, Brazil	20-30 days from date of publication	5,000 cu m		cubic meter
Hydrous ANP Domestic Ex-mill Ribeirao with taxes	Real/cu m	AAXNQ00		AAXNQ04	Spot	EXW	ex-mill Ribeirao Preto	1-7 days from date of publication	500 cu m	1,500 cu m	cubic meter
Raw Sugar Equivalent	c/lb	AAXOA00		AAXOA04	Calculation	FOB	Santos, Brazil				pound
Grade B FOB Santos/Paranagua	\$/cu m	AAXNS00		AAXNS04	Spot	FOB	Santos/Paranagua	20-30 days from date of publication	5,000 cu m		cubic meter
NNE Brazil delivered Suape anhydrous	Real/cu m	AAXFW00	AAXFW03	AAXFW04	Spot	DAP	Suape, Pernambuco	1-15 days from date of publication	250 cu m	1000 cu m	cubic meter

## Ethanol

### Asia

#### Bioethanol CIF Philippines

Platts Asia fuel grade bioethanol assessments are daily assessments basis CIF Philippines based on latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time.

**Timing:** Platts assesses three half-monthly cycles on arrival basis. The daily CIF Philippines marker (AAWAA00) averages the three cycles. The three cycles that Platts publishes are as follows:

- 1) 30-45 days forward
- 2) 45-60 days forward
- 3) 60-75 days forward

These assessments are rolled over on the 1st and 16th of each month. For example, on April 1, Platts assesses:

- 1) Second-half May
- 2) First-half June
- 3) Second-half June

These assessments would be rolled over on April 16. They would then read as:

- 1) First-half June
- 2) Second-half June
- 3) First-half July

**Basis and locations:** CIF Philippines reflect prices basis CIF Subic Bay. Pricing information for other Philippines' ports may

be taken into account but would be normalized back to the basis location.

**Volume:** Cargo size of 3,000 – 5,000 cu m, normalized to 3,000 cu m. Other volumes may be taken into consideration but will be normalized back to 3,000 cu m.

**Unit:** \$/cu m.

**Terms and conditions:** The CIF Philippines assessments reflect Letter of Credit at sight up to 30 days from the date of transaction. For deals with usance of greater than 30 days, the value of the extra credit allowance will be normalized.

**Quality and Product Purity specifications:** Assessments reflect undenatured anhydrous bioethanol and conform to the Philippines National Standard (PNS/DOE QS 007:2005) specifications under the current definitions 3.1 and 3.2 of the standard for use as a blending component in unleaded gasoline.

These specifications include:

**Ethanol content/purity:** 99.3% min (by volume)

**Density at 20 degrees Celsius:** 0.7915 kg/liter max

**Water content:** 0.5% max (by mass)

**Methanol:** 0.5% max (by mass)

**Total acids (as acetic acid):** 0.007% max (by mass)

The CIF Philippines assessments reflect product at a temperature of 20 degree Celsius.

#### Ethanol Grade B CFR Ulsan

Platts Ethanol Grade B CFR Ulsan is a daily physical spot price assessment based on latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time. In the absence of representative CFR Ulsan price

information, Platts may also refer to FOB prices from relevant supply origins using prevailing vessel sizes and spot freight rates.

**Timing:** Ethanol Grade B CFR Ulsan reflects spot cargoes arriving in Ulsan 60-90 days forward from the day of publication.

**Basis and locations:** CFR Ulsan, South Korea.

**Unit :** \$/cu m.

**Volume:** Typical cargo sizes normalized to 5,000 cu m.

**Terms and conditions:** Industry standard payment terms.

**Quality specifications:** The assessment reflects typical Grade B ethanol specifications, from non-GM sugarcane, normalized to standard Ethanol Grade B at 20 degrees Celsius with a maximum of 40 mg/100 ml of higher alcohols.

#### Platts FOLicht Ethanol FOB Karachi (weekly)

Platts publishes three weekly FOLicht Ethanol physical spot assessments basis FOB Karachi, reflecting latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time on Mondays. When Monday falls on a public holiday, Platts will assess on the previous publishing day.

**Quality and Purity:** Platts FOLicht FOB Karachi Extra Neutral Alcohol (ENA) grade assessment reflects undenatured extra neutral alcohol ethanol with 96% alcohol by volume.

Platts FOLicht FOB Karachi Industry grade assessment reflects undenatured industrial grade ethanol with 95% alcohol by volume.

Platts FOLicht FOB Karachi Anhydrous grade assessment reflects anhydrous grade ethanol with 99.7%-99.9% alcohol by volume.

In the absence of observable spot market activity for certain grades of bioethanol, Platts may consider adjacent markets and other verifiable data reported.

**Timing:** Cargoes loading 30-45 days forward from the week of publication.

**Basis and locations:** Assessments reflect prices basis FOB Karachi port, Pakistan. Pricing information for other ports may be taken into account but would be normalized back to the basis location.

**Volume:** Cargo size of 2,000 – 3,000 mt, other volumes may be taken into consideration but will be normalized back to the basis volume.

**Unit:** \$/mt, also published in \$/cu m using a conversion factor of 0.8.

**Terms and conditions:** The FOB Karachi assessments reflect a Letter of Credit at sight up to 30 days from the date of transaction. For deals with usance of greater than 30 days, the value of the extra credit allowance will be normalized.

#### Anhydrous bioethanol CFR India (weekly)

Platts publishes two weekly anhydrous bioethanol spot assessments basis CFR India, reflecting latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time on Tuesdays. When Tuesday falls on a public holiday, Platts will assess on the previous publishing day.

**Quality and Purity:** The assessments reflect denatured anhydrous grade with a purity of more than 99% ethanol by volume.

**Timing:** The two assessments reflect shipment loading one month ahead (M1) and two months ahead (M2) from the month of publication. The loading laycans roll on the first Tuesday of every month.

For example, for the month of September, Platts will assess:

- October Shipment (M1)
- November Shipment (M2)

These assessments will roll on the first Tuesday of October, when Platts will assess:

- November Shipment (M1)
- December Shipment (M2)

**Basis and locations:** The assessments reflect CFR Nhava Shiva or Mundra. Cargoes shipped to other Indian ports may be taken into consideration and may be normalized back to the above basis locations.

**Volume:** The assessments reflect a parcel size of 3,000-5,000 mt. Other volumes may be taken into consideration and normalized back to 3,000-5,000 mt. An ethanol cargo shipped to Indian ports could consist of multiple parcels on one vessel.

**Unit:** \$/mt, also published in \$/cu m using a conversion factor of 0.8.

**Terms and conditions:** The CFR India assessments reflect a payment term of a usance Letter of Credit (LC) of 180 days from the bill of lading date. Platts may consider and normalize price information with usance LC of shorter or longer than 180 days.

**Note:** In the absence of observable spot market activities for CFR India, Platts may consider related markets, such as the Platts Chicago Terminal (AALR100) ethanol benchmark, and factors including quality premium, insurance, freight and other costs, or other adjacent ethanol market information.

## Europe

### T2 Ethanol FOB Rotterdam

**Basis and Locations:** Prices for T2 ethanol barges are assessed daily on a FOB ARA (Amsterdam, Rotterdam, Antwerp) basis, with nomenclature of FOB Rotterdam. T2 product (duty paid for European-qualified material, not inclusive of Russian origin material).

**Loading Options:** Platts FOB ethanol assessments reflect Amsterdam-Rotterdam-Antwerp loading. The seller will not incur additional freight costs for loading from ARA loading points, compared to loading from Rotterdam, provided that costs do not exceed standard market rates. The seller will notify the buyer of the port of loading in a time-frame as per standard market practice. The seller must also be prepared to make the volume available through early loading to allow for timing differences between ports to prevent delays and consequent financial losses.

**Sustainability Criteria:** Platts T2 Ethanol FOB Rotterdam assessment reflects ethanol which is compliant with the sustainability and certification provisions of the Renewable Energy Directive (RED). Furthermore and upon buyer's request, the seller shall exercise reasonable efforts to provide all necessary documentation for validation of the product batch against Germany's biomass web application system Nabisy. The seller shall also exercise best efforts to provide proof of sustainability documentation within 30 days from barge loading, as per ISCC and Nabisy guidelines. The buyer holds a right to audit the sustainability documentation for the sole purpose of determining the validity and veracity of these documents.

**Timing:** Platts ethanol assessments for T2 FOB Rotterdam barges reflect loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication.

**Volume:** Assessments reflect standard, transactable size of 1,000-2,000 mt, normalized to 1,000 mt.

**Unit:** Eur/cu m. Platts also publishes a \$/cu m value for T2 product, using a 16:30 London time assessed value for the Eur/USD exchange rate.

**Product Purity Specification:** Assessments reflect anhydrous, undenatured ethanol conforming to the latest edition of the European standard EN 15376 specifications for automotive fuels — ethanol as a blending component for gasoline. The ethanol must also conform to the Netherlands' customs TARIC code of

CN 2207 1000, under the European Commission's latest definition of; Undenatured ethyl alcohol of an alcoholic strength by volume of 80% vol. or higher.

**Carbon Intensity:** Platts T2 ethanol assessments reflect product meeting a maximum carbon intensity (CI) of 33.52g of carbon dioxide equivalent (CO<sub>2</sub>e) per megajoule (MJ), This is equivalent to a minimum GHG saving of 60% based on a fossil fuel comparator of 83,8g CO<sub>2</sub>e/MJ under the European Commission's Renewable Energy Directive (RED) I framework, or GHG savings of 64.3% based on the RED II fossil fuel comparator of 94g CO<sub>2</sub>e/MJ.

Platts may also publish bids, offers and trades for ethanol meeting other levels of CI, normalized to the assessment CI specification.

**Temperature:** The European automotive fuel ethanol assessment reflects product at a temperature of 20 degrees Celsius with a reference conversion from mt to cu m: 0.7887.

Notes:

1) The Platts T2 ethanol assessments reflect a barge market, however parties involved in transactions may also opt to load on a vessel or do pump overs. Performance by ship-to-ship transfers can take place as long as mutually agreed. A buyer may opt to nominate a vessel instead of a typical barge, provided the physical dimensions of the performing vessel comply with the requirements of the designated port. Should a buyer opt to nominate a vessel and delay in loading occurs, the seller will face demurrage exposure limited to the transacted size, while the buyer will face demurrage costs consequential to his choice of vessel.

For example, if the sale was done for 2,000 mt and the buyer nominates a 12,500 mt vessel, the seller will incur demurrage cost for 2,000 mt, while the buyer will face the demurrage cost of the remaining 10,500 mt. In this instance leading to a consequential demurrage cost, the seller must show good

endeavor and not willfully obstruct the timely loading process in order to disadvantage the buyer.

2) Platts European ethanol assessments reflect products that are lawfully sourced within the marketplace. Platts considers in its assessment process ethanol based on its chemical structure and is not currently distinguishing between feedstocks used in its manufacture.

3) Platts T2 ethanol assessments reflect product meeting a maximum carbon intensity (CI) of 33.52g of carbon dioxide equivalent (CO<sub>2</sub>e) per megajoule (MJ), this is equivalent to a minimum GHG saving of 60% based on a fossil fuel comparator of 83,8g CO<sub>2</sub>e/MJ under the European Commission's Renewable Energy Directive (RED) I framework. Platts biofuels methodology does not make provision for sellers who report deals via the Platts Market on Close assessment process (MOC) to provide a mixture of PoS documentation where individual PoS certificates are below 60% GHG savings for a minimum 60% GHG ethanol parcel, unless otherwise mutually agreed between the parties.

### T2 Ethanol futures

T2 ethanol futures trade in lots of 100 cu m and settle on the arithmetic average of the mid-point of the high and low quotations for physical T2 undenatured ethanol assessments published by Platts during the determined contract month.

Platts T2 ethanol futures values are assessed for the next twelve calendar months from the date of publication and are denoted in Eur/cu m. The assessments roll forward on the first business day of each month and reflect the close of European markets time time-stamped at 16:30 London time, subject to the typical guidelines of the Platts Market On Close assessment process.

### Ethanol T2 High GHG Savings FOB Rotterdam

The Ethanol T2 High GHG Savings FOB Rotterdam assessment is published as an outright price and as a differential to the Ethanol T2 FOB Rotterdam assessment, in Eur/cu m. The assessment reflects the same assessment parameters as the

Ethanol T2 FOB Rotterdam price, such as location basis, with the following exceptions:

**Volume:** Assessments reflect standard, transactable size of 1,000 mt, with other volumes considered and normalized back to the basis volume

**Carbon Intensity:** The Ethanol T2 High GHG Savings premium assessment reflects ethanol meeting a maximum CI of 9.4g CO<sub>2</sub>e/MJ. This is equivalent to a minimum GHG saving of 90% based on the RED II fossil fuel comparator of 94g CO<sub>2</sub>e/MJ.

Platts will also standardize the averaging of GHG savings across Proof of Sustainability certificates, requiring that the weighted average of GHG savings across provided PoS certificates for a parcel traded in the MOC meet a minimum of 90% GHG savings, equivalent to a maximum CI of 9.4 g CO<sub>2</sub>e/MJ. Individual PoS certificates should not fall below 64.3% GHG savings, equivalent to a maximum CI of 33.52 g CO<sub>2</sub>e/MJ, unless otherwise mutually agreed.

**Timing:** The assessment reflects a single strip laycan of 3-15 days forward (Monday to Tuesday) or 5-15 days forward (Wednesday to Friday). Buyers should provide 48 clear working hours for nomination, taking into account the 3/5-15 days forward traded strip. Counterparties are expected to perform on trades published in the MOC in line with standard market practices.

**Sustainability Criteria:** Platts T2 Ethanol FOB Rotterdam assessment reflects ethanol which is compliant with the sustainability and certification provisions of the Renewable Energy Directive (RED). Furthermore, the Nabisy Proof of Sustainability (PoS) documentation is a standard requirement for all Ethanol T2 High GHG Savings FOB Rotterdam barge indications in the Platts Market on Close assessment process. The transfer of PoS documentation and the Nabisy-registered PoS between counterparties must occur within 30 days of barge loading or 30 days after title and risk of product have transferred to the buyer.

**T1 Ethanol Northwest Europe**

**Basis and Locations:** Prices for T1 (European Union duties unpaid) ethanol barges and cargoes are assessed daily on an FOB Rotterdam and CIF NWE basis, respectively.

**Sustainability Criteria:** Platts ethanol assessments reflect fuel ethanol that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

**Minimum greenhouse gas saving:** Platts FOB Rotterdam T1 ethanol assessments reflect material with sustainability documentation showing a minimum greenhouse gas saving of 50% when compared to the fossil fuel comparator, as per the European Union's Fuel Quality Directive calculation. This operates in addition to the prevailing Renewable Energy Directive (RED) requirement, with the highest requirement for GHG savings taking precedence.

**Timing:** Platts ethanol assessments for T1 FOB Rotterdam barges reflect loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication. Platts European ethanol assessments for T1 CIF Northwest European T1 cargoes reflect delivery 10-25 days forward from date of publication.

**Volume:** Standard transactable size of 1,000-2,000 mt, normalized to 1,000 mt, the equivalent in cu m for FOB Rotterdam barges and a minimum of 3,000 mt or the equivalent in cu m for T1 CIF NWE cargoes.

**Unit:** \$/cu m.

**Product Purity and Specification:** Assessments are for anhydrous, undenatured ethanol conforming to the latest edition of the European standard EN 15376 specifications for automotive fuels — ethanol as a blending component for gasoline. The ethanol must also conform to the Netherlands' customs TARIC code of CN 2207 1000, under the European

Commission's latest definition of : undenatured ethyl alcohol of an alcoholic strength by volume of 80% vol. or higher.

**Temperature:** The European automotive fuel ethanol assessment reflects product at a temperature of 20 degrees Celsius with a reference conversion from mt to cu m: 0.7887.

**T1 ethanol assessment method:** The Platts T1 ethanol CIF NWE cargoes and T1 ethanol FOB Rotterdam barge assessments represent the lowest calculated net-forward value from a basket of daily established values, basis 16:30 London time, for FOB Santos anhydrous and FOB Chicago Argo Terminal ethanol, as provided by Platts' regional teams.

For the Platts European T1 CIF NWE assessment, a premium is applied to convert ASTM to EN spec in the case of the Chicago Argo Terminal value. Premiums are applied to convert ANP to EN spec and for Bonsucro Proof of Sustainability in the case of the FOB Santos anhydrous value. All premiums are based on market feedback. The net-forward calculation uses an assessment of freight rates based on freight reports and market feedback. The assessment uses a density value of 0.7887 g/cu m for converting metric tons into cu m.

T1 FOB Rotterdam barges are assessed at a fixed premium of \$12/cu m versus the T1 CIF NWE assessment, which represents logistics costs.

Platts European ethanol assessments reflect products that are lawfully sourced within the marketplace. Platts considers in its assessment process ethanol based on its chemical structure and is not currently distinguishing between feedstocks used in its manufacture.

**Platts FOLicht Fuel Grade Ethanol DAP Eastern Europe**

The assessment is published at 16:30 London time on Mondays and follow the UK holiday calendar. If Monday is a non-publishing day, then the assessment will be published on the previous work-ing day.

**Basis and locations:** Assessment reflects DAP basis to Eastern Europe region, which includes Eastern Poland, Hungary, Czech Republic, Slovakia, Latvia and Lithuania.

**Volume:** Cargo size of 1-2 trucks, equivalent to 30-60 cubic meters, other volumes may be considered and normalized to the assessment specification.

**Timing:** Assessment reflects delivery over a 30-day period starting one week forward from the day of publication.

**Unit:** Eur/hl, also published in Eur/cbm.

**Quality and Purity:** Assessment reflects anhydrous, undenatured ethanol conforming to the latest edition of the European standard EN 15376 specifications for automotive fuels — ethanol as a blending component for gasoline.

**Platts FOLicht European Non-Fuel Ethanol**

The spot assessments are published at 16:30 London time on Mondays and follow the UK holiday calendar. If Monday is a non-publishing day, then the assessments will be published on the previous working day.

The contract prices are published at 16:30 London time on the first working day of the new quarter.

**Basis and locations:** Assessments reflect prices based on FOB Northwest European Ports, and DAP Central Europe, East Europe, South Europe and West Europe.

- Eastern Europe, reflecting Poland, the Czech Republic, Slovakia, Hungary and the Baltic countries.
- South Europe, reflecting the western Mediterranean countries, including Spain, Italy, and the south of France.
- Central Europe, reflecting Germany and Austria.

**Volume:** Cargo size of 1-2 trucks, equivalent to 30-60 cubic meters, other volumes may be considered and normalized to the assessment specification.

**Timing:** Delivered at Place (DAP) and Free on Board (FOB) spot assessments reflect delivery over a 30-day period starting one week forward from the day of publication.

**Contract:** The DAP contract prices reflect contracted volumes for delivery across the current quarter, published on the first working day of that quarter.

**Unit:** Eur/hl, also published in Eur/cbm.

**Quality and Purity:** Platts FOLicht Beverage 96 grade assessment reflects undenatured extra neutral alcohol ethanol with 96% alcohol by volume. Platts FOLicht Industrial grade 99 and 96 reflect industrial grade ethanol with 99% and 96% alcohol by volume, respectively. Platts Industrial REN 96 grade reflects Rectified Extra Neutral industrial with 96% alcohol by volume.

## South America

### Ethanol FOB Brazil Cargo (Anhydrous)

**Location:** Basis FOB Santos. In the absence of FOB Santos pricing data, Platts may look at related markets such as the domestic anhydrous ex-mill Ribeirao price assessment adjusted for freight, terminal costs and taxes.

**Quality:** Standard ANP anhydrous quality ethanol.

**Timing:** Loading 10-30 days forward from date of publication.

**Volume:** Minimum 10,000 cu m.

**Units:** The assessment is published in \$/cu m and \$/gal. This is converted to Real/cu m using a 16:30 Sao Paulo time Platts Real/USD exchange rate assessment.

**Notes:** The assessment includes the daily Platts CBIO assessment (ACIBA00), in Real/mtCO<sub>2</sub>e, along with applicable tariffs and taxes.

### Anhydrous ANP domestic ex-mill Ribeirao with taxes

**Location:** Basis Ex-mill Ribeirao Preto, Sao Paulo. Other ex-mill locations may be normalized, taking into account key regional destinations.

**Quality:** Standard ANP anhydrous quality ethanol.

**Timing:** 1-7 days forward from date of publication.

**Volume:** Minimum volume of 500 cu m and maximum volume of 1,500 cu m.

**Payment:** The assessment reflects payment on the day of the product transfer and up to 10 days after the transfer.

**Unit:** Real/cu m.

**Taxes:** The assessment reflects the PIS/Cofins tax. No ICMS tax is included.

In the absence of Brazil anhydrous ethanol bids, offers or trades, Platts typically applies a percentage premium as defined by the market to the value of Brazil Hydrous ANP Domestic Ex-mill Ribeirao with taxes.

### Hydrous ANP FOB Santos

**Location:** Basis FOB Santos. In the absence of FOB Santos pricing data, Platts may look at related markets such as the domestic anhydrous ex-mill Ribeirao price assessment adjusted for freight, terminal costs and taxes.

**Quality:** Standard ANP hydrous quality ethanol.

**Timing:** Loading 20-30 days forward from date of publication.

**Volume:** Minimum 5,000 cu m.

**Units:** \$/cu m.

**Notes:** The assessment includes the daily Platts CBIO assessment (ACIBA00), in Real/mtCO<sub>2</sub>e, along with applicable tariffs and taxes.

### Hydrous ANP Domestic Ex-mill Ribeirao with taxes

**Location:** Ex-mill Ribeirao Preto, Sao Paulo; other ex-mill locations may be normalized taking into account key regional destinations.

**Quality:** Standard ANP hydrous quality ethanol.

**Timing:** Loading 1-7 days forward from date of publication.

**Volume:** Minimum volume of 500 cu m and maximum of 1,500 cu m.

**Payment:** The assessment reflects payment on the day of the product transfer and up to 10 days after the transfer.

**Unit:** Real/cu m.

**Taxes:** The assessment includes the ICMS tax, as well as the PIS/Cofins tax.

### Ex-mill Ribeirao Hydrous Raw Sugar equivalent

Platts publishes an ex-mill Ribeirao Preto hydrous ethanol raw sugar equivalent value in cents/lb. This is calculated using the Hydrous ANP domestic ex-mill Ribeirao with taxes assessment, and taking into account the ICMS and PIS tax, as well as freight and elevation costs to Santos. Platts also converts the ethanol price to ATR (Total Recoverable sugar) value, then to sugar equivalent. To allow an accurate comparison between the Platts raw sugar equivalent value and the ICE New York Sugar No. 11 futures contract, Platts normalizes the polarization quality to 96 degrees from an assumed polarization of between 99.2 to 99.3 pol.

**Notes:** The assessment includes the daily Platts CBIO assessment (ACIBA00), in Real/mtCO<sub>2</sub>e, along with applicable tariffs and taxes.

#### Hydrous Ethanol CIF Paulinia

**Location:** CIF Paulinia, Platts also considers ethanol delivered into Guarulhos, but may normalize back to a Paulinia basis.

**Quality:** Standard ANP hydrous quality ethanol.

**Timing:** Delivery 1-15 days forward from the date of publication.

**Volume:** Minimum volume of 500 cu m and maximum of 1,500 cu m. Volumes outside this range may be normalized to reflect the assessed 500-1,500 cu m range.

**Unit:** Real/cu m.

**Taxes:** The assessment includes the ICMS tax, as well as the PIS/Cofins tax.

#### Grade B FOB Santos/Paranagua

In the absence of market indications Platts may assess grade B as a premium to FOB Hydrous assessment.

**Location:** Basis FOB Santos/Paranagua.

**Quality:** Standard Grade B industrial ethanol.

**Timing:** Loading 20-30 days forward from date of publication.

**Volume:** Minimum 5,000 cu m.

**Unit:** \$/cu m.

**Notes:** The assessment includes the daily Platts CBIO assessment (ACIBA00), in Real/mtCO<sub>2</sub>e, along with applicable tariffs and taxes.

#### NNE Brazil delivered Suape anhydrous

**Location:** DAP (Delivered At Place) basis Suape, Pernambuco. Other locations and Incoterms such as FOB/CIF may be normalized back to the basis location. Platts also takes into consideration product produced regionally, transfers from the Center-South region as well as volumes delivered from international locations.

**Quality:** Standard ANP anhydrous quality ethanol.

**Timing:** Delivery 1-15 days forward from date of publication.

**Volume:** Minimum volume 250,000 liters, or 250 cu m, and maximum volume 1,000,000 liters, or 1,000 cu m.

**Payment:** Platts assessments reflect payment within 10 days of delivery.

**Unit:** Real/cu m.

**Taxes:** The assessment reflects the PIS/Cofins tax. No ICMS tax is included.

#### North America

All Platts US ethanol assessments reflect domestic, denatured, refinery grade ethanol meeting ASTM D4806 specification. They are published in cents/gal.

#### US Atlantic Coast ethanol

**Basis and Location:** FOB New York Harbor.

**Volume:** Minimum of 25,000 barrels.

**Timing:** Assessments reflect material loading two months forward on an any-month basis, i.e. loading at any point during the assessed month. The assessments roll to the next forward month on the first publishing day after eight calendar days before the end of the month.

**Note:** Platts considers LEAP terms standard in the New York Harbor ethanol market.

#### US New York Harbor

**Basis and Location:** New York Harbor Intertank Transfer (ITT) Sewaren terminal.

**Volume:** Minimum of 5,000 barrels.

**Timing:** Loading 5-15 days forward from date of publication.

**Offtake Options:** Buyer has the option to take delivery of the product in a method other than by ITT at the Sewaren terminal such as by barge. All incremental costs associated with the chosen offtake option would be borne by the buyer. A seller should not unreasonably withhold any offtake option, and any associated costs for non-ITT offtake options must be demonstrably reasonable and typical.

**Nomination guidelines:** In the ITT market, the buyer retains the option to nominate the transfer date within a 5 to 15 day forward range; this nomination should take place at least one calendar day in advance of the transfer date. For all nominations, there will be an end-of-day time cut-off of 15:00 (16:00 ET). Any nomination provided after this time would be considered as being for the next day.

**RIN transfer:** For transactions in this market, if ownership of the physical product transfers between January 1 and January 31 it is the seller's option to transfer current or prior-year RINs. Transfers after January 31 for the rest of the calendar year must carry current-year RINs. The physical ethanol transfer date determines what RIN vintage may be attached, not the trade date.

**Note:** Platts considers LEAP terms standard in the New York Harbor ethanol market.

#### US Gulf Coast ethanol, FOB Houston

**Basis and Location:** FOB Houston.

**Volume:** Reflects minimum of 10,000 barrels.

**Timing:** loading 5-15 days forward from date of publication,

Platts assesses the FOB Houston market as a spread to the delivered Houston rail assessment in the absence of FOB price indications. The rail-FOB spread factors costs such as logistics, which Platts understands to typically be 3 cents/gal.

**RIN Transfer:** For transactions in this market, if ownership of the physical product transfers between January 1 and January 31 it is the seller's option to transfer current or prior-year RINs. Transfers after January 31 for the rest of the calendar year must carry current-year RINs. The physical ethanol transfer date determines what RIN vintage may be attached, not the trade date.

#### US Gulf Coast ethanol, Delivered Rail

**Basis and Location:** Delivered rail to the Pasadena, Bayport, Texas City and Galveston terminals.

**Volume:** Full unit train.

**Timing:** Assessment reflects trains arriving 15-30 days from publication.

**Note:** For delivered rail, buyers have the option to nominate the delivery terminal and sellers pay freight to the terminal. Delivered rail is published both as a flat price and as a differential to the Platts Ethanol Chicago front month derivative in cents/gallon. In the absence of flat price indications, the flat price assessment considers the differential value applied to a price curve drawn using the balance-of-the-month swap and the forward month swap from the 1st-15th of the month and the forward month swap from the 16th through the end of the month.

**RIN Transfer:** For transactions in this market, if ownership of the physical product transfers between January 1 and January 31 it is the seller's option to transfer current or prior-year RINs. Transfers

after January 31 for the rest of the calendar year must carry current-year RINs. The physical ethanol transfer date determines what RIN vintage may be attached, not the trade date.

#### Chicago Terminal ethanol

**Basis and Location:** Intertank Transfer (ITT) in the Kinder Morgan Argo and Chicago fungible system, which includes the Argo and Chicago (Stony Island) terminals.

**Timing:** Loading 5-15 days forward from date of publication.

**Offtake Options:** Buyer has the option to take delivery of the product in a method other than by ITT at the Kinder Morgan terminals such as by barge, rail and truck. All incremental costs associated with the chosen offtake option would be borne by the buyer. A seller should not unreasonably withhold any offtake option, and any associated costs for non-ITT offtake options must be demonstrably reasonable and typical.

Platts expects incremental costs, which would include throughput fees for physical offtake, to be around 2.5 cents/gal for barge loading, and 1.5 cents/gal for rail loading and offtake via truck at the Kinder Morgan fungible ethanol system. These costs may be subject to change due to market conditions; any such change in costs for transactions published during the Platts MOC process may be subject to review by Platts, and must be demonstrably reasonable and typical.

**Nomination guidelines:** In the ITT market, the buyer retains the option to nominate the transfer date within a 5 to 15 day forward range; this nomination should take place at least one calendar day in advance of the transfer date.

- For offtake via barge, a buyer should nominate a three-day loading period within the 5-15 day assessment laycan as well as a performing vessel, at least five calendar days prior to the first day of the three-day loading period, subject to terminal acceptance. The seller should nominate a loading terminal at least 48 hours prior to the first day of the three-day loading period.

- If a buyer chooses to take delivery of product via truck, the buyer should nominate a specific lifting date at least one calendar day prior. For offtake via rail, a buyer should nominate a lifting date at least five calendar days prior.

For all nominations, there will be an end-of-day time cut-off of 15:00 CT (16:00 ET). Any nomination provided after this time would be considered as being for the next day.

Sellers for transactions published during the MOC process should ensure that they make best efforts to seek terminal dates that meet the reported transaction laycan. Platts is aware that physical conditions regarding logistics which are beyond the control of the seller or buyer may result in issues such as late loading. If it becomes clear that it is not possible to secure offtake of product within the 5-15 day assessment laycan via the means nominated by the buyer, the buyer should seek resolution to perform on the transaction via other means, including alternative offtake mechanisms and bookouts.

In addition, since offtake via rail at the Kinder Morgan ethanol fungible system is available only at the Chicago (Stony Island) terminal, if there is insufficient product at that terminal, a seller may reasonably reject an offtake nomination via rail.

**Demurrage:** Platts understands that ethanol trades that involve barge loading at the Kinder Morgan fungible system typically include a public dock clause. For transactions published in the MOC process, sellers should ensure that they seek terminal dates that meet the reported transaction laycan and have product available for said laycan. In the event that terminal dates do not meet the reported transaction laycan, the availability of which neither the buyer or seller have control over, the public dock clause would apply. Platts understands that under the commonly used public dock clause for barges loading ethanol at the Kinder Morgan fungible system, laytime commences when the vessel is at the dock.

**Volume:** Minimum of 5,000 barrels.

**RIN transfer:** For transactions in this market, if ownership of the physical product transfers between January 1 and January 31 it is the seller's option to transfer current or prior-year RINs. Transfers after January 31 for the rest of the calendar year must carry current-year RINs. The physical ethanol transfer date determines what RIN vintage may be attached, not the trade date.

#### Chicago Terminal Ethanol (any-month)

**Basis and Location:** Intertank Transfer (ITT) in the Kinder Morgan Argo and Chicago fungible system, which includes the Argo and Chicago (Stony Island) terminals.

**Timing:** The assessments reflect two any-month Chicago Terminal ethanol assessments, one for the current-month (M1) and one for the forward-month (M2). The assessments roll to the next forward month two publishing days before the end of the month, this means that there would be at least one clear working day between the roll of the assessment and the start of the new calendar month. For example, the any-June (M1) 2024 and any-July (M2) 2024 assessments would roll to any-July (M1) 2024 and any-August (M2) on June 27, 2024.

**Offtake Options:** Buyer has the option to take delivery of the product in a method other than by ITT at the Kinder Morgan terminals such as by barge, rail and truck. All incremental costs associated with the chosen offtake option would be borne by the buyer. A seller should not unreasonably withhold any offtake option, and any associated costs for non-ITT offtake options must be demonstrably reasonable and typical.

**Nomination guidelines:** In the ITT market, the buyer retains the option to nominate the transfer date within the month; this nomination should take place at least one calendar day in advance of the transfer date.

For all nominations, there will be an end-of-day time cut-off of 15:00 CT (16:00 ET). Any nomination provided after this time would be considered as being for the next day.

For other offtake and nomination details please refer to the Chicago Terminal ethanol section

**Volume:** Minimum of 5,000 barrels.

**RIN transfer:** For transactions in this market, if ownership of the physical product transfers between January 1 and January 31 it is the seller's option to transfer current or prior-year RINs. Transfers after January 31 for the rest of the calendar year must carry current-year RINs. The physical ethanol transfer date determines what RIN vintage may be attached, not the trade date.

#### Chicago ethanol derivatives

Platts assesses Chicago ethanol derivatives, which settle against the physical Platts assessments for Platts Chicago Terminal ethanol. The derivative assessments are published as outright values in cents/gal. Platts publishes Chicago ethanol derivatives for the balance of the current month and the first two forward months. The balance of month assessment is published through the 15th day of the calendar month. The two forward months roll to the next month on the first publishing day of each month.

#### Ethanol Cash margin

Platts publishes an ethanol cash manufacturing margin based on assumptions and fixed costs calculated by S&P Global Energy based on existing Platts assessments and third-party price data.

**Location:** Chicago

**Calculation:** The ethanol cash production margin calculation is based on the Platts Chicago Terminal ethanol (AALRI00) price and factors in the co-product Dried Distiller Grains delivered Chicago price (ACDDG00), the USDA Chicago corn mill and processor bid price, Platts Intraday NICOR gas price (PNBEX21) and on-Peak Electricity Prices (PJM N IL HUB) added to fixed costs and other variable costs with a yield of 2.87 gallons/bushel.

#### Chicago Rail (Rule 11)

**Basis and Location:** Platts daily Rule 11 Chicago assessment, reflects ethanol that is railed basis Chicago. Rule 11 is a railroad accounting term that refers to a seller paying for freight up to an intermediate point and the buyer pays for freight beyond that point, without either party incurring switching costs.

**Volume:** Minimum of five rail cars or 145,000 gallons.

**Timing:** Assessments reflect This-Week-Shipment (TWS) Monday through Wednesday and Next-Week-Shipment (NWS) Thursday and Friday.

**RIN transfer:** For transactions in this market the bill of lading date is used to determine what RIN vintage may be attached. Bills of lading on or between January 1 to January 31, it is the seller's option on whether to transfer prior-year RINs or current year RINs. Bills of lading after January 31 through the rest of the calendar year must carry current-year RINs.

#### North California Rail Car Ethanol

Platts publishes North California Rail Car Ethanol assessments that reflect two different carbon intensity (CI) levels: an annual gasoline standard carbon intensity (CI) and 70 CI.

Platts understands that ethanol delivered into Northern California by rail reflects material with a range of CI values. Therefore, for any trades published in the Platts Market on Close assessment process for the North California 70 CI or the gasoline standard CI, Platts expects buyers and sellers to apply a value normalization based on the CI of the ethanol physically delivered. This can either be via direct payment or the transfer of carbon credits (partial obligation), with the seller retaining the option to choose the method of compensation. Platts expects the seller to notify the buyer of this option by the close of business on the day of the trade. As part of any direct payment, buyers and sellers are expected to apply a value normalization based on the value per point of CI per gallon of ethanol on the day of the trade.

**North California Rail Car Ethanol (gasoline standard)**

**Basis and Location:** North California delivered rail cars basis the Richmond, Stockton, McClellan Park and Sacramento terminals.

**Quality and CI:** Reflects Carbon Intensity (CI) equal to the annual gasoline CI standard as set by the California Air Resources Board (CARB). CI scores for fuel pathways consist of the sum of the greenhouse gases emitted throughout each stage of the ethanol's production and use. CI is expressed in grams of carbon dioxide equivalent per mega-joule (gCO<sub>2</sub>e/MJ).

Assessments reflect transactions where the seller retains any obligation for credits or deficits generated by the actual CI of the ethanol sold.

In the absence of pricing information for the gasoline standard CI North California rail car assessment, Platts would value it based on its North California 70 CI rail car ethanol assessment and daily-published Carbon Intensity ethanol CI value per point which uses the LCFS carbon credit and the energy density of denatured ethanol at 81.51 MJ/gallon.

Here is an example of the normalization:

To find the value in cents/gallon of the difference between a stated CI in a bid, offer or trade and the basis assessment CI, Platts takes the annual gasoline standard CI in gCO<sub>2</sub>e/MJ as set by CARB minus the CI of the stated bid, offer or trade. The LCFS carbon credits as published daily by Platts, under the code AAXYA00, is then divided by 1 million, and multiplied by 81.51 MJ/gallon (the energy density of ethanol). The result of this calculation (CI value per point) is multiplied by the CI difference previously calculated to get the \$/gal value.

For example:

Platts publishes a 70 CI ethanol trade basis North California Terminal at 125 cents/gal; the annual gasoline standard CI is 88.25.

- The difference between the two CI levels is 18.25.

- The value of LCFS carbon credits for the front quarter published by Platts on the corresponding day is \$70/mt.
- \$70/mt divided by 1,000,000 then multiplied by 81.51 (energy density of ethanol) equals \$0.0057057/CI
- 18.25 (the difference in the CI values) multiplied by 0.0057057 equals \$0.104129/gal or 10.41 cents/gal.

The 70 CI ethanol trade of 250.00 cents/gal can be normalized by 10.41 cents/gal to give 239.59 cents/gal, rounded to 239.50 cents/gal; an equivalent value for a 88.25 CI ethanol trade.

**Timing:** Assessment reflects Monday through Thursday this-week-shipment (TWS); while on Friday, it reflects next-week-shipment (NWS).

Platts expects the buyer to nominate a destination to the seller by close of business on Thursday of the shipment week; and the seller to provide a bill of lading to the railroad by end of day Saturday of the shipment week.

**Volume:** Minimum of five rail car lots or 145,000 gallons.

**Unit:** Platts publishes North California ethanol assessments as both a flat price in cents/gallon and as a premium to the Platts Ethanol Chicago front-month derivative.

**North California Rail Car Ethanol 70 CI**

**Basis and Location:** North California delivered rail cars basis the Richmond, Stockton, McClellan Park and Sacramento terminals.

**Quality and CI:** Assessment reflects ethanol with a reference 70 CI.

**Timing:** Assessment reflects Monday through Thursday this-week-shipment (TWS); while on Friday, it reflects next-week-shipment (NWS).

Platts expects the buyer to nominate a destination to the seller by close of business on Thursday of the shipment week; and the seller to provide a bill of lading to the railroad by end of day Saturday of the shipment week.

**Volume:** Minimum of five rail car lots or 145,000 gallons.

**Unit:** Platts publishes North California 70 CI ethanol assessments as both a flat price in cents/gallon and as a premium to the Platts Ethanol Chicago front-month derivative.

**Ethanol delivered Toronto**

**Basis and Location:** Delivered At Place via rail into the Toronto, Ontario area. Platts also considers market information for delivery into the Montreal, Quebec area for the assessment, but it may be normalized back to the basis location.

**Quality and CI:** The assessments reflect fuel grade ethanol meeting the CAN/CGSB-3.516 specification, with a reference CI of 39.50 gCO<sub>2</sub>e/MJ. The reference CI level is derived from the Environment and Climate Change Canada's weighted average CI of imported and produced ethanol in Q4 2024. Platts will seek to update the reference CI for its Canadian ethanol price assessments as new data on prevailing values becomes available, typically on an annual basis. Platts will communicate any proposed changes via subscriber notes.

**Timing:** Assessment reflects delivery 15-30 days forward from the publication.

**Volume:** Minimum of 145,000 gallons (five rail cars).

**Unit:** The assessments are published as an outright price in both US cents/gal and Canadian cents/liter. The US cents/gal value is converted to Canadian cents/liter using the 1330 Houston US dollar/Canadian dollar exchange rate (CADUS00).

**Notes:** Platts understands that the Canadian ethanol market is traded as a differential to the benchmark Chicago terminal ethanol.

**Ethanol CFR Carbon Intensity value calculation**

Platts publishes a value that reflects the cost of each point of Carbon Intensity (CI) per gallon and per liter of ethanol under Canada's Clean Fuel Regulation (CFR).

The published CI cost per point is calculated daily using the Platts assessment of current-quarter CFR Compliance Category 2 credits and the energy density of ethanol, as published by the ECCC at 23.419 MJ/liter (88.6505 MJ/gal), divided by 10,000 to give a US cents per CI point per gallon value. Platts converts this value to also give a Canadian cents per CI point per liter value.

**Unit:** US cents/gal and CAN cents/liter.

**Biodiesel**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>Asia</b>											
UCOME FOB China	\$/mt	UCFCA00	UCFCA03	UCFCB04	Spot	FOB	Tianjin	20-40 days forward	2,500	10,000	metric ton
UCOME FOB Straits	\$/mt	UCFCB00	UCFCB03	UCFCA04	Spot	FOB	Pasir Gudang, Singapore, Port Klang	20-40 days forward	2,500	10,000	metric ton
<b>Europe</b>											
FAME -10 FOB ARA RED	\$/mt	AAWGH00	AAWGH03	AAWGH04	Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
FAME 0 FOB ARA RED	\$/mt	AAWGI00	AAWGI03	AAWGI04	Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
SME FOB ARA RED	\$/mt	AAWJ00	AAWJ03	AAWJ04	Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
RME FOB ARA RED	\$/mt	AAWG00	AAWG03	AAWG04	Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
PME FOB ARA RED	\$/mt	AAXNZ00			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
UCOME FOB ARA RED	Eur/mt	AUMEB00	AUMEB03	AUMEB04	Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
UCOME FOB ARA RED	\$/mt	UFAE000	UFAE003	UFAE004	Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
<b>Premiums (To ICE gasoil futures)</b>											
RED FAME 0 FOB ARA	\$/mt	AAXNT00			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
RED RME FOB ARA	\$/mt	AAXNU00			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
RED SME FOB ARA	\$/mt	AAXNX00			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
RED PME FOB ARA	\$/mt	AAXNY00			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
UCOME FOB ARA RED	\$/mt	AUMEA00			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
<b>Biodiesel, weekly</b>											
Platts FOLicht FAME -10 Central Europe	Eur/mt	AFOLE04			Spot	EXW	Central Europe	1-20 days from date of publication	25		metric ton
Platts FOLicht FAME -10 Eastern Europe	Eur/mt	AFOLF04			Spot	EXW	Eastern Europe	1-20 days from date of publication	25		metric ton
Platts FOLicht FAME 0 Southern Europe	Eur/mt	AFOLG04			Spot	EXW	Southern Europe	1-20 days from date of publication	25		metric ton
Platts FOLicht FAME -20 FOB ARA	Eur/mt	AFOLH04			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
Platts FOLicht FAME 0 Delivered Central Europe	Eur/mt	AFOLD04			Spot	DAP	Central Europe	1-20 days from date of publication	25		metric ton

**Biodiesel**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
Platts FOLicht TME +5 EXW Central Europe	Eur/mt	AFOLJ04			Spot	EXW	Central Europe	1-20 days from date of publication	25		metric ton
Platts FOLicht TME +5 FOB ARA	Eur/mt	AFOLI04			Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
Platts FOLicht UCOME 0 Delivered Central Europe	Eur/mt	AFOLB04			Spot	DAP	Central Europe	1-20 days from date of publication	25		metric ton

**Glycerine, weekly**

Platts FOLicht Glycerine, Central Europe GM, EXW	Eur/mt	AFOLK04			Spot	EXW	Central Europe	1-20 days from date of publication	20		metric ton
Platts FOLicht Glycerine, Central Europe non-GM, EXW	Eur/mt	AFOLL04			Spot	EXW	Central Europe	1-20 days from date of publication	20		metric ton

**North America**

Biodiesel B 100 SME Chicago	¢/gal	AAURR00	AAURR03		Spot	FOB	Chicago	3-10 days forward	150	3,000	barrels
Biodiesel B 100 SME Houston	¢/gal	AAURS00	AAURS03		Spot	FOB	Houston	3-10 days forward	150	3,000	barrels

**South America**

Biodiesel DAP Paulinia, Brazil	Real/cu m	ABPLA00	ABPLA03	ABPLA04	Spot	DAP	Paulinia, Brazil	1-7 days from date of publication	100	500	cubic meter
Biodiesel FOB Up River, Argentina	USD/mt	AARGA00		AARGA04	Spot	FOB	Up River, Argentina		30,000		metric ton

**Biodiesel Bi-monthly term contract fee indices**

Brazil biodiesel contract fee Rio Grande do Sul	Real/cu m	BBTCB00			Contract	ExW	Rio Grande do Sul	bi-monthly			
Brazil biodiesel contract fee Parana-Santa Catarina	Real/cu m	BBTCD00			Contract	ExW	Parana-Santa Catarina	bi-monthly			
Brazil biodiesel contract fee Mato Grosso do Sul	Real/cu m	BBTCF00			Contract	ExW	Mato Grosso do Sul	bi-monthly			
Brazil biodiesel contract fee Cuiaba-Rondonopolis	Real/cu m	BBTCH00			Contract	ExW	Cuiaba-Rondonopolis	bi-monthly			
Brazil biodiesel contract fee Sorriso-Nova Mutum	Real/cu m	BBTCJ00			Contract	ExW	Sorriso-Nova Mutum	bi-monthly			
Brazil biodiesel contract fee Southern Goias-Minas Gerais	Real/cu m	BBTCL00			Contract	ExW	Southern Goias-Minas Gerais	bi-monthly			
Brazil biodiesel contract fee Northern Goias-Tocantins	Real/cu m	BBTCN00			Contract	ExW	Northern Goias-Tocantins	bi-monthly			
Brazil biodiesel contract fee Bahia	Real/cu m	BBTCP00			Contract	ExW	Bahia	bi-monthly			

**Daily biodiesel contract price**

Brazil biodiesel term contract ExW Rio Grande do Sul	Real/cu m	BBTCA00	BBTCA03		Contract	ExW	Rio Grande do Sul				
Brazil biodiesel term contract ExW Parana-Santa Catarina	Real/cu m	BBTCC00	BBTCC03		Contract	ExW	Parana-Santa Catarina				
Brazil biodiesel term contract ExW Mato Grosso do Sul	Real/cu m	BBTCE00	BBTCE03		Contract	ExW	Mato Grosso do Sul				
Brazil biodiesel term contract ExW Cuiaba-Rondonopolis	Real/cu m	BBTCG00	BBTCG03		Contract	ExW	Cuiaba-Rondonopolis				
Brazil biodiesel term contract ExW Sorriso-Nova Mutum	Real/cu m	BBTCI00	BBTCI03		Contract	ExW	Sorriso-Nova Mutum				
Brazil biodiesel term contract ExW Southern Goias-Minas Gerais	Real/cu m	BBTCK00	BBTCK03		Contract	ExW	Southern Goias-Minas Gerais				
Brazil biodiesel term contract ExW Northern Goias-Tocantins	Real/cu m	BBTCM00	BBTCM03		Contract	ExW	Northern Goias-Tocantins				
Brazil biodiesel term contract ExW Bahia	Real/cu m	BBTCO00	BBTCO03		Contract	ExW	Bahia				

## Biodiesel

### Asia

#### Used Cooking Oil Methyl Ester (UCOME) FOB North China

Platts UCOME FOB North China assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time.

**Basis and Locations:** FOB North China prices are assessed daily reflecting a basis port FOB Tianjin.

**Unit:** \$/mt.

**Timing:** The assessment reflects loading 20-40 days forward from the date of publication.

**Volume:** 2,500 mt to 10,000 mt, normalized to 2,500mt.

**Product Purity Specification:** Product meeting the EN14214 specification excluding oxidation stability, and allows for sulfur content of maximum 15 ppm, a maximum CFPP of 5 degrees Celsius, a maximum Monoglyceride Content of 0.3%, with minimum GHG savings of 87%.

The assessment also reflects material that adheres to the ISCC certification scheme, in compliance with the EUs Renewable Energy Directive or RED requirements. It will also reflect German mandate (Nabisy) compliant material eligible for UK and Dutch double-counting. All material needs to be traceable and have right to audit provided by the seller.

#### Used Cooking Oil Methyl Ester (UCOME) FOB Straits

Platts UCOME FOB Straits assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time.

**Basis and Locations:** Prices are assessed daily on an FOB Straits basis, including Pasir Gudang and Singapore

terminals. Loadings from Port Klang may also be reflected in the assessment but may be normalized for assessment purposes.

**Unit:** \$/mt.

**Timing:** The assessment reflects loading 20-40 days forward from the date of publication.

**Volume:** 2,500 mt to 10,000 mt, normalized to 2,500mt.

**Product Purity Specification:** Product meeting the EN14214 specification excluding oxidation stability, sulfur content maximum of 10 ppm, a maximum CFPP of 13 degrees Celsius, with minimum GHG savings of 84% and maximum water content of 350 ppm.

The assessment also reflects material that adheres to the ISCC certification scheme, in compliance with the EUs Renewable Energy Directive or RED requirements. It also reflects German mandate (Nabisy) compliant material eligible for UK and Dutch double-counting. All material needs to be traceable and have right to audit provided by the seller.

### Europe

#### Biodiesel FOB ARA

**Basis and Locations:** Prices are assessed daily on a FOB Amsterdam-Rotterdam-Antwerp basis. The assessments are for T2 product; duty paid for European-qualified material and free from origin restrictions.

**Unit:** Assessment is published in \$/mt. The UCOME outright is published in both \$/mt and EUR/mt.

**Sustainability Criteria:** Platts biodiesel assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission. Proof of Sustainability documentation should be

provided to the buyer within a maximum of 20 working days from the date of Bill of Lading. All biodiesel barge assessments reflect material of 100% virgin vegetable oil (VVO) origin except for UCOME. This applies to both physical material and sustainability certification delivered to the buyer.

The RME FOB ARA premium and outright assessments reflect product that holds proof of sustainability showing material of 100% rapeseed oil origin.

The PME FOB ARA premium and outright assessments reflect product that holds proof of sustainability showing material of 100% palm oil origin.

The SME FOB ARA premium and outright assessment reflect product that holds proof of sustainability showing material of 100% soybean oil origin.

The FAME 0 ARA premium and outright assessments reflect product that holds proof of sustainability showing material of origins other than palm oil. Platts will continue to publish bids, offers and trades for non-VVO product and the associated data points will be normalized to reflect 100% VVO as part of the assessment process.

Platts RME, FAME 0, PME, SME and FAME-10 FOB ARA assessments reflect biodiesel meeting a maximum CI of 33.52g of carbon dioxide equivalent per megajoule (CO<sub>2</sub>e/MJ). This is equivalent to a minimum GHG saving of 64.3% based on a fossil fuel comparator of 94g CO<sub>2</sub>e/MJ outlined in the European Commission's Renewable Energy Directive (RED) II framework, or 60% based on the RED I fossil fuel comparator of 83.8g CO<sub>2</sub>e/MJ. Platts UCOME FOB ARA assessments reflect material meeting a maximum CI of 10.89 CO<sub>2</sub>e/MJ, equivalent to a minimum GHG saving of 88.4% under RED II, or 87% under RED I.

Platts will only consider bids, offers and transactions where, upon buyer's request, the seller shall exercise reasonable efforts to provide documentation describing:

- 1) the biodiesel feedstock type and percentage of each feedstock in case of blendstocks;
- 2) the country of origin of the feedstock;
- 3) a declaration of land use on which feedstock was grown on or after January 1, 2008.
- 4) the buyer holds a right to audit the sustainability documentation for the sole purpose of determining the validity and veracity of these documents.

**Timing:** The assessments reflect barges loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication. Implied or actual loading date is a factor when normalizing indications to reflect the S&P Global barge loading dates of 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication.

**Volume:** a standard size of 1,000-3,000 mt, normalized to 1,000 mt. The operational tolerance reflected for European biodiesel barge assessments is plus or minus 2%.

#### Product Purity Specification:

Platts assesses six grades of biodiesel - Fatty Acid Methyl Ester minus 10 (FAME -10), FAME 0, Soy Methyl Ester (SME), Rapeseed Methyl Ester (RME), Palm oil Methyl Ester (PME) and Used Cooking Oil Methyl Ester (UCOME).

- FAME -10 assessments reflect product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of minus 10 degrees Celsius and a maximum water content of 350 ppm.
- FAME 0 assessments reflect product that conforms to EN 14214 specifications with a maximum CFPP of 0 degrees Celsius and a maximum water content of 350 ppm.

- SME assessments reflect product that conforms to EN 14214 specifications with maximum Iodine of 135g/100g, minimum Cetane of 47, a maximum CFPP of minus 3 degrees Celsius and a maximum water content of 400 ppm.
- RME assessments reflect product that conforms to EN 14214 specifications with a maximum CFPP of minus 12 degrees Celsius and a maximum water content of 300 ppm.
- PME assessments reflect product that conforms to EN 14214 specifications with a maximum CFPP of plus 13 degrees Celsius and a maximum water content of 350 ppm.
- UCOME assessments reflect product meeting the EN14214 specification, with a maximum CFPP of 0 degrees Celsius, a maximum water content of 350 ppm with minimum GHG savings of 87%. The assessment would also reflect RED and German mandate compliant material eligible for UK and Dutch double-counting.

Biodiesel blended with any non-bio additives will not be included in the assessment, with the exception of the BHT anti-oxidant. The assessment excludes tax refunds or other rebates.

**Calculation for FAME -10 assessments:** Platts assessed RED FAME -10 biodiesel using a fixed calculation based on FAME 0, RME, and SME assessments. Platts determines the RED FAME -10 assessment as the most competitive method of replacement, using the ratios of blendstocks stated below, plus a \$5/mt logistic cost. Should the assessment for RED RME be lower than the corresponding RED FAME -10 replacement calculation, logistical costs will be ignored.

#### Blendstock ratios:

- 1) 10% FAME 0 and 90% RME
- 2) 15% SME and 85% RME

The logistical costs reflect recirculation and retesting costs. In the event that price indications for FAME -10 are received, then Platts may also reflect those in the assessments.

**Biodiesel premium assessments:** The majority of spot physical and paper biodiesel trades in Europe are transacted as premiums over the ICE 10ppm Low Sulfur Gasoil futures contract. Platts publishes the outright price of all biodiesel qualities and grades and the corresponding premiums for a select number. The premium for each assessment is determined by subtracting from the full outright price assessment the weighted average value of the front month(s) ICE Low Sulfur gasoil future(s) across the date range reflected in the price assessment.

The weighted average ICE Low Sulfur Gasoil value for the biodiesel assessment laycan is calculated per the following:

Front-month ICE Low Sulfur Gasoil future value x (number of days front-month contract not expired during assessment laycan / total number of days in assessment laycan) plus

Second-month ICE Low Sulfur Gasoil future value x (number of days front-month contract is expired during assessment laycan / total number of days in assessment laycan)

#### Platts FOLicht Weekly Assessments

Platts FOLicht assessments reflect a 4.30pm London time market close on Wednesdays.

#### Platts FOLicht, FOB Amsterdam-Rotterdam-Antwerp

**Location:** Assessment reflects barges on a FOB ARA (Amsterdam-Rotterdam-Antwerp) basis.

#### Quality:

- UCOME +5 assessments reflect product meeting the EN14214 specification, with a maximum CFPP of 5 degrees Celsius, a maximum water content of 350 ppm with minimum GHG savings of 87%.
- FAME -20 assessments reflect product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of minus 20 degrees Celsius and a maximum water content of 350 ppm.

- TME +5 assessments reflect product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of 5 degrees Celsius and a maximum water content of 350 ppm.

**Sustainability Criteria:** Platts biodiesel assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission. **Timing:** The assessments reflect barges loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication.

**Volume:** A standard size of 1,000-3,000 mt, normalized to 1,000 mt. The operational tolerance reflected for European biodiesel barge assessments is plus or minus 2%.

**Unit:** EUR/mt.

#### Platts FOLicht Dlvd Central Europe

**Location:** Assessment reflects product delivered in Central Europe, basis Vienna. Where Central Europe refers to Germany and Austria.

The delivered basis considers FCA and DAP price indications. Other locations will be considered and may be normalized to the basis location as needed.

**Quality:** UCOME assessments reflects product meeting the EN14214 specification, with a maximum CFPP of 0 degrees Celsius, a maximum water content of 350 ppm with minimum GHG savings of 87%.

FAME 0 assessments reflect product that conforms to EN 14214 specifications with a maximum CFPP of 0 degrees Celsius and a maximum water content of 350 ppm.

**Sustainability Criteria:** Platts biodiesel assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

**Timing:** The assessment reflects delivery one to 20 days forward from the date of publication.

**Volume:** Assessment reflects a minimum 25 mt (one truck), considering truck and rail shipment.

**Unit:** EUR/mt.

#### Platts FOLicht EXW Central Europe

**Location:** Assessment reflects Ex-works Central Europe. Central Europe refers to Germany and Austria.

**Quality:**

FAME -10 assessments reflect product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of minus 10 degrees Celsius and a maximum water content of 350 ppm.

TME +5 assessments reflect product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of 5 degrees Celsius and a maximum water content of 350 ppm.

**Sustainability Criteria:** Platts biodiesel assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

**Timing:** The assessment reflects one to 20 days forward from the date of publication.

**Volume:** Assessment reflects a minimum 25 mt (one truck), considering truck and rail shipment.

**Unit:** EUR/mt.

#### Platts FOLicht FAME -10, EXW Eastern Europe

**Location:** Assessment reflects Ex-works Eastern Europe, reflecting Poland, the Czech Republic, Slovakia, Hungary and the Baltic countries.

**Quality:** FAME -10 assessments reflect product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of minus 10 degrees Celsius and a maximum water content of 350 ppm.

**Sustainability Criteria:** Platts biodiesel assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

**Timing:** The assessment reflects one to 20 days forward from the date of publication.

**Volume:** Assessment reflects a minimum 25 mt (one truck) considering truck and rail shipment.

**Unit:** EUR/mt.

#### Platts FOLicht FAME 0, EXW Southern Europe

**Location:** Ex-works Southern Europe, reflecting the western Mediterranean countries, including Spain, Italy, and the south of France.

**Quality:** FAME 0 assessments reflects product that conforms to EN 14214 specifications with a maximum cold filter plugging point (CFPP) of 0 degrees Celsius and a maximum water content of 350 ppm.

**Sustainability Criteria:** Platts biodiesel assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

**Timing:** The assessment reflects one to 20 days forward from the date of publication.

**Volume:** Assessment reflects a minimum 25 mt (one truck) considering truck and rail shipment.

**Unit:** EUR/mt.

**Platts FOLicht Glycerine EXW Central Europe**

**Location:** Assessments reflect Ex-Works Central Europe, reflecting Germany and Austria.

**Quality:**

- Refined, kosher/halal, pharmaceutical glycerine, non-GM
- Refined, kosher/halal glycerine, GM

**Timing:** The assessments reflect one to 20 days forward from the date of publication.

**Volume:** Assessments reflect a minimum 25 mt, maximum 1,000 mt, considering truck and rail shipment.

**Unit:** EUR/mt

**Notes:** Weekly assessments reflect a 4.30pm London time market close on Wednesdays.

**South America**

**Biodiesel DAP Paulínia**

**Location:** DAP Paulínia, Brazil.

**Quality:** ANP standard quality biodiesel, taking into account the cold filter plugging point specification seasonality.

**Timing:** Loading 1-7 days forward from the date of publication.

**Volume:** 100-500 cubic meters.

**Unit:** Real/cu m and \$/mt.

**Note:** In the absence of bids, offers, trades or market values, Platts may consider changes in the key feedstock market including the Platts assessment of FOB Paranagua soybean oil (SYOBA00).

**Taxes:** The assessment does not include the ICMS tax but does include PIS/Cofins tax.

**Biodiesel FOB Up River**

**The assessment follows a 17:30 São Paulo timestamp.**

**Location:** FOB Up River, Argentina.

**Quality:** Specifications established by both Resolution 1283/2006 from Argentina’s Energy Secretary and EN 14214 from the European Committee for Standardization.

**Volume:** Basis 30,000 metric tons.

**Unit:** \$/mt.

**Taxes:** The assessment includes Argentina’s export duties on soybean oil and biodiesel, as well as a premium to account for associated production costs required to produce biodiesel.

**Note:** Platts calculates the biodiesel price by considering its daily Argentina FOB Up River soybean oil price assessment (SYOAA00). Platts will update export duty values in the formula upon any changes from the Argentine government, as tracked in the Boletín Oficial de la República Argentina. Platts will notify the market of any changes through subscriber notes.

**Brazil bi-monthly biodiesel contract fee**

The Platts biodiesel Brazil contract fees are region-specific term contract fees averaged from data submitted by market participants. This data is used to calculate and publish a bi-monthly average fee for each specified region. Platts analyzes the submitted information and may contact the price submitter for clarification on potentially anomalous data and/or exclude such data from the indices calculation.

**The Platts eight regional indices are:**

- Brazil biodiesel contract fee Rio Grande do Sul

- Brazil biodiesel contract fee Parana-Santa Catarina
- Brazil biodiesel contract fee Mato Grosso do Sul
- Brazil biodiesel contract fee Cuiaba-Rondonopolis
- Brazil biodiesel contract fee Sorriso-Nova Mutum
- Brazil biodiesel contract fee Southern Goias-Minas Gerais
- Brazil biodiesel contract fee Northern Goias-Tocantins
- Brazil biodiesel contract fee Bahia

Platts updates the term contract fees for each of the eight regions every two months, on the first business day of each bimester (January, March, May, July, September, and November).

Market participants wishing to submit term contract fee data can do so by emailing the Platts Biofuels editorial team at [brazilbiodiesel@spglobal.com](mailto:brazilbiodiesel@spglobal.com). The cutoff for data submission is 13:00 hours Sao Paulo time, on the last working day of the previous bi-monthly period.

**Brazil biodiesel contract price**

Prices represent daily ExW (ex-works) term contract prices that reflects biodiesel cargoes transported via fuel tanker truck or rail tanker per region, incorporating the Platts soybean oil price assessments and the regional contract fee indices.

The daily biodiesel contract price is calculated using the following components:

Soybean oil CBOT futures settle	CBAAD00
Soybean Oil Brazil FOB Paranaguá basis (M1)	SYOBB00
USD/BRL Spot Forex at 17:30 Sao Paulo	USDBL00

The contract prices follow the Platts Sao Paulo publishing schedule and are published in Brazilian reais per cubic meter for each of the eight regions mentioned above, with applicable conversions and adjustments for biodiesel density.

## North America

### Biodiesel delivered Chicago

**Basis and Locations:** Assessments reflect truck or rail volume delivered at Kinder Morgan Argo and Chicago fungible system, which includes the Argo and Chicago (Stony Island) terminals, and other major storage facilities in the Chicago area.

**Volume:** Truck volume of 150 barrels; rail volume of 700 barrels. Volumes of 1,000 to 3,000 barrels sold FOB in-tank at terminals in Chicago may also be considered and normalized for assessment purposes.

**Quality:** ASTM specification D6751 for biodiesel (B100). Assessment reflects soy methyl ester (SME). Price data for B99 may be normalized to B100. Platts considers a CI of 28.51 gCO<sub>2</sub>e/MJ (or 30.08 kgCO<sub>2</sub>/MMBtu)

**Timing:** Three to 10 days forward from date of publication.

**Units:** Cents/gal.

**Notes:** Platts assessment includes the Clean Fuel Production Credit.

The assessment reflects product with a D4 biomass-based diesel RIN (BDRCY02) attached; Platts may normalize RIN-less indications using the Platts assessment of the current-year D4 RIN. Platts typically assesses US biodiesel by applying differentials heard in the market to the daily settlement of the front-month NYMEX ULSD futures contract.

### Biodiesel delivered Houston

**Basis and Locations:** Assessments reflect truck or rail volume delivered in the Houston area.

**Volume:** Truck volume of 150 barrels; rail volume of 700 barrels. Volumes of 1,000 to 3,000 barrels sold FOB in-tank at terminals in the Houston Ship Channel may also be considered and normalized for assessment purposes.

**Quality:** ASTM specification D6751 for biodiesel (B100). Assessment reflects soy methyl ester (SME). Price data for B99 may be normalized to B100. Platts considers a CI of 28.51 gCO<sub>2</sub>e/MJ (or 30.08 kgCO<sub>2</sub>/MMBtu)

**Timing:** Three to 10 days forward from date of publication.

**Units:** Cents/gal.

**Notes:** Platts assessment includes the Clean Fuel Production Credit.

The assessment reflects product with a D4 biomass-based diesel RIN (BDRCY02) attached; Platts may normalize RIN-less indications using the Platts assessment of the current-year D4 RIN. Platts typically assesses US biodiesel by applying differentials heard in the market to the daily settlement of the front-month NYMEX ULSD futures contract.

### Renewable Diesel (RD) or Hydrotreated Vegetable Oil (HVO)

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>Asia</b>											
<b>Renewable Diesel (RD)</b>											
RD Cost of Production (UCO) North Asia	\$/mt	HVMAC00	HVMAC03		Production cost	FOB	China				metric ton
RD Cost of Production (UCO) North Asia	\$/bbl	HVMAD00	HVMAD03		Production cost	FOB	China				barrel
<b>Europe</b>											
RD-A FOB ARA	\$/mt	ANEWA00	ANEWA03		Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
RD-B FOB ARA	\$/mt	ANEWB00	ANEWB03		Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
<b>Premiums (To ICE gasoil futures)</b>											
RD-A FOB ARA Premium	\$/mt	ANEWC00	ANEWC03		Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
RD-B FOB ARA Premium	\$/mt	ANEWD00	ANEWF03		Spot	FOB	ARA	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
<b>North America</b>											
<b>Renewable Diesel (RD)</b>											
RD99 San Francisco	¢/gal	AAUWD00	AAUWD03		Spot	Dlvd rail	San Francisco	15-30 days forward	145,000		gallons
RD100 San Francisco	¢/gal	AAUWE00	AAUWE03		Spot	Dlvd rail	San Francisco	15-30 days forward	145,000		gallons
RD99 Los Angeles	¢/gal	AAUWB00	AAUWB03		Spot	Dlvd rail	Los Angeles	15-30 days forward	145,000		gallons
RD100 Los Angeles	¢/gal	AAUWC00	AAUWC03		Spot	Dlvd rail	Los Angeles	15-30 days forward	145,000		gallons
RD Soybean Margin Indicator	¢/gal	RRDFJ00	RRDFJ03		Calculation		Los Angeles				gallons
RD Tallow Margin Indicator	¢/gal	RRDFK00	RRDFK03		Calculation		Los Angeles				gallons
<b>Renewable Diesel premiums</b>											
RD99 LA vs NYMEX ULSD	¢/gal	AAUWF00	AAUWF03		Spot	Dlvd rail	Los Angeles	15-30 days forward	145,000		gallons
RD99 LA vs CARB ULSD	¢/gal	RAUWF00	RAUWF03		Spot	Dlvd rail	Los Angeles	15-30 days forward	145,000		gallons
RD100 LA vs NYMEX ULSD	¢/gal	AAUWG00	AAUWG03		Spot	Dlvd rail	Los Angeles	15-30 days forward	145,000		gallons
RD100 LA vs CARB ULSD	¢/gal	RAUWG00	RAUWG03		Spot	Dlvd rail	Los Angeles	15-30 days forward	145,000		gallons
RD99 SF vs NYMEX ULSD	¢/gal	AAUWH00	AAUWH03		Spot	Dlvd rail	San Francisco	15-30 days forward	145,000		gallons
RD99 SF vs CARB ULSD	¢/gal	RAUWH00	RAUWH03		Spot	Dlvd rail	San Francisco	15-30 days forward	145,000		gallons
RD100 SF vs NYMEX ULSD	¢/gal	AAUWI00	AAUWI03		Spot	Dlvd rail	San Francisco	15-30 days forward	145,000		gallons
RD100 SF vs CARB ULSD	¢/gal	RAUWI00	RAUWI03		Spot	Dlvd rail	San Francisco	15-30 days forward	145,000		gallons

## Renewable Diesel (RD) (or Hydrotreated Vegetable Oil (HVO))

### Asia

Platts publishes Renewable Diesel (RD) cost-based assessments using data from S&P Global Energy's Horizon team.

#### Renewable Diesel (RD) North Asia, Cost of Production

This cost-based assessment is published on an FOB China basis and is comprised of a number of existing Platts assessments and other fixed costs.

The Renewable Diesel inputs are FOB China Used Cooking Oil [AUCOC00] and Japan Hydrogen SMR [IGYGC00], added to fixed renewable diesel refinery costs, then deducting the by-product credits to include Propane Refrigerated CFR South China [AABAK00] and Naphtha C+F Korea Cargo [PAADE00].

### Europe

#### Renewable Diesel

**Basis and Location:** FOB basis Amsterdam Rotterdam Antwerp. Other locations within Northwest Europe would be considered for the assessment but will be normalized to reflect basis ARA.

**Quality:** EN15940 standard with a minimum of 85% greenhouse gas savings under RED II. Other GHG savings levels may be considered and normalized to a min 85% GHG savings. RD assessments reflect a minimum cetane level of 70, in accordance with EN 15940 paraffinic diesel fuel specifications. Cetane levels lower than 70 may be normalized to the minimum basis level.

The renewable diesel assessments are divided into two categories, under the names RD-A and RD-B focusing on feedstock in Annex IX of the Renewable Energy Directive (RED).

The RD-A assessments reflect renewable diesel produced from Renewable Energy Directive Annex IX-A waste and residue

feedstocks, as listed in the Netherlands Energy for Transport register.

The RD-B assessments reflect renewable diesel produced from feedstocks in Annex IX-B of the European Renewable Energy Directive.

**Volume:** 1,000-3,000 mt. Volumes outside this range will be normalized to basis 1,000 mt.

**Timing:** The assessments reflect barges loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication.

**Units:** \$/mt and \$/cu m.

**Sustainability Criteria:** The assessments reflect product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission. Market participants shall exercise efforts to provide all necessary documentation for Proof of Sustainability within a reasonable timeframe.

Platts publishes the RD-A and RD-B FOB ARA premiums versus the Platts ULSD 10ppmS FOB ARA Barge physical assessment.

The methodology and specifications for the ULSD assessment can be found here: <https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/refined-products/refined-products-europe-africa-specifications.pdf>

### North America

#### Renewable Diesel (R99)

**Basis and Location:** Delivered at place via railcar (UP or BNSF) to the Los Angeles and San Francisco area. Other delivery or shipping methods may also be considered in the assessments

but may be normalized for inclusion, such as FOB indications delivered via barges and by head of pipeline.

**Volume:** Minimum volume of 145,000 US gallons.

**Quality:** Meeting the ASTM D975 specification.

**Timing:** delivery 15-30 days forward, from date of publication.

**Units:** US cents/gal, published as an outright price as well as a differential to the front-month NYMEX ULSD futures contract and to the ULSD No2 CARB Diesel.

**Notes:** Blended Los Angeles and San Francisco R99 assessments exclude the California LCFS credit, Clean Fuel Production Credit and D4 RIN, but still consider cap-and-trade (CCA) costs.

#### Renewable Diesel (R100)

**Basis and Location:** Delivered at place via railcar (UP or BNSF) to the Los Angeles and San Francisco area. Other delivery or shipping methods may also be considered in the assessments but may be normalized for inclusion, such as FOB indications delivered via barges and head of pipeline.

**Volume:** Minimum volume of 145,000 US gallons.

**Quality:** Meeting the ASTM D975 specification with a reference Carbon Intensity (CI) of 37.01 gCO<sub>2</sub>e/MJ.

**Timing:** Delivery 15-30 days forward, from date of publication.

**Units:** US cents/gal, published as an outright price as well as a differential to the front-month NYMEX ULSD futures contract and to the ULSD No2 CARB Diesel.

**Notes:** The Los Angeles and San Francisco R100 assessments include the California LCFS credit, Clean Fuel Production Credit and D4 RIN; and consider cap-and-trade (CCA) costs.

**Renewable Diesel Margin Indicators**

Platts publishes margin indicators from the Hydroprocessed Esters and Fatty Acids production pathway.

**Location:** Los Angeles, California.

**Calculation:** The calculations consider Platts ULSD No2 CARB Diesel Los Angeles (POAAK00), deducting the CBOT soybean oil daily settle (CBAAD00) or the Platts tallow delivered USGC

(TADUC00) feedstock price, multiplied by a yield of 8.5 lb oil/gallon, and then adding the Platts California LCFS credit price (AAXYA00) based on a value per point of CI, the Clean Fuel Production Credit and D4 biomass-based diesel RIN price (BDRCY02) with RD multiplier.

Platts may normalize the soybean oil assessment to account for refining and its freight cost, and the tallow assessment to account for its freight cost delivered in Los Angeles.

**Quality:** The RD soybean oil margin indicator reflects renewable diesel with a reference Carbon Intensity (CI) of 55.71 kgCO<sub>2</sub>/MMBtu (or 52.8 gCO<sub>2</sub>/MJ) for LCFS calculation and 25 kgCO<sub>2</sub>/MMBtu (or 23.75 gCO<sub>2</sub>/MJ) for the Clean Fuel Production credit calculation and the RD tallow margin indicator reflects a reference CI of 20 kgCO<sub>2</sub>/MMBtu (or 18.96 gCO<sub>2e</sub>/MJ).

**Units:** US cents/gal

### Sustainable Aviation Fuel (SAF)

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>Asia</b>											
SAF FOB Straits	\$/mt	SFSMT00	SFSMT03		Spot	FOB	Straits	15-30 days forward	5,000	10,000	metric ton
SAF Premium FOB Straits	\$/mt	SFSHA00	SFSHA03		Spot	FOB	Straits	15-30 days forward	5,000	10,000	metric ton
<b>Cost of Production</b>											
SAF (H-S) Cost of Production (UCO) North Asia	\$/mt	ASMAC00	ASMAC03		Production cost	FOB	China				metric ton
SAF (H-S) Cost of Production (UCO) North Asia	\$/bbl	ASMAD00	ASMAD03		Production cost	FOB	China				barrel
<b>Europe</b>											
SAF (H-S) CIF NWE Cargo	\$/mt	AJNWD00	AJNWD03		Spot	CIF	NWE	10-25 days forward (Monday-Friday)	5,000	10,000	metric ton
SAF (H-S) CIF NWE Cargo Premium	\$/mt	AJNWF00	AJNWF03		Spot	CIF	NWE	10-25 days forward (Monday-Friday)	5,000	10,000	metric ton
SAF (H-S) FOB FARAG Barge	\$/mt	SUAFA00	SUAFA03		Spot	FOB	FARAG	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
SAF (H-S) FOB FARAG Barge Premium	\$/mt	SUAFB00	SUAFB03		Spot	FOB	FARAG	3-15 days forward (Monday-Tuesday) 5-15 days forward (Wednesday-Friday)	1,000	3,000	metric ton
<b>North America</b>											
SAF (H-S) CA (credits det)	¢/gal	SFCAD00	SFCAD03		Spot	DAP	Los Angeles	5-25 days forward	1,000		gallons
SAF (H-S) CA Premium (credits det)	¢/gal	SFCCD00	SFCCD03		Spot	DAP	Los Angeles	5-25 days forward	1,000		gallons
SAF (H-S) IL (credits det)	¢/gal	SFILA00	SFILA03		Spot	DAP	Chicago	5-25 days forward	1,000		gallons
SAF (H-S) IL Premium (credits det)	¢/gal	SFILB00	SFILB03		Spot	DAP	Chicago	5-25 days forward	1,000		gallons
SAF CA	¢/gal	SAFCA00	SAFCA03		Spot	DAP	Los Angeles	5-25 days forward	1,000		gallons
SAF CA vs Jet LA	¢/gal	SAFCB00	SAFCB03		Spot	DAP	Los Angeles	5-25 days forward	1,000		gallons
Aviation Turbine Fuel 30/70 blend, basis CA	¢/gal	SAFCF00	SAFCF03		Spot	DAP	Los Angeles	5-20 days forward	8,000		gallons
SAF IL	¢/gal	SAFCD00	SAFCD03		Spot	DAP	Chicago	5-25 days forward	1,000		gallons
SAF IL vs Jet Chicago	¢/gal	SAFCE00	SAFCE03		Spot	DAP	Chicago	5-25 days forward	1,000		gallons
Aviation Turbine Fuel 30/70 blend, basis IL	¢/gal	SAFCG00	SAFCG03		Spot	DAP	Chicago	5-20 days forward	8,000		gallons
<b>Cost of Production</b>											
Sustainable Aviation Fuel (H-S, UCO) Cost of Production	\$/mt	BJNWD00	BJNWD03		Production cost	ex-refinery	NWE		1,000	3,000	metric ton
SAF Cost of Production (H-S, Tallow) w/ Credits USWC	¢/gal	ASAFK00	ASAFK03		Production cost	ex-refinery	California				gallons
SAF Cost of Production (H-S, Tallow) w/o Credits USWC	¢/gal	ASAFI00	ASAFI03		Production cost	ex-refinery	California				gallons
SAF ETJ Cost of production w credits USGC	¢/gal	ESTFA00	ESTFA03		Production cost		USGC				gallons
SAF ETJ Cost of production w/o credits USGC	¢/gal	ESTFB00	ESTFB03		Production cost		USGC				gallons

## Sustainable Aviation Fuel (SAF)

### Asia

#### SAF (HEFA-SPK) FOB Straits

Platts SAF FOB Straits assessments reflect market information reported to Platts up to the close of the assessment window at 16:30 Singapore time on daily basis.

**Basis and Location:** Prices are basis FOB Straits. Other locations within Southeast Asia, such as Indonesia and Thailand, will be considered for the assessment but may be normalized to reflect the Straits basis.

**Quality:** The assessments reflect ASTM D7566 standard specifications for synthesized paraffinic kerosene from hydroprocessed esters and fatty acids (SPK-HEFA), as referenced in Annex A2, with a relative density of 760 kg/cu m (at 15 degrees Celsius). The assessments reflect SAF produced from Renewable Energy Directive-compliant feedstocks, excluding palm fatty acid distillates and category 3 tallow, and reflect minimum greenhouse gas savings of 80%. Other GHG savings levels will be considered but may be normalized to the minimum basis level.

The assessments reflect ISCC EU-certified cargoes. ISCC CORSIA-certified cargoes will also be considered, but may be normalized.

**Volume:** 5,000-10,000 mt. Other volumes may be taken into consideration and normalized to the assessed range.

**Timing:** The assessment reflects cargoes loading 15-30 days forward from date of publication.

**Units:** \$/mt.

**Conversion factor:** SAF uses a \$/mt to \$/b (under the symbol SFSBB00) conversion factor of 8.276.

SAF FOB Straits are published in an outright price as well as in a SAF premium over the Platts Jet Kero FOB Spore assessed

forward strip (AAPJZ00), including a conversion to \$/mt. The forward strip, also known as the MOPS strip, is defined as the average of the forward values for jet kero loading 15 to 30 days forward from Singapore, coinciding with the same loading dates reflected in the SAF FOB Straits assessment.

The methodology and specifications for the jet assessment can be found here: [refined-products-asia-pacific-middle-east-specifications.pdf](#)

**Note:** In the absence of neat SAF spot market data, Platts may also take into consideration the freight netback value of the Platts CIF Northwest European neat SAF cargo assessment (AJNWD00), the cost of SAF feedstocks, and other adjacent markets such as renewable diesel (HVO) and China exported SAF.

#### Sustainable Aviation Fuel (HEFA-SPK) Cost of Production (UCO) North Asia

Platts SAF North Asia cost of production is based on cost calculations from S&P Global Energy's Analytics team. This cost-based assessment for SAF is published on an FOB China basis, comprised of a number of existing Platts assessments and other fixed costs.

The SAF inputs are FOB China Used Cooking Oil [AUCOC00] and Japan Hydrogen SMR [IGYGC00], added to fixed renewable diesel refinery costs, then deducting the by-product credits to include Propane Refrigerated CFR South China [AABAK00], Naphtha C+F Korea Cargo [PAADE00] and Gasoil LP C+F South China Cargo [POAFA00].

### Europe

#### SAF (HEFA-SPK) CIF NWE Cargo

**Basis and Location:** Prices are CIF basis Northwest Europe.

**Quality:** The assessment reflects ASTM D7566 standard specification for Synthesized Paraffinic Kerosene from Hydroprocessed Esters and Fatty Acids (SPK-HEFA), as reference in Annex A2, with a relative density of 760 kg/cu m

(at 15 degrees Celsius). The assessment reflects SAF produced from Renewable Energy Directive-compliant feedstocks, with an exclusion for Palm Fatty Acid Distillate, and reflects minimum GHG savings of 85%. Other GHG savings levels such as min 85% GHG savings, will be considered but may be normalized to the minimum basis level.

The assessment reflects product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission. Market participants shall exercise efforts to provide all necessary documentation for Proof of Sustainability within a reasonable timeframe.

**Volume:** 5,000-10,000 mt

**Timing:** The assessment reflects delivery 10-25 days forward from date of publication.

**Units:** \$/mt.

**Conversion factor:** SAF uses a \$/mt to \$/b conversion factor of 8.276.

The SAF price is published as an outright in US dollars per metric ton.

Platts publishes the SAF CIF NWE premium versus the Platts Jet CIF NWE Cargo assessed forward curve for the delivery window. The forward curve is calculated on the average of the delivery window reflected in the assessment, also known as the strip. The strip is defined as the average of the forward values for the sequence of the 16 days for cargoes, reflecting 10-25 days forward, representing the future delivery dates reflected in Platts SAF assessment.

The methodology and specifications for the jet assessment can be found here: [https://www.spglobal.com/commodityinsights/PlattsContent/\\_assets/\\_files/en/our-methodology/methodology-specifications/europe-africa-refined-products-methodology.pdf](https://www.spglobal.com/commodityinsights/PlattsContent/_assets/_files/en/our-methodology/methodology-specifications/europe-africa-refined-products-methodology.pdf)

**SAF (HEFA-SPK) FOB FARAG barge**

**Basis and Location:** Prices are FOB basis Flushing-Amsterdam-Rotterdam-Antwerp-Ghent.

**Quality:** The assessment reflects ASTM D7566 standard specification for Synthesized Paraffinic Kerosene from Hydroprocessed Esters and Fatty Acids (SPK-HEFA), as reference in Annex A2, with a relative density of 760 kg/cu m (at 15 degrees Celsius). The assessment reflects SAF produced from Renewable Energy Directive-compliant feedstocks, with an exclusion for Palm Fatty Acid Distillate, and reflects minimum GHG savings of 80%. Other GHG savings levels will be considered but may be normalized to the minimum basis level. The assessment reflects product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission. Market participants shall exercise efforts to provide all necessary documentation for Proof of Sustainability within a reasonable timeframe.

**Volume:** 1,000 – 3,000 mt, volumes outside this range will be normalized to basis 1,000 mt.

**Timing:** The assessment reflects barges loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday) from the date of publication.

**Units:** \$/mt.

**Conversion factor:** SAF uses a \$/mt to \$/b conversion factor of 8.276.

The SAF price is published as an outright in US dollars per metric ton. Platts publishes the SAF FOB FARAG premium versus the Platts Jet FOB Rotterdam barge assessed forward curve, The forward curve is calculated on the average of the loading window reflected in the assessment, also known as the strip. The strip is defined as the average of the forward values for the sequence of the 13/11 days for barges, reflecting 3/5-15

days forward, representing the future loading dates reflected in the Platts SAF barge assessment.

[https://www.spglobal.com/commodityinsights/PlattsContent/\\_assets/\\_files/en/our-methodology/methodology-specifications/europe-africa-refined-products-methodology.pdf](https://www.spglobal.com/commodityinsights/PlattsContent/_assets/_files/en/our-methodology/methodology-specifications/europe-africa-refined-products-methodology.pdf)

**Sustainable Aviation Fuel (HEFA-SPK) Cost of Production (UCO) EXW NWE**

SAF Cost of Production, is an ex-refinery price based on cost calculations from S&P Global Energy Analytics team. The cost-based prices for SAF are published on an ex-refinery NWE basis, and comprise a number of existing Platts assessments and other fixed costs, which are reviewed annually.

The SAF inputs are Used Cooking Oil FOB ARA [AUCOA00] and Hydrogen Netherlands SMR [HXNMA00] added to fixed SAF bio-refinery costs, then deducting the by-product credits to include.

Bio-propane FCA ARA [ABPRA00], Bio-naphtha FOB NWE cargoes [PAAAU00] and Renewable Diesel B FOB ARA [ANEWB00].

**North America****SAF (HEFA-SPK) California (credits detached)**

**Basis and Location:** The assessment reflects DAP SAF delivered via railcar or barge to Los Angeles. Neat SAF delivered to other locations within California such as San Francisco are also considered but may be normalized back to the basis location.

**Quality:** The assessment reflects ASTM D7566 standard specification for Synthesized Paraffinic Kerosene from Hydroprocessed Esters and Fatty Acids (SPK-HEFA), as reference in Annex A2, with a relative density of 760 kg/cu m (at 15 degrees Celsius), with a reference Carbon Intensity of 42 gCO<sub>2</sub>e/MJ, according to the California Air Resources Board Low Carbon Fuel Standard alternative fuels pathway. Assessment reflects SAF produced via the hydroprocessed esters and fatty

acids pathway, using feedstocks such as vegetable oils, waste oils, fats, tallow and other similar feedstocks. Platts does not consider SAF produced from palm oil or palm fatty acid distillate within the assessment.

**Timing:** Delivery five to 25 days forward, from date of publication.

**Volume:** Minimum 1,000 barrels.

**Units:** The assessment is published as an outright price in US cents/gallon, as well as a premium to the Platts Jet Kero LA pipeline (PJAAP00) assessment

**Note:** The assessment is exclusive of the California Low Carbon Fuel Standard carbon credit, the Clean Fuel Production Credit and D4 biomass-based diesel Renewable Identification Number.

**SAF (HEFA-SPK) Illinois (credits detached)**

**Basis and Location:** The assessment reflects DAP SAF delivered via railcar or barge to Chicago Neat SAF delivered to other locations within Illinois are also considered but may be normalized back to the basis location.

**Quality:** The assessment reflects ASTM D7566 standard specification for Synthesized Paraffinic Kerosene from Hydroprocessed Esters and Fatty Acids (SPK-HEFA), as reference in Annex A2, with a relative density of 760 kg/cu m (at 15 degrees Celsius), with a reference Carbon Intensity of 42 gCO<sub>2</sub>e/MJ, according to the California Air Resources Board Low Carbon Fuel Standard alternative fuels pathway. Assessment reflects SAF produced via the hydroprocessed esters and fatty acids pathway, using feedstocks such as vegetable oils, waste oils, fats, tallow and other similar feedstocks. Platts does not consider SAF produced from palm oil or palm fatty acid distillate within the assessment.

**Timing:** Delivery five to 25 days forward, from date of publication.

**Volume:** Minimum 1,000 barrels.

**Units:** The assessment is published as an outright price in US cents/gallon, as well as a premium to the Platts Jet Kero Chicago pipeline (PJAAF00) assessment.

**Notes:** The assessment is exclusive of the Illinois SAF tax credit, the Clean Fuel Production Credit and D4 biomass-based diesel RIN.

#### SAF, California

**Basis and Location:** The assessment reflects DAP SAF delivered via railcar or barge to Los Angeles. Neat SAF delivered to other locations within California such as San Francisco are also considered but may be normalized back to the basis location.

**Quality:** The assessment reflects ASTM D7566 standard specification for Synthesized Paraffinic Kerosene from Hydroprocessed Esters and Fatty Acids (SPK-HEFA), as reference in Annex A2, with a relative density of 760 kg/cu m (at 15 degrees Celsius), with a reference Carbon Intensity of 42 gCO<sub>2</sub>e/MJ, according to the California Air Resources Board Low Carbon Fuel Standard alternative fuels pathway. Assessment reflects SAF produced via the hydroprocessed esters and fatty acids pathway, using feedstocks such as vegetable oils, waste oils, fats, tallow and other similar feedstocks. Platts does not consider SAF produced from palm oil or palm fatty acid distillate within the assessment.

**Timing:** Delivery five to 25 days forward, from date of publication.

**Volume:** Minimum 1,000 barrels.

**Units:** The assessment is published as an outright price in US cents/gallon, as well as a premium to the Platts Jet Kero LA pipeline (PJAAP00) assessment.

**Notes:** The assessments are also inclusive of the California Low Carbon Fuel Standard carbon credit, the Clean Fuel Production Credit and D4 biomass-based diesel RIN.

#### SAF, Illinois

**Basis and Location:** The assessment reflects DAP SAF delivered via railcar or barge to Chicago Neat SAF delivered to other locations within Illinois are also considered, but may be normalized back to the basis location.

**Quality:** The assessment reflects ASTM D7566 standard specification for Synthesized Paraffinic Kerosene from Hydroprocessed Esters and Fatty Acids (SPK-HEFA), as reference in Annex A2, with a relative density of 760 kg/cu m (at 15 degrees Celsius), with a reference Carbon Intensity of 42 gCO<sub>2</sub>e/MJ, according to the California Air Resources Board Low Carbon Fuel Standard alternative fuels pathway. Assessment reflects SAF produced via the hydroprocessed esters and fatty acids pathway, using feedstocks such as vegetable oils, waste oils, fats, tallow and other similar feedstocks. Platts does not consider SAF produced from palm oil or palm fatty acid distillate within the assessment.

**Timing:** Delivery five to 25 days forward, from date of publication.

**Volume:** Minimum 1,000 barrels.

**Units:** The assessment would be published as an outright price in US cents/gallon, as well as a premium to the Platts Jet Kero Chicago pipeline (PJAAF00) assessment.

**Notes:** The assessment is inclusive of the Illinois SAF tax credit, the Clean Fuel Production Credit and D4 biomass-based diesel RIN.

#### Aviation Turbine Fuel 30/70 blend basis CA

**Basis and Location:** The assessment reflects DAP aviation turbine fuel or blended aviation fuel delivered via railcar or barge to Los Angeles International airport (LAX) or surrounding airports in the Los Angeles area. Deliveries into other California airports may be considered and normalized.

**Quality:** 70% conventional aviation fuel (or jet fuel) and 30% neat SAF (SPK-HEFA), meeting ASTM D7566 specification; the SAF portion of the blend meets a reference Carbon Intensity of 42 gCO<sub>2</sub>e/MJ, according to the California Air Resources Board Low Carbon Fuel Standard alternative fuels pathway.

**Timing:** Delivery five to 20 days forward, from date of publication.

**Volume:** Minimum 8,000 gallons.

**Units:** US cents/gal.

**Notes:** The assessment is also inclusive of the California Low Carbon Fuel Standard carbon credit, the Clean Fuel Production Credit and D4 biomass-based diesel RIN.

#### Aviation Turbine Fuel 30/70 blend basis IL

**Basis and Location:** Assessment reflects product delivered via pipeline or truck into the Chicago O'Hare International airport (ORD) or surrounding airports in the Chicago area. Deliveries into other Illinois airports may be considered and normalized.

**Quality:** 70% conventional aviation fuel (or jet) and 30% neat SAF (SPK-HEFA), meeting ASTM D7566 specification.

**Timing:** Delivery five to 20 days forward, from date of publication.

**Volume:** Minimum 8,000 gallons.

**Units:** US cents/gal.

**Notes:** The assessment is inclusive of the Illinois SAF tax credit, the Clean Fuel Production Credit and D4 biomass-based diesel RIN.

### **Sustainable Aviation Fuel (HEFA-SPK) Cost of Production (Tallow) USWC**

Platts publishes cost based values reflecting the production of sustainable aviation fuel (SAF) through hydroprocessing. The assumptions are calculated by S&P Global Energy based on existing Platts assessments and other fixed costs. Fixed costs will be reviewed on at least an annual basis.

**Quality:** SAF values reflect ASTM D7566 standard specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons, with a relative density of 776 kg/cu m (at 15 degrees Celsius).

**Location:** Ex-refinery, basis California.

**Calculation:** The SAF inputs are Packer Grade Beef Tallow DlvD Chicago (ATALA00) and Hydrogen California SMR w/o CCS (incl CAPEX) (IGZBL00), added to fixed renewable aviation fuel refinery costs, then deducting the by-products of Gasoline Unl 84 Los Angeles CA Pipeline (AAUHA00), Propane non-LST Mt Belvieu pipe Mo01 (PMAAY00) and ULSD No2 CARB Diesel Los Angeles CA Pipeline (POAAK00).

Platts may normalize the Chicago packer grade tallow assessment to account for freight to California and a quality differential between packer tallow and an alternative grade used for SAF production.

The primary SAF values are inclusive of environmental credits. Platts publishes additional values without environmental credits by deducting the value of the RINs under the Renewable Fuel Standard, credits from the LCFS administered by CARB and,

when applicable, the Clean Fuel Production Credit. Platts uses the International Civil Aviation Organization's publication of the CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels to calculate the applicable SAF tax credit. Platts uses a beef tallow feedstock with a 29.70 gCO<sub>2</sub>e/MJ lifecycle emissions in the calculation.

Platts calculates the USWC SAF credit multiplying the lifecycle greenhouse gas emissions reduction percentage by the maximum credit price of \$1/gal adjusted with inflation when applicable.

**Units:** The primary SAF values are published in cents/gal. Both with and without credit values are also published in \$/mt and \$/b. SAF uses a 3.4 conversion factor from cents/gal to \$/mt and 0.42 from cents/gal to \$/barrel. This implies a \$/mt to \$/b conversion factor of 8.105.

### **Sustainable Aviation Fuel ETJ Cost of Production, USGC**

Platts publishes cost-based values reflecting the production of sustainable aviation fuel (SAF) from ethanol. The assumptions are calculated by S&P Global Energy based on existing Platts assessments and other fixed costs. Fixed costs and depreciation will reflect updates whenever there are changes to the prevailing Process Economic Program values released by S&P Global Energy.

**Quality:** SAF values reflect Annex 5 of the ASTM D7566 standard specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons, which refers to alcohol-to-jet synthetic paraffinic kerosene, with a relative density of 759.5 kg/cu m (at 15 degrees

Celsius). The values reflect a reference Carbon Intensity (CI) of 45 gCO<sub>2</sub>e/MMBTU (42.652 gCO<sub>2</sub>/MJ).

**Location:** Basis US Gulf Coast.

**Calculation:** The SAF inputs are Ethanol FOB Santos (AAWF000), Clean USGC-Brazil 38KT (TCAFR00), and Hydrogen Gulf Coast SMR w/o CCS (incl CAPEX) (IGYAI00), added to the utilities of ERCOT Houston Hub (IERHM00), and Houston ShipChl TDt Abs (IGBAP20), deducting the by-products of Gasoline Unl 87 USGC Prompt Pipeline (PGACT00), and RD99 LA (AAUWB00), and then adding to fixed costs including depreciation. SAF ETJ cost of production prices do not include plant front-end costs such as project feasibility study and engineering design costs, government permits costs, land cost, technology license and royalty fees, working capital, initial catalyst-charge costs, spare parts cost, plant start-up costs, project financing and borrowing costs.

Platts may normalize the RD99 LA assessment to account for freight to the Gulf Coast. Platts may also normalize the Ethanol FOB Santos assessment freight cost to account or other related costs, including tariffs when applicable. or other costs related,

The primary SAF values are inclusive of environmental credits. Platts publishes additional values without environmental credits by deducting the value of the RINs under the Renewable Fuel Standard, and, when applicable, the Clean Fuel Production Credit.

Platts considers a reference Carbon Intensity (CI) of 45 kgCO<sub>2</sub>e/MMBtu (42.652 gCO<sub>2</sub>/MJ).

## Biobunkers

Details of Platts biobunkers coverage can be found in the Global Bunkers Fuel Specifications Guide, available at: <https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/shipping/bunker-fuels-specifications.pdf>

**Credits**

Assessment	Currency	Code	Mavg	Contract Type	Delivery Period	Min Size	Max Size	UOM
<b>Europe</b>								
<b>European biofuel tickets (rolling)</b>								
<b>Netherlands Renewable Energy Units (HBEs)</b>								
Netherlands HBE-Advanced (HBE-A) (Previous Year)	Eur/GJ	ANLDE00	ANLDE03	Spot		50,000		GigaJoules
Netherlands HBE-Advanced (HBE-A) (Next Year)	Eur/GJ	ATHAE00	ATHAE03	Spot		50,000		GigaJoules
Netherlands HBE-Annex IX B (HBE-B) (Previous Year)	Eur/GJ	ANLDF00	ANLDF03	Spot		50,000		GigaJoules
Netherlands HBE-Other (HBE-O) (Previous Year)	Eur/GJ	ANLDH00	ANLDH03	Spot		50,000		GigaJoules
<b>Netherlands Emission Reduction Units (EREs)</b>								
Netherlands LRE-Advanced (Previous Year)	euro cents/kgCO2e	LREAY01	LREAZ01	Spot		2 million		kgCO2e
Netherlands LRE-Advanced (Current Year)	euro cents/kgCO2e	LREAY02	LREAZ02	Spot		2 million		kgCO2e
Netherlands LRE-Advanced (Next Year)	euro cents/kgCO2e	LREAY03	LREAZ03	Spot		2 million		kgCO2e
Netherlands LRE-Annex IX B (Previous Year)	euro cents/kgCO2e	LREBY01	LREBZ01	Spot		2 million		kgCO2e
Netherlands LRE-Annex IX B (Current Year)	euro cents/kgCO2e	LREBY02	LREBZ02	Spot		2 million		kgCO2e
Netherlands LRE-Annex IX B (Next Year)	euro cents/kgCO2e	LREBY03	LREBZ03	Spot		2 million		kgCO2e
Netherlands LRE-Conventional (Previous Year)	euro cents/kgCO2e	LRECY01	LRE CZ01	Spot		2 million		kgCO2e
Netherlands LRE-Conventional (Current Year)	euro cents/kgCO2e	LRECY02	LRE CZ02	Spot		2 million		kgCO2e
Netherlands LRE-Conventional (Next Year)	euro cents/kgCO2e	LRECY03	LRE CZ03	Spot		2 million		kgCO2e
Netherlands LRE-Other (Previous Year)	euro cents/kgCO2e	LREOY01	LREOZ01	Spot		2 million		kgCO2e
Netherlands LRE-Other (Current Year)	euro cents/kgCO2e	LREOY02	LREOZ02	Spot		2 million		kgCO2e
Netherlands LRE-Other (Next Year)	euro cents/kgCO2e	LREOY03	LREOZ03	Spot		2 million		kgCO2e
Netherlands LRE-Electricity (Previous Year)	euro cents/kgCO2e	LREEY01	LREEZ01	Spot		2 million		kgCO2e
Netherlands LRE-Electricity (Current Year)	euro cents/kgCO2e	LREEY02	LREEZ02	Spot		2 million		kgCO2e
Netherlands LRE-Electricity (Next Year)	euro cents/kgCO2e	LREEY03	LREEZ03	Spot		2 million		kgCO2e
Netherlands ZRE-Advanced (Previous Year)	euro cents/kgCO2e	ZREAY01	ZREAZ01	Spot		2 million		kgCO2e
Netherlands ZRE-Advanced (Current Year)	euro cents/kgCO2e	ZREAY02	ZREAZ02	Spot		2 million		kgCO2e
Netherlands ZRE-Advanced (Next Year)	euro cents/kgCO2e	ZREAY03	ZREAZ03	Spot		2 million		kgCO2e
<b>Germany Greenhouse Gas Quotas (THGs)</b>								
Germany THG-Advanced Single Counting (Current Year)	Eur/GJ	GASCY02	GASCY12	Spot		50,000		GigaJoules
Germany THG-Advanced Single Counting (Previous Year)	Eur/GJ	GASCY01	GASCY11	Spot		50,000		GigaJoules
Germany THG-Advanced Single Counting (Next Year)	Eur/GJ	GASCY03	GASCY13	Spot		50,000		GigaJoules
Germany THG-Other (Current Year)	Eur/mtCO2e	GTHOY02	GTHOY12	Spot		5,000		mtCO2e
Germany THG-Other (Previous Year)	Eur/mtCO2e	GTHOY01	GTHOY11	Spot		5,000		mtCO2e

**Credits**

Assessment	Currency	Code	Mavg	Contract Type	Delivery Period	Min Size	Max Size	UOM
Germany THG-Other (Next Year)	Eur/mtCO2e	GTHOY03	GTHOY13	Spot		5,000		mtCO2e
Germany THG-Conventional (Current Year)	Eur/mtCO2e	GTCVY02	GTCVY12	Spot		5,000		mtCO2e
Germany THG-Conventional (Previous Year)	Eur/mtCO2e	GTCVY01	GTCVY11	Spot		5,000		mtCO2e
Germany THG-Conventional (Next Year)	Eur/mtCO2e	GTCVY03	GTCVY13	Spot		5,000		mtCO2e
Germany THG-Annex IX B (Current Year)	Eur/mtCO2e	GANBY02	GANBY12	Spot		5,000		mtCO2e
Germany THG-Annex IX B (Previous Year)	Eur/mtCO2e	GANBY01	GANBY11	Spot		5,000		mtCO2e
Germany THG-Annex IX B (Next Year)	Eur/mtCO2e	GANBY03	GANBY13	Spot		5,000		mtCO2e

**UK Renewable Transport Fuel Certificates (RTFCs)**

UK Crop RTFC (Current Year)	pence/RTFC	UKC1Y02	UKC1Y12	Spot		1 million		RTFC
UK Crop RTFC (Previous Year)	pence/RTFC	UKC1Y01	UKC1Y11	Spot		1 million		RTFC
UK Crop RTFC (Next Year)	pence/RTFC	UKC1Y03	UKC1Y13	Spot		1 million		RTFC
UK Non-Crop RTFC (Current Year)	pence/RTFC	UKNCY02	UKNCY12	Spot		1 million		RTFC
UK Non-Crop RTFC (Previous Year)	pence/RTFC	UKNCY01	UKNCY11	Spot		1 million		RTFC
UK Non-Crop RTFC (Next Year)	pence/RTFC	UKNCY03	UKNCY13	Spot		1 million		RTFC

**European biofuel tickets (calendar)**

Netherlands HBE-Advanced (HBE-A) (2025)	Eur/GJ	HBA2025		Spot		50,000		GigaJoules
Netherlands HBE-Conventional (HBE-C) (2025)	Eur/GJ	HBC2025		Spot		50,000		GigaJoules
Netherlands HBE-Annex IX B (HBE-B) (2025)	Eur/GJ	HBB2025		Spot		50,000		GigaJoules
Netherlands HBE-Other (HBE-O) (2025)	Eur/GJ	HB02025		Spot		50,000		GigaJoules
Netherlands LRE-Advanced (20XX)	euro cents/kgCO2e	LRA20XX		Spot		2 million		kgCO2e
Netherlands LRE-Annex IX B (20XX)	euro cents/kgCO2e	LRB20XX		Spot		2 million		kgCO2e
Netherlands LRE-Conventional (20XX)	euro cents/kgCO2e	LRC20XX		Spot		2 million		kgCO2e
Netherlands LRE-Electricity (20XX)	euro cents/kgCO2e	LRE20XX		Spot		2 million		kgCO2e
Netherlands LRE-Other (20XX)	euro cents/kgCO2e	LR020XX		Spot		2 million		kgCO2e
Netherlands ZRE-Advanced (20XX)	euro cents/kgCO2e	ZRA20XX		Spot		2 million		kgCO2e
Germany THG-Advanced Single Counting (20XX)	Eur/GJ	GA120XX		Spot		50,000		GigaJoules
Germany THG-Other (20XX)	Eur/mtCO2e	GT020XX		Spot		5,000		mtCO2e
Germany THG-Conventional (20XX)	Eur/mtCO2e	GTC20XX		Spot		5,000		mtCO2e
Germany THG-Annex IX B (20XX)	Eur/mtCO2e	GAB20XX		Spot		5,000		mtCO2e
UK Crop RTFC (20XX)	pence/RTFC	UKC20XX		Spot		1 million		RTFC
UK Non-Crop RTFC (20XX)	pence/RTFC	UKN20XX		Spot		1 million		RTFC

\*In codes such as GA120XX and UKC20XX, XX refers to the calendar year. E.g., GA12025, UKC2024

### Credits

Assessment	Currency	Code	Mavg	Contract Type	Delivery Period	Min Size	Max Size	UOM
<b>North America</b>								
<b>Renewable Identification Number (RIN) Assessments</b>								
Ethanol (D6) RIN Rolling Year 1 (Previous Year)	¢/RIN	RINCY01	RINCY31	Spot		500,000		RIN
Ethanol (D6) RIN Rolling Year 2 (Current year)	¢/RIN	RINCY02	RINCY32	Spot		500,000		RIN
Ethanol (D6) RIN Rolling Year 3 (Next Year)	¢/RIN	RINCY03	RINCY13	Spot		500,000		RIN
Ethanol RIN Cal 20XX	¢/RIN	RD620XX	RD6MAXX	Spot		500,000		RIN
Biodiesel (D4) RIN Rolling Year 1 (Previous Year)	¢/RIN	BDRCY01	BDRCY31	Spot		250,000		RIN
Biodiesel (D4) RIN Rolling Year 2 (Current year)	¢/RIN	BDRCY02	BDRCY32	Spot		250,000		RIN
Biodiesel (D4) RIN Rolling Year 3 (Next Year)	¢/RIN	BDRCY03	BDRCY13	Spot		250,000		RIN
Biodiesel RIN Cal 20XX	¢/RIN	RD420XX	RD4MAXX	Spot		250,000		RIN
Advanced biofuel (D5) RIN Rolling Year 1 (Previous Year)	¢/RIN	ABRCY01	ABRCY31	Spot		100,000		RIN
Advanced biofuel (D5) RIN Rolling Year 2 (Current year)	¢/RIN	ABRCY02	ABRCY32	Spot		100,000		RIN
Advanced biofuel (D5) RIN Rolling Year 3 (Next Year)	¢/RIN	ABRCY03	ABRCY13	Spot		100,000		RIN
Advanced Biofuel RIN Cal 20XX	¢/RIN	RD520XX	RD5MAXX	Spot		100,000		RIN
Cellulosic biofuel (D3) RIN Rolling Year 1 (Previous Year)	¢/RIN	CBRCY01	CBRCY31	Spot		100,000		RIN
Cellulosic biofuel (D3) RIN Rolling Year 2 (Current year)	¢/RIN	CBRCY02	CBRCY32	Spot		100,000		RIN
Cellulosic biofuel (D3) RIN Rolling Year 3 (Next Year)	¢/RIN	CBRCY03	CBRCY13	Spot		100,000		RIN
Cellulosic Biofuel RIN Cal 20XX	¢/RIN	RD320XX	RD3MAXX	Spot		100,000		RIN
Renewable Volume Obligation 20XX	¢/gal	RV0Y0XX	RV0Y3XX	Calculated				gal
Renewable Volume Obligation Current Year	¢/gal	RV0R002		Calculated				gal
*In codes such as RD620XX, XX refers to the calendar year. E.g., RD62025								

### Low Carbon Fuel Programs Carbon Credits

California Low Carbon Fuel Standard Carbon Credits Front Quarter	\$/mt of CO2e	AAXYA00	AAXYA03	Spot	Quarterly	5,000		mtCO2e
California Low Carbon Fuel Standard Carbon Credits Second Quarter	\$/mt of CO2e	AAXYZ00	AAXYZ03	Spot	Quarterly	5,000		mtCO2e
Ethanol CI Value Per Point	¢/gal	ACIVA00		Calculation				gallons
Oregon Clean Fuel Program Carbon Credits Front Quarter	\$/mt of CO2e	ACXYZ00	ACXYZ03	Spot	Quarterly	1,000		mtCO2e
Oregon Clean Fuel Program Carbon Credits Second Quarter	\$/mt of CO2e	ASXYZ00	ASXYZ03	Spot	Quarterly	1,000		mtCO2e
Washington Clean Fuel Standard Carbon Credits Front Quarter	\$/mt of CO2e	AWXYA00	AWXYA03	Spot	Quarterly	1,000		mtCO2e
Washington Clean Fuel Standard Carbon Credits Second Quarter	\$/mt of CO2e	AWXYZ00	AWXYZ03	Spot	Quarterly	1,000		mtCO2e
BC LCFS Carbon Credit Current Quarter (C\$/mt)	C\$/mt of CO2e	ALCFA00	ALCFA03	Spot	Quarterly	1,000		mtCO2e
BC LCFS Carbon Credit Second Quarter (C\$/mt)	C\$/mt of CO2e	ALCFB00	ALCFB03	Spot	Quarterly	1,000		mtCO2e

**Credits**

Assessment	Currency	Code	Mavg	Contract Type	Delivery Period	Min Size	Max Size	UOM
Canada CFR Carbon Credit CC2 Current Quarter (C\$/mt)	C\$/mt of CO2e	ALCFC00	ALCFC03	Spot	Quarterly	1,000		mtCO2e
Canada CFR Carbon Credit CC2 Second Quarter (C\$/mt)	C\$/mt of CO2e	ALCFD00	ALCFD03	Spot	Quarterly	1,000		mtCO2e
Canada CFR Carbon Credit CC3 Current Quarter (C\$/mt)	C\$/mt of CO2e	ALCFE00	ALCFE03	Spot	Quarterly	1,000		mtCO2e
Canada CFR Carbon Credit CC3 Second Quarter (C\$/mt)	C\$/mt of CO2e	ALCFF00	ALCFF03	Spot	Quarterly	1,000		mtCO2e

**South America**

CBIO (Crédito de Descarbonização)	Real/mt of CO2e	ACIBA00	ACIBA03	ACIBA04	spot		10 CBIOs	mtCO2e
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## Tickets and Credits

### Europe

#### Netherlands Renewable Energy Units (HBEs)

**Platts assesses four types of HBE:** HBE-Conventional (HBE-C), HBE-Advanced (HBE-A), HBE-Annex IX B (HBE-B) and HBE-Other (HBE-O).

Platts has initiated the staged discontinuation of its Netherlands HBE price assessments starting Nov. 3, 2025

Year-ahead Platts HBE assessments were discontinued, effective Nov. 3, 2025.

Current-year Platts HBE assessments were discontinued, effective Jan 2, 2026.

Platts will continue to assess the previous year vintage until the last working day of April and will stop assessing HBEs after this date, following the shift to the ERE system in the Netherlands.

**Volume:** The assessments reflect a minimum of 50,000 units in GJ. Lower volumes may be considered and normalized to the minimum specification volume.

**Units:** Assessments are published in Eur/GJ.

**Calendar HBE codes:** These codes correspond to the vintage year of the HBE to supplement the existing rolling codes (current and previous year) and accompany a specific HBE vintage throughout its entire lifecycle, from launch to discontinuation.

#### Netherlands Emission Reduction Units (EREs)

**Platts assesses six types of EREs:** LRE-Advanced, LRE-Annex IX B, LRE-Conventional, LRE-Other, LRE-Electricity and ZRE-Advanced.

**Timing:** Each ERE is assessed on a current year, previous year and next-year basis, Platts assesses:

Current year vintage from the first to the last working day of the calendar year.

Previous year vintage from the first working day of January until March 30, starting in 2027.

Next year vintage from the first working day of November to the last working day of the calendar year.

**Volume:** The assessments reflect market activity ranging from 2 million to 10 million units.

**Units:** Assessments are published in euro cents/kgCO<sub>2</sub>e.

**Calendar ERE codes:** These codes correspond to the vintage year of the ERE to supplement the existing rolling codes (current and previous year) and accompany a specific ERE vintage throughout its entire lifecycle, from launch to discontinuation.

#### Germany Greenhouse Gas Quota (THGs)

**Platts assesses four types of THG:** THG-Advanced Single Counting, THG-Conventional, THG-Annex IX B, and THG Other.

**Timing:** Each THG type is assessed on a current year, previous year and next-year basis, Platts assesses:

Current year vintage from the first to the last working day of the calendar year.

Previous year vintage from the first working day of January until April 15.

Next year vintage from the first working day of November to the last working day of the calendar year.

For example, in 2025, Platts will publish 2025 assessments from January through December, 2024 assessments from January to the last working day to April 15, and 2026 assessments in November and December.

**Volume:** The assessments reflect a basis volume of 5,000 units, except for the THG-Advanced Single Counting type, which reflect a minimum volume of 50,000 GJ. Volumes outside of these parameters may be considered and normalized to the assessed specification.

**Units:** THG-Advanced Single Counting is published in Eur/GJ, while the other four types are assessed in Eur/mtCO<sub>2</sub>e.

**Calendar THG codes:** These codes correspond to the vintage year of the THG to supplement the existing rolling codes (current, previous and next year) and accompany a specific THG vintage throughout its entire lifecycle, from launch to discontinuation.

#### UK Renewable Transport Fuel Certificates (RTFCs)

**Platts assesses two types of RTFC:** Crop and Non-Crop, as defined under UK RTFO Order 2007 No. 3072 by the UK Department for Transport.

**Timing:** Each RTFC type is on a current year, previous year and next-year basis.

#### **Platts assesses:**

Current year vintage from the first to the last working day of the calendar year.

Previous year vintage from the start of January until the last working day of April.

Next year vintage from the first working day of November to the last working day of the calendar year.

For example, in 2025, Platts will publish 2025 RTFCs from January through December, 2024 RTFCs from Jan. 6 until April 30, and 2026 RTFCs in November and December.

**Volume:** The assessments reflect market activity ranging from 1 million to 10 million RTFCs.

**Unit:** GBP pence per RTFC; one RTFC represents one liter of renewable fuel delivered to the transport sector.

**Calendar RTFC codes:** These codes correspond to the vintage year of the RTFC to supplement the existing rolling codes (current, previous and next year) and accompany a specific RTFC vintage throughout its entire lifecycle, from launch to discontinuation.

**Note:** The assessments reflect first-quarter transfer and payment terms in line with market practice. Pricing information reflecting other terms may be considered and normalized to the specification.

## South America

### Crédito de Descarbonização (CBIO)

Platts assesses the Crédito de Descarbonização, or CBIO under the Brazilian National Biofuels Policy, or RenovaBio. CBIOs are issued by biofuel producers and importers authorized by the National Agency of Petroleum, Natural Gas and Biofuels and certified for RenovaBio. CBIOs are registered, traded and retired via Brazil, Bolsa, Balcão (B3), a Brazilian derivatives exchange.

**Timing:** CBIOs are issued with no expiration date, but CBIOs can be retired or removed from the market at the request of an obligated or non-obligated party.

**Unit:** The assessment is published in Real/CBIO. One CBIO is one metric ton of CO<sub>2</sub> equivalent (mtCO<sub>2</sub>e).

**Volume:** Minimum 10 CBIO.

## North America

### California Low Carbon Fuel Standard Carbon Credits (LCFS)

Platts assesses carbon credits under the Low Carbon Fuel Standard (LCFS) as defined by the California Air Resources Board (CARB).

**Transfer dates:** Platts assesses current quarter and next quarter carbon credits that are to be transferred before the end of the respective quarters.

**Timing:** Assessments roll on the first publishing day after the 14th of the last month of the quarter.

**Volume:** Typical volume of 5,000mt CO<sub>2</sub>.

**Units:** US dollars per metric ton of carbon dioxide equivalent.

### Carbon Intensity value calculation

Platts publishes a value that reflects the cost of each point of Carbon Intensity (CI) per gallon of ethanol under California's Low Carbon Fuel Standard.

The published CI price per point is calculated daily using the Platts assessment of front-quarter California LCFS credits (\$/mt) and the energy density of denatured ethanol, as published by the California Air Resources Board at 81.51 MJ/gal, then divided by 10,000 to give a cents/CI per gallon value.

**Unit:** Cents/gallon.

### Oregon Clean Fuel Program Carbon Credits (OCFP)

Platts assesses carbon credits under the Clean Fuel Program (CFP) as defined by the Oregon Department of Environmental Quality (DEQ).

**Transfer dates:** Platts assesses current quarter and next quarter carbon credits that are to be transferred before the end of the respective quarters.

**Timing:** Assessments roll on the first publishing day after the 14th of the last month of the quarter.

**Volume:** Minimum 1,000 mt CO<sub>2</sub>e  
**Units:** US dollars per metric ton of carbon dioxide equivalent.

### Washington Clean Fuel Standard Carbon Credits (WACFS)

Platts assesses carbon credits under the Clean Fuel Standard (CFS) as defined by the Washington State Department of Ecology.

**Transfer dates:** Platts assesses current quarter and next quarter carbon credits that are to be transferred before the end of the respective quarters.

**Timing:** Assessments roll on the first publishing day after the 14th of the last month of the quarter.

**Volume:** Minimum 1,000 mt CO<sub>2</sub>e.

**Units:** US dollars per metric ton of carbon dioxide equivalent.

### Canada Clean Fuel Regulation Credits (CFR)

Platts assesses Compliance Category 2 and Compliance Category 3 carbon credits under the Canada Clean Fuel Regulations (CFR) as defined by Environmental and Climate Change Canada (ECCC).

**Transfer dates:** Platts assesses current quarter and next quarter carbon credits that are to be transferred before the end of the respective quarters.

**Timing:** Assessments roll on the first publishing day after the 14th of the last month of the quarter.

**Volume:** Minimum 1,000 mtCO<sub>2</sub>e.

**Units:** Canadian dollars per metric ton of carbon dioxide equivalent.

### British Columbia Low Carbon Fuel Standard Credits (BC LCFS)

Platts assesses carbon credits under the British Columbia Low Carbon Fuel Standard as defined by the British Columbia Ministry of Energy, Mines and Low Carbon Innovation.

**Transfer dates:** Platts assesses current quarter and next quarter carbon credits that are to be transferred before the end of the respective quarters.

**Timing:** Assessments roll on the first publishing day after the 14th of the last month of the quarter.

**Volume:** Minimum 1,000 mtCO<sub>2e</sub>.

**Units:** Canadian dollars per metric ton of carbon dioxide equivalent.

**Renewable Identification Number (RIN) assessments**

A RIN is a credit issued by the US Environmental Protection Agency, for the purpose of tracking renewable fuel usage. Applicable refiners and importers, called obligated parties, use RINs to demonstrate to the EPA they have fulfilled their government mandated use of renewable fuels. If the obligated party has not used enough physical product, such as ethanol, it can satisfy the quota by purchasing RINs.

Platts assesses RINs for conventional biofuels or corn-based ethanol (D6), biomass-based diesel (D4), cellulosic biofuel (D3) and advanced biofuel (D5) for the previous year, current year and next-year vintage RINs.

In the absence of spot market values for D3 RINs, Platts may look at the value of the Cellulosic Waiver Credit (CWC) and D5 RIN value.

The EPA has historically published the value of the next year’s CWC around December of the current year, however the final underlying data for calculating the CWC is published in early September. Platts may publish next-year D3 RIN assessments using a projected value calculated from the available underlying data the EPA uses starting from the first publishing day of July, which is when Platts begins publishing next-year RIN assessments. From early September, Platts may use a calculated CWC using the final underlying data the EPA uses to calculate the next-year CWC.

Volumes:

**D6:** Typical volume of 500,000 RINs per trade.

**D4:** Typical volume of 250,000 RINs per trade.

**D3:** Typical volume of 100,000 RINs per trade.

**D5:** Typical volume of 100,000 RINs per trade.

**Transfer dates:** For current-year and previous-year RIN trades, the seller is obligated to transfer RINs to the buyer during the first full calendar month forward from date of execution. For example, a seller of a RIN on June 7, 2022, has the obligation to transfer that RIN to the buyer no later than the last working day of July 2022. For year-ahead RIN assessments, the seller is obligated to transfer RINs to the buyer no later than January 31 of the following year. Vintage rolling schedule: Platts begins assessing next-year RINs on the first publishing day of July. The final publishing day for prior-year RIN assessments is the last publishing day of January two years after the RIN vintage. For example, the last assessment for 2021 RINs will be on January 31, 2023.

**Calendar RINs codes:** These codes correspond to the calendar year of the RIN to supplement the existing rolling codes and accompany a specific RIN vintage throughout its entire lifecycle, from launch to discontinuation, even as the vintage may be previous, current or forward year. The codes contain the calendar year, e.g., RD62022.

**Renewable Volume Obligation**

Platts publishes the US Renewable Volume Obligation (RVO) calculated values in line with the release of the blending mandates under the Renewable Fuel Standard. RVO is the aggregate cost of the RIN percentages per gallon of transportation fuel as mandated by the EPA in the RFS.

Platts publishes RVO values for three calendar years: the previous year, current year and next year. Each year’s RVO will follow the same calendar and publication timings as the corresponding RIN assessments.

The RVO is calculated by taking each category and vintage RIN from daily Platts assessments (e.g., 2023 D6, D4, D5 and D3 RINs), multiplying by its EPA mandated percentage and then adding them together.

For example:

- **D6 ethanol RINs daily assessment:** \$1.0225/RIN
- **D5 advanced biofuel RINs daily assessment:** \$1.06 /RIN
- **D4 biodiesel RINs daily assessment:** \$1.0675/RIN
- **D3 cellulosic biofuel RINs daily assessment:** \$2.35/RIN

2025 RVO formula:

$$RVO = 8.71\% (D6) + 0.34\% (D5) + 2.82\% (D4) + 0.59\% (D3)$$

$$RVO = 8.71\% (102.25) + 0.34\% (106) + 2.82\% (106.75) + 0.59\% (235)$$

$$RVO = 13.6632 \text{ cents/gal}$$

The 2024 and 2025 RVO percentages are:

	D4	D6	D5	D3
2024 RVO	2.82	8.71	0.34	0.59
2025 RVO	3.15	8.82	0.35	0.81

The percentages Platts is using reference the low end of the percentage mandate ranges published by the EPA, given the EPA publishing the lows in the federal register and the EPA’s proposed intention to deny more small refinery exemptions than in past years.

As these renewable fuels are mandated by the EPA and hence subject to change without prior notice, Platts may update the Platts RVO formulas at any time and inform the market of the changes through subscriber notes.

**Waste Feedstocks**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Min Size	Max Size	UOM
<b>Asia</b>											
UCO North Asia	\$/mt	AUCOC00	AUCOC03	AUCOC04	Spot	FOB	Tianjin	20-40 days forward	2,500	10,000	metric ton
UCO FOB Straits	\$/mt	UCFCC00	UCFCC03	UCFCC04	Spot	FOB	Pasir Gudang, Singapore, Port Klang	20-40 days forward	2,500	5,000	metric ton
UCO DAP Tianjin port, North China	CNY/mt	BFANC00	BFANC03	BFANC04	Spot	DAP	Tianjin	1-7 days forward	500	1,000	metric ton
UCO DAP Tianjin port, North China	\$/mt	BFBNC00	BFBNC03	BFBNC04	Spot	DAP	Tianjin	1-7 days forward	500	1,000	metric ton
UCO DAP Nantong port, East China	CNY/mt	BFCEC00	BFCEC03	BFCEC04	Spot	DAP	Nantong	1-7 days forward	500	1,000	metric ton
UCO DAP Nantong port, East China	\$/mt	BFDEC00	BFDEC03	BFDEC04	Spot	DAP	Nantong	1-7 days forward	500	1,000	metric ton
UCO DAP Nansha port, South China	CNY/mt	BFESC00	BFESC03	BFESC04	Spot	DAP	Nansha	1-7 days forward	500	1,000	metric ton
UCO DAP Nansha port, South China	\$/mt	BFFSC00	BFFSC03	BFFSC04	Spot	DAP	Nansha	1-7 days forward	500	1,000	metric ton
POME FOB Indonesia	\$/mt	APOMA00	APOMA03	APOMA04	Spot	FOB	Dumai, Belawan	30-90 days forward	2,000	5,000	metric ton
POME FOB Malaysia	\$/mt	APOMB00	APOMB03	APOMB04	Spot	FOB	Pasir Gudang, Port Klang	15-60 days forward	2,000	5,000	metric ton
Refined POME FOB Indonesia	\$/mt	RPEBA00	RPEBA03		Spot	FOB	Dumai, Belawan	15-60 days forward	1,000	5,000	metric ton
POME DAP Dumai, Indonesia	IDR/kg	PDIDC00	PDIDC03		Spot	DAP	Dumai, Indonesia	1-7 days forward	100	2,000	kilo gram
POME DAP Dumai, Indonesia	\$/mt	PDIDD00	PDIDD03		Spot	DAP	Dumai, Indonesia	1-7 days forward	100	2,000	metric ton
Palm Fatty Acid Distillates FOB Indonesia M1	\$/mt	APFAE00	APFAE03		Spot	FOB	Dumai, Indonesia	First month, roll on 16th of current month	500		metric ton
Palm Fatty Acid Distillates FOB Indonesia M2	\$/mt	APFAD00	APFAD03		Spot	FOB	Dumai, Indonesia	Second month, roll on 16th of current month	500		metric ton
Beef Tallow FOB East Coast Australia (Weekly)	\$/mt	ALOWD04	ALOWD03		Spot	FOB	Brisbane	30-60 days forward	5,000	10,000	metric ton
<b>Europe</b>											
UCO FOB ARA	\$/mt	AUCOA00	AUCOA03	AUCOA04	Spot	FOB	ARA	15-30 days forward of assessment	1,000	2,000	metric ton
Platts FOLicht UCO EXW Germany	Eur/mt	AFOLC04				EXW	Germany	1-20 days from date of publication	25	1000	metric ton
<b>North America</b>											
Tallow Dlvd Chicago	cts/lb	ATALA00	ATALA03		Spot	DAP	Chicago, Il	Shipped 15-30 days forward	5 rails cars		pound
Tallow Dlvd USGC	cts/lb	TADUC00	TADUC03		Spot	DAP	US Gulf Coast	Shipped 14-45 days forward	5 rails cars		pound
Distillers Corn Oil Dlvd Chicago	cts/lb	UDSAH00	UDSAH03		Spot	DAP	Chicago, Il	Shipped 15-30 days forward	5 rails cars		pound
UCO Dlvd Houston	cts/lb	UDSAG00	UDSAG03		Spot	DAP	Houston, Tx	Shipped 15-30 days forward	5 rails cars		pound
UCO Dlvd San Francisco	cts/lb	UDSAF00	UDSAF03		Spot	DAP	San Fransisco, Ca	Shipped 15-30 days forward	5 rails cars		pound
<b>South America</b>											
Beef Tallow FOB Santos	\$/mt	ALOWB00	ALOWB03	ALOWB04	Spot	FOB	Santos, Brazil	31-60 days from date of publication	1000 mt		metric tonnes
Beef Tallow ExW	Real/mt	ALOWA00	ALOWA03	ALOWA04	Spot	EXW	Mato Grosso, Brazil	1-20 days from date of publication	100 mt		metric tonnes
UCO ExW São Paulo	Real/mt	ALOWC00	ALOWC03	ALOWC04	Spot	EXW	São Paulo, Brazil	1-20 days from date of publication	30 mt		metric tonnes
<b>Oceania</b>											
Beef Tallow FOB East Coast Australia (Weekly)	\$/mt	ALOWD00	ALOWD03	ALOWD04	Spot	FOB	Brisbane	30-60 days forward	5,000	10,000	metric tonnes

## Waste Feedstocks

### Asia

#### Used Cooking Oil (UCO) FOB North Asia

Platts UCO FOB North Asia assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time.

**Basis and Locations:** FOB North Asia prices are assessed daily reflecting North China basis port FOB Tianjin.

**Unit:** \$/mt.

**Timing:** The assessment reflects loading 20-40 days forward from the date of publication.

**Volume:** 2,500 mt to 10,000 mt, normalized to 2,500 mt.

**Product Purity Specification:** UCO assessments reflect material with a maximum of 7% FFA, a maximum of 2% MIU, maximum 50ppm sulfur and a minimum of 80gr iodine per 100gr of used cooking oil and wax content of maximum 300 ppm. The cargoes reflect proof of sustainability certifications in line with RED-such as ISCC.

#### Used Cooking Oil (UCO) FOB Straits

Platts UCO FOB Straits assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time.

**Basis and Locations:** Prices are assessed daily on an FOB Straits basis, with Straits being defined as Pasir Gudang and Singapore terminals. Loadings from Port Klang may also be reflected in the assessment but may be normalized for assessment purposes.

**Unit:** \$/mt.

**Timing:** The assessment reflects loading 20-40 days forward from the date of publication. The minimum loading rate is 150 mt/hour for breakbulk cargoes.

**Volume:** 2,500 mt to 5,000 mt, normalized to 2,500 mt.

**Product Purity Specification:** UCO assessments reflect material with a maximum of 5% FFA, a maximum of 2% MIU, maximum 40ppm sulfur and a minimum of 50gr iodine per 100gr of used cooking oil and maximum wax content of 300 ppm. The cargoes reflect ISCC-certified and RED-compliant material.

In addition, the assessment reflects a product that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission (Nabisy, UK and Dutch-double counting). Proof of Sustainability, Annex VII and Right to Audit needs to be provided by the seller. Payment terms are defined standard payment terms.

#### Used Cooking Oil (UCO) DAP Tianjin port, North China

Platts UCO DAP Tianjin port, North China assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Penang time.

**Basis and Locations:** Prices are assessed daily on a delivered-at-place (DAP) basis Tianjin port, North China. Other ports in North China will also be reflected in the assessment, but may be normalized back to the basis location.

**Quality:** The assessments reflect products with an acid value less than or equal to 15 mg KOH/g, maximum of 7% free fatty acids, and a maximum of 2% moisture, impurities, and unsaponifiable (MIU).

**Unit:** CNY/mt. Platts also publishes a \$/mt equivalence for UCO DAP Tianjin port, North China, using a 16:30 Penang time assessed value for the CNY/USD exchange rate (AAFW00).

**Timing:** The assessment reflects UCO delivering one to seven days forward from the date of publication.

**Volume:** 500 mt to 1,000 mt. Other volumes may be considered, but would be normalized back to the assessed volume range.

**Taxes:** The assessment reflects products inclusive of 13% value-added tax and where payment is made through telegraphic transfer or cash up to 7 days after the transfer of products.

#### Used Cooking Oil (UCO) DAP Nantong port, East China

Platts UCO DAP Nantong port, East China assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Penang time.

**Basis and Locations:** Prices are assessed daily on a delivered-at-place (DAP) basis Nantong port, East China. Other ports in East China, including the ports of Lianyungang, Taizhou and Wenzhou, will be considered but may be normalized back to the basis location.

**Quality:** The assessments reflect products with an acid value less than or equal to 15 mg KOH/g, maximum of 7% free fatty acids, and a maximum of 2% moisture, impurities, and unsaponifiable (MIU).

**Unit:** CNY/mt. Platts also publishes a \$/mt equivalence for UCO DAP Nantong port, East China, using a 16:30 Penang time assessed value for the CNY/USD exchange rate (AAFW00).

**Timing:** The assessment reflects UCO delivering one to seven days forward from the date of publication.

**Volume:** 500 mt to 1,000 mt. Other volumes may be considered, but would be normalized back to the assessed volume range.

**Taxes:** The assessment reflects products inclusive of 13% value-added tax and where payment is made through telegraphic transfer or cash up to 7 days after the transfer of products.

#### Used Cooking Oil (UCO) DAP Nansha port, South China

Platts UCO DAP Nansha port, South China assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Penang time.

**Basis and Locations:** Prices are assessed daily on a delivered-at-place (DAP) basis Nansha port, South China. Other ports in South China, including the ports of Dongguan and Fangcheng, will be considered but may be normalized back to the basis location.

**Quality:** The assessments reflect products with an acid value less than or equal to 15 mg KOH/g, maximum of 7% free fatty acids, and a maximum of 2% moisture, impurities, and unsaponifiable (MIU).

**Unit:** CNY/mt. Platts also publishes a \$/mt equivalence for UCO DAP Nansha port, South China, using a 16:30 Penang time assessed value for the CNY/USD exchange rate (AAFW00).

**Timing:** The assessment reflects UCO delivering one to seven days forward from the date of publication.

**Volume:** 500 mt to 1,000 mt. Other volumes may be considered, but would be normalized back to the assessed volume range.

**Taxes:** The assessment reflects products inclusive of 13% value-added tax and where payment is made through telegraphic transfer or cash up to 7 days after the transfer of products.

#### Palm Oil Mill Effluent (POME) FOB Indonesia

Platts POME FOB Indonesia assessment is based on latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Basis and Location:** FOB Indonesia, loading out of Dumai and Belawan.

**Quality:** Free fatty acids minimum 50%, maximum 3% moisture content and total fatty matter of minimum 95%. The assessment also reflects material that adheres to the ISCC certification scheme, in compliance with the EUs Renewable Energy Directive or RED requirements, such as the ISCC certification scheme.

**Unit:** \$/mt.

**Timing:** The assessment reflects parcels loading over a two-month period starting one month forward. The assessment laycan will roll over to the next two calendar months on the first publication day after the 15th.

**Volume:** Reflects a bulk volume of 2,000-5,000 mt. Other volumes and specifications may be considered but would be normalized back to the reference.

#### Palm Oil Mill Effluent (POME) FOB Malaysia

Platts POME FOB Malaysia assessment is based on the latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Basis and Location:** FOB Malaysia, loading out of Port Klang and Pasir Gudang.

**Quality:** Free fatty acids maximum 50%, maximum 3% moisture content and total fatty matter of minimum 95%. The assessment also reflects material that adheres to the ISCC certification scheme, in compliance with the EUs Renewable Energy Directive or RED requirements, such as the ISCC certification scheme.

**Unit:** \$/mt.

**Timing:** The assessment reflects parcels loading during a 45-day period covering three half-months, starting 15 days forward from the date of publication. The assessment laycan will roll over to the next 45 days on the 1st and 16th of each month, or the first publishing day after if they fall on weekends or a public holiday.

**Volume:** Reflects a bulk volume of 2,000-5,000 mt. Other volumes and specifications may be considered, but would be normalized back to the reference.

#### Palm Oil Mill Effluent (POME) Indonesia Domestic

Platts POME Indonesia domestic assessment is based on the latest information sourced from the market up to the close of the assessment window at 16:30 Penang time.

**Basis and Location:** DAP Dumai, Sumatra Island, Indonesia. Cargoes delivered to other locations in Sumatra Island, including Belawan, Palembang, Lampung and Aceh may be considered by normalizing back to the basis location of Dumai.

**Quality:** Free fatty acids maximum 50%, maximum 3% moisture content and total fatty matter of minimum 95%.

**Unit:** IDR/kg. Platts also publishes a \$/mt equivalence for POME Indonesia domestic assessment, using a 16:30 Penang time assessed US dollar IDR exchange rate (IDRUS00).

**Timing:** The assessment reflects POME cargoes delivering one to seven days forward from the date of publication.

**Volume:** 100 mt to 2,000 mt. Other volumes may be considered but would normalize back to the assessed volume range.

**Taxes:** The assessment reflects products inclusive of 12% value-added tax.

#### Refined Palm Oil Mill Effluent (POME) FOB Indonesia

Platts refined POME FOB Indonesia assessment is based on the latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Basis and Location:** FOB Indonesia, loading out of Dumai and Belawan.

**Quality:** Free fatty acids maximum of 5%, moisture and impurities content maximum of 1%, total fatty matter minimum

of 95%, total metal content maximum of 100ppm and Iodine minimum of 50 g I<sub>2</sub>/100g. The assessment also reflects material that adheres to the ISCC certification scheme, in compliance with the EUs Renewable Energy Directive or RED requirements, such as the ISCC certification scheme.

**Unit:** \$/mt.

**Timing:** The assessment reflects parcels loading during a 45-day period covering three half-months, starting 15 days forward from the date of publication. The assessment laycan will roll over to the next 45 days on the 1st and 16th of each month, or the first publishing day after if they fall on weekends or a public holiday.

For example, on Feb. 3, 2026, the Platts refined POME FOB Indonesia assessment will reflect cargoes loading Feb. 16 to March 31, reflecting H2 February, H1 March and H2 March. On Feb. 16, 2026, the assessment will reflect cargoes loading in H1 March, H2 March and H1 April.

**Volume:** Reflects a bulk volume of 1,000-5,000 mt. Other volumes and specifications may be considered, but would be normalized back to the reference.

#### **Palm Fatty Acid Distillates (PFAD) FOB Indonesia**

Platts Palm Fatty Acid Distillates (PFAD) FOB Indonesia assessment is based on the latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Quality:** The assessment reflects the specifications for PFAD as defined by the Palm Oil Refiners Association of Malaysia (PORAM). Other qualities may be considered, but normalized back to the reference specification.

**Quantity:** The assessment reflects a typical clip size of 500 mt. Other volumes may be considered in the assessment but normalized to reference size.

**Location:** The assessment reflects parcels loading out of Dumai, Indonesia. Bids, offers and trades for other locations may be considered, but normalized back to the basis location.

**Timing:** The FOB Indonesia assessment reflects parcels loading one and two months forward. The assessments laycan will roll over to the next calendar month on the first publication day after the 15th. For example, from March 16 - April 15, the PFAD FOB Indonesia assessment will reflect parcels loading over April and May, while from April 16 - May 15, the assessments will reflect parcels loading in May and June.

**Unit of measurement:** \$/mt.

**Notes:** All other specifications and clauses should be as per market practice.

#### **Beef Tallow FOB East Coast Australia**

Platts beef tallow FOB East Coast Australia assessment reflects the latest information sourced from the market up to the close of the assessment window at 16:30 Singapore time on Wednesdays and following the Platts Singapore publication calendar.

**Basis and location:** The assessments reflect the price basis Port of Brisbane, East Coast Australia. Pricing information from other East Coast ports, such as Melbourne and Sydney, may be taken into consideration and normalized back to the basis location for assessment purposes.

**Quality:** Maximum Free Fatty Acid (FFA) level of 2% and maximum Moisture, Impurities and Unsaponifiable (MIU) of 1%.

**Timing:** Loading 30-60 days forward from the date of publication.

**Volume:** 5,000 mt to 10,000 mt

**Unit:** \$/mt.

**Notes:** Weekly assessment reflecting a 4.30 pm Singapore time market close on Wednesdays.

#### **Europe**

##### **Biodiesel Feedstock: Used Cooking Oil (UCO) FOB ARA**

**Basis and Locations:** Prices are assessed daily on a FOB Amsterdam-Rotterdam-Antwerp basis. The assessments are for T2 product; duty paid for European-qualified material and free from origin restrictions.

**Unit:** \$/mt.

**Timing:** The assessment reflects barges loading 15-30 days forward from the date of publication.

**Volume:** a standard size of 1,000-2,000 mt.

**Product Purity Specification:** UCO assessments reflect material with a maximum of 5% FFA, a maximum of 2% MIU, maximum 50ppm sulfur and a minimum of 70gr iodine per 100gr of used cooking oil.

The Platts UCO assessment reflects renewable energy directive compliant UCO that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

Market participants shall exercise reasonable efforts to provide all necessary documentation for Proof of Sustainability.

##### **Platts FOLicht Used Cooking Oil (UCO) EXW Germany**

**Basis and Location:** Assessment reflects ExWorks Germany.

**Product Purity Specification:** UCO assessments reflect material with a maximum of 5% FFA, a maximum of 2% MIU, maximum 50ppm sulfur and a minimum of 70gr iodine per 100gr of used cooking oil.

The UCO assessment reflects renewable energy directive compliant UCO that holds proof of sustainability obtained in the framework of voluntary schemes approved by the EU Commission.

**Timing:** Assessment reflects one to 20 days forward from date of publication.

**Volume:** assessment reflects minimum 25 mt, maximum 1,000mt.

**Unit:** EUR/mt.

**Notes:** Weekly assessment reflecting a 4.30pm London time market close on Wednesdays..

## South America

Platts waste feedstocks assessments in Brazil follow a 17:30 São Paulo timestamp.

### Beef Tallow FOB Santos Waterborne

**Location:** FOB Santos.

**Quality:** Maximum Free Fatty Acid (FFA) level of 10% and maximum Moisture, Impurities and Unsaponifiable (MIU) of 2%.

**Timing:** Loading 31-60 days forward from the date of publication.

**Volume:** Minimum volume 1,000 mt with no maximum volume.

**Unit:** \$/mt.

**Taxes:** The assessment does not include ICMS and PIS/Cofins taxes.

### Beef Tallow ExW Mato Grosso

Location Assessment reflects Ex-Works Mato Grosso state.

**Quality:** Free Fatty Acid (FFA) levels 3.5% to 5% and maximum Moisture, Impurities and Unsaponifiable (MIU) of 1%.

**Timing:** Assessment reflects loading 1-20 days forward from the date of publication.

**Volume:** Minimum volume traded of 100 mt with no maximum volume.

**Unit:** Real/mt.

**Taxes:** The assessment does not include ICMS and PIS/Cofins taxes.

### Used Cooking Oil ExW São Paulo

**Location:** ExW São Paulo.

**Quality:** Free Fatty Acid (FFA) levels 3.5% to 5% and maximum Moisture, Impurities and Unsaponifiable (MIU) of 2%.

**Timing:** Assessment reflects loading 1-20 days forward from the date of publication.

**Volume:** assessment reflects a basis volume of 30 mt.

**Unit:** Real/mt.

**Taxes:** The assessment does not include PIS/Cofins taxes. UCO is exempt from ICMS.

## North America

### Tallow DAP Chicago

**Basis and Location:** The assessment reflects rail delivered (DAP) into the greater Chicago area. Deliveries into other locations are also considered but may be normalized back to the basis location.

**Volume:** Minimum 5 rail cars.

**Quality:** The assessment considers a maximum value of 4% free fatty acids (FFA) and maximum 1% moisture, impurities, and

unsaponifiable (MIU).

**Timing:** Shipped 15 to 30 days forward, from date of publication.

**Units:** Published in cents/lb.

### Tallow DAP Gulf Coast

**Basis and Location:** The assessment reflects manifest rail cars delivered (DAP) in the US Gulf Coast area, defined as the region from the Port of Houston to the Port of New Orleans. Deliveries to other locations are also considered but may be normalized back to the basis location.

**Volume:** Minimum 5 rail cars.

**Quality:** The assessment reflects a maximum of 15% free fatty acids and a maximum of 3% moisture, impurities and unsaponifiable (MIU).

**Timing:** Shipped 15-45 days forward from the date of publication

**Units:** Published in cents/lb.

### Distiller's Corn Oil DAP Chicago

**Basis and Locations:** The assessments reflect rail delivered (DAP) into the greater Chicago area. Deliveries to other locations are also considered but may be normalized back to the basis location.

**Volume:** Minimum 5 rail cars.

**Quality:** The assessment considers a maximum value of 15% free fatty acids (FFA) and maximum 3% moisture, impurities, and unsaponifiable (MIU).

**Timing:** Shipped 15 to 30 days forward, from date of publication.

**Units:** Published in cents/lb.

**Used Cooking Oil DAP San Francisco**

**Basis and Locations:** The assessments reflect rail delivered into the greater San Francisco area. Deliveries to other locations such as New Orleans are also considered but may be normalized back to the basis location.

**Volume:** Minimum 5 rail cars.

**Quality:** The assessments consider a maximum value of 15% free fatty acids (FFA) and maximum 2% moisture, impurities, and unsaponifiable (MIU).

**Timing:** Shipped 15 to 30 days forward, from date of publication.

**Units:** Published in cents/lb.

**Used Cooking Oil DAP Houston**

**Basis and Locations:** The assessments reflect rail delivered into the greater Houston area. Deliveries to other locations such as New Orleans are also considered but may be normalized back to the basis location.

**Volume:** Minimum 5 rail cars.

**Quality:** The assessments consider a maximum value of 15% free fatty acids (FFA) and maximum 2% moisture, impurities, and unsaponifiable (MIU).

**Timing:** Shipped 15 to 30 days forward, from date of publication.

**Units:** Published in cents/lb.

**Oceania****Beef Tallow FOB East Coast Australia**

**Location:** FOB East Coast Australia, loading out of Brisbane

**Quality:** Maximum Free Fatty Acid (FFA) level of 2% and maximum Moisture, Impurities and Unsaponifiable (MIU) of 1%.

**Timing:** Loading 30-60 days forward from the date of publication.

**Volume:** Minimum volume 5,000 mt to 10,000 mt

**Unit:** \$/mt.

**Notes:** Weekly assessment reflecting a 4.30 pm Singapore time market close on Wednesdays.

**Vegetable Oils**

Assessment	Currency	Code	Mavg	Wavg	Contract Type	Contract Basis	Location	Delivery Period	Typical Size	UOM
<b>Asia</b>										
Crude Palm Oil FOB Indonesia M1	\$/mt	ACPOD00	ACPOD03		Spot	FOB	Dumai, Indonesia	First month, roll on 16th of current month	1,000	metric ton
Crude Palm Oil FOB Indonesia M2	\$/mt	ACPOA00	ACPOA03		Spot	FOB	Dumai, Indonesia	Second month, roll on 16th of current month	1,000	metric ton
Crude Palm Oil CFR West Coast India M1	\$/mt	ACPOE00	ACPOE03		Spot	CFR	Kandla, India	First month, roll on 16th of current month	1,000	metric ton
Crude Palm Oil CFR West Coast India M2	\$/mt	ACPOB00	ACPOB03		Spot	CFR	Kandla, India	Second month, roll on 16th of current month	1,000	metric ton
Refined, Bleached, and Deodorized Palm Stearin FOB Indonesia M1	\$/mt	ARBSB00	ARBSB03		Spot	FOB	Dumai, Indonesia	First month, roll on 16th of current month	500	metric ton
Refined, Bleached, and Deodorized Palm Stearin FOB Indonesia M2	\$/mt	ARBSA00	ARBSA03		Spot	FOB	Dumai, Indonesia	Second month, roll on 16th of current month	500	metric ton
<b>Europe</b>										
Sunflower Oil FOB Black Sea Ukraine	\$/mt	SFWBL00	SFWBL03		Spot	FOB	Chornomorsk	Next month, roll on 16th of current month	3,000 mt	metric ton
Crude Rapeseed Oil assessment, FOB Dutch Mill, Front Run	Eur/mt	ASEEG00	ASEEG03		Spot	FOB	Dutch Mill	FMA, MJJ, ASO and NDJ. Roll date: First day of next run	100 mt per month, for a total of 300 mt	metric ton
Crude Rapeseed Oil assessment, FOB Dutch Mill, 2nd Run	Eur/mt	ASEED00	ASEED03		Spot	FOB	Dutch Mill	FMA, MJJ, ASO and NDJ. Roll date: First day of next run	100 mt per month, for a total of 300 mt	metric ton
Crude Rapeseed Oil assessment, FOB Dutch Mill, 3rd Run	Eur/mt	ASEEF00	ASEEF03		Spot	FOB	Dutch Mill	FMA, MJJ, ASO and NDJ. Roll date: First day of next run	100 mt per month, for a total of 300 mt	metric ton
Crude Rapeseed Oil assessment, FOB Dutch Mill, 4th Run	Eur/mt	ASEEH00	ASEEH03		Spot	FOB	Dutch Mill	FMA, MJJ, ASO and NDJ. Roll date: First day of next run	100 mt per month, for a total of 300 mt	metric ton
<b>South America</b>										
Soybean Oil Argentina FOB Up River	\$/mt	SYOAA00	SYOAA03	SYOAA04	Spot	FOB	Argentina Up River	First month, roll on 21st of current month	1,000	metric ton
Soybean Oil Argentina FOB Up River basis	points/lb	SYOAB00	SYOAB03		Spot	FOB	Argentina Up River	First month, roll on 21st of current month	1,000	pounds
Soybean Oil Brazil FOB Paranaguá (M1)	\$/mt	SYOBA00	SYOBA03	SYOBA04	Spot	FOB	Paranaguá	First month, roll on 21st of current month	1,000	metric ton
Soybean Oil Brazil FOB Paranaguá basis (M1)	points/lb	SYOBB00	SYOBB03	SYOBB04	Spot	FOB	Paranaguá	First month, roll on 21st of current month	1,000	pounds
Soybean Oil Brazil FOB Paranaguá (M2)	\$/mt	SYOBA02	SYOBA23		Spot	FOB	Paranaguá	Second month, roll on 21st of current month	1,000	metric ton
Soybean Oil Brazil FOB Paranaguá basis (M2)	points/lb	SYOBB02	SYOBB23		Spot	FOB	Paranaguá	Second month, roll on 21st of current month	1,000	pounds

## Vegetable Oils

### Asia

#### Crude Palm Oil (CPO) FOB Indonesia

Platts Crude Palm Oil (CPO) FOB Indonesia assessment is based on the latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Quality:** The assessment reflects maximum Free Fatty Acids (as palmitic) content of 5% and maximum Moisture and Impurities (M&I) content of 0.5%. Other qualities may be considered, but normalized back to the reference specification.

**Quantity:** The assessment reflects a typical clip size of 1,000 mt. Other volumes may be considered in the assessment, but normalized to reference size.

**Location:** The FOB Indonesia Crude Palm Oil assessment reflects parcels loading out of Dumai, Indonesia. Bids, offers and trades for other locations may be considered, but normalized back to the basis location.

**Timing:** The FOB Indonesia assessment reflects parcels loading one and two months forward. The assessments laycan will roll over to the next calendar month on the first publication day after the 15th. For example, from March 16 - April 15, the FOB Indonesia CPO assessments will reflect parcels loading over April and May, while from April 16 - May 15, the assessments will reflect parcels loading in May and June.

**Unit of measurement:** \$/mt.

**Notes:** All other specifications and clauses should be as per market practice.

#### Crude Palm Oil (CPO) CFR West Coast India

Platts Crude Palm Oil (CPO) CFR West Coast India assessment is based on the latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Quality:** The assessment reflects maximum FFA (as palmitic) content of 4.5% and maximum M&I content of 0.5%. Other qualities may be considered, but normalized back to the reference specification.

**Quantity:** The assessment reflects a typical clip size of 1,000 mt. Other volumes may be considered in the assessment, but normalized to reference size.

**Location:** The CFR WC India assessment reflects parcels for delivery into Kandla, India. Bids, offers and trades for other locations may be considered, but normalized back to the basis location.

**Timing:** The CFR WC India assessment reflects parcels shipping one and two months forward. This is basis a Dumai, Indonesia shipment time into WC India. The assessments laycan will roll over to the next calendar month on the first publication day after the 15th. For example, from March 16 - April 15, the CFR West Coast India CPO assessments will reflect parcels shipping over April and May, while from April 16 - May 15, the assessments will reflect parcels shipping in May and June.

**Unit of measurement:** \$/mt.

**Notes:** All other specifications and clauses should be as per market practice.

#### Refined, Bleached, and Deodorized Palm (RBDP) Stearin FOB Indonesia

Platts Refined, Bleached, and Deodorized Palm (RBDP) Stearin FOB Indonesia assessment is based on the latest information sourced from the market up to the close of the assessment window at 18:00 Penang time.

**Quality:** The assessment reflects the specifications for RBDP Stearin as defined by the Palm Oil Refiners Association of Malaysia (PORAM). Other qualities may be considered, but normalized back to the reference specification.

**Quantity:** The assessment reflects a typical clip size of 500 mt. Other volumes may be considered in the assessment, but normalized to reference size.

**Location:** The assessment reflects parcels loading out of Dumai, Indonesia. Bids, offers and trades for other locations may be considered, but normalized back to the basis location.

**Timing:** The assessment reflects parcels shipping one and two months forward. The assessments laycan will roll over to the next calendar month on the first publication day after the 15th. For example, from March 16 - April 15, the RBDP Stearin FOB Indonesia assessments will reflect parcels loading over April and May, while from April 16 - May 15, the assessments will reflect parcels loading in May and June.

**Unit of measurement:** \$/mt.

**Notes:** All other specifications and clauses should be as per market practice.

### Europe

#### Sunflower Oil FOB Black Sea

**Quality:** Price assessments reflect Ukrainian origin raw sunflower oil with a free fatty acid basis content of 2%, maximum 3%, a maximum moisture content of 0.5%, a maximum impurities content of 0.5%, a flash point of 121 degrees Celsius minimum, and a maximum hydrocarbon content of 50 milligrams per kilogram. Sunflower oil of other origins or with different specifications may be considered, but normalized back to Ukrainian origin raw sunflower oil with the specifications listed above.

**Quantity:** Cargo assessments reflect parcels of 3,000 mt. Other sizes may be considered in the assessment, but normalized to 3,000 mt.

**Location:** FOB the Port of Chornomorsk. With prices from other locations, including Odesa and Pivdennyi, to be

considered and normalized to the basis location. Platts will continue to gather and publish pricing information from other relevant loading and delivery locations and may normalize such indications for inclusion within the Sunflower Oil FOB Black Sea assessment. In the event of a lack of deep-sea port prices, Platts may include pricing information from other ports, such as Izmail and Reni ports, but normalize back to the basis location.

**Timing:** The assessment reflects loading one or two calendar months forward from the month of the assessment date. The shipment month assessed rolls to the following calendar month on the 16th of the current month unless that day is not a business day, in which case the assessment rolls over on the next business day. For example on August 15, Platts assesses loading over September, from August 16 to September 15, Platts assesses loading over October.

Prices for cargoes delivered outside the shipment month on any day during the delivery month may be used in the assessment process and will be normalized to the median point of the shipment month by taking into account forward market structure.

**Unit of assessment:** US dollars per mt.

**Notes:** The assessments reflect a market close time stamp of 16:30 pm London. All other specifications and clauses should be as per market practice.

#### Crude Rapeseed Oil FOB Dutch Mill

**Quality:** The assessment reflects product with maximum free fatty acids content: 1.75%, a maximum moisture volatile matter and impurities content of 0.4%, a maximum lecithin content of 300 ppm and a maximum erucic acid content of 2%. Other qualities may be considered, but normalized back to the reference specification.

**Quantity:** The assessment reflects a cargo size of 100 mt per month, for a total of 300 mt. Other sizes may be considered in the assessment, but normalized to a cargo size of 100 mt per month, for a total of 300 mt.

**Location:** FOB Dutch Mill. Bids, offers and trades for other locations may be considered, but normalized back to the basis location.

**Timing:** The assessment reflects four time periods or runs. Each run is made up of three months, the four runs assessed are FMA (Feb, March, April), MJJ (May, June, July), ASO (Aug, Sept. Oct.) and NDJ (Nov. Dec. Jan). The assessed run rolls to the next run on the first publishing day of the previous run's first month. For example on July 31st Platts assesses run one as Aug-Sep-Oct, then on August 1st Platts rolls the assessment to assess run one as Nov-Dec-Jan.

**Unit of assessment:** Euros per mt.

**Notes:** For guidance, key FEDIOL specifications at the time of publication include crude degummed rapeseed oil physical specifications and NOFOTA trading rules.

### South America

Platts soybean oil assessments in South America follow a 17:30 São Paulo timestamp.

#### Soybean Oil Argentina FOB Up River

**Quality:** Assessments reflect product meeting FOSFA 51 soybean oil specification.

**Quantity:** Assessments reflect parcels of 1,000 mt.

**Basis and Location:** FOB Up River, Argentina. Up River refers to the San Lorenzo, Rosario and San Nicolas port areas on the Paraná River in Argentina.

**Timing:** Assessment reflects parcels loading one calendar month forward. This will roll to the next calendar month on the first publication day after the 20th of each month. For example, from September 21-October 20, the assessment would reflect parcels loading in November, while from October 21-November 20, the assessment would reflect parcels loading in December.

**Unit of measurement:** Assessment is published in US dollar/mt, as well as a US points/pound differential, or basis, to the CBOT futures settlement price. One US cent is equivalent to 100 points, and the relevant futures month letter code is published next to the basis value.

#### Soybean Oil Brazil FOB Paranaguá

**Quality:** Assessments reflect product meeting ANEC 81 soybean oil specification.

**Quantity:** Assessments reflect parcels of 1,000 mt.

**Basis and Location:** FOB Paranaguá, Brazil.

**Timing:** Assessments reflect parcels loading in the first (M1) and in the second (M2) calendar months forward. This will roll to the next calendar months on the first publication day after the 20th of each month. For example, from September 21-October 20, the M1 assessment would reflect parcels loading in November and the M2, in December, while from October 21-November 20, the M1 assessment would reflect parcels loading in December and the M2, in January.

**Unit of measurement:** Assessments are published in US dollar/mt, as well as a US points/pound differential or basis to the CBOT futures settlement price. One US cent is equivalent to 100 points, and the relevant futures month letter code is published next to the basis value.

## Global Calculations and Spreads

	Currency	Code
<b>Spreads and ratios</b>		
USWC SAF-Jet Fuel Ratio	¢/gal	AUSWG00
USWC SAF-Jet Fuel Spread	¢/gal	AUSWH00
Chicago ethanol-gasoline spread	¢/gal	ACHIA00
Current-Year D4/D5 RIN Spread	¢/RIN	ACURC00
Current-Year D4/D6 RIN Spread	¢/RIN	ACURD00
Current/Next Year D6 RIN Spread	¢/RIN	ACURA00
Current/Previous Year D6 RIN Spread	¢/RIN	ACURB00
European ethanol-gasoline spread	\$/mt	AEURB00
European FAME 0-ULSD spread	\$/mt	AURA00
European SAF-jet fuel spread	\$/mt	AEURK00
European SAF-jet fuel ratio	\$/mt	AURJ00
<b>California LCFS CI values</b>		
Biodiesel CI value per point	¢/gal	ABDIA00
Renewable Diesel CI value per point	¢/gal	ARENA00
CARB Diesel CI value per point	¢/gal	ACRBA00
CaRFG CI value per point	¢/gal	ARFGA00
CARBOB CI value per point	¢/gal	ACRBB00
SAF CI value per point	¢/gal	ASCIA00
USWC SAF Credit Value	¢/gal	AUSWF00

## Global Calculations and Spreads

	Currency	Code
<b>European GHG savings values</b>		
European SAF GHG savings	¢/g of CO2e per MJ	AGHGA00
European UCOME GHG savings	¢/g of CO2e per MJ	AEURM00
European RME GHG savings	¢/g of CO2e per MJ	AEURI00
European PME GHG savings	¢/g of CO2e per MJ	AEURH00
European SME GHG savings	¢/g of CO2e per MJ	AEURL00
European FAME 0 GHG savings	¢/g of CO2e per MJ	AEURC00
European FAME-10 GHG savings	¢/g of CO2e per MJ	AEURD00
European HVO GHG savings	¢/g of CO2e per MJ	AEURE00
<b>Brazilian motor fuels weekly parity</b>		
Hydrous Ethanol Parity versus Gasoline North East Brazil	%	HENEB00
Hydrous Ethanol Parity versus Gasoline Center West Brazil	%	HECWB00
Hydrous Ethanol Parity versus Gasoline South East Brazil	%	HESEB00
Hydrous Ethanol Parity versus Gasoline South Brazil	%	HESBB00

## Global

### Calculations and spreads

The calculated spreads and ratios use existing Platts biofuel, refined product and credit assessments to provide insight into the price of greenhouse gas reductions using biofuels, carbon credit values for biofuels and the relationships between biofuels and related fossil fuels. The calculations and spreads include outright spreads and ratios between existing Platts assessments.

Platts also publishes prices that represent the value of each point of Carbon Intensity (CI) per gallon of fuel under California's Low Carbon Fuel Standard. The published CI prices per point are calculated using the Platts assessment of front-quarter California LCFS credits (\$/mt) and the energy density of the relevant fuel, as published by the California Air Resources Board.

Platts publishes prices that represent the cost of reducing greenhouse gas emissions using physical biofuels in Europe. The calculations adjust Platts biofuels and refined product assessments based on energy densities published in the European Commission's Renewable Energy Directive and then compare the greenhouse gas emissions scores for biofuels and fossil fuels published in RED.

### Futures and Foreign Exchange

Platts publishes assessments reflecting the prevailing market value precisely at the MOC close for several futures contracts on Bursa Malaysia (BMD), Intercontinental Exchange (ICE), Euronext and Chicago Board of Trade (CBOT) and foreign exchange values, as well as the settlements for certain futures contracts on the above exchanges.

#### 18:00 Singapore assessments

An assessment for the third-month crude palm oil futures contract listed on the BMD reflecting the prevailing value at 18:00 Singapore is published daily in MYR/mt. The BMD contract rolls forward on the 15th of each calendar month, or if this falls on a holiday, on the preceding business day. From the start of the calendar month until rolling, the assessment reflects the traded value for BMD contract representing the balance of the current month. After the contract rolls until the end of the calendar month, the assessment reflects the traded value for the next month.

The assessed spread between the BMD crude palm oil third-month futures assessment and the ICE gasoil futures contract (PO-GO) for corresponding contractual months is also published reflecting the prevailing value at 18:00 Singapore time. Platts publishes this spread in US dollars per mt and uses the published and prevailing USD/MYR exchange rate at 18:00 Singapore time to convert the BMD palm oil assessment from MYR/mt to USD/mt.

#### 16:30 London assessments

Assessments for the two front months of the gasoil futures contract listed on ICE Futures reflecting prevailing values at 16:30 London time are published in USD/mt. The assessments will roll over to the second and third month contracts on the 5th day of each calendar month until the official expiry of the front month futures contract.

Assessments reflecting the front month of the rapeseed futures contract listed on Euronext reflecting prevailing values at 16:30 London time are published in Eur/mt.

Assessments reflecting the front month of the soybean oil (USc/lb), contract listed on CBOT reflecting prevailing value at 16:30 London time are published. The front month assessment will roll to the second month on the 5th of each calendar month (until the official expiry of the existing front month contract).

Platts also reflects in USD/mt, the spread between the first- or second-month soybean oil futures contract as listed on CBOT and the corresponding calendar month's ICE gasoil futures contract (BO-GO). This assessment reflects the front month soybean oil contract until the 5th day of the calendar month of contract expiry. The assessment will roll over to reflect the second-month soybean oil futures contract listed on CBOT on the 5th day of the calendar month of futures contract expiry until the official expiry of the front-month contract. If the 5th day of the calendar month is not a business day in London the spread assessment will roll to reflect the second month futures contract on the next business day. Check this

#### 13:30 CT Houston

Platts publishes the settlement values for the front month soybean oil, corn and soybean meal CBOT futures contracts. Platts also publishes USD.BRL and USD.MXN foreign exchange rate assessments that reflect the prevailing market value at 13:30 CT.

#### 16:30 Sao Paulo

Platts publishes a USD.BRL foreign exchange rate assessment that reflects the prevailing market value at 16:30 Sao Paulo time.

### Brazilian motor fuels weekly parity

Platts publishes weekly calculations of price parity between ethanol and gasoline in the Brazilian retail fuel market.

Typically ethanol is considered price competitive when its price ranges between 70% and 75% of the gasoline price, reflecting ethanol's lower energy content.

The calculations are performed on a regional basis across Brazil and are based on fuel price surveys collected from retailers and published by the country's oil regulator ANP (National Petroleum Agency), in accordance with standard industry practices.

## Revision history

**April 2026:** Platts discontinued SAF and RD cost of production (PFAD) Southeast Asia prices and the related spreads. Platts discontinued all RD cost of production for NWE and USWC and the related spreads. Platts updated the daily FOB Straits neat sustainable aviation fuel freight netback assessment to a market-based price assessment and added a SAF premium FOB Straits over MOPS. Platts launched beef tallow FOB East Coast Australia weekly assessment. Platts launched Refined Palm Oil Mill Effluent FOB Indonesia assessment. Platts clarifies weekly calculations of Brazilian hydrous ethanol-gasoline price parity.

Platts discontinued Biodiesel FOB Southeast Asia prices and the related spreads.

**January 2026:** Platts discontinued current year HBEs and THG-Advanced double counting assessments. Platts updated specifications and basis for UCOME and FAME 0 Central Europe. Platts updated carbon intensity for Ethanol T2 High GHG Savings premium and launched outright price. Platts launched Ethanol CFR India weekly assessments.

**September 2025:** Platts launched USA SAF (HEFA-SPK) California and Illinois (credits detached) and Renewable diesel premiums to ULSD No2 CARB Diesel as well as renewable diesel margin indicators. Platts updated Canadian Ethanol reference CI level and clarified the Argentina export duties on soybean oil and biodiesel. Platts also added Platts FOLicht European Fuel and Non-Fuel weekly ethanol assessments. Platts also updated the basis location for the FOB Black Sea Sunflower oil, as well as the Southern European Platts FOLicht biodiesel assessment specification.

**August 2025:** Platts launched China domestic UCO assessments in East and South China, and updated the quality specifications and delivery terms in North China. Platts updated the quality and timing of the Asia POME FOB Malaysia assessment, and launched Indonesia domestic POME assessment. Platts also launched

USGC tallow assessments and clarified the ETJ updates and tariffs. Platts launched Brazil bi-monthly biodiesel contracts fees and daily contract prices and updated Argentina, and updated export duties for its Argentina biodiesel FOB Up River price.

**July 2025:** Platts conducted an annual review of this guide, changing the structure and grouping assessments by product type for greater clarity; the guide was previously structured by region. Platts made other small edits to language for improved clarity. Details of Platts Vegetable Oil assessments were transferred from the Grains & Oilseeds guide to the Biofuels Guide, while details of coverage for Dried Distillers Grains with Solubles (DDGS) were moved to the Global Grains & Oilseeds specifications guide. Platts added details of new Platts FOLicht price assessments for three FOB Karachi Ethanol, one European UCO, nine European Biodiesel, and two Glycerine assessments, launched May 2025. References to discontinued European CPO and CPKO assessments were removed. Further updates were made to reflect the cetane level reflected in Platts European Renewable Diesel assessments; the inclusion of CBIOs in Brazilian ethanol coverage; changes to SAF assessment names and methodology; and the launch of calculated ETJ SAF cost of production assessments and Argentina biodiesel.

**February 2025:** EMEA renewable diesel and SAF cost of production inputs updated.

**January 2025:** Platts discontinued the B24 bio-bunkers calculated assessments and has moved all other bio-bunkers assessments specifications to the Global Bunker Fuels Specification guide. Platts updated the freight rate symbol used for its SAF FOB Straits, neat sustainable aviation fuel freight netback assessment. Platts added UK RTFC price assessments and updated the volume for the Germany THG-Advanced Single Counting assessment.

**December 2024:** Platts added Germany THG price assessments and next year Netherlands HBE price assessments. Platts updated the GHG saving for the Sustainable Aviation Fuel FOB FARAG. Platts added Canadian ethanol price assessments

along with calculations for the cost per point of Carbon Intensity under the Clean Fuel Regulations. Platts added new North China domestic UCO and FOB Straits neat SAF netback assessment. Platts added new waste feedstocks price assessments for beef tallow and UCO in Brazil. Platts added US waste-feedstock price assessments focused on UCO and DCO and updated the specifications and methodology of the existing tallow assessment.

**September 2024:** Platts conducted an annual review of this guide, reviewing all content, correcting typos and making edits to language for clarity. Platts added clarity around cost-based calculations for SAF and RD, updated timestamps for Asia Biodiesel and Palm coverage to Penang and added details of newly-launched delivered Singapore bio-bunkers market-based assessment. Platts also added details of CIF Paulinia ethanol coverage, US Renewable Diesel, and US SAF assessments, launched August 1. Platts also added Canadian carbon credits, FOB FARAG neat SAF and updated CIF NWE SAF cargoes as per Sept. 1.

**July 2024:** Platts added details of Brazil CBIO credit, Oregon Clean Fuel Program Carbon Credits (OCFP) and Washington Clean Fuel Standard Carbon Credits (WACFS) price assessments. Platts also added Chicago Terminal ethanol any-month price assessments.

**June 2024:** Platts added European renewable diesel price assessments. Platts changed the Asian used cooking oil and used cooking oil methyl ester timestamps to 1630 Singapore time, from 1800 Singapore time and aligned both the North China assessment to reflect a basis port FOB Tianjin. Platts updated the name of cost-based HVO/renewable diesel prices. Platts updated max volume for Brazil biodiesel. Platts added CFR Southeast Asia assessment and updated Incoterm details for DDGS Delivered Chicago assessment.

**February 2024:** Platts added POME FOB Indonesia and POME FOB Malaysia assessments. Platts also added Netherlands

HBE assessments. Platts updated the calculation and volume specifications for the Bio-Bunkers B24 Singapore assessment. Platts updated the carbon intensity specification for the Ethanol T2 FOB Rotterdam premium assessment and updated the carbon intensity specification for the Ethanol T2 FOB Rotterdam assessment to remove specific publication of 50% GHG savings. Platts updated the NNE Brazil delivered Suape anhydrous assessment specifications to reflect PIS/Cofins tax, and removed the 2022 RVO calculation.

**November 2023:** Platts updated the density for the CIF ARA SAF assessment. Platts also updated the CIF ARA Used Cooking Oil assessment as well as B30 bio-bunker calculated assessments.

**September 2023:** Platts completed an annual review of this guide, reviewing all content, correcting typos, and making edits to language throughout. Platts updated the FOB Rotterdam T2 ethanol to exclude German spec, and removed the forex assessments. Platts also added the specifications for the new European SAF assessment, updated the frequency of the NNE Brazil DAP Suape ethanol assessment and updated the DDGS profat specification.

**June 2023:** Platts added the Bio-Bunkers B24 Singapore assessment and updated FOB Straits UCO quality specifications and Brazil biodiesel tax status.

**February 2023:** Platts updated the FOB ARA FAME 0 assessment to reflect PoS of non-palm oil origin and FOB China and FOB Straits UCO and UCOME location and quality specifications. Updated RVO calculation to reflect 2023 percentages. Platts updated SAF tax credit to reflect IRS guidance. Platts added NYH ITT ethanol assessment

**December 2022:** Platts updated the FOB China UCOME CFPP to 5C and changed its CFR Singapore UCOME assessment from a FOB China freight net forward to a standalone assessment on FOB Straits basis together with a separate definition of standard quality specification.

**October 2022:** Platts completed an annual review of this guide, reviewing all content, correcting typos, and making edits to language throughout. Platts clarified the Basis and Location for Used Cooking Oil (UCO) FOB Straits. Platts updated its daily Brazil ethanol assessments to reflect a 16:30 Sao Paulo time and updated the language for its New York Harbor ethanol barge roll.

**October 2022:** Platts updated the guide with new UCO and UCOME assessments in Asia and amended the specifications of Used Cooking Oil (UCO) North Asia to an FFA of 7%, on August 1.

**August 2022:** Platts updated its Brazilian ethanol methodology to reflect changes in tax rates. Platts updated the formulas for renewable volume obligations.

**June 2022:** Platts extended the T2 Ethanol Futures forward curve from six to twelve months out.

**April 2022:** Platts introduced implied or actual loading date as a factor when normalizing indications in the European biodiesel assessments.

Platts changed the proof of sustainability certification requirement for some of its first-generation biodiesel assessments to ensure the PoS certification reflects the same feedstock as the physical material.

**February 2022:** Platts introduced a maximum Carbon Intensity requirement of 33.52mg CO<sub>2</sub>e/MJ to its RME, FAME 0, PME, SME and FAME-10 FOB ARA assessments. This replaced the previous specification of a minimum GHG savings limit.

**January 2022:** Platts added Brazilian biodiesel, Houston delivered rail and global biofuels calculations and spreads. Platts starts publishing North Asia Used Cooking Oil (UCO) Sustainable Aviation Fuel (SAF) and Hydrotreated Vegetable Oil (HVO) values.

**November 2021:** Platts amended the size reflected in its used cooking oil North Asia assessment to bulk volume of 3,000 mt to 10,000 mt parcels, effective Nov. 1, 2021.

**September 2021:** Platts completed an annual review of the Biofuels specifications guide. Platts reviewed all content, corrected typos and made minor edits to language. Platts removed FOB Santos to NYH ethanol calculation in line with discontinuation. Platts clarified PoS certification requirements for T2 Ethanol FOB Rotterdam and balance of month assessment methodology for US Ethanol swaps; and added Ethanol cash margins methodology.

**April 2021:** Following a formal public consultation launch, proposal and review, S&P Global Platts discontinues its Ethanol T2 FOB Rotterdam German Spec assessment, effective April 1, 2021.

**March 2021:** Platts updated the renewable volume obligation percentages used in its RVO assessments and launched Renewable Diesel assessments in the US.

**January 2021:** Platts introduced a maximum Carbon Intensity requirement of 33.52mg CO<sub>2</sub>e/MJ into its European T2 ethanol assessments. This replaced the previous specification of a minimum GHG savings limit. Platts also launched a European T2 Premium ethanol assessment meeting a maximum CI of 18.82g CO<sub>2</sub>e/MJ. Platts starts publishing Southeast Asia Palm Fatty Acid Distillates (PFAD) Sustainable Aviation Fuel (SAF) and Hydrotreated Vegetable Oil (HVO) values.

**September 2020:** Platts completed an annual review of the Biofuels specifications guide. Platts reviewed all content, corrected typos and made minor edits to language. Platts launched Chicago tallow assessment and starts publishing US West Coast Sustainable Aviation Fuel (SAF) values.

**August 2020:** Platts changed the timing and laycan for its biodiesel FOB Southeast Asia assessment, as well as its calculation of the palm oil-gasoil spread, effective July 1, 2020. Platts started publishing Northwest European Sustainable Aviation Fuel (SAF) and Hydrotreated Vegetable Oil (HVO) assessments.

**April 2020:** Platts launched Carbon Intensity per point per gallon of ethanol value and North California delivered rail 70 CI assessment. Platts updated gasoline standard CI North California delivered rail assessment and discontinued South California delivered rail assessment. Updated this guide with 2020 RVO percentages and calculation.

**March 2020:** Platts updated the guide with new UCO and UCOME assessments.

**November 2019:** Platts completed an annual review of the Biofuels specifications guide. Platts reviewed all content, corrected typos and made minor edits to language.

**July 2019:** Platts updated this guide to reflect the change in Ethanol Chicago (terminal) assessment methodology, with effect from June 3, 2019, including new offtake options and nomination guidelines. Platts completed an annual update to sections 1 to 6 of Platts Methodology and Specifications Guides in April 2019, and moved these sections into a standalone Methodology Guide.

**April 2019:** Platts updated CS Brazil domestic ethanol assessment credit terms, volume.

**February 2019:** Update RIN code labelling and RVO percentages.

**January 2019:** Platts reviewed the guide as part of its annual methodology review and made a number of minor edits.

**October 2018:** Platts clarified T2 ethanol sustainability criteria.

**July 2018:** Platts revamped sections I-VI.

**June 2018:** Platts clarified its Ethanol Grade B CFR Ulsan specifications reflecting sugarcane based industrial ethanol.

**May 2018:** Platts clarified RIN transfers with trades in US ethanol Market on Close assessment processes. Platts changed the basis of the T2 ethanol assessment to FOB ARA from FOB Rotterdam.

**November 2017:** Platts reviewed the guide as part of its annual methodology review. Updated Loading rate, dates, timing and locations, adding normalization. In addition, ICE Settlements, Open Interest and Volumes were also updated with correct contract references. Platts launched NNE Brazil delivered Suape weekly anhydrous ethanol assessment.

**October 2017:** Platts specified terms of POS in European T2 ethanol.

**July 2017:** Platts updates California ethanol Carbon Intensity basis and timing reflected in the assessment.

**June 2017:** Platts updates the ex-mill Ribeirao Hydrous expressed as Raw Sugar equivalent methodology.

**March 2017:** Platts revised roll dates for CIF NOLA DDGS barge and FOB Chicago DDGS truck assessments.

**December 2016:** Platts added a minimum 50% greenhouse gas saving requirement for T2 and T1 ethanol assessments.

**November 2016:** Platts made changes to the formatting and updated language for the Europe section.

**October 2016:** Annual review: Platts made a number of minor edits and updated language for the Asia, Europe and Americas sections. Platts discontinued its assessment of fuel-grade ethanol FOB Thailand.

**July 2016:** Platts changed Americas biofuels Market on Close

assessment time to 14:30 Eastern Standard Time (13:30 CT) from 1515 EST (14:15 CT). Platts updated the guide to reflect a clarification regarding the delivery ports taken into consideration for the CIF Philippines ethanol assessments. Platts amended language for the Asian section of Futures and Foreign Exchange assessments to clarify the assessment month used on Bursa Malaysia (BMD) and the process in which the front month rolls over. Platts updated the guide to reflect changes made to the Biodiesel FOB Southeast Asia assessment. Beginning 1 July, 2016, Platts assesses RED compliant PME at the Malaysian loading ports of Port Klang, Pasir Gudang and Lahad Datu which adheres to EN14214 quality specifications with monoglyceride levels of 0.5% or less.

**May 2016:** Platts updated its methodology to reflect an alternate assessment methodology for D3 cellulosic RINs when market activity is not available.

**April 2016:** Platts updated the guide to reflect changes made to the FOB Rotterdam T2 ethanol assessments. As of April 1, 2016, Platts FOB Rotterdam T2 assessments reflect a FOB Rotterdam basis with loading options in Amsterdam and Antwerp. Platts updated Chicago terminal ethanol ITT methodology to include nomination time as originally stated in 2009.

**January 2016:** References to non-RED biodiesel FOB ARA assessments removed, following the discontinuation of those assessments effective January 1, 2016.

**December 2015:** The methodology guide was updated with further description and clarification of calculated values of the US Renewable Volume Obligation in accordance with the release of the blending mandates under the Renewable Fuel Standard. Platts also removed references to the FOB Singapore ethanol, following the discontinuation of its assessment effective Dec 21. References to non-RED biodiesel FOB ARA assessments removed, following the discontinuation of those assessments effective January 1, 2016.

**October 2015:** Platts updated the guide with the new assessment Ethanol Grade B CFR Ulsan, effective October 1. Platts updated guide with new assessments of US Dried Distillers Grain CIF basis New Orleans barge and FOB Chicago truck or rail launched October 1, 2015.

**September 2015:** Platts updated the guide with: new US 'lifetime' RINS codes; updated methodology around the roll dates for the Atlantic Coast ethanol assessments; a clarification on specifications for its FOB Southeast Asia biodiesel assessment; a clarification on methodology for T1 ethanol CIF NWE cargo and FOB Rotterdam barge assessments.

**July 2015:** Platts clarified and updated its RINS rolling dates and launch cycles, as well as improving the wording around each

individual RIN name to align with industry standards on corn-based and biomass-based RINS.

**June 2015:** Platts removed references to non-RED SME biodiesel FOB ARA barges, following the discontinuation of its assessment effective June 1.

**February 2015:** This methodology guide was updated to include further description of Platts' processes and practices in survey assessment environments.

**January 2015:** Platts added a requirement for all FOB ARA biodiesel assessments (except for non-RED and RED-compliant SME) to reflect material with sustainability documentation showing a minimum greenhouse gas saving

of 50% when compared to the fossil fuel comparator, as per the European Union's Fuel Quality Directive calculation.

**October 2014:** Platts clarified for European biodiesel barges, operational tolerances and the maximum number of days for delivery of Proof of Sustainability documentation.

**August 2014:** Platts revamped all Agriculture and Biofuel Methodology and Specifications Guides, including its Global Biofuels guide, in August 2014. This revamp was completed to enhance the clarity and usefulness of all guides, and to introduce greater consistency of layout and structure across all published methodology guides. Methodologies for market coverage were not changed through this revamp, unless specifically noted in the methodology guide itself.